LAUNCH COMPLEX 34, SWMU CC054
2021 DNAPL SOURCE ZONE OPERATIONS, MAINTENANCE, AND MONITORING,
AND HOT SPOT 6 AIR SPARGE SYSTEM
ANNUAL PERFORMANCE MONITORING REPORT
CAPE CANAVERAL SPACE FORCE STATION, FLORIDA

Prepared for:

National Aeronautics and Space Administration
Kennedy Space Center, Florida

September 2022
Revision 0

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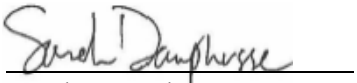
Prepared by: 
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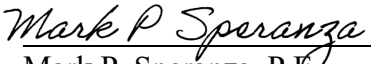
Approved by: 
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September 2022

PROFESSIONAL ENGINEER CERTIFICATION

This 2021 Annual Performance Monitoring Report for the DNAPL Source Zone and Hot Spot 6 Air Sparge System for Launch Complex 34, SWMU CC054, Cape Canaveral Space Force Station, Florida, dated September 2022, has been prepared by or under the responsible supervision, direction, or control of the Florida-licensed professional engineer whose signature and seal appear below. This document and the work described herein complies with standard professional practices and the requirements of Chapter 62-780, Florida Administrative Code (F.A.C.) and other rules of the Florida Department of Environmental Protection according to Rule 62-780.400(1), F.A.C.

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ABBREVIATIONS AND ACRONYMS

ADP	Advance Data Package
AS	Air Sparge
bls	below land surface
CatOx	Catalytic Oxidation Unit
CCSFS	Cape Canaveral Space Force Station
CCR	Construction Completion Report
cDCE	cis-1,2-dichloroethene
CMS	Corrective Measures Study
COC	Contaminant of Concern
CPT	Cone Penetrometer Test
CVOC	Chlorinated Volatile Organic Compound
DNAPL	Dense Non-Aqueous Phase Liquid
DSZ	DNAPL Source Zone
DPT	Direct-Push Technology
EE	Engineering Evaluation
ESB	Engineering Support Building
°F	degree Fahrenheit
FDEP	Florida Department of Environmental Protection
ft	foot or feet
GCTL	Groundwater Cleanup Target Level
gpm	gallon per minute
HAP	Hazardous Air Pollutant
HC	Hydraulic Containment
HCP	High Concentration Plume
HCS	hydraulic containment system
HMI	Human Machine Interface
hp	horsepower
HPT	Hydraulic Profiling Tool
HS	Hot Spot

ABBREVIATIONS AND ACRONYMS (Continued)

IM	Interim Measure
IMWP	Interim Measure Work Plan
IWP	Implementation Work Plan
KSC	Kennedy Space Center
KSCRT	Kennedy Space Center Remediation Team
LC34	Launch Complex 34
LCP	Low Concentration Plume
LPGAC	Liquid-Phase Granular Activated Carbon
LTM	Long-Term Monitoring
mg/L	milligram per liter
MIP	Membrane Interface Probe
MNA	Monitored Natural Attenuation
NADC	Natural Attenuation Default Concentration
NaOH	Sodium Hydroxide
nBA	n-butyl acetate
NASA	National Aeronautics and Space Administration
O&M	Operation and Maintenance
OM&M	Operation, Maintenance, and Monitoring
OMMR	Operations, Maintenance, and Monitoring Report
PCB	Polychlorinated Biphenyl
PED	Partitioning Electron Donor
PID	Photoionization Detector
PLC	Programmable Logic Controller
PMR	Performance Monitoring Report
psi	pound per square inch
psig	pound per square inch gauge
RAE	Remedial Alternatives Evaluation
RCRA	Resource Conservation and Recovery Act
RFI	RCRA Facility Investigation

ABBREVIATIONS AND ACRONYMS (Continued)

SAP	Sampling and Analysis Plan
scfm	standard cubic foot per minute
SOP	Standard Operating Procedure
SWMU	Solid Waste Management Unit
tDCE	trans-1,2-dichloroethene
TCE	Trichloroethene
µg/L	microgram per liter
USEPA	United States Environmental Protection Agency
VC	Vinyl Chloride
VOC	Volatile Organic Compound

EXECUTIVE SUMMARY

This Annual Performance Monitoring Report (PMR) for the Dense Non-Aqueous Phase Liquid (DNAPL) Source Zone (DSZ) and Hot Spot 6 (HS 6) Air Sparge (AS) System presents the results of Year 12 operation of the hydraulic containment (HC) Interim Measure (IM), the results of performance monitoring direct-push technology (DPT) sampling and monitoring well sampling conducted in the DSZ, and the results of operations and performance sampling of the HS 6 AS IM at Launch Complex 34 (LC34), located at Cape Canaveral Space Force Station (CCSFS), Florida. Site-wide biennial LTM sampling was not conducted during this reporting period and is scheduled to be conducted in December 2022. The timeframe for activities documented in this PMR extends from April 1, 2021 to March 31, 2022. LC34 has been designated Solid Waste Management Unit CC054 under the Kennedy Space Center (KSC) Resource Conservation and Recovery Act Corrective Action Program.

The objective of the HC IM at LC34 is to contain the DSZ and deep dissolved-phase trichloroethene (TCE) high concentration plume via operation of a hydraulic containment system (HCS). The pre-IM design 300 micrograms per liter (µg/L) TCE groundwater contour was used to establish the deep zone capture area for deep recovery wells, and the shallow zone capture area was defined by the DSZ. The system began operating in 2010, and in 2015, the system was expanded to provide HC for areas within the 300 µg/L TCE groundwater isocontours of HS 3 and 4. In 2018 and 2019, an investigation was conducted to re-characterize the DSZ, which included investigating TCE mass in Layer 7. This data was subsequently used to optimize the pumping rates of the HCS to more adequately capture residual contaminant mass.

The operational period for Year 12 of the HCS was from April 1, 2021 to March 31, 2022. Operational runtime for the system was 94 percent during Year 12, with downtime events attributed to planned maintenance, system repairs, and power outages. As of March 31, 2022, a total of 285,712,801 gallons of groundwater containing 84,933 pounds of VOCs have been removed by the HCS. Influent concentrations of TCE have decreased since startup from approximately 280,000 µg/L (January 2010) to 12,000 µg/L (March 2022). During the reporting period, all effluent concentrations from the HCS (aqueous and vapor) were below regulatory reporting limits, indicating the system continues to operate as intended.

Performance monitoring was conducted in December 2021 within the DSZ to evaluate TCE contamination. Groundwater samples were collected via DPT at nine locations, consistent with previous events in 2017, 2018, 2019, and 2020. Full vertical profile sampling was completed at each DPT from 8 to 98 ft bls, at 5 foot intervals. The DPT performance monitoring results are summarized in this PMR. The results revealed TCE remains at concentrations greater than 11,000 µg/L in the DSZ (1-percent solubility, indicative of DNAPL) at eight of the nine DPT locations at depths ranging from 8 to 98 ft bls. An overall increasing trend of TCE concentrations was observed in DPT samples during this reporting period, which may be due to several recovery wells that were turned off during the AS Pilot Study in the DSZ that operated from July 2021 to February 2022 (documented separately from this report). The maximum TCE concentration in 2021 was 15,400,000 µg/L in the 58 ft bls depth interval at DPT597 (previous maximum result in 2020 was 1,690,000 at 48 ft bls at DPT596). During the 2021 DPT event, the overall majority of TCE contamination was identified in the 58 ft bls interval (below Layer 4), where in the previous year the majority of mass was observed in Layer 4. This trend appears to indicate continued mass discharge from Layer 4 (fine-grained unit). In addition to DPT sampling, monitoring well samples were collected from deep wells in the DSZ area (Layers 7 and 8) to verify vertical delineation. All monitoring well results were non-detect or below cleanup levels, with exception of one well (IW0162, screened 105 to 115 ft bls, which is below the existing recovery well capture zone) where TCE was identified above cleanup target levels.

The HS 6 AS system remained operational during the reporting period covered under this report. The HS 6 AS IM was initiated in 2018 with 160 AS wells, and expanded in 2019 with an additional 140 AS wells. Quarterly performance monitoring was reduced to semi-annual prior to this operational period. The results of the HS 6 system operation and semi-annual performance monitoring are summarized in this report. Semi-annual monitoring results collected in April and October 2021 show concentrations of contaminants of concern (cis-1,2-dichloroethene, trans-1,2-dichloroethene, and vinyl chloride) are generally decreasing and not impacting the surface water drainage canal, indicating the HS 6 IM is meeting objectives.

Overall, the tasks associated with Year 12 operation of the HC IM and operation of the HS 6 AS IM were performed in accordance with the recommendations of the 2020 LC34 (Year 11)

Operations, Maintenance, and Monitoring Report for DNAPL Source Zone, Site Wide Long-Term Monitoring, and Hot Spot 6 Air Sparging System PMR (NASA, 2021c). Evaluation of results from the HC IM and HS 6 IM show that these systems are operating as designed and meeting performance objectives.

The following items are recommended for Year 13 of operation of the HCS (April 1, 2022 through March 31, 2023):

- Continue site-wide LTM on a biennial frequency and conduct the next LTM event in December 2022.
- Continue operation of the HCS with the following actions:
  - Installation of a new recovery well , screened from 90 to 100 ft bls, in the vicinity of RW20C (screened 80 to 95 ft bls) to manage recent TCE detections in monitoring well, IW0162. Pumping rates will be tested and adjusted to maximize new recovery well influence and recovery;
  - Continued operation of the catalytic oxidizer for offgas treatment;
  - Monthly sampling of aqueous effluent from the air strippers, and liquid phase granular activated carbon when online;
  - Quarterly sampling of combined system influent and individual recovery well influent;
  - Annual vapor-phase sampling;
  - Annual sampling in the DSZ at the same nine DPT locations (DPT593 to DPT601) and depth intervals as the 2021 event; and
  - Annual sampling at 11 Layer 7/8 wells (IW0001D2, IW0042D2, IW0043D2, IW0044D2, IW0045D2, IW0160, IW0161, IW0162, IW0163, IW0164, IW0165).
- Continue operation of the HS 6 AS system with the following actions:

- Weekly inspection of flow meters, transmitters, and AS system components for leakage and excessive vibration, noise, or abnormal temperatures;
- Weekly inspection of oil levels and lubrication;
- Weekly inspection of condensate treatment systems and refrigerated air dryer;
- Assessment of differential pressure across filtration units and process equipment;
- Recording of system operational data and comparing data to design conditions and previous operating data;
- Repairing and cleaning equipment as needed;
- Routine maintenance and housekeeping as needed; and
- Semi-annual performance monitoring at the same 28 wells and three surface water locations as 2021.

The results and recommendations summarized in this PMR were presented to the KSC Remediation Team on June 28, 2022, and Team concurrence was received on the path forward.

SECTION I
INTRODUCTION

This Annual Performance Monitoring Report (PMR) for the Dense Non-Aqueous Phase Liquid (DNAPL) Source Zone (DSZ) and Hot Spot 6 (HS) 6 Air Sparge (AS) System presents the results of Year 12 operation of the hydraulic containment (HC) Interim Measure (IM), the results of performance monitoring direct-push technology (DPT) sampling and monitoring well sampling conducted in the DSZ, and the results of operations and performance sampling of the HS 6 AS IM at Launch Complex 34 (LC34), located at Cape Canaveral Space Force Station (CCSFS), Florida. This site has been designated Solid Waste Management Unit (SWMU) CC054 under the Kennedy Space Center (KSC) Resource Conservation and Recovery Act (RCRA) Corrective Action Program. This PMR was prepared by Tetra Tech, Inc., for the National Aeronautics and Space Administration (NASA) under Indefinite Delivery Indefinite Quantity Contract 80KSC019D0011-80KSC019F0067.

Site-wide Long-Term Monitoring (LTM) at LC34 is conducted on a biennial basis to evaluate the dissolved-phase low concentration plume (LCP) and high concentration plume (HCP) at the site. Site-wide biennial LTM sampling was not conducted during this reporting period and is scheduled to be conducted in December 2022.

The Year 12 operational period for the HC IM was from April 1, 2021 to March 31, 2022. The following activities were completed during Year 12 of the HC IM:

- Continued operation and maintenance (O&M) of the hydraulic containment system (HCS);
- Monthly sampling of primary and secondary air stripper effluent;
- Monthly sampling of the liquid-phase granular activated carbon (LPGAC) when online;
- Quarterly sampling of combined system influent, individual recovery well influent;
- Annual vapor-phase sampling (pre- and post-catalytic oxidation unit [CatOx] treatment);

- Performance monitoring of the HCS via groundwater sample collection at nine DPT locations and 11 monitoring well locations in the DSZ for volatile organic compound (VOC) analysis (Table 1-1).

The HS 6 IM AS system was implemented in 2018 to prevent plume expansion and migration into the drainage canal and to contain and remediate the HS 6 area located downgradient to the east of the HC IM at LC34. The HS 6 AS system is currently in the operational phase in accordance with the Implementation Work Plan (IWP) (NASA, 2017b) and expansion IWP (NASA, 2018). The second phase of HS 6 AS expansion is currently pending implementation (NASA, 2021b).

The following HS 6 IM activities were completed during the reporting period covered under this report:

- Semi-annual sampling of the HS 6 performance monitoring network, which includes 28 monitoring wells and three surface water locations (Table 1-1); and

- O&M of the HS 6 AS system.

1.1 BACKGROUND

LC34 is located at CCSFS in Section 6, Township 23 South, and Range 38 East, in the False Cape Quadrangle. CCSFS was previously named Cape Canaveral Air Force Station, with formal name change occurring in December 2020. LC34 is bordered to the north by Launch Complex 37, to the south by Launch Complex 20, to the west by ICBM Road (Samuel Phillips Parkway), and to the east by the Atlantic Ocean. The launch pad and associated facilities at LC34 were built in the late 1950s and used by NASA's Apollo Space Program for the launching of Saturn rockets from 1960 to 1968. The Apollo 1 tragedy occurred on the launch pad on January 27, 1967.

Historical information suggests that rocket engines and other parts were cleaned at the site using solvent degreasers, most notably trichloroethene (TCE). It is speculated that releases of solvents occurred during cleaning operations through both intentional and unintentional discharges to nearby areas. Based on groundwater and soil sampling data, these releases occurred primarily in

the immediate vicinity of the former Engineering Support Building (ESB) located southwest of the Blockhouse and identified on Figure 1-1. Since shutdown of the launch pad in 1968, LC34 has remained largely inactive, although several site features (e.g., Blockhouse, camera pad, etc.) are still present. Most operational equipment (service towers, fuel storage tanks, piping, etc.) has been dismantled, and the majority of previous on-site buildings and structures were abandoned in place. Native and invasive vegetation has overgrown the majority of the site, and dense wooded areas currently surround the site. Figure 1-1 shows the site location and major site features.

1.2 SITE CHARACTERIZATION

Beginning in 1993, a number of site investigations, engineering studies, and pilot-scale in-situ remedial technology demonstrations were conducted at LC34. Extensive soil and groundwater contamination was identified and characterized during these investigations into seven HS areas (Figure 1-2). Chlorinated compounds TCE, cis-1,2-dichloroethene (cDCE), trans-1,2-dichloroethene (tDCE), and vinyl chloride (VC) are the primary contaminants of concern (COCs) and have been detected at trace to high concentrations in groundwater and soil. TCE is also present as a DNAPL in the ESB area, and is currently being contained by the HCS.

The majority of the mass of TCE at LC34 is present upgradient (west) of HS 6 within the DSZ. The overall mass of TCE released at the site is unknown. Modeling performed in 2005 estimated the mass of TCE DNAPL at the time as 40,500 pounds in the shallow zone (0 to 50 feet [ft] below land surface [bls]) and an additional 33,300 pounds in the lower zone (50 to 120 ft bls) of the surficial aquifer. In 2019, data collected in support of the source area re-characterization study indicated the approximate total TCE mass has been reduced to 32,000 pounds. At HS 6, the TCE daughter products cDCE, tDCE and VC are the primary COCs. The tDCE results only exceeded State of Florida Groundwater Cleanup Target Levels (GCTLs) and cDCE and VC were the only constituents that exceeded Florida Department of Environmental Protection (FDEP) Natural Attenuation Default Concentrations (NADCs), representing 1,500 pounds and 430 pounds, respectively. Currently, the extent of the overall groundwater contaminant plume where COCs exceed GCTLs is approximately 322 acres. Within the overall plume, the hydraulic capture zone currently covers approximately 10 acres and the HS 6 treatment area is approximately 14.4 acres.

1.3 LITHOLOGY

Subsurface materials have been subdivided into nine facies (layers) in the LC34 area. Layers 1, 2, 3, 6, and 8 are considered the primary water-transmitting units in the site area and are the focus of the LTM and performance monitoring program. The lithologies of Layers 1 through 8, illustrated on Figure 1-3, are as follows:

Layer 1 – tan/gray fine sand with shell fragments (approximately 25 feet thick from 0 to 25 ft bls);

Layer 2 – gray silty clayey fine sand (approximately 5 feet thick from 25 to 30 ft bls);

Layer 3 – gray silty fine sand with shell fragments (approximately 12 to 15 feet thick from 30 to 45 ft bls);

Layer 4 – (shallow confining unit) – greenish gray sandy clay unit (less than 1 to 5 ft thick from 45 to 50 ft bls);

Layer 5 – medium to coarse sand with shell fragments (approximately 12 to 15 feet thick from 50 to 65 ft bls);

Layer 6 – gray fine to medium “salt and pepper” sand (approximately 15-20 feet thick from 65 to 80-85 ft bls);

Layer 7 – fine silty gray sand with abundant shell fragments (approximately 15-20 feet thick from 80-85 to 100 ft bls); and

Layer 8 – fine to coarse sand with shell fragments (approximately 20 feet thick from 100 to 120 ft bls).

The Hawthorn Group (Layer 9), which directly underlies the lower sand unit (Layer 8) and ranges from 120 to 140 ft bls, is a thick green sandy clay and is considered a regional confining unit.

1.4 SITE HISTORY

This section provides a summary of investigation activities, documents, and Engineering Evaluation (EE) Process and reports for LC34. LC34 was transitioned into the EE Multi-Step Process following installation of the original HC IM in 2008. The EE Multi-Step Process includes Site Characterization (formerly referred to as Step 1), Remedial Alternatives Evaluation (RAE) (formerly referred to as Step 2), IM Design and Implementation (formerly referred to as Step 3), and IM Optimization and Monitoring (formerly referred to as Step 4), and the results of these steps are presented as advance data packages (ADPs) at KSC Remediation Team (KSCRT) Meetings. The EE Process is being used to address groundwater contamination at LC34 and allows input from all KSCRT members for confirmation of contaminated groundwater delineation, evaluation of remedial technologies, review of preliminary designs, and evaluation and optimization of remediation systems following installation and operation. Site activities and document submittals are summarized in the following sections.

1.4.1 RCRA FACILITY INVESTIGATION. The RCRA Facility Investigation (RFI) Report for LC34 was submitted in 1999 and included human health and ecological risk assessments (NASA, 1999).

1.4.2 RCRA FACILITY INVESTIGATION ADDENDUM. The RFI Report Addendum for LC34, prepared in July 2003, summarized remediation demonstration projects conducted at the site by the Interagency DNAPL Consortium and RFI Addendum activities conducted in 2002 and 2003 (NASA, 2003). Six demonstration projects were performed at LC34 using the following technologies: chemical oxidation, Six-Phase Heating™, steam injection, emulsified zero-valent iron, bioaugmentation, and sequential oxidation/enhanced bioremediation. RFI Addendum field activities included collection of membrane interface probe (MIP) data, soil cores, groundwater level measurements, and groundwater samples.

1.4.3 CORRECTIVE MEASURES STUDY REPORT. The Corrective Measures Study (CMS) identified and evaluated potential remedial technologies based on existing site conditions and contamination identified during RFI and RFI Addendum activities. The selected alternative was hydraulic containment of the DSZ and TCE HCP, monitored natural attenuation (MNA)

with IMs in the HCP, and MNA of the LCP (NASA, 2007). The HCP has concentrations of COCs greater than FDEP NADCs, and the LCP has concentrations of COCs greater than GCTLs.

1.4.4 INTERIM MEASURE DESIGN. The design details for the proposed IM remediation system were provided in the 2008 LC34 Interim Measures Design for Hydraulic Containment of the DNAPL Source Zone and Deep TCE Groundwater Plume (NASA, 2008). Additional assessment activities, including MIP and DPT sampling, were conducted in 2008 to refine the horizontal and vertical extent of TCE contamination in the vicinity of the ESB. The deep zone results were used to determine the limits of the capture area for the proposed HCS.

1.4.5 HOT SPOT 1 SITE CHARACTERIZATION ADP. The HS 1 Site Characterization for LC34, presented at the April 2009 KSCRT Meeting, summarized field investigations conducted to delineate the TCE plume to the NADC (300 micrograms per liter [µg/L]). MIP results, cone penetrometer test (CPT) and lithology data, and DPT and monitoring well sampling results were included in the Site Characterization. Team consensus was reached to install a monitoring well screened from 70 to 80 ft bls in the area of well cluster IW0002, to install piezometers within the capture zone in Layer 5, and to conduct a slug test in the area of the IW0002 well cluster. Team consensus was also reached on the alternatives for the RAE, which included bioremediation, thermal treatment, large-diameter augering, and excavation (Meeting Minute 0904-M4, Decisions 0904-D09 through D12).

1.4.6 INTERIM MEASURE WORK PLAN. The DSZ Interim Measure Work Plan (IMWP) presented the activities required to install, operate, and monitor the HC IM (NASA, 2009b).

1.4.7 HOT SPOT 1 SITE CHARACTERIZATION ADDENDUM. The HS 1 Site Characterization Addendum presented at the October 2009 KSCRT Meeting summarized follow-up field activities completed as proposed at the April 2009 meeting. Slug testing was performed at four Layer 5 monitoring wells. Team consensus was reached to proceed with an Environmental Security Technology Certification Program pilot study to evaluate bioremediation with a partitioning electron donor (PED) in HS 1, beginning with preparation of an IMWP (Meeting Minute 0910-M11, Decision 0910-D34).

1.4.8 HOT SPOT 2 PERFORMANCE MONITORING ADP. A Performance Monitoring ADP was presented at the July 2010 KSCRT Meeting to summarize IM activities conducted since startup of the HCS on December 7, 2009. At the time of the presentation, due to an involved troubleshooting phase, the system had only been operational 65 percent of the time since startup, increasing to an operational runtime of 80 percent following troubleshooting. The treatment system was installed to treat influent groundwater at a peak flow rate of 50 gallons per minute (gpm). The primary components included groundwater recovery via three shallow (screened interval of 15 to 45 ft bls) and six deep recovery wells (screened interval of 50 to 80 ft bls) for DSZ and deep TCE plume containment, primary treatment via air stripping, air stripper offgas treatment via catalytic oxidation, and treated groundwater discharge to an infiltration gallery and 12 deep injection wells (screened interval of 50 to 80 ft bls). The approved path forward was to install piezometers where performance monitoring data gaps were present; perform a hydraulic capture study in Layers 1, 2, 3, and 6 using pressure transducers; adjust pumping rates to increase hydraulic capture; install additional extraction wells (as needed); and test the use of condensate from the quench as an acid source to lower pH in the air stripper aqueous effluent.

1.4.9 INTERIM MEASURE COMPLETION REPORT. The LC34 HC IM Completion Report, dated April 2011, presented the activities associated with implementation of the HS 2 IM, including construction, commissioning, and startup (NASA, 2011a).

1.4.10 HOT SPOTS 3 AND 4 SITE CHARACTERIZATION ADP. The HSs 3 and 4 Site Characterization ADP for LC34, presented at the December 2011 KSCRT Meeting, summarized delineation of TCE contamination to the NADC (300 µg/L), MIP results, CPT, and lithology data, and DPT and monitoring well sampling results. Team consensus was reached to install monitoring wells in HS 4 to evaluate TCE concentrations exceeding the NADC in the 6- to 10-foot and 11- to 15-foot bls intervals. Additionally, Team consensus was reached to evaluate expanding the HCS as an optimization in the Performance Monitoring ADP, without first preparing an RAE and IMWP for HSs 3 and 4 (Meeting Minute 1112-M14, Decisions 1112-D20 and D21).

1.4.11 HOT SPOT 1 INTERIM MEASURES IMPLEMENTATION ADP. The HS 1 IM Implementation ADP for the PED demonstration was presented at the December 2012 KSCRT Meeting. The PED demonstration was the first field implementation using n-butyl acetate (nBA), and the PED was successfully injected into the low-permeability zone. During the pilot test, over 1 million gallons of groundwater were recirculated, with an approximately 92-percent reduction in the mass of chlorinated volatile organic compounds (CVOCs) observed in two recovery wells after 12 months of operation. Team consensus was reached to collect groundwater samples in March 2013 at BW-01B, BW-01C, and BW-01D for analysis of CVOCs, nBA, and methane, ethane, and ethene to evaluate the potential for a second injection event (Meeting Minute 1212-M4, Decision 1212-D5).

1.4.12 PUMPING OPTIMIZATION AND HOT SPOTS 3 AND 4 EXPANSION ADP. The Pumping Optimization and HSs 3 and 4 Expansion ADP, presented at the March 2013 KSCRT Meeting, described a proposed IM pumping optimization and HCS expansion to address HSs 3 and 4. The presentation also included results from a MIP investigation performed to evaluate contaminant magnitude and a hydraulic profiling tool (HPT) investigation performed to evaluate hydraulic permeability variations. The results of the MIP and HPT investigations were correlated to distinguish mobile and stored mass signatures within the HC zone, particularly within the DSZ, and to provide pumping optimization recommendations. Team consensus was reached on recovery well optimizations at select wells, including adjusting of pump intake invert elevations and isolating screened intervals via water-inflated packers (Meeting Minute 1303-M3, Decision 1303-D9). For the HCS expansion, Team consensus was reached for modification and retrofitting of the treatment system, proposed recovery well locations, pumping rates, and expansion construction plans (Meeting Minute 1303-M4, Decisions 1303-D10 through D14). Of note, HS 4 is no longer within the current HCS capture zone boundary (see Figure 1-2). This is because of the reduction of TCE concentrations in HS 4 over the years and the resulting optimization of the HCS pumping scheme.

1.4.13 HYDRAULIC CONTAINMENT EXPANSION IMPLEMENTATION WORK PLAN. The Hydraulic Containment Expansion Implementation Work Plan described the activities for expansion of the existing HCS to HSs 3 and 4 in the shallow surficial aquifer and

additional source zone recovery in the deep surficial aquifer. The expansion included seven new shallow recovery wells and one deep recovery well, 11 new monitoring wells, and installation of infrastructure and treatment equipment required to accommodate expansion of the hydraulic containment footprint (NASA, 2014).

1.4.14 HYDRAULIC CONTAINMENT EXPANSION CONSTRUCTION COMPLETION ADP. The LC34 Hydraulic Containment IM Expansion Construction Completion ADP, dated September 2015, presented the activities associated with implementation of the expansion of the HC IM, including installation of new recovery wells, installation of packers in selected recovery wells, installation of a new air stripper, refurbishment of the catalytic oxidizer, commissioning, and startup (Meeting Minute 1509-M05 and NASA, 2015).

1.4.15 HOT SPOT 6 AREA OF INVESTIGATION SITE CHARACTERIZATION ADP. The HS 6 Area of Investigation Site Characterization ADP dated December 2016, summarized delineation, and refinement of the TCE, cDCE, and VC HCPs and HS downgradient of HS 1 using DPT and monitoring well sampling results. Team consensus was reached to collect additional samples at depth at DPT418 and surface water samples from the drainage canal within HS 6 (Meeting Minute 1612-M2, Decisions 1612-D2 through D4).

1.4.16 HOT SPOT 6 AREA IMPLEMENTATION WORK PLAN. The Implementation Work Plan for HS 6, dated November 2017, describes the AS system installed to remediate contaminated groundwater within the treatment zone and support transition to MNA (NASA, 2017b).

1.4.17 HOT SPOT 6 AREA EXPANSION IMPLEMENTATION WORK PLAN. The Implementation Work Plan for HS 6 Expansion, dated October 2018, describes the AS system expansion installed to remediate contaminated groundwater within the treatment zone and support transition to MNA (NASA, 2018).

1.4.18 2018 OPERATIONS, MAINTENANCE AND MONITORING REPORT AND HOT SPOT 6 CONSTRUCTION COMPLETION REPORT. The 2018 Operations, Maintenance, and Monitoring Report (OMMR) and Hot Spot 6 Construction Completion Report (CCR), dated June 2019, describes the Year 9 operation and performance monitoring of the HCS, results of the

biennial long-term monitoring event and provides construction completion details for the HS 6 AS system, which was installed in two stages. Construction of the initial stage of the HS 6 AS system included the installation of 160 AS wells and 11 monitoring wells between February 19, 2018 and July 7, 2018. The initial system operated from July 9, 2018 through January 7, 2019, when it was shut down for the expansion. Construction for the expanded AS system was conducted from November 9, 2018, through April 2, 2019. An additional 140 AS wells and 14 monitoring wells were installed (NASA, 2019a). The expanded system was fully operational in May 2019.

1.4.19 HOT SPOT 5 SITE CHARACTERIZATION ENGINEERING EVALUATION ADP. The HS 5 Site Characterization ADP, dated June 2019, summarized delineation of the cDCE and VC HS located downgradient (south-southwest) of the DSZ using DPT sampling results, as well as HCP and LCP conditions along and to the south of Phillips Parkway. Team consensus was reached that HS 5 was adequately delineated horizontally and vertically, and to also implement a HS 5 air sparge barrier wall north of Phillips Parkway (Meeting Minute 1906-M12, Decisions 1906-D70 and D71).

1.4.20 SOIL INTERIM MEASURE REPORT. The Soil Interim Measure Report, dated January 2019, describes the removal of soils contaminated with polychlorinated biphenyls (PCBs), dioxins/furans, and total recoverable petroleum hydrocarbons from 20 different areas around the site. No Further Action was approved for all 20 areas (NASA, 2019c).

1.4.21 HYDRAULIC CAPTURE SYSTEM INVESTIGATION WORK PLAN. The HCS Investigation Work Plan dated June 2019, describes the activities proposed to re-characterize the DSZ, to include investigating and delineating TCE in the Layer 7 lithologic zone. The activities included soil and groundwater sampling at discrete depth intervals to delineate TCE, installation of monitoring wells in the source area and a pump test to determine the effectiveness of the HCS in Layer 7 (NASA, 2019b).

1.4.22 DSZ SITE CHARACTERIZATION ENGINEERING EVALUATION ADP. The DSZ Site Characterization Engineering Evaluation ADP, dated October 2019, presented the results of the HCS Investigation including site characterization sampling, TCE delineation, well

installation and sampling, updated mass calculations, results of the Layer 7 aquifer testing and HCS revised pumping rates. During the DSZ site characterization, a Layer 7 recovery well was installed (RW17C screened from 80 to 95 ft bls). Six monitoring wells (IW0160 through IW0165, screened from 105 to 115 ft bls) were installed in Layer 8 in the source area outside the TCE >11,000 µg/L area. Team consensus was reached that TCE is adequately delineated in the source area and the path forward includes the preparation of an RAE to evaluate the next phase of the treatment train (Meeting Minute 1910-M02, Decision 1910-D02-D22).

1.4.23 ELECTRICAL SUBSTATION T-2 AREA SOIL INTERIM MEASURE REPORT. The Soil Interim Measure Report, dated January 2020, describes the sampling and removal of PCB-contaminated soil and concrete in the area of a former electrical substation located along the southeast side of the LC34 launch pad. A monitoring well was installed in this area (IW0122) and groundwater sampling for PCBs was incorporated into the site's biennial long-term monitoring program (NASA, 2020a).

1.4.24 REMEDIAL ALTERNATIVES EVALUATION AND DNAPL SOURCE ZONE AIR SPARGE PILOT STUDY WORK PLAN. A DSZ RAE Discussion and Pilot Study was presented to the KSCRT in the October 2020 meeting. The plume within the DSZ was compared between the 2019 Site Characterization to the historical plume in 2009. It was concluded that the DSZ was relatively the same size, perhaps slightly larger, different configuration, and that it extended into Layer 7. In addition, mass calculations showed that a majority of the mass was trapped within the fine-grained units, Layer 4, and Layer 7. The on-going RAE was discussed to determine the next implementable step for the treatment train for the DSZ. The preliminary alternatives presented included large-diameter auger with steam and zero-valent iron, in-situ thermal treatment, pump-and-treat with microbial amendments, and expansion of the HCS to control Layer 7. A Pilot Study was developed to determine the feasibility of using AS as a technology to treat groundwater contamination, within and below, confining lithology units. Consensus was reached to conduct the AS Pilot Study with a Work Plan developed and submitted for review (Meeting Minute 2010-M4, Decisions 2010-D8). The DSZ Air Sparging Pilot Study Work Plan (NASA, 2021a) included details of the Pilot Study design, which included installation of AS wells at various depths between 43 and 82 ft bls, installation of piezometers,

vapor monitoring points, and vertical distribution columns, to collect data in support of determining whether AS is a viable alternative to treat mass in the fine-grained units. The Work Plan was submitted and approved by FDEP in April 2021. The Pilot Study operated between July 2021 to February 2022, which consisted of seven tests to evaluate goals and objectives for determining if AS should be included as a viable technology for the RAE. Results are scheduled to be presented to the KSCRT in Fall 2022, and documented in a separate report.

1.4.25 HOT SPOT 6 AREA EXPANSION PHASE 2 IMPLEMENTATION WORK PLAN.

The Hot Spot Area 6 Expansion – Phase Two Implementation Work Plan, dated January 2021 (NASA, 2021b), describes the design of an expanded area of the HS 6 AS system. The design includes installation of 76 AS wells to depths of approximately 35 ft bls, to remediate contaminated groundwater within a 4-acre area located north of the existing HS 6 treatment area. The expansion targets “hot spot” concentrations of cDCE and VC. Elements of the implementation work plan were presented during the December 2020 KSCRT meeting, and consensus was reached to proceed with development of the work plan and implement the project. The Hot Spot Area 6 Expansion – Phase Two Implementation Work Plan was approved by FDEP on June 18, 2021.

Implementation of the expansion was delayed while the U.S. Fish and Wildlife Service reviewed information regarding threatened and endangered species at LC34. Planning for the next expansion proceeded, and in May 2022 the FDEP was briefed on the additional expansion that would include 116 air sparge wells and 10 performance monitoring wells over an area of 5.7 acres. FDEP concurred with proceeding without an additional Implementation Work Plan on the condition that the further expansion will be documented with as-builts in the Construction Completion Report. The proposed additional expansion was documented in a revised ADP dated March 2022. Once the HS6 AS expansion is operational, operation, maintenance, and monitoring (OM&M) and performance data will be incorporated into LC34 Annual PMRs.

1.5 PURPOSE

The purpose of this PMR is to present various activities conducted at LC34 during the Year 12 operational period of the HC IM (April 1, 2021 – March 31, 2022). The activities discussed in

this PMR include operation of the HCS and performance monitoring of the HCS IM, and O&M and performance monitoring of the HS 6 AS System IM.

Table 1-1. LC34 Sitewide Sampling Plan for 2021

Sample Location (LC34-)	Sampling Function		
	Biennial LTM[(1)]	Semi-annual HS 6 PM	Annual HCS PM
CW0002	X		
IW0001D2			X
IW0004S	X		
IW0005S	X		
IW0006I	X		
IW0009S	X		
IW0009I	X		
IW0010SR	X		
IW0010IR	X		
IW0011S	X		
IW0013I	X		
IW0014IR	X		
IW0018I	X		
IW0021I	X		
IW0022I	X		
IW0023I	X		
IW0024S	X		
IW0024I	X		
IW0025S	X		
IW0029S	X		
IW0029I	X		
IW0031I	X		
IW0032S	X		
IW0033I	X		
IW0036I	X		
IW0037S	X		
IW0037I	X		
IW0039I	X		
IW0042D2			X
IW0043D2			X
IW0044D2			X
IW0045D2			X
IW0051S	X		
IW0051I	X		
IW0054S	X		
IW0055I	X		
IW0057S		X	
IW0057I		X	
IW0058S	X		
IW0059S	X		

Table 1-1. LC34 Sitewide Sampling Plan for 2021 (Continued)

Sample Location (LC34-)	Sampling Function		
	Biennial LTM[1]	Semi-annual HS 6 PM	Annual HCS PM
IW0059I	X		
IW0061I	X		
IW0062I	X		
IW0063S	X		
IW0063I	X		
IW0064S	X		
IW0064I	X		
IW0074S	X		
IW0095	X		
IW0096	X		
IW0097	X		
IW0098	X		
IW0099	X		
IW0100	X		
IW0101	X		
IW0102	X		
IW0103	X		
IW0104	X		
IW0105	X		
IW0106	X		
IW0107	X		
IW0108		X	
IW0109	X		
IW0110	X		
IW0122[2]	X		
IW0123		X	
IW0124		X	
IW0125		X	
IW0126		X	
IW0127		X	
IW0128		X	
IW0129		X	
IW0130		X	
IW0131		X	
IW0132		X	
IW0133		X	
IW0134		X	
IW0135		X	
IW0136		X	
IW0137		X	

Table 1-1. LC34 Sitewide Sampling Plan for 2021 (Continued)

Sample Location (LC34-)	Sampling Function		
	Biennial LTM[(1)]	Semi-annual HS 6 PM	Annual HCS PM
IW0138		X	
IW0139		X	
IW0140		X	
IW0141		X	
IW0142		X	
IW0143		X	
IW0144		X	
IW0145		X	
IW0146		X	
IW0147		X	
SW1001		X	
SW1002		X	
SW1004		X	
IW0160			X
IW0161			X
IW0162			X
IW0163			X
IW0164			X
IW0165			X
DPT0593			X
DPT0594			X
DPT0595			X
DPT0596			X
DPT0597			X
DPT0598			X
DPT0599			X
DPT0600			X
DPT0601			X

Note:

Samples are analyzed for VOCs by EPA Method 8260B.

1 - Biennial wells are shown for reference, but were not sampled during this reporting period, the next biennial sampling event is December 2022.

2 - well IW0122 is only analyzed for PCBs by Method 8082 to monitor the T2 Area.

Annual sampling occurred in December 2021.

Semi-annual sampling occurred in April and October 2021.

At each DPT location 19 depth intervals are sampled; from 8 to 98 ft bls.

FIGURE 1-1 SITE LOCATION MAP
LAUNCH COMPLEX 34, CAPE CANAVERAL SPACE FORCE STATION, FLORIDA

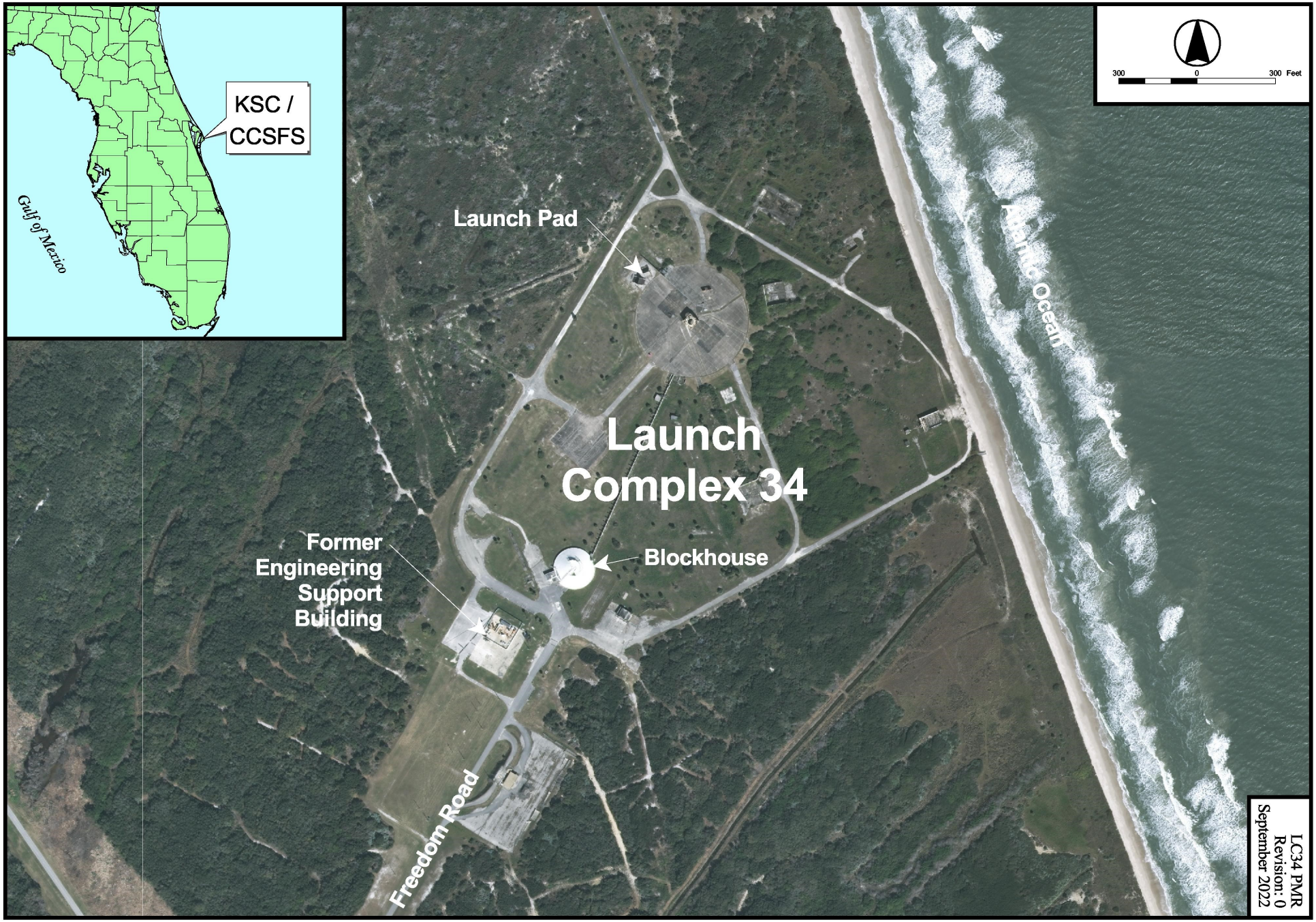


FIGURE 1-2 LC34 HOT SPOT LOCATIONS
LAUNCH COMPLEX 34, CAPE CANAVERAL SPACE FORCE STATION, FLORIDA

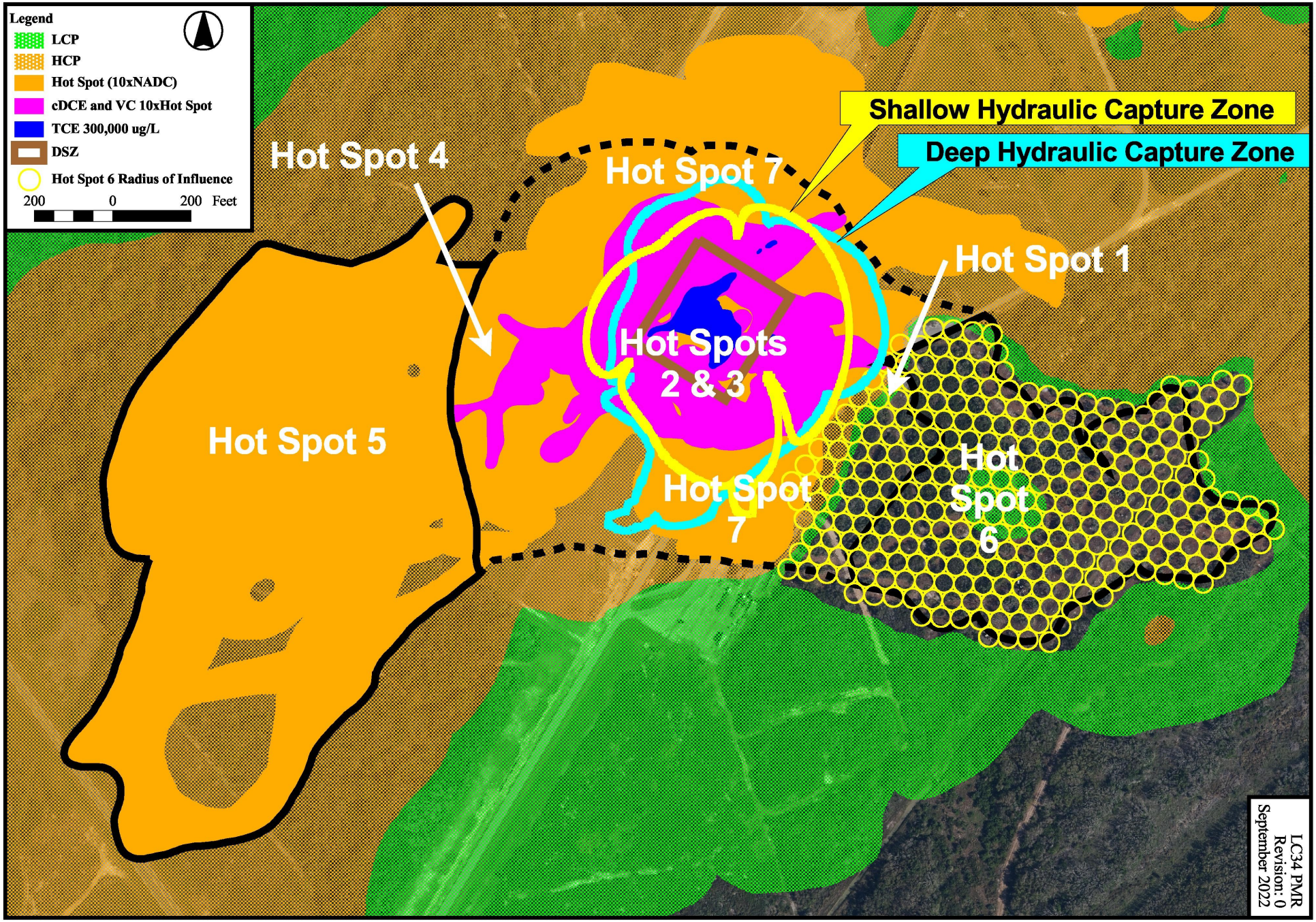
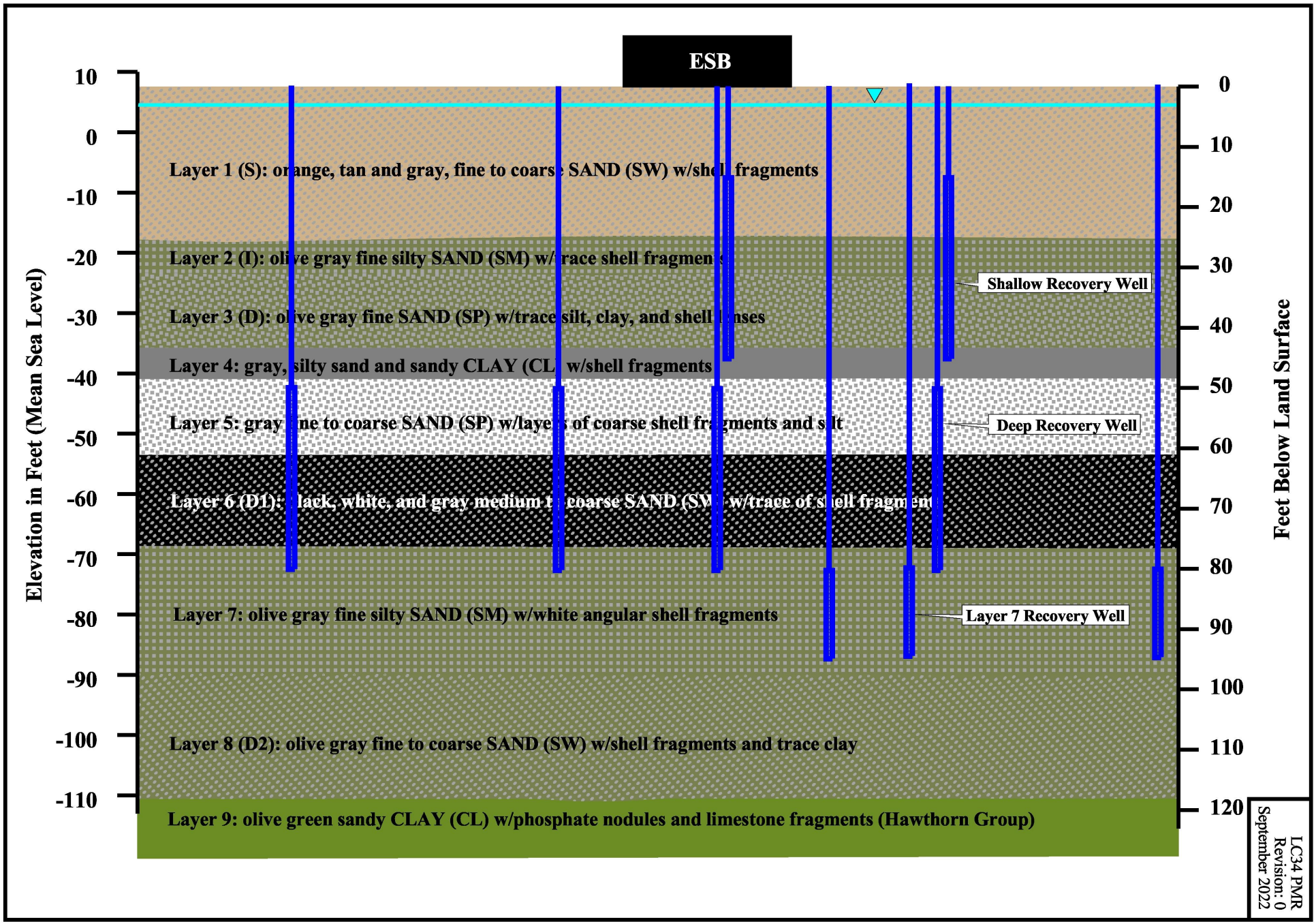


FIGURE 1-3 LITHOLOGY
LAUNCH COMPLEX 34, CAPE CANAVERAL SPACE FORCE STATION, FLORIDA



LC34 PMR
Revision: 0
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SECTION II
HCS IM OPERATIONS, EVALUATION, AND PERFORMANCE MONITORING

This section summarizes the performance of the HCS during this reporting period (April 1, 2021, to March 31, 2022) and discusses the performance monitoring sampling results for the overall HC IM. System performance includes evaluation of system runtime, system sampling results, condition of process components, and volume and mass recovery. Sampling logs and field documentation are provided in Appendix A.

2.1 INTERIM MEASURE OBJECTIVES

The primary objective of the HC IM is to contain the shallow DSZ and deep dissolved-phase TCE HCP via operation of the HCS. The pre-IM design 300 µg/L TCE groundwater contour was used to establish the deep zone capture area for deep recovery wells, and the shallow zone capture area was defined by the DSZ. In 2015, the original system providing hydraulic containment in the HS 2 area was expanded to provide hydraulic containment of HS 3 and 4. The expanded containment system includes areas within the 300 µg/L TCE groundwater isocontours of HSs 3 and 4. Secondary IM objectives include maintaining treatment standards for aqueous and air discharges, maintaining system equipment to sustain plume containment, and maximizing contaminant mass removal.

2.2 HCS OVERVIEW

The following sections provide an overview of the treatment process of the HCS. Sections 2.2.2 and 2.2.3 give a summary of modifications to the process components and O&M procedures during the lifetime of the system including any changes made during this reporting period.

2.2.1 PROCESS DESCRIPTION. This section provides a process description of the LC34 HCS, as operated at the end of this reporting period. The HCS layout is shown on Figure 2-1. The piping and instrumentation diagrams are provided in Figures 2-2 through 2-4.

Groundwater is extracted from eight shallow zone recovery wells (RW01A, RW02A, RW03A, RW09A, RW12A, RW13A, RW14A, and RW15A), five deep zone recovery wells (RW01B,

RW02B, RW03B, RW05B, and RW16B), and four Layer 7 zone recovery wells (RW17C, RW18C, RW19C, and RW20C). The shallow and deep recovery wells each use a dedicated, single-phase, 240-volt, 0.75-horsepower (hp), electric, submersible pump. The Layer 7 recovery wells use a submersible compressed air-driven pump (AP4 AutoPump manufactured by QED). The pumping rates for the recovery wells have changed over the course of the project based on concentrations and mass recovery. The most recent change to the flow rate was during the Pilot Study when RW1A, 1B, 3A, and 3B were shut off between July 2021 and February 2022. Subsequently, the flow rate on RW2A, 9A, 12A, 13A, 14A, 15A, 16B was maximized to achieve a flow rate of 75 gpm. Following the pilot study, the system was returned to normal operation.

Pumps in each recovery well convey contaminated groundwater (influent) to the treatment system located on the former ESB concrete slab. Flow rates of extracted fluids from individual recovery wells are individually totalized prior to being manifolded. Two 25-micron bag filters, plumbed in parallel arrangement, remove sediment from the water prior to entry into a 500-gallon, 304-stainless-steel, double-walled, equalization tank. A chemical metering pump doses groundwater from the equalization tank with a biodispersant in 15-minute dosage cycles every 8 hours to prevent biological accumulation within treatment system components.

A three-phase, 240-volt, 1.5-hp, pump transfers groundwater from the equalization tank into the primary horizontal four-tray air stripper that strips most of the CVOCs from groundwater into the vapor phase. The air strippers are equipped with a three-phase, 240-volt, 20-hp blower rated for 600 standard cubic feet per minute (scfm) that conveys atmospheric air into the secondary air stripper, which then flows into the primary air stripper. Treated groundwater is pumped from the primary air stripper sump to the secondary horizontal four-tray air stripper via a three-phase, 240-volt, 1.5-hp, transfer pump where most if not all of the remainder of the CVOCs are removed from the liquid into the vapor phase. The treated water from the secondary air stripper sump is pumped by a three-phase, 240-volt, 7.5-hp, transfer pump through two 50-micron bag filters plumbed in parallel. The treated water is then pumped through two available 1,500-pound LPGAC vessels in series to provide secondary treatment, when necessary. The water is then discharged into 12 deep zone injection wells and an infiltration gallery consisting of two 300-foot-long infiltration gallery laterals. Treated groundwater is metered and injected into the 12

injection wells at flow rates of 2 gpm per well at pressures less than 5 pounds per square inch (psi), and the remaining flow is discharged to the infiltration gallery located southeast of the ESB area.

Moisture in the CVOC-laden primary air stripper exhaust is removed via a moisture separator. Moisture condensate accumulated in the moisture separator is pumped via a three-phase, 240-volt, 0.5-hp, centrifugal, transfer pump into the equalization tank. Following moisture separation, the exhaust air undergoes treatment via a CatOx rated for an air flow of 600 scfm. The unit contains a 50 percent efficient air-to-air heat exchanger, a three-phase, 480-volt, 112-kilowatt, air heater with a watt density of 29 watts per square inch, and specialized catalyst media for destruction of CVOCs. A quench tower reduces the air temperature of the CatOx discharge to less than 130 degrees Fahrenheit (°F) by injecting a fine droplet water aerosol. An acid gas scrubber neutralizes the acidic process stream generated during oxidation of CVOCs in the CatOx. As part of the acid gas scrubbing process, 20-percent sodium hydroxide (NaOH) is injected into a recirculation line via a chemical metering pump connected to a 3,000-gallon double-walled storage tank. The chemical metering pump is controlled by a pH sensor and controller that adjusts the NaOH dosage rates to maintain a near neutral pH within the scrubber sump. Quench and scrubber makeup water is provided via CCSFS potable water service. A 2,000-gallon reservoir tank and booster pump provide continuous flow (3 to 4 gpm) and pressure (60 psi) to the quench and scrubber makeup water feeds. Process water from the air scrubber blow-down is discharged into the infiltration gallery at an average rate of 3 to 4 gpm.

2.2.2 SUMMARY OF COMPONENT MODIFICATIONS. This section gives an overview of the changes to the HCS process components. The original system was built in 2009 and full-scale O&M began in May 2010. In February 2015, the system was expanded which added seven shallow recovery wells (RW09A through RW015A) screened 15 to 45 ft bls and one deep recovery well (RW016B) screened 50 to 80 ft bls, removed the air stripper and installed two new air strippers, removed the DNAPL separator, replaced the control system with Siemens Human Machine Interface (HMI)/Programmable Logic Controller (PLC), and the CatOx was refurbished with refurbished metal housing and a new catalyst module. The system was operated without significant modification between 2015 and 2019. In August 2019, a new recovery well (RW17C) screened

from 80 to 95 ft bls was installed which started extracting groundwater at 1 gpm from Layer 7. During the initial startup of RW17C, the two 1,500-pound LPGAC vessels were returned online from August 2019 to November 2019 to ensure system effluent met GCTLs. In January 2021, three additional recovery wells were installed (RW18C, 19C, 20C) in Layer 7 with the same screen interval as RW17C. The LPGAC vessels were operated during startup of these recovery wells and have since operated through March 2022.

2.2.3 SUMMARY OF O&M MODIFICATIONS. This section gives an overview of the changes to the O&M schedule. Further details related to the original commissioning, startup, and prove-out of the system are provided in the 2010 Annual Groundwater Monitoring and Interim Measure Performance Report (NASA, 2011b), and details related to the commissioning, startup, and prove-out of the expanded system are provided in the 2015 CCR (NASA, 2015). The O&M phase initially involved weekly influent and effluent sampling and daily system monitoring. The system sampling frequency transitioned to monthly after the September 22, 2010 sampling event, and this frequency was maintained during 2011 and 2012 O&M activities. Team consensus was reached at the May 2013 KSCRT Meeting to reduce the system influent and air stripper effluent sampling frequencies to quarterly (Meeting Minute 1305-M10, Decision Item 1305-D27). The system was shut down on February 10, 2015, for expansion and modification and startup of the modified system began in May 2015, and full-scale treatment was resumed on June 15, 2015. After resumption, quarterly influent and effluent sampling continued until the November 2017 increase in overall flow rate to 83 gpm, after which sampling of air stripper effluent was conducted monthly. The recovery wells installed in Layer 7 (RW17C, 18C, 19C, 20C) are also sampled monthly, as opposed to quarterly with the rest of the recovery wells. Since installation of the Layer 7 recovery wells, the LPGAC effluent has been sampled on a monthly frequency as well.

Since the HCS came online in 2010, the boundaries of the deep and shallow capture zones have changed over time based on expansion and optimization. The capture zones are continually optimized to ensure IM objectives are met and mass removal is maximized. Of note, HS 4 is no longer within the current HCS capture zone boundaries. This is because of the reduction of TCE concentrations in HS 4 over the years and the resulting optimization of the HCS pumping

scheme. Currently, the 1-year capture zones cover about 7.8 acres (shallow) and 9.5 acres (deep). The Layer 7 recovery wells have an estimated radius of influence of 25-feet, which is based on initial modeling efforts of RW17C.

2.3 YEAR 12 OPERATIONAL PERFORMANCE

This section presents operational performance of the HCS during the reporting period, which represents Year 12 of system operation. System operational data are recorded on a weekly basis and used to evaluate performance parameters such as treated volume. Table 2-1 presents the system operational data recorded during the reporting period.

System down time is recorded for periods where the system is not operating due to planned and unplanned circumstances. System runtime (i.e., system availability) is then calculated relating the down time to the total possible runtime of the system. Table 2-2 presents the system runtime data for Year 12. From April 1, 2021 to March 31, 2022, the system availability was 94 percent, which is higher than the normal operating range when compared to historical system runtimes. Minor downtime events occurred throughout the reporting period including planned maintenance, system repairs due to wear and tear, and power outages. Any significant maintenance activities are listed in Table 2-3 where the issue and resolution are specified for the affected process component.

2.4 YEAR 12 TREATMENT PERFORMANCE

System sampling results are discussed in this section. The treatment system monitoring plan is provided in Table 2-4. Samples are collected from the aqueous and vapor treatment processes of the HCS. Aqueous sampling consists of sampling the system influent (combined and from individual recovery wells), primary and secondary air stripper effluents, and LPGAC effluent. Vapor sampling includes collection of samples of air stripper exhaust and CatOx scrubber exhaust.

Laboratory analytical aqueous results are summarized in Tables 2-5, 2-6, 2-7, 2-8, and 2-11 for recovery well-specific influent, combined influent, primary air stripper effluent, secondary air stripper effluent, and LPGAC effluent, respectively. Destruction efficiencies of the CatOx were

monitored via weekly photoionization detector (PID) readings and vapor process sampling. Influent and effluent CatOx laboratory analytical vapor results are summarized in Tables 2-9 and 2-10, respectively. System laboratory analytical reports are included in Appendix B.

2.4.1 INFLUENT RESULTS. During the reporting period, the influent from the individual recovery wells and the combined influent were sampled on a quarterly basis and analyzed for CVOCs by United States Environmental Protection Agency (USEPA) Method 8260B. The Layer 7 recovery wells (RW17C, 18C, 19C, 20C) are sampled on a monthly basis for CVOCs by USEPA Method 8260B. Individual recovery well influent data are presented in Table 2-5 and shown on Figure 2-5 (quarterly events only), and the combined influent data are presented in Table 2-6. The data trends are summarized in tables below which present the fourth quarterly TCE results for each reporting period.

2.4.1.1 Combined Influent. Samples of the combined influent are collected to evaluate mass recovery and system CVOC loading. Quarterly sampling of the combined influent was conducted on June 23, 2021; September 14, 2021; December 14, 2021; and March 22, 2022. Overall, influent TCE concentrations have decreased since full-scale system startup (January 2010) to Year 12 (March 2022) from 280,000 µg/L to 12,000 µg/L, respectively. Due to the introduction of the Layer 7 recovery wells, higher TCE concentrations have been introduced to the system which has increased the combined influent concentrations during certain periods. Fluctuations in the combined influent continued in Year 12 with the highest result in June 2021 at 22,500 µg/L. The TCE concentration stabilized at the end of the reporting period in March 2022 at 12,000 µg/L, a trend that was observed during the last reporting period. The combined influent concentrations continue to show an overall decrease; however, the decrease from Year 11 to Year 12 is less than previous years.

The table below presents the fourth quarter combined influent result for TCE, cDCE and VC for each reporting period since startup of the HCS.

Reporting Period	Date	TCE	cDCE	VC
Startup	1/25/2010	191,000	41,100	6,530
Prove-Out	3/20/2010	164,000	40,100	6,460
Year 1	3/10/2011	67,100	16,800	1,600
Year 2	3/1/2012	59,800	9,670	1,100
Year 3	1/29/2013	45,600	7,820	939
Year 4	4/3/2014	45,000	6,570	5,510
Year 5	12/30/2014	31,800	4,370	399
Year 6	3/4/2016	18,400	9,040	1,110
Year 7	3/15/2017	17,000	6,510	833
Year 8	3/19/2018	16,100	3,730	551
Year 9	3/12/2019	15,600	3,990	684
Year 10	3/12/2020	13,300	2,160	236
Year 11	3/11/2021	12,100	2,450	476
Year 12	3/22/2022	12,000	3,900	360

Table shows primary COCs concentrations (µg/L) at end of reporting periods

2.4.1.2 Shallow Recovery Wells – ESB Area. The fourth quarter TCE results for the three original shallow recovery wells in the ESB area are summarized in the table below.

Reporting Period	Date	RW01A	RW02A	RW03A
Startup	1/20/2010	240,000	280,000	41,000
Year 1	5/18/2011	46,800	50,400	2,940
Year 2	2/2/2012	85,000	42,500	427
Year 3	3/11/2013	91,900	39,000	80
Year 4	4/3/2014	91,800	33,600	60 U
Year 5	12/30/2014	60,200	26,600	371
Year 6	3/4/2016	81,600	35,000	7,150
Year 7	3/15/2017	71,900	27,200	16,300
Year 8	3/19/2018	66,000	17,900	186
Year 9	3/12/2019	58,100	21,600	825
Year 10	3/12/2020	36,800	11,800	262
Year 11	3/11/2021	45,400	14,900	0.35 U
Year 12	3/22/2022	35,000	36,000	34,000

Table shows TCE concentrations (µg/L) at end of reporting periods
U – Not detected at associated detection limit.

In Year 12, TCE concentrations have fluctuated in the shallow capture zone at the ESB area. At RW01A, TCE has decreased from the previous year (Year 11) from 45,400 to 35,000 µg/L; in contrast, RW02A and RW03A have increased from the previous year from 14,900 to 36,000

µg/L and 0.35 U to 34,000 µg/L, respectively. RW02A recorded the highest TCE concentration out of the eight shallow recovery wells operated during this reporting period. The concentration trends at RW01A, RW02A, and RW03A indicate possible influence from Pilot Study operations since RW01A and RW03A were turned off during that time period. However, the result at RW03A is consistent with historical trends where concentrations have fluctuated between non-detect and greater than 10xNADC. Considering these trends at RW01A, RW02A, and RW03A, a sustained mass dissolution is observed within the ESB area shallow capture zone.

2.4.1.3 Shallow Recovery Wells – Outside ESB Area. The results for the recovery wells near HS 4 (RW13A, RW14A, and RW15A) are discussed separately from the other four wells (RW09A, RW10A, RW11A, and RW12A) on the eastern side of the HS 3. TCE concentrations for RW09A, RW10A, RW11A, and RW12A are summarized in the table below.

Reporting Period	Date	RW09A	RW10A	RW11A	RW12A
Pre-startup	5/27/2015	5,500	3 U	400 U	100 U
Startup	6/4/2015	62,100	67 U	400 U	17,800
Year 6	3/4/2016	8,610	11.6	5.4 U	1,200
Year 7	3/15/2017	158	29	30	346
Year 8	3/19/2018	108 I	39	33	164
Year 9	3/12/2019	37 I	25	19 I	129 I
Year 10	3/20/2020	17 U	NS	NS	7 U
Year 11	3/11/2021	35 U	NS	NS	129
Year 12	3/22/2022	44 U	NS	NS	44 U

Table shows TCE concentrations (µg/L) at end of reporting periods
U – Not detected at associated detection limit.
I – Report value is between method detection limit and quantitation limit.
NS – Not sampled due to recovery well taken offline

TCE was not detected at RW09A for three consecutive sample events and continues to show an overall decrease in TCE concentrations since start-up from 62,100 µg/L. RW10A and RW11A continue to not operate as a result of system optimization conducted in August 2019. TCE concentrations at RW12A remain stable at low levels and have shown an overall decrease since start-up from 17,800 µg/L. It is noted that the elevated non-detect values for TCE are likely due to sample dilutions from high concentrations of cDCE and VC.

TCE concentrations for RW13A, RW14A, and RW15A are summarized in the table below.

Reporting Period	Date	RW13A	RW14A	RW15A
Pre-startup	5/27/2015	50 U	67 U	470
Startup	6/4/2015	5,000	400 U	3,700
Year 6	3/4/2016	150	14 U	83.7
Year 7	3/15/2017	35 U	19.4	35 U
Year 8	3/19/2018	34.9	32.7 I	56.5 I
Year 9	3/12/2019	21.3 I	25.6 I	35 U
Year 10	3/12/2020	35 U	35 U	17 U
Year 11	3/11/2021	35 U	59 I	17 U
Year 12	3/22/2022	89 U	44 U	22 U

Table shows TCE concentrations (µg/L) at end of reporting periods
U – Not detected at associated detection limit.
I – Report value is between method detection limit and quantitation limit.

TCE concentrations in RW13A, RW14A, and RW15A remain stable in Year 12 with TCE not detected at any of the locations; however, as previously noted for RW09A and RW12A, the elevated non-detect values for TCE in these three recovery wells are likely due to sample dilutions from high concentrations of cDCE and VC. An overall decrease in TCE was observed at all three recovery wells since system start-up with exception to RW14A where TCE has been observed at either low level or non-detect.

2.4.1.4 Deep Recovery Wells. TCE data for deep recovery wells in the ESB area are summarized in the table below.

Reporting Period	Date	RW01B	RW02B	RW03B
Startup	1/20/2010	130,000	940,000	16,000
Year 1	5/18/2011	186,000	152,000	4,840
Year 2	2/2/2012	176,000	126,000	3,210
Year 3	3/11/2013	73,800	66,300	2,220
Year 4	4/3/2014	62,400	59,900	2,140
Year 5	12/30/2014	42,500	72,100	2,520
Year 6	3/4/2016	38,500	35,100	2,270
Year 7	3/15/2017	42,600	33,800	2,370
Year 8	3/19/2018	20,300	34,700	1,850
Year 9	3/12/2019	19,600	38,900	2,320
Year 10	3/12/2020	12,700	22,100	5,470
Year 11	3/11/2021	20,700	20,200	8,960
Year 12	3/22/2021	6,700	19,000	4,700

Table shows TCE concentrations (µg/L) at end of each reporting period.

The TCE concentrations at RW01B, RW02B, and RW03B have decreased significantly since startup and have decreased compared to Year 11. RW01B and RW03B were shut down during the Pilot Study and restarted following completion of the study. Significant fluctuations in TCE from Pilot Study operations were not observed in the deep recovery wells. As noted in the previous annual report, TCE concentrations were monitored at RW03B due to significant increases observed in January and March 2021. In June 2021, TCE at RW03B remained higher at 11,400 µg/L, but concentrations decreased to 4,700 µg/L in March 2022 indicating that TCE has stabilized.

The table below summarizes TCE influent in deep recovery wells outside of the groundwater source area.

Reporting Period	Date	RW04B	RW05B	RW06B	RW16B
Startup	1/20/2010	250,000	250,000	270,000	NP
Year 1	5/18/2011	43,200	77,700	26,600	NP
Year 2	2/2/2012	16,100	57,000	9,320	NP
Year 3	3/11/2013	2,640	47,300	1,360	NP
Year 4	4/3/2014	517	9,050	455	NP
Year 5	12/30/2014	331	2,860	NA	NP
Year 6	3/4/2016	40	456	52	2,880
Year 7	3/15/2017	85	544	91	1,540
Year 8	3/19/2018	76	178	157	497
Year 9	3/12/2019	77	108	43	159
Year 10	3/12/2020	NS	19	NS	65
Year 11	3/11/2021	NS	7	NS	35
Year 12	3/22/2022	NS	6.6	NS	22

Table shows TCE concentrations (µg/L) at end of reporting periods
NA – Not analyzed (deactivated in November 2013 and restarted in June 2015)
NP – Well was not present.
NS – Not sampled due to recovery well taken offline

TCE concentrations in recovery wells in the deep dissolved-phase plume have significantly decreased since system startup. As a result of the system optimization in August 2019, RW04B and RW06B were shut off due to low TCE concentrations. TCE concentrations at RW05B continue to show a decreasing trend since startup. TCE concentrations at RW16B have also shown a decreasing trend since the first sampling event in March 2016.

2.4.1.5 Layer 7 Recovery Wells. Four recovery wells are currently operating in the TCE source zone in Layer 7. RW17C began operation in late August 2019 and was sampled during start-up, September, December, and on a monthly basis after December 2019. RW18C, 19C, and 20C began operation in February 2021 and are also sampled monthly. TCE concentrations have significantly decreased in all Layer 7 recovery wells from Year 11 to Year 12. TCE concentrations at RW17C, 18C, and 20C are now below 1,000-times NADC levels and TCE has decreased by half of the Year 11 concentration at RW19C. The Layer 7 recovery wells will continue to be monitored for decreasing trends during next year. The TCE data is presented below for all Layer 7 recovery wells.

Reporting Period	Date	RW17C	RW18C	RW19C	RW20C
Start-up	8/23/2019	475,000	NP	NP	NP
Year 10	3/12/2020	489,000	NP	NP	NP
Year 11	3/11/2021	429,000	556,000	959,000	593,000
Year 12	3/22/2022	130,000	240,000	470,000	98,000

Table shows TCE concentrations (µg/L) at end of reporting periods
NP – Well was not present.

2.4.2 AIR STRIPPER TREATMENT RESULTS. Air stripper aqueous samples are taken from the effluent at the aqueous discharge of each air stripper and analyzed for CVOCs by USEPA Method 8260B. Primary and secondary air stripper effluent data are presented in Tables 2-7 and 2-8, respectively. During Year 12, effluent from the secondary air stripper was less than the GCTLs in all monthly samples except for September and November 2021. The LPGAC stage has operated during the entire reporting period and sampled monthly which ensured discharge standards were met. The LPGAC effluent concentrations are discussed in the section below.

2.4.3 LPGAC TREATMENT RESULTS. The LPGAC vessels remained online during the entire reporting period and continue to operate past March 2022. The LPGAC effluent data are presented in Table 2-11. There were no exceedances of GCTLs in any the monthly samples collected during the reporting period.

2.4.4 AIR STRIPPER OFFGAS RESULTS. Vapor samples were collected for laboratory analysis on December 20, 2021 from the CatOx influent (air stripper exhaust) and effluent. Laboratory results indicate that emissions from the CatOx have been consistently less than

Hazardous Air Pollutant (HAP) requirements specified in the KSC Title V Air Permit for Remedial Activities. Annual air sampling results for CatOx influent and effluent are presented in Tables 2-9 and 2-10, respectively. The results of offgas treatment performance calculations are provided in Table 2-12. The vapor sampling results are further discussed in Section 2.5.2.2 under the HC IM evaluation.

2.5 HC IM OPERATION EVALUATION

The evaluations discussed in this section were completed to ensure the HC IM objectives are being achieved based on data from this reporting period. The evaluations include proper functioning of system components, performance of the water and vapor treatment processes, and total volume and mass recovery.

2.5.1 HC EVALUATION. A hydraulic capture study was conducted from December 20, 2010, through January 5, 2011, to evaluate the efficacy of hydraulic containment in the shallow and deep zones of the surficial aquifer at LC34. The results of the evaluation determined that the HC IM objective for hydraulic containment was achieved. Results and conclusions of the hydraulic capture study were provided in Appendix D of the 2010 LC34 Annual Groundwater Monitoring and Interim Measure Performance Report (NASA, 2011b). The hydraulic influence of pumping rate optimization at RW01B, RW02B, RW03B, and RW06B was modeled in 2013 and the modified pumping rates were expected to increase containment relative to existing site conditions. Based on the MIP and HPT study performed in 2013, seven new shallow recovery wells, RW09A through RW015A, were installed in HSs 3 and 4, and one new deep recovery well, RW016B, was installed in HS 2 to further improve plume containment and contaminant removal.

Performance sampling of monitoring wells in the DSZ was suspended beginning in Year 8 of operation based on significant differences between maximum TCE concentrations in recovery well influent and samples collected from the performance monitoring network. In lieu of sampling monitoring wells to evaluate the system's performance, DPT samples were collected in 2017 and 2018. The 2018 DPT results showed an increase in the maximum TCE concentration from 2017, which indicated a significant amount of remaining TCE mass in the 50 to 80 ft bls

zone. The TCE concentrations in this area were investigated as part the 2018-2019 DSZ Site Characterization. As part of this effort, pumping tests were conducted to determine the feasibility of extracting mass from deeper layers in the area. As a result, RW17C (screened from 80 to 95 ft bls) was installed with the intent of operating as a pilot study to determine mass removal over time. Based on the results of RW17C, three additional Layer 7 recovery wells were installed in February 2021. During this reporting period, the four Layer 7 recovery wells recovered 1,870,056 gallons of groundwater with 5,092 pounds of TCE out of 5,161 total pounds of VOCs treated. To date, 2,270,063 gallons of groundwater have been recovered from the four Layer 7 recovery wells with 6,834 pounds TCE out of 6,956 pounds of total VOCs treated.

In 2020, DPT sampling was extended to 98 ft (adding three additional sample depths) to evaluate the Layer 7 recovery wells. In addition, 11 monitoring wells screened in Layer 7 and Layer 8 were added to the annual sampling plan to ensure vertical delineation of the plume. Annual DPT sampling continues to be conducted to evaluate the performance of the HCS, and monitoring well sampling in Layer 7 and Layer 8 is also conducted on an annual basis. Results from these sampling events are further discussed in Section 2.7.

2.5.2 SYSTEM EVALUATION. The operation of major treatment components and treatment performance are discussed in this section.

2.5.2.1 Evaluation of Major System Components. The following provides an overview of the current conditions and maintenance conducted during this reporting period of the major system process components:

Recovery Wells – Recovery wells are performing at the intended groundwater recovery rates. The flow totalizers were cleaned to ensure accurate readings. Recovery wells RW04B, RW06B, RW10A, RW11A remained shut off. During the AS Pilot Study, RW01A, 01B, 03A, and 3B were shut off to prevent air bubbles from entering the pumps. Those recovery wells resumed operation after the Pilot Study was completed. Future activities include normal maintenance and inspection.

Groundwater Recovery Pumps – The submersible pump heads have operated effectively since initial startup, although intermittent pump head or motor replacement is required due to

mechanical and chemical degradation over time. Recovery wells RW17C, 18C, 19C, 20C operate with submersible pneumatic pumps designed with more chemical resistance. No evidence of sediment, mineral, or biological pump head fouling has been observed. Future activities include continued monitoring conditions of pumps and normal maintenance.

Filtration System – There are two influent bag filters upstream of the equalization tank and two bag filters upstream of the injection wells. The influent bag filters are replaced approximately weekly, and the bag filters upstream of the injection wells are replaced approximately monthly. With the addition of RW18C, 19C, and 20C, an influx of clay/fine particulates was observed that required more bag filter changeouts on the influent side; otherwise, there was no impact on the system during this reporting period. Future activities include continuing the biocide program and filter maintenance.

Equalization Tank – No issues were encountered with the equalization tank this reporting period. Future activities include normal maintenance.

Air Strippers – Factors influencing treatment efficiency, such as biofouling, are controlled to the maximum extent possible to maintain removal efficiencies. The trays were washed monthly to remove solids. Continued operation of two air strippers in series is necessary to ensure that discharge compliance is maintained. Future activities include normal maintenance.

Blowers – No issues were encountered during this reporting period. Future activities include normal maintenance.

Transfer Pumps – No issues were encountered during this reporting period. Future activities include normal maintenance.

Moisture Separator – The original moisture separator was replaced with a 1,650-gallon holding tank from the decommissioned Components Cleaning Facility groundwater treatment system. The holding tank was modified to operate as a cyclonic moisture separator and is used to reduce friction losses and increase liquid droplet removal efficiency following

installation of the new air stripper units in 2015. No issues were encountered during this reporting period. Future activities include normal maintenance.

LPGAC – The LPGAC vessels have operated since February 2021 following installation of the Layer 7 recovery wells and remained online through the entire reporting period. No issues were encountered with the LPGAC vessels. The LPGAC effluent is sampled to monitor concentrations of CVOCs prior to discharge. Secondary treatment via LPGAC has resulted in no discharge exceedances to the infiltration gallery or injection wells during the system's operational period. Future activities include normal maintenance during operation of the vessels.

Catalytic Oxidation Unit – During this reporting period, the CatOx operated as expected with normal maintenance and repairs. Normal maintenance during this period included replacing the heater elements and the temperature sensor. Future activities include continued maintenance of heater elements and additional insulation every six months with the heater.

Quench Tower – The quench tower operated as normal during this reporting period. The quench nozzle was replaced and minor repairs to the flow fittings were performed. Future activities include normal maintenance and inspection of corrosion/material degradation.

Scrubber – The scrubber has operated normally. During this reporting period, the temperature nozzle was replaced with a permanent stainless-steel nozzle and the scrubber pump was replaced. Future activities include normal maintenance and visual inspection.

Injection Wells – During this reporting period, the injection well flow totalizers were cleaned to ensure accurate readings. No other issues were encountered; future activities include normal maintenance. If the injection pressure exceeds 5 pounds per square inch gauge (psig) at the system manifold, the need for injection well maintenance is evaluated.

Infiltration Gallery – No issues were encountered with the infiltration gallery during this reporting period. Future activities include normal maintenance and monitoring which includes quarterly inspections to ensure that discharge does not result in surface water

accumulation. No evidence of surface water has been observed from infiltration gallery discharges.

2.5.2.2 Treatment Performance Evaluation. Evaluation of the water and vapor treatment processes is conducted to ensure the HC IM objectives are being achieved. Below are evaluations for both processes for the data collected during this reporting period.

Aqueous Treatment – Treatment of the aqueous process stream has resulted in no discharge exceedances (CVOC concentrations less than GCTLs), and overall treatment performance has been consistent. Overall, the efficiency of the aqueous treatment process is nearly 100 percent. The average removal efficiency of the strippers since operations began is greater than 99.9 percent. The LPGAC, which has been online since February 2021, has provided an effective polishing step for aqueous treatment.

Offgas Treatment – Treatment of offgas from the air stripper has resulted in total HAP and individual HAP emissions less than the limits in the KSC Title V Operating Air Permit. Based on the most recent sample collected on December 20, 2021, offgas treatment efficiencies for TCE, cDCE, and VC were greater than 99.5 percent. The same set of data was used to evaluate emissions loading. Based on the annual sample, the individual HAP emission rate for TCE was 0.051 pounds per day. This value was less than the KSC Title V permit requirements for individual HAP emissions of less than 2.7 pounds per day (1,000 pounds per year). The total HAP emission rate for all VOCs was 0.055 pounds per day, which is less than the Title V permit requirement of 6.8 pounds per day (2,500 pounds per year).

2.5.3 VOLUME AND MASS RECOVERY. As of March 31, 2022, a total of 285,712,801 gallons of groundwater containing 84,933 pounds of CVOCs have been removed by the HCS. Influent concentrations of TCE have decreased since startup from approximately 280,000 (January 2010) to 12,000 µg/L (March 2022). Groundwater recovery volumes and CVOC mass recoveries are summarized in Table 2-13 and listed in Appendix C.

2.6 HCS PERFORMANCE MONITORING FIELD ACTIVITIES

To assess the groundwater conditions in the DSZ and evaluate the performance of the HCS, annual performance monitoring was conducted at nine DPT boring locations and 11 monitoring well locations in and around the source area. All DPT and monitoring well sampling was conducted in accordance with applicable portions of the NASA Sampling and Analysis Plan (SAP) for the RCRA Corrective Action Program at KSC (NASA, 2017a) and FDEP Standard Operating Procedures (SOPs) (FDEP, 2017).

In December 2021, samples were collected from nine DPT boring locations (DPT593 to DPT601). At each boring location, the upper 5 feet of soil was excavated using a stainless-steel hand auger to verify the absence of underground utilities. Groundwater grab samples were collected by DPT methods via a 4-foot-long stainless-steel retractable screen. Samples were collected at 5-foot intervals from 8 to 98 ft bls, corresponding to the midpoints of the 4-foot screens, via a peristaltic pump through Teflon tubing terminating at the midpoint of the well screen, for a total of 171 samples. DPT samples were delivered under chain-of-custody to SGS North America, Inc, in Orlando, Florida, for analysis of VOCs by USEPA Method 8260B. Note, samples were collected from the same nine locations and depth intervals as the previous annual DPT sampling event in November 2020.

In December 2021, groundwater samples were collected from one monitoring well in Layer 7 (IW0042D2) and 10 monitoring wells in Layer 8 (IW0001D2, IW0043D2, IW0044D2, IW0045D2, IW0160, IW0161, IW0162, IW0163, IW0164, and IW0165). Peristaltic pumps were used for the purging of wells prior to sampling, and samples were collected using the low-flow purge technique. After collection, groundwater samples were shipped under proper chain-of-custody protocols to Enco Laboratories in Orlando, Florida, for analysis of VOCs by USEPA Method 8260B.

Groundwater sampling logs and field documentation are provided in Appendix A. Laboratory analytical reports are provided in Appendix B. The following section discusses the DPT and monitoring well analytical results.

2.7 HCS PERFORMANCE MONITORING RESULTS

2.7.1 DPT – CONCENTRATION TRENDS. A summary of the analytical results for the DPT groundwater samples collected in December 2021 is provided in Table 2-14. Figure 2-6 presents the DPT groundwater results for TCE, cDCE and VC. The TCE results shaded in yellow exceed 11,000 µg/L (1-percent solubility of TCE), and is where potential DNAPL is suspected to be present in relation to the DSZ boundary (the area in which the HCS treatment is focused). TCE concentrations greater than 11,000 µg/L were detected at eight of the nine DPT locations at depths ranging from 8 to 98 ft bls.

For discussion purposes, the DPT depth intervals are being compared to the shallow, deep, and Layer 7 captures zones of the HCS. These depth intervals correlate with the screened intervals of the recovery wells. The shallow capture zone of the HCS is from 15 to 45 ft bls and the deep capture zone is from 50 to 80 ft bls; therefore, the DPT depth intervals between 8 ft bls and 43 ft bls correlate with the shallow capture zone and the depth intervals between 53 ft bls and 78 ft bls correlate with the deep capture zone. The 48 ft bls depth interval (DPT sample screened 46 to 50 ft bls) is between the shallow and deep capture zones and represents Layer 4 which is a fine-grained layer. This layer has been considered a shallow -confining unit; however, results of re-characterization showing concentrations of CVOCs below Layer 4 suggest this layer has semi-confining properties. The Layer 7 depth intervals are between 83 and 93 ft bls, which correlate to the depths of recovery wells RW17C, RW18C, RW19C, and RW20C. The 98 ft bls depth interval is below the Layer 7 capture zone.

In December 2021, the maximum TCE concentration in the shallow zone was detected in DPT594, located in the north central portion of the DSZ. The TCE concentration at this location was 1,900,000 µg/L at 43 ft bls, which is immediately above the confining layer. The TCE concentration at this location and depth interval has increased each year since 2018. In 2020, the TCE concentration at this location was 1,100,000 µg/L, and in 2019, the maximum TCE concentration in the shallow capture zone was 414,000 µg/L.

In the 48 ft bls depth interval (Layer 4), the maximum TCE concentration was 2,030,000 µg/L at DPT596 in the east central area of the DSZ. At this location and depth interval, TCE

concentrations have increased since 2019. The December 2021 concentration was an increase since the November 2020 value of 1,690,000 µg/L; however, the DNAPL observed in 2020 was not present in this depth interval during the 2021 sampling event.

In the deep capture zone (between 53 and 78 ft bls), the maximum TCE concentration was 15,400,000 µg/L in the 58 ft bls depth interval at DPT597, which is about 20 feet above the Layer 7 fine-grained unit. This represents an increase since the previous events in 2019 (571,000 µg/L) and 2020 (1,440,000 µg/L). There were four other DPT locations with TCE greater than 11,000 µg/L in the 58 ft bls depth interval: 632,000 µg/L in DPT594, located in the northern center of the DSZ, 15,700 µg/L at DPT593, located in the northeast portion of the DSZ, 70,200 µg/L at DPT596, located in the east portion of the DSZ, and 86,800 µg/L at DPT599, located in the southern center for the DSZ. Of these DPT locations, DPT597 (maximum TCE concentration) and DPT594 are in the area where the Layer 7 RWs were installed (Figure 2-6).

In the Layer 7 capture zone (83 to 93 ft bls), TCE concentrations were greater than 11,000 µg/L in the 83 ft bls (23,400 µg/L), 88 ft bls (116,000 u/L) and 93 ft bls (229,000 µg/L) intervals at DPT594, located in the north central portion of the DSZ. At DPT597 the 83 ft bls interval had the maximum TCE concentration (472,000 µg/L), and the 88 ft bls interval was 11,800 µg/L. Other DPT locations with TCE results greater than 11,000 µg/L in the Layer 7 capture zone included the 93 ft bls interval in DPT596 (14,100 µg/L), the 83 ft bls interval at DPT598 (230,000 µg/L), and the 83 ft bls interval at DPT599 (14,400 µg/L).

In the 98 ft bls interval, which is below the Layer 7 capture zone, the maximum TCE concentration was 2,630,000 µg/L in DPT594. In this depth interval, all but one of the nine DPT locations had TCE greater than the GCTL, and three of them were greater than 11,000 µg/L, with the DPT594 result being the maximum. The DPT locations with the highest concentrations of TCE in the Layer 7 capture zone and below (DPT594, DPT597, and DPT598) are all located in the area where the Layer 7 RWs are located (Figure 2-6).

2.7.2 DPT – PERCENT TCE COMPOSITION. The table below shows the DPT performance sampling results as percent composition for each year. The capture zones are specified for the sample depths that are within the recovery well screen intervals. In 2021, the

overall majority of the TCE contamination (35.6 percent) was observed within the deep capture zone at 58 ft bls, an increase from 10.9 percent in 2017. During the previous year, the majority of TCE was located within Layer 4 (48 ft bls) although a significant percentage still exists between 43 to 58 ft bls. TCE composition at 48 ft bls decreased from 32.3 percent last year to 14.2 percent this year. The trends observed between the depths of 43 and 58 ft bls continue to show the stored mass and sustained mass are located within Layer 4; however, the increase in mass in the 58 ft depth interval may suggest semi-confining properties in Layer 4. The TCE composition in other depths within the shallow and deep capture zone remain relatively stable. At 78 ft bls, the TCE composition remains relatively stable at 11.3 percent still indicating stored mass at the interval immediately above the Layer 7 fine-grained unit.

	Depth	2017	2018	2019	2020	2021
	8	0.0 %	0.0%	0.0 %	0.0 %	0.1 %
	13	0.0 %	0.0 %	0.0 %	0.0 %	0.3 %
Shallow	18	0.0 %	0.0 %	0.0 %	0.0 %	0.6 %
Shallow	23	0.1 %	0.4 %	0.0 %	0.0 %	1.2 %
Shallow	28	4.7 %	3.3 %	0.5 %	0.2 %	0.8 %
Shallow	33	6.0 %	4.9 %	2.7 %	0.6 %	1.0 %
Shallow	38	9.6 %	7.5 %	3.6 %	5.2 %	2.5 %
Shallow	43	9.0 %	9.7 %	12.3 %	8.8 %	9.2 %
	48	**22.7 %**	19.9 %	**24.3 %**	**32.3 %**	14.2 %
Deep	53	18.1 %	4.8 %	17.9 %	19.7 %	12.2 %
Deep	58	10.9 %	7.1 %	14.6 %	14.4 %	**35.6 %**
Deep	63	1.5 %	3.4 %	5.2 %	0.3 %	2.3 %
Deep	68	0.2 %	0.2 %	0.5 %	0.1 %	0.1 %
Deep	73	2.3 %	1.4 %	2.0 %	0.3 %	0.1 %
Deep	78	13.9 %	**36.5 %**	14.8 %	17.1 %	11.3 %
Layer	83	1.0 %	0.5 %	1.7 %	0.3 %	1.6 %
Layer	88	NS	0.2 %	NS	0.1 %	0.3 %
Layer	93	NS	0.1 %	NS	0.2 %	0.6 %
Layer	98	NS	0.2 %	NS	0.4 %	6.0 %

Table shows average TCE composition as percentages for each annual DPT event
TCE composition determined by averaging the TCE concentrations for each interval and dividing by the total concentration for that year
Bold indicates the depth interval with highest percent TCE composition
NS – Not Sampled

2.7.3 DPT – TOTAL TCE CONCENTRATION TREND. The table below shows the total TCE concentration trend over time for the capture zones. The values are calculated by summing

the individual DPT concentrations from within each zone. The total TCE concentration in the shallow capture zone increased from 2,701 milligrams per liter (mg/L) to 6,336 mg/L, a significant increase compared to historical trends. Historical trends had shown an overall decrease in TCE concentrations from 2017 to 2020; however, TCE in 2021 shows an overall increase from 2017. The highest increases in TCE concentrations were at DPT597 (1,687 mg/L), DPT594 (938 mg/L), and DPT599 (319 mg/L), likely due to RWs 1A, 1B, 3A, and 3B being turned off during the Pilot Study with a majority of the TCE located at 48 ft bls. The highest total TCE concentrations observed were at DPT594, 597, and 599.

Zone	2017	2018	2019	2020	2021
Shallow Capture Zone (15 – 45 ft bls)	5,914	3,786	1,990	2,701	6,336
Deep Capture Zone (50 – 80 ft bls)	8,764	7,856	5,741	9,373	28,044
Layer 7 Capture Zone (80 – 95 ft bls)	159	88	182	104	1,147
All Capture Zones	14,839	11,731	7,914	12,179	35,529

Table shows total TCE concentration (mg/L) for all DPT locations for that year.
In 2020, TCE concentrations in Layer 7 included additional deeper intervals that were added during this reporting period.

In the deep capture zone, TCE concentrations have significantly increased since 2020 from 9,373 mg/L to 28,044 mg/L. Historical trends have shown an overall decrease in TCE from 2017 to 2019; however, concentrations increased in 2020 and 2021. The highest increases observed during the current reporting period were at DPT597 (17,147 mg/L), DPT598 (2,241 mg/L), and DPT599 (132 mg/L). Similar to the shallow capture zone, the trend of TCE in the deep zone is attributed to RWs 1A, 1B, 3A, and 3B being turned off during the Pilot Study. The majority of TCE within the deep zone is at 58 ft bls which could also be influenced by the potential mass discharge from Layer 4.

In the Layer 7 capture zone, the total TCE concentration increased from 104 mg/L to 1,147 mg/L, the largest increase observed in the capture zone since 2017. The majority of contamination is located at 83 ft bls; however, TCE concentrations are relatively low compared to the depths outside the capture zone. Directly above the Layer 7 capture zone at 78 ft bls, significant TCE concentrations are observed with the highest concentration of 3,070 mg/L at

DPT598. Significant concentrations are also observed directly below the Layer 7 zone at 98 ft bls at 2,630 mg/L at DPT594. The trends above and below Layer 7 indicate potential mass storage surrounding the Layer 7 capture zone.

Overall, the total TCE concentration trends show significant increases in TCE across the DPT sample area. Based on TCE composition results, mass stored in and around the fine-grained units may be contributing to the added TCE mass observed in 2021. DNAPL found in certain intervals could also impact the volatility of sample concentrations (e.g., DPT598 at 78 ft bls in 2018). As noted during the previous reporting period, macro trends continue to indicate mass storage and discharge from the fine-grained units. Results from future DPT annual sampling will continue to be evaluated to identify macro trends within the performance monitoring area.

2.7.4 DPT – CDCE AND VC TRENDS. The cDCE and VC concentration trends are similar to the trends observed for TCE. Historical cDCE and VC trends have shown an overall decrease in total concentrations over all DPT locations from 2017 to 2020; however, concentrations have significantly increased from 2020 to 2021. The maximum cDCE concentration in December 2021 in the shallow capture zone was 150,000 µg/L in the 43 ft bls interval at DPT594. This is an increase from the 2020 concentration of 56,600 µg/L and an increase from the 2017 concentration of 134,000 µg/L. In the 48 ft bls interval (between shallow and deep), the maximum cDCE concentration was 255,000 µg/L at DPT596. This is an increase from the 2020 concentration of 125,000 µg/L and an increase from the 2017 concentration of 191,000 µg/L. In the deep capture zone, the maximum cDCE result was 338,000 µg/L in the 58 ft bls sample at location DPT597, a significant increase over the 2017 concentration of 17,000 µg/L. The maximum VC concentrations in December 2021 were 64,600 µg/L in the shallow capture zone (43 ft bls at DPT593), 26,800 µg/L in the 48 ft bls interval (DPT596), and 20,600 µg/L in the deep capture zone (58 ft bls at DPT597). The increase in total concentrations from 2020 to 2021 have shown that the cDCE and VC trends have changed since the decreasing trend from 2017 to 2020. Results from the next DPT sampling event will be evaluated to determine whether the current increasing trend continues.

2.7.5 EVALUATION OF PERFORMANCE MONITORING USING DPT. Concentrations of TCE, cDCE, and VC in DPT groundwater samples collected in December 2021 are still

significantly greater than concentrations last observed in performance monitoring well samples collected in December 2016 (prior to implementing performance monitoring via DPT). In December 2016, the maximum TCE concentration was 22,700 µg/L at IW0121, screened from 38 to 43 ft bls. This well was located near DPT597, which currently has a TCE concentration of 1,260,000 µg/L in that depth interval. This indicates that the high resolution DPT approach to performance monitoring is continuing to provide a more accurate picture of current conditions in the aquifer and a better indication of where high mass storage remains, than what performance monitoring well data was previously providing.

2.7.6 DPT PERFORMANCE MONITORING AND RECOVERY WELL RESULTS COMPARISON. The recovery well sample results are shown on Figure 2-5. The individual results indicate that the recovery wells continue to adequately capture contamination. The influent from each recovery well is sampled quarterly to evaluate HCS operational performance, as discussed in Section 2.4. The recovery wells in Layer 7 are sampled on a monthly basis to monitor the concentrations during their initial operation. For comparison purposes, the DPT results are being compared to the December 2021 recovery well results because the sample dates are closest to each other. In the case of RW1A, 1B, 3A, and 3B where those wells were shut off during the Pilot Study, the DPT results were compared to the March 2022 data.

In the northwestern portion of the DSZ, locations DPT595 and DPT598 are near recovery wells RW02A, RW02B, and RW19C. In the shallow capture zone, TCE had low-level detections in DPT595 and the maximum TCE concentration at DPT598 was 105,000 µg/L at 43 ft bls. In comparison, the December 2021 concentration was 45,000 µg/L at RW02A. In the deep capture zone, the maximum TCE concentrations were 2,310 µg/L in the 78 ft bls depth interval at DPT595 and 3,070,000 µg/L in the 78 ft bls depth interval at DPT598, which were greater than the December 2021 concentration of 27,000 µg/L at RW02B. The Layer 7 recovery wells in the northwest portion of the DSZ had TCE results of 130,000 µg/L (RW17C) and 550,000 µg/L (RW19C). These wells are screened from 80 to 95 ft bls and were designed to capture the contamination below the deep zone (greater than 85 feet). The TCE results for Layer 7 at 83 to 93 ft bls and 98 ft bls depth intervals at DPT595 were low-level detections, and the highest TCE

results at DPT598 were 230,000 µg/L at the 83 ft bls interval and 82,000 µg/L in the 98 ft bls interval.

In the northeastern portion of the DSZ, the locations of DPT593 and DPT594 are near recovery wells RW03A and RW03B and RW20C. In the shallow capture zone, at DPT594, the TCE result of 1,900,000 µg/L at 43 ft bls was the maximum concentration in December 2021. The highest shallow zone result at DPT593 was 61,700 µg/L in the 43 ft bls interval. The TCE concentration in March 2022 for RW03A was 34,000 µg/L. The maximum TCE concentration for the deep capture zone at DPT593 and DPT594 was 170,000 µg/L (53 ft bls) and 1,560,000 µg/L (53 ft bls), respectively. The TCE concentration at RW03B in March 2022 was 4,700 µg/L. The maximum TCE concentrations at DPT593 and DPT594 for the Layer 7 capture zone are 8,860 µg/L (83 ft bls) and 229,000 µg/L (93 ft bls), respectively. The TCE concentration at RW20C for December 2021 was 410,000 µg/L. The results in the DPT samples were significantly greater for the shallow and deep capture zone for the northeastern portion wells. Results were greater at RW20C compared to the DPT samples collected within the Layer 7 capture zone.

In the southern portion of the DSZ, the maximum TCE concentration from DPT locations DPT596, DPT597, DPT599, DPT600, and DPT601 in the shallow zone was 1,260,000 µg/L at DPT597 at 43 ft bls. The TCE concentrations at RW12A and RW01A were non-detect and 35,000 µg/L, respectively. The maximum TCE concentration at the DPTs in the deep zone was 15,400,000 µg/L at 58 ft bls (DPT597) compared to the nearby recovery wells RW01B and RW16B, which had TCE concentrations of 6,700 and 340 µg/L, respectively. The maximum TCE concentration at the DPTs in the Layer 7 zone was 472,000 µg/L at 83 ft bls (DPT597) compared to the nearby recovery well RW18C, which had a TCE concentration of 510,000 µg/L in December 2021. For the southern portion wells, the results in the DPT samples were significantly greater for the shallow and deep capture zone, with maximum concentrations for Layer 7 recovery wells and DPT intervals within the same order of magnitude.

Overall, the shallow, deep, and Layer 7 capture zones are represented by higher DPT concentrations compared to concentrations observed in the nearby recovery wells. The higher TCE concentrations are partially attributed to spikes in specific locations and intervals - for example, at DPT594 at 43 ft bls (1,900,000 µg/L), DPT594 at 83 ft bls (2,630,000 µg/L), and

DPT597 at 58 ft bls (15,400,000 µg/L). These spikes in TCE concentrations could be attributed to contamination trapped in and above the fine-grained units. The amounts of CVOCs still being detected in recovery wells indicates the HCS is still effectively removing mass from the source area.

2.7.7 LAYER 7 AND LAYER 8 MONITORING WELL RESULTS. One monitoring well in Layer 7 (IW0042D2) and 10 monitoring wells in Layer 8 (IW0001D2, IW0043D2, IW0044D2, IW0045D2, IW0160, IW0161, IW0162, IW0163, IW0164, and IW0165) are sampled on an annual basis to confirm vertical delineation of the DSZ area. Analytical results are summarized in Table 2-15 and Figure 2-7. These wells were all sampled in December 2021, with one well (IW0162) re-sampled again in February and re-developed and re-sampled March 2022 due to a TCE detection of 2.4 µg/L, just below the GCTL of 3 µg/L. The February and March detections of 7.4 µg/L and 33 µg/L, respectively, indicate potential migration of TCE in this area. Results from the remaining 10 wells showed no detections or GCTL exceedances and only a low-level detection of cDCE in IW0043D2. The results show that the DSZ is still vertically delineated, with the exception of the area around IW0162.

Table 2-1. Hydraulic Containment System Operational Data - Year 12

Parameter	Date	04/01/21	04/08/21	04/15/21	04/22/21	04/28/21	05/05/21	05/14/21	05/25/21	06/04/21
Vapor Process System Monitoring										
CatOx High Temperature	°F	715	720	735	740	748	735	751	732	731
CatOx Main Temperature	°F	745	754	755	760	750	748	771	750	755
Quench Tower Temperature	°F	114	115	115	114	117	116	116	118	118
Photoionization Detector Air Sample Influent	ppm_v	79	79	79	79	79	79	79	79	79
Photoionization Detector Air Sample Effluent	ppm_v	0	0	0	0	0	0	0	0	0
Differential Pressure, Average. Pitot Tube	in. w.c.	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Pressure, Air Stripper 2 Inlet	in. w.c.	27	27	27	28	30	25	27	26	28
Pressure, Air Stripper 1 Inlet	in. w.c.	44	44	40	46	42	45	44	44	43
Pressure, Air Stripper 2 Outlet	in. w.c.	14	14	14	14	14	14	14	12	13
Pressure, Catox Inlet	in. w.c.	8	8	8	8	8	9	8	9	8
Differential Pressure Air Stripper 1	in. w.c.	17	17	16	17	17	16	17	15	18
Differential Pressure Air Stripper 2	in. w.c.	24	24	22	23	25	23	23	25	28
Air Stripper Blower Speed	hertz	54	54	54	54	54	54	54	54	54.2
Groundwater Process System Monitoring										
Air Stripper 1 Transfer Pump	hertz	57.5	57.5	57.5	57.5	57.5	57.5	57.5	57.5	57.5
Air Stripper 2 Transfer Pump	hertz	58.2	58.2	58.2	58.2	58.2	58.2	58.2	58.2	58.2
Inlet #1 Totalizer	gal	76,928,512	77,088,252	77,214,031	77,295,916	77,295,916	77,436,134	77,615,516	77,839,060	77,972,146
Inlet #1 Flow	gpm	17	15	15	16	16	16	15	16	16
Inlet #2 Totalizer	gal	176,180,364	176,776,819	177,302,915	177,803,786	178,164,775	178,628,410	179,189,462	179,889,049	180,463,316
Inlet #2 Flow	gpm	60	60	60	51	50	44	47	45	44
Equilibrium Tank Pump Totalizer	gal	99,841,700	601,929	1,257,750	1,910,500	2,373,200	2,985,710	3,732,320	4,636,440	5,355,620
Equilibrium Tank Pump Flow Rate	gpm	78	78	78	78	78	78	79	79	78
Moisture Separator Totalizer	gal	1,087	1,087	1,087	1,087	1,087	1,087	1,087	1,087	1,087
Air Stripper Pump 1 Pressure	psi	60	60	60	60	60	60	60	60	60
Air Stripper Pump 2 Pressure	psi	12	10	12	12	15	12	10	15	12
Pressure, Carbon Influent	psi	off	off	off	off	off	35	35	35	35
Pressure, Carbon Effluent	psi	off	off	off	off	off	25	25	25	32
Air Stripper 1 Flow Rate	gpm	113	103	103	110	110	102	103	103	109
Air Stripper 2 Flow Rate	gpm	85	86	88	90	88	88	88	87	86
Quench Tower/Scrubber Monitoring										
Supply Pressure	psi	60	60	60	60	60	60	60	60	60
Quench Flow	gpm	2	2	2	2	2	2	2	2	2
Dilution Flow	gpm	3	3.2	2.8	3.3	3.3	3.3	3.3	3.2	3.2
Recirculation Pump Flow	gpm	26	26	26	26	25	26	26	26	26
Chemical Feed Stroke	%	40	40	40	40	40	40	40	40	30
Recirculation Pump Pressure	psig	12	12	12	12	12	12	12	12	13
Discharge Pressure	psig	18	18	18	18	18	18	18	18	25
Calculated Values										
Total Input	gal	253,108,876	253,865,071	254,516,946	255,099,702	255,460,691	256,064,544	256,804,978	257,728,109	258,435,462
Flow Meter Extraction Rate	gpm	77	75	75	67	66	60	62	61	60
Average Extraction Rate	gpm	75.9	73.1	62.8	57.5	43.6	59.0	58.9	57.6	48.6
Air Flow, Average. Pitot Tube	scfm	603	603	603	603	603	603	603	603	603

Table 2-1. Hydraulic Containment System Operational Data - Year 12 (Continued)

Parameter	Date	06/10/21	06/18/21	06/24/21	07/01/21	07/08/21	07/15/21	07/22/21	07/29/21	08/19/21
Vapor Process System Monitoring										
CatOx High Temperature	°F	733	727	730	717	713	710	733	732	756
CatOx Main Temperature	°F	757	748	750	756	750	764	756	752	732
Quench Tower Temperature	°F	119	118	119	118	117	117	119	118	120
Photoionization Detector Air Sample Influent	ppm_v	79	79	79	79	79	79	79	79	79
Photoionization Detector Air Sample Effluent	ppm_v	0	0	0	0	0	0	0	0	0
Differential Pressure, Average. Pitot Tube	in. w.c.	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Pressure, Air Stripper 2 Inlet	in. w.c.	27	27	27	29	29	27	29	29	29
Pressure, Air Stripper 1 Inlet	in. w.c.	44	45	48	44	44	43	44	44	41
Pressure, Air Stripper 2 Outlet	in. w.c.	14	14	14	14	14	14	14	14	15
Pressure, Catox Inlet	in. w.c.	8	8	8	9	8	8	8	9	7
Differential Pressure Air Stripper 1	in. w.c.	14	17	17	14	17	15	17	16	15
Differential Pressure Air Stripper 2	in. w.c.	24	24	23	24	24	21	24	22	21
Air Stripper Blower Speed	hertz	54.2	54.2	54.2	54.2	54.2	52	52	52	52
Groundwater Process System Monitoring										
Air Stripper 1 Transfer Pump	hertz	57.5	57.5	57.5	57.5	57.5	57.5	57.5	57.5	57.5
Air Stripper 2 Transfer Pump	hertz	58.2	58.2	58.2	58.2	58.2	58.2	58.2	58.2	58.2
Inlet #1 Totalizer	gal	78,147,724	78,339,631	78,482,370	78,653,846	78,741,138	79,032,362	79,221,218	79,549,583	80,630,540
Inlet #1 Flow	gpm	18	18	17	15	16	35	33	30	41
Inlet #2 Totalizer	gal	180,912,201	181,409,121	181,785,895	182,237,544	182,480,915	182,693,815	182,859,544	183,143,167	183,996,738
Inlet #2 Flow	gpm	44	46	44	45	45	25	25	30	31
Equilibrium Tank Pump Totalizer	gal	5,964,750	6,633,620	7,138,310	7,746,240	8,072,330	8,560,350	8,903,130	9,493,600	11,334,400
Equilibrium Tank Pump Flow Rate	gpm	77	77	77	78	78	76	76	76	78
Moisture Separator Totalizer	gal	1,087	1,087	1,087	1,087	1,087	1,087	1,087	1,087	1,087
Air Stripper Pump 1 Pressure	psi	60	60	60	60	60	60	60	60	60
Air Stripper Pump 2 Pressure	psi	12	10	10	10	10	10	12	10	12
Pressure, Carbon Influent	psi	35	35	35	35	35	35	35	35	35
Pressure, Carbon Effluent	psi	25	25	25	25	25	25	25	25	25
Air Stripper 1 Flow Rate	gpm	103	103	103	103	103	103	103	103	103
Air Stripper 2 Flow Rate	gpm	88	88	89	88	88	90	90	90	90
Quench Tower/Scrubber Monitoring										
Supply Pressure	psi	60	60	60	60	60	60	60	60	60
Quench Flow	gpm	2	2	2	2.1	2	2.1	2.1	2.1	2.1
Dilution Flow	gpm	3.2	3.1	3.2	3.1	3	3.1	3	3	3
Recirculation Pump Flow	gpm	26	26	26	26	26	26	26	26	26
Chemical Feed Stroke	%	40	40	40	40	40	40	40	40	40
Recirculation Pump Pressure	psig	12	12	12	12	12	12	12	12	12
Discharge Pressure	psig	18	18	18	18	18	18	18	18	18
Calculated Values										
Total Input	gal	259,059,925	259,748,752	260,268,265	260,891,390	261,222,053	261,726,177	262,080,762	262,692,750	264,627,278
Flow Meter Extraction Rate	gpm	62	64	61	60	61	60	58	60	72
Average Extraction Rate	gpm	71.5	60.1	60.8	60.5	33.9	48.6	36.0	61.3	63.8
Air Flow, Average. Pitot Tube	scfm	603	603	603	603	603	603	603	603	603

Table 2-1. Hydraulic Containment System Operational Data - Year 12 (Continued)

Parameter	Date	09/02/21	09/09/21	09/16/21	09/23/21	10/07/21	11/04/21	02/25/22	03/04/22
Vapor Process System Monitoring									
CatOx High Temperature	°F	720	720	720	710	715	710	727	714
CatOx Main Temperature	°F	760	749	753	740	745	760	757	757
Quench Tower Temperature	°F	115	115	116	115	118	114	112	111
Photoionization Detector Air Sample Influent	ppm_v	79	79	79	79	79	79	79	79
Photoionization Detector Air Sample Effluent	ppm_v	0	0	0	0	0	0	0	0
Differential Pressure, Average. Pitot Tube	in. w.c.	1.1	1.1	1.1	1.1	1.15	1.2	1.15	1.15
Pressure, Air Stripper 2 Inlet	in. w.c.	27	27	29	29	29	29	30	29
Pressure, Air Stripper 1 Inlet	in. w.c.	45	44	44	45	45	44	49	47
Pressure, Air Stripper 2 Outlet	in. w.c.	14	14	14	14	14	14	14	14
Pressure, Catox Inlet	in. w.c.	8	8	8	8	8	8	9	8
Differential Pressure Air Stripper 1	in. w.c.	16	16	16	16	16	16	17	17
Differential Pressure Air Stripper 2	in. w.c.	22	24	23	24	22	23	2	22
Air Stripper Blower Speed	hertz	52	52	52	52	52	52	55.5	55.5
Groundwater Process System Monitoring									
Air Stripper 1 Transfer Pump	hertz	57.5	57.5	57.5	57.5	57.5	57.5	57.5	57.5
Air Stripper 2 Transfer Pump	hertz	58.2	58.2	58.2	58.2	58.2	58.2	60	60
Inlet #1 Totalizer	gal	81,265,170	81,657,900	82,065,305	82,450,000	83,143,346	84,634,176	90,699,742	90,903,260
Inlet #1 Flow	gpm	40	40	40	40	45	35	19	19
Inlet #2 Totalizer	gal	184,474,273	184,766,256	185,051,924	185,331,100	185,848,053	186,865,462	192,085,352	192,677,498
Inlet #2 Flow	gpm	30	30	30	30	30	30	59	58
Equilibrium Tank Pump Totalizer	gal	12,382,000	13,023,400	13,660,000	14,296,100	15,439,300	17,872,500	27,990,400	28,752,300
Equilibrium Tank Pump Flow Rate	gpm	76	76	78	76	76	76	78	78
Moisture Separator Totalizer	gal	1,087	1,087	1,087	1,087	1,087	1,087	1,087	1,087
Air Stripper Pump 1 Pressure	psi	60	60	60	60	60	60	60	60
Air Stripper Pump 2 Pressure	psi	12	10	12	12	10	10	15	16
Pressure, Carbon Influent	psi	35	35	35	35	35	35	35	35
Pressure, Carbon Effluent	psi	25	25	25	25	25	25	25	25
Air Stripper 1 Flow Rate	gpm	103	103	103	103	103	103	94	103
Air Stripper 2 Flow Rate	gpm	90	90	93	90	88	84	82	80
Quench Tower/Scrubber Monitoring									
Supply Pressure	psi	60	60	60	60	60	60	60	60
Quench Flow	gpm	2.2	2.2	2.2	2.2	2.2	2.2	3.3	3.2
Dilution Flow	gpm	3	3	3	3	3	3	2.4	2.4
Recirculation Pump Flow	gpm	26	26	26	26	26	26	26	26
Chemical Feed Stroke	%	40	40	40	40	40	40	40	40
Recirculation Pump Pressure	psig	12	12	12	12	12	15	12	15
Discharge Pressure	psig	18	18	18	18	18	18	18	18
Calculated Values									
Total Input	gal	265,739,443	266,424,156	267,117,229	267,781,100	268,991,399	271,499,638	282,785,094	283,580,758
Flow Meter Extraction Rate	gpm	70	70	70	70	75	65	78	77
Average Extraction Rate	gpm	55.2	68.1	68.6	64.5	60.8	62.2	69.4	78.5
Air Flow, Average. Pitot Tube	scfm	578	578	578	578	591	603	591	591

Note:
Readings were not recorded during certain weeks. During those weeks, the system was inspected and ensured to be operating properly

°F = Degrees Fahrenheit
gal = Gallons
gpm = Gallons per minute
hertz = Hertz
in. w.c. = Inches of water column
ppmv = Parts per million by volume
psi = Pounds per square inch
psig = Pounds per square inch gauge
scfm = Standard cubic feet per minute

Table 2-2. Hydraulic Containment System Run Time Summary

Year	Month	Days In Month	Days System Down	Run Time	Downtime Contributing Factor
2021	April	30	1.00	97%	Routine system cleaning; Inlet 1 totalizer cleaned
	May	31	3.50	89%	Routine system cleaning; Scrubber temperature nozzle was replaced with permanent stainless steel nozzle. Equalization tank, air stripper, and influent flow meters cleaned
	June	30	0.50	98%	Routine system cleaning
	July	31	0.50	98%	Routine system cleaning
	August	31	2.50	92%	Routine system cleaning; Heater wires repaired after lightning storm
	September	30	1.00	97%	Routine system cleaning; Quench nozzle flange eroded and replaced
	October	31	1.00	97%	Routine system cleaning; Scrubber pump repaired
	November	30	0.50	98%	Routine system cleaning
	December	31	2.50	92%	Routine system cleaning; Replaced recirculation pump
2022	January	31	0.50	98%	Routine system cleaning
	February	28	1.00	96%	Routine system cleaning; Recirculation pump replaced second time
	March	31	8.75	72%	Routine system cleaning; Scheduled power outage; CatOx temperature sensor malfunctioned and replaced
Total		**365**	**23.25**	**94%**	

Note:
Runtime indicated is from April 1, 2021 to March 31, 2022

Table 2-3. Hydraulic Containment System Issues and Resolutions

System Component	Issue	Issue Date	Resolution	Resolution Date
Inlet totalizer	Inlet 1 totalizer not functioning properly	4/23/2021	Taken apart and cleaned	4/23/2021
Recovery Well	RW12 is having controller issues and is being worked on	5/14/2021	Controller replaced. No downtime with system	5/14/2021
Recovery Well	RW18 has sediment problem in well and is being worked on	5/14/2021	RW18 redeveloped and running. This was done for 17,18,19,20	5/28/2021
Scrubber	Nozzle replacement	5/21/2021	Scrubber temperature nozzle was swapped out for more permanent stainless nozzle	5/21/2021
Flow meters	Cleaning meters	5/21/2021	EQ tank and AS2 flow meters were cleaned. Influent meters cleaned	5/21/2021
Recovery Well	Air supply to pneumatic pumps	6/25/2021	HS6 air compressor is now supplying compressed air to penumatic pumps	6/25/2021
Recovery Well	RW modifications needed for pilot study	7/9/2021	RW1A,1B, RW3A,3B turned off. RW2B has a new motor at 15 gpm. Increased flow at RW2A, 5B, 9A, 12A, 13A, 14A, 15A, 1B, 2B, 3B, 5B, 16B. Total flow approximated at 60-65 gpm. Everything back to normal and rebalanced on 2/25/2022	2/25/2022
Quench nozzle	Quench nozzle flange is eroded	9/2/2021	The quench nozzle was replaced.	9/2/2021
Compressor/ Pneumatic pumps	VSD broke down	10/4/2021	10/5 - Atlas Copco onsite to inspect VSD issue. Found the unit is continuously tripping on Earth Fault. Tested motor leads, no issues found. Tried to reset the alarm to no avail. 10/8 - Removed Earth Fault error from drive program and tested for functionality. Tested motor and tested all leads for shorts. Unit runs normally now.	10/8/2021
Scrubber Pump	Cooling fan on scrubber motor broke	10/28/2021	Cooling fan was repaired	10/28/2021
Recirculation Pump	Recirculation pump malfunctioned	12/25/2021	Recirculation pump was replaced	12/27/2021
Recirculation Pump	Bearings malfunctioned on recirculation pump	2/24/2022	Recirculation pump was replaced again	2/24/2022
CatOx	CatOx temperature sensor malfunctioned	3/25/2022	CatOx temperature sensor replaced	3/28/2022

AS = Air Stripper
CatOx = Catalytic Oxidizer
EQ = Equilibrium
gpm = gallons per minute
HS6 = Hot Spot 6
RW = Recovery Well
VSD = Variable Speed Drive

Table 2-4. Hydraulic Containment System Performance Monitoring Plan

Sampling Location	Analysis	Frequency	Analytes
			CVOCs
Aqueous System Sampling			
Combined Influent	USEPA Method 8260B	Quarterly	✔
AS1 Effluent	USEPA Method 8260B	Monthly	✔
AS2 Effluent	USEPA Method 8260B	Monthly	✔
LPGAC Effluent	USEPA Method 8260B	Monthly	✔
Recovery Wells	USEPA Method 8260B	Quarterly[1]	✔
Vapor System Sampling			
AS Exhaust	USEPA Method TO-15	Annually	✔
	Draeger Tube/PID	Monthly	✔
CatOx Exhaust	USEPA Method TO-15	Annually	✔
	Draeger Tube/PID	Monthly	✔

[1] RW17C, 18C, 19C, and 20C were sampled monthly during the reporting period

AS1 = Secondary air stripper
AS2 = Primary air stripper
CatOx = Catalytic oxidizer
CVOCs = Chlorinated volatile organic compounds
LPGAC = Liquid phase granular activated carbon
PID = Photoionization detector
RW = Recovery Well
USEPA = United States Environmental Protection Agency

Table 2-5. Recovery Well Influent Data

Well ID	Sample Date	TCE	cDCE	tDCE	VC
RW0001A	8-Dec-09	**140,000**	**110,000**	10,000 U	**12,000**
	18-Dec-09	**226,000**	**111,000**	1,000 U	**14,300**
	21-Dec-09	**230,000**	**139,000**	670 U	**15,600**
	20-Jan-10	**240,000**	**98,000**	10,000 U	10,000 U
	23-Jun-10	**61,000**	**42,900**	340 U	**6,390**
	22-Nov-10	**29,200**	**82,100**	**379 I**	**4,750**
	21-Feb-11	**35,700**	**62,700**	350 U	**4,260**
	18-May-11	**46,800**	**61,300**	350 U	**4,770**
	10-Aug-11	**56,800**	**50,700**	350 U	**3,750**
	10-Nov-11	**64,900**	**34,000**	700 U	**2,310**
	2-Feb-12	**85,000**	**29,500**	**245**	**2,260**
	4-Apr-12	**86,600**	**32,300**	350 U	**2,360**
	26-Jul-12	**99,000**	**22,900**	**169**	**1,370**
	26-Nov-12	**94,700**	**20,500**	**218**	**847**
	11-Mar-13	**91,900**	**21,100**	**238 I**	**860 I**
	27-Sep-13	**100,000**	**18,200**	**213**	**783**
	31-Dec-13	**49,400**	**11,200**	**203**	**621**
	3-Apr-14	**91,800**	**19,500**	340 U	**685 I**
	26-Jun-14	**89,900**	**13,900**	340 U	**769 I**
	30-Sep-14	**84,600**	**14,000**	340 U	**558 I**
	30-Dec-14	**60,200**	**12,000**	**197 I**	**565**
	27-May-15	**36,100**	**25,700**	**970**	**7,300**
	4-Jun-15	**133,000**	**31,700**	**510**	**1,400**
	5-Jun-15	**154,000 J**	**31,200**	**470**	**1,000**
	13-Jul-15	**91,400**	**15,900**	**256**	**554**
	30-Sep-15	**58,500**	**11,100**	**184 I**	**381**
	17-Dec-15	**83,300**	**16,600**	**264 I**	**652**
	4-Mar-16	**81,600**	**14,500**	330 U	**857 I**
	22-Jun-16	**70,600**	**13,200**	170 U	**561**
	22-Sep-16	**67,400**	**12,700**	330 U	**512 I**
	16-Dec-16	**69,600**	**13,500**	330 U	**637 I**
	18-Jan-17	**49,400**	**14,800**	**255 I**	**712**
	15-Mar-17	**71,900**	**13,000**	**235 I**	**587**
	4-May-17	**62,400**	**14,000**	**247**	**684**
	20-Sep-17	**76,300**	**12,900**	220 U	**739 I**
	13-Dec-17	**65,500**	**13,700**	**219 I**	**539**
	19-Mar-18	**66,000**	**13,200**	**228 I**	**687 I**
	27-Jun-18	**59,200**	**11,100**	**163 I**	**563**
	20-Sep-18	**53,700**	**12,600**	**228 I**	**583**
	12-Dec-18	**49,200**	**10,300**	110 U	**501**
	12-Mar-19	**58,100**	**11,100**	220 U	**861 I**

Table 2-5. Recovery Well Influent Data (continued)

Well ID	Sample Date	TCE	cDCE	tDCE	VC
RW0001A	12-Jun-19	**50,000**	**9,590**	**158 I**	**510**
	30-Sep-19	**54,000**	**9,660**	220 U	410 U
	17-Dec-19	**46,000**	**9,380**	**160**	**625**
	12-Mar-20	**36,800**	**6,540**	110 U	**390 I**
	8-Jun-20	**41,700**	**7,830**	**170 I**	**504**
	16-Sep-20	**41,500**	**6,480**	110 U	**522**
	11-Jan-21	**42,600**	**7,270**	**146 I**	**514**
	11-Mar-21	**45,400**	**8,500**	**206 I**	**582**
	23-Jun-21	**45,900 Q**	**6,420**	55 U	**495**
	14-Sep-21	NS	NS	NS	NS
	14-Dec-21	NS	NS	NS	NS
	22-Mar-22	**35,000**	**17,000**	**310 I**	**630**

Table 2-5. Recovery Well Influent Data (continued)

Well ID	Sample Date	TCE	cDCE	tDCE	VC
RW0001B	8-Dec-09	**87,000**	**23,000**	10,000 U	10,000 U
	18-Dec-09	**94,100**	**10,300**	1,000 U	1,000 U
	21-Dec-09	**13,100**	**12,600**	500 U	500 U
	20-Jan-10	**130,000**	**10,000**	10,000 U	10,000 U
	23-Jun-10	**180,000**	**7,330**	340 U	280 U
	22-Nov-10	**200,000**	**6,610**	880 U	550 U
	21-Feb-11	**198,000**	**5,950**	350 U	220 U
	18-May-11	**186,000**	**5,410**	1,800 U	1,100 U
	10-Aug-11	**212,000**	**7,050**	880 U	550 U
	10-Nov-11	**177,000**	**7,400**	1,800 U	1,100 U
	2-Feb-12	**176,000**	**6,550**	70 U	44 U
	4-Apr-12	**122,000**	**6,460**	350 U	220 U
	26-Jul-12	**112,000**	**6,760**	180 U	110 U
	26-Nov-12	**70,800**	**8,400**	110 U	220 U
	11-Mar-13	**73,800**	**5,160**	230 U	440 U
	27-Sep-13	**69,400**	**5,220**	230 U	440 U
	20-Nov-13	**59,500**	**3,710**	230 U	440 U
	31-Dec-13	**57,200**	**4,880**	170 U	**213 I**
	3-Apr-14	**62,400**	**4,820**	340 U	330 U
	26-Jun-14	**31,100**	**1,910**	170 U	160 U
	30-Sep-14	**48,700**	**4,200**	170 U	160 U
	30-Dec-14	**42,500**	**3,970**	170 U	160 U
	27-May-15	**23,700**	**14,100**	**620**	**530**
	4-Jun-15	**105,100**	**12,200**	400 U	400 U
	5-Jun-15	**51,500**	**7,200**	400 U	400 U
	13-Jul-15	**48,600**	**3,900**	**46.9 I**	**143 I**
	30-Sep-15	**48,700**	**1,870**	**29.1 I**	**54.2 I**
	17-Dec-15	**45,900**	**3,660**	52 U	**145 I**
	4-Mar-16	**38,500**	**2,950**	170 U	160 U
	22-Jun-16	**30,900**	**3,210**	170 U	160 U
	22-Sep-16	**31,300**	**3,070**	83 U	**130 I**
	16-Dec-16	**38,200**	**3,060**	170 U	**170 I**
	17-Jan-17	**20,400**	**1,230**	44 U	82 U
	15-Mar-17	**42,600**	**2,770**	110 U	200 U
	4-May-17	**38,400**	**2,920**	**38 I**	**143**
	20-Sep-17	**32,100**	**2,360**	55 U	**155 I**
	13-Dec-17	**22,600**	**2,260**	44 U	**111 I**
	19-Mar-18	**20,300**	**1,900**	55 U	**107 I**
	27-Jun-18	**17,500**	**1,760**	55 U	**103 I**
	20-Sep-18	**17,200**	**2,300**	44 U	**100 I**
	12-Dec-18	**17,400**	**2,180**	55 U	**122 I**

Table 2-5. Recovery Well Influent Data (continued)

Well ID	Sample Date	TCE	cDCE	tDCE	VC
RW0001B	12-Mar-19	**19,600**	**2,120**	55 U	**118 I**
	12-Jun-19	**20,700**	**2,480**	55 U	100 U
	30-Sep-19	**18,900**	**2,020**	55 U	100 U
	17-Dec-19	**18,100**	**1,910**	44 U	82 U
	12-Mar-20	**12,700**	**1,260**	44 U	82 U
	8-Jun-20	**16,200**	**1,860**	44 U	82 U
	16-Sep-20	**17,300**	**1,550**	55 U	100 U
	11-Jan-21	**30,100**	**3,000**	110 U	200 U
	11-Mar-21	**20,700**	**2,170**	55 U	**113 I**
	23-Jun-21	**44,300 Q**	**3,460**	55 U	**155**
	14-Sep-21	NS	NS	NS	NS
	14-Dec-21	NS	NS	NS	NS
	22-Mar-22	**6,700**	**2,100**	73 U	**96 I**

Table 2-5. Recovery Well Influent Data (continued)

Well ID	Sample Date	TCE	cDCE	tDCE	VC
RW0002A	8-Dec-09	**230,000**	**150,000**	10,000 U	10,000 U
	18-Dec-09	**267,000**	**183,000**	2,000 U	**19,900**
	21-Dec-09	**263,000**	**187,000**	**1,800**	**31,200**
	20-Jan-10	**280,000**	**170,000**	10,000 U	**24,000**
	23-Jun-10	**82,500**	**41,800**	**390 I**	**13,400**
	22-Nov-10	**58,500**	**34,000**	**438 I**	**7,250**
	21-Feb-11	**3,630**	**63,300**	**456 I**	**5,850**
	18-May-11	**50,400**	**23,800**	**345 I**	**6,200**
	10-Aug-11	**48,500**	**21,500**	**349 I**	**5,020**
	10-Nov-11	**40,500**	**18,100**	350 U	**3,680**
	2-Feb-12	**42,500**	**16,400**	**352 I**	**4,010**
	4-Apr-12	**49,000**	**17,600**	**358 I**	**4,360**
	26-Jul-12	**38,500**	**11,400**	**256**	**3,340**
	26-Nov-12	**39,000**	**11,300**	**304**	**2,810**
	11-Mar-13	**39,000**	**10,400**	110 U	220 U
	27-Sep-13	**35,800**	**9,120**	**198 I**	**2,700**
	31-Dec-13	**33,400**	**7,720**	**188 I**	**2,380**
	3-Apr-14	**33,600**	**7,300**	170 U	**2,070**
	26-Jun-14	**33,100**	**6,990**	**199 I**	**2,190**
	30-Sep-14	**28,200**	**6,100**	**171 I**	**1,590**
	30-Dec-14	**26,600**	**5,030**	170 U	**1,390**
	27-May-15	**16,700**	**12,000**	**570**	**3,600**
	4-Jun-15	**39,900**	**12,100**	**380**	**2,600**
	5-Jun-15	**66,900**	**15,200**	**470**	**3,300**
	13-Jul-15	**39,600**	**7,270**	**229**	**2,060**
	30-Sep-15	**29,900**	**5,920**	**165 I**	**1,420**
	17-Dec-15	**32,600**	**6,430**	**168 I**	**1,610**
	4-Mar-16	**35,000**	**7,510**	**196 I**	**1,590**
	22-Jun-16	**38,200**	**6,960**	**189 I**	**1,890**
	22-Sep-16	**27,200**	**5,230**	**134 I**	**1,370**
	16-Dec-16	**29,600**	**5,500**	170 U	**1,520**
	15-Mar-17	**27,200**	**4,950**	**148 I**	**1,370**
	4-May-17	**29,900**	**5,480**	**140**	**1,830**
	20-Sep-17	**18,400**	**4,130**	**148 I**	**1,520**
	13-Dec-17	**15,600**	**3,820**	**124**	**1,020**
	19-Mar-18	**17,900**	**3,890**	**162 I**	**1,360**
	27-Jun-18	**11,700**	**2,310**	**88.8 I**	**772**
	20-Sep-18	**18,400**	**3,410**	**166 I**	**1,130**
	12-Dec-18	**19,600**	**3,580**	**178 I**	**1,280**
	12-Mar-19	**21,600**	**3,050**	**151 I**	**1,450**
	12-Jun-19	**17,300**	**2,520**	**102 I**	**901**

Table 2-5. Recovery Well Influent Data (continued)

Well ID	Sample Date	TCE	cDCE	tDCE	VC
RW0002A	30-Sep-19	**16,700**	**2,130**	**97.1 I**	**854**
	17-Dec-19	**16,500**	**2,120**	**94.3**	**1,150**
	12-Mar-20	**11,800**	**1,450**	**47.3 I**	**712**
	8-Jun-20	**13,600**	**1,570**	**73.9 I**	**845**
	16-Sep-20	**12,300**	**1,170**	55 U	**770**
	11-Jan-21	**15,300**	**1,650**	**86.5 I**	**867**
	11-Mar-21	**14,900**	**1,590**	**75.8 I**	**919**
	23-Jun-21	**12,900**	**1,220**	44.0 U	**816**
	14-Sep-21	**30,000**	**3,100**	360 U	**850 I**
	14-Dec-21	**45,000**	**7,700**	360 U	**820 I**
	22-Mar-22	**36,000**	**13,000**	360 U	**1,100 I**

Table 2-5. Recovery Well Influent Data (continued)

Well ID	Sample Date	TCE	cDCE	tDCE	VC
RW0002B	8-Dec-09	**660,000**	**17,000**	10,000 U	10,000 U
	18-Dec-09	**803,000**	**17,700**	5,000 U	5,000 U
	21-Dec-09	**946,000**	**21,900**	3,300 U	3,300 U
	20-Jan-10	**940,000**	**14,000**	10,000 U	10,000 U
	23-Jun-10	**363,000**	**7,780**	340 U	280 U
	22-Nov-10	**248,000**	**4,760 I**	1,800 U	1,100 U
	21-Feb-11	**203,000**	**3,670**	180 U	**141 I**
	18-May-11	**152,000**	**2,860**	700 U	440 U
	10-Aug-11	**138,000**	**2,950**	700 U	440 U
	10-Nov-11	**102,000**	**2,740**	880 U	550 U
	2-Feb-12	**126,000**	**3,130**	350 U	220 U
	4-Apr-12	**91,400**	**2,470**	350 U	220 U
	26-Jul-12	**94,000**	**2,270**	180 U	110 U
	26-Nov-12	**78,100**	**2,690**	110 U	220 U
	11-Mar-13	**66,300**	**2,860**	230 U	440 U
	27-Sep-13	**75,900**	**2,950**	230 U	440 U
	20-Nov-13	**64,900**	**2,230**	230 U	440 U
	31-Dec-13	**62,800**	**2,460**	170 U	**213 I**
	3-Apr-14	**59,900**	**1,820**	340 U	330 U
	26-Jun-14	**68,700**	**2,510**	340 U	330 U
	30-Sep-14	**57,600**	**2,150**	340 U	330 U
	30-Dec-14	**72,100**	**2,470**	170 U	**235 I**
	27-May-15	**35,200**	**11,200**	**410**	**770**
	4-Jun-15	**78,600**	**6,100**	400 U	400 U
	5-Jun-15	**66,800**	**4,500**	**79**	**260**
	13-Jul-15	**43,300**	**1,980**	42 U	**213**
	30-Sep-15	**35,800**	**1,730**	42 U	**190 I**
	17-Dec-15	**48,000**	**1,960**	100 U	**174 I**
	4-Mar-16	**35,100**	**1,790**	170 U	160 U
	22-Jun-16	**39,100**	**1,760**	170 U	160 U
	22-Sep-16	**35,300**	**1,390**	83 U	79 U
	16-Dec-16	**45,100**	**1,690**	170 U	**167 I**
	15-Mar-17	**33,800**	**1,140**	110 U	200 U
	4-May-17	**42,200**	**1,230**	22 U	**169**
	20-Sep-17	**32,100**	**1,710**	55 U	**191 I**
	13-Dec-17	**38,900**	**1,820**	44 U	**201**
	19-Mar-18	**34,700**	**1,910**	110 U	**282 I**
	27-Jun-18	**30,400**	**1,600**	110 U	200 U
	20-Sep-18	**31,800**	**2,070**	55 U	**251**
	12-Dec-18	**28,900**	**1,840**	110 U	220 U
	12-Mar-19	**38,900**	**1,900**	110 U	**378 I**

Table 2-5. Recovery Well Influent Data (continued)

Well ID	Sample Date	TCE	cDCE	tDCE	VC
RW0002B	12-Jun-19	**31,900**	**1,880**	55 U	**238 I**
	30-Sep-19	**25,700**	**1,450**	110 U	200 U
	17-Dec-19	**24,200**	**1,540**	44 U	**303**
	12-Mar-20	**22,100**	**1,190**	55 U	**235 I**
	8-Jun-20	**20,700**	**1,350**	44 U	**332**
	16-Sep-20	**20,200**	**1,050**	55 U	**323**
	12-Nov-20	**5,820**	**704**	0.22 U	**182**
	11-Jan-21	**4,320**	**1,520**	**30.9 I**	**211**
	11-Mar-21	**20,200**	**1,280**	55 U	**389**
	23-Jun-21	**17,800**	**1,250**	44 U	**810**
	14-Sep-21	**29,000**	**2,100**	360 U	**520 I**
	14-Dec-21	**27,000**	**2,300**	360 U	**360 I**
	22-Mar-22	**19,000**	**1,700**	150 U	**250 I**

Table 2-5. Recovery Well Influent Data (continued)

Well ID	Sample Date	TCE	cDCE	tDCE	VC
RW0003A	14-Dec-09	10,000 U	5,500	10,000 U	28,000
	18-Dec-09	7,500	22,830	1,000 U	23,600
	21-Dec-09	8,700	38,000	670	18,000
	21-Dec-09	8,900	37,600	660	17,800
	20-Jan-10	41,000	12,000	10,000 U	10,000 U
	23-Jun-10	20,500	36,200	400	7,280
	22-Nov-10	3,830	45,900	453 I	4,130
	21-Feb-11	3,520	40,300	440 I	4,050
	18-May-11	2,940	28,100	302 I	3,690
	10-Aug-11	1,430	26,800	350	3,520
	10-Nov-11	284 I	24,800	237 I	2,870
	2-Feb-12	427	26,700	303	3,410
	4-Apr-12	972	22,800	261	3,660
	26-Jul-12	65 U	17,500	88 U	3,500
	26-Nov-12	4,520	12,900	295	3,050
	11-Mar-13	79.5 I	16,800	266	2,980
	27-Sep-13	79 U	14,600	180 I	3,040
	31-Dec-13	60 U	15,100	225	3,910
	3-Apr-14	60 U	14,400	195 I	2,880
	26-Jun-14	2,100	888	9 U	74
	30-Sep-14	144 I	10,700	170 I	1,890
	30-Dec-14	371	11,400	179 I	2,160
	27-May-15	2,700	12,500	440	8,900
	4-Jun-15	20,200	23,000	390	9,400
	5-Jun-15	26,300	25,600	430	8,800
	13-Jul-15	5,140	34,300	331	6,670
	30-Sep-15	5,820	24,700	288	4,500
	17-Dec-15	18,500	27,700	336	5,030
	4-Mar-16	7,150	23,100	347	3,200
	22-Jun-16	15,300	15,500	241 I	4,020
	22-Sep-16	10,000	17,100	204	2,680
	16-Dec-16	7 U	417	90.3	2,990
	15-Mar-17	16,300	15,000	229	2,520
	4-May-17	19,300	14,700	170	3,060
	20-Sep-17	4,380	2,590	63.5	875
	13-Dec-17	3,390	2,850	46.9	557
	19-Mar-18	186	300	50.2	63.6
	27-Jun-18	822	2,950	52.1	439
	20-Sep-18	693	2,410	50.8	447
	12-Dec-18	600	2,380	42.0	381
	12-Mar-19	825	2,390	45.4	597

Table 2-5. Recovery Well Influent Data (continued)

Well ID	Sample Date	TCE	cDCE	tDCE	VC
RW0003A	12-Jun-19	**779**	**2,420**	**45.3**	**518**
	30-Sep-19	**697**	**2,230**	**35.9**	**356**
	17-Dec-19	**194**	**2,330**	**38.1**	**488**
	12-Mar-20	**262**	**1,610**	**35.7**	**341**
	8-Jun-20	**168**	**1,780**	**36.8**	**478**
	16-Sep-20	**172**	**1,640**	**24.1 I**	**459**
	11-Jan-21	**215**	**1,970**	**29.7**	**403**
	11-Mar-21	0.35 U	**3.8**	**14.8**	**5.0**
	23-Jun-21	**105**	**1,740**	27.2 U	**396**
	14-Sep-21	NS	NS	NS	NS
	14-Dec-21	NS	NS	NS	NS
	22-Mar-22	**34,000**	**9,700**	360.0 U	**520 I**

Table 2-5. Recovery Well Influent Data (continued)

Well ID	Sample Date	TCE	cDCE	tDCE	VC
RW0003B	8-Dec-09	**11,000**	10,000 U	10,000 U	10,000 U
	18-Dec-09	**7,700**	**1,700**	400 U	400 U
	21-Dec-09	**5,800**	**1,500**	100 U	100 U
	20-Jan-10	**16,000**	**1,700**	100 U	100 U
	23-Jun-10	**4,370**	**810**	17 U	14 U
	22-Nov-10	**6,420**	**1,160**	35 U	22 U
	21-Feb-11	**6,540**	**1,140**	**9 I**	**8 I**
	18-May-11	**4,840**	**900**	35 U	22 U
	10-Aug-11	**4,810**	**895**	18 U	**15 I**
	10-Nov-11	**69,800**	**14,800**	700 U	440 U
	2-Feb-12	**3,210**	**741**	18 U	**35 I**
	4-Apr-12	**3,020**	**735**	18 U	**45 I**
	26-Jul-12	**2,560**	**596**	7 U	**35**
	26-Nov-12	**1,820**	**574**	**6**	**24**
	11-Mar-13	**2,220**	**792**	6 U	**47**
	27-Sep-13	**2,530**	**925**	11 U	**68**
	20-Nov-13	**2,480**	**826**	11 U	**69**
	31-Dec-13	**2,090**	**903**	**6.3**	**66**
	3-Apr-14	**2,140**	**1,030**	9 U	**70**
	26-Jun-14	**1,440**	**18,300**	**251**	**4,060**
	30-Sep-14	**2,820**	**1,200**	17 U	**89**
	30-Dec-14	**2,520**	**1,280**	17 U	**121**
	27-May-15	**630**	**2,600**	**80**	**250**
	4-Jun-15	**1,600**	**950**	**18**	**140**
	5-Jun-15	**2,300**	**1,400**	40 U	**230**
	13-Jul-15	**2,200**	**986**	**9.1 I**	**74**
	30-Sep-15	**2,170**	**1,060**	**15 I**	**71**
	17-Dec-15	**2,170**	**1,030**	**8.6 I**	**57**
	4-Mar-16	**2,270**	**1,040**	**8.9 I**	**57**
	22-Jun-16	**1,890**	**1,050**	**10 I**	**77**
	22-Sep-16	**2,310**	**1,150**	**10 I**	**70**
	16-Dec-16	**1,550**	**888**	8 U	**67**
	15-Mar-17	**2,370**	**910**	**11**	**57**
	4-May-17	**1,930**	**912**	**6.6 I**	**70**
	20-Sep-17	**1,560**	**940**	**9.4 I**	**90**
	13-Dec-17	**1,740**	**1,200**	**8.6 I**	**123**
	19-Mar-18	**1,850**	**1,200**	**21**	**126**
	27-Jun-18	**1,960**	**1,080**	**8.2 I**	**87**
	20-Sep-18	**2,450**	**1,440**	5.5 U	**120**
	12-Dec-18	**2,070**	**1,180**	**6.1 I**	**91**
	12-Mar-19	**2,320**	**1,770**	**13 I**	**235**

Table 2-5. Recovery Well Influent Data (continued)

Well ID	Sample Date	TCE	cDCE	tDCE	VC
RW0003B	12-Jun-19	**1,520**	**615**	**5.3**	**65**
	30-Sep-19	**6,490**	**1,380**	22 U	**91 I**
	17-Dec-19	**6,430**	**1,420**	**17**	**123**
	12-Mar-20	**5,470**	**1,140**	22 U	**105**
	8-Jun-20	**6,210**	**1,290**	22 U	**139**
	16-Sep-20	**6,570**	**1,160**	22 U	**171**
	11-Jan-21	**13,400**	**1,490**	44 U	**357**
	11-Mar-21	**8,960**	**1,570**	22 U	**194**
	23-Jun-21	**11,400**	**1,510**	44 U	**288**
	14-Sep-21	NS	NS	NS	NS
	14-Dec-21	NS	NS	NS	NS
	22-Mar-22	**4,700**	**1,800**	36 U	**150**

Table 2-5. Recovery Well Influent Data (continued)

Well ID	Sample Date	TCE	cDCE	tDCE	VC
RW0004B (off)	8-Dec-09	**200,000**	**20,000**	10,000 U	10,000 U
	18-Dec-09	**239,000**	**22,700**	5,000 U	5,000 U
	21-Dec-09	**230,000**	**25,000**	1,000 U	1,000 U
	20-Jan-10	**250,000**	**23,000**	10,000 U	10,000 U
	23-Jun-10	**102,000**	**9,220**	170 U	140 U
	22-Nov-10	**82,300**	**6,940**	350 U	220 U
	21-Feb-11	**54,100**	**4,660**	350 U	220 U
	18-May-11	**43,200**	**3,680**	350 U	220 U
	10-Aug-11	**34,400**	**2,790**	180 U	110 U
	10-Nov-11	**12,000**	**1,320**	180 U	110 U
	2-Feb-12	**16,100**	**1,330**	70 U	44 U
	4-Apr-12	**10,000**	**969**	35 U	22 U
	26-Jul-12	**6,210**	**568**	18 U	11 U
	26-Nov-12	**4,400**	**607**	11 U	22 U
	11-Mar-13	**2,640**	**370**	11 U	22 U
	27-Sep-13	**1,100**	**174**	5 U	9 U
	31-Dec-13	**643**	**110**	3 U	3 U
	3-Apr-14	**517**	**105**	3 U	3 U
	26-Jun-14	**697**	**119**	7 U	7 U
	30-Sep-14	**365**	**83**	**3.8 I**	2 U
	30-Dec-14	**331**	**90**	**3.7 I**	2 U
	27-May-15	**77**	**130**	**9.0**	**18**
	4-Jun-15	**270**	**120**	**7.0**	3 U
	5-Jun-15	**320**	**130**	**8.0**	3 U
	13-Jul-15	**128**	**65.2**	**3.9**	**0.52 I**
	30-Sep-15	**56.3**	**30.8**	**2.1**	0.25 U
	17-Dec-15	**51.9**	**34**	**2.5**	**0.29 I**
	4-Mar-16	**39.9**	**31.8**	**2.3**	**0.53 I**
	22-Jun-16	**28.7**	**28.7**	**2.5**	**0.81 I**
	22-Sep-16	**18.2**	**21.6**	**1.9**	0.3 U
	16-Dec-16	**21.8**	**26.4**	**1.9**	**0.43 I**
	15-Mar-17	**84.5**	**43.9**	**1.6**	**4.9**
	4-May-17	**165**	**47.6**	**1.7 I**	**5.2**
	20-Sep-17	**113**	**45.6**	**2.1**	**3.5**
	13-Dec-17	**109**	**33.2**	**1.7**	**3.7**

Table 2-5. Recovery Well Influent Data (continued)

Well ID	Sample Date	TCE	cDCE	tDCE	VC
RW0004B (off)	19-Mar-18	**75.7**	**58.7**	**1.9**	**9.4**
	27-Jun-18	**89.3**	**28**	**1.2**	**8.6**
	20-Sep-18	**2.5**	**38.8**	**1.6**	**9.3**
	12-Dec-18	**123**	**33.2**	**1.4**	**5.5**
	12-Mar-19	**76.5**	**42.9**	**1.7**	**10.5**
	12-Jun-19	**275**	**59.2**	**1.9**	**9.4**
	30-Sep-19	**497**	**24.5**	1 U	2 U

Table 2-5. Recovery Well Influent Data (continued)

Well ID	Sample Date	TCE	cDCE	tDCE	VC
RW0005B	8-Dec-09	**200,000**	**19,000**	10,000 U	10,000 U
	18-Dec-09	**226,000**	**20,000**	5,000 U	5,000 U
	21-Dec-09	**259,000**	**23,500**	1,000 U	1,000 U
	20-Jan-10	**250,000**	**21,000**	10,000 U	10,000 U
	23-Jun-10	**142,000**	**11,800**	340 U	280 U
	22-Nov-10	**113,000**	**8,340**	700 U	440 U
	21-Feb-11	**86,400**	**6,770**	350 U	220 U
	18-May-11	**77,700**	**5,670**	700 U	440 U
	10-Aug-11	**70,700**	**5,140**	350 U	220 U
	10-Nov-11	**58,500**	**4,910**	700 U	440 U
	2-Feb-12	**57,000**	**4,210**	350 U	220 U
	4-Apr-12	**59,500**	**4,830**	180 U	110 U
	26-Jul-12	**53,200**	**4,870**	88 U	55 U
	26-Nov-12	**49,700**	**3,360**	57 U	110 U
	11-Mar-13	**47,300**	**4,750**	**194 I**	220 U
	27-Sep-13	**23,600**	**2,720**	57 U	110 U
	31-Dec-13	**14,500**	**1,890**	86 U	81 U
	3-Apr-14	**9,050**	**1,290**	34 U	33 U
	26-Jun-14	**2,070**	**393**	17 U	16 U
	30-Sep-14	**3,890**	**748**	**17 I**	16 U
	30-Dec-14	**2,860**	**678**	**23 I**	16 U
	27-May-15	**3,800**	**1,800**	**89**	**110**
	4-Jun-15	**3,800**	**1,200**	**47**	40 U
	5-Jun-15	**3,200**	**920**	40 U	40 U
	13-Jul-15	**1,070**	**311**	**18.7 I**	5.0 U
	30-Sep-15	**651**	**269**	**14.4**	2.5 U
	17-Dec-15	**533**	**265**	**16.9**	**3.7**
	4-Mar-16	**456**	**284**	**17.6**	**5.0**
	22-Jun-16	**359**	**233**	**21.3**	**4.3 I**
	22-Sep-16	**385**	**230**	**19.6**	**5.3**
	11-Jan-17	**333**	**251**	**18.1**	**4.3 I**
	15-Mar-17	**544**	**331**	**21.9**	**8.4**
	4-May-17	**519**	**245**	**14.0**	**8.8 I**
	20-Sep-17	**321**	**222**	**17.1**	**9.3**
	13-Dec-17	**301**	**207**	**20.3**	**5.9**
	19-Mar-18	**178**	**254**	**16.6**	**7.1**
	27-Jun-18	**183**	**163**	**12.1**	**5.7**
	20-Sep-18	**75.8**	**169**	**10.5**	**5.7**
	12-Dec-18	**110**	**166**	**9.4**	**4.9**
	12-Mar-19	**108**	**135**	**8.5**	**7.7**
	12-Jun-19	**335**	**149**	**8.5**	**8.7**

Table 2-5. Recovery Well Influent Data (continued)

Well ID	Sample Date	TCE	cDCE	tDCE	VC
RW0005B	30-Sep-19	**483**	**151**	**7.3**	**9.0**
	17-Dec-19	**18.4**	**124**	**6.9**	**9.3**
	12-Mar-20	**18.9**	**136**	**6.5**	**9.9**
	8-Jun-20	**13.5**	**121**	**6.2**	**11.1**
	16-Sep-20	**11.5**	**103**	**6.8**	**17.3**
	11-Jan-21	**5.8**	**120**	**6.8**	**11.5**
	11-Mar-21	**6.7**	**134**	**6.1**	**17.5**
	23-Jun-21	**50.9**	**1,370**	**64.7**	**183**
	14-Sep-21	**11**	**91**	**5.5**	**14**
	14-Dec-21	**6.8**	**76**	**5.0**	**15**
	22-Mar-22	**6.6**	**91**	**3.5**	**24.0**

Table 2-5. Recovery Well Influent Data (continued)

Well ID	Sample Date	TCE	cDCE	tDCE	VC
RW0006B (off)	8-Dec-09	**220,000**	**28,000**	10,000 U	10,000 U
	18-Dec-09	**210,000**	**25,700**	5,000 U	5,000 U
	21-Dec-09	**254,000**	**31,200**	1,000 U	1,000 U
	20-Jan-10	**270,000**	**29,000**	10,000 U	10,000 U
	23-Jun-10	**98,700**	**16,000**	340 U	280 U
	22-Nov-10	**72,400**	**9,580**	350 U	220 U
	21-Feb-11	**43,400**	**6,350**	180 U	110 U
	18-May-11	**26,600**	**3,470**	180 U	110 U
	10-Aug-11	**19,700**	**2,570**	7 U	4 U
	10-Nov-11	**13,000**	**1,830**	180 U	110 U
	2-Feb-12	**9,320**	**1,200**	35 U	22 U
	4-Apr-12	**7,060**	**851**	35 U	22 U
	26-Jul-12	**4,610**	**552**	18 U	11 U
	26-Nov-12	**3,380**	**583**	11 U	22 U
	11-Mar-13	**1,360**	**275**	5 U	9 U
	27-Sep-13	**477**	**125**	**2.3 I**	2 U
	20-Nov-13	**455**	**119**	**3.1**	**0.6 I**
	27-May-15	**52**	**150**	**16**	**28**
	4-Jun-15	**65**	**120**	**12**	**5.0**
	5-Jun-15	**100**	**130**	**14**	**5.0**
	13-Jul-15	**109**	**89**	**6.3**	**1.6**
	30-Sep-15	**76**	**66**	**3.9**	**0.7 I**
	17-Dec-15	**54**	**44**	**3.1**	**0.5 I**
	4-Mar-16	**52**	**51**	**3.8**	**1.0**
	22-Jun-16	**70**	**62**	**4.4**	**0.6 I**
	22-Sep-16	**68**	**61**	**3.8**	**0.5 I**
	16-Dec-16	**71**	**68**	**3.7**	**0.7 I**
	15-Mar-17	**91**	**68**	**3.7**	**3.0**
	4-May-17	**155**	**59**	**2.8**	**3.0**
	20-Sep-17	**112**	**77**	**4.7**	**3.5**
	13-Dec-17	**104**	**41**	**2.4**	**2.1**

Table 2-5. Recovery Well Influent Data (continued)

Well ID	Sample Date	TCE	cDCE	tDCE	VC
RW0006B (off)	19-Mar-18	**157**	**53**	**2.4**	**3.6**
	27-Jun-18	**93**	**43**	**2.2**	**1.9**
	20-Sep-18	**8.5**	**67**	**2.7**	**9.4**
	12-Dec-18	**64**	**33**	**1.8**	**1.8**
	12-Mar-19	**43**	**37**	**1.9**	**2.8**
	12-Jun-19	**204**	**47**	**2.3**	**3.7**
	30-Sep-19	**240**	**20**	1 U	1 U
	17-Dec-19	NS	NS	NS	NS
	12-Mar-20	NS	NS	NS	NS

Table 2-5. Recovery Well Influent Data (continued)

Well ID	Sample Date	TCE	cDCE	tDCE	VC
RW0009A	27-May-15	**5,500**	**32,700**	**790**	**3,800**
	4-Jun-15	**62,100**	**75,000**	**1,200**	**4,300**
	5-Jun-15	**66,400**	**74,000**	**1,200**	**4,700**
	13-Jul-15	**24,700**	**54,100**	**698**	**4,620**
	30-Sep-15	**17,300**	**29,000**	**586**	**2,050**
	17-Dec-15	**14,500**	**25,500**	**527**	**2,430**
	4-Mar-16	**8,610**	**21,800**	**427**	**2,400**
	22-Jun-16	**3,300**	**17,600**	**352**	**3,070**
	22-Sep-16	**1,160**	**13,600**	**221**	**1,850**
	16-Dec-16	**393**	**14,900**	**188 I**	**2,190**
	15-Mar-17	**158**	**12,100**	**211**	**1,890**
	4-May-17	**111**	**9,370**	**179**	**2,510**
	20-Sep-17	**100**	**9,990**	**206**	**2,780**
	13-Dec-17	**55.2**	**9,990**	**148**	**1,780**
	19-Mar-18	**108 I**	**8,440**	**158 I**	**2,020**
	27-Jun-18	**79.7**	**6,990**	**120**	**1,490**
	20-Sep-18	35 U	**7,290**	22 U	**1,730**
	12-Dec-18	35 U	**6,270**	**133**	**1,600**
	12-Mar-19	**36.6 I**	**6,510**	**118**	**1,970**
	12-Jun-19	**184**	**4,920**	**108**	**1,730**
	30-Sep-19	**443**	**4,930**	**90.4**	**1,400**
	17-Dec-19	**26.1 I**	**4,770**	**98.7**	**1,850**
	12-Mar-20	17 U	**3,800**	**68.5**	**1,610**
	8-Jun-20	17 U	**4,300**	**92.6**	**1,700**
	16-Sep-20	17 U	**3,890**	**78.4**	**2,050**
	11-Jan-21	17 U	**4,360**	**89.5**	**1,610**
	11-Mar-21	35 U	**4,970**	**106**	**2,030**
	23-Jun-21	17 U	**4,360**	**76.8**	**1,570**
	14-Sep-21	**91 I**	**4,200**	**86 I**	**1,400**
	14-Dec-21	44 U	**4,400**	**94 I**	**1,500**
	22-Mar-22	44 U	**3,300**	**74 I**	**1,600**

Table 2-5. Recovery Well Influent Data (continued)

Well ID	Sample Date	TCE	cDCE	tDCE	VC
RW0010A (off)	27-May-15	3 U	**400**	**11**	**280**
	4-Jun-15	67 U	**9,700**	**370**	**1,200**
	5-Jun-15	100 U	**8,100**	**320**	**820**
	13-Jul-15	**69**	**3,700**	**158**	**910**
	30-Sep-15	**12.5**	**3,010**	**170**	**1,440**
	17-Dec-15	**18.3 I**	**4,280**	**233**	**1,580**
	4-Mar-16	**11.6 I**	**4,930**	**261**	**1,410**
	22-Jun-16	14 U	**4,080**	**225**	**1,530**
	22-Sep-16	14 U	**3,450**	**172**	**1,060**
	16-Dec-16	14 U	**3,450**	**150**	**1,220**
	15-Mar-17	**29.2 I**	**2,670**	**147**	**1,020**
	4-May-17	**64.4**	**2,720**	**127**	**1,430**
	20-Sep-17	**51.1**	**2,100**	**113**	**1,060**
	13-Dec-17	**42.3**	**1,950**	**98.9**	**978**
	19-Mar-18	**38.9**	**1,970**	**105**	**1,000**
	27-Jun-18	**66.0**	**1,360**	**75.4**	**692**
	20-Sep-18	6.9 U	**1,520**	**95.2**	**802**
	12-Dec-18	**39.5**	**1,210**	**65.6**	**639**
	12-Mar-19	**24.6**	**1,420**	**57.6**	**837**
	12-Jun-19	**150**	**1,310**	**69.2**	**905**
	1-Sep-19	**324**	**95.4**	**54.1**	**1,500**
	23-Jun-21	NS	NS	NS	NS
	14-Sep-21	8.9 U	**1200**	**53**	**770**
	14-Dec-21	18 U	**1400**	**55**	**730**
	22-Mar-22	NS	NS	NS	NS

Table 2-5. Recovery Well Influent Data (continued)

Well ID	Sample Date	TCE	cDCE	tDCE	VC
RW0011A (off)	27-May-15	400 U	**23,500**	**970**	**2,300**
	4-Jun-15	400 U	**31,500**	**790**	**2,600**
	5-Jun-15	**250**	**26,300**	**690**	**2,200**
	13-Jul-15	5 U	**4,240**	**128**	**641**
	30-Sep-15	11 U	**2,410**	**58.6**	**708**
	17-Dec-15	5 U	**2,930**	**74.5**	**823**
	4-Mar-16	5 U	**3,150**	**74.7**	**724**
	22-Jun-16	14 U	**2,640**	**67.3**	**857**
	22-Sep-16	3 U	**2,380**	**53.2**	**573**
	16-Dec-16	14 U	**2,340**	**44.4 I**	**728**
	15-Mar-17	**29.6**	**2,060**	**56.7**	**659**
	4-May-17	**54.4**	**1,830**	**30.1**	**1,010**
	20-Sep-17	**80.3**	**1,960**	**38.4**	**822**
	13-Dec-17	**36.5**	**1,910**	**39.2**	**744**
	19-Mar-18	**33.0**	**1,730**	**50.8**	**589**
	27-Jun-18	**34.7**	**1,500**	**31.6**	**548**
	20-Sep-18	7 U	**1,840**	**49.8**	**651**
	12-Dec-18	**28.8**	**1,400**	**26.8**	**516**
	12-Mar-19	**18.6 I**	**1,870**	**33.7**	**812**

Table 2-5. Recovery Well Influent Data (continued)

Well ID	Sample Date	TCE	cDCE	tDCE	VC
RW0012A	27-May-15	100 U	7,200	160	3,900
	4-Jun-15	17,800	80,100	2,700	5,300
	5-Jun-15	35,000	103,000	3,700	5,400
	13-Jul-15	7,270	45,000	1,220	3,490
	30-Sep-15	99.3 I	22,000	733	1,870
	17-Dec-15	1,980	22,100	616	1,730
	4-Mar-16	1,200	21,500	538	1,480
	22-Jun-16	794	18,600	416	1,540
	22-Sep-16	709	16,900	305	1,120
	16-Dec-16	883	18,600	278	1,380
	15-Mar-17	346	16,100	328	1,340
	4-May-17	358	17,600	248	1,300
	20-Sep-17	838	14,700	264	1,330
	13-Dec-17	231	18,300	281	1,400
	19-Mar-18	164 I	15,700	297	1,470
	27-Jun-18	167 I	14,000	253	1,250
	20-Sep-18	86 U	15,000	288	1,330
	12-Dec-18	69 U	13,400	284	1,170
	12-Mar-19	129 I	14,400	239	1,430
	12-Jun-19	219	13,500	224	1,190
	30-Sep-19	340	11,100	192 I	1,310
	17-Dec-19	111 I	10,300	204	1,870
	12-Mar-20	6.9 U	1,200	54.5 I	1,250
	8-Jun-20	35 U	9,020	183	1,510
	16-Sep-20	35 U	7,790	136	1,650
	11-Jan-21	435	9,840	170	1,800
	11-Mar-21	129	8,310	158	1,720
	23-Jun-21	35 U	6,230	95.5	1,610
	14-Sep-21	44 U	5,200	140	1,100
	14-Dec-21	44 U	4,300	99 I	810
	22-Mar-22	44 U	4,800	130	1,500

Table 2-5. Recovery Well Influent Data (continued)

Well ID	Sample Date	TCE	cDCE	tDCE	VC
RW0013A	27-May-15	50 U	**5,200**	**150**	**5,700**
	4-Jun-15	**5,000**	**40,000**	**770**	**5,300**
	5-Jun-15	**3,900**	**49,500**	**980**	**5,000**
	13-Jul-15	**710**	**14,000**	**254**	**2,750**
	30-Sep-15	**763**	**19,000**	**347**	**2,190**
	17-Dec-15	**348**	**7,520**	**166**	**1,080**
	4-Mar-16	**150**	**6,850**	**148**	**1,000**
	22-Jun-16	**85.3 I**	**5,020**	**117**	**1,190**
	22-Sep-16	14 U	**4,360**	**87.5**	**863**
	16-Dec-16	14 U	**5,140**	**88.5**	**1,190**
	15-Mar-17	35 U	**4,750**	**106**	**1,120**
	4-May-17	**28.8 I**	**4,360**	**80**	**1,420**
	20-Sep-17	**32.0 I**	**4,030**	**78**	**1,200**
	13-Dec-17	**38.2**	**5,050**	**82**	**1,090**
	19-Mar-18	**34.9**	**2,620**	**100**	**1,390**
	27-Jun-18	**45.6 I**	**4,430**	**72.5**	**1,040**
	20-Sep-18	35 U	**5,280**	**90.4 I**	**1,160**
	12-Dec-18	**27.3 I**	**4,410**	**76.9**	**911**
	12-Mar-19	**21.3 I**	**6,120**	**98.2**	**1,520**
	12-Jun-19	**126**	**4,820**	**79.7**	**1,140**
	30-Sep-19	**266**	**6,610**	**101**	**1,410**
	17-Dec-19	35 U	**7,220**	**116**	**1,820**
	12-Mar-20	35 U	**5,390**	**102**	**1,220**
	8-Jun-20	35 U	**6,380**	**104**	**1,640**
	16-Sep-20	35 U	**5,870**	**77.5 I**	**1,820**
	11-Jan-21	**36.8 I**	**7,510**	**113**	**1,780**
	11-Mar-21	35 U	**8,430**	**123**	**2,050**
	23-Jun-21	69 U	**7,470**	**104 I**	**1,870**
	14-Sep-21	**54 I**	**5,900**	**100 I**	**1,300**
	14-Dec-21	89 U	**7,000**	**130 I**	**1,600**
	22-Mar-22	89 U	**7,400**	**120 I**	**2,100**

Table 2-5. Recovery Well Influent Data (continued)

Well ID	Sample Date	TCE	cDCE	tDCE	VC
RW0014A	27-May-15	67 U	**5,100**	**220**	**6,600**
	4-Jun-15	400 U	**45,500**	**960**	**2,900**
	5-Jun-15	400 U	**82,200**	**1,700**	**4,900**
	13-Jul-15	**58.8**	**9,650**	**245**	**1,000**
	30-Sep-15	**384**	**4,920**	**122**	**579**
	15-Jan-16	14 U	**4,310**	**116**	**617**
	4-Mar-16	14 U	**3,710**	**116**	**574**
	22-Jun-16	14 U	**3,410**	**92.8**	**726**
	22-Sep-16	14 U	**2,930**	**68.5**	**449**
	16-Dec-16	14 U	**3,710**	**70.3**	**653**
	15-Mar-17	**19.4 I**	**3,060**	**75.2**	**625**
	4-May-17	**33.9 I**	**3,650**	**65.0**	**916**
	20-Sep-17	**65.9**	**2,580**	**56.4**	**598**
	13-Dec-17	**28.4**	**3,420**	**60.2**	**656**
	19-Mar-18	**32.7 I**	**4,330**	**73.2**	**829**
	27-Jun-18	**31.3 I**	**4,600**	**65**	**665**
	20-Sep-18	35 U	**6,150**	**99 I**	**986**
	12-Dec-18	17 U	**8,010**	**107**	**1,090**
	12-Mar-19	**25.6 I**	**9,660**	**128**	**1,830**
	12-Jun-19	**78.6**	**8,280**	**134**	**1,590**
	30-Sep-19	**208**	**9,600**	**125**	**1,430**
	17-Dec-19	35 U	**8,900**	**164**	**2,040**
	12-Mar-20	35 U	**7,720**	**147**	**1,350**
	8-Jun-20	35 U	**8,600**	**143**	**1,700**
	16-Sep-20	35 U	**7,170**	**106**	**1,790**
	11-Jan-21	35 U	**8,460**	**142**	**1,700**
	11-Mar-21	**59.0 I**	**9,020**	**152**	**1,930**
	23-Jun-21	35 U	**6,980**	**124**	**1,620**
	14-Sep-21	44 U	**5,200**	**110 I**	**1,200**
	14-Dec-21	44 U	**3,900**	**82 I**	**850**
	22-Mar-22	44 U	**3,800**	**86 I**	**1,200**

Table 2-5. Recovery Well Influent Data (continued)

Well ID	Sample Date	TCE	cDCE	tDCE	VC
RW0015A	27-May-15	**470**	**29,200**	**1,000**	**2,900**
	4-Jun-15	**3,700**	**62,100**	**1,400**	**3,200**
	5-Jun-15	**4,000**	**67,800**	**1,500**	**3,400**
	13-Jul-15	**538**	**9,240**	**248**	**768**
	30-Sep-15	**182**	**6,380**	**140**	**321**
	17-Dec-15	**136**	**6,350**	**139**	**299**
	4-Mar-16	**83.7**	**6,550**	**121**	**266**
	22-Jun-16	**34.8 I**	**6,310**	**122**	**407**
	22-Sep-16	**14.4 I**	**6,380**	**97.1**	**309**
	16-Dec-16	27 U	**8,200**	**105**	**455**
	15-Mar-17	35 U	**6,930**	**118**	**469**
	4-May-17	35 U	**8,010**	**100 I**	**696**
	20-Sep-17	**63.5**	**6,930**	**108**	**657**
	13-Dec-17	17 U	**7,760**	**116**	**674**
	19-Mar-18	**56.5 I**	**7,210**	**122**	**795**
	27-Jun-18	35 U	**6,510**	**110**	**690**
	20-Sep-18	35 U	**6,040**	**111**	**761**
	12-Dec-18	35 U	**5,080**	**94.8 I**	**723**
	12-Mar-19	35 U	**5,340**	**81.8 I**	**936**
	12-Jun-19	**52.5**	**3,960**	**76.6**	**718**
	30-Sep-19	**151**	**4,220**	**68.5**	**771**
	17-Dec-19	17 U	**4,110**	**85.8**	**821**
	12-Mar-20	17 U	**3,070**	**69.7**	**665**
	8-Jun-20	17 U	**3,250**	**61.5**	**758**
	16-Sep-20	17 U	**2,890**	**44.3 I**	**820**
	11-Jan-21	17 U	**3,070**	**52.8**	**664**
	11-Mar-21	17 U	**3,270**	**57.9**	**683**
	23-Jun-21	17 U	**2,510**	**41.2 I**	**553**
	14-Sep-21	22 U	**2,400**	**46.0 I**	**590**
	14-Dec-21	22 U	**2,000**	**44.0 I**	**440**
	22-Mar-22	22 U	**1,700**	**36.0 I**	**520**

Table 2-5. Recovery Well Influent Data (continued)

Well ID	Sample Date	TCE	cDCE	tDCE	VC
RW0016B	27-May-15	**5,300**	**8,000**	**570**	**8,700**
	4-Jun-15	**79,400**	**15,800**	400 U	**1,000**
	5-Jun-15	**67,000**	**13,400**	500 U	**680**
	13-Jul-15	**14,300**	**2,440**	**50.9 I**	**61.8 I**
	30-Sep-15	**6,920**	**1,650**	**52.9**	**53.7**
	17-Dec-15	**3,770**	**1,310**	**45.2**	**51.5**
	4-Mar-16	**2,880**	**1,320**	**45.7**	**66.8**
	22-Jun-16	**1,780**	**985**	**42.8**	**57.9**
	22-Sep-16	**1,950**	**1,060**	**41.1**	**56.6**
	16-Dec-16	**1,790**	**1,190**	**38.6**	**79.3**
	15-Mar-17	**1,540**	**1,090**	**45.2**	**84.0**
	4-May-17	**1,400**	**958**	**30.1**	**93.7**
	20-Sep-17	**1,110**	**977**	**40.3**	**75.7**
	13-Dec-17	**768**	**1,240**	**36.0**	**115**
	19-Mar-18	**497**	**927**	**37.2**	**108**
	27-Jun-18	**332**	**957**	**27.5**	**105**
	20-Sep-18	**462**	**1,560**	**44.2**	**243**
	12-Dec-18	**229**	**578**	**18.7**	**67.4**
	12-Mar-19	**159**	**660**	**15.0**	**107**
	12-Jun-19	**168**	**698**	**21.1**	**123**
	30-Sep-19	**1,940**	**705**	**18.1**	**100**
	17-Dec-19	**114**	**632**	**19.4**	**137**
	12-Mar-20	**65**	**458**	**14.0**	**95.8**
	8-Jun-20	**50.4**	**490**	**14.6**	**127**
	16-Sep-20	**38.7**	**345**	**10.5**	**107**
	11-Jan-21	**41.7**	**403**	**12.5**	**103**
	11-Mar-21	**34.9**	**495**	**13.1**	**149**
	23-Jun-21	**18.1**	**355**	**10.2**	**105**
	14-Sep-21	**25**	**230**	**7.8**	**39**
	14-Dec-21	**340**	**220**	**6.6**	**20**
	22-Mar-22	**22**	**190**	**7.1**	**36**

Table 2-5. Recovery Well Influent Data (continued)

Well ID	Sample Date	TCE	cDCE	tDCE	VC
RW0017C	23-Aug-19	**475,000**	**25,200**	220 U	410 U
	30-Sep-19	**1,160,000**	**20,100**	4,400 U	8,200 U
	17-Dec-19	**585,000**	**14,700**	220 U	410 U
	16-Jan-20	**488,000**	**14,200**	220 U	410 U
	19-Feb-20	**474,000**	**10,900**	440 U	820 U
	12-Mar-20	**489,000**	**11,900**	440 U	820 U
	7-Apr-20	**603,000**	**13,100**	1,100 U	2,000 U
	14-May-20	**411,000**	**11,300**	1,100 U	2,000 U
	8-Jun-20	**425,000**	**12,800**	**83.2 I**	100 U
	14-Jul-20	**398,000**	**9,650**	110 U	200 U
	11-Aug-20	**395,000**	**9,900**	220 U	410 U
	16-Sep-20	**417,000**	**9,120**	440 U	820 U
	22-Oct-20	**472,000**	**11,100**	1,100 U	2,000 U
	12-Nov-20	**394,000**	**11,500**	110 U	200 U
	11-Jan-21	**409,000**	**16,600**	110 U	200 U
	22-Feb-21	**433,000**	**13,600**	440 U	820 U
	11-Mar-21	**429,000**	**9,390**	1,100 U	2,000 U
	22-Apr-21	**307,000**	**8,330**	220 U	410 U
	19-May-21	**245,000**	**5,180**	1,100 U	2,000 U
	23-Jun-21	**307,000**	**4,790 I**	1,100 U	2,000 U
	22-Jul-21	**228,000**	**5,850**	44 U	82 U
	24-Aug-21	**293,000**	**6,300**	55 U	100 U
	14-Sep-21	**190,000**	**6,500**	730 U	710 U
	7-Oct-21	**240,000**	**11,000**	1,500 U	1,400 U
	11-Nov-21	**210,000**	**7,300**	1,800 U	1,800 U
	14-Dec-21	**130,000**	**3,700 I**	1,800 U	1,800 U
	17-Jan-22	**120,000**	**4,100 I**	1,800 U	1,800 U
	14-Feb-22	**120,000**	**4,000 I**	1,800 U	1,800 U
	22-Mar-22	**130,000**	**4,400 I**	1,800 U	1,800 U

Table 2-5. Recovery Well Influent Data (continued)

Well ID	Sample Date	TCE	cDCE	tDCE	VC
RW0018C	22-Feb-21	**289,000**	**5,330**	440 U	820 U
	11-Mar-21	**556,000**	**11,200**	1,100 U	2,000 U
	22-Apr-21	**360,000**	2,800 U	2,200 U	4,100 U
	19-May-21	**269,000**	**2,870 I**	1,100 U	2,000 U
	23-Jun-21	**163,000**	1,400 U	1,100 U	2,000 U
	22-Jul-21	**239,000**	**2,850**	44 U	82 U
	24-Aug-21	**90,300**	**2,110**	440 U	820 U
	14-Sep-21	**96,000**	**3,500**	730 U	710 U
	7-Oct-21	**89,000**	**4,700**	730 U	710 U
	11-Nov-21	**560,000**	**4,100 I**	1,500 U	1,400 U
	14-Dec-21	**510,000**	**3,100 I**	1,500 U	1,400 U
	17-Jan-22	**530,000**	**7,600 I**	7,300 U	7,100 U
	14-Feb-22	**290,000**	**5,500 I**	7,300 U	7,100 U
	22-Mar-22	**240,000**	**5,800 I**	3,600 U	3,600 U
RW0019C	22-Feb-21	**354,000**	**14,300**	440 U	820 U
	11-Mar-21	**959,000**	**12,900**	1,100 U	2,000 U
	22-Apr-21	**791,000**	**18,700**	220 U	410 U
	19-May-21	**742,000**	**11,800**	2,200 U	4,100 U
	23-Jun-21	**827,000 Q**	**6,830**	220 U	410 U
	22-Jul-21	**243,000**	**5,660**	**42.6 I**	**80.7 I**
	24-Aug-21	**545,000**	**5,260 I**	2200 U	4100 U
	14-Sep-21	**650,000**	**5,900**	1500 U	1400 U
	7-Oct-21	**430,000**	5,300 U	7300 U	7100 U
	11-Nov-21	**510,000**	**5,900 I**	7300 U	7100 U
	14-Dec-21	**550,000**	**5,700 I**	7300 U	7100 U
	17-Jan-22	**550,000**	**7,200 I**	7300 U	7100 U
	14-Feb-22	**530,000**	**7,800 I**	7,300.0 U	7,100.0 U
	22-Mar-22	**470,000**	5,300 U	7,300 U	7,100 U

Table 2-5. Recovery Well Influent Data (continued)

Well ID	Sample Date	TCE	cDCE	tDCE	VC
RW0020C	22-Feb-21	**512,000**	**16,800**	440 U	820 U
	11-Mar-21	**593,000**	**9,120**	2,200 U	4,100 U
	22-Apr-21	**230,000**	**7,600**	220 U	410 U
	19-May-21	**223,000**	**6,220**	550 U	1,000 U
	23-Jun-21	**221,000**	**3,970**	550 U	1,000 U
	22-Jul-21	**273,000 L**	**4,320**	**39.2 I**	**114**
	24-Aug-21	**126,000**	**7,370**	550 U	1,000 U
	14-Sep-21	**160,000**	**5,100**	730 U	710 U
	7-Oct-21	**270,000**	**6,600**	1500 U	1,400 U
	11-Nov-21	**370,000**	**5,400 I**	3600 U	3,600 U
	14-Dec-21	**410,000**	**4,000 I**	3600 U	3,600 U
	17-Jan-22	**360,000**	**4,400 I**	3600 U	3,600 U
	14-Feb-22	**170,000**	**7,200 I**	3,600 U	3,600 U
	22-Mar-22	**98,000**	**8,100**	730 U	710 U

Concentrations in µg/L

RWs designated with "A" are screened from 15 to 40 ft bls; RWs designated with "B" are screened from 50 to 80 ft bls; and RWs designated with "C" are screened from 80 to 95 ft bls

Bolding indicates a concentration greater than the MDL but less than the NADC

Shading indicates a concentration exceeding the NADC: TCE = 300 µg/L, cDCE = 700 µg/L, tDCE = 1,000 µg/L, and VC = 100 µg/L

NADC = Natural Attenuation Default Concentration
NS = Not Sampled
RW = Recovery Well
TCE = Trichloroethene
cDCE = cis-1,2-Dichloroethene
tDCE = trans-1,2-Dichloroethene
VC = Vinyl chloride
I = Reported value is between MDL and practical quantitation limit
J = Estimated value
L = Indicates value exceeds calibration range
Q = Sample exceeded the accepted holding time
U = Not detected at method detection limit (MDL) (associated value)

Table 2-6. Hydraulic Containment System Combined Influent Data

Sample Date	TCE	cDCE	tDCE	VC
8-Dec-09	**290,000**	**9,200**	10,000 U	10,000 U
8-Dec-09	**280,000**	**69,000**	10,000 U	10,000 U
8-Dec-09	**160,000**	**3,500**	10,000 U	10,000 U
9-Dec-09	**210,000**	**26,000**	10,000 U	10,000 U
9-Dec-09	**270,000**	**44,000**	10,000 U	10,000 U
10-Dec-09	**290,000**	**3,200**	10,000 U	10,000 U
11-Dec-09	**200,000**	**32,000**	10,000 U	10,000 U
14-Dec-09	**200,000**	**32,000**	10,000 U	10,000 U
14-Dec-09	**230,000**	**39,000**	10,000 U	10,000 U
15-Dec-09	**240,000**	**43,000**	10,000 U	10,000 U
18-Dec-09	**191,000**	**33,700**	500 U	**4,700**
18-Dec-09	**219,000**	**42,300**	670 U	**5,900**
18-Dec-09	**189,000 J**	**40,300 J**	**290**	**5,600**
18-Dec-09	**228,000**	**44,600**	670 U	**6,000**
18-Dec-09	**247,000**	**48,100**	670 U	**6,600**
18-Dec-09	**232,000**	**45,200**	670 U	**6,000**
18-Dec-09	**219,000**	**44,300**	670 U	**5,800**
18-Dec-09	**232,000**	**46,500**	670 U	**6,000**
18-Dec-09	**244,000**	**48,900**	670 U	**6,300**
18-Dec-09	**230,000**	**46,200**	670 U	**6,000**
18-Dec-09	**243,000**	**47,800**	670 U	**5,900**
19-Dec-09	**230,000**	**45,700**	670 U	**5,500**
19-Dec-09	**223,000**	**44,300**	670 U	**5,200**
19-Dec-09	**239,000**	**46,800**	670 U	**5,900**
19-Dec-09	**264,000**	**49,800**	670 U	**6,200**
19-Dec-09	**226,000**	**45,100**	500 U	**5,500**
19-Dec-09	**239,000**	**46,800**	670 U	**5,800**
19-Dec-09	**251,000**	**50,000**	670 U	**6,200**
19-Dec-09	**246,000**	**49,300**	670 U	**6,000**
19-Dec-09	**232,000**	**47,900**	670 U	**5,900**
19-Dec-09	**252,000**	**50,100**	670 U	**6,300**
19-Dec-09	**255,000**	**49,900**	670 U	**6,400**
19-Dec-09	**245,000**	**46,500**	670 U	**6,000**
20-Dec-09	**233,000**	**44,700**	670 U	**5,900**
20-Dec-09	**241,000**	**47,000**	670 U	**5,700**
20-Dec-09	**256,000**	**49,900**	670 U	**6,500**
20-Dec-09	**214,000**	**42,100**	670 U	**5,100**
20-Dec-09	**252,000**	**52,800**	670 U	**5,900**
20-Dec-09	**253,000**	**51,500**	670 U	**6,200**
20-Dec-09	**258,000**	**53,200**	670 U	**6,400**
20-Dec-09	**249,000**	**51,300**	670 U	**6,000**
20-Dec-09	**242,000**	**50,500**	670 U	**5,800**
20-Dec-09	**263,000**	**53,400**	670 U	**6,200**
20-Dec-09	**265,000**	**53,400**	670 U	**6,600**

Table 2-6. Hydraulic Containment System Combined Influent Data

Sample Date	TCE	cDCE	tDCE	VC
20-Dec-09	**262,000**	**52,400**	670 U	**6,600**
20-Dec-09	**238,000**	**49,600**	670 U	**6,400**
20-Dec-09	**238,000**	**49,900**	670 U	**6,100**
21-Dec-09	**235,000**	**48,900**	670 U	**6,200**
21-Dec-09	**264,000**	**54,000**	670 U	**6,900**
21-Dec-09	**243,000**	**53,900**	670 U	**6,300**
21-Dec-09	**241,000**	**53,700**	670 U	**6,200**
21-Dec-09	**251,000**	**53,900**	670 U	**6,600**
21-Dec-09	**251,000**	**53,600**	670 U	**6,600**
21-Dec-09	**255,000**	**54,600**	670 U	**6,700**
21-Dec-09	**254,000**	**53,900**	670 U	**6,300**
21-Dec-09	**266,000**	**53,600**	670 U	**6,700**
21-Dec-09	**272,000**	**58,200**	670 U	**7,400**
18-Jan-10	**160,000**	**37,000**	10,000 U	10,000 U
18-Jan-10	**180,000**	**40,000**	10,000 U	10,000 U
19-Jan-10	**230,000**	**40,000**	10,000 U	10,000 U
19-Jan-10	**490,000**	**91,000**	10,000 U	**15,000**
19-Jan-10	**230,000**	**42,000**	10,000 U	10,000 U
19-Jan-10	**270,000**	**41,000**	10,000 U	10,000 U
19-Jan-10	**570,000**	**82,000**	10,000 U	10,000 U
19-Jan-10	**160,000**	**20,000**	10,000 U	10,000 U
19-Jan-10	**410,000**	**64,000**	10,000 U	10,000 U
19-Jan-10	**280,000**	**37,000**	10,000 U	10,000 U
20-Jan-10	**290,000**	**44,000**	10,000 U	10,000 U
20-Jan-10	**270,000**	**38,000**	10,000 U	10,000 U
20-Jan-10	**270,000**	**39,000**	10,000 U	10,000 U
20-Jan-10	**270,000**	**40,000**	10,000 U	10,000 U
20-Jan-10	**290,000**	**39,000**	10,000 U	10,000 U
20-Jan-10	**260,000**	**42,000**	10,000 U	10,000 U
20-Jan-10	**280,000**	**37,000**	10,000 U	10,000 U
20-Jan-10	**280,000**	**42,000**	10,000 U	10,000 U
20-Jan-10	**270,000**	**39,000**	10,000 U	10,000 U
20-Jan-10	**290,000**	**43,000**	10,000 U	10,000 U
20-Jan-10	**290,000**	**40,000**	10,000 U	10,000 U
20-Jan-10	**360,000**	**53,000**	10,000 U	10,000 U
20-Jan-10	**280,000**	**40,000**	10,000 U	10,000 U
21-Jan-10	**250,000**	**30,000**	10,000 U	10,000 U
21-Jan-10	**250,000**	**32,000**	10,000 U	10,000 U
22-Jan-10	**250,000**	**33,000**	10,000 U	10,000 U
22-Jan-10	**320,000**	**45,000**	10,000 U	10,000 U
22-Jan-10	**250,000**	**34,000**	10,000 U	10,000 U
22-Jan-10	**290,000**	**36,000**	10,000 U	10,000 U
22-Jan-10	**270,000**	**34,000**	10,000 U	10,000 U
23-Jan-10	**270,000**	**41,000**	10,000 U	10,000 U

Table 2-6. Hydraulic Containment System Combined Influent Data

Sample Date	TCE	cDCE	tDCE	VC
23-Jan-10	**300,000**	**42,000**	10,000 U	10,000 U
23-Jan-10	**290,000**	**40,000**	10,000 U	10,000 U
23-Jan-10	**310,000**	**48,000**	10,000 U	10,000 U
23-Jan-10	**280,000**	**40,000**	10,000 U	10,000 U
24-Jan-10	**300,000**	**40,000**	10,000 U	10,000 U
25-Jan-10	**191,000**	**41,100**	340 U	**6,530**
26-Jan-10	**186,000**	**41,600**	680 U	**6,250**
27-Jan-10	**193,000**	**44,000**	**376 I**	**5,880**
5-Feb-10	**202,000**	**38,500**	**311 I**	**5,580**
5-Feb-10	**195,000**	**37,400**	**290 I**	**5,330**
6-Feb-10	**200,000**	**36,900**	**284 I**	**5,300**
7-Feb-10	**194,000**	**38,000**	850 U	**6,550**
8-Feb-10	**192,000**	**40,800**	340 U	**6,290**
10-Feb-10	**189,000**	**42,000**	340 U	**6,990**
11-Feb-10	**188,000**	**34,100**	1,700 U	**5,630**
16-Feb-10	**246,000**	**44,200**	850 U	**7,330**
17-Feb-10	**185,000**	**33,400**	850 U	**5,350**
18-Feb-10	**191,000**	**34,600**	850 U	**5,650**
19-Feb-10	**178,000**	**32,300**	1,700 U	**5,770**
20-Feb-10	**176,000**	**32,000**	1,700 U	**5,820**
21-Feb-10	**169,000**	**28,400**	1,700 U	**5,540**
25-Feb-10	**160,000**	**34,500**	680 U	**6,260**
26-Feb-10	**159,000**	**39,300**	680 U	**5,090**
27-Feb-10	**159,000**	**37,100**	680 U	**6,090**
28-Feb-10	**154,000**	**36,200**	680 U	**6,510**
1-Mar-10	**156,000**	**38,100**	680 U	**6,250**
10-Mar-10	**164,000**	**40,100**	340 U	**6,460**
11-Mar-10	**166,000**	**36,500**	**232 I**	**5,190**
12-Mar-10	**160,000**	**39,200**	340 U	**6,470**
13-Mar-10	**83,700**	**19,300**	340 U	**3,300**
14-Mar-10	**79,400**	**19,200**	340 U	**3,050**
18-Mar-10	**151,000**	**35,800**	850 U	**6,270**
19-Mar-10	**148,000**	**37,300**	850 U	**5,890**
20-Mar-10	**153,000**	**41,500**	850 U	**5,980**
21-Mar-10	**157,000**	**44,700**	850 U	**7,630**
22-Mar-10	**144,000**	**41,100**	850 U	**6,010**
23-Mar-10	**129,000**	**40,200**	850 U	**5,340**
24-Mar-10	**137,000**	**40,900**	340 U	**5,320**
25-Mar-10	**123,000**	**38,200**	340 U	**5,100**
31-Mar-10	**124,000**	**37,000**	680 U	**4,780**
7-Apr-10	**132,000**	**34,400**	340 U	**5,090**
14-Apr-10	**119,000**	**31,000**	680 U	**4,190**
5-May-10	**128,000**	**34,200**	340 U	**4,060**
19-May-10	**113,000**	**33,700**	**200 I**	**3,540**

Table 2-6. Hydraulic Containment System Combined Influent Data

Sample Date	TCE	cDCE	tDCE	VC
26-May-10	**116,000**	**26,900**	680 U	**3,370**
2-Jun-10	**105,000**	**26,400**	680 U	**3,480**
16-Jun-10	**94,500**	**21,000**	680 U	**2,750**
23-Jun-10	**96,900**	**23,200**	340 U	**4,660**
1-Jul-10	**103,000**	**26,300**	680 U	**2,600**
7-Jul-10	**107,000**	**27,600**	680 U	**3,040**
11-Aug-10	**130,000**	**12,600**	850 U	**1,080 I**
18-Aug-10	**115,000**	**13,500**	680 U	560 U
25-Aug-10	**116,000**	**10,400**	850 U	700 U
1-Sep-10	**127,000**	**15,800**	680 U	**911 I**
8-Sep-10	**96,700**	**12,900**	340 U	**765 I**
15-Sep-10	**98,400**	**21,000**	170 U	**2,800**
22-Sep-10	**92,500**	**23,300**	340 U	**2,260**
27-Oct-10	**87,400**	**17,900**	700 U	**2,810**
22-Nov-10	**83,900**	**24,300**	350 U	**1,830**
29-Dec-10	**69,800**	**16,700**	350 U	**2,290**
26-Jan-11	**68,700**	**14,200**	350 U	**1,910**
21-Feb-11	**69,900**	**18,400**	180 U	**981**
10-Mar-11	**67,100**	**16,800**	700 U	**1,600 I**
14-Apr-11	**71,600**	**18,600**	180 U	**1,490**
18-May-11	**65,000**	**14,600**	350 U	**1,500**
8-Jun-11	**63,800**	**15,500**	350 U	**1,430**
13-Jul-11	**57,900**	**14,400**	700 U	**1,460 I**
10-Aug-11	**59,500**	**15,300**	180 U	**1,360**
14-Sep-11	**59,000**	**12,800**	350 U	**1,330**
10-Oct-11	**54,400**	**12,300**	350 U	**1,180**
10-Nov-11	**51,200**	**10,800**	700 U	**863 I**
15-Dec-11	**65,000**	**8,030**	350 U	220 U
20-Jan-12	**63,000**	**11,000**	350 U	**1,340**
2-Feb-12	**61,000**	**9,740**	**101**	**964**
1-Mar-12	**59,800**	**9,670**	**87 I**	**1,100**
4-Apr-12	**65,100**	**9,080**	350 U	**1,180**
17-May-12	**60,000**	**9,240**	**108**	**1,080**
14-Jun-12	**54,000**	**8,140**	180 U	**727**
26-Jul-12	**50,800**	**6,980**	180 U	**763**
14-Sep-12	**53,500**	**8,150**	350 U	**563 I**
5-Oct-12	**54,200**	**7,620**	46 U	**856**
26-Nov-12	**44,200**	**6,020**	**86 I**	**611**
29-Jan-13	**45,600**	**7,820**	**116 I**	**939**
11-Mar-13[1]	**17,100**	**3,080**	46 U	**304**
1-Apr-13[1]	**39,500**	**6,900**	100 U	**880**
8-May-13	**38,300**	**7,310**	**102 I**	**577**
30-May-13	**39,100**	**6,260**	**73 I**	**602**

Table 2-6. Hydraulic Containment System Combined Influent Data

Sample Date	TCE	cDCE	tDCE	VC
26-Jun-13	**35,100**	**5,620**	**67 I**	**695**
27-Sep-13	**41,600**	**6,200**	46 U	**718**
31-Dec-13	**26,700**	**5,050**	**92 I**	**579**
3-Apr-14	**45,000**	**6,570**	170 U	**5,510**
26-Jun-14	**29,500**	**6,350**	**115 I**	**913**
30-Sep-14	**31,600**	**4,350**	170 U	**365 I**
30-Dec-14	**31,800**	**4,370**	170 U	**399 I**
27-May-15	**8,500**	**9,000**	**350**	**3,000**
27-May-15	**7,900**	**11,300**	**420**	**3,800**
3-Jun-15	**16,800**	**22,200**	**430**	**2,700**
3-Jun-15	**24,300**	**21,700**	**420**	**2,100**
3-Jun-15	**23,800**	**20,200**	**400**	**2,100**
4-Jun-15	**27,300**	**15,300**	**310**	**1,600**
4-Jun-15	**22,600**	**21,500**	**430**	**2,100**
4-Jun-15	**18,300**	**22,800**	**460**	**2,100**
4-Jun-15	**25,300**	**26,100**	**560**	**2,200**
4-Jun-15	**21,900**	**26,000**	**570**	**2,300**
5-Jun-15	**20,600**	**26,000**	**570**	**2,100**
5-Jun-15	**23,100**	**28,400**	**680**	**2,400**
5-Jun-15	**26,600**	**27,100**	**650**	**2,100**
5-Jun-15	**28,500**	**28,800**	**680**	**2,400**
6-Jun-15	**23,000**	**29,500**	**660**	**2,300**
6-Jun-15	**22,100**	**28,600**	**650**	**2,200**
7-Jun-15	**16,000**	**16,000**	**434**	**1,930**
8-Jun-15	**22,900**	**14,300**	**337**	**1,470**
9-Jun-15	**94**	**57**	**2**	**6**
10-Jun-15	**23,200**	**14,100**	52 U	**1,400**
11-Jun-15	**23,200**	**14,900**	**325**	**1,850**
12-Jun-15	**23,400**	**14,700**	**310**	**1,870**
13-Jun-15	**24,700**	**14,300**	**320**	**1,820**
14-Jun-15	**21,300**	**15,300**	**325**	**2,110**
18-Jun-15	**21,000**	**12,900**	**331**	**1,580**
25-Jun-15	**14,900**	**12,300**	**293**	**1,520**
13-Jul-15	**18,900**	**8,880**	**223**	**925**
13-Aug-15	**17,900**	**10,500**	**236**	**1,030**
10-Sep-15	**20,800**	**10,100**	**234**	**1,040**
30-Sep-15	**20,300**	**8,280**	**154**	**808**
17-Dec-15	**21,100**	**10,100**	**182 I**	**1,210**

Table 2-6. Hydraulic Containment System Combined Influent Data

Sample Date	TCE	cDCE	tDCE	VC
4-Mar-16	**18,400**	**9,040**	**148 I**	**1,110**
22-Jun-16	**16,200**	**6,740**	**118 I**	**904**
22-Sep-16	**16,300**	**7,120**	**119 I**	**814**
16-Dec-16	**17,700**	**6,170**	**98 I**	**706**
15-Mar-17	**17,000**	**6,510**	**122**	**833**
4-May-17	**7,660**	**8,010**	**143**	**1,050**
20-Sep-17	**16,700**	**4,340**	**66 I**	**720**
13-Dec-17	**15,900**	**4,250**	**75 I**	**504**
19-Mar-18	**16,100**	**3,730**	**77 I**	**551**
27-Jun-18	**13,500**	**3,350**	**65**	**499**
20-Sep-18	**15,300**	**3,930**	44 U	**536**
18-Jan-19	**13,300**	**3,500**	**72**	**470**
12-Mar-19	**15,600**	**3,990**	**74**	**684**
12-Jun-19	**10,300**	**2,940**	44 U	**476**
30-Sep-19	**31,400**	**4,230**	44 U	**446**
17-Dec-19	**20,100**	**3,010**	55 U	**463**
12-Mar-20	**13,300**	**2,160**	44 U	**236**
8-Jun-20	**10,700**	**2,380**	**46.6 I**	**241**
16-Sep-20	**16,200**	**2,360**	55 U	**477**
11-Jan-21[2]	**45,000**	**3,650**	110 U	**489 I**
11-Mar-21	**12,100**	**2,450**	**66.6 I**	**476**
23-Jun-21	**22,500**	**2,830**	55 U	**462**
14-Sep-21	**17,000**	**3,000**	180 U	**430 I**
14-Dec-21	**19,000**	**3,400**	180 U	**630**
22-Mar-22	**12,000**	**3,900**	73 U	**360**

1 Location resampled due to suspect result on March 11, 2013. The April 1, 2013, result was used for mass calculations.

2 System was down in December due to Programmable Logic Controller replacement. Sampling pushed to January 2021.

Concentrations in µg/L

Bolding indicates a concentration greater than the MDL but less than the GCTL

Shading indicates a concentration exceeding the GCTL: TCE = 3 µg/L, cDCE = 70 µg/L, tDCE = 100 µg/L, and VC = 1 µg/L

GCTL = Groundwater Cleanup Target Level
MDL = Method Detection Limit
TCE = Trichloroethene
cDCE = cis-1,2-Dichloroethene
tDCE = trans-1,2-Dichloroethene
VC = Vinyl chloride
U = Not detected at method detection limit (MDL) (associated value).
J = Estimated concentration.
I = Reported value is between MDL and practical quantitation limit.

Table 2-7. Primary Air Stripper Effluent Data

Sample Date	TCE	cDCE	tDCE	VC
27-May-15	**270**	**510 J**	**19**	**50**
27-May-15	**320**	**1200**	**31**	**70**
3-Jun-15	**2**	**24.0**	1 U	1 U
3-Jun-15	**3**	**26.0**	1 U	1 U
3-Jun-15	**2**	**15.0**	1 U	1 U
4-Jun-15	**4**	**19.0**	1 U	1 U
4-Jun-15	**3**	**28.0**	1 U	1 U
4-Jun-15	**4**	**31.0**	1 U	1 U
4-Jun-15	**1**	**11.0**	1 U	1 U
4-Jun-15	1 U	1.0 U	1 U	1 U
5-Jun-15	1 U	**8.0**	1 U	1 U
5-Jun-15	1 U	**10.0**	1 U	1 U
5-Jun-15	1 U	**6.0**	1 U	1 U
5-Jun-15	**3**	**5.0**	1 U	1 U
6-Jun-15	1 U	**6.0**	1 U	1 U
6-Jun-15	1 U	**5.0**	1 U	1 U
7-Jun-15	**0.33 I**	**3.1**	0.21 U	0.25 U
8-Jun-15	**0.67 I**	**4.6**	0.21 U	0.25 U
9-Jun-15	**0.83 I**	**5.5**	0.21 U	0.25 U
10-Jun-15	**0.87 I**	**6.1**	0.21 U	0.25 U
11-Jun-15	**1.1**	**7.9**	0.21 U	0.25 U
12-Jun-15	**1.3**	**8.4**	0.21 U	0.25 U
13-Jun-15	**1.3**	**7.9**	0.21 U	0.25 U
14-Jun-15	**1.2**	**7.7**	0.21 U	0.25 U
18-Jun-15	**1.2**	**8.7**	0.21 U	0.25 U
25-Jun-15	**0.89 I**	**5.5**	0.21 U	0.25 U
13-Jul-15	**0.4 I**	**1.8**	0.21 U	0.25 U
13-Aug-15	**1.1**	**6.2**	0.21 U	0.25 U
10-Sep-15	**0.63 I**	**3.3**	0.21 U	0.25 U
30-Sep-15	**0.5 I**	**2.5**	0.21 U	0.25 U
17-Dec-15	**1.3**	**5.2**	0.21 U	0.25 U
4-Mar-16	**1.2**	**5.4**	0.33 U	0.31 U
22-Jun-16	**0.48 I**	**2.6**	0.33 U	0.31 U
22-Sep-16	**1.6**	**6.6**	0.33 U	0.31 U
16-Dec-16	**0.77 I**	**2.8**	0.33 U	0.31 U
15-Mar-17	**1.2**	**4.9**	0.22 U	0.41 U
4-May-17	**2.7**	**10.1**	0.22 U	0.41 U
20-Sep-17	**0.91 I**	**1.6**	0.22 U	0.41 U
15-Nov-17	**3.4**	**5.9**	0.22 U	0.41 U
13-Dec-17	**62.9**	**63.9**	0.35 I	0.41 U

Table 2-7. Primary Air Stripper Effluent Data (continued)

Sample Date	TCE	cDCE	tDCE	VC
25-Jan-18	**99.6**	**87.4**	0.53 I	0.41 U
27-Feb-18	**97.3**	**96.8**	0.63 I	**0.58 I**
19-Mar-18	**113**	**98.5**	0.86 I	0.82 U
26-Apr-18	**92.4**	**86.5**	0.35 I	0.41 U
30-May-18	**79.1**	**73.8**	0.56 I	0.41 U
27-Jun-18	**73.1**	**70.0**	0.49 I	0.41 U
19-Jul-18	**82.4**	**85.4**	0.58 I	**0.46 I**
13-Aug-18	**74.5**	**77.5**	0.32 I	0.32 U
20-Sep-18	**52.1**	**61.7**	0.25 I	0.25 U
29-Oct-18	**39.4**	**52.4**	0.25 I	0.25 U
21-Nov-18	**34.8**	**39.1**	0.22 U	0.41 U
12-Dec-18	**41.9**	**54.0**	0.22 U	0.41 U
14-Jan-19	**42.4**	**53.9**	0.22 U	0.41 U
28-Feb-19	**45.5**	**52.9**	0.22 U	0.72 U
12-Mar-19	**80**	**90.3**	0.45 I	0.41 U
22-Apr-19	**53.4**	**59.3**	0.22 U	0.41 U
30-May-19	**40**	**51.0**	0.22 U	0.41 U
12-Jun-19	**135**	**111.0**	**0.53 I**	**1.5**
9-Jul-19	**108**	**79.4**	**0.34 I**	0.41 U
27-Aug-19	**176**	**96.2**	0.44 U	**1.2 I**
30-Sep-19	**666**	**156.0**	**0.88 I**	**3.3**
17-Oct-19	**42.2**	**22.4**	0.22 U	0.41 U
5-Nov-19	**108**	**79.0**	**0.39 I**	**1.0**
17-Dec-19	**88.1**	**49.0**	**0.4 I**	**0.84**
16-Jan-20	**134**	**66.0**	0.44 U	0.82 U
19-Feb-20	**94.6**	**35.5**	0.22 U	**0.57 I**
12-Mar-20	**148**	**57.3**	0.44 U	0.82 U
7-Apr-20	**215**	**63.0**	0.55 U	1.0 U
14-May-20	**136**	**63.6**	0.44 U	0.82 U
8-Jun-20	**120**	**63.3**	**0.49 I**	0.82 U
1-Jul-20	**146**	**105**	**0.58 I**	**1.7 I**
11-Aug-20	**108**	**44.1**	0.44 U	**0.84 I**
16-Sep-20	**92.2**	**56.8**	0.22 U	**1.0**
22-Oct-20	**140**	**69.0**	0.55 U	**1.3 I**
12-Nov-20	**112**	**63.3**	0.44 U	**0.88 I**
1-Dec-20	NA	NA	NA	NA
11-Jan-21	**117**	**67.9**	**0.50 I**	**1.2 I**
22-Feb-21	**141,000**	**81,400**	**517 I**	**1,580 I**
11-Mar-21	**155**	**68.3**	0.44 U	**1.2 I**
22-Apr-21	**287**	**66.6**	1.1 U	2.0 U

Table 2-7. Primary Air Stripper Effluent Data (continued)

Sample Date	TCE	cDCE	tDCE	VC
19-May-21	**298**	**80.9**	1.1 U	2.0 U
23-Jun-21	**242**	**74.5**	1.1 U	2.0 U
22-Jul-21	**61.1**	**75.2**	0.22 U	**4.4**
24-Aug-21	**364**	**69.9**	**0.54 I**	**2.3**
14-Sep-21	**390**	**130**	1.8 U	**3.9 I**
7-Oct-21	**140**	**150**	1.5 U	**3.9 I**
11-Nov-21	**390**	**98**	1.8 U	**2.8 I**
14-Dec-21	**96**	**52**	0.73 U	**0.92 I**
17-Jan-22	**120**	**84**	0.73 U	**1.4 I**
14-Feb-22	**98**	**74**	0.73 U	**1.1 I**
22-Mar-22	**84**	**76**	0.73 U	**0.93 I**

Concentrations in µg/L
Bolding indicates a concentration greater than the MDL but less than or equal to the GCTL
Shading indicates a concentration exceeding the GCTL: TCE = 3 µg/L, cDCE = 70 µg/L, tDCE = 100 µg/L, and VC = 1 µg/L

GCTL = Groundwater Cleanup Target Level
MDL = Method Detection Limit
TCE = Trichloroethene
cDCE = cis-1,2-Dichloroethene
tDCE = trans-1,2-Dichloroethene
VC = Vinyl chloride
I = Reported value is between MDL and practical detection limit.
J = Estimated value.
U = Not detected at or above MDL (associated value).

Table 2-8. Secondary Air Stripper Effluent Data

Sample Date	TCE	cDCE	tDCE	VC
27-May-15	**2**	**19**	1 U	1 U
3-Jun-15	1 U	**1**	1 U	1 U
3-Jun-15	1 U	1 U	1 U	1 U
3-Jun-15	1 U	1 U	1 U	1 U
4-Jun-15	1 U	1 U	1 U	1 U
4-Jun-15	**3**	**3**	1 U	1 U
4-Jun-15	1 U	1 U	1 U	1 U
4-Jun-15	1 U	**1**	1 U	1 U
4-Jun-15	**4**	**35**	1 U	1 U
5-Jun-15	**4**	**5**	1 U	1 U
5-Jun-15	1 U	1 U	1 U	1 U
5-Jun-15	1 U	1 U	1 U	1 U
5-Jun-15	1 U	1 U	1 U	1 U
6-Jun-15	1 U	1 U	1 U	1 U
6-Jun-15	1 U	1 U	1 U	1 U
7-Jun-15	0.22 U	0.22 U	0.21 U	0.25 U
8-Jun-15	0.22 U	0.22 U	0.21 U	0.25 U
9-Jun-15	0.22 U	0.22 U	0.21 U	0.25 U
10-Jun-15	0.22 U	0.22 U	0.21 U	0.25 U
11-Jun-15	0.22 U	0.22 U	0.21 U	0.25 U
12-Jun-15	0.22 U	0.22 U	0.21 U	0.25 U
13-Jun-15	0.22 U	0.22 U	0.21 U	0.25 U
14-Jun-15	0.22 U	0.22 U	0.21 U	0.25 U
18-Jun-15	0.22 U	0.22 U	0.21 U	0.25 U
25-Jun-15	**0.43 I**	**0.42 I**	0.21 U	0.25 U
13-Jul-15	0.22 U	0.22 U	0.21 U	0.25 U
13-Aug-15	0.22 U	0.22 U	0.21 U	0.25 U
10-Sep-15	0.22 U	0.22 U	0.21 U	0.25 U
30-Sep-15	0.22 U	0.22 U	0.21 U	0.25 U
17-Dec-15	**0.26 I**	0.22 U	0.21 U	0.25 U
4-Mar-16	0.27 U	0.31 U	0.33 U	0.31 U
22-Jun-16	0.27 U	0.31 U	0.33 U	0.31 U
22-Sep-16	0.27 U	0.31 U	0.33 U	0.31 U
16-Dec-16	0.27 U	0.31 U	0.33 U	0.31 U
15-Mar-17	0.35 U	0.28 U	0.22 U	0.41 U
4-May-17	0.35 U	0.28 U	0.22 U	0.41 U
20-Sep-17	0.35 U	0.28 U	0.22 U	0.41 U
15-Nov-17	0.35 U	0.28 U	0.22 U	0.41 U
13-Dec-17	0.35 U	0.28 U	0.22 U	0.41 U
25-Jan-18	0.35 U	**0.59 I**	0.22 U	0.59 U

Table 2-8. Secondary Air Stripper Effluent Data (continued)

Sample Date	TCE	cDCE	tDCE	VC
27-Feb-18	0.35 U	**0.54 I**	0.22 U	0.54 U
19-Mar-18	**0.58**	**2.0**	0.22 U	0.58 U
26-Apr-18	0.35 U	0.28 U	0.22 U	0.31 U
30-May-18	0.35 U	**0.31 I**	0.22 U	0.42 U
27-Jun-18	0.35 U	**0.42 I**	0.22 U	0.41 U
19-Jul-18	0.35 U	**0.73 I**	0.22 U	0.41 U
13-Aug-18	0.35 U	**0.29 I**	0.22 U	0.41 U
20-Sep-18	0.35 U	**0.44 I**	0.22 U	0.41 U
29-Oct-18	0.35 U	0.28 U	0.22 U	0.41 U
21-Nov-18	0.35 U	**0.43 I**	0.22 U	0.41 U
12-Dec-18	0.35 U	0.28 U	0.22 U	0.41 U
14-Jan-19	0.35 U	0.28 U	0.22 U	0.41 U
28-Feb-19	0.22 U	**0.64 I**	0.22 U	0.41 U
12-Mar-19	0.35 U	**0.57 I**	0.22 U	0.41 U
22-Apr-19	0.35 U	0.28 U	0.21 U	0.41 U
30-May-19	0.35 U	0.28 U	0.22 U	0.41 U
12-Jun-19	0.35 U	**1.2**	0.22 U	0.41 U
9-Jul-19	0.35 U	**0.35 I**	0.22 U	0.41 U
27-Aug-19	**0.60 I**	**0.69 I**	0.22 U	0.41 U
30-Sep-19	**23.7**	**8.9**	0.22 U	0.41 U
17-Oct-19	**0.53 I**	**0.74 I**	0.22 U	0.41 U
5-Nov-19	**0.65 I**	0.28 U	0.22 U	0.41 U
17-Dec-19	**1.7**	**2.0**	0.22 U	0.41 U
16-Jan-20	**1.0**	**0.98 I**	0.22 U	0.41 U
19-Feb-20	**1.0**	0.63 I	0.22 U	0.41 U
12-Mar-20	**0.91 I**	**0.62 I**	0.22 U	0.41 U
7-Apr-20	**1.0**	**0.79 I**	0.22 U	0.41 U
14-May-20	**1.1**	**0.97 I**	0.22 U	0.41 U
8-Jun-20	**0.87 I**	**1.0**	0.22 U	0.41 U
14-Jul-20	**2.4**	**3.6**	0.22 U	0.41 U
11-Aug-20	**1.1**	**1.0**	0.22 U	0.41 U
16-Sep-20	**1.5**	**1.1**	0.22 U	0.41 U
22-Oct-20	**1.2**	**1.2**	0.22 U	0.41 U
12-Nov-20	**0.72 I**	**0.67 I**	0.22 U	0.41 U
1-Dec-21	NA	NA	NA	NA
11-Jan-21	**0.79 I**	**0.73 I**	0.22 U	0.41 U
22-Feb-21	**1.4**	**1.6**	0.22 U	0.41 U
11-Mar-21	**1.2**	**1.2**	0.22 U	0.41 U
22-Apr-21	**1.1**	**1.3**	0.22 U	0.41 U
19-May-21	**1.8**	**1.1**	0.22 U	0.41 U

Table 2-8. Secondary Air Stripper Effluent Data (continued)

Sample Date	TCE	cDCE	tDCE	VC
23-Jun-21	**1.6**	**1.0**	0.22 U	0.41 U
22-Jul-21	**0.97 I**	**3.6**	0.22 U	0.41 U
24-Aug-21	**2.2**	**1.8**	0.22 U	0.41 U
14-Sep-21	**6.0**	**1.6 I**	0.73 U	0.71 U
7-Oct-21	**1.9 I**	**4.9**	0.73 U	0.71 U
11-Nov-21	**4.0**	**2.3 I**	0.73 U	0.71 U
14-Dec-21	**1.2 I**	**0.58 I**	0.73 U	0.71 U
17-Jan-22	0.89 U	**1.3 I**	0.73 U	0.71 U
14-Feb-22	0.89 U	**0.74 I**	0.73 U	0.71 U
22-Mar-22	0.89 U	**1.1 I**	0.73 U	0.71 U

Concentrations in µg/L

Bolding indicates a concentration greater than the MDL but less than or equal to the GCTL.

Shading indicates at or exceeding the GCTL: TCE = 3 µg/L, cDCE = 70 µg/L, tDCE = 100 µg/L, and VC = 1 µg/L.

MDL = Method Detection Limit
GCTL = Groundwater Cleanup Target Level
TCE = Trichloroethene
tDCE = trans-1,2-Dichloroethene
cDCE = cis-1,2-Dichloroethene
VC = Vinyl chloride
I = Reported value is between MDL and practical detection limit
U = Not detected at or above MDL (associated value)

Table 2-9. Catalytic Oxidizer Influent Data

Sample Date	TCE	cDCE	tDCE	VC
9-Dec-09	1,890,000	296,000	1,870	22,300
21-Dec-09	1,330,000	293,000	2,980	36,600
20-Jan-10	1,260,000	196,000	3,810	29,100
20-Jan-10	1,490,000	234,000	4,440	34,300
20-Jan-10	2,170,000	312,000	6,220	46,300
21-Jan-10	935,000	160,000	3,150	24,200
1-Apr-10	564,000	137,000	3,690	26,300
6-May-10	332,000	79,700	908	11,800
11-Aug-10	978,000	86,000	416 I	2,910
15-Sep-10	453,000	87,600	523	8,510
22-Feb-11	554,000	101,000	412	4,470
29-Dec-11	381,000	57,900	662	3,400
20-Sep-12	182,000	33,700	563	3,170
31-Dec-13	227,000	36,400	444	3,580
30-Dec-14	181,000	42,000	634	6,750
17-Dec-15	204,000	117,000	1,920	10,700
4-May-17	293,000	128,000	3,700	13,800
13-Dec-17	254,000	69,000	1,190	8,540
12-Dec-18	226,000	63,800	1,110	6,950
17-Dec-19	201,000	26,400	416 J	4,350
22-Feb-21	95,700	36,800	912	4,860
20-Dec-21	230,000 V	65,000	1,800 U	14,000

Concentrations in $\mu g/m^3$

TCE = Trichloroethene.
cDCE = cis-1,2-Dichloroethene.
tDCE = trans-1,2-Dichloroethene.
VC = Vinyl chloride.
I = Reported value is between method detection limit and practical quantitation limit.
V = Indicate that the analyte was detected in both the sample and the associated method blank

Table 2-10. Catalytic Oxidizer Effluent Data

Sample Date	TCE	cDCE	tDCE	VC
8-Dec-09	155,000	1,990	1,300	28 U
21-Dec-09	368,000	9,520	6,700	130 U
20-Jan-10	34,700	555	125	5.4 U
20-Jan-10	17,100	412	58 I	5.4 U
20-Jan-10	47,500	741	170	5.4 U
21-Jan-10	13,400	255	90	5.4 U
1-Apr-10	12,500	316	64 I	5.4 U
6-May-10	5,910	237	85	23
11-Aug-10	1.3 U	1.2 U	1.4 U	3,730
11-Aug-10	1.3 U	1.2 U	1.4 U	3,600
15-Sep-10	5,800	133	47	3.6 U
22-Feb-11	59	8	0.6 U	0.31 U
29-Dec-11	5160	44.4	15 I	1.6 U
20-Sep-12	2,250	48	13	1.1 U
31-Dec-13	24	0.11 U	0.1 U	0.043 U
30-Dec-14	1,050	84	14	13
17-Dec-15	5,640	480	75	35
4-May-17	10	4.4	0.1 U	0.097 U
13-Dec-17	305	16	3 I	1.4 I
12-Dec-18	40	1.6	0.03 U	0.056 U
17-Dec-19	142	15	0.32 U	1.6 J
22-Feb-21	247	18	2.00 J	2.1
20-Dec-21	940 V	21 I	9.5 I	8.9 U

Concentrations in $\mu g/m^3$

TCE = Trichloroethene
cDCE = cis-1,2-Dichloroethene
tDCE = trans-1,2-Dichloroethene
VC = Vinyl chloride
I = Reported value is between method detection limit and practical quantitation limit.
V = Indicate that the analyte was detected in both the sample and the associated method blank
U = Not detected at MDL (associated value).

Table 2-11. Liquid-Phase Granular Activated Carbon Effluent Data

Sample Date	TCE	cDCE	tDCE	VC
5-Feb-10	0.24 U	0.32 U	0.34 U	0.28 U
6-Feb-10	0.24 U	0.32 U	0.34 U	0.28 U
7-Feb-10	0.24 U	0.32 U	0.34 U	0.28 U
8-Feb-10	0.24 U	0.32 U	0.34 U	0.28 U
10-Feb-10	0.24 U	0.32 U	0.34 U	0.28 U
11-Feb-10	0.24 U	0.32 U	0.34 U	0.28 U
16-Feb-10	0.24 U	0.32 U	0.34 U	0.28 U
17-Feb-10	0.24 U	0.32 U	0.34 U	0.28 U
18-Feb-10	0.24 U	0.32 U	0.34 U	0.28 U
19-Feb-10	0.24 U	0.32 U	0.34 U	0.28 U
20-Feb-10	0.24 U	0.32 U	0.34 U	0.28 U
21-Feb-10	0.24 U	0.32 U	0.34 U	0.28 U
25-Feb-10	0.24 U	0.32 U	0.34 U	0.28 U
26-Feb-10	0.24 U	0.32 U	0.34 U	0.28 U
27-Feb-10	0.24 U	0.32 U	0.34 U	0.28 U
28-Feb-10	0.24 U	0.32 U	0.34 U	0.28 U
1-Mar-10	0.24 U	0.32 U	0.34 U	0.28 U
10-Mar-10	0.24 U	0.32 U	0.34 U	0.28 U
11-Mar-10	0.24 U	0.32 U	0.34 U	0.28 U
12-Mar-10	0.24 U	0.32 U	0.34 U	0.28 U
13-Mar-10	0.24 U	0.32 U	0.34 U	0.28 U
14-Mar-10	0.24 U	0.32 U	0.34 U	0.28 U
18-Mar-10	0.24 U	0.32 U	0.34 U	0.28 U
19-Mar-10	0.24 U	0.32 U	0.34 U	0.28 U
20-Mar-10	0.24 U	0.32 U	0.34 U	0.28 U
21-Mar-10	0.24 U	0.32 U	0.34 U	0.28 U
22-Mar-10	0.24 U	0.32 U	0.34 U	0.28 U
23-Mar-10	0.24 U	0.32 U	0.34 U	0.28 U
24-Mar-10	0.24 U	0.32 U	0.34 U	0.28 U
25-Mar-10	0.24 U	0.32 U	0.34 U	0.28 U
31-Mar-10	0.24 U	0.32 U	0.34 U	0.28 U
7-Apr-10	0.24 U	0.32 U	0.34 U	0.28 U
14-Apr-10	0.24 U	0.32 U	0.34 U	0.28 U
5-May-10	0.24 U	0.32 U	0.34 U	0.28 U
13-May-10	0.24 U	0.32 U	0.34 U	0.28 U
19-May-10	**0.4 I**	0.32 U	0.34 U	0.28 U
26-May-10	0.24 U	0.32 U	0.34 U	0.28 U
2-Jun-10	0.24 U	0.32 U	0.34 U	0.28 U
16-Jun-10	0.24 U	0.32 U	0.34 U	0.28 U

Table 2-11. Liquid-Phase Granular Activated Carbon Effluent Data (continued)

Sample Date	TCE		cDCE		tDCE		VC	
23-Jun-10	0.24	U	0.32	U	0.34	U	0.28	U
1-Jul-10	**0.33**	**I**	**0.45**	**I**	0.34	U	0.28	U
7-Jul-10	0.24	U	**0.45**	**I**	0.34	U	0.28	U
11-Aug-10	0.24	U	0.32	U	0.34	U	0.28	U
18-Aug-10	0.24	U	**0.46**	**I**	0.34	U	0.28	U
25-Aug-10	0.24	U	0.32	U	0.34	U	0.28	U
1-Sep-10	0.24	U	**0.42**	**I**	0.34	U	0.28	U
8-Sep-10	0.24	U	**0.54**	**I**	0.34	U	0.28	U
15-Sep-10	0.24	U	**0.56**	**I**	0.34	U	0.28	U
22-Sep-10	0.24	U	**0.75**	**I**	0.34	U	0.28	U
27-Oct-10	0.26	U	**0.71**	**I**	0.35	U	0.22	U
22-Nov-10	0.26	U	**0.9**	**I**	0.35	U	0.22	U
29-Dec-10	0.26	U	**0.56**	**I**	0.35	U	0.22	U
26-Jan-11	**0.72**	**I**	**0.89**	**I**	0.35	U	0.22	U
21-Feb-11	**0.57**	**I**	**0.91**	**I**	0.35	U	0.22	U
10-Mar-11	**0.64**	**I**	**0.84**	**I**	0.35	U	0.22	U
14-Apr-11	**0.97**	**I**	**0.9**	**I**	0.35	U	0.22	U
18-May-11	**1.1**		**1.4**		0.35	U	0.22	U
8-Jun-11	**1.9**		**3.1**		0.35	U	0.22	U
13-Jul-11	0.26	U	0.26	U	0.35	U	0.22	U
10-Aug-11	0.26	U	0.26	U	0.35	U	0.22	U
14-Sep-11	0.26	U	0.26	U	0.35	U	0.22	U
10-Oct-11	0.26	U	0.26	U	0.35	U	0.22	U
10-Nov-11	0.26	U	0.26	U	0.35	U	0.22	U
15-Dec-11	0.26	U	0.26	U	0.35	U	0.22	U
20-Jan-12	**0.68**	**I**	**0.34**	**I**	0.35	U	0.22	U
2-Feb-12	**0.46**	**I**	0.26	U	0.35	U	0.22	U
1-Mar-12	**0.4**	**I**	**0.43**	**I**	0.35	U	0.22	U
4-Apr-12	**0.39**	**I**	**0.43**	**I**	0.35	U	0.22	U
17-May-12	**0.64**	**I**	**0.41**	**I**	0.35	U	0.22	U
14-Jun-12	**0.38**	**I**	**0.41**	**I**	0.35	U	0.22	U
26-Jul-12	0.26	U	0.26	U	0.35	U	0.22	U
14-Sep-12	**0.28**	**I**	**0.36**	**I**	0.35	U	0.22	U
5-Oct-12	0.31	U	0.24	U	0.23	U	0.44	U
26-Nov-12	**1.2**		**0.54**	**I**	0.23	U	0.44	U
8-Feb-13	**0.53**	**I**	**0.41**	**I**	0.23	U	0.44	U
11-Mar-13	**0.47**	**I**	**0.39**	**I**	0.23	U	0.44	U
8-May-13	0.31	U	**0.58**	**I**	0.23	U	0.44	U
30-May-13	**0.36**	**I**	**0.38**	**I**	0.23	U	0.44	U

Table 2-11. Liquid-Phase Granular Activated Carbon Effluent Data (continued)

Sample Date	TCE	cDCE	tDCE	VC
26-Jun-13	**1.7**	0.24 U	0.23 U	0.44 U
28-Aug-13	**1.3**	**0.3 I**	0.23 U	0.44 U
27-Sep-13	0.31 U	0.24 U	0.23 U	0.44 U
30-Oct-13	**0.47 I**	0.24 U	0.23 U	0.44 U
20-Nov-13	**0.47 I**	0.24 U	0.23 U	0.44 U
31-Dec-13	0.3 U	0.33 U	0.34 U	0.33 U
3-Feb-14	**0.32 I**	0.33 U	0.34 U	0.33 U
20-Mar-14	0.3 U	0.33 U	0.34 U	0.33 U
3-Apr-14	0.3 U	0.33 U	0.34 U	0.33 U
26-Jun-14	0.3 U	**0.54 I**	0.34 U	0.33 U
29-Aug-14	0.3 U	**0.4 I**	0.34 U	0.33 U
30-Sep-14	**0.34 I**	**0.37 I**	0.34 U	0.33 U
30-Dec-14	0.3 U	0.33 U	0.34 U	0.33 U
4-Feb-15	0.22 U	0.22 U	0.21 U	0.25 U
3-Jun-15	1 U	1 U	1 U	1 U
3-Jun-15	1 U	1 U	1 U	1 U
3-Jun-15	1 U	1 U	1 U	1 U
4-Jun-15	1 U	1 U	1 U	1 U
4-Jun-15	1 U	1 U	1 U	1 U
4-Jun-15	1 U	1 U	1 U	1 U
4-Jun-15	1 U	1 U	1 U	1 U
4-Jun-15	1 U	1 U	1 U	1 U
5-Jun-15	1 U	1 U	1 U	1 U
5-Jun-15	1 U	1 U	1 U	1 U
5-Jun-15	1 U	1 U	1 U	1 U
5-Jun-15	1 U	1 U	1 U	1 U
6-Jun-15	1 U	1 U	1 U	1 U
6-Jun-15	1 U	1 U	1 U	1 U
7-Jun-15	0.22 U	0.22 U	0.21 U	0.25 U
8-Jun-15	0.22 U	0.22 U	0.21 U	0.25 U
9-Jun-15	0.22 U	0.22 U	0.21 U	0.25 U
10-Jun-15	0.22 U	0.22 U	0.21 U	0.25 U
11-Jun-15	0.22 U	0.22 U	0.21 U	0.25 U
12-Jun-15	0.22 U	0.22 U	0.21 U	0.25 U
13-Jun-15	0.22 U	0.22 U	0.21 U	0.25 U
14-Jun-15	0.22 U	0.22 U	0.21 U	0.25 U
18-Jun-15	0.22 U	0.22 U	0.21 U	0.25 U
25-Jun-15	0.22 U	0.22 U	0.21 U	0.25 U
13-Jul-15	0.22 U	0.22 U	0.21 U	0.25 U

Table 2-11. Liquid-Phase Granular Activated Carbon Effluent Data (continued)

Sample Date	TCE		cDCE		tDCE		VC	
13-Aug-15	0.22	U	0.22	U	0.21	U	0.25	U
10-Sep-15	0.22	U	0.22	U	0.21	U	0.25	U
30-Sep-15	0.22	U	0.22	U	0.21	U	0.25	U
22-Oct-15	0.22	U	0.22	U	0.21	U	0.25	U
13-Nov-15	0.22	U	0.22	U	0.21	U	0.25	U
17-Dec-15	**0.82**	**I**	**0.5**	**I**	0.21	U	0.25	U
15-Jan-16	0.27	U	0.31	U	0.33	U	0.31	U
12-Feb-16	0.27	U	0.31	U	0.33	U	0.31	U
4-Mar-16	0.27	U	0.31	U	0.33	U	0.31	U
12-Apr-16	0.27	U	0.31	U	0.33	U	0.31	U
24-May-16	0.27	U	0.31	U	0.33	U	0.31	U
22-Jun-16	0.27	U	0.31	U	0.33	U	0.31	U
15-Jul-16	0.27	U	0.31	U	0.33	U	0.31	U
22-Aug-16	0.27	U	0.31	U	0.33	U	0.31	U
22-Sep-16	**1.1**		**0.5**	**I**	0.33	U	0.31	U
28-Oct-16	0.27	U	0.31	U	0.33	U	0.31	U
17-Nov-16	0.27	U	0.31	U	0.33	U	0.31	U
16-Dec-16	0.27	U	0.31	U	0.33	U	0.31	U
30-Jan-17	0.35	U	0.28	U	0.22	U	0.41	U
20-Feb-17	0.35	U	0.28	U	0.22	U	0.41	U
15-Mar-17	0.35	U	0.28	U	0.22	U	0.41	U
13-Apr-17	0.35	U	**0.47**	**I**	0.22	U	0.41	U
4-May-17	0.35	U	0.28	U	0.22	U	0.41	U
20-Sep-17	0.35	U	0.28	U	0.22	U	0.41	U
15-Nov-17	0.35	U	0.28	U	0.22	U	0.41	U
13-Dec-17	0.35	U	0.28	U	0.22	U	0.41	U
25-Jan-18	0.35	U	**0.6**	**I**	0.22	U	0.41	U
27-Feb-18	**0.41**	**I**	**0.57**	**I**	0.22	U	0.41	U
19-Mar-18	0.35	U	**1.1**		0.22	U	0.41	U
26-Apr-18	0.35	U	0.29	U	0.21	U	0.41	U
30-May-18	0.50	U	**0.54**	**I**	0.22	U	0.41	U
27-Jun-18	0.35	U	**0.46**	**I**	0.21	U	0.41	U
19-Jul-18	0.35	U	**0.49**	**I**	0.22	U	0.41	U
30-Sep-19	**3.0**		**0.92**	**I**	0.22	U	0.41	U
17-Oct-19	0.35	U	**0.28**	**U**	0.22	U	0.41	U
5-Nov-19	0.35	U	**0.28**	**U**	0.22	U	0.41	U
17-Dec-19	**1.7**		**1.7**		0.22	U	0.41	U
22-Feb-21	0.35	U	0.28	U	0.22	U	0.41	U
11-Mar-21	0.35	U	0.28	U	0.22	U	0.41	U

Table 2-11. Liquid-Phase Granular Activated Carbon Effluent Data (continued)

Sample Date	TCE	cDCE	tDCE	VC
22-Apr-21	**0.41 I**	**1.8**	0.22 U	0.41 U
19-May-21	0.35 U	0.28 U	0.22 U	0.41 U
23-Jun-21	0.35 U	0.28 U	0.22 U	0.41 U
22-Jul-21	0.35 U	0.28 U	0.22 U	0.41 U
24-Aug-21	0.35 U	0.28 U	0.22 U	0.41 U
14-Sep-21	0.89 U	0.53 U	0.73 U	0.71 U
7-Oct-21	0.89 U	0.53 U	0.73 U	0.71 U
10-Nov-21	0.89 U	0.53 U	0.73 U	0.71 U
14-Dec-21	0.89 U	0.53 U	0.73 U	0.71 U
17-Jan-22	0.89 U	0.53 U	0.73 U	0.71 U
14-Feb-22	0.89 U	0.53 U	0.73 U	0.71 U
22-Mar-22	0.89 U	0.53 U	0.73 U	0.71 U

GAC was removed in July 2018. It was reinstated in September 2019 through December 2019 during RW17C startup. It was reinstated in February 2021 and sampled monthly since then.

Bolding indicates a concentration greater than the method detection limit (MDL) but less than the GCTL

Concentrations in µg/L

TCE = Trichloroethene
cDCE = cis-1,2-Dichloroethene
tDCE = trans-1,2-Dichloroethene
VC = Vinyl chloride
I = Reported value between method detection limit and practical quantitation limit.
U = Not detected at or above method detection limit (associated value).

Table 2-12. Catalytic Oxidizer Emission Loading and Destruction Efficiencies

Parameter	Influent				Parameter	Effluent				
	Result ($\mu g/m^3$)	Calculated Loading				Result ($\mu g/m^3$)	Calculated Loading			Destruction Efficiency
		(lb/day)	(lb/month)	(lb/year)			(lb/day)	(lb/month)	(lb/year)	
Acetone	1,200 U	0.03	1.0	12	Acetone	**9.8 IV**	**0.0005**	**0.02**	**0.19**	99.2%
trans-1,2-Dichloroethene	1,800 U	0.05	1.5	18	trans-1,2-Dichloroethene	**9.5 I**	**0.0005**	**0.02**	**0.19**	99.5%
cis-1,2-Dichloroethene	**65,000**	**3.50**	**105**	**1,279**	cis-1,2-Dichloroethene	**21 I**	**0.0011**	**0.03**	**0.41**	100.0%
Methylene chloride	**8,700 IV**	**0.47**	**14**	**171**	Methylene chloride	**39 IV**	**0.0021**	**0.06**	**0.77**	99.6%
Trichloroethene	**230,000 V**	**12.4**	**372**	**4,524**	Trichloroethene	**940 V**	**0.0507**	**1.5**	**18**	99.6%
Vinyl chloride	**14,000**	**0.75**	**22.6**	**275**	Vinyl chloride	8.9 U	0.0002	0.01	0.09	99.9%

TCE and total VOC emission rates are 0.051 and 0.055 pound per day, respectively, which are less than the daily HAP level of 2.7 and 6.8 pounds per day, respectively.
Influent results show system loading for TCE is 12.4 lb/day and for total VOCs is 17.2 lb/day.
Loading calculated based on the operational flow rate of 600 standard cubic feet per minute.
Table includes all analytes that were detected for influent and effluent samples (collected 12/20/2021); all other tested parameters are non-detect.
Bolding indicates a detected parameter above the laboratory method detection limit

I = The reported value is between the laboratory method detection limit (MDL) and the practical quantitation limit (PQL).
V = Indicates that the analyte was detected in both the sample and the associated method blank.
HAP = Hazardous Air Pollutant.
lb = Pounds.
NA = Not applicable.
TCE = Trichloroethene.
µg/m3 = Micrograms per cubic meter.
VOC = Volatile organic compound.

Table 2-13. Mass and Volume Recovery Data

Year	Date	TCE (µg/L)	cDCE (µg/L)	tDCE (µg/L)	VC (µg/L)	Total Influent VOCs (µg/L)	Volume Recovered (gal)		VOC Mass Recovered (lb)	
							Annually	Cumulative	Annually	Cumulative
1	2/21/2011	69,900	18,400	180	981	89,461	10,384,456	11,540,001	10,782	13,196
2	3/1/2012	59,800	9,670	87	1,100	70,657	15,768,761	27,308,762	10,070	23,265
3	3/11/2013	39,500	6,900	100	880	47,380	17,316,773	44,625,535	8,805	32,071
4	4/3/2014	45,000	6,570	170	5,510	57,250	17,008,141	61,633,676	6,264	38,335
5	2/10/2015	31,800	4,370	170	339	36,679	13,145,739	74,779,415	4,323	42,657
6	3/4/2016	9,040	148	1,110	28,698	38,996	18,220,810	93,000,225	6,437	49,095
7	3/15/2017	17,000	6,510	122	833	24,465	29,003,352	122,003,577	6,299	55,394
8	3/19/2018	16,100	3,730	77	551	20,458	28,032,490	150,036,067	4,785	60,179
9	3/29/2019	15,600	3,990	74	684	20,348	40,014,072	190,050,139	6,284	66,464
10	3/26/2020	13,300	2,160	44	236	15,740	32,592,916	222,643,055	5,982	72,446
11	3/31/2021	12,100	2,450	67	476	15,093	30,358,082	253,001,137	6,293	78,738
12	3/31/2022	12,000	3,900	73	360	16,333	32,711,664	285,712,801	6,195	84,933

COC concentrations are results from March at the end of the reporting period.

TCE = Trichloroethene
cDCE = cis-1,2-Dichloroethene
tDCE = trans-1,2,-Dichloroethene
VC = Vinyl chloride
µg/L = Micrograms per liter
VOCs = Volatile organic compounds
gal = Gallons
lb = Pounds
NA = Not available

Table 2-14. DPT Performance Groundwater Results

Location ID (LC34-)	Date	Sample Depth (ft bls)	Sample ID	TCE	cDCE	VC
DPT0593	11/7/2017	8	LC34-DPT0593-008.0-20171107	1 U	1 U	1 U
		13	LC34-DPT0593-013.0-20171107	2	5	1 U
		18	LC34-DPT0593-018.0-20171107	**5**	35	**18**
		23	LC34-DPT0593-023.0-20171107	**25**	62	**24**
		28	LC34-DPT0593-028.0-20171107	**54**	62	**21**
		33	LC34-DPT0593-033.0-20171107	**59**	**460**	**180**
		38	LC34-DPT0593-038.0-20171107	**2,400**	**4,100**	**2,000**
		43	LC34-DPT0593-043.0-20171107	**216,000**	**67,200**	**107,000**
		48	LC34-DPT0593-048.0-20171107	**539,000**	**174,000**	**5,400**
		53	LC34-DPT0593-053.0-20171107	**479,000**	**165,000**	**4,100**
		58	LC34-DPT0593-058.0-20171107	**125,000**	**26,800**	2,000 U
		63	LC34-DPT0593-063.0-20171107	**1,600**	28	20 U
		68	LC34-DPT0593-068.0-20171107	**1,600**	23	10 U
		73	LC34-DPT0593-073.0-20171107	**3,800**	49	**6**
		78	LC34-DPT0593-078.0-20171107	**2,400**	**79**	10 U
		83	LC34-DPT0593-083.0-20171107	**4,400**	**100**	10 U
	11/5/2018	8	LC34-DPT0593-008.0-20181105	1 U	1 U	1 U
		13	LC34-DPT0593-013.0-20181105	1 U	1 U	1 U
		18	LC34-DPT0593-018.0-20181105	**11**	6	**3**
		23	LC34-DPT0593-023.0-20181105	**45**	26	**16**
		28	LC34-DPT0593-028.0-20181105	**1,200**	67	**63**
		33	LC34-DPT0593-033.0-20181105	**150**	**97**	**130**
		38	LC34-DPT0593-038.0-20181105	**2,100**	**2,200**	**5,700**
		43	LC34-DPT0593-043.0-20181105	**101,000 J**	**14,600**	**68,400 J**
		48	LC34-DPT0593-048.0-20181105	**75,300**	**180,000**	**1,000**
		53	LC34-DPT0593-053.0-20181105	**48,900**	**132,000**	**520**
		58	LC34-DPT0593-058.0-20181105	**2,900**	**17,100**	**430**
	11/6/2018	63	LC34-DPT0593-063.0-20181106	**17,500**	**490**	100 U
		68	LC34-DPT0593-068.0-20181106	**35**	10 U	10 U
		73	LC34-DPT0593-073.0-20181106	**520**	6	**2**
		78	LC34-DPT0593-078.0-20181106	**4,000**	**110**	20 U
		83	LC34-DPT0593-083.0-20181106	**17,600**	290 U	290 U
	11/18/2019	8	LC34-DPT0593-008.0-20191118	1 U	32	**200**
		13	LC34-DPT0593-013.0-20191118	2 U	16	**98**
		18	LC34-DPT0593-018.0-20191118	**6**	5	**30**
		23	LC34-DPT0593-023.0-20191118	**33**	9	**8**
		28	LC34-DPT0593-028.0-20191118	**140**	59	**44**
		33	LC34-DPT0593-033.0-20191118	**120**	**160**	**140**
		38	LC34-DPT0593-038.0-20191118	**2,000**	**4,700**	**8,300**
		43	LC34-DPT0593-043.0-20191118	**9,800**	**9,800**	**42,000 J**
		48	LC34-DPT0593-048.0-20191118	**316,000 J**	**28,900**	**24,800**
		53	LC34-DPT0593-053.0-20191118	**315,000**	**217,000**	**3,000**
		58	LC34-DPT0593-058.0-20191118	**34,900**	**37,700**	500 U
		63	LC34-DPT0593-063.0-20191118	**9**	11	2 U
		68	LC34-DPT0593-068.0-20191118	**790**	10 U	10 U
		73	LC34-DPT0593-073.0-20191118	**1,200**	11	10 U
		78	LC34-DPT0593-078.0-20191118	**270**	18	3 U
		83	LC34-DPT0593-083.0-20191118	**50**	20	2 U

Table 2-14. DPT Performance Groundwater Results (continued)

Location ID (LC34-)	Date	Sample Depth (ft bls)	Sample ID	TCE	cDCE	VC
DPT0593 (continued)	12/1/2020	8	LC34-DPT0593-008.0-20201201	0.47 J	47.4	**4.7**
		13	LC34-DPT0593-013.0-20201201	**11.2**	**425**	**177**
		18	LC34-DPT0593-018.0-20201201	**12.8**	**493**	**183**
		23	LC34-DPT0593-023.0-20201201	**29.2**	26.6	**62.3**
		28	LC34-DPT0593-028.0-20201201	**85.2**	10.2	**8.5**
		33	LC34-DPT0593-033.0-20201201	**68.5**	**96.8**	**75.2**
		38	LC34-DPT0593-038.0-20201201	**3,750**	**12,200**	**4,170**
		43	LC34-DPT0593-043.0-20201201	**27,900**	**27,600**	**73,800**
		48	LC34-DPT0593-048.0-20201201	**929,000**	**20,800**	**46,000**
		53	LC34-DPT0593-053.0-20201201	**441,000**	**217,000**	**5,170**
		58	LC34-DPT0593-058.0-20201201	**8,790**	**47,600**	**414**
		63	LC34-DPT0593-063.0-20201201	**48.9**	6.4	0.56 J
		68	LC34-DPT0593-068.0-20201201	**6.6**	0.61 J	0.23 U
		73	LC34-DPT0593-073.0-20201201	**145**	18.6	**2.4**
		78	LC34-DPT0593-078.0-20201201	**160**	9.8	0.23 J
		83	LC34-DPT0593-083.0-20201201	**23.6**	4.2	0.41 J
		88	LC34-DPT0593-088.0-20201201	**175**	5.5	0.63 J
		93	LC34-DPT0593-093.0-20201201	**3,960**	69	**16.1**
		98	LC34-DPT0593-098.0-20201201	**20.2**	4.2	0.36 J
	12/22/2021	8	LC34-DPT0593-008.0-20211222	**7,360**	**1,390**	41 U
		13	LC34-DPT0593-013.0-20211222	**21,600 J**	**1,600**	**222**
		18	LC34-DPT0593-018.0-20211222	**254 J**	**1,500**	**111**
		23	LC34-DPT0593-023.0-20211222	**625**	**706**	**437**
		28	LC34-DPT0593-028.0-20211222	**1,860**	28 U	**138**
		33	LC34-DPT0593-033.0-20211222	**32,700 J**	**252**	**456**
		38	LC34-DPT0593-038.0-20211222	**24,100 J**	**3,200**	**1,160**
		43	LC34-DPT0593-043.0-20211222	**61,700 J**	**48,900**	**64,600**
		48	LC34-DPT0593-048.0-20211222	**719,000**	28,000 U	41,000 U
		53	LC34-DPT0593-053.0-20211222	**170,000**	**222,000**	41,000 U
		58	LC34-DPT0593-058.0-20211222	**15,700**	**105,000**	**5,520**
		63	LC34-DPT0593-063.0-20211222	**899 J**	**262 J**	20 UJ
		68	LC34-DPT0593-068.0-20211222	**129 J**	35.3 J	4.1 UJ
		73	LC34-DPT0593-073.0-20211222	**135 J**	14.3 J	4.1 UJ
	12/23/2021	78	LC34-DPT0593-078.0-20211223	**57.9**	15.2	2 U
		83	LC34-DPT0593-083.0-20211223	**8,860 J**	59.9	**10.2**
		88	LC34-DPT0593-088.0-20211223	**961 J**	56.1	**3.9 J**
		93	LC34-DPT0593-093.0-20211223	**3,610 J**	**264**	**17.2**
		98	LC34-DPT0593-098.0-20211223	**737 J**	16.6 J	**4.8 J**

Table 2-14. DPT Performance Groundwater Results (continued)

Location ID (LC34-)	Date	Sample Depth (ft bls)	Sample ID	TCE	cDCE	VC
DPT0594	11/7/2017	8	LC34-DPT0594-008.0-20171107	**24**	7	**13**
		13	LC34-DPT0594-013.0-20171107	**11**	27	**110**
		18	LC34-DPT0594-018.0-20171107	**8**	38	**200**
		23	LC34-DPT0594-023.0-20171107	**6**	52	**240**
		28	LC34-DPT0594-028.0-20171107	**25**	2	**3**
		33	LC34-DPT0594-033.0-20171107	**12,500**	**3,100**	**160**
		38	LC34-DPT0594-038.0-20171107	**610,000**	**8,200**	1,000 U
		43	LC34-DPT0594-043.0-20171107	**836,000**	**134,000**	2,500 U
		48	LC34-DPT0594-048.0-20171107	**754,000**	**43,400**	3,300 U
	11/8/2017	53	LC34-DPT0594-053.0-20171108	**1,580,000**	**34,000**	3,300 U
		58	LC34-DPT0594-058.0-20171108	**549,000**	**43,000**	5,000 U
		63	LC34-DPT0594-063.0-20171108	**28,600 J**	**180**	10 U
		68	LC34-DPT0594-068.0-20171108	**17,100**	**1,200**	100 U
		73	LC34-DPT0594-073.0-20171108	**96,900**	**6,600**	100 U
		78	LC34-DPT0594-078.0-20171108	**431,000**	**26,500**	400 U
		83	LC34-DPT0594-083.0-20171108	**6,300**	**940**	2,000 U
	11/6/2018	8	LC34-DPT0594-008.0-20181106	1 U	2	1 U
		13	LC34-DPT0594-013.0-20181106	1 U	4	**29**
		18	LC34-DPT0594-018.0-20181106	3	6	**49**
		23	LC34-DPT0594-023.0-20181106	2	2	**11**
		28	LC34-DPT0594-028.0-20181106	**180**	2	**3**
		33	LC34-DPT0594-033.0-20181106	2	2	**2**
		38	LC34-DPT0594-038.0-20181106	**11,500**	**2,200**	200 U
		43	LC34-DPT0594-043.0-20181106	**781,000**	**30,200**	**360**
		48	LC34-DPT0594-048.0-20181106	**323,000 J**	**87,300**	**10,400**
		53	LC34-DPT0594-053.0-20181106	**42,000 J**	**69,000**	**4,500**
		58	LC34-DPT0594-058.0-20181106	**212,000**	**10,700**	1,000 U
		63	LC34-DPT0594-063.0-20181106	**3,300**	**320**	200 U
	11/7/2018	68	LC34-DPT0594-068.0-20181107	**16,500**	**860**	3 U
		73	LC34-DPT0594-073.0-20181107	**29,900**	**2,400**	200 U
		78	LC34-DPT0594-078.0-20181107	**278,000 J**	**14,400**	200 U
		83	LC34-DPT0594-083.0-20181107	**31,000**	**320**	100 U
	11/18/2019	8	LC34-DPT0594-008.0-20191118	2 U	16	**110**
		13	LC34-DPT0594-013.0-20191118	1	**140**	**220 J**
		18	LC34-DPT0594-018.0-20191118	2	26	**260 J**
		23	LC34-DPT0594-023.0-20191118	2	32	**240 J**
		28	LC34-DPT0594-028.0-20191118	2	12	**210**
		33	LC34-DPT0594-033.0-20191118	**14,200**	**840**	290 U
		38	LC34-DPT0594-038.0-20191118	**206,000 J**	**13,700**	**330**
		43	LC34-DPT0594-043.0-20191118	**414,000 J**	**33,900**	**840**
		48	LC34-DPT0594-048.0-20191118	**457,000 J**	**55,000**	**1,100**
		53	LC34-DPT0594-053.0-20191118	**813,000 J**	**37,600**	1,000 U
		58	LC34-DPT0594-058.0-20191118	**669,000 J**	**25,000**	**2,400**
		63	LC34-DPT0594-063.0-20191118	**17,900**	**410**	**1,300**
		68	LC34-DPT0594-068.0-20191118	**27,800**	**600**	100 U

Table 2-14. DPT Performance Groundwater Results (continued)

Location ID (LC34-)	Date	Sample Depth (ft bls)	Sample ID	TCE	cDCE	VC
DPT0594 (continued)	11/19/2019	73	LC34-DPT0594-073.0-20191119	**177,000**	**4,500**	1,000 U
		78	LC34-DPT0594-078.0-20191119	**594,000 J**	**20,000**	1,000 U
		83	LC34-DPT0594-083.0-20191119	**115,000**	**1,900**	1,000 U
	12/2/2020	8	LC34-DPT0594-008.0-20201202	0.31 U	9	**44.3**
		13	LC34-DPT0594-013.0-20201202	0.31 U	0.34 U	**36.1**
		18	LC34-DPT0594-018.0-20201202	0.31 U	3.7	**21.5**
		23	LC34-DPT0594-023.0-20201202	1.8	23.5	**187**
		28	LC34-DPT0594-028.0-20201202	2.9	10.8	**92.1**
		33	LC34-DPT0594-033.0-20201202	**4,680**	**3,250**	**376**
		38	LC34-DPT0594-038.0-20201202	**64,900**	**8,450**	**327 J**
		43	LC34-DPT0594-043.0-20201202	**1,100,000**	**56,600**	2,300 U
		48	LC34-DPT0594-048.0-20201202	**780,000**	**172,000**	**6,840 J**
		53	LC34-DPT0594-053.0-20201202	**1,420,000**	**34,100**	2,300 U
		58	LC34-DPT0594-058.0-20201202	**1,120,000**	**24,500**	2,300 U
		63	LC34-DPT0594-063.0-20201202	**6,640**	40.7 J	12 U
		68	LC34-DPT0594-068.0-20201202	**8,670**	17 U	12 U
		73	LC34-DPT0594-073.0-20201202	**20,500**	**2,470**	**207**
		78	LC34-DPT0594-078.0-20201202	**1,520,000**	**24,200**	2,300 U
		83	LC34-DPT0594-083.0-20201202	**1,110**	**159**	1.2 U
		88	LC34-DPT0594-088.0-20201202	**9,870**	**114**	23 U
		93	LC34-DPT0594-093.0-20201202	**28,400**	**375**	46 U
		98	LC34-DPT0594-098.0-20201202	**2,330**	43.5	4.6 U
	12/22/2021	8	LC34-DPT0594-008.0-20211222	**1,160**	57.5 J	41 U
		13	LC34-DPT0594-013.0-20211222	**21,200 J**	**6,700**	**257**
		18	LC34-DPT0594-018.0-20211222	**61,100 J**	**5,430**	**484**
		23	LC34-DPT0594-023.0-20211222	**89,800 J**	**4,040**	**826**
		28	LC34-DPT0594-028.0-20211222	**36,700 J**	**7,260**	**582**
		33	LC34-DPT0594-033.0-20211222	**78.3 J**	**377**	**73.3**
		38	LC34-DPT0594-038.0-20211222	**20,300**	**4,640 J**	2,000 U
		43	LC34-DPT0594-043.0-20211222	**1,900,000**	**150,000**	41,000 U
		48	LC34-DPT0594-048.0-20211222	**637,000**	55,000 U	82,000 U
		53	LC34-DPT0594-053.0-20211222	**1,560,000 J**	**38,100 J**	**5,400 J**
		58	LC34-DPT0594-058.0-20211222	**632,000 J**	**19,000 J**	**2,330 J**
		63	LC34-DPT0594-063.0-20211222	**24,000 J**	**213 J**	100 UJ
	12/23/2021	68	LC34-DPT0594-068.0-20211223	**19,100**	**330 J**	200 U
		73	LC34-DPT0594-073.0-20211223	**49,300 J**	**3,810**	200 U
		78	LC34-DPT0594-078.0-20211223	**1,230,000**	**17,500 J**	8,200 U
		83	LC34-DPT0594-083.0-20211223	**23,400 J**	**605**	**12.8 J**
		88	LC34-DPT0594-088.0-20211223	**116,000 J**	**4,090**	**185 J**
		93	LC34-DPT0594-093.0-20211223	**229,000 J**	**8,700**	**255 J**
		98	LC34-DPT0594-098.0-20211223	**2,630,000 J**	**17,100**	**627**

Table 2-14. DPT Performance Groundwater Results (continued)

Location ID (LC34-)	Date	Sample Depth (ft bls)	Sample ID	TCE	cDCE	VC
DPT0595	11/8/2017	8	LC34-DPT0595-008.0-20171108	**130**	14	**160**
		13	LC34-DPT0595-013.0-20171108	**5,400**	29	**18**
		18	LC34-DPT0595-018.0-20171108	**640**	40 U	**72**
		23	LC34-DPT0595-023.0-20171108	**64**	10 U	**92**
		28	LC34-DPT0595-028.0-20171108	**190**	6	**42**
		33	LC34-DPT0595-033.0-20171108	**47**	**800**	**3,400**
		38	LC34-DPT0595-038.0-20171108	200 U	**42,600**	**34,500**
		43	LC34-DPT0595-043.0-20171108	40 U	**1,100**	**89**
		48	LC34-DPT0595-048.0-20171108	**240**	**1,500**	**30**
		53	LC34-DPT0595-053.0-20171108	**24**	**120**	10 U
		58	LC34-DPT0595-058.0-20171108	**64**	**590**	**5**
		63	LC34-DPT0595-063.0-20171108	**4**	18	**6**
		68	LC34-DPT0595-068.0-20171108	**7**	15	**5**
		73	LC34-DPT0595-073.0-20171108	**151,000**	**6,000**	1,000 U
		78	LC34-DPT0595-078.0-20171108	**1,340,000**	**6,800**	3,300 U
		83	LC34-DPT0595-083.0-20171108	**4,500**	**110**	20 U
	11/7/2018	8	LC34-DPT0595-008.0-20181107	**4**	25	**190**
		13	LC34-DPT0595-013.0-20181107	2	30	**220**
		18	LC34-DPT0595-018.0-20181107	1	3	**2**
		23	LC34-DPT0595-023.0-20181107	1	1	**6**
		28	LC34-DPT0595-028.0-20181107	1 U	1	**18**
		33	LC34-DPT0595-033.0-20181107	3 U	3 U	**200**
		38	LC34-DPT0595-038.0-20181107	100 U	**20,900**	**21,600**
		43	LC34-DPT0595-043.0-20181107	**1,600**	**23,400**	**1,900**
		48	LC34-DPT0595-048.0-20181107	**510**	**700**	**130**
		53	LC34-DPT0595-053.0-20181107	**42**	**670**	**320**
		58	LC34-DPT0595-058.0-20181107	**120**	**140**	**58**
		63	LC34-DPT0595-063.0-20181107	**9**	16	**9**
		68	LC34-DPT0595-068.0-20181107	**49**	**93**	**10**
		73	LC34-DPT0595-073.0-20181107	**123,000**	**840**	200 U
		78	LC34-DPT0595-078.0-20181107	**1,060,000 J**	**5,300**	500 U
	11/8/2018	83	LC34-DPT0595-083.0-20181108	**610**	100 U	100 U
	11/19/2019	8	LC34-DPT0595-008.0-20191119	1	3	**12**
		13	LC34-DPT0595-013.0-20191119	1 U	3	**31**
		18	LC34-DPT0595-018.0-20191119	1 U	3	**50**
		23	LC34-DPT0595-023.0-20191119	1 U	2	**53**
		28	LC34-DPT0595-028.0-20191119	1 U	3	**36**
		33	LC34-DPT0595-033.0-20191119	20 U	**1,200**	**3,200**
		38	LC34-DPT0595-038.0-20191119	290 U	**50,000**	**28,000**
		43	LC34-DPT0595-043.0-20191119	290 U	**7,900**	**4,900**
		48	LC34-DPT0595-048.0-20191119	200 U	**5,000**	**2,800**
		53	LC34-DPT0595-053.0-20191119	50 U	**6,400**	**2,800**
		58	LC34-DPT0595-058.0-20191119	20 U	**4,800**	**2,100**
		63	LC34-DPT0595-063.0-20191119	1 U	2	1 U
		68	LC34-DPT0595-068.0-20191119	1 U	1 U	1 U
		73	LC34-DPT0595-073.0-20191119	**5,400**	**190**	20 U
		78	LC34-DPT0595-078.0-20191119	**3,600**	**500**	20 U
		83	LC34-DPT0595-083.0-20191119	3	5	1

Table 2-14. DPT Performance Groundwater Results (continued)

Location ID (LC34-)	Date	Sample Depth (ft bls)	Sample ID	TCE	cDCE	VC
DPT0595 (continued)	12/2/2020	8	LC34-DPT0595-008.0-20201202	1.2	0.55 J	0.23 U
		13	LC34-DPT0595-013.0-20201202	0.31 U	0.34 U	0.23 U
		18	LC34-DPT0595-018.0-20201202	0.51 J	1.1	**13.8**
		23	LC34-DPT0595-023.0-20201202	0.54 J	1.4	20.5 U
		28	LC34-DPT0595-028.0-20201202	0.37 J	1.9	**8.8**
		33	LC34-DPT0595-033.0-20201202	0.66 J	4.9	**163**
	12/3/2020	38	LC34-DPT0595-038.0-20201203	62 U	**22,600**	**24,800**
		43	LC34-DPT0595-043.0-20201203	**72.6 J**	**11,100**	**6,700**
		48	LC34-DPT0595-048.0-20201203	**75.2**	**6,220**	12 U
		53	LC34-DPT0595-053.0-20201203	**70.3**	**6,080**	**3,750**
		58	LC34-DPT0595-058.0-20201203	**13.1 J**	**3,170**	**2,120 J**
		63	LC34-DPT0595-063.0-20201203	0.33 J	2.5	0.23 U
		68	LC34-DPT0595-068.0-20201203	0.75 J	0.34 U	0.23 U
		73	LC34-DPT0595-073.0-20201203	**31.8**	1.6	0.23 U
		78	LC34-DPT0595-078.0-20201203	**28,600**	**1,100**	46 U
		83	LC34-DPT0595-083.0-20201203	**14**	16.7	**1.7**
		88	LC34-DPT0595-088.0-20201203	**31.8**	1.6	0.23 U
		93	LC34-DPT0595-093.0-20201203	1.8	0.34 U	0.23 U
		98	LC34-DPT0595-098.0-20201203	**46.4**	5.7	0.23 U
	12/22/2021	8	LC34-DPT0595-008.0-20211222	**4,380**	**295**	41 U
		13	LC34-DPT0595-013.0-20211222	**965**	**219**	41 U
		18	LC34-DPT0595-018.0-20211222	100 U	55.2 J	41 U
		23	LC34-DPT0595-023.0-20211222	100 U	28 U	41 U
		28	LC34-DPT0595-028.0-20211222	100 U	28 U	41 U
		33	LC34-DPT0595-033.0-20211222	1,000 U	550 U	820 U
		38	LC34-DPT0595-038.0-20211222	10,000 U	**23,300**	**22,700**
		43	LC34-DPT0595-043.0-20211222	500 U	**65,200**	**33,100**
		48	LC34-DPT0595-048.0-20211222	170 U	**339 J**	**317 J**
		53	LC34-DPT0595-053.0-20211222	**251 J**	**2,340**	**1,710**
		58	LC34-DPT0595-058.0-20211222	2.9 J	16.5 J	**9.9 J**
		63	LC34-DPT0595-063.0-20211222	**282**	10.1 J	41 U
		68	LC34-DPT0595-068.0-20211222	**6 J**	3.2 J	1 J
		73	LC34-DPT0595-073.0-20211222	**160**	53.5 J	**6.9 J**
		78	LC34-DPT0595-078.0-20211222	**2,310**	**1,590 J**	820 U
		83	LC34-DPT0595-083.0-20211222	**61.4 J**	22.6 J	**4.1 J**
		88	LC34-DPT0595-088.0-20211222	**5.7 J**	10.9 J	**2.4 J**
		93	LC34-DPT0595-093.0-20211222	**43.2 J**	**120**	**5.4 J**
		98	LC34-DPT0595-098.0-20211222	**13.9 J**	**80 J**	**18.6 J**

Table 2-14. DPT Performance Groundwater Results (continued)

Location ID (LC34-)	Date	Sample Depth (ft bls)	Sample ID	TCE	cDCE	VC
DPT0596	11/9/2017	8	LC34-DPT0596-008.0-20171109	3	2	1 U
		13	LC34-DPT0596-013.0-20171109	**4**	3	**2**
		18	LC34-DPT0596-018.0-20171109	**460**	8	**9**
		23	LC34-DPT0596-023.0-20171109	**4**	4	**7**
		28	LC34-DPT0596-028.0-20171109	100 U	12	**1,000**
		33	LC34-DPT0596-033.0-20171109	**9,400**	**33,700**	**6,100**
		38	LC34-DPT0596-038.0-20171109	**165,000**	**334,000**	**1,000**
		43	LC34-DPT0596-043.0-20171109	**129,000**	**458,000**	3,300 U
		48	LC34-DPT0596-048.0-20171109	**1,101,000**	**191,000**	**20,800**
		53	LC34-DPT0596-053.0-20171109	**377,000**	**4,000**	2,000 U
		58	LC34-DPT0596-058.0-20171109	**109,000**	**17,000**	1,000 U
		63	LC34-DPT0596-063.0-20171109	**3,000**	**620**	**110**
		68	LC34-DPT0596-068.0-20171109	**1,500**	65	**18**
	11/8/2018	8	LC34-DPT0596-008.0-20181108	1	1 U	1 U
		13	LC34-DPT0596-013.0-20181108	1 U	1 U	1 U
		18	LC34-DPT0596-018.0-20181108	1	1	1 U
		23	LC34-DPT0596-023.0-20181108	2	4	**7**
		28	LC34-DPT0596-028.0-20181108	1 U	2	**8**
		33	LC34-DPT0596-033.0-20181108	**810**	**5,400**	**3,400**
		38	LC34-DPT0596-038.0-20181108	**153,000**	**192,000**	**3,300**
		43	LC34-DPT0596-043.0-20181108	**121,000**	**402,000**	1,000 U
		48	LC34-DPT0596-048.0-20181108	**790,000**	**214,000**	**31,900**
		53	LC34-DPT0596-053.0-20181108	**91,600**	**41,700**	1,000 U
		58	LC34-DPT0596-058.0-20181108	**6,100**	**9,800**	290 U
		63	LC34-DPT0596-063.0-20181108	**610**	**210**	**4**
		68	LC34-DPT0596-068.0-20181108	**4,100**	**95**	20 U
		73	LC34-DPT0596-073.0-20181108	**130**	49	5 U
		78	LC34-DPT0596-078.0-20181108	**1,500**	**110**	10 U
		83	LC34-DPT0596-083.0-20181108	**470**	44	5 U
	11/21/2019	8	LC34-DPT0596-008.0-20191121	2	48	**180**
		13	LC34-DPT0596-013.0-20191121	2	**81**	**420**
		18	LC34-DPT0596-018.0-20191121	3	22	**110**
		23	LC34-DPT0596-023.0-20191121	**7**	9	**8**
		28	LC34-DPT0596-028.0-20191121	3	7	**13**
		33	LC34-DPT0596-033.0-20191121	10 U	**690**	**940**
		38	LC34-DPT0596-038.0-20191121	**2,000**	**15,100**	**6,800**
		43	LC34-DPT0596-043.0-20191121	**85,500**	**151,000**	**3,500**
		48	LC34-DPT0596-048.0-20191121	**415,000 J**	**126,000**	**24,900**
		53	LC34-DPT0596-053.0-20191121	**252,000 J**	**73,400**	**1,800**
		58	LC34-DPT0596-058.0-20191121	**19,600**	**22,300**	**350**
		63	LC34-DPT0596-063.0-20191121	**4,200**	**2,500**	100 U
		68	LC34-DPT0596-068.0-20191121	**3,400**	**240**	50 U
		73	LC34-DPT0596-073.0-20191121	**180**	17	3 U
		78	LC34-DPT0596-078.0-20191121	**1,600**	**350**	20 U
		83	LC34-DPT0596-083.0-20191121	**230**	10	1 U

Table 2-14. DPT Performance Groundwater Results (continued)

Location ID (LC34-)	Date	Sample Depth (ft bls)	Sample ID	TCE	cDCE	VC
DPT0596 (continued)	11/30/2020	8	LC34-DPT0596-008.0-20201130	**22**	**249**	1.2 U
		13	LC34-DPT0596-013.0-20201130	**8.7**	**590**	1.2 U
		18	LC34-DPT0596-018.0-20201130	6.2 U	6.7 U	4.6 U
		23	LC34-DPT0596-023.0-20201130	1.5	**147**	**426**
		28	LC34-DPT0596-028.0-20201130	1.2	5.5	**12**
		33	LC34-DPT0596-033.0-20201130	0.92 J	7.2	**58**
		38	LC34-DPT0596-038.0-20201130	**2,490**	**6,810**	**2,500**
		43	LC34-DPT0596-043.0-20201130	**235,000**	**305,000**	**4,720**
		48	LC34-DPT0596-048.0-20201130	**1,690,000**	**125,000**	**28,000**
		53	LC34-DPT0596-053.0-20201130	**479,000**	**64,800**	1,200 U
		58	LC34-DPT0596-058.0-20201130	**25,700**	**22,800**	46 U
		63	LC34-DPT0596-063.0-20201130	**294**	**258**	**3.9**
		68	LC34-DPT0596-068.0-20201130	**773**	13.9	0.55 J
		73	LC34-DPT0596-073.0-20201130	**1,030**	14.3	0.69 J
	12/1/2020	78	LC34-DPT0596-078.0-20201201	**189**	**212**	**1.6**
		83	LC34-DPT0596-083.0-20201201	**68.2**	2.8	0.23 U
		88	LC34-DPT0596-088.0-20201201	**495**	9.3	0.56 J
		93	LC34-DPT0596-093.0-20201201	**4,300**	**164**	**8.4**
		98	LC34-DPT0596-098.0-20201201	**698**	4.2	0.23 U
	12/21/2021	8	LC34-DPT0596-008.0-20211221	**2,260 J**	**3,160 J**	**61.8**
		13	LC34-DPT0596-013.0-20211221	86 UJ	**11,100 J**	100 UJ
		18	LC34-DPT0596-018.0-20211221	**81,500 J**	**21,400 J**	200 UJ
		23	LC34-DPT0596-023.0-20211221	**48,300 J**	**26,100 J**	**461 J**
		28	LC34-DPT0596-028.0-20211221	**96,100 J**	**36,300 J**	**515 J**
		33	LC34-DPT0596-033.0-20211221	**72,100 J**	**50,800 J**	**380 J**
		38	LC34-DPT0596-038.0-20211221	**36,100 J**	**38,800 J**	**1,220 J**
		43	LC34-DPT0596-043.0-20211221	**52,200**	**71,200**	**4,250**
		48	LC34-DPT0596-048.0-20211221	**2,030,000**	**255,000**	**26,800 J**
		53	LC34-DPT0596-053.0-20211221	**458,000**	**58,300**	**4,690 J**
		58	LC34-DPT0596-058.0-20211221	**70,200 J**	**41,600**	**309 J**
	12/22/2021	63	LC34-DPT0596-063.0-20211222	**684**	**672**	**16.7 J**
		68	LC34-DPT0596-068.0-20211222	**1,190**	**213**	41 U
		73	LC34-DPT0596-073.0-20211222	**1,090**	24.5 J	82 U
		78	LC34-DPT0596-078.0-20211222	**831**	**191**	**18.7 J**
		83	LC34-DPT0596-083.0-20211222	**1,590**	**156**	41 U
		88	LC34-DPT0596-088.0-20211222	**1,190**	59.3	20 U
		93	LC34-DPT0596-093.0-20211222	**14,100**	**1,120**	410 U
		98	LC34-DPT0596-098.0-20211222	**1,060**	**78 J**	41 U

Table 2-14. DPT Performance Groundwater Results (continued)

Location ID (LC34-)	Date	Sample Depth (ft bls)	Sample ID	TCE	cDCE	VC
DPT0597	11/10/2017	8	LC34-DPT0597-008.0-20171110	**50**	5	1 U
		13	LC34-DPT0597-013.0-20171110	**17**	17	**17**
		18	LC34-DPT0597-018.0-20171110	**8**	37	**23**
		23	LC34-DPT0597-023.0-20171110	**9**	24	**11**
		28	LC34-DPT0597-028.0-20171110	2	26	**13**
		33	LC34-DPT0597-033.0-20171110	**82**	39	**44**
		38	LC34-DPT0597-038.0-20171110	**4,000**	**180**	20 U
		43	LC34-DPT0597-043.0-20171110	**235,000**	**16,700**	2,000 U
		48	LC34-DPT0597-048.0-20171110	**759,000**	**42,000**	3,300 U
		53	LC34-DPT0597-053.0-20171110	**1,120,000**	**97,600**	**38,200**
		58	LC34-DPT0597-058.0-20171110	**1,360,000**	**17,000**	**2,800**
		63	LC34-DPT0597-063.0-20171110	**271,000**	**22,300**	1,000 U
	11/9/2018	8	LC34-DPT0597-008.0-20181109	**25**	1 U	1 U
		13	LC34-DPT0597-013.0-20181109	**9**	16	**9**
		18	LC34-DPT0597-018.0-20181109	2	38	**26**
		23	LC34-DPT0597-023.0-20181109	2	49	**32**
		28	LC34-DPT0597-028.0-20181109	3 U	37	**24**
		33	LC34-DPT0597-033.0-20181109	**9**	34	**10**
		38	LC34-DPT0597-038.0-20181109	**79,500**	**2,100**	290 U
		43	LC34-DPT0597-043.0-20181109	**89,300**	**3,500**	290 U
		48	LC34-DPT0597-048.0-20181109	**578,000**	**31,000**	2,000 U
		53	LC34-DPT0597-053.0-20181109	**495,000 J**	**31,300**	**970**
		58	LC34-DPT0597-058.0-20181109	**811,000**	**29,000**	3,300 U
		63	LC34-DPT0597-063.0-20181109	**473,000**	**37,000**	1,000 U
		68	LC34-DPT0597-068.0-20181109	**8,200**	40	40 U
		73	LC34-DPT0597-073.0-20181109	**35,700**	**1,100**	290 U
		78	LC34-DPT0597-078.0-20181109	**828,000**	**7,200**	2,000 U
		83	LC34-DPT0597-083.0-20181109	**14,300**	**830**	200 U
	11/19/2019	8	LC34-DPT0597-008.0-20191119	**84**	3	1 U
		13	LC34-DPT0597-013.0-20191119	3	20	**4**
		18	LC34-DPT0597-018.0-20191119	**5**	**160**	**14**
		23	LC34-DPT0597-023.0-20191119	2	17	**12**
		28	LC34-DPT0597-028.0-20191119	2	42	**11**
		33	LC34-DPT0597-033.0-20191119	2	40	**19**
		38	LC34-DPT0597-038.0-20191119	**5,900**	**320**	50 U
		43	LC34-DPT0597-043.0-20191119	**290,000 J**	**12,200**	500 U
		48	LC34-DPT0597-048.0-20191119	**341,000 J**	**30,400**	**570**
		53	LC34-DPT0597-053.0-20191119	**354,000 J**	**50,700**	**6,200**
		58	LC34-DPT0597-058.0-20191120	**571,000 J**	**27,000**	**12,400**
		63	LC34-DPT0597-063.0-20191120	**212,000**	**36,000**	1,000 U
		68	LC34-DPT0597-068.0-20191120	**12,700**	500 U	500 U
		73	LC34-DPT0597-073.0-20191120	**7,100**	**860**	100 U
		78	LC34-DPT0597-078.0-20191120	**146,000 J**	**18,700**	100 U
		83	LC34-DPT0597-083.0-20191120	**840**	**410**	10 U

Table 2-14. DPT Performance Groundwater Results (continued)

Location ID (LC34-)	Date	Sample Depth (ft bls)	Sample ID	TCE	cDCE	VC
DPT0597 (continued)	12/4/2020	8	LC34-DPT0597-008.0-20201204	**33.9**	1.4	0.23 U
		13	LC34-DPT0597-013.0-20201204	2.1	8.7	0.23 U
		18	LC34-DPT0597-018.0-20201204	1	7.4	0.23 U
		23	LC34-DPT0597-023.0-20201204	0.31 U	10.9	0.23 U
		28	LC34-DPT0597-028.0-20201204	1.5	23.9	0.23 U
		33	LC34-DPT0597-033.0-20201204	1.9	37.3	0.23 U
		38	LC34-DPT0597-038.0-20201204	**1,360**	**306**	0.23 U
		43	LC34-DPT0597-043.0-20201204	**81,900**	**7,160**	**143 J**
		48	LC34-DPT0597-048.0-20201204	**781,000**	**19,800**	1,200 U
		53	LC34-DPT0597-053.0-20201204	**964,000**	**26,700**	2,300 U
		58	LC34-DPT0597-058.0-20201204	**1,440,000**	**32,100**	**3,630 J**
		63	LC34-DPT0597-063.0-20201204	**29,800**	**3,010**	**90.1 J**
		68	LC34-DPT0597-068.0-20201204	**873**	14.6	1.1
		73	LC34-DPT0597-073.0-20201204	**19,200**	**677**	46 U
		78	LC34-DPT0597-078.0-20201204	**691,000**	**7,290**	1,200 U
	12/7/2020	83	LC34-DPT0597-083.0-20201207	**43,900**	**3,170**	120 U
		88	LC34-DPT0597-088.0-20201207	**1,230**	**955**	2.3 U
		93	LC34-DPT0597-093.0-20201207	**1,220**	7.3 J	2.3 U
		98	LC34-DPT0597-098.0-20201207	**128**	1.1	0.23 U
	12/20/2021	8	LC34-DPT0597-008.0-20211220	**5,200 J**	**76.5**	**1.6**
	12/21/2021	13	LC34-DPT0597-013.0-20211221	**45,900 J**	**7,020 J**	**86**
		18	LC34-DPT0597-018.0-20211221	**112,000 J**	**8,080 J**	**120 J**
		23	LC34-DPT0597-023.0-20211221	**115,000 J**	**16,600 J**	**84.7 J**
		28	LC34-DPT0597-028.0-20211221	**83.3**	**80.6 J**	**20.2**
		33	LC34-DPT0597-033.0-20211221	**161,000 J**	**26,900 J**	**194 J**
		38	LC34-DPT0597-038.0-20211221	**122,000 J**	**8,820 J**	**158**
		43	LC34-DPT0597-043.0-20211221	**1,260,000 J**	**12,600**	410 U
		48	LC34-DPT0597-048.0-20211221	**1,460,000 J**	**29,000**	4,100 U
		53	LC34-DPT0597-053.0-20211221	**3,060,000 J**	**122,000**	**4,560 J**
		58	LC34-DPT0597-058.0-20211221	**15,400,000 J**	**338,000**	**20,600 J**
		63	LC34-DPT0597-063.0-20211221	**990,000 J**	**73,900 J**	**2,410**
		68	LC34-DPT0597-068.0-20211221	**7,400 J**	**108 J**	**9.4**
		73	LC34-DPT0597-073.0-20211221	**4,810**	**115 J**	82 U
		78	LC34-DPT0597-078.0-20211221	**830,000**	**9,330 J**	4,100 U
		83	LC34-DPT0597-083.0-20211221	**472,000 J**	**1,650**	200 U
		88	LC34-DPT0597-088.0-20211221	**11,800 J**	**125**	4.1 U
		93	LC34-DPT0597-093.0-20211221	**4,590 J**	**92.4**	4.1 U
		98	LC34-DPT0597-098.0-20211221	**19,400 J**	**82.5**	**4.5 J**

Table 2-14. DPT Performance Groundwater Results (continued)

Location ID (LC34-)	Date	Sample Depth (ft bls)	Sample ID	TCE	cDCE	VC
DPT0598	11/9/2017	8	LC34-DPT0598-008.0-20171109	**4**	5	**16**
		13	LC34-DPT0598-013.0-20171109	**46**	13	**8**
		18	LC34-DPT0598-018.0-20171109	**44**	19	**32**
		23	LC34-DPT0598-023.0-20171109	**14**	32	**88**
		28	LC34-DPT0598-028.0-20171109	3	9	**16**
		33	LC34-DPT0598-033.0-20171109	10 U	**5,200**	**9,000**
		38	LC34-DPT0598-038.0-20171109	**4,700**	**662,000**	**16,500**
		43	LC34-DPT0598-043.0-20171109	**12,300**	**108,000**	**9,200**
		48	LC34-DPT0598-048.0-20171109	**59,400**	**38,000**	**570**
		53	LC34-DPT0598-053.0-20171109	**220**	**700**	**140**
	11/10/2017	58	LC34-DPT0598-058.0-20171110	**17,200**	**29,300**	**250**
		63	LC34-DPT0598-063.0-20171110	**210**	**150**	5 U
		68	LC34-DPT0598-068.0-20171110	**40**	44	1
		73	LC34-DPT0598-073.0-20171110	**11**	12	1 U
		78	LC34-DPT0598-078.0-20171110	**384,000**	**13,400**	2,000 U
		83	LC34-DPT0598-083.0-20171110	**2,500**	**1,600**	**10**
	11/12/2018	8	LC34-DPT0598-008.0-20181112	1 U	11	**4**
		13	LC34-DPT0598-013.0-20181112	2	8	**2**
		18	LC34-DPT0598-018.0-20181112	2	11	**5**
		23	LC34-DPT0598-023.0-20181112	2	23	**94**
		28	LC34-DPT0598-028.0-20181112	1 U	10	**46**
		33	LC34-DPT0598-033.0-20181112	1	12	**69**
		38	LC34-DPT0598-038.0-20181112	**2,200**	**36,700**	**17,600**
		43	LC34-DPT0598-043.0-20181112	**320**	**32,600**	**2,400**
		48	LC34-DPT0598-048.0-20181112	**27,300**	**35,900**	**2,600**
		53	LC34-DPT0598-053.0-20181112	**57**	**570**	**62**
		58	LC34-DPT0598-058.0-20181112	**15,800**	**28,400**	**91**
		63	LC34-DPT0598-063.0-20181112	**6**	**120**	5 U
		68	LC34-DPT0598-068.0-20181112	**4**	3	3 U
		73	LC34-DPT0598-073.0-20181112	**17,700**	**1,200**	40 U
		78	LC34-DPT0598-078.0-20181112	**3,190,000**	**13,100**	290 U
		83	LC34-DPT0598-083.0-20181112	**5,100**	**3,900**	10 U
	11/19/2019	8	LC34-DPT0598-008.0-20191119	1	5	**4**
		13	LC34-DPT0598-013.0-20191119	2	2	**5**
		18	LC34-DPT0598-018.0-20191119	3	8	**5**
		23	LC34-DPT0598-023.0-20191119	3	17	**32**
		28	LC34-DPT0598-028.0-20191119	1	8	**7**
		33	LC34-DPT0598-033.0-20191119	**130**	7	**35**
		38	LC34-DPT0598-038.0-20191119	20 U	**1,700**	**510**
		43	LC34-DPT0598-043.0-20191119	**2,400**	**73,600**	**8,000**
		48	LC34-DPT0598-048.0-20191119	**257,000 J**	**140,000**	**7,200**
		53	LC34-DPT0598-053.0-20191119	**6,400**	**11,100**	**800**
		58	LC34-DPT0598-058.0-20191119	**164,000 J**	**42,400**	**430**
		63	LC34-DPT0598-063.0-20191119	**298,000 J**	**7,500**	500 U
		68	LC34-DPT0598-068.0-20191119	**5,200**	**100**	50 U
		73	LC34-DPT0598-073.0-20191119	**19,800**	**240**	50 U
		78	LC34-DPT0598-078.0-20191119	**785,000 J**	**17,200**	1,000 U
		83	LC34-DPT0598-083.0-20191119	**64,000**	**1,100**	290 U

Table 2-14. DPT Performance Groundwater Results (continued)

Location ID (LC34-)	Date	Sample Depth (ft bls)	Sample ID	TCE	cDCE	VC
DPT0598 (continued)	12/3/2020	8	LC34-DPT0598-008.0-20201203	0.8 J	2.5	**2.3**
		13	LC34-DPT0598-013.0-20201203	0.94 J	3.2	**2.8**
		18	LC34-DPT0598-018.0-20201203	1.7	4.9	0.23 U
		23	LC34-DPT0598-023.0-20201203	1.1	14.9	0.23 U
		28	LC34-DPT0598-028.0-20201203	0.74 J	20.9	**22.5**
		33	LC34-DPT0598-033.0-20201203	0.77 J	4	0.23 U
		38	LC34-DPT0598-038.0-20201203	**27.9**	**1,840**	4.6 U
		43	LC34-DPT0598-043.0-20201203	**596**	**17,800**	**5,920**
		48	LC34-DPT0598-048.0-20201203	**29,200**	**104,000**	**5,180**
		53	LC34-DPT0598-053.0-20201203	**19.9**	**241**	0.23 U
		58	LC34-DPT0598-058.0-20201203	**1,180**	**2,240**	**143**
		63	LC34-DPT0598-063.0-20201203	3	**276**	**5.8**
		68	LC34-DPT0598-068.0-20201203	1.7	2.1	0.23 U
		73	LC34-DPT0598-073.0-20201203	**11,900**	**641**	23 U
	12/4/2020	78	LC34-DPT0598-078.0-20201204	**847,000**	**13,900**	1,200 U
		83	LC34-DPT0598-083.0-20201204	**9,270**	**1,990**	4.6 U
		88	LC34-DPT0598-088.0-20201204	**37.4**	19.6	0.23 U
		93	LC34-DPT0598-093.0-20201204	**93**	**495**	1.2 U
		98	LC34-DPT0598-098.0-20201204	**66,000**	**54,000**	120 U
	12/20/2021	8	LC34-DPT0598-008.0-20211220	**12,400 J**	**1,920 J**	**28.3**
		13	LC34-DPT0598-013.0-20211220	**868 J**	**716 J**	**25.8**
		18	LC34-DPT0598-018.0-20211220	**648 J**	**864 J**	**64.9**
		23	LC34-DPT0598-023.0-20211220	**25,500 J**	**3,980 J**	200 UJ
		28	LC34-DPT0598-028.0-20211220	**19,800 J**	**3,560 J**	**211 J**
		33	LC34-DPT0598-033.0-20211220	**71,300 J**	**21,500 J**	**975 J**
		38	LC34-DPT0598-038.0-20211220	**19,000 J**	**4,070 J**	**195**
		43	LC34-DPT0598-043.0-20211220	**105,000 J**	**53,600 J**	**3,340**
		48	LC34-DPT0598-048.0-20211220	**49,700 J**	**106,000 J**	**4,390 J**
		53	LC34-DPT0598-053.0-20211220	**29,600 J**	**14,100 J**	**475 J**
		58	LC34-DPT0598-058.0-20211220	**207 J**	**2,940 J**	**338 J**
		63	LC34-DPT0598-063.0-20211220	**377 J**	**190 J**	**8.2 J**
		68	LC34-DPT0598-068.0-20211220	**19.6**	6.1	0.41 U
		73	LC34-DPT0598-073.0-20211220	**790 J**	55 UJ	82 UJ
		78	LC34-DPT0598-078.0-20211220	**3,070,000 J**	**11,000 J**	4,100 UJ
		83	LC34-DPT0598-083.0-20211220	**230,000 J**	**5,760 J**	82 UJ
		88	LC34-DPT0598-088.0-20211220	**6,500 J**	**335 J**	**7 J**
		93	LC34-DPT0598-093.0-20211220	**173 J**	**349 J**	4.1 UJ
		98	LC34-DPT0598-098.0-20211220	**82,000 J**	**37,100 J**	410 UJ

Table 2-14. DPT Performance Groundwater Results (continued)

Location ID (LC34-)	Date	Sample Depth (ft bls)	Sample ID	TCE	cDCE	VC
DPT0599	11/13/2017	8	LC34-DPT0599-008.0-20171113	**7**	1 U	1 U
		13	LC34-DPT0599-013.0-20171113	**84**	4	1 U
		18	LC34-DPT0599-018.0-20171113	**220**	41	**41**
		23	LC34-DPT0599-023.0-20171113	**25,100**	**3,900**	**560**
		28	LC34-DPT0599-028.0-20171113	**913,000**	**7,500**	2,000 U
		33	LC34-DPT0599-033.0-20171113	**1,000,000**	**25,000**	3,300 U
		38	LC34-DPT0599-038.0-20171113	**1,030,000**	**50,300**	3,300 U
		43	LC34-DPT0599-043.0-20171113	**356,000**	**214,000**	3,300 U
		48	LC34-DPT0599-048.0-20171113	**1,370,000**	**45,900**	2,000 U
		53	LC34-DPT0599-053.0-20171113	**96,700**	**26,100**	200 U
		58	LC34-DPT0599-058.0-20171113	**51,400**	**6,500**	200 U
		63	LC34-DPT0599-063.0-20171113	**3,300**	100 U	100 U
		68	LC34-DPT0599-068.0-20171113	**15,800**	**160**	40 U
		73	LC34-DPT0599-073.0-20171113	**109,000**	**860**	100 U
		78	LC34-DPT0599-078.0-20171113	**12,500**	**1,400**	100 U
		83	LC34-DPT0599-083.0-20171113	**142,000**	**10,900**	100 U
	11/13/2018	8	LC34-DPT0599-008.0-20181113	1 U	1 U	1 U
		13	LC34-DPT0599-013.0-20181113	1	2	1 U
		18	LC34-DPT0599-018.0-20181113	**33**	30	**12**
		23	LC34-DPT0599-023.0-20181113	**54,700 J**	**3,400**	**270**
		28	LC34-DPT0599-028.0-20181113	**479,000 J**	**5,100**	**670**
		33	LC34-DPT0599-033.0-20181113	**683,000**	**18,300**	**2,600**
		38	LC34-DPT0599-038.0-20181113	**759,000**	**137,000**	3,300 U
		43	LC34-DPT0599-043.0-20181113	**231,000**	**211,000**	**3,900**
		48	LC34-DPT0599-048.0-20181113	**1,110,000 J**	**43,200**	2,000 U
		53	LC34-DPT0599-053.0-20181113	**28,500 J**	**21,600**	40 U
		58	LC34-DPT0599-058.0-20181113	**210**	**1,300**	**5**
		63	LC34-DPT0599-063.0-20181113	**1,500**	29	5 U
		68	LC34-DPT0599-068.0-20181113	**570**	11	5 U
		73	LC34-DPT0599-073.0-20181113	**2,000**	29	10 U
		78	LC34-DPT0599-078.0-20181113	**3,800**	**490**	10 U
		83	LC34-DPT0599-083.0-20181113	**1,500**	48	10 U
		88	LC34-DPT0599-088.0-20181113	**12,200 J**	**180**	20 U
		93	LC34-DPT0599-093.0-20181113	**5,400**	**100**	20 U
		98	LC34-DPT0599-098.0-20181113	**8,700**	**110**	40 U
	11/20/2019	8	LC34-DPT0599-008.0-20191120	2	1 U	1 U
		13	LC34-DPT0599-013.0-20191120	3 U	3 U	**8**
		18	LC34-DPT0599-018.0-20191120	2	6	**3**
		23	LC34-DPT0599-023.0-20191120	**1,700**	**1,200**	**100**
		28	LC34-DPT0599-028.0-20191120	**48,500**	**7,900**	**790**
		33	LC34-DPT0599-033.0-20191120	**264,000**	**14,100**	**1,200**
		38	LC34-DPT0599-038.0-20191120	**113,000**	**82,200**	**5,600**
		43	LC34-DPT0599-043.0-20191120	**373,000 J**	**175,000**	**2,700**
		48	LC34-DPT0599-048.0-20191120	**688,000 J**	**59,200**	**4,500**

Table 2-14. DPT Performance Groundwater Results (continued)

Location ID (LC34-)	Date	Sample Depth (ft bls)	Sample ID	TCE	cDCE	VC
DPT0599 (continued)	11/21/2019	53	LC34-DPT0599-053.0-20191121	**126,000 J**	**33,000**	500 U
		58	LC34-DPT0599-058.0-20191121	**66,400 J**	**5,700**	290 U
		63	LC34-DPT0599-063.0-20191121	**12,500**	200 U	200 U
		68	LC34-DPT0599-068.0-20191121	**2,700**	**76**	20 U
		73	LC34-DPT0599-073.0-20191121	**440 J**	31	1
		78	LC34-DPT0599-078.0-20191121	**770**	**930**	10 U
		83	LC34-DPT0599-083.0-20191121	**2,200**	**98**	20 U
	11/24/2020	8	LC34-DPT0599-008.0-20201124	1.7	0.34 U	0.23 U
		13	LC34-DPT0599-013.0-20201124	1.1	2.5	**25.6**
		18	LC34-DPT0599-018.0-20201124	1.8	5.1	0.23 U
		23	LC34-DPT0599-023.0-20201124	3.3	**361**	0.23 U
		28	LC34-DPT0599-028.0-20201124	**39,000**	**6,230**	46 U
		33	LC34-DPT0599-033.0-20201124	**109,000**	**16,100**	120 U
		38	LC34-DPT0599-038.0-20201124	**876,000**	**27,600**	1,200 U
		43	LC34-DPT0599-043.0-20201124	**145,000**	**191,000**	230 U
		48	LC34-DPT0599-048.0-20201124	**1,600,000**	**54,700**	1,200 U
		53	LC34-DPT0599-053.0-20201124	**266,000**	**32,800**	230 U
		58	LC34-DPT0599-058.0-20201124	**3,370**	**1,090**	23 U
	11/30/2020	63	LC34-DPT0599-063.0-20201130	**9,250**	**540**	1.2 U
		68	LC34-DPT0599-068.0-20201130	**1,560**	23.3	0.23 U
		73	LC34-DPT0599-073.0-20201130	**332**	9.4	0.23 U
		78	LC34-DPT0599-078.0-20201130	**151**	**1,430**	2.3 U
		83	LC34-DPT0599-083.0-20201130	**12.3**	11.5	0.23 U
		88	LC34-DPT0599-088.0-20201130	**116**	1	0.23 U
		93	LC34-DPT0599-093.0-20201130	**159**	6.9	0.23 U
		98	LC34-DPT0599-098.0-20201130	**128**	3.1	0.23 U
	12/21/2021	8	LC34-DPT0599-008.0-20211221	**69.6**	3.8	0.74 J
		13	LC34-DPT0599-013.0-20211221	**2,100 J**	**1,360 J**	**28.5**
		18	LC34-DPT0599-018.0-20211221	**7,200 J**	**21,300 J**	**398 J**
		23	LC34-DPT0599-023.0-20211221	**225,000 J**	**33,100 J**	**390**
		28	LC34-DPT0599-028.0-20211221	**187,000 J**	**15,600**	**371 J**
		33	LC34-DPT0599-033.0-20211221	**39,700 J**	**3,130 J**	820 U
		38	LC34-DPT0599-038.0-20211221	**755,000**	**39,000**	4,100 U
		43	LC34-DPT0599-043.0-20211221	**274,000 J**	**121,000 J**	**3,950 J**
		48	LC34-DPT0599-048.0-20211221	**1,480,000 J**	**48,300 J**	4,100 UJ
		53	LC34-DPT0599-053.0-20211221	**294,000 J**	**121,000 J**	**4,660 J**
		58	LC34-DPT0599-058.0-20211221	**86,800 J**	**13,700 J**	200 UJ
		63	LC34-DPT0599-063.0-20211221	**15,700 J**	**2,300 J**	100 UJ
		68	LC34-DPT0599-068.0-20211221	**14,500 J**	**300 J**	100 UJ
		73	LC34-DPT0599-073.0-20211221	**1,480 J**	**175 J**	100 UJ
		78	LC34-DPT0599-078.0-20211221	**238**	**636**	**35.8**
		83	LC34-DPT0599-083.0-20211221	**2,830**	**254**	20 U
		88	LC34-DPT0599-088.0-20211221	**14,400**	**4,360**	**169 J**
		93	LC34-DPT0599-093.0-20211221	**6,090 J**	**381**	20 U
	12/22/2021	98	LC34-DPT0599-098.0-20211222	200 U	55 U	82 U

Table 2-14. DPT Performance Groundwater Results (continued)

Location ID (LC34-)	Date	Sample Depth (ft bls)	Sample ID	TCE	cDCE	VC
DPT0600	11/16/2017	8	LC34-DPT0600-008.0-20171116	**170**	14	1 U
		13	LC34-DPT0600-013.0-20171116	3	**170**	**39**
		18	LC34-DPT0600-018.0-20171116	**5**	**120**	**63**
		23	LC34-DPT0600-023.0-20171116	**10**	**240**	**47**
		28	LC34-DPT0600-028.0-20171116	**140**	23	**51**
		33	LC34-DPT0600-033.0-20171116	3	7	**12**
		38	LC34-DPT0600-038.0-20171116	**25**	**260**	**4,000 J**
		43	LC34-DPT0600-043.0-20171116	400 U	**235,000**	**14,300**
		48	LC34-DPT0600-048.0-20171116	100 U	**26,400**	**3,500**
		53	LC34-DPT0600-053.0-20171116	**120**	**1,700**	**59**
		58	LC34-DPT0600-058.0-20171116	**14**	**5,500**	**54**
		63	LC34-DPT0600-063.0-20171116	**250**	**3,700 J**	**120**
		68	LC34-DPT0600-068.0-20171116	**38**	**200**	10 U
		73	LC34-DPT0600-073.0-20171116	**110**	**220**	**14**
		78	LC34-DPT0600-078.0-20171116	**15,700**	**6,400**	**14**
		83	LC34-DPT0600-083.0-20171116	**94**	**230**	10 U
	11/14/2018	8	LC34-DPT0600-008.0-20181114	1	1 U	1 U
		13	LC34-DPT0600-013.0-20181114	1	31	**17**
		18	LC34-DPT0600-018.0-20181114	**5**	31	**36**
		23	LC34-DPT0600-023.0-20181114	**180**	57	**70**
		28	LC34-DPT0600-028.0-20181114	3 U	47	**51**
		33	LC34-DPT0600-033.0-20181114	**11**	38	**97**
		38	LC34-DPT0600-038.0-20181114	20 U	**78**	**67**
		43	LC34-DPT0600-043.0-20181114	40 U	**8,800**	**12,400 J**
		48	LC34-DPT0600-048.0-20181114	290 U	**57,400**	**9,000**
		53	LC34-DPT0600-053.0-20181114	290 U	**95,300**	**14,000**
		58	LC34-DPT0600-058.0-20181114	290 U	**11,000**	**800**
		63	LC34-DPT0600-063.0-20181114	**120**	**1,700**	**29**
		68	LC34-DPT0600-068.0-20181114	2 U	36	**21**
		73	LC34-DPT0600-073.0-20181114	**32**	**170**	**160**
		78	LC34-DPT0600-078.0-20181114	**1,500**	**2,200**	**21**
		83	LC34-DPT0600-083.0-20181114	2	21	2 U
		88	LC34-DPT0600-088.0-20181114	3	**100**	**13**
		93	LC34-DPT0600-093.0-20181114	**4**	**150**	**7**
		98	LC34-DPT0600-098.0-20181114	**10**	**530**	**43**
	11/20/2019	8	LC34-DPT0600-008.0-20191120	3	1 U	1 U
		13	LC34-DPT0600-013.0-20191120	2	1 U	1 U
		18	LC34-DPT0600-018.0-20191120	3	3	1 U
		23	LC34-DPT0600-023.0-20191120	2	68	**120**
		28	LC34-DPT0600-028.0-20191120	3	**71**	**130**
		33	LC34-DPT0600-033.0-20191120	10 U	55	**78**
		38	LC34-DPT0600-038.0-20191120	3 U	5	**79**
		43	LC34-DPT0600-043.0-20191120	**1,300**	**39,400**	**8,900**
		48	LC34-DPT0600-048.0-20191120	100 U	**23,300**	**5,100**
		53	LC34-DPT0600-053.0-20191120	**59**	**10,200**	**1,800**
		58	LC34-DPT0600-058.0-20191120	**240**	**3,200**	**110**
		63	LC34-DPT0600-063.0-20191120	**43**	**710**	**24**
		68	LC34-DPT0600-068.0-20191120	**8**	8	**5**
		73	LC34-DPT0600-073.0-20191120	**9**	**160**	**19**

Table 2-14. DPT Performance Groundwater Results (continued)

Location ID (LC34-)	Date	Sample Depth (ft bls)	Sample ID	TCE	cDCE	VC
DPT0600 (continued)	11/21/2019	78	LC34-DPT0600-078.0-20191121	**1,300**	**2,100**	**22**
		83	LC34-DPT0600-083.0-20191121	**4**	12	1 U
	11/23/2020	8	LC34-DPT0600-008.0-20201123	0.66 J	0.34 U	0.23 U
		13	LC34-DPT0600-013.0-20201123	1.4	0.55 J	0.23 U
		18	LC34-DPT0600-018.0-20201123	0.95 J	3.3	0.23 U
	11/24/2020	23	LC34-DPT0600-023.0-20201124	1.2	9.4	0.23 U
		28	LC34-DPT0600-028.0-20201124	0.75 J	11.4	**13.8**
		33	LC34-DPT0600-033.0-20201124	0.45 J	22.1	**66.1**
		38	LC34-DPT0600-038.0-20201124	1.4	11.9	**39.3**
		43	LC34-DPT0600-043.0-20201124	16 U	**11,000**	**4,580**
		48	LC34-DPT0600-048.0-20201124	160 U	**50,000**	**6,190**
		53	LC34-DPT0600-053.0-20201124	16 U	**10,500**	**1,710**
		58	LC34-DPT0600-058.0-20201124	1.6 U	**663**	1.2 U
		63	LC34-DPT0600-063.0-20201124	2.3 J	**342**	1.2 U
		68	LC34-DPT0600-068.0-20201124	1	**166**	**122**
		73	LC34-DPT0600-073.0-20201124	0.86 J	**128**	**91.2**
		78	LC34-DPT0600-078.0-20201124	**595**	**1,320**	2.3 U
		83	LC34-DPT0600-083.0-20201124	0.31 U	2.8	0.23 U
		88	LC34-DPT0600-088.0-20201124	0.31 U	0.42 J	0.23 U
		93	LC34-DPT0600-093.0-20201124	0.42 J	20.9	0.23 U
		98	LC34-DPT0600-098.0-20201124	0.31 U	3.3	0.23 U
	12/20/2021	8	LC34-DPT0600-008.0-20211220	**324 J**	7.5	0.55 J
		13	LC34-DPT0600-013.0-20211220	**24,100 J**	**3,410 J**	**35.5**
		18	LC34-DPT0600-018.0-20211220	**10,900 J**	**2,210 J**	**91**
		23	LC34-DPT0600-023.0-20211220	**23,400 J**	**5,360 J**	**192 J**
	12/21/2021	28	LC34-DPT0600-028.0-20211221	**44.5**	19.4	**20**
		33	LC34-DPT0600-033.0-20211221	**41,900 J**	**9,130 J**	**183 J**
		38	LC34-DPT0600-038.0-20211221	**54,000 J**	**7,480 J**	**242 J**
		43	LC34-DPT0600-043.0-20211221	**74,600 J**	**14,800**	**1,480**
		48	LC34-DPT0600-048.0-20211221	**76,800 J**	**28,500**	**889**
		53	LC34-DPT0600-053.0-20211221	**260 J**	**18,100**	**2,450**
		58	LC34-DPT0600-058.0-20211221	**434 J**	**535**	**289**
		63	LC34-DPT0600-063.0-20211221	**400**	**443**	**49**
		68	LC34-DPT0600-068.0-20211221	**84.9**	13.3	**6.8**
		73	LC34-DPT0600-073.0-20211221	**339 J**	**421 J**	**10.1**
		78	LC34-DPT0600-078.0-20211221	**49.1 J**	**312**	**44.5**
		83	LC34-DPT0600-083.0-20211221	**85.7 J**	68.1	**5.8**
		88	LC34-DPT0600-088.0-20211221	**78.1 J**	22	0.69 J
		93	LC34-DPT0600-093.0-20211221	**160 J**	**90.2 J**	**6.8**
		98	LC34-DPT0600-098.0-20211221	**790 J**	**310 J**	**18.2**

Table 2-14. DPT Performance Groundwater Results (continued)

Location ID (LC34-)	Date	Sample Depth (ft bls)	Sample ID	TCE	cDCE	VC
DPT0601	11/16/2017	8	LC34-DPT0601-008.0-20171116	2	30	**5**
		13	LC34-DPT0601-013.0-20171116	**5**	64	**29**
		18	LC34-DPT0601-018.0-20171116	**11**	**79**	**39**
		23	LC34-DPT0601-023.0-20171116	**11**	**6,100**	**640**
		28	LC34-DPT0601-028.0-20171116	**27,400**	**81,600 J**	**1,500**
		33	LC34-DPT0601-033.0-20171116	**181,000**	**202,000**	**3,100**
		38	LC34-DPT0601-038.0-20171116	**119,000**	**249,000**	**4,800**
		43	LC34-DPT0601-043.0-20171116	**24,200**	**339,000**	**13,100**
		48	LC34-DPT0601-048.0-20171116	**890**	**139,000**	**18,600**
	11/17/2017	53	LC34-DPT0601-053.0-20171117	**160**	**280**	10 U
		58	LC34-DPT0601-058.0-20171117	**1,000**	**5,900 J**	**120**
		63	LC34-DPT0601-063.0-20171117	**280**	**1,100**	20 U
		68	LC34-DPT0601-068.0-20171117	**160**	**280**	10 U
		73	LC34-DPT0601-073.0-20171117	**780**	**370**	**7**
		78	LC34-DPT0601-078.0-20171117	**6,800**	**9,800**	**41**
		83	LC34-DPT0601-083.0-20171117	**61**	**160**	**8**
	11/16/2018	8	LC34-DPT0601-008.0-20181116	1	22	**16**
		13	LC34-DPT0601-013.0-20181116	2 U	45	**55**
		18	LC34-DPT0601-018.0-20181116	2	49	**53**
		23	LC34-DPT0601-023.0-20181116	3 U	20	**180**
		28	LC34-DPT0601-028.0-20181116	40 U	**12,000**	**3,400**
		33	LC34-DPT0601-033.0-20181116	**33,800**	**80,800**	**1,800**
		38	LC34-DPT0601-038.0-20181116	**103,000**	**125,000**	**2,400**
		43	LC34-DPT0601-043.0-20181116	**97,900**	**156,000**	**3,100**
		48	LC34-DPT0601-048.0-20181116	**26,600**	**160,000**	**5,900**
		53	LC34-DPT0601-053.0-20181116	**24**	**2,100**	**170**
		58	LC34-DPT0601-058.0-20181116	**90**	**310**	**5**
		63	LC34-DPT0601-063.0-20181116	3	57	3 U
		68	LC34-DPT0601-068.0-20181116	3	19	1
		73	LC34-DPT0601-073.0-20181116	**80**	**160**	**7**
		78	LC34-DPT0601-078.0-20181116	**360**	**1,300**	**32**
		83	LC34-DPT0601-083.0-20181116	**25**	**100**	**5**
		88	LC34-DPT0601-088.0-20181116	1	9	1 U
		93	LC34-DPT0601-093.0-20181116	**5**	54	**6**
		98	LC34-DPT0601-098.0-20181116	**7**	14	1 U
	11/20/2019	8	LC34-DPT0601-008.0-20191120	**9**	12	**3**
		13	LC34-DPT0601-013.0-20191120	**4**	26	**24**
		18	LC34-DPT0601-018.0-20191120	**8**	42	**37**
		23	LC34-DPT0601-023.0-20191120	2	42	**110**
		28	LC34-DPT0601-028.0-20191120	2	23	**260 J**
		33	LC34-DPT0601-033.0-20191120	**1,400**	**17,700**	**1,500**
		38	LC34-DPT0601-038.0-20191120	**50,200**	**60,400**	**1,300**
		43	LC34-DPT0601-043.0-20191120	**104,000**	**154,000**	**2,900**
		48	LC34-DPT0601-048.0-20191120	**61,100**	**117,000 J**	**4,300**
		53	LC34-DPT0601-053.0-20191120	**50**	**170**	**17**
		58	LC34-DPT0601-058.0-20191120	**26**	**110**	1
		63	LC34-DPT0601-063.0-20191120	**13**	**140**	2 U
		68	LC34-DPT0601-068.0-20191120	**93**	**220**	**5**
		73	LC34-DPT0601-073.0-20191120	**24**	**89**	**12**
		78	LC34-DPT0601-078.0-20191120	**9,100**	**4,300**	100 U
		83	LC34-DPT0601-083.0-20191120	**40**	50	**2**

Table 2-14. DPT Performance Groundwater Results (continued)

Location ID (LC34-)	Date	Sample Depth (ft bls)	Sample ID	TCE	cDCE	VC
DPT0601 (continued)	11/23/2020	8	LC34-DPT0601-008.0-20201123	1.3	5.5	**6.6**
		13	LC34-DPT0601-013.0-20201123	0.8 J	12.9	**16.9**
		18	LC34-DPT0601-018.0-20201123	1.3	36.5	**38.1**
		23	LC34-DPT0601-023.0-20201123	3.1 U	11.4	**63.6**
		28	LC34-DPT0601-028.0-20201123	0.86 J	15.1	**50.8**
		33	LC34-DPT0601-033.0-20201123	2.1 J	**707**	**642**
		38	LC34-DPT0601-038.0-20201123	**662**	**18,900**	**1,070**
		43	LC34-DPT0601-043.0-20201123	**9,090**	**42,600**	**888 J**
		48	LC34-DPT0601-048.0-20201123	**39,800**	**93,400**	**2,080**
		53	LC34-DPT0601-053.0-20201123	3	18.6	**11.3**
		58	LC34-DPT0601-058.0-20201123	**24.5**	**132**	**2.3**
		63	LC34-DPT0601-063.0-20201123	**3.7**	34.4	0.23 U
		68	LC34-DPT0601-068.0-20201123	2	7.8	**5.3**
		73	LC34-DPT0601-073.0-20201123	**181**	36	0.44 J
		78	LC34-DPT0601-078.0-20201123	**5,260**	**2,830**	**10.3**
		83	LC34-DPT0601-083.0-20201123	1.1	3.4	0.23 U
		88	LC34-DPT0601-088.0-20201123	2.8	1.3	0.23 U
		93	LC34-DPT0601-093.0-20201123	**4.9**	9.7	0.23 U
		98	LC34-DPT0601-098.0-20201123	0.31 U	0.34 U	0.23 U
	12/20/2021	8	LC34-DPT0601-008.0-20211220	**2,870 J**	37.9	1.4
		13	LC34-DPT0601-013.0-20211220	**795 J**	**1,790 J**	**21.7**
		18	LC34-DPT0601-018.0-20211220	**15,300 J**	**2,610 J**	**125 J**
		23	LC34-DPT0601-023.0-20211220	**18**	35.6	**62.1**
		28	LC34-DPT0601-028.0-20211220	**10.8**	10.1	**243 J**
		33	LC34-DPT0601-033.0-20211220	**17.3**	8.2 J	**30.2**
		38	LC34-DPT0601-038.0-20211220	**948**	**1,210**	**1,010**
		43	LC34-DPT0601-043.0-20211220	**674**	**8,760**	**2,730**
		48	LC34-DPT0601-048.0-20211220	**2,160**	**49,800**	**2,720**
		53	LC34-DPT0601-053.0-20211220	**6.5**	**5,190 J**	**442 J**
		58	LC34-DPT0601-058.0-20211220	**5.4 J**	**76.4 J**	**6.8**
		63	LC34-DPT0601-063.0-20211220	**10.2**	16.2	1.3
		68	LC34-DPT0601-068.0-20211220	**203 J**	**105 J**	**12.2**
		73	LC34-DPT0601-073.0-20211220	**68.1**	61	**67.5**
		78	LC34-DPT0601-078.0-20211220	**690**	**2,390**	**156**
		83	LC34-DPT0601-083.0-20211220	**80.3 J**	42.2	**2**
		88	LC34-DPT0601-088.0-20211220	**29.6**	15.8	0.68 J
		93	LC34-DPT0601-093.0-20211220	**13.1**	28	1.2
		98	LC34-DPT0601-098.0-20211220	**36.2**	4.4	0.41 U

Note:
DPT results are considered screening-level only and were reviwed in accordance with internal data review protocols; appropriate qualifiers were applied to the data as deemed necessary by the quality reviewer.
Concentrations reported in micrograms per liter (µg/L)
Shading indicates > Groundwater Cleanup Target Level (GCTL): TCE = 3 µg/L, cDCE = 70 µg/L, and VC = 1 µg/L
TCE = Trichloroethene
cDCE = cis-1,2-Dichloroethene
VC = Vinyl chloride
J = Estimated concentration
U = Not detected at or above MDL (associated value)

Table 2-15. Layer 7 and 8 Monitoring Well Results

Well (LC34-)/ Screened Interval	Layer	Sample Date	TCE	cDCE	tDCE	VC
IW0001D2 (105-115)	8	15-Jun-05	0.5 U	0.5 U	0.5 U	0.5 U
		12-Dec-05	**5.9**	0.78 I	0.5 U	0.58 I
		29-Jun-06	0.5 U	0.5 U	0.5 U	0.5 U
		11-Dec-06	2.4	1.8	0.5 U	**2.5**
		11-Jun-07	2	1.1	0.5 U	1.1
		04-Dec-07	1.4	0.45 I	0.2 U	0.34 U
		03-Dec-08	**57.7**	16.9	0.122 U	0.155 U
		30-Nov-09	**8.1**	21.8	2.1	**8.5**
		22-Dec-10	0.26 U	0.5 I	0.7 I	**8.5**
		14-Dec-11	1 U	30	3	**19**
		05-Dec-12	0.5 U	4	0.44 U	**6**
		04-Dec-13	0.31 U	11.4	1.4	**19**
		11-Dec-14	0.3 U	3.2	1.1	**13.2**
		22-Dec-15	0.22 U	1.2	0.37 I	**2.6**
		4-Dec-16	0.29 I	1.4	0.36 I	**1.7**
		23-Jan-19	0.35 U	0.28 U	0.22 U	0.41 U
		21-Dec-20	0.35 U	0.28 U	0.22 U	0.41 U
		23-Dec-21	0.89 U	0.53 U	0.73 U	0.71 U
IW0042D2 (87-92)	7	09-Jun-05	**20.9**	10.4	0.5 U	0.5 U
		12-Dec-05	2.4	1.4	0.5 U	0.5 U
		26-Jun-06	2.5	1.2	0.5 U	0.5 U
		11-Dec-06	0.67 I	0.52 I	0.5 U	**3.9**
		11-Jun-07	0.94 I	0.5 U	0.5 U	**2.6**
		04-Dec-07	2.2	0.73 I	0.2 U	0.96 I
		01-Dec-08	0.87 I	1.14 I	0.122 U	0.953 I
		23-Nov-09	1	0.57 I	0.45 U	0.42 I
		20-Dec-10	0.26 U	0.26 U	0.35 U	0.22 U
		15-Dec-11	1.6	3.1	1 U	1 U
		05-Dec-12	0.5 U	0.65 U	0.44 U	0.5 U
		02-Dec-13	0.31 U	0.24 U	0.23 U	0.47 I
		8-Dec-14	0.3 U	0.33 U	0.34 U	0.33 U
		22-Dec-15	0.22 U	0.22 U	0.21 U	0.25 U
		6-Dec-16	0.27 U	0.31 U	0.33 U	0.31 U
		3-Dec-18	0.35 U	0.28 U	0.22 U	0.41 U
		21-Dec-20	0.35 U	0.28 U	0.22 U	0.41 U
		23-Dec-21	0.89 U	0.53 U	0.73 U	0.71 U
IW0043D2 (105-115)	8	11-Feb-04	**9.3**	0.6 J	0.5 U	0.5 U
		15-Jun-05	0.5 U	0.5 U	0.5 U	0.5 U
		13-Dec-05	1 U	1 U	1 U	1 U
		04-Dec-07	0.74 I	0.28 U	0.38 I	0.34 U
		01-Dec-08	0.118 U	0.162 U	0.122 U	0.155 U
		24-Nov-09	0.32 U	0.2 U	0.45 U	0.3 U
		23-Dec-10	0.26 U	0.48 I	0.53 I	0.22 U
		14-Dec-11	**6.7**	9.1	6.2	**1.5**
		04-Dec-12	0.5 U	0.65 U	0.44 U	0.5 U
		03-Dec-13	0.31 U	0.24 U	0.23 U	0.44 U
		9-Dec-14	0.3 U	0.33 U	0.34 U	0.33 U
		22-Dec-15	0.22 U	0.49 I	0.21 U	0.25 U
		4-Dec-16	0.27 U	0.52 I	0.33 U	0.31 U
		4-Dec-18	0.35 U	2	0.22 U	0.41 U
		21-Dec-20	0.35 U	0.44 I	0.22 U	0.41 U
		23-Dec-21	0.89 U	0.74 I	0.73 U	0.71 U

Table 2-15. Layer 7 and 8 Monitoring Well Results (Continued)

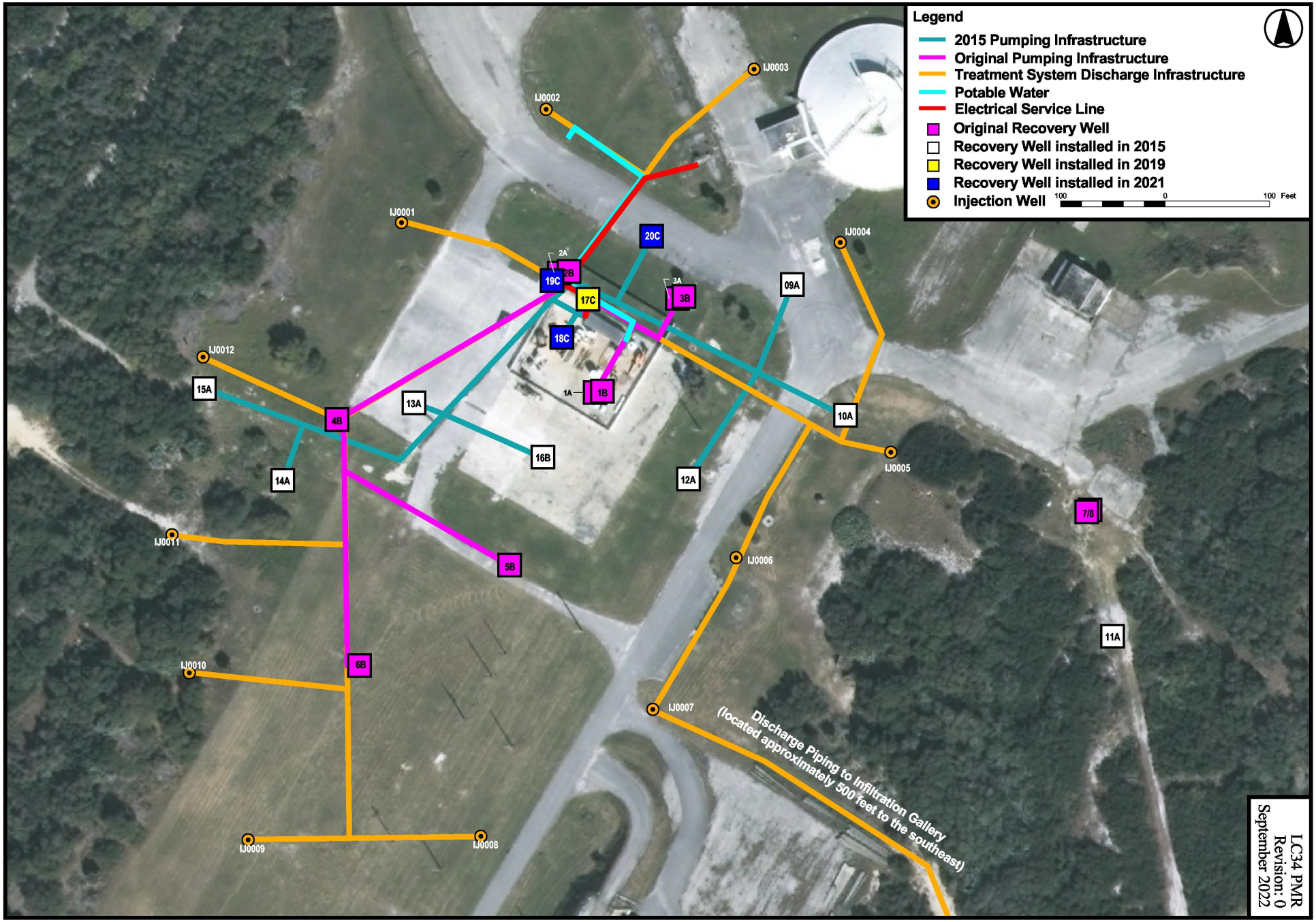
Well (LC34-)/ Screened Interval	Layer	Sample Date	TCE	cDCE	tDCE	VC
IW0044D2 (105-115)	8	15-Jun-04	0.5 U	0.5 U	0.5 U	0.5 U
		17-Nov-04	0.5 U	0.5 U	0.5 U	0.5 U
		09-Jun-05	2.5	0.5 U	0.5 U	0.5 U
		13-Dec-05	1.3	0.5 U	0.5 U	0.5 U
		04-Dec-07	1.1	1	0.2 U	0.34 U
		03-Dec-08	0.118 U	58.5	0.122 U	0.155 U
		24-Nov-09	0.32 U	5.3	1.2	**32.8**
		20-Dec-10	0.26 U	0.26 U	0.35 U	0.22 U
		15-Dec-11	1 U	1 U	1 U	1 U
		05-Dec-12	1.8	1.4	0.44 U	0.5 U
		04-Dec-13	1.2	1.8	0.27 I	0.44 U
		9-Dec-14	0.37 I	0.67 I	0.34 U	0.33 U
		23-Dec-15	0.27 U	0.95 I	0.33 U	0.31 U
		7-Dec-16	0.27 U	0.57 I	0.33 U	0.31 U
		4-Dec-18	0.35 U	0.28 U	0.22 U	0.41 U
		21-Dec-20	0.35 U	0.28 U	0.22 U	0.41 U
		23-Dec-21	0.89 U	0.53 U	0.73 U	0.71 U
IW0045D2 (105-115)	8	10-Oct-03	**6.2**	**78.2**	0.81 J	**2.3**
		30-Oct-03	**7.4**	45.1	2 U	**2.9**
		09-Jun-05	1.9	4.8	0.5 U	1
		12-Dec-05	2	1.4	0.5 U	0.5 U
		17-Jun-08	1.7	2.3	0.2 U	0.34 U
		03-Dec-08	**4.91**	4.06 I	0.122 U	0.155 U
		23-Nov-09	**29.6**	**72.9**	8.3	**6.5**
		20-Dec-10	**4**	1.5	0.35 U	0.22 U
		15-Dec-11	**6.8**	19	5.6	**5.3**
		05-Dec-12	1.3	1.1	2.1	**4.9**
		04-Dec-13	0.31 U	0.24 U	0.58 I	**2.3**
		9-Dec-14	0.3 U	0.52 I	0.34 U	0.33 U
		22-Dec-15	0.22 U	0.22 U	0.23 I	0.98 I
		7-Dec-16	0.69 I	0.33 I	0.33 U	0.31 U
		3-Dec-18	0.68 I	1.9	0.22 U	0.41 U
		21-Dec-20	0.35 U	0.28 U	4.3	**6.9**
		19-May-21	0.35 U	0.28 U	0.22 U	0.41 U
		23-Dec-21	0.89 U	0.53 U	0.73 U	0.71 U
IW0160 (105 - 115)	8	21-Aug-19	0.94 I	0.28 U	0.22 U	0.41 U
		21-Dec-20	0.35 U	0.28 U	0.22 U	0.41 U
		23-Dec-21	0.89 U	0.53 U	0.73 U	0.71 U
IW0161 (105 - 115)	8	21-Aug-19	0.35 U	0.28 U	0.22 U	0.41 U
		18-Dec-20	0.35 U	0.28 U	0.22 U	0.41 U
		23-Dec-21	0.89 U	0.53 U	0.73 U	0.71 U
IW0162 (105 - 115)	8	21-Aug-19	0.35 U	0.28 U	0.22 U	0.41 U
		18-Dec-20	0.35 U	0.28 U	0.22 U	0.41 U
		23-Dec-21	2.4 I	0.53 U	0.73 U	0.71 U
		4-Feb-22	**7.4**	0.53 U	0.73 U	0.71 U
		22-Mar-22	**33**	0.53 U	0.73 U	0.71 U
IW0163 (105 - 115)	8	21-Aug-19	0.35 U	0.28 U	0.22 U	0.41 U
		18-Dec-20	0.35 U	0.28 U	0.22 U	0.41 U
		23-Dec-21	0.89 U	0.53 U	0.73 U	0.71 U
IW0164 (105-115)	8	21-Aug-19	0.35 U	0.28 U	0.22 U	0.41 U
		18-Dec-20	0.35 U	0.28 U	0.22 U	0.41 U
		23-Dec-21	0.89 U	0.53 U	0.73 U	0.71 U

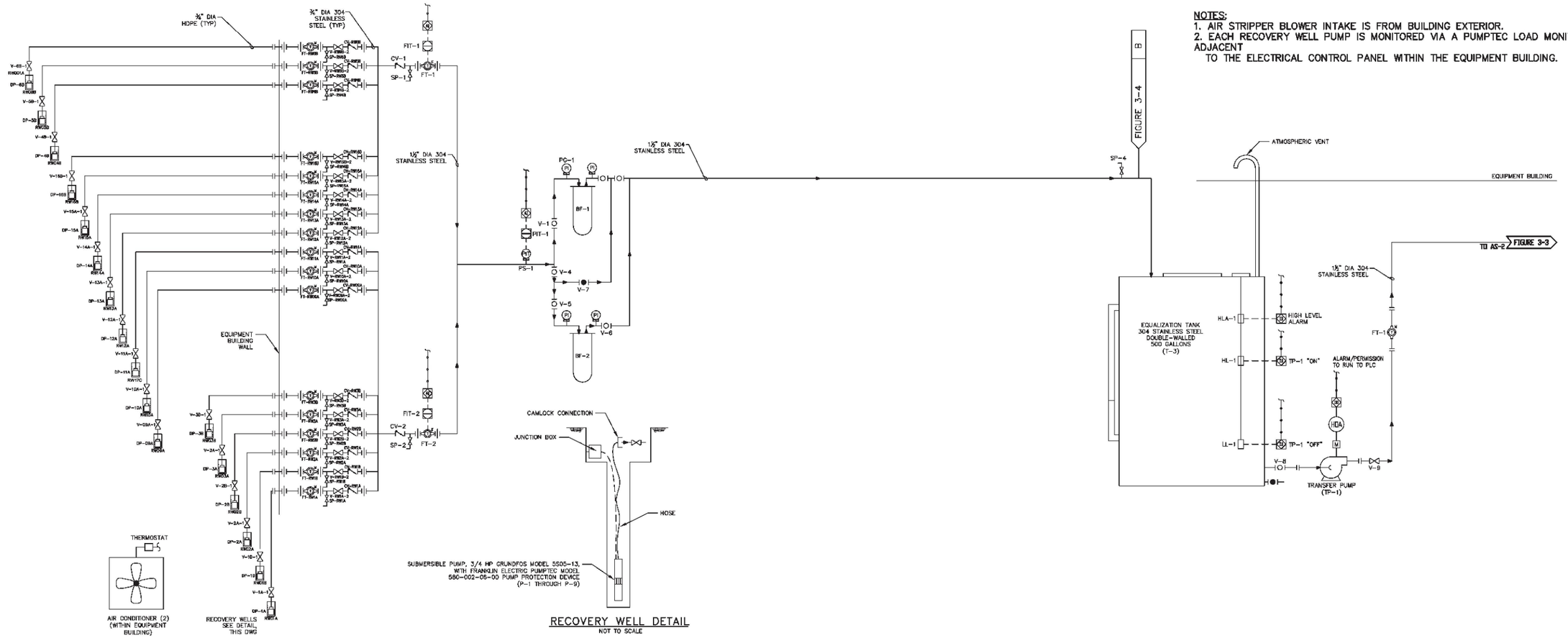
Table 2-15. Layer 7 and 8 Monitoring Well Results (Continued)

Well (LC34-)/ Screened Interval	Layer	Sample Date	TCE	cDCE	tDCE	VC
IW0165 (105 - 115)	8	21-Aug-19	0.45 I	0.28 U	0.22 U	0.41 U
		18-Dec-20	0.35 U	0.28 U	0.22 U	0.41 U
		23-Dec-21	0.89 U	0.53 U	0.73 U	0.71 U

Concentrations in µg/L.
TCE = Trichloroethene
tDCE = trans-1,2-Dichloroethene.
cDCE = cis-1,2-Dichloroethene.
VC = Vinyl chloride.
Shading indicates exceeding Groundwater Cleanup Target Level (GCTL), TCE = 3 µg/L,
cDCE = 70 µg/L, tDCE = 100 µg/L, and VC = 1 µg/L.
I = Reported value is between method detection limit (MDL) and practical quantitation limit.
U = Not detected at or above MDL (associated value).

FIGURE 2-1 HYDRAULIC CONTAINMENT SYSTEM LAYOUT
LAUNCH COMPLEX 34, CAPE CANAVERAL SPACE FORCE STATION, FLORIDA





NOTES:
1. AIR STRIPPER BLOWER INTAKE IS FROM BUILDING EXTERIOR.
2. EACH RECOVERY WELL PUMP IS MONITORED VIA A PUMPTEC LOAD MONITOR INSTALLED ADJACENT TO THE ELECTRICAL CONTROL PANEL WITHIN THE EQUIPMENT BUILDING.

KEY EQUIPMENT ITEMS

P&ID Symbol	Description	Model Info	Qty.
DP-1A through DP-16B	Extraction well pump	Grundfos model 5S07-18 (with teflon seals), Franklin motor model 2145074916S, with Pumptec model 580-002-006-00 motor protection 5 gpm at 340' TDH, ¾ hp	16
FT-1A through FT-16B	Flow totalizer for each extraction well	ISTEC model 1740, 3/4" inlet/outlet	16
FS-1 and FIC-1, FS-2 and FIC-2	Flow sensor and transmitter with digital display	Signet 525 METLEX	2
FS-3 and FIC-3, FS-4 and FIC-4	Flow sensor and transmitter	Signet 38550-1	2
BF-1 to BF-4	Bag filter	KRYSTIL KLEAR model 66-30 (304SS)	2
MP-1, MP-2	Biocide, sequestering agent metering pumps	LMI model AA971-155HV	2
FT-1	Flow totalizer	ISTEC model 1740, 1 1/2" inlet/outlet	1
AS-1, AS-2	4-tray low profile air stripper	QED model EZ Tray 12.4SS, rated for 125 gpm, 600 SCFM at <30" w.c.	1
LGAC-1, LGAC-2	Liquid phase granular activated carbon vessels, located outside	Carbon services model AQ1500, 1500# of carbon each, 50 gpm, <150 psi rating	1
TP-1	Air stripper inlet transfer pump	AMT model 490D-98, 50 gpm at 75' TDH, 1.5 hp	1
TP-2	Air stripper effluent transfer pump	Goulds SSH 5SH, 5.5 inch impeller, 125 gpm at 23 feet, 1.5 hp, VFD controlled	1
TP-3	Air stripper effluent transfer pump	Goulds SSH 4SH, 6-1/16 inch impeller, 125 gpm at 115 feet, 7.5 hp, VFD controlled	1
B-1	Air stripper blower	New York Blower model 29006, 600 scfm at 62" wg, 20 hp, VFD controlled	1
MV-1	Flow dividing motorized valve controlled by PLC signal	?	1
SP-1	Sump Pump	ARD PD air operated pump	1

SYMBOLS

FS	FLOW SENSOR
FIT	FLOW TRANSMITTER WITH TOTALIZING FUNCTION
PS	PRESSURE SENSOR
PIT	PRESSURE TRANSMITTER
MIC	MOTORIZED VALVE PLC CONTROLLER
PG	PRESSURE GAUGE
V	PROCESS VALVE
CV	CHECK VALVE
SP	SAMPLING PORT
LL	LOW LEVEL SWITCH
HL	HIGH LEVEL SWITCH
HLA	HIGH LEVEL ALARM SWITCH

LEGEND

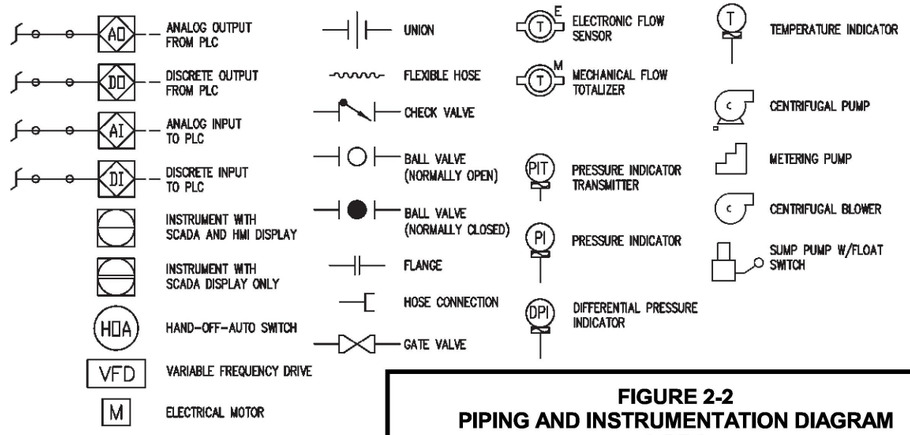


FIGURE 2-2
PIPING AND INSTRUMENTATION DIAGRAM
1 OF 3
LAUNCH COMPLEX 34
CAPE CANAVERAL SPACE FORCE STATION, FLORIDA

20200109

NOTES:
1. AIR STRIPPER BLOWER INTAKE IS FROM BUILDING EXTERIOR.
2. EACH RECOVERY WELL PUMP IS MONITORED VIA A PUMPTEC LOAD MONITOR INSTALLED ADJACENT TO THE ELECTRICAL CONTROL PANEL WITHIN THE EQUIPMENT BUILDING.

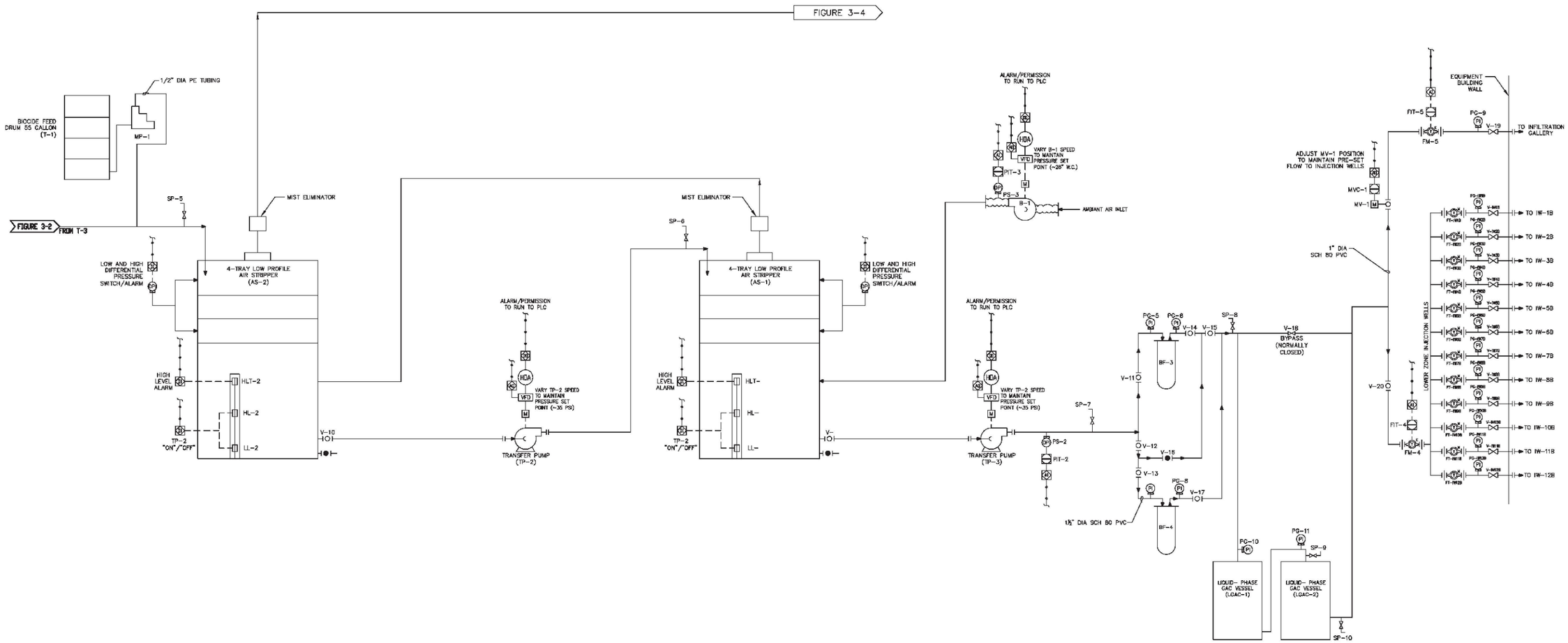
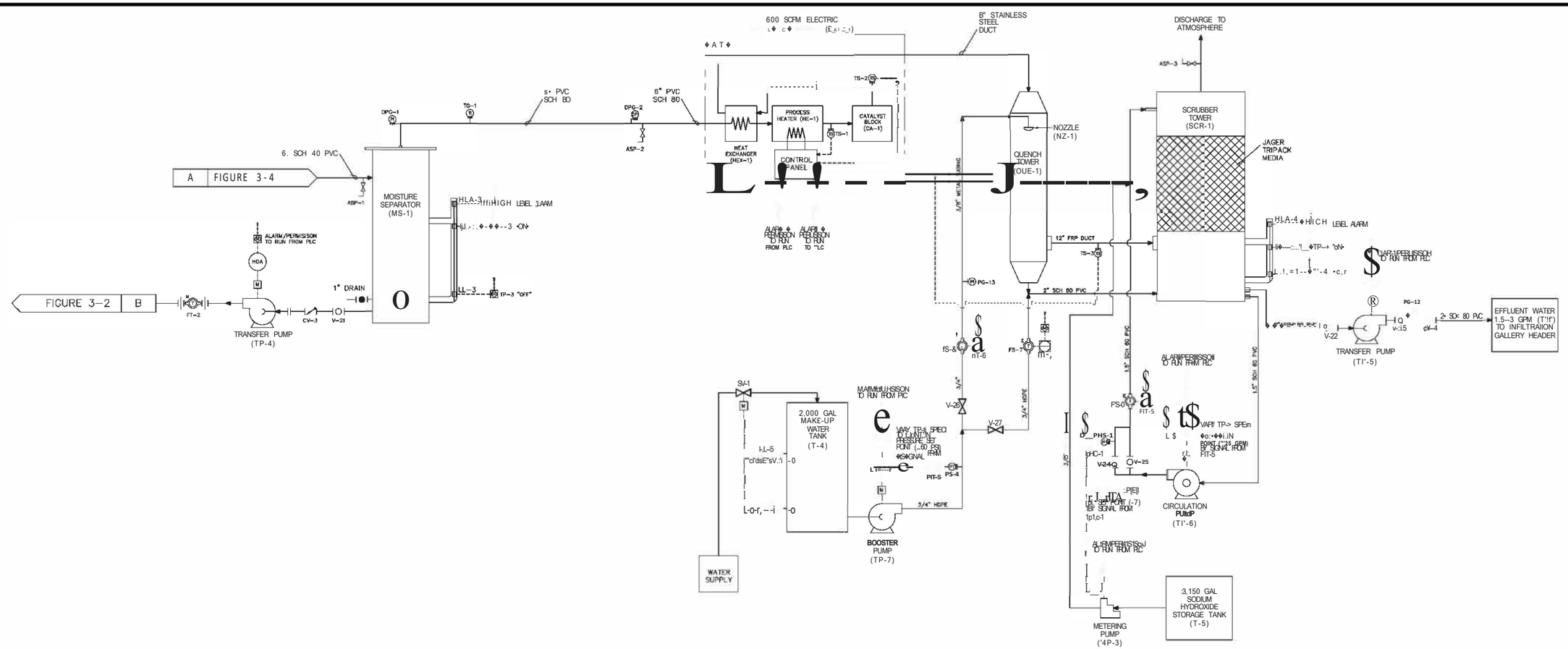


FIGURE 2-3
PIPING AND INSTRUMENTATION DIAGRAM
2 OF 3
LAUNCH COMPLEX 34
CAPE CANAVERAL SPACE FORCE STATION, FLORIDA

20200109



KEY EQUIPMENT ITEMS

Description	Model Info	Quantity
Electrical catalyllc oxidizer	PRM model CATOX-E600, 600 SCFM max flow, integrale<l control Dmel cnd temperrnture senso<s	I
Process nearer	Durex Industries, Model FOH48N-5630, 825degF at 600 SCFM, 116 KW max	I
Heal ;exchanger	Custom made, aauae 14 AL6XN stainless steel, 50% efficiencv	I
Catctvst module	Johnson Matthev, Model HALOCAT, 8.6cu.ft (72 cubes)	1
Pre-scrubber auench tower	Custom ma:le, aauae 14 AL6XN stainless steel, t4"Dx120"H_	I
Scrubber tower	Custom made, FRP, 24'Dx120'H.	1
Moisll!re separatoc	PRM model IMS120. epoxy coated steel. 4• inlet. ft oullet. 750 SCFM max fl•Ow, 24"Dx60"H, fill.nal Uaid caoaatv	1
CATOX inlet blower	Twin CiN Fan model TBNS.9N6. 7.5 ho. VFD controlled	I
Mcisture seoarator transfer cumo	CT Mevers, Model CT05, 112 ho	I
Scrubber eltl nt transfer oomc	Stainless steel oenlrifllgal oumc, 1.5 hll	1
Scrubber ciiculation pump	Stainless steel centrifugal pump, 1.5 llp, VFD controlled	1
Makec[JD water pressure booster oumo	Goulds s s, Model 2HMIF250, VFO C-Ol11rolled	f
Flow sensor aid transmitter	Sionel 385.50-1	3
Flow totalizer	Masler Meter 3/4•classic multi-1el water meter	1
Thermooouple	Pyromation, Model K43U-024-00-8HN34	2
Thermocouote	Pyromation, Model K48UT-012-56C-9HP63	I

SYMBOLS

FS	FLOW SENSOR
FIT	AOW TRANSMITIER I\HH TOTAU11NG FUNCTION
PS	PRESSURE SENSOR
PIT	PRESSURE TRANSMITTER
pHS	pH SENSOR
pHC	pH CONIROLLER
SV	SOLENOID VALVE
PG	PRESSURE GAUGE
DPG	DIFEFRENTIAL PRESSURE GAUGE
V	PROCESS VALVE
CV	CHECK VAL'l/E.
SP	SAIIPUNG PORT
ASP	AIR SAWPUNG PORT
11	LOW LEVEL SWTCH
HL	HIGI LEVEL S\\ITCH
HLA	HIGI LEVEL ALARM SWITCH

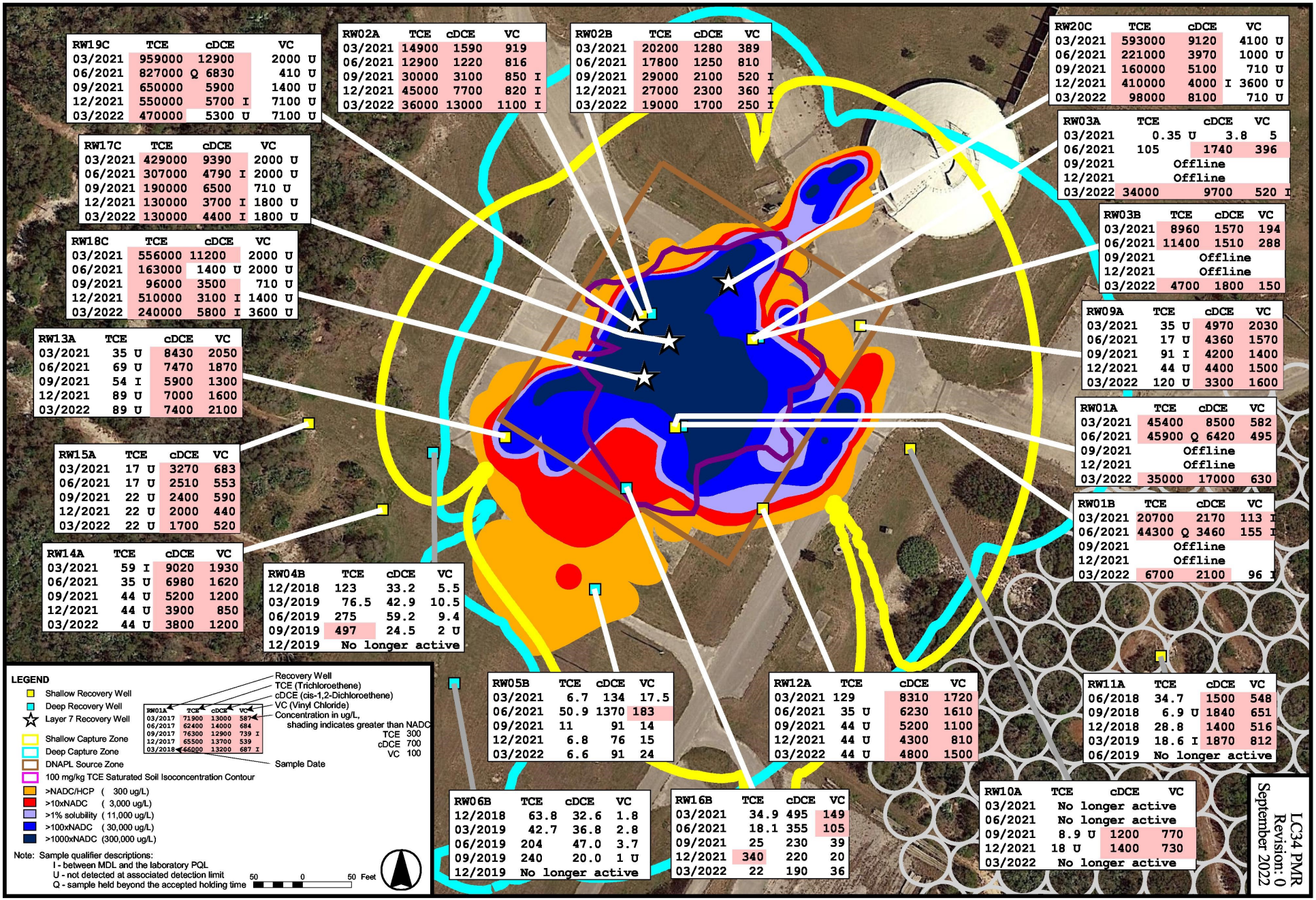
LEGEND

--	ANALOG OOIPUT TO PLC
--	DISCREIE OOIPUT TO PLC
--()---	ANALOC INPUT FR<I,I PLC
-mt--	DISCREIE INPUT FR<I,I PLC
B	INSIRUWENT WITH SCADA AND HUI DISPLAY
8	INSIRUWENT WITH SCADA DISPLAY ONLY
e	HAND-Off-AUTO SWITCH
	VARIABLE FREQUENCY DRIVE
0	ELECTRICAL MOTOR
-j If•	UNION
-'VVVVv-	FLEXIBIE HOSE
-r-,f-	CHEO< VALVf.
-iQ f-	BALL VAL'l/E. (NORMAU.Y <FEN)
-i• f-	BALL VALVE (NORMAI.Y II..OSED)
--jf-	FI.ANGE
- {	HOSE CONNECTION
--f><}--	GATE Vl>I.VE
	ELECIRONIC FLOW SENSOR
	WECHANICAI. FLOW TOTALIZER
	ELECIRONIC PRESSURE SENSOR
	PRESSURE INDICATOR
1	DIFFERENTIAL PRESSURE INIIIC,'JTOR
	TEIiIPERATURE INDICATOR
Q	CENTRIRJGAI. PUMP
C::J	METERING PUMP
O	CENTRIRJGAI. ELOWER

FIGURE2-4
PIPING AND INSTRUMENTATION DIAGRAM
3 0 F 3
LAUNCH COMPLEX 34
CAPE CANAVERAL SPACE FORCE STATION, FLORIDA

20200109

FIGURE 2-5 YEAR 12 INDIVIDUAL RECOVERY WELL RESULTS
LAUNCH COMPLEX 34, CAPE CANAVERAL SPACE FORCE STATION, FLORIDA



LC34 PMR
Revision: 0
September 2022

DPT0595 TCE	11/2017 cDCE	VC	TCE	11/2018 cDCE	VC	TCE	11/2019 cDCE	VC	TCE	11/2020 cDCE	VC	TCE	12/2021 cDCE	VC
8'	130	14	160	4	25	190	1	3	12	1.2	0.55 J	0.23 U	4380	295	41 U
13'	5400	29	18	2	30	220	1 U	3	31	0.31 U	0.34 U	0.23 U	965	219	41 U
18'	640	40 U	72	1	3	2	1 U	3	50	0.51 J	1.1	13.8	100 U	55.2 J	41 U
23'	64	10 U	92	1	1	6	1 U	2	53	0.54 J	1.4	20.5	100 U	28 U	41 U
28'	190	6	42	1 U	1	18	1 U	3	36	0.37 J	1.9	8.8	100 U	28 U	41 U
33'	47	800	3400	3 U	3 U	200	20 U	1200	3200	0.66 J	4.9	163	1000 U	550 U	820 U
38'	200 U	42600	34500	100 U	29000	21600	290 U	50000	28000	62 U	22600	24800	10000 U	23300	22700
43'	40 U	1100	89	1600	23400	1900	290 U	7900	4900	72.6 J	11100	6700	500 U	65200	33100
48'	240	1500	30	510	700	130	200 U	5000	2800	75.2	6220	12 U	170 U	339 J	317 J
53'	24	120	10 U	42	670	320	50 U	6400	2800	70.3	6080	3750	251 J	2340	1710
58'	64	590	5	120	140	58	20 U	4800	2100	13.1 J	3170	2120 J	2.9 J	16.5 J	9.9 J
63'	4	18	6	9	16	9	1 U	2	1 U	0.33 J	2.5	0.23 U	282	10.1 J	41 U
68'	7	15	5	49	93	10	1 U	1 U	1 U	0.75 J	0.34 U	0.23 U	6 J	3.2 J	1 J
73'	151000	6000	1000 U	123000	840	200 U	5400	190	20 U	31.8	1.6	0.23 U	160	53.5 J	6.9 J
78'	1340000	6800	3300 U	1060000 J	5300	500 U	3600	500	20 U	28600	1100	46 U	2310	1590 J	820 U
83'	4500	110	20 U	610	100 U	100 U	3	5	1	14	16.7	1.7	61.4 J	22.6 J	4.1 J
88'				Interval not sampled until November 2020						31.8	1.6	0.23 U	5.7 J	10.9 J	2.4 J
93'				Interval not sampled until November 2020						1.8	0.34 U	0.23 U	43.2 J	120	5.4 J
98'				Interval not sampled until November 2020						46.4	5.7	0.23 U	13.9 J	80 J	18.6 J

DPT0594 TCE	11/2017 cDCE	VC	TCE	11/2018 cDCE	VC	TCE	11/2019 cDCE	VC	TCE	11/2020 cDCE	VC	TCE	12/2021 cDCE	VC
8'	24	7	13	1 U	2	1 U	2 U	16	110	0.31 U	9	44.3	1160	57.5 J	41 U
13'	11	27	110	1 U	4	29	1	140	220 J	0.31 U	0.34 U	36.1	21200 J	6700	257
18'	8	38	200	3	6	49	2	26	260 J	0.31 U	3.7	21.5	61100 J	5430	484
23'	6	52	240	2	2	11	2	32	240 J	1.8	23.5	187	89800 J	4040	826
28'	25	2	3	180	2	3	2	12	210	2.9	10.8	92.1	36700 J	7260	582
33'	12500	3100	160	2	2	2	14200	840	290 U	4680	3250	376	78.3 J	377	73.3
38'	610000	8200	1000 U	11500	2200	200 U	206000 J	13700	330	64900	8450	327 J	20300	4640 J	2000 U
43'	836000	134000	2500 U	781000	30200	360	414000 J	33900	840	1100000	56600	2300 U	1900000	150000	41000 U
48'	754000	43400	3300 U	323000 J	87300	10400	457000 J	55000	1100	780000	172000	6840 J	637000	55000 U	82000 U
53'	1580000	34000	3300 U	42000 J	69000	4500	813000 J	37600	1000 U	1420000	34100	2300 U	1560000 J	38100 J	5400 J
58'	549000	43000	5000 U	212000	10700	1000 U	669000 J	25000	2400	1120000	24500	2300 U	632000 J	19000 J	2330 J
63'	28600 J	180	10 U	3300	320	200 U	17900	410	1300	6640	40.7 J	12 U	24000 J	213 J	100 UJ
68'	17100	1200	100 U	16500	860	3 U	27800	600	100 U	8670	17 U	12 U	19100	330 J	200 U
73'	96900	6600	100 U	29900	2400	200 U	177000	4500	1000 U	20500	2470	207	49300 J	3810	200 U
78'	431000	26500	400 U	278000 J	14400	200 U	594000 J	20000	1000 U	1520000	24200	2300 U	1230000	17500 J	8200 U
83'	6300	940	2000 U	31000	320	100 U	115000	1900	1000 U	1110	159	1.2 U	23400 J	605	12.8 J
88'				Interval not sampled until November 2020						9870	114	23 U	116000 J	4090	185 J
93'				Interval not sampled until November 2020						28400	375	46 U	229000 J	8700	255 J
98'				Interval not sampled until November 2020						2330	43.5	4.6 U	2630000 J	17100	627

DPT0598 TCE	11/2017 cDCE	VC	TCE	11/2018 cDCE	VC	TCE	11/2019 cDCE	VC	TCE	11/2020 cDCE	VC	TCE	12/2021 cDCE	VC
8'	4	5	16	1 U	11	4	1	5	4	0.8 J	2.5	2.3	12400 J	1920 J	28.3
13'	46	13	8	2	8	2	2	2	5	0.94 J	3.2	2.8	868 J	716 J	25.8
18'	44	19	32	2	11	5	3	8	5	1.7	4.9	0.23 U	648 J	864 J	64.9
23'	14	32	88	2	23	94	3	17	32	1.1	14.9	0.23 U	25500 J	3980 J	200 UJ
28'	3	9	16	1 U	10	46	1	8	7	0.74 J	20.9	22.5	19800 J	3560 J	211 J
33'	10 U	5200	9000	1	12	69	130	7	35	0.77 J	4	0.23 U	71300 J	21500 J	975 J
38'	4700	662000	16500	2200	36700	17600	20 U	1700	510	27.9	1840	4.6 U	19000 J	4070 J	195
43'	12300	108000	9200	320	32600	2400	2400	73600	8000	596	17800	5920	105000 J	53600 J	3340
48'	59400	38000	570	27300	35900	2600	257000 J	140000	7200	29200	104000	5180	49700 J	106000 J	4390 J
53'	220	700	140	57	570	62	6400	11100	800	19.9	241	0.23 U	29600 J	14100 J	475 J
58'	17200	29300	250	15800	28400	91	164000 J	42400	430	1180	2240	143	207 J	2940 J	338 J
63'	210	150	5 U	6	120	5 U	298000 J	7500	500 U	3	276	5.8	377 J	190 J	8.2 J
68'	40	44	1	4	3	3 U	5200	100	50 U	1.7	2.1	0.23 U	19.6	6.1	0.41 U
73'	11	12	1 U	17000	1200	40 U	19800	240	50 U	11900	641	23 U	790 J	55 UJ	82 UJ
78'	384000	13400	2000 U	3190000	13100	290 U	785000 J	17200	1000 U	847000	13900	1200 U	3070000 J	11000 J	4100 UJ
83'	2500	1600	10	5100	3900	10 U	6400	1100	290 U	9270	1990	4.6 U	230000 J	5760 J	82 UJ
88'				Interval not sampled until November 2020						37.4	19.6	0.23 U	6500 J	335 J	7 J
93'				Interval not sampled until November 2020						93	495	1.2 U	173 J	349 J	4.1 UJ
98'				Interval not sampled until November 2020						66000	54000	120 U	82000 J	37100 J	410 UJ

DPT0597 TCE	11/2017 cDCE	VC	TCE	11/2018 cDCE	VC	TCE	11/2019 cDCE	VC	TCE	11/2020 cDCE	VC	TCE	12/2021 cDCE	VC
8'	50	5	1 U	25	1 U	1 U	84	3	1 U	33.9	1.4	0.23 U	5200 J	76.5	1.6
13'	17	17	17	9	16	9	3	20	4	2.1	8.7	0.23 U	45900 J	7020 J	86
18'	8	37	23	2	38	26	5	160	14	1	7.4	0.23 U	112000 J	8080 J	120 J
23'	9	24	11	2	49	32	2	17	12	0.31 U	10.9	0.23 U	115000 J	16600 J	84.7 J
28'	2	26	13	3 U	37	24	2	42	11	1.5	23.9	0.23 U	83.3	80.6 J	20.2
33'	82	39	44	9	34	10	2	40	19	1.9	37.3	0.23 U	161000 J	26900 J	194 J
38'	4000	180	20 U	79500	2100	290 U	5900	320	50 U	1360	306	0.23 U	122000 J	8820 J	158
43'	235000	16700	2000 U	89300	3500	290 U	290000 J	12200	500 U	81900	7160	143 J	1260000 J	12600	410 U
48'	759000	42000	3300 U	578000	31000	2000 U	341000 J	30400	570	781000	19800	1200 U	1460000 J	29000	4100 U
53'	1120000	97600	38200	495000 J	31300	970	354000 J	50700	6200	964000	26700	2300 U	3060000 J	122000	4560 J
58'	1360000	17000	2800	811000	29000	3300 U	571000 J	27000	12400	1440000	32100	3630 J	1540000 J	338000	20600 J
63'	271000	22300	1000 U	473000	37000	1000 U	212000	36000	1000 U	29800	3010	90.1 J	990000 J	73900 J	2410
68'	Not Sampled			8200	40	40 U	12700	500 U	500 U	873	14.6	1.1	7400 J	108 J	9.4
73'	Not Sampled			35700	1100	290 U	7100	860	100 U	19200	677	46 U	4810	115 J	82 U
78'	Not Sampled			828000	7200	2000 U	146000 J	18700	100 U	691000	7290	1200 U	830000	9330 J	4100 U
83'	Not Sampled			14300	830	200	840	410	10 U	43900	3170	120 U	472000 J	1650	200 U
88'				Interval not sampled until November 2020						1230	955	2.3 U	11800 J	125	4.1 U
93'				Interval not sampled until November 2020						1220	7.3 J	2.3 U	4590 J	92.4	4.1 U
98'				Interval not sampled until November 2020						128	1.1	0.23 U	19400 J	82.5	4.5 J

DPT0593 TCE	11/2017 cDCE	VC	TCE	11/2018 cDCE	VC	TCE	11/2019 cDCE	VC	TCE	11/2020 cDCE	VC	TCE	12/2021 cDCE	VC
8'	1 U	1 U	1 U	1 U	1 U	1 U	1 U	32	200	0.47 J	47.4	4.7	7360	1390	41 U
13'	2	5	1 U	1 U	1 U	1 U	2 U	16	98	11.2	425	177	21600 J	1600	222
18'	5	35	18	11	6	3	6	5	30	12.8	493	183	254 J	1500	111
23'	25	62	24	45	26	16	33	9	8	29.2	26.6	62.3	625	706	437
28'	54	62	21	1200	67	63	140	59	44	85.2	10.2	8.5	1860	28 U	138
33'	59	460	180	150	97	130	120	160	140	68.5	96.8	75.2	32700 J	252	456
38'	2400	4100	2000	2100	2200	5700	2000	4700	8300	3750	12200	4170	24100 J	3200	1160
43'	216000	67200	107000	101000 J	14600	68400 J	9800	9800	42000 J	27900	27600	73800	61700 J	48900	64600
48'	539000	174000	5400	75300	180000	1000	316000 J	28900	24800	929000	20800	46000	719000	28000 U	41000 U
53'	479000	165000	4100	48900	132000	520	315000	217000	3000	441000	217000	5170	170000	222000	41000 U
58'	125000	26800	2000 U	2900	17100	430	34900	37700	500 U	8790	47600	414	15700	105000	5520
63'	1600	28	20 U	17500	490	100 U	9	11	2 U	48.9	6.4	0.56 J	899 J	262 J	20 UJ
68'	1600	23	10 U	35	10 U	10 U	790	10 U	10 U	6.6	0.61 J	0.23 U	129 J	35.3 J	4.1 UJ
73'	3800	49	6	520	6	2	1200	11	10 U	145	18.6	2.4	135 J	14.3 J	4.1 UJ
78'	2400	79	10 U	4000	110	20 U	270	18	3 U	160	9.8	0.23 J	57.9	15.2	2 U
83'	4400	100	10 U	17600	290 U	290 U	50	20	2 U	23.6	4.2	0.41 J	8860 J	59.9	10.2
88'				Interval not sampled until November 2020						175	5.5	0.63 J	961 J	56.1	3.9 J
93'				Interval not sampled until November 2020						3960	69	16.1	3610 J	264	17.2
98'				Interval not sampled until November 2020						20.2	4.2	0.36 J	737 J	16.6 J	4.8 J

DPT0596 TCE	11/2017 cDCE	VC	TCE	11/2018 cDCE	VC	TCE	11/2019 cDCE	VC	TCE	11/2020 cDCE	VC	TCE	12/2021 cDCE	VC
8'	3	2	1 U	1	1 U	1 U	2	48	180	22	249	1.2 U	2260 J	3160 J	61.8
13'	4	3	2	1 U	1 U	1 U	2	81	420	8.7	590	1.2 U	86 UJ	11100 J	100 UJ
18'	460	8	9	1	1	1 U	3	22	110	6.2 U	6.7 U	4.6 U	81500 J	21400 J	200 UJ
23'	4	4	7	2	4	7	7	9	8	1.5	147	426	48300 J	26100 J	461 J
28'	100 U	12	1000	1 U	2	8	3	7	13	1.2	5.5	12	96100 J	36300 J	515 J
33'	9400	33700	6100	810	5400	3400	10 U	690	940	0.92 J	7.2	58	72100 J	50800 J	380 J
38'	165000	334000	1000	153000	192000	3300	2000	15100	6800	2490	6810	2500	36100 J	38800 J	1220 J
43'	129000	458000	3300 U	121000	402000	1000 U	85500	151000	3500	235000	305000	4720	52200	71200	4250
48'	1101000	191000	20800	790000	214000	31900	415000 J	126000	24900	1690000	125000	28000	2030000	255000	26800 J
53'	377000	4000	2000 U	91600	41700	1000 U	252000 J	73400	1800	479000	64800	1200 U	458000	58300	4690 J
58'	109000	17000	1000 U	6100	9800	290 U	19600	22300	350	25700	22800	46 U	70200 J	41600	309 J
63'	3000	620	110	610	210	4	4200	2500	100 U	294	258	3.9	684	672	16.7 J
68'	1500	65	18	4100	95	20 U	3400	240	50 U	773	13.9	0.55 J	1190	213	41 U
73'		Not Sampled		130	49	5 U	180	17	3 U	1030	14.3	0.69 J	1090	24.5 J	82 U
78'		Not Sampled		1500	110	10 U	1600	350	20 U	189	212	1.6	831	191	18.7 J
83'		Not Sampled		470	44	5 U	230	10	1 U	68.2	2.8	0.23 U	1590	156	41 U
88'				Interval not sampled until November 2020						495	9.3	0.56 J	1190	59.3	20 U
93'				Interval not sampled until November 2020						4300	164	8.4	14100	1120	410 U
98'				Interval not sampled until November 2020						698	4.2	0.23 U	1060	78 J	41 U

DPT0601 TCE	11/2017 cDCE	VC	TCE	11/2018 cDCE	VC	TCE	11/2019 cDCE	VC	TCE	11/2020 cDCE	VC	TCE	12/2021 cDCE	VC
8'	2	30	5	1	22	16	9	12	3	1.3	5.5	6.6	2870 J	37.9	1.4
13'	5	64	29	2 U	45	55	4	26	24	0.8 J	12.9	16.9	795 J	1790 J	21.7
18'	11	79	39	2	49	53	8	42	37	1.3	36.5	38.1	15300 J	2610 J	125 J
23'	11	6100	640	3 U	20	180	2	42	110	3.1 U	11.4	63.6	18	35.6	62.1
28'	27400	81600 J	1500	40 U	12000	3400	2	23	260 J	0.86 J	15.1	50.8	10.8	10.1	243 J
33'	181000	202000	3100	33800	80800	1800	1400	17700	1500	2.1 J	707	642	17.3	8.2 J	30.2
38'	119000	249000	4800	103000	125000	2400	50200	60400	1300	662	18900	1070	948	1210	1010
43'	24200	339000	13100	97900	156000	3100	104000	154000	2900	9090	42600	888 J	674	8760	2730
48'	890	139000	18600	26600	160000	5900	61100	117000 J	4300	39800	93400	2080	2160	49800	2720
53'	160	280	10 U	24	2100	170	50	170	17	3	18.6	11.3	6.5	5190 J	442 J
58'	1000	5900 J	120	90	310	5	26	110	1	24.5	132	2.3	5.4 J	76.4 J	6.8
63'	280	1100	20 U	3	57	3 U	13	140	2 U	3.7	34.4	0.23 U	10.2	16.2	1.3
68'	160	280	10 U	3	19	1	93	220	5	2	7.8	5.3	203 J	105 J	12.2
73'	780	370	7	80	160	7	24	89	12	181	36	0.44 J	68.1	61	67.5
78'	6800	9800	41	360	1300	32	9100	4300	100 U	5260	2830	10.3	690	2390	156
83'	61	160	8	25	100	5	40	50	2	1.1	3.4	0.23 U	80.3 J	42.2	2
88'	Not Sampled			1	9	1 U	Not Sampled			2.8	1.3	0.23 U	29.6	15.8	0.68 J
93'	Not Sampled			5	54	6	Not Sampled			4.9	9.7	0.23 U	13.1	28	1.2
98'	Not Sampled			7	14	1 U	Not Sampled			0.31 U	0.34 U	0.23 U	36.2	4.4	0.41 U

DPT0600 TCE	11/2017 cDCE	VC	TCE	11/2018 cDCE	VC	TCE	11/2019 cDCE	VC	TCE	11/2020 cDCE	VC	TCE	12/2021 cDCE	VC
8'	170	14	1 U	1	1 U	1 U	3	1 U	1 U	0.66 J	0.34 U	0.23 U	324 J	7.5	0.55 J
13'	3	170	39	1	31	17	2	1 U	1 U	1.4	0.55 J	0.23 U	24100 J	3410 J	35.5
18'	5	120	63	5	31	36	3	3	1 U	0.95 J	3.3	0.23 U	10900 J	2210 J	91
23'	10	240	47	180	57	70	2	68	120	1.2	9.4	0.23 U	23400 J	5360 J	192 J
28'	140	23	51	3 U	47	51	3	71	130	0.75 J	11.4	13.8	44.5	19.4	20
33'	3	7	12	11	38	97	10 U	55	78	0.45 J	22.1	66.1	41900 J	9130 J	183 J
38'	25	260	4000 J	20 U	78	67	3 U	5	79	1.4	11.9	39.3	54000 J	7480 J	242 J
43'	400 U	235000	14300	40 U	8800	12400 J	1300	39400	8900	16 U	11000	4580	74600 J	14800	1480
48'	100 U	26400	3500	290 U	57400	9000	100 U	23300	5100	160 U	50000	6190	76800 J	28500	889
53'	120	1700	59	290 U	95300	14000	59	10200	1800	16 U	10500	1710	260 J	18100	2450
58'	14	5500	54	290 U	11000	800	240	3200	110	1.6 U	663	1.2 U	434 J	535	289
63'	250	3700 J	120	120	1700	29	43	710	24	2.3 J	342	1.2 U	400	443	49
68'	38	200	10 U	2 U	36	21	8	8	5	1	166	122	84.9	13.3	6.8
73'	110	220	14	32	170	160	9	160	19	0.86 J	128	91.2	339 J	421 J	10.1
78'	15700	6400	14	1500	2200	21	1300	2100	22	595	1320	2.3 U	49.1 J	312	44.5
83'	94	230	10 U	2	21	2 U	4	12	1 U	0.31 U	2.8	0.23 U	85.7 J	68.1	5.8
88'	Not Sampled			3	100	13	Not Sampled			0.31 U	0.42 J	0.23 U	78.1 J	22	0.69 J
93'	Not Sampled			4	150	7	Not Sampled			0.42 J	20.9	0.23 U	160 J	90.2 J	6.8
98'	Not Sampled			10	530	43	Not Sampled			0.31 U	3.3	0.23 U	790 J	310 J	18.2

DPT0599 TCE	11/2017 cDCE	VC	TCE	11/2018 cDCE	VC	TCE	11/2019 cDCE	VC	TCE	11/2020 cDCE	VC	TCE	12/2021 cDCE	VC
8'	7	1 U	1 U	1 U	1 U	1 U	2	1 U	1 U	1.7	0.34 U	0.23 U	69.6	3.8	0.74 J
13'	84	4	1 U	1	2	1 U	3 U	3 U	8	1.1	2.5	25.6	2100 J	1360 J	28.5
18'	220	41	41	33	30	12	2	6	3	1.8	5.1	0.23 U	7200 J	21300 J	398 J
23'	25100	3900	560	54700 J	400	270	1700	1200	100	3.3	361	0.23 U	225000 J	33100 J	390
28'	913000	7500	2000 U	479000 J	5100	670	48500	7900	790	39000	6230	46 U	187000 J	15600	371 J
33'	1000000	25000	3300 U	683000	18300	2600	264000	14100	1200	109000	16100	120 U	39700 J	3130 J	820 U
38'	1030000	50300	3300 U	759000	137000	3300 U	113000	82200	5600	876000	27600	1200 U	755000	39000	4100 U
43'	356000	214000	3300 U	231000	211000	3900	373000 J	175000	2700	145000	191000	230 U	274000 J	121000 J	3950 J
48'	1370000	45900	2000 U	1110000 J	43200	2000 U	688000 J	59200	4500	1600000	54700	1200 U	1480000 J	48300 J	4100 UJ
53'	96700	26100	200 U	28500 J	21600	40 U	126000 J	33000	500 U	266000	32800	230 U	294000 J	121000 J	4660 J
58'	51400	6500	200 U	210	1300	5	66400 J	5700	290 U	3370	1090	23 U	86800 J	13700 J	200 UJ
63'	3300	100 U	100 U	1500	29	5 U	12500	200 U	200 U	9250	540	1.2 U	15700 J	2300 J	100 UJ
68'	15800	160	40 U	570	11	5 U	2700	76	20 U	1560	23.3	0.23 U	14500 J	300 J	100 UJ
73'	109000	860	100 U	2000	29	10 U	440 J	31	1	332	9.4	0.23 U	1480 J	175 J	100 UJ
78'	12500	1400	100 U	3800	490	10 U	770	930	10 U	151	1430	2.3 U	238	636	35.8
83'	142000	10900	100 U	1500	48	10 U	2200	98	20 U	12.3	11.5	0.23 U	2830	254	20 U
88'	Not Sampled			12200 J	180	20 U	Not Sampled			116	1	0.23 U	14400	4360	169 J
93'	Not Sampled			5400	100	20 U	Not Sampled			159	6.9	0.23 U	6090 J	381	20 U
98'	Not Sampled			8700	110	40 U	Not Sampled			128	3.1	0.23 U	200 U	55 U	82 U

FIGURE 2-6
YEAR 12 DSZ DPT
GROUNDWATER RESULTS

LAUNCH COMPLEX 34
CAPE CANAVERAL SPACE FORCE STATION, FLORIDA

Legend

- Annual DSZ Performance Sampling DPT Location
- Shallow Recovery Well
- Deep Recovery Well
- Layer 7 Recovery Well
- Shallow Capture Zone
- Deep Capture Zone
- DNAPL Source Zone
- 100 mg/kg TCE Saturated Soil Isoconcentration Contour
- >NADC/HCP (300 ug/L)
- >10xNADC (3,000 ug/L)
- >1% solubility (11,000 ug/L)
- >100xNADC (30,000 ug/L)
- >1000xNADC (300,000 ug/L)

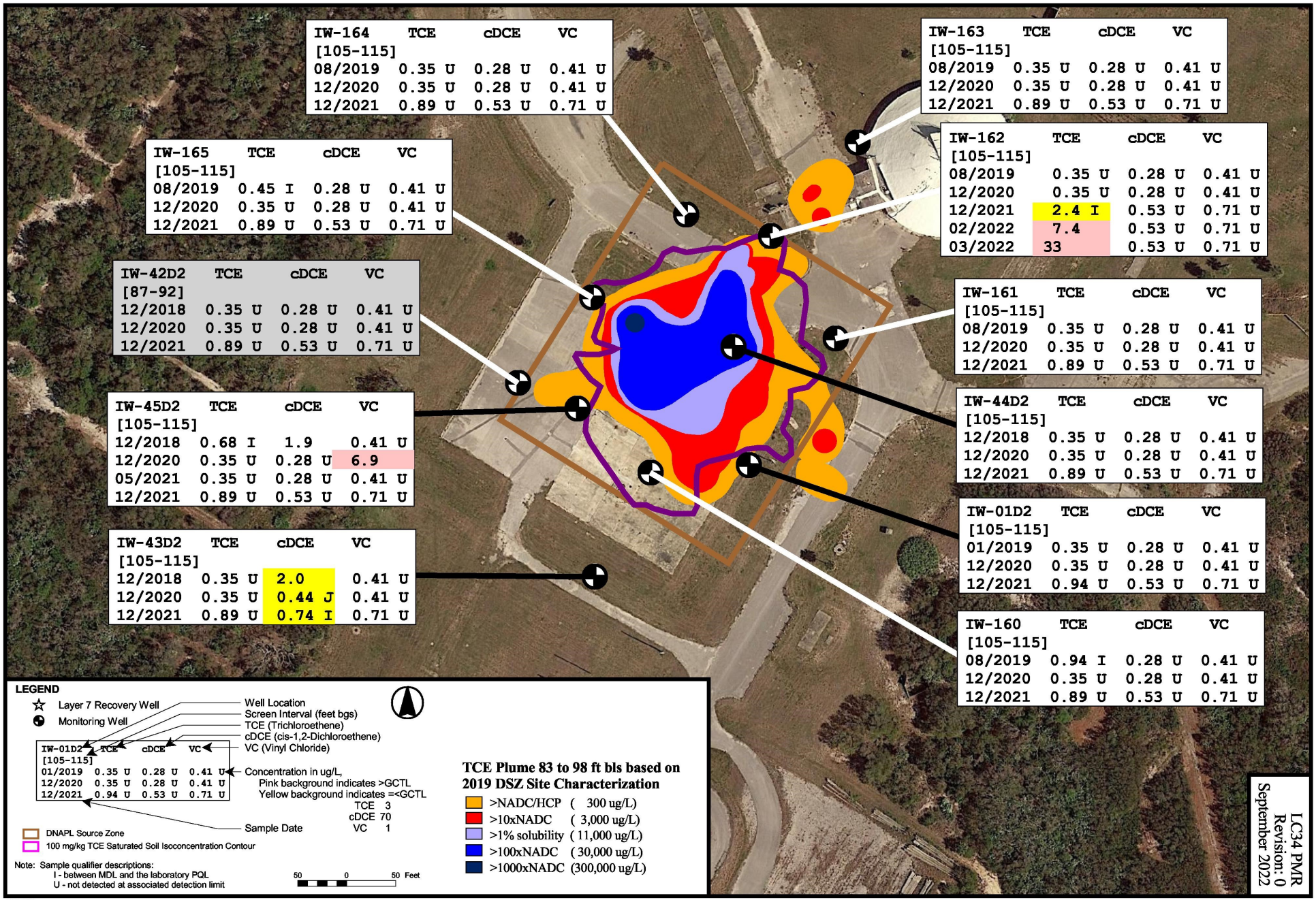
Location
TCE (Trichloroethene)
cDCE (cis-1,2-Dichloroethene)
VC (Vinyl Chloride)
Concentration in ug/L, shading indicates TCE > 11,000 ug/L
Sample Depth

DPT599	TCE	cDCE	VC
23'	25100	3900	560
28'	913000	7500	2000 U
33'	1000000	25000	3300 U
38'	1030000	50300	3300 U
43'	356000	214000	3300 U
48'	1370000	45900	2000 U
53'	96700	26100	200 U
58'	51400	6500	200 U
63'	3300	100 U	100 U

Note: Sample qualifier descriptions:
J - estimated value
U - not detected at associated detection limit

100 0 100 Feet

FIGURE 2-7 LAYERs 7/8 WELL RESULTS
LAUNCH COMPLEX 34, CAPE CANAVERAL SPACE FORCE STATION, FLORIDA



SECTION III
HS 6 AS IM OPERATIONS, EVALUATION AND PERFORMANCE MONITORING

This section discusses activities conducted during the reporting period (April 1, 2021 to March 31, 2022) for the HS 6 AS IM and summarizes the results of evaluations conducted regarding system performance.

The HS 6 AS system was installed in two phases. The first phase was the construction of the initial system to prevent further discharge into the drainage canal and to prevent the HS from expanding. The second phase was system expansion after six months of operation to contain and remediate the HS 6 area located down/side-gradient of the HC IM at LC34. The initial HS 6 AS system, which consisted of 160 AS wells in five zones (zones 1 through 5), was installed between February 19, 2018 and July 7, 2018, in accordance with the approved LC34 HS 6 IWP (NASA, 2017b). The full-scale O&M phase for the initial system began on July 9, 2018.

After six months of operation, based on rapid contaminant reductions seen in performance monitoring, the HS 6 AS system was expanded to provide greater spatial coverage in the HS 6 area. The expanded system consisted of 140 AS wells in four zones (zones 6 through 9). Installation activities associated with the expanded system were performed in accordance with the approved LC34 HS 6 Expansion IWP (NASA, 2018) between November 9, 2018 through April 2, 2019 and full-scale operation resumed in May 2019. The 300 AS wells over the first and second phase were installed beneath the CVOC contamination on the top of Layer 4, approximately 40 ft bls. The design included an AS well flow rate of 5.0 scfm and wells spaced 50 feet apart with a 25 ft radius of influence and no overlap. The system was designed to operate in nine treatment zones with compressed air supplied from a 75-hp variable frequency drive rotary screw air compressor. Detailed information about the HS 6 AS system design, startup, prove-out and initial operations and O&M activities are provided in the 2018 OMMR and HS 6 CCR (NASA, 2019a). Figure 3-1 depicts the HS 6 trenching, air sparging, and monitoring well layout.

A second phase of system expansion is planned for HS 6, as discussed in Section 1.4. The design includes 197 additional air sparge wells installed to a depth of 35 ft bls, spaced approximately 50 feet apart with a 25-foot radius of influence, and will utilize the existing air compressor. The expansion is proposed to treat approximately 9.7-acres of cDCE and VC with "hot spot" concentrations in the northern area. Once the expansion is complete, OM&M and performance monitoring data will be included in subsequent annual reports.

3.1 INTERIM MEASURE SCOPE AND OBJECTIVE

The objective for the HS 6 AS IM is to remediate contaminated groundwater within the treatment zone, to prevent impacts to drainage canals, and support transition to MNA. The overall corrective action objective at HS 6 is to reduce concentrations of the HS 6 COCs (cDCE, tDCE and VC) to less than FDEP NADCs. The HS 6 AS IM objective was developed to provide a flexible treatment train approach for which certain metrics such as remedial performance, plume dynamics, and natural attenuation characteristics can be evaluated to determine remedial objectives and ultimately an endpoint to the IM. Based on the treatment performance of the IM, AS operations may be modified, as appropriate, to achieve the HS 6 AS IM objective.

3.2 AS SYSTEM OPERATION, MAINTENANCE AND EVALUATION

Table 3-1 presents runtime data for the HS 6 AS system. Pressure and flow data for each manifold and zone is included in Appendix D. From April 1, 2021 to March 31, 2022, the cumulative runtime was 89 percent. Most of the system down time was planned such as performance sampling and system maintenance. Unplanned down time included approximately 16 days in April for replacement of bearings and motor fan on top of scheduled performance monitoring. In October, the system was shut down for approximately 10 days because the compressor drive supplying air to the HCS, and Pilot Study malfunctioned during the performance monitoring event. During this time, Atlas Copco conducted an onsite inspection and resolved the problem. During the reporting period, routine maintenance activities included an 8,000-hour service in August and a scheduled power outage in March 2022.

In April 2019, zone 1 and zone 2 were turned off consisting of 48 AS wells. In January and February 2020, select wells in zone 3 and zone 4 were turned off which included 53 AS wells

(35 wells in zone 3 and 18 wells in zone 4), which increased the individual AS well flow rate from 5.0 to 5.9 scfm per AS well. These AS wells in zones 1 to 4 were shut off because performance monitoring results showed IM objectives had been achieved.

During this reporting period, 199 AS wells operated (out of the installed 300 AS wells at the site). The combined system is currently operating on a cycling schedule alternating operation between the zones, as summarized in the following table:

Zone	Cycle Time
1	Off
2	Off
3	00:00 – 06:00
4	06:00 – 12:00
5	12:00 – 00:00
6	00:00 – 06:00
7	06:00 – 12:00
8	12:00 – 18:00
9	18:00 – 00:00

During full-scale operation, the system is monitored remotely. System evaluations and maintenance activities are conducted to evaluate the operational parameters of the system. Monthly site visits were conducted during the reporting period, which included the following activities for system evaluation:

- Inspection of flow meters, transmitters, and AS system components for leakage and excessive vibration, noise, or abnormal temperatures;
- Inspection of oil levels and lubrication;
- Inspection of condensate treatment systems and refrigerated air dryer;
- Assessment of differential pressure across filtration units and process equipment;

- Recording of system operational data and comparing data to design conditions and previous operating data;
- Repairing and cleaning equipment as needed; and
- Perform housekeeping.

Maintenance will continue to be executed in a manner that minimizes emergencies or unscheduled shutdowns. Maintenance activities were conducted as planned during the monthly site visits, which included the following activities:

- Balancing individual sparging well flows within each manifold zone;
- Redevelop sparge wells as needed if fouling occurs;
- Change air compressor oil every 8,000 hours;
- Drain condensate treatment system on a quarterly basis or as needed; and
- Replace filters as needed and/or based on manufacturer's recommendations.

3.3 HS 6 PERFORMANCE MONITORING FIELD ACTIVITIES

Performance monitoring results are used to evaluate the effectiveness of the HS 6 AS IM in reducing concentrations of CVOCs in groundwater by comparing current results to baseline results collected prior to installation of the AS system. Following the 2020 monitoring period, the Annual PMR recommended reducing the performance monitoring frequency from quarterly to semi-annual (NASA, 2021c). Semi-annual performance monitoring was conducted in April 2021 and October 2021. Note that the Annual PMR recommended the semi-annual sampling events be conducted in July 2021 and January 2021; however, at the time of the report, a sampling event had already been conducted in April 2021, so the subsequent semi-annual event was aligned in October 2021. Because of this, future events are planned to occur during those months.

There are 28 wells and three surface water locations included in the HS 6 performance monitoring network. Because the system was installed in two phases (original design and expansion), there were 12 performance monitoring wells designated to monitor the original system (IW0108 and IW0123 through IW133) and then 16 performance monitoring wells were added after the expansion (IW0057S, IW0057I and IW0134 through IW0147). Note, wells IW0108, IW0057S and IW0057I existed prior to construction of the HS 6 AS system as part of site-wide long-term monitoring of the CVOC plume and were incorporated into the HS 6 performance monitoring network after system installation because of their proximity within the HS 6 plume. The baseline event for the original wells was in June 2018 and the baseline event for the expansion wells was in March 2019. In addition to monitoring of the groundwater, there are three surface water locations in the drainage canal (SW1001, SW1002, SW1004) sampled during each event. The monitoring network was sampled on a quarterly basis until January 2021 when it transitioned to a semi-annual frequency. Sample locations are shown on Figure 3-2.

Peristaltic pumps were used for the purging of wells prior to sampling, and samples were collected using the low-flow purge technique. Monitoring well purging and sampling activities and surface water collection were conducted in accordance with the KSC SAP (NASA, 2017a) and FDEP SOPs FS 2100 and 2200 (FDEP, 2017).

Temperature, pH, specific conductance, dissolved oxygen, turbidity, and oxidation-reduction potential were measured and recorded in the field during monitoring well sampling activities (see sample log sheets in Appendix A). Field measurements for each well were generally consistent with historical values. A summary of water quality parameter data recorded during monitoring well and surface water sampling is provided in Table 3-2.

During the April and October 2021 sampling events, groundwater and surface water samples were shipped under chain-of-custody to Enco Laboratories, in Orlando, Florida, for analysis of CVOCs by USEPA Method 8260B.

3.4 HS 6 PERFORMANCE MONITORING RESULTS

Summaries of TCE, cDCE, tDCE and VC results for baseline and all performance monitoring events to date are presented in Table 3-3 (groundwater) and Table 3-4 (surface water) and on

Figure 3-2. Groundwater and surface water sampling log sheets and field documentation are provided in Appendix A, and laboratory analytical reports are provided in Appendix B. Groundwater and surface water results for each semi-annual sampling event during the operational period are discussed in the remainder of this section.

3.4.1 APRIL 2021. During the first semi-annual performance monitoring event in April 2021, 28 wells and three surface water locations were sampled. TCE was not detected in any wells or surface water locations; however, it is noted that IW0134 and IW0135 had an elevated non-detect value greater than the GCTL of 3 µg/L. tDCE was detected at a concentration greater than the GCTL of 100 µg/L in two of the 28 wells sampled. At the other 26 wells, tDCE was non-detect or less than the GCTL. The tDCE concentrations were 175 µg/L in IW0134 and 228 µg/L in IW0135. The maximum concentration, located outside the treatment area to the west near the DSZ, is a significant decrease from the baseline value of 1,100 µg/L in March 2019. All surface water samples were non-detect for tDCE in April 2021. cDCE was detected at a concentration greater than the GCTL of 70 µg/L in three of the 28 wells sampled. The concentrations were 90.7 µg/L in well IW0123, 5,230 µg/L in well IW0135, and 14,200 µg/L in well IW0134. The concentration of 90.7 µg/L in well IW0123, located outside the treatment area to the north, is a significant decrease since the June 2018 baseline concentration of 4,530 µg/L. The maximum concentration in well IW0134 exceeded the 10xNADC value of 7,000 µg/L for cDCE. This well and IW0135 are located along the edge of the treatment zone closest to the DSZ and HCS. Although these results represent the highest concentrations in the area, these are significant decreases since each well's respective baseline concentration. At the other 25 well locations, cDCE was not detected or was detected at a concentration less than the GCTL. In the surface water samples, cDCE was detected at two locations. The concentrations were 0.42 µg/L at SW001 and 1.2 µg/L at SW1002. cDCE does not have a Florida Freshwater Surface Water cleanup value; however, this concentration is low-level and does not represent a significant impact to the canal. VC was detected at a concentration greater than the GCTL of 1 µg/L in eight of the 28 wells. The concentrations ranged from 1.5 µg/L in IW0145 to 1,230 µg/L in IW0134, which was also the location of the highest cDCE concentration, located along the edge of the treatment area to the west. This value exceeded the 10xNADC value of 1000 µg/L and represents an increase since the previous year's sampling events, but represents a decrease since the

baseline value of 8,900 µg/L in March 2019. The VC result of 284 µg/L in IW0135 is greater than the NADC of 100 µg/L, but represents a decreased concentration compared to the previous year's sampling events and the baseline result of 1,230 µg/L in March 2019. On the east (downgradient) side of the canal, VC exceeded the GCTL in wells IW0125 (3.6 µg/L), IW0129 (9.5 µg/L), and IW0130 (20.9 µg/L). These wells are located outside to the north and south of the treatment area and within the footprint of the LC34 LCP (see Figure 1-2). No other CVOC compounds exceeded GCTLs in the samples collected from wells on the downgradient side of the canal. VC was not detected in any of the surface water samples, which is a significant decrease from the June 2018 baseline event where the concentrations of 79.2 µg/L, 93.7 µg/L, and 212 µg/L at locations SW1001, SW1002 and SW1004, respectively, exceeded the Florida Freshwater Surface Water criterion of 2.4 µg/L.

3.4.2 OCTOBER 2021. During the second semi-annual performance monitoring event in October 2021, the same 28 wells and three surface water locations were sampled. TCE was not detected in any wells or surface water locations in October 2021; however, similar to April 2021, the non-detect values for TCE in wells IW0134 and IW0135 were elevated to a concentration greater than the GCTL. tDCE was detected in well IW0135 at a concentration of 150 µg/L, which is greater than the GCTL. This concentration represents a decrease since the April 2021 result of 228 µg/L, and a significant decrease from the March 2019 baseline value of 1,110 µg/L. At the other 27 well locations, tDCE was not detected or was detected at a concentration less than the GCTL. tDCE was not detected in any surface water locations in October 2021. cDCE concentrations exceeded the GCTL in three of the 28 wells. The concentrations were 97 µg/L in well IW0123, 2,700 µg/L in well IW0135, and 9,700 µg/L in well IW0134. The IW0134 result exceeded the 10xNADC level, and IW0134 exceeded the NADC of 700 µg/L. Wells IW0134 and IW0135 are located along the edge of the treatment area to the west (on the edge of the DSZ HCS capture zone) and IW0123 is located outside the treatment area to the north. The three wells with concentrations greater than the GCTL all show decreasing concentrations from their baseline values. In all other wells cDCE was not detected or was detected at a concentration less than the GCTL. cDCE was detected in surface water sample SW1002 at a concentration of 2.1 µg/L, slightly greater than the April 2021 result. cDCE does not have a Florida Freshwater Surface Water cleanup value; however, this concentration is low-level and does not represent a

significant impact to the canal. VC was detected in 7 of the 28 wells at a concentration greater than the GCTL and of these, two results also exceeded the NADC, and one result was equal to the 10xNADC level. The concentrations ranged from 2.6 µg/L in IW0057I to 1,000 µg/L in IW0134. Well IW0134 is located along the treatment area to the west, and also had the maximum concentration of cDCE and a GCTL exceedance of tDCE in October 2021. On the east side of the canal, VC exceeded the GCTL in wells IW0125 (2.9 µg/L), IW0129 (6.6 µg/L), and IW0130 (23 µg/L). These wells are located outside of the treatment area and within the footprint of the LC34 LCP. VC was not detected in the surface water samples. No other CVOC concentrations exceeded GCTLs on the east side of the canal.

Overall, the two semi-annual data sets show no detections of TCE and decreasing concentrations of tDCE, cDCE and VC over the course of the monitoring period. Performance monitoring sampling results indicate the IM is meeting the objectives of reducing concentrations of the COCs in groundwater associated with HS 6 (cDCE, tDCE, VC), and preventing impacts to the drainage canal in support of a future transition to MNA.

Table 3-1. HS 6 AS System Run Time

Year	Month	Days In Month	Downtime (Days)	Run Time	Downtime Contributing Factor
2021	April	30	16	47%	Performance monitoring sampling; Atlas Copco replaced bearings and motor fan
	May	31	0	100%	
	June	30	0	100%	
	July	31	0	100%	
	August	31	0.5	98%	8,000 hour maintenance performed by Atlas Copco
	September	30	3.75	88%	General maintenance and rust repairs inside the compressor cabinet; Performance monitoring sampling
	October	31	10.25	67%	Performance monitoring sampling. Compressor drive malfunctioned while performance monitoring sampling (system was supplying air to Hydraulic Capture System and Pilot Study); Atlas Copco inspected Variable Speed Drive, tested, and fixed the issue.
	November	30	0	100%	
	December	31	0	100%	
2022	January	31	4.5	85%	Performance monitoring sampling
	February	29	0	100%	
	March	31	4.5	85%	Scheduled power outage
	Total	**365**	**39.5**	**89%**	

Note:

Reporting period is from April 1, 2021 to March 31, 2022.

Table 3-2. HS 6 Performance Monitoring Field Measurements

Well ID (LC34-)	Sample Date	pH (S.U.)	Temp. (ºC)	SC (µS/cm)	DO (mg/L)	Turb. (NTUs)	ORP (mV)
IW0057I	6/13/2007	7.67	24.31	2233	0.16	6.33	-145.9
	12/4/2007	7.83	21.03	2131	0.39	7.96	-150.9
	6/17/2008	7.61	25.85	2400	0.30	1.70	-148.1
	12/2/2008	8.00	22.07	2239	0.99	2.70	-261.8
	11/23/2009	7.64	23.74	1812	0.22	0.00	-166.4
	12/21/2010	8.00	22.76	2930	0.37	0.77	-145.8
	12/15/2011	7.74	23.80	1670	0.14	0.77	-143.7
	12/4/2012	7.71	24.05	1784	0.27	0.00	-67.5
	12/9/2014	7.71	23.18	2301	0.35	1.33	-146.7
	12/9/2016	7.87	23.74	1834	0.36	2.49	-153.5
	12/6/2018	8.72	24.49	1288	0.32	1.11	-0.4
	3/28/2019	7.65	23.64	4074	12.90	2.06	16.8
	7/10/2019	7.49	26.00	1431	0.11	5.59	-44.3
	10/10/2019	5.89	27.79	3745	0.78	2.15	26.5
	1/17/2020	7.33	21.20	2496	0.24	6.30	-170.0
	4/15/2020	7.13	26.56	2769	0.30	6.29	-104.7
	7/29/2020	7.26	28.57	2684	0.23	4.45	-97.1
	10/20/2020	7.12	29.06	3006	0.40	3.35	-98.7
	1/24/2021	6.85	25.60	3090	0.55	4.01	53.9
	4/30/2021	7.10	25.65	2931	0.66	1.43	211.0
	10/6/2021	7.27	28.05	3294	0.59	4.08	48.1
IW0057S	6/13/2007	7.12	25.00	868	0.24	6.10	-83.9
	12/4/2007	7.30	21.43	920	0.48	6.15	-115.8
	6/17/2008	7.11	27.06	1050	0.31	1.40	89.8
	12/2/2008	7.41	21.70	1013	1.11	-4.40	-226.9
	11/23/2009	7.06	24.68	712	0.37	0.00	-57.0
	1/30/2017	7.02	23.54	2593	0.49	13.70	-40.1
	12/6/2018	7.98	24.70	1698	0.43	5.32	29.2
	3/28/2019	7.18	23.14	1637	0.15	18.20	-45.3
	7/10/2019	7.10	28.90	2020	0.24	5.61	143.2
	10/10/2019	5.71	28.89	3501	2.69	6.21	112.0
	1/17/2020	7.24	20.70	2069	1.18	7.56	-21.8
	4/15/2020	7.13	26.53	1808	2.26	2.31	-60.1
	7/29/2020	7.19	29.24	2265	1.33	6.33	-50.2
	10/20/2020	7.13	30.23	1666	2.64	1.42	-227.3
	1/24/2021	6.95	24.0	1941	2.48	1.34	73.2
	4/29/2021	7.21	27.4	1922	3.23	2.70	147.7
	10/6/2021	7.30	29.4	2039	1.08	0.51	-58.8
IW0108	6/12/2018	7.75	23.81	2646	0.22	1.55	-181.8
	10/17/2018	7.34	25.99	2420	1.10	19.09	-89.1
	1/18/2019	7.51	24.38	2462	1.37	7.62	0.7
	4/17/2019	7.36	24.72	2807	1.10	9.87	-60.1
	7/9/2019	7.41	26.20	3941	0.20	4.77	0.3
	10/9/2019	7.19	25.01	7576	3.93	11.42	87.3
	1/17/2020	7.29	20.90	3835	0.95	2.23	-81.1
	4/14/2020	7.24	26.80	2692	2.02	9.67	-55.0
	7/29/2020	7.23	25.28	3994	1.19	1.26	15.2
	10/20/2020	7.15	26.50	4022	2.42	5.19	132.8
	1/23/2021	6.80	23.1	3315	3.23	2.21	88.8
	4/29/2021	7.23	24.8	3525	1.54	6.37	209.4
	10/5/2021	7.41	26.0	3682	3.40	4.96	99.1

Table 3-2. HS 6 Performance Monitoring Field Measurements (Continued)

Well ID (LC34-)	Sample Date	pH (S.U.)	Temp. (ºC)	SC (µS/cm)	DO (mg/L)	Turb. (NTUs)	ORP (mV)
IW0123	6/13/2018	7.48	24.46	952	0.39	3.57	-133.9
	10/17/2018	7.30	27.82	1636	0.59	5.93	115.9
	1/18/2019	7.15	24.54	2459	0.29	8.56	85.5
	4/17/2019	7.9	25.04	1948	0.48	7.39	-13.9
	7/11/2019	6.93	25.97	2353	0.10	4.07	125.5
	10/9/2019	6.86	25.55	5259	0.44	2.14	52.6
	1/16/2020	7.03	21.50	2362	0.20	4.57	-167.9
	4/15/2020	6.84	26.53	2222	0.53	2.84	-45.7
	7/30/2020	6.92	26.43	2201	0.18	9.90	81.2
	10/21/2020	6.92	28.09	2191	0.19	4.29	-113.0
	1/25/2021	6.76	25.1	2350	0.24	1.65	-39.3
	4/30/2021	7.05	25.8	1884	0.14	6.21	-65.4
	10/7/2021	7.25	27.8	2219	0.14	1.50	-31.4
IW0124	6/13/2018	7.46	25.03	2528	0.32	11.41	-199.4
	10/17/2018	7.10	26.59	3437	1.48	19.99	93.9
	1/18/2019	7.28	23.76	1887	1.16	12.64	107.1
	4/17/2019	7.18	25.70	4449	0.53	9.55	70.2
	7/10/2019	6.92	26.67	4643	1.61	6.51	194.1
	10/10/2019	5.81	28.92	10247	2.30	5.24	90.7
	1/17/2020	7.10	21.50	3943	1.90	6.43	-122.8
	4/14/2020	6.86	26.65	3571	1.07	4.68	-26.9
	7/29/2020	7.05	26.26	4045	0.61	1.07	24.0
	10/20/2020	6.95	27.32	3223	4.96	2.36	117.7
	1/23/2021	6.65	23.5	3535	4.38	3.51	121.3
	4/29/2021	6.94	26.7	3656	3.96	4.18	189.6
	10/6/2021	7.15	27.6	3139	4.04	2.20	163.1
IW0125	6/12/2018	7.28	23.82	8322	0.27	1.07	-130.8
	10/19/2018	7.34	25.95	7727	0.18	14.97	-101.9
	1/18/2019	7.26	23.86	580	0.19	5.25	-127.4
	4/17/2019	7.36	23.96	4357	0.16	8.41	-55.1
	7/9/2019	7.53	25.72	8892	0.09	6.47	-4.3
	10/8/2019	7.13	25.26	15459	0.32	2.46	-46.1
	1/16/2020	7.47	19.00	4383	0.51	11.20	-52.3
	4/13/2020	7.36	26.38	7657	0.15	5.63	-210.3
	7/28/2020	7.34	25.32	7319	0.20	4.09	-187.8
	10/19/2020	7.33	26.06	7333	0.20	2.41	-258.5
	1/23/2021	6.79	23.4	7663	0.09	5.37	-129.8
	4/28/2021	7.15	25.2	6618	1.35	6.76	-147.5
	10/5/2021	7.30	25.7	6276	0.09	4.51	-53.9
IW0126	6/13/2018	7.36	25.42	1385	0.23	1.50	-199.1
	10/17/2018	7.65	25.20	1394	0.07	6.98	-231.0
	1/18/2019	7.52	23.65	1190	0.09	7.62	-148.8
	4/17/2019	7.49	24.59	1447	0.04	4.52	-94.7
	7/11/2019	7.34	25.87	1711	0.11	1.08	-4.3
	10/9/2019	7.39	25.16	3216	2.02	3.65	-98.1
	1/17/2020	7.44	20.80	1952	0.10	10.20	-249.1
	4/15/2020	7.08	25.17	1936	0.28	3.33	-179.5
	7/30/2020	7.43	27.73	2336	0.26	5.85	-148.6
	10/21/2020	7.08	26.40	2077	0.13	4.34	-218.9
	1/25/2021	7.01	23.70	2341	0.07	0.89	-147.1
	4/30/2021	7.11	24.99	2016	0.11	3.25	-172.8
	10/8/2021	7.30	25.06	2028	0.08	1.12	-52.3

Table 3-2. HS6 Performance Monitoring Field Measurements (Continued)

Well ID (LC34-)	Sample Date	pH (S.U.)	Temp. (ºC)	SC (µS/cm)	DO (mg/L)	Turb. (NTUs)	ORP (mV)
IW0127	6/13/2018	7.28	24.39	1643	0.42	3.07	-131.5
	10/17/2018	7.25	26.14	1771	0.60	13.27	6.9
	1/18/2019	7.20	24.16	153	1.53	8.66	74.0
	4/17/2019	7.10	25.30	2210	0.07	1.22	-3.8
	7/10/2019	6.96	26.32	2836	0.35	14.31	126.7
	10/9/2019	6.14	26.10	5513	0.96	6.13	132.4
	1/17/2020	6.95	21.10	2784	1.14	4.20	-84.6
	4/14/2020	6.94	26.46	2567	4.08	5.58	-9.7
	7/29/2020	6.95	26.23	2708	0.21	5.45	17.4
	10/20/2020	6.85	27.83	2662	1.55	2.34	-25.0
	1/24/2021	6.62	24.6	2688	2.22	3.74	85.9
	4/29/2021	6.90	26.2	2352	1.59	6.36	149.9
	10/6/2021	7.16	27.2	2265	2.50	5.65	142.0
IW0128	6/13/2018	7.44	24.33	2376	0.39	3.65	-146.4
	10/17/2018	7.32	27.32	2181	0.91	3.49	47.6
	1/18/2019	7.25	24.79	2169	1.40	16.50	74.6
	4/17/2019	7.15	24.87	2251	0.04	4.30	44.0
	7/10/2019	6.97	26.84	3014	0.89	4.67	181.3
	10/10/2019	6.12	28.20	5276	2.11	5.25	102.4
	1/17/2020	7.22	21.40	2885	2.40	8.20	-117.7
	4/14/2020	7.00	25.95	2233	0.76	2.70	-118.1
	7/29/2020	7.06	26.35	3070	1.31	8.90	-27.5
	10/20/2020	7.01	28.28	3027	3.82	4.38	-191.6
	1/24/2021	6.76	24.70	3122	3.83	2.45	-11.2
	4/29/2021	7.03	25.55	2838	3.20	6.52	157.7
	10/6/2021	7.26	27.06	2506	4.01	4.54	144.4
IW0129	6/12/2018	7.37	23.65	5439	0.24	17.51	-147.6
	10/19/2018	7.26	25.88	5944	0.19	13.50	49.0
	1/18/2019	7.17	23.73	4474	0.24	10.29	51.2
	4/17/2019	7.08	24.16	6153	0.25	9.25	75.9
	7/9/2019	7.36	25.32	6081	0.09	5.57	46.7
	10/8/2019	7.02	25.48	10812	0.22	6.06	-28.2
	1/16/2020	7.18	20.10	5950	0.30	7.59	-146.7
	4/14/2020	7.14	24.31	5364	0.20	4.14	-149.7
	7/29/2020	7.19	24.41	5480	0.16	3.35	-76.7
	10/19/2020	7.33	26.10	5213	0.14	6.91	-179.2
	1/23/2021	6.77	22.9	5777	0.10	2.86	-87.1
	4/28/2021	7.17	25.9	4606	0.09	4.11	-92.5
	10/5/2021	7.28	26.2	4796	0.06	4.59	-66.9
IW0130	6/12/2018	7.50	23.78	5302	0.22	7.29	-167.6
	10/19/2018	7.39	24.97	5254	0.13	10.66	66.0
	1/18/2019	7.23	23.40	977	0.31	9.57	54.0
	4/17/2019	7.20	23.95	6472	0.18	14.62	67.9
	7/9/2019	7.43	25.48	6281	0.08	5.35	63.5
	10/8/2019	6.50	25.48	10843	0.21	5.08	-27.8
	1/16/2020	7.25	20.00	5984	0.09	6.33	-226.4
	4/14/2020	7.15	24.50	6218	0.13	1.37	-115.9
	7/29/2020	7.23	24.47	6057	0.14	4.43	-60.8
	10/19/2020	7.35	25.91	5475	0.13	3.91	-164.5
	1/23/2021	6.76	23.00	6796	0.08	1.88	-61.9
	4/28/2021	7.16	26.65	5703	0.11	8.97	-68.8
	10/5/2021	7.28	25.48	6391	0.05	3.34	-45.7

Table 3-2. HS 6 Performance Monitoring Field Measurements (Continued)

Well ID (LC34-)	Sample Date	pH (S.U.)	Temp. (ºC)	SC (µS/cm)	DO (mg/L)	Turb. (NTUs)	ORP (mV)
IW0131	6/12/2018	7.22	24.00	5295	0.29	10.41	-154.6
	10/19/2018	7.23	26.76	5658	0.26	5.04	55.7
	1/18/2019	7.27	24.73	5420	0.38	8.00	44.9
	4/17/2019	7.16	25.29	6324	1.51	14.74	78.3
	7/9/2019	7.41	25.61	7832	0.14	4.94	85.3
	10/8/2019	7.13	26.19	13675	0.27	1.90	-9.0
	1/16/2020	7.24	19.50	4998	0.64	7.13	-161.0
	4/14/2020	7.18	24.08	7612	0.21	3.98	-67.4
	7/28/2020	7.35	26.10	8241	0.15	4.88	-129.0
	10/19/2020	7.36	26.51	7951	0.15	4.27	-153.5
	1/23/2021	6.77	22.50	8177	0.19	4.22	-57.5
	4/28/2021	7.24	24.87	6303	0.08	5.91	-74.4
	10/5/2021	7.36	25.80	6890	0.08	3.51	-30.6
IW0132	6/12/2018	7.31	24.41	4697	0.35	16.92	-143.6
	10/19/2018	7.10	26.66	6587	0.68	7.14	35.7
	1/18/2019	7.09	25.34	3976	0.61	4.53	-1.4
	4/17/2019	7.04	24.90	6782	0.37	9.87	40.9
	7/9/2019	7.25	26.02	7115	0.10	7.71	68.0
	10/8/2019	6.93	27.36	12988	0.22	6.67	-3.9
	1/16/2020	7.13	21.00	6261	0.24	10.11	-175.4
	4/13/2020	7.21	26.50	6517	0.14	4.86	-145.9
	7/28/2020	7.27	25.96	5322	0.12	2.02	-152.7
	10/19/2020	7.27	26.68	6774	0.10	4.47	-172.4
	1/23/2021	6.67	23.6	7192	0.18	4.99	-69.3
	4/28/2021	7.15	25.5	6058	0.14	5.88	-72.2
	10/5/2021	7.24	27.4	5738	0.08	6.77	-94.1
IW0133	6/12/2018	7.37	23.72	7797	0.23	1.18	-163.7
	10/19/2018	7.24	24.77	8499	0.14	14.31	13.1
	1/18/2019	7.18	24.21	4674	0.68	7.78	10.5
	4/17/2019	7.14	23.94	8587	0.40	6.92	6.3
	7/9/2019	7.39	25.27	8803	0.10	4.08	11.3
	10/8/2019	7.22	26.57	15558	8.41	4.77	-78.8
	1/16/2020	7.29	20.00	8158	0.17	1.17	32.1
	4/13/2020	7.50	26.15	7939	0.15	0.99	-201.2
	7/28/2020	7.37	25.39	5570	0.25	8.39	-173.4
	10/19/2020	7.36	25.82	7822	1.05	2.51	-202.0
	1/23/2021	6.69	23.30	8448	0.21	2.99	-113.8
	4/29/2021	7.16	24.40	5999	0.14	6.95	-131.8
	10/5/2021	7.27	26.54	7885	0.12	3.85	-48.7
IW0134	3/27/2019	7.92	23.60	2459	0.22	8.38	-104.4
	7/11/2019	7.46	27.28	1538	0.06	7.39	11.2
	10/8/2019	6.96	27.86	3538	1.02	60.15	14.8
	1/17/2020	7.20	21.00	2173	0.35	14.20	-85.2
	4/15/2020	6.85	27.34	2461	0.34	2.81	-91.4
	7/30/2020	7.13	28.68	2942	0.13	2.71	16.1
	10/22/2020	6.96	29.34	2810	0.13	7.47	39.3
	1/25/2021	6.78	25.6	2697	0.28	3.56	7.9
	4/23/2021	7.33	22.4	2417	0.36	3.56	180.4
	10/8/2021	7.11	27.8	2578	0.24	7.36	4.2

Table 3-2. HS6 Performance Monitoring Field Measurements (Continued)

Well ID (LC34-)	Sample Date	pH (S.U.)	Temp. (°C)	SC (µS/cm)	DO (mg/L)	Turb. (NTUs)	ORP (mV)
IW0135	3/27/2019	7.55	23.07	1887	0.16	9.06	-129.6
	7/11/2019	7.36	26.53	1632	0.08	3.69	52.4
	10/8/2019	6.98	26.83	3461	2.98	5.23	58.1
	1/16/2020	7.12	21.80	2157	0.23	7.01	-119.2
	4/15/2020	6.87	26.26	2133	0.35	7.99	-133.9
	7/30/2020	7.09	28.44	2148	0.29	6.97	-129.1
	10/22/2020	6.96	26.72	2199	0.15	5.80	-11.7
	1/25/2021	6.73	24.6	2291	0.37	2.60	8.0
	4/23/2021	7.29	22.0	1947	0.23	4.32	265.0
	10/7/2021	7.23	26.0	1632	0.09	2.32	102.7
IW0136	3/27/2019	8.36	26.50	1982	0.09	1.66	-202.3
	7/11/2019	7.42	29.10	2507	0.25	2.55	29.3
	10/8/2019	7.21	28.41	4643	0.27	1.36	59.4
	1/17/2020	7.25	22.30	2620	0.22	8.26	-239.9
	4/15/2020	7.04	29.18	2978	0.20	1.73	-70.0
	7/30/2020	7.08	30.62	2639	0.10	2.25	-77.2
	10/22/2020	7.00	31.77	3342	0.27	5.93	40.7
	1/25/2021	6.74	27.40	3566	0.89	4.66	60.0
	4/23/2021	7.26	24.00	3251	1.59	9.65	192.6
	10/8/2021	7.04	29.60	3622	2.00	0.40	124.4
IW0137	3/27/2019	7.92	22.90	657	0.22	8.46	-182.4
	7/11/2019	7.26	26.38	1739	0.19	3.58	61.3
	10/9/2019	7.19	25.83	4203	5.14	5.10	85.3
	1/16/2020	7.16	22.00	1965	0.89	58.70	-182.3
	4/16/2020	7.07	24.43	1238	2.16	4.27	40.4
	7/30/2020	7.09	27.94	2449	0.79	3.47	25.6
	10/22/2020	7.07	30.90	2559	1.28	5.36	57.5
	1/25/2021	6.88	24.90	2795	2.35	4.31	2.1
	4/23/2021	7.48	22.20	2749	4.19	5.61	187.6
	10/7/2021	7.46	27.00	2784	4.40	5.08	154.5
IW0138	3/27/2019	8.12	23.40	1504	0.30	9.57	-136.0
	7/11/2019	7.33	26.73	2584	2.01	4.02	127.6
	10/9/2019	7.17	25.70	6125	6.79	6.82	92.1
	1/16/2020	7.38	22.50	3599	2.32	800	-191.3
	4/16/2020	7.36	24.61	3145	3.14	9.81	49.9
	7/30/2020	7.25	27.79	3368	5.14	5.03	60.4
	10/22/2020	7.15	28.99	3762	3.28	8.33	79.1
	1/25/2021	6.92	25.3	4016	2.39	5.28	69.0
	4/23/2021	7.59	22.6	3715	3.94	6.17	189.6
	10/7/2021	7.54	26.7	3459	4.91	3.25	154.9
IW0139	3/27/2019	7.80	22.90	1528	0.22	4.72	-174.9
	7/11/2019	7.02	27.46	2142	0.21	1.33	112.9
	10/10/2019	5.65	28.06	4536	5.26	1.09	159.1
	1/16/2020	7.12	20.80	2220	4.71	18.20	-170.4
	4/16/2020	7.01	23.76	2113	6.39	4.45	75.0
	7/30/2020	7.03	27.42	2226	3.19	4.20	83.4
	10/22/2020	6.95	30.33	2258	6.68	3.24	86.4
	1/24/2021	6.84	24.30	2304	6.98	3.88	107.5
	4/23/2021	7.44	22.10	2164	7.89	3.62	188.2
	10/8/2021	7.30	26.46	1828	6.60	2.11	168.2

Table 3-2. HS 6 Performance Monitoring Field Measurements (Continued)

Well ID (LC34-)	Sample Date	pH (S.U.)	Temp. (°C)	SC (µS/cm)	DO (mg/L)	Turb. (NTUs)	ORP (mV)
IW0140	3/27/2019	8.93	23.30	1288	0.15	17.30	-220.6
	7/11/2019	7.26	26.49	2755	0.22	3.01	59.1
	10/10/2019	5.58	27.94	6554	1.88	18.80	118.4
	1/16/2020	7.35	21.00	3279	0.60	23.90	-49.2
	4/16/2020	7.25	24.13	2552	2.41	4.49	51.2
	7/30/2020	7.31	27.58	3233	0.61	2.83	-70.0
	10/22/2020	7.17	30.27	3249	2.72	5.54	50.0
	1/24/2021	6.98	24.4	3860	4.37	3.40	58.4
	4/23/2021	7.62	22.0	3704	5.82	5.17	186.8
	10/8/2021	7.43	26.9	3271	4.99	1.52	169.8
IW0141	3/28/2019	7.54	24.25	1226	0.28	12.00	-132.9
	7/11/2019	7.05	26.52	2100	0.12	4.98	150.1
	10/10/2019	6.10	26.10	5511	1.62	8.20	133.2
	1/17/2020	7.16	21.60	3066	1.53	11.20	-201.6
	4/15/2020	7.08	26.63	2482	2.55	2.22	-26.1
	7/30/2020	7.11	27.69	2896	3.09	3.73	81.0
	10/21/2020	7.04	28.06	3593	3.39	3.06	160.6
	1/24/2021	6.93	25.70	4040	4.27	2.96	87.3
	4/29/2021	7.22	26.97	2996	3.69	1.46	161.0
	10/6/2021	7.45	26.94	3778	5.33	3.40	130.5
IW0142	3/28/2019	7.64	23.72	1453	0.32	16.30	-134.6
	7/10/2019	7.30	26.57	2574	0.15	9.46	143.5
	10/10/2019	7.10	26.74	3515	1.72	2.27	129.9
	1/17/2020	7.43	21.50	3120	1.02	10.20	-161.0
	4/14/2020	7.48	26.62	1214	2.58	2.42	-27.1
	7/29/2020	7.38	27.14	3022	2.07	2.17	46.8
	10/20/2020	7.48	27.88	3549	4.61	2.25	9.0
	1/24/2021	7.12	24.7	3828	5.15	1.89	71.3
	4/29/2021	7.41	26.9	2947	4.28	3.05	166.3
	10/7/2021	7.66	26.0	3487	6.39	2.22	186.0
IW0143	3/27/2019	7.71	24.18	1855	0.26	11.73	-101.0
	7/11/2019	7.00	25.78	2020	1.19	3.55	133.6
	10/9/2019	7.06	26.04	4523	5.51	9.82	80.2
	1/16/2020	7.23	22.40	2310	3.89	8.26	-103.5
	4/15/2020	7.34	26.77	2434	5.18	16.50	-31.2
	7/29/2020	7.32	28.05	2596	3.81	6.92	50.3
	10/22/2020	7.14	29.50	2754	4.17	7.84	60.8
	1/25/2021	6.83	25.60	2853	4.19	2.22	107.8
	4/30/2021	7.12	26.05	2381	4.78	5.62	56.1
	10/7/2021	7.41	27.15	2515	7.06	1.93	163.1
IW0144	3/27/2019	7.46	23.99	2149	0.14	4.53	-114.6
	7/10/2019	7.04	27.10	2627	0.15	5.19	80.3
	10/10/2019	5.85	28.19	5552	1.80	12.59	124.2
	1/16/2020	7.02	22.40	2890	0.94	20.90	-191.5
	4/15/2020	7.14	26.60	2869	1.05	6.91	-28.0
	7/30/2020	6.98	27.48	2892	0.53	4.66	82.7
	10/21/2020	6.91	28.97	2580	1.86	7.56	-30.9
	1/24/2021	6.70	25.10	2823	1.65	5.86	85.0
	4/30/2021	7.06	26.84	2436	1.88	3.13	155.7
	10/7/2021	7.28	27.01	2391	1.53	1.71	168.8

Table 3-2. HS6 Performance Monitoring Field Measurements (Continued)

Well ID (LC34-)	Sample Date	pH (S.U.)	Temp. (ºC)	SC (µS/cm)	DO (mg/L)	Turb. (NTUs)	ORP (mV)
IW0145	3/27/2019	7.82	24.07	1418	0.29	2.67	-113.1
	7/10/2019	7.61	26.31	2066	0.09	3.65	-82.9
	10/10/2019	5.68	28.37	5175	0.56	19.9	-171.2
	1/16/2020	7.23	22.30	3055	0.50	20.10	-202.2
	4/15/2020	7.16	26.45	3637	0.39	1.81	-106.8
	7/30/2020	7.03	26.90	3884	0.20	4.42	36.9
	10/21/2020	6.92	28.19	4196	0.38	4.31	-126.5
	1/24/2021	6.66	25.00	4415	0.43	2.21	-8.7
	4/30/2021	7.00	26.42	3899	0.39	7.27	-27.6
	10/7/2021	7.23	26.64	3746	0.25	3.75	-0.4
IW0146	3/27/2019	7.42	22.89	1657	0.21	3.12	-124.9
	7/10/2019	7.18	25.98	2168	0.80	4.55	87.3
	10/10/2019	5.43	28.24	6303	4.48	10.26	56.7
	1/17/2020	7.44	21.40	3030	4.50	4.28	-433.8
	4/16/2020	7.23	23.89	2675	5.98	8.17	39.4
	7/29/2020	7.39	28.07	2708	6.47	6.33	21.9
	10/21/2020	7.21	28.70	2701	7.62	4.63	-3.6
	1/25/2021	7.01	24.70	2759	5.95	1.77	107.3
	4/30/2021	7.30	25.18	2577	7.79	2.49	191.7
	10/7/2021	7.51	27.21	1921	7.92	1.01	156.4
IW0147	3/27/2019	8.26	23.23	1391	0.23	6.48	-156.9
	7/10/2019	7.27	26.37	2291	0.23	6.46	102.4
	10/10/2019	5.43	28.24	6303	4.48	9.26	56.7
	1/17/2020	7.28	21.30	259	4.62	4.21	-173.0
	4/16/2020	7.57	24.01	2205	5.90	5.83	36.8
	7/29/2020	7.52	27.43	3150	5.27	3.86	40.0
	10/21/2020	7.44	28.37	3080	6.86	6.71	5.5
	1/24/2021	7.09	24.6	3321	6.22	3.33	90.9
	4/30/2021	7.44	25.8	1923	6.42	4.10	189.7
	10/7/2021	7.64	27.5	3266	7.55	1.08	127.0
SW1001	6/13/2018	8.33	30.22	1834	5.26	1.71	-26.2
	10/19/2018	NM	NM	NM	NM	NM	NM
	1/14/2019	7.83	20.90	2429	7.96	2.65	67.7
	4/17/2019	8.68	30.62	1845	15.88	44.18	9.4
	7/11/2019	7.42	30.81	2000	6.72	2.38	166.8
	10/8/2019	7.71	29.84	5228	7.51	12.96	97.4
	1/17/2020	7.85	19.90	1916	5.74	10.20	821.0
	4/16/2020	7.50	21.70	1757	3.23	0.21	-2.0
	7/30/2020	7.27	34.18	2244	3.79	2.80	-88.9
	10/22/2020	7.08	28.03	1958	1.23	5.64	-27.5
	1/25/2021	7.39	21.70	1856	3.50	2.46	-44.3
	4/28/2021	7.50	27.86	1669	2.56	9.24	-180.1
	10/8/2021	7.59	29.54	1915	5.66	10.60	-4.4

Table 3-2. HS 6 Performance Monitoring Field Measurements (Continued)

Well ID (LC34-)	Sample Date	pH (S.U.)	Temp. (ºC)	SC (µS/cm)	DO (mg/L)	Turb. (NTUs)	ORP (mV)
SW1002	6/13/2018	7.32	27.39	1943	1.50	10.99	-68.3
	10/19/2018	NM	NM	NM	NM	NM	NM
	1/18/2019	7.77	24.07	1907	3.97	48.29	52.5
	4/17/2019	8.54	30.03	1978	10.66	69.45	-2.3
	7/11/2019	7.51	30.81	1940	8.35	2.22	178.1
	10/8/2019	7.67	30.47	2318	7.12	10.27	37.9
	1/17/2020	7.79	18.20	1802	6.36	14.30	39.4
	4/16/2020	7.41	20.71	1640	3.23	12.97	-64.5
	7/30/2020	7.48	36.24	2302	8.67	0.92	-78.7
	10/22/2020	7.11	27.59	2026	1.07	2.92	-73.0
	1/25/2021	7.33	22.10	1850	2.98	2.48	-89.6
	4/28/2021	7.58	29.21	1473	8.93	19.21	-76.9
	10/8/2021	7.57	30.01	1766	5.26	3.53	84.1
SW1004	6/13/2018	7.45	28.55	2586	0.31	19.18	-253.6
	10/19/2018	NM	NM	NM	NM	NM	NM
	1/18/2019	7.85	23.64	4074	12.90	1744.70	16.8
	4/17/2019	8.95	33.32	4074	12.90	265.46	16.8
	7/11/2019	7.06	32.72	2810	6.52	2.62	141.8
	10/8/2019	7.50	29.36	7168	8.13	12.51	77.4
	1/17/2020	7.81	19.30	1832	6.03	19.80	19.2
	4/16/2020	7.64	20.78	2552	5.44	6.43	-128.6
	7/30/2020	7.55	36.66	2462	16.73	2.39	-141.3
	10/22/2020	7.43	27.66	1562	4.55	0.35	186.1
	1/25/2021	7.32	26.70	2881	11.10	3.01	21.7
	4/28/2021	8.41	32.68	2157	8.58	3.01	26.1
	10/8/2021	7.77	30.39	1975	9.45	6.17	91.5

Note:

SC = Specific conductance in microSiemens per centimeter (µS/cm).

S.U. = pH in standard units

DO = Dissolved oxygen in milligrams per liter (in mg/L).

Turb. = Turbidity in nephelometric turbidity units (NTUs).

ORP = Oxidation/reduction potential in millivolts (mV).

NM = Not measured

Table 3-3. HS 6 Groundwater Performance Monitoring Results

Well ID (LC34-)/ Screened Interval	Sample Date	TCE	cDCE	tDCE	VC
IW0057S [1-11]	30-Jan-17	1 U	23	1 U	**29**
	06-Dec-18	0.35 U	62.7	5.1	**54.9**
	28-Mar-19	3 U	63	3 U	**73**
	10-Jul-19	3.5 U	**488**	6.2 I	4.1 U
	10-Oct-19	1.7 U	**375**	3.9 I	2 U
	17-Jan-20	0.35 U	**93.1**	1.1 I	**1.5 I**
	15-Apr-20	0.35 U	20	0.27 I	0.41 U
	29-Jul-20	0.35 U	7.2	0.22 U	0.41 U
	20-Oct-20	0.35 U	2	0.22 U	0.41 U
	24-Jan-21	0.35 U	1.5	0.22 U	0.41 U
	29-Apr-21	0.35 U	0.43 I	0.22 U	0.41 U
	06-Oct-21	0.89 U	0.57 I	0.73 U	0.71 U
IW0057I [23-28]	21-Dec-10	5.2 U	**1120**	7.5 I	**264**
	15-Dec-11	20 UD	**2900 D**	37 D	**370 D**
	04-Dec-12	5 U	**4300**	**310**	**1200**
	9-Dec-14	60 U	**9430**	**170 I**	**2280**
	9-Dec-16	27 U	**6930**	**131**	**2090**
	6-Dec-18	0.35	**13500 LV**	**271**	**4430**
	28-Mar-19	40 U	**15400**	**330**	**5900**
	10-Jul-19	17 U	**5630**	**143**	**2840**
	10-Oct-19	8.6 U	**2310**	82.1	**857**
	17-Jan-20	1.7 U	**270**	29.4	**317**
	15-Apr-20	0.35 U	37.7	14.5	**101**
	29-Jul-20	0.35 U	26.9	13.7	**120**
	20-Oct-20	0.35 U	14.1	5.9	**19.5**
	24-Jan-21	0.35 U	9.8	4.1	**12.9**
	30-Apr-21	0.35 U	11	3.5	**7.1**
	06-Oct-21	0.89 U	6.2	1.8 I	**2.6**
IW0108 [10-28]	22-Dec-10	0.52 U	**137**	0.7 U	**3.5**
	13-Dec-11	1 U	**96**	1 U	**110**
	04-Dec-12	0.5 U	36	0.44 U	**230**
	10-Dec-14	0.76 U	**215**	0.86 I	**145**
	15-Dec-16	1.4 U	4.2 I	1.7 U	**320**
	12-Jun-18	0.35 U	0.88 I	0.45 I	**306**
	17-Oct-18	1 U	1	1 U	1
	14-Jan-19	0.35 U	0.36 I	0.22 U	0.41 U
	17-Apr-19	1 U	1	1 U	**3**
	9-Jul-19	0.35 U	0.48 I	0.22 U	0.56 I
	9-Oct-19	0.35 U	0.28 U	0.22 U	0.41 U
	17-Jan-20	0.35 U	0.28 U	0.22 U	0.41 U
	13-Apr-20	0.35 U	0.28 U	0.22 U	0.41 U
	29-Jul-20	0.35 U	0.28 U	0.22 U	0.41 U
	20-Oct-20	0.35 U	0.28 U	0.22 U	0.41 U
	23-Jan-21	0.35 U	1.2	0.22 U	0.41 U
	29-Apr-21	0.35 U	0.28 U	0.22 U	0.41 U
	5-Oct-21	0.89 U	0.53 U	0.73 U	0.71 U

Table 3-3. HS 6 Groundwater Performance Monitoring Results (Continued)

Well ID (LC34-)/ Screened Interval	Sample Date	TCE	cDCE	tDCE	VC
IW0123 [20-28]	13-Jun-18	17 U	**4530**	63.6	**1000**
	17-Oct-18	3	**1200**	38	**130**
	14-Jan-19	3.5 U	**928**	20	**60.8**
	17-Apr-19	20 U	**710**	25	**200**
	11-Jul-19	1.7 U	**355**	17.6	**116**
	9-Oct-19	0.35 U	**137**	11.1	**35.9**
	16-Jan-20	0.69 U	**146**	8	**38.8**
	15-Apr-20	1.7 U	**258**	8.9	**51**
	30-Jul-20	1.7 U	**275**	8.8	**95.3**
	21-Oct-20	0.86 U	**213**	6.9	**67.4**
	25-Jan-21	0.69 U	**139**	4.4	**42.9**
	30-Apr-21	0.69 U	**90.7**	3.0	**25.5**
	7-Oct-21	0.89 U	**97**	2.4 I	**28**
IW0124 [13-23]	13-Jun-18	0.35 U	**74.6**	35.4	**1280**
	17-Oct-18	3 U	10	3 U	**4**
	14-Jan-19	0.35 U	0.56 I	0.88 I	0.67 I
	17-Apr-19	1 U	1 U	2	**5**
	10-Jul-19	0.35 U	0.6 I	2.1	**2.6**
	10-Oct-19	0.35 U	0.28 U	0.98 I	0.83 I
	17-Jan-20	0.35 U	0.44 I	1 I	0.79 I
	13-Apr-20	0.35 U	0.28 U	0.96 I	1.4
	29-Jul-20	0.35 U	0.49 I	1.3	**3.2**
	20-Oct-20	0.35 U	0.28 U	0.58 I	0.41 I
	23-Jan-21	0.35 U	0.28 U	0.27 I	0.41 U
	29-Apr-21	0.35 U	0.28 U	0.22 U	0.41 U
	6-Oct-21	0.89 U	0.53 U	0.73 U	0.71 U
IW0125 [13-23]	12-Jun-18	0.35 U	5	4.3	**2.4**
	19-Oct-18	**4**	4	1 U	1 U
	14-Jan-19	0.35 U	3.4	2.4	1.4
	17-Apr-19	1 U	4	2	1
	9-Jul-19	0.35 U	3.7	2.3	**1.7**
	8-Oct-19	0.35 U	3	1.5	**2.4**
	16-Jan-20	0.35 U	3.6	0.91 I	1.4
	13-Apr-20	0.35 U	2.3	0.37 I	**3.3**
	28-Jul-20	0.35 U	2.3	0.52 I	**3.9**
	19-Oct-20	0.35 U	1.4	0.22 U	**3.6**
	23-Jan-21	0.35 U	2	0.32 I	**3.2**
	28-Apr-21	0.35 U	3.6	0.22 U	**3.6**
	5-Oct-21	0.89 U	2.1 I	0.73 U	**2.9**

Table 3-3. HS 6 Groundwater Performance Monitoring Results (Continued)

Well ID (LC34-)/ Screened Interval	Sample Date	TCE	cDCE	tDCE	VC
IW0126 [20-28]	13-Jun-18	0.35 U	3.4	0.22 U	**5.5**
	17-Oct-18	1 U	2	1 U	**2**
	18-Jan-19	0.35 U	1.7	0.22 U	0.41 U
	17-Apr-19	1 U	2	1 U	1 U
	11-Jul-19	0.35 U	1.7	0.22 U	0.41 U
	9-Oct-19	0.35 U	1.2	0.22 U	0.41 U
	17-Jan-20	0.35 U	0.98 I	0.22 U	0.41 U
	13-Apr-20	0.35 U	0.96 I	0.22 U	0.41 U
	30-Jul-20	0.35 U	1.2	0.22 U	0.41 U
	21-Oct-20	0.35 U	1	0.22 U	0.41 U
	25-Jan-21	0.35 U	0.92 I	0.22 U	0.41 U
	30-Apr-21	0.35 U	0.28 U	0.22 U	0.41 U
	8-Oct-21	0.89 U	0.64 I	0.73 U	0.71 U
IW0127 [20-28]	13-Jun-18	0.35 U	32.1	0.33 I	**42.8**
	17-Oct-18	1 U	3	1 U	1 U
	14-Jan-19	0.35 U	1.4	0.22 U	0.41 U
	17-Apr-19	1 U	4	1 U	1 U
	10-Jul-19	0.35 U	2.8	0.22 U	0.41 U
	9-Oct-19	0.35 U	1.6	0.22 U	0.41 U
	17-Jan-20	0.35 U	0.83 I	0.22 U	0.41 U
	15-Apr-20	0.35 U	0.5 I	0.22 U	0.41 U
	29-Jul-20	0.35 U	0.6 I	0.22 U	0.41 U
	20-Oct-20	0.35 U	0.58 I	0.22 U	0.41 U
	24-Jan-21	0.35 U	0.28 U	0.22 U	0.41 U
	29-Apr-21	0.35 U	0.28 U	0.22 U	0.41 U
	6-Oct-21	0.89 U	0.53 U	0.73 U	0.71 U
IW0128 [13-23]	13-Jun-18	17 U	**4030**	54.9	**3050**
	17-Oct-18	3 U	**180**	3 U	**10**
	18-Jan-19	0.35 U	21.5	1	**2.6**
	17-Apr-19	1 U	4	1 U	**33**
	10-Jul-19	0.35 U	3.3	0.47 I	**2.2**
	10-Oct-19	0.35 U	1.3	0.22 U	0.41 U
	17-Jan-20	0.35 U	0.81 I	0.22 U	0.49 I
	13-Apr-20	0.35 U	0.84 I	0.22 U	1.4
	29-Jul-20	0.35 U	1.1	0.22 U	0.59 I
	20-Oct-20	0.35 U	0.65 I	0.22 U	0.41 U
	24-Jan-21	0.35 U	0.5 I	0.22 U	0.41 U
	29-Apr-21	0.35 U	0.28 U	0.22 U	0.41 U
	6-Oct-21	0.89 U	0.53 U	0.73 U	0.71 U
IW0129 [13-23]	12-Jun-18	0.35 U	0.54 I	0.22 U	**53.5**
	19-Oct-18	1 U	1 U	1 U	**9**
	14-Jan-19	0.35 U	0.28 U	0.22 U	**3.4**
	17-Apr-19	1 U	1 U	1 U	**2**
	9-Jul-19	0.35 U	1.2	0.22 U	**5**
	8-Oct-19	0.35 U	1.9	0.22 U	**9.9**
	16-Jan-20	0.35 U	1.1	0.22 U	**6.9**
	13-Apr-20	0.35 U	1.2	0.22 U	**10.3**
	29-Jul-20	0.35 U	1.1	0.22 U	**14.1**
	19-Oct-20	0.35 U	0.98 I	0.22 U	**11.5**
	23-Jan-21	0.35 U	0.81 I	0.22 U	**11.6**
	28-Apr-21	0.35 U	0.48 I	0.22 U	**9.5**
	5-Oct-21	0.89 U	0.72 I	0.73 U	**6.6**

Table 3-3. HS 6 Groundwater Performance Monitoring Results (Continued)

Well ID (LC34-)/ Screened Interval	Sample Date	TCE	cDCE	tDCE	VC
IW0130 [10-28]	12-Jun-18	0.35 U	1.3	0.22 U	**68.7**
	19-Oct-18	1 U	2	1 U	**19**
	18-Jan-19	0.35 U	0.99 I	0.22 U	**17.5**
	17-Apr-19	1 U	1	1 U	**4**
	9-Jul-19	0.35 U	1	0.22 U	**9.9**
	8-Oct-19	0.35 U	0.96 I	0.22 U	**10.2**
	16-Jan-20	0.35 U	0.86 I	0.22 U	**9.9**
	13-Apr-20	0.35 U	1	0.22 U	**12.7**
	29-Jul-20	0.35 U	1.1	0.22 U	**23.9**
	19-Oct-20	0.35 U	1.8	0.22 U	**17.2**
	23-Jan-21	0.35 U	0.99 I	0.22 U	**18.7**
	28-Apr-21	0.35 U	0.73 I	0.22 U	**20.9**
	5-Oct-21	0.89 U	1.2 I	0.73 U	**23**
IW0131 [13-23]	12-Jun-18	0.35 U	14.6	17.4	**1350**
	19-Oct-18	1 U	1	1 U	**2**
	14-Jan-19	0.35 U	0.28 U	0.22 U	0.61 I
	17-Apr-19	1 U	1 U	1 U	1 U
	9-Jul-19	0.35 U	0.4 I	0.22 U	0.41 U
	8-Oct-19	0.35 U	0.31 I	0.22 U	0.93 I
	16-Jan-20	0.35 U	0.28 U	0.22 U	0.73 I
	13-Apr-20	0.35 U	0.28 U	0.22 U	0.41 U
	28-Jul-20	0.35 U	0.46 I	0.22 U	0.41 U
	19-Oct-20	0.35 U	0.42 I	0.22 U	0.53 I
	23-Jan-21	0.35 U	0.36 I	0.22 U	0.41 U
	28-Apr-21	0.35 U	0.28 U	0.22 U	0.41 U
	5-Oct-21	0.89 U	0.80 I	0.73 U	0.71 U
IW0132 [13-23]	12-Jun-18	0.35 U	11.1	17.2	**1130**
	19-Oct-18	1 U	3	3	**3**
	14-Jan-19	0.35 U	0.28 U	0.22 U	1.1
	17-Apr-19	1 U	1	1 U	1 U
	9-Jul-19	0.35 U	2.9	0.22 U	0.51 I
	8-Oct-19	0.35 U	1.7	0.24 I	0.77 I
	16-Jan-20	0.35 U	0.88 I	0.22 U	0.69 I
	13-Apr-20	0.35 U	2.3	0.22 U	0.49 I
	28-Jul-20	0.35 U	1.9	0.22 U	0.83 I
	19-Oct-20	0.35 U	1.9	0.22 U	0.93 I
	23-Jan-21	0.35 U	1.6	0.22 U	0.41 U
	28-Apr-21	0.35 U	1	0.22 U	0.41 U
	5-Oct-21	0.89 U	1.0 I	0.73 U	0.71 U
IW0133 [13-23]	12-Jun-18	0.35 U	3.6	0.54 I	1.1
	19-Oct-18	1 U	2	1 U	1 U
	14-Jan-19	0.35 U	1.6	0.22 U	0.41 U
	17-Apr-19	1 U	2	1 U	1 U
	9-Jul-19	0.35 U	2.4	0.54 I	0.41 U
	8-Oct-19	0.35 U	2.1	0.47 I	0.41 U
	16-Jan-20	0.35 U	2.4	0.51 I	0.41 U
	13-Apr-20	0.35 U	1.5	0.22 U	0.41 U
	28-Jul-20	0.35 U	1.7	0.22 U	0.41 U
	19-Oct-20	0.35 U	1.5	0.33 I	0.41 U
	23-Jan-21	0.35 U	1.7	0.39 I	0.41 U
	28-Apr-21	0.35 U	1.6	0.22 U	0.41 U
	5-Oct-21	0.89 U	3.6	0.73 U	1.0 I

Table 3-3. HS 6 Groundwater Performance Monitoring Results (Continued)

Well ID (LC34-)/ Screened Interval	Sample Date	TCE	cDCE	tDCE	VC
IW0134 [23-28]	27-Mar-19	1 U	**20300**	**220**	**8900**
	11-Jul-19	170 U	**37100**	**387 I**	**12500**
	8-Oct-19	69 U	**24300**	**344**	**391**
	17-Jan-20	69 U	**11900**	**166 I**	**220**
	15-Apr-20	35 U	**9130**	**120**	**207**
	30-Jul-20	35 U	**7590**	94.9 I	**837**
	22-Oct-20	69 U	**10200**	87 I	**651**
	25-Jan-21	69 U	**14400**	**132 I**	**715**
	23-Apr-21	69 U	**14200**	**175 I**	**1230**
	8-Oct-21	89 U	**9700**	77 I	**1000**
IW0135 [23-28]	27-Mar-19	290 U	**53800**	**1100**	**10700**
	11-Jul-19	35 U	**16200**	**619**	**15700**
	8-Oct-19	69 U	**10200**	**491**	**7330**
	16-Jan-20	35 U	**5330**	**295**	**1580**
	15-Apr-20	35 U	**7750**	**282**	**166**
	30-Jul-20	35 U	**11900**	**455**	**1960**
	22-Oct-20	69 U	**10200**	**288**	**580**
	25-Jan-21	35 U	**7440**	**227**	**403**
	23-Apr-21	35 U	**5230**	**228**	**284**
	7-Oct-21	18 U	**2700**	**150**	**190**
IW0136 [23-28]	27-Mar-19	10 U	**240**	10 U	**520**
	11-Jul-19	0.35 U	34.9	0.22 U	**59.7**
	8-Oct-19	0.35 U	2.5	0.22 U	**7.2**
	17-Jan-20	0.35 U	5.4	0.22 U	**1.5**
	15-Apr-20	0.35 U	3.9	0.22 U	0.66 I
	30-Jul-20	0.35 U	32.6	0.22 U	**12.2**
	22-Oct-20	0.35 U	1.4	0.22 U	0.41 U
	25-Jan-21	0.35 U	0.63 I	0.22 U	0.41 U
	23-Apr-21	0.35 U	0.33 I	0.22 U	0.41 U
	8-Oct-21	0.89 U	0.53 U	0.73 U	0.71 U
IW0137 [23-28]	27-Mar-19	40 U	**36600**	**490**	**4100**
	11-Jul-19	86 U	**21400**	**248 I**	**440**
	9-Oct-19	69 U	**12300**	**129 I**	82 U
	16-Jan-20	8.6 U	**1980**	22.8 I	10 U
	16-Apr-20	3.5 U	**789**	8 I	**10.6**
	30-Jul-20	1.7 U	**394**	9	**7.8**
	22-Oct-20	0.35 U	**97.3**	1.6	**1.7**
	25-Jan-21	0.35 U	21.9	0.55 I	0.43 I
	23-Apr-21	0.35 U	13.6	0.39 I	0.41 U
	7-Oct-21	0.89 U	5.0	0.73 U	0.71 U

Table 3-3. HS 6 Groundwater Performance Monitoring Results (Continued)

Well ID (LC34-)/ Screened Interval	Sample Date	TCE	cDCE	tDCE	VC
IW0138 [29-34]	27-Mar-19	40 U	**48400**	**490**	**13600**
	11-Jul-19	35 U	**6400**	22 U	**873**
	9-Oct-19	3.5 U	**529**	6.7 I	4.1 U
	16-Jan-20	0.35 U	**111**	2.5	0.41 U
	16-Apr-20	0.35 U	23.8	0.73 I	0.53 I
	30-Jul-20	0.35 U	**85.2**	2.1	0.55 I
	22-Oct-20	0.35 U	6.6	0.28 I	0.41 U
	25-Jan-21	0.35 U	2.3	0.22 U	0.41 U
	23-Apr-21	0.35 U	1.9	0.22 U	0.41 U
	7-Oct-21	0.89 U	1.7 I	0.73 U	0.71 U
IW0139 [13-23]	27-Mar-19	10 U	**4300**	60	**1800**
	11-Jul-19	0.35 U	**569**	10.5	**31.1**
	10-Oct-19	0.69 U	**215**	2.6	0.82 U
	16-Jan-20	0.35 U	43.3	0.7 I	0.41 U
	16-Apr-20	0.35 U	14	0.37 I	0.41 U
	30-Jul-20	0.35 U	7.9	0.34 I	0.41 U
	22-Oct-20	0.35 U	2.3	0.24 I	0.41 U
	24-Jan-21	0.35 U	0.69 I	0.22 U	0.41 U
	23-Apr-21	0.35 U	0.29 I	0.22 U	0.41 U
	8-Oct-21	0.89 U	0.53 U	0.73 U	0.71 U
IW0140 [23-28]	27-Mar-19	100 U	**4000**	100 U	**3600**
	11-Jul-19	**1.51 I**	**125**	7.7	**65.3**
	10-Oct-19	0.35 U	9.9	1.7	0.41 U
	16-Jan-20	0.35 U	1.6	0.57 I	0.41 U
	16-Apr-20	0.35 U	0.75 I	0.49 I	0.41 U
	30-Jul-20	0.35 U	1.1	0.47 I	0.43 I
	22-Oct-20	0.35 U	0.44 I	0.32 I	0.41 U
	24-Jan-21	0.35 U	0.28 U	0.22 U	0.41 U
	23-Apr-21	0.35 U	0.28 U	0.22 U	0.41 U
	8-Oct-21	0.89 U	0.53 U	0.73 U	0.71 U
IW0141 [23-28]	28-Mar-19	50 U	**5600**	50 U	**5600**
	11-Jul-19	3.5 U	**809**	15.3	**36.8**
	10-Oct-19	0.35 U	55.6	3.9	0.41 U
	17-Jan-20	0.35 U	4.7	1.3	0.41 U
	15-Apr-20	0.35 U	0.51 I	0.22 U	0.41 U
	30-Jul-20	0.35 U	1.4	0.3 I	0.41 U
	21-Oct-20	0.35 U	0.58 I	0.22 U	0.41 U
	24-Jan-21	0.35 U	0.28 U	0.22 U	0.41 U
	29-Apr-21	0.35 U	0.28 U	0.22 U	0.41 U
	6-Oct-21	0.89 U	0.53 U	0.73 U	0.71 U
IW0142 [23-28]	28-Mar-19	40 U	**2900**	40 U	**6700**
	10-Jul-19	0.35 U	14.5	1.2	**5.7**
	10-Oct-19	0.35 U	0.84 I	0.22 U	0.41 U
	17-Jan-20	0.35 U	0.49 I	0.22 U	0.41 U
	13-Apr-20	0.35 U	0.28 U	0.22 U	0.41 U
	29-Jul-20	0.35 U	0.44 I	0.22 U	0.41 U
	20-Oct-20	0.35 U	0.28 U	0.22 U	0.41 U
	24-Jan-21	0.35 U	0.28 U	0.22 U	0.41 U
	29-Apr-21	0.35 U	0.28 U	0.22 U	0.41 U
	7-Oct-21	0.89 U	0.53 U	0.73 U	0.71 U

Table 3-3. HS 6 Groundwater Performance Monitoring Results (Continued)

Well ID (LC34-)/ Screened Interval	Sample Date	TCE	cDCE	tDCE	VC
IW0143 [23-28]	27-Mar-19	3 U	**650**	11	**3**
	11-Jul-19	0.69 U	**697**	19.9	**3.1**
	9-Oct-19	1.7 U	**247**	6.4	**4.1**
	16-Jan-20	0.35 U	33.7	2	0.41 U
	15-Apr-20	0.35 U	21.2	0.81 I	0.41 U
	29-Jul-20	0.35 U	13	0.51 I	0.41 U
	22-Oct-20	0.35 U	11.3	0.22 U	0.41 U
	25-Jan-21	0.35 U	6.6	0.22 U	0.41 U
	30-Apr-21	0.35 U	5.9	0.22 U	0.41 U
	7-Oct-21	0.89 U	4.4	0.73 U	0.71 U
IW0144 [23-28]	27-Mar-19	10 U	**1900**	40	**410**
	10-Jul-19	1.7 U	**325**	11.8	**82.1**
	10-Oct-19	0.69 U	**108**	6.2	1.1 I
	16-Jan-20	0.35 U	20.3	7.9	**16.9**
	15-Apr-20	0.35 U	20.7	1.7	**1.7**
	30-Jul-20	0.35 U	10.2	1.2	**1.9**
	21-Oct-20	0.35 U	12.4	1.2	0.66 I
	24-Jan-21	0.35 U	6.7	0.82 I	0.41 U
	30-Apr-21	0.35 U	5.2	0.72 I	0.41 U
	7-Oct-21	0.89 U	3.2	0.73 U	0.71 U
IW0145 [29-34]	27-Mar-19	20 U	**3900**	27	**930**
	10-Jul-19	3.5 U	**546**	44.8	**987**
	10-Oct-19	0.69 U	**76.4**	16.7	**375**
	16-Jan-20	0.35 U	43	3.1	**3.5**
	15-Apr-20	0.35 U	7.7	2.4	**8.6**
	30-Jul-20	0.35 U	4.8	1.3	**11.7**
	21-Oct-20	0.35 U	2.8	0.92 I	**3.5**
	24-Jan-21	0.35 U	1.6	0.39 I	**1.7**
	30-Apr-21	0.35 U	1.3	0.22 U	**1.5**
	7-Oct-21	0.89 U	1.5 I	0.73 U	1.1 I
IW0146 [13-23]	27-Mar-19	10 U	**3000**	34	**310**
	10-Jul-19	1.7 U	**380**	4.3 I	2 U
	10-Oct-19	0.35 U	**93.3**	1.9	**2**
	17-Jan-20	0.35 U	2.9	0.22 U	0.41 U
	16-Apr-20	0.35 U	6.8	0.22 U	0.41 U
	29-Jul-20	0.35 U	1.5	0.22 U	0.41 U
	21-Oct-20	0.35 U	1	0.22 U	0.41 U
	25-Jan-21	0.35 U	0.8 I	0.22 U	0.41 U
	30-Apr-21	0.35 U	0.69 I	0.22 U	0.41 U
	7-Oct-21	0.89 U	0.53 U	0.73 U	0.71 U

Table 3-3. HS 6 Groundwater Performance Monitoring Results (Continued)

Well ID (LC34-)/ Screened Interval	Sample Date	TCE	cDCE	tDCE	VC
IW0147 [23-28]	27-Mar-19	40 U	**4400**	40 U	**1200**
	10-Jul-19	0.35 U	29.5	0.68 I	**3.1**
	10-Oct-19	0.35 U	4.6	0.22 U	0.41 U
	17-Jan-20	0.35 U	15.1	0.22 U	0.41 U
	16-Apr-20	0.35 U	0.74 I	0.22 U	0.41 U
	29-Jul-20	0.35 U	1.5	0.22 U	0.41 U
	21-Oct-20	0.35 U	0.68 I	0.22 U	0.41 U
	24-Jan-21	0.35 U	0.49 I	0.22 U	0.41 U
	30-Apr-21	0.35 U	0.28 U	0.22 U	0.41 U
	7-Oct-21	0.89 U	0.53 U	0.73 U	0.71 U

Note:

Concentrations in µg/L.

TCE = Trichloroethene.

tDCE = trans-1,2-Dichloroethene.

cDCE = cis-1,2-Dichloroethene.

VC = Vinyl chloride.

Shading indicates greater than the Groundwater Cleanup Target Level (GCTL):

TCE = 3 µg/L, cDCE = 70 µg/L, tDCE = 100 µg/L, and VC = 1 µg/L.

I = Reported value is between method detection limit (MDL) and practical quantitation limit.

L = Actual value is known to be greater than value given.

U = Not detected at or above MDL (associated value).

D = Result was obtained from the analysis of a dilution.

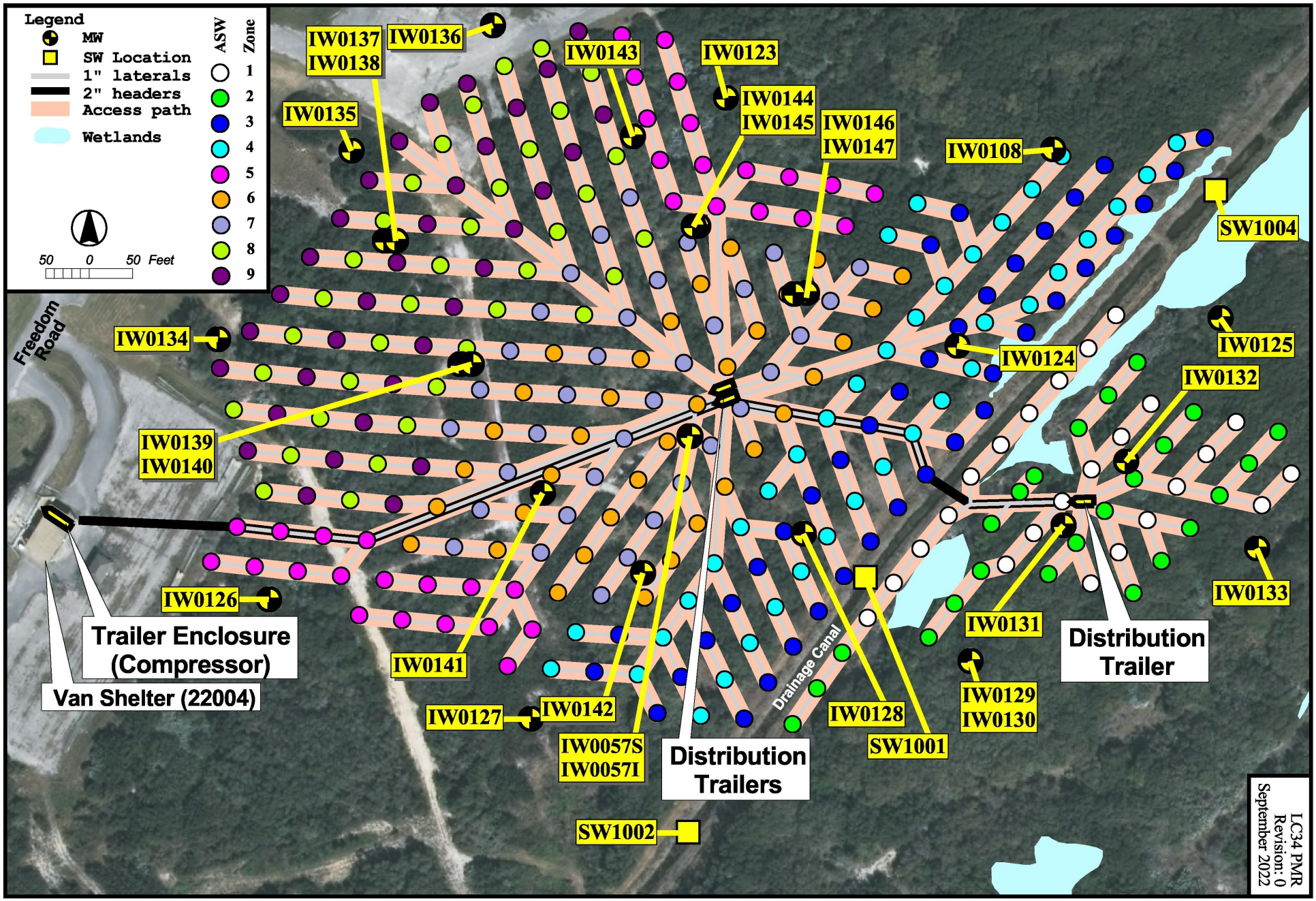
V = Analyte was detected in both the sample and associated method blank.

Table 3-4. HS 6 Surface Water Performance Monitoring Results

Location ID (LC34-)	Sample Date	TCE	cDCE	tDCE	VC
SW1001	6/13/2018	0.35 U	37.3	1.7	**79.2**
	10/16/2018	1 U	1 U	1 U	1 U
	1/18/2019	0.35 U	0.28 U	0.22 U	0.41 U
	4/17/2019	1 U	1 U	1 U	1 U
	7/11/2019	0.35 U	0.94 I	0.22 U	0.41 U
	10/8/2019	0.35 U	0.28 U	0.22 U	0.41 U
	1/17/2020	0.35 U	0.71 I	0.22 U	0.41 U
	4/16/2020	0.35 U	0.58 I	0.22 U	0.41 U
	7/30/2020	0.35 U	0.28 U	0.22 U	0.41 U
	10/22/2020	0.35 U	0.28 U	0.22 U	0.41 U
	1/25/2021	0.35 U	0.28 U	0.22 U	0.41 U
	4/28/2021	0.35 U	0.42 I	0.22 U	0.41 U
	10/8/2021	0.89 U	0.53 U	0.73 U	0.71 U
SW1002	6/13/2018	0.35 U	22.4	0.22 U	**93.7**
	10/16/2018	1 U	1	1 U	1 U
	1/18/2019	0.35 U	1.7	0.22 U	0.41 U
	4/17/2019	1 U	1 U	1 U	1 U
	7/11/2019	0.35 U	2	0.22 U	0.41 U
	10/8/2019	0.35 U	0.28 U	0.22 U	0.41 U
	1/17/2020	0.35 U	1.1	0.22 U	0.41 U
	4/16/2020	0.35 U	2.8	0.22 U	0.41 U
	7/30/2020	0.35 U	1.9	0.22 U	0.66 I
	10/22/2020	0.35 U	0.78 I	0.22 U	0.6 I
	1/25/2021	0.35 U	0.28 U	0..22 U	0.41 U
	4/28/2021	0.35 U	1.2	0.22 U	0.41 U
	10/8/2021	0.89 U	2.1 I	0.73 U	0.71 U
SW1004	6/13/2018	0.35 U	1.4	11.5	**212**
	10/16/2018	1 U	1 U	1 U	1 U
	1/18/2019	0.35 U	0.28 U	0.22 U	0.41 U
	4/17/2019	1 U	1 U	1 U	1 U
	7/11/2019	0.35 U	0.28 U	0.22 U	0.41 U
	10/8/2019	0.35 U	0.28 U	0.22 U	0.41 U
	1/17/2020	0.35 U	0.28 U	0.22 U	0.41 U
	4/16/2020	0.35 U	0.28 U	0.22 U	0.41 U
	7/30/2020	0.35 U	0.28 U	0.22 U	0.41 U
	10/22/2020	0.35 U	0.28 U	0.22 U	0.41 U
	1/25/2021	0.35 U	0.28 U	0.22 U	0.41 U
	4/28/2021	0.35 U	0.28 U	0.22 U	0.41 U
	10/8/2021	0.89 U	0.53 U	0.73 U	0.71 U

Note:
The baseline event for the HS6 performance monitoring was June 2018
Concentrations in µg/L.
TCE = Trichloroethene.
tDCE = trans-1,2-Dichloroethene.
cDCE = cis-1,2-Dichloroethene.
VC = Vinyl chloride.
Shading indicates at or exceeding the Florida Freshwater Surface Water Criteria (FAC 62-777):
TCE = 80.7 µg/L, cDCE = no value, tDCE = 11,000 µg/L, and VC = 2.4 µg/L.
U = Not detected at method detection limit (MDL) (associated value).
I = Reported value is between MDL and practical quantitation limit.

FIGURE 3-1 HOT SPOT 6 TRENCHING, AIR SPARGING AND MONITORING WELL LAYOUT
LAUNCH COMPLEX 34, CAPE CANAVERAL SPACE FORCE STATION, FLORIDA



LC34 PMR
Revision: 0
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IW0144	TCE	cDCE	tDCE	VC
[23-28]				
03/2019	10 U	1900	40	410
07/2019	1.7 U	325	11.8	82.1
10/2019	0.69 U	108	6.2	1.1 I
01/2020	0.35 U	20.3	7.9	16.9
04/2020	0.35 U	20.7	1.7	1.7
07/2020	0.35 U	10.2	1.2	1.9
10/2020	0.35 U	12.4	1.2	0.66 I
01/2021	0.35 U	6.7	0.82 I	0.41 U
04/2021	0.35 U	5.2	0.72 I	0.41 U
10/2021	0.89 U	3.2	0.73 U	0.71 U

IW0145	TCE	cDCE	tDCE	VC
[29-34]				
03/2019	20 U	3900	27	930
07/2019	3.5 U	546	44.8	987
10/2019	0.69 U	76.4	16.7	375
01/2020	0.35 U	43	3.1	3.5
04/2020	0.35 U	7.7	2.4	8.6
07/2020	0.35 U	4.8	1.3	11.7
10/2020	0.35 U	2.8	0.92 I	3.5
01/2021	0.35 U	1.6	0.39 I	1.7
04/2021	0.35 U	1.3	0.22 U	1.5
10/2021	0.89 U	1.5 I	0.73 U	1.1 I

IW0135	TCE	cDCE	tDCE	VC
[23-28]				
03/2019	290 U	53800	1100	10700
07/2019	35 U	16200	619	15700
10/2019	69 U	10200	491	7330
01/2020	35 U	5330	295	1580
04/2020	35 U	7750	282	166
07/2020	35 U	11900	455	1960
10/2020	69 U	10200	288	580
01/2021	35 U	7440	227	403
04/2021	35 U	5230	228	284
10/2021	18 U	2700	150	190

IW0136	TCE	cDCE	tDCE	VC
[23-28]				
03/2019	10 U	240	10 U	520
07/2019	0.35 U	34.9	0.22 U	59.7
10/2019	0.35 U	2.5	0.22 U	7.2
01/2020	0.35 U	5.4	0.22 U	1.5
04/2020	0.35 U	3.9	0.22 U	0.66 I
07/2020	0.35 U	32.6	0.22 U	12.2
10/2020	0.35 U	1.4	0.22 U	0.41 U
01/2021	0.35 U	0.63 I	0.22 U	0.41 U
04/2021	0.35 U	0.33 I	0.22 U	0.41 U
10/2021	0.89 U	0.53 U	0.73 U	0.71 U

IW0143	TCE	cDCE	tDCE	VC
[23-28]				
03/2019	3 U	650	11	3.0
07/2019	0.69 U	697	19.9	3.1
10/2019	1.7 U	247	6.4	4.1 I
01/2020	0.35 U	33.7	2	0.41 U
04/2020	0.35 U	21.2	0.81 I	0.41 U
07/2020	0.35 U	13	0.51 I	0.41 U
10/2020	0.35 U	11.3	0.22 U	0.41 U
01/2021	0.35 U	6.6	0.22 U	0.41 U
04/2021	0.35 U	5.9	0.22 U	0.41 U
10/2021	0.89 U	4.4	0.73 U	0.71 U

IW0123	TCE	cDCE	tDCE	VC
[20-28]				
06/2018	17 U	4530	63.6	1000
10/2018	3	1200	38	130
01/2019	3.5 U	928	20	60.8
04/2019	20 U	710	25	200
07/2019	1.7 U	355	17.6	116
10/2019	0.35 U	137	11.1	35.9
01/2020	0.69 U	146	8	38.8
04/2020	1.7 U	258	8.9	51
07/2020	1.7 U	275	8.8	95.3
10/2020	0.86 U	213	6.9	67.4
01/2021	0.69 U	139	4.4	42.9
04/2021	0.69 U	90.7	3.0	25.5
10/2021	0.89 U	97	2.4 I	28

IW0146	TCE	cDCE	tDCE	VC
[13-23]				
03/2019	10 U	3000	34	310
07/2019	1.7 U	380	4.3 I	2 U
10/2019	0.35 U	93.3	1.9	2
01/2020	0.35 U	2.9	0.22 U	0.41 U
04/2020	0.35 U	6.8	0.22 U	0.41 U
07/2020	0.35 U	1.5	0.22 U	0.41 U
10/2020	0.35 U	1.0	0.22 U	0.41 U
01/2021	0.35 U	0.8 I	0.22 U	0.41 U
04/2021	0.35 U	0.69 I	0.22 U	0.41 U
10/2021	0.89 U	0.53 U	0.73 U	0.71 U

IW0147	TCE	cDCE	tDCE	VC
[23-28]				
03/2019	40 U	4400	40 U	1200
07/2019	0.35 U	29.5	0.68 I	3.1
10/2019	0.35 U	4.6	0.22 U	0.41 U
01/2020	0.35 U	15.1	0.22 U	0.41 U
04/2020	0.35 U	0.74 I	0.22 U	0.41 U
07/2020	0.35 U	1.5	0.22 U	0.41 U
10/2020	0.35 U	0.68 I	0.22 U	0.41 U
01/2021	0.35 U	0.49 I	0.22 U	0.41 U
04/2021	0.35 U	0.28 U	0.22 U	0.41 U
10/2021	0.89 U	0.53 U	0.73 U	0.71 U

IW0108	TCE	cDCE	tDCE	VC
[20-28]				
12/2010	0.52 U	137	0.7 U	3.5
12/2011	1 U	96	1 U	110
12/2012	0.5 U	36	0.44 U	230
12/2014	0.76 U	215	0.86 I	145
12/2016	1.4 U	4.2 I	1.7 U	320
06/2018	0.35 U	0.88 I	0.45 I	306
10/2018	1 U	1.0	1 U	1.0
01/2019	0.35 U	0.36 I	0.22 U	0.41 U
04/2019	1 U	1.0	1 U	3.0
07/2019	0.35 U	0.48 I	0.22 U	0.56 I
10/2019	0.35 U	0.28 U	0.22 U	0.41 U
01/2020	0.35 U	0.28 U	0.22 U	0.41 U
04/2020	0.35 U	0.28 U	0.22 U	0.41 U
07/2020	0.35 U	0.28 U	0.22 U	0.41 U
10/2020	0.35 U	0.28 U	0.22 U	0.41 U
01/2021	0.35 U	1.2	0.22 U	0.41 U
04/2021	0.35 U	0.28 U	0.22 U	0.41 U
10/2021	0.89 U	0.53 U	0.73 U	0.71 U

IW0124	TCE	cDCE	tDCE	VC
[13-23]				
06/2018	0.35 U	74.6	35.4	1280
10/2018	3 U	10	3 U	4.0
01/2019	0.35 U	0.56 I	0.88 I	0.67 I
04/2019	1 U	1 U	2.0	5.0
07/2019	0.35 U	0.6 I	2.1	2.6
10/2019	0.35 U	0.28 U	0.98 I	0.83 I
01/2020	0.35 U	0.44 I	1	0.79 I
04/2020	0.35 U	0.28 U	0.96 I	1.4
07/2020	0.35 U	0.49 I	1.3	3.2
10/2020	0.35 U	0.28 U	0.58 I	0.41 I
01/2021	0.35 U	0.28 U	0.27 I	0.41 U
04/2021	0.35 U	0.28 U	0.22 U	0.41 U
10/2021	0.89 U	0.53 U	0.73 U	0.71 U

SW1004	TCE	cDCE	tDCE	VC
01/2017	1 U	41	8	140
06/2018	0.35 U	1.4	11.5	212
10/2018	1 U	1 U	1 U	1 U
01/2019	0.35 U	0.28 U	0.22 U	0.41 U
04/2019	1 U	1 U	1 U	1 U
07/2019	0.35 U	0.28 U	0.22 U	0.41 U
10/2019	0.35 U	0.28 U	0.22 U	0.41 U
01/2020	0.35 U	0.28 U	0.22 U	0.41 U
04/2020	0.35 U	0.28 U	0.22 U	0.41 U
07/2020	0.35 U	0.28 U	0.22 U	0.41 U
10/2020	0.35 U	0.28 U	0.22 U	0.41 U
01/2021	0.35 U	0.28 U	0.22 U	0.41 U
04/2021	0.35 U	0.53 U	0.73 U	0.71 U
10/2021	0.89 U	0.53 U	0.73 U	0.71 U

IW0125	TCE	cDCE	tDCE	VC
[13-23]				
06/2018	0.35 U	5.0	4.3	2.4
10/2018	4.0	4.0	1 U	1 U
01/2019	0.35 U	3.4	2.4	1.4
04/2019	1 U	4.0	2.0	1.0
07/2019	0.35 U	3.7	2.3	1.7
10/2019	0.35 U	3.0	1.5	2.4
01/2020	0.35 U	3.6	0.91 I	1.4
04/2020	0.35 U	2.3	0.37 I	3.3
07/2020	0.35 U	2.3	0.52 I	3.9
10/2020	0.35 U	1.4	0.22 U	3.6
01/2021	0.35 U	2.0	0.32 I	3.2
04/2021	0.35 U	3.6	0.22 U	3.6
10/2021	0.89 U	2.1 I	0.73 U	2.9

IW0132	TCE	cDCE	tDCE	VC
[13-23]				
06/2018	0.35 U	11.1	17.2	1130
10/2018	1 U	3.0	3.0	3.0
01/2019	0.35 U	0.28 U	0.22 U	1.1
04/2019	1 U	1.0	1 U	1 U
07/2019	0.35 U	2.9	0.22 U	0.51 I
10/2019	0.35 U	1.7	0.24 I	0.77 I
01/2020	0.35 U	0.88 I	0.22 U	0.69 I
04/2020	0.35 U	2.3	0.22 U	0.49 I
07/2020	0.35 U	1.9	0.22 U	0.83 I
10/2020	0.35 U	1.9	0.22 U	0.93 I
01/2021	0.35 U	1.6	0.22 U	0.41 U
04/2021	0.35 U	1.0	0.22 U	0.41 U
10/2021	0.89 U	1.0 I	0.73 U	0.71 U

IW0131	TCE	cDCE	tDCE	VC
[13-23]				
06/2018	0.35 U	14.6	17.4	1350
10/2018	1 U	1.0	1 U	2.0
01/2019	0.35 U	0.28 U	0.22 U	0.61 I
04/2019	1 U	1 U	1 U	1 U
07/2019	0.35 U	0.4 I	0.22 U	0.41 U
10/2019	0.35 U	0.31 I	0.22 U	0.93 I
01/2020	0.35 U	0.28 U	0.22 U	0.73 I
04/2020	0.35 U	0.28 U	0.22 U	0.41 U
07/2020	0.35 U	0.46 I	0.22 U	0.41 U
10/2020	0.35 U	0.42 I	0.22 U	0.53 I
01/2021	0.35 U	0.36 I	0.22 U	0.41 U
04/2021	0.35 U	0.28 U	0.22 U	0.41 U
10/2021	0.89 U	0.80 I	0.73 U	0.71 U

IW0133	TCE	cDCE	tDCE	VC
[13-23]				
06/2018	0.35 U	3.6	0.54 I	1.1
10/2018	1 U	2	1 U	1 U
01/2019	0.35 U	1.6	0.22 U	0.41 U
04/2019	1 U	2.0	1 U	1 U
07/2019	0.35 U	2.4	0.54 I	0.41 U
10/2019	0.35 U	2.1	0.47 I	0.41 U
01/2020	0.35 U	2.4	0.51 I	0.41 U
04/2020	0.35 U	1.5	0.22 U	0.41 U
07/2020	0.35 U	1.7	0.22 U	0.41 U
10/2020	0.35 U	1.5	0.33 I	0.41 U
01/2021	0.35 U	1.7	0.39 I	0.41 U
04/2021	0.35 U	1.6	0.22 U	0.41 U
10/2021	0.89 U	3.6	0.73 U	1.0 I

IW0137	TCE	cDCE	tDCE	VC
[23-28]				
03/2019	40 U	36600	490	4100
07/2019	86 U	21400	248 I	440
10/2019	69 U	12300	129 I	82 U
01/2020	8.6 U	1980	22.8 I	10 U
04/2020	3.5 U	789	8 I	10.6
07/2020	1.7 U	394	9	7.8
10/2020	0.35 U	97.3	1.6	1.7
01/2021	0.35 U	21.9	0.55 I	0.43 I
04/2021	0.35 U	13.6	0.39 I	0.41 U
10/2021	0.89 U	5.0	0.73 U	0.71 U

IW0138	TCE	cDCE	tDCE	VC
[29-34]				
03/2019	40 U	48400	490	13600
07/2019	35 U	6400	22 U	873
10/2019	3.5 U	529	6.7 I	4.1 U
01/2020	0.35 U	111	2.5	0.41 U
04/2020	0.35 U	23.8	0.73 I	0.53 I
07/2020	0.35 U	85.2	2.1	0.55 I
10/2020	0.35 U	6.6	0.28 I	0.41 U
01/2021	0.35 U	2.3	0.22 U	0.41 U
04/2021	0.35 U	1.9	0.22 U	0.41 U
10/2021	0.89 U	1.7 I	0.73 U	0.71 U

IW0134	TCE	cDCE	tDCE	VC
[23-28]				
03/2019	1 U	20300	220	8900
07/2019	170 U	37100	387 I	12500
10/2019	69 U	24300	344	391
01/2020	69 U	11900	166 I	220
04/2020	35 U	9130	120	207
07/2020	35 U	7590	94.9 I	837
10/2020	69 U	10200	87 I	651
01/2021	69 U	14400	132 I	715
04/2021	69 U	14200	175 I	1230
10/2021	89 U	9700	77 I	1000

IW0139	TCE	cDCE	tDCE	VC
[13-23]				
03/2019	10 U	4300	60	1800
07/2019	0.35 U	569	10.5	31.1
10/2019	0.69 U	215	2.6	0.82 U
01/2020	0.35 U	43.3	0.7 I	0.41 U
04/2020	0.35 U	14	0.37 I	0.41 U
07/2020	0.35 U	7.9	0.34 I	0.41 U
10/2020	0.35 U	2.3	0.24 I	0.41 U
01/2021	0.35 U	0.69 I	0.22 U	0.41 U
04/2021	0.35 U	0.29 I	0.22 U	0.41 U
10/2021	0.89 U	0.53 U	0.73 U	0.71 U

IW0140	TCE	cDCE	tDCE	VC
[23-28]				
03/2019	100 U	4000	100 U	3600
07/2019	1.5 I	125	7.7	65.3
10/2019	0.35 U	9.9	1.7	0.41 U
01/2020	0.35 U	1.6	0.57 I	0.41 U
04/2020	0.35 U	0.75 I	0.49 I	0.41 U
07/2020	0.35 U	1.1	0.47 I	0.43 I
10/2020	0.35 U	0.44 I	0.32 I	0.41 U
01/2021	0.35 U	0.28 U	0.22 U	0.41 U
04/2021	0.35 U	0.28 U	0.22 U	0.41 U
10/2021	0.89 U	0.53 U	0.73 U	0.71 U

IW-57S	TCE	cDCE	tDCE	VC
[1-11]				
12/2018	0.35 U	62.7	5.1	54.9
03/2019	3 U	63	3 U	73
07/2019	3.5 U	488	6.2 I	4.1 U
10/2019	1.7 U	375	3.9 I	2 U
01/2020	0.35 U	93.1	1.1 I	1.5 I
04/2020	0.35 U	20	0.27 I	0.41 U
07/2020	0.35 U	7.2	0.22 U	0.41 U
10/2020	0.35 U	2	0.22 U	0.41 U
01/2021	0.35 U	1.5	0.22 U	0.41 U
04/2021	0.35 U	0.43 I	0.22 U	0.41 U
10/2021	0.89 U	0.57 I	0.73 U	0.71 U

IW-57I	TCE	cDCE	tDCE	VC
[23-28]				
12/2018	0.35 U	13500 LV	271	4430
03/2019	40 U	15400	330	5900
07/2019	17 U	5630	143	2840
10/2019	8.6 U	2310	82.1	857
01/2020	1.7 U	270	29.4	317
04/2020	0.35 U	37.7	14.5	101
07/2020	0.35 U	26.9	13.7	120
10/2020	0.35 U	14.1	5.9	19.5
01/2021	0.35 U	9.8	4.1	12.9
04/2021	0.35 U	11	3.5	7.1
10/2021	0.89 U	6.2	1.8 I	2.6

IW0126	TCE	cDCE	tDCE	VC
[20-28]				
06/2018	0.35 U	3.4	0.22 U	5.5
10/2018	1 U	2.0	1 U	2.0
01/2019	0.35 U	1.7	0.22 U	0.41 U
04/2019	1 U	2.0	1 U	1 U
07/2019	0.35 U	1.7	0.22 U	0.41 U
10/2019	0.35 U	1.2	0.22 U	0.41 U
01/2020	0.35 U	0.98 I	0.22 U	0.41 U
04/2020	0.35 U	0.96 I	0.22 U	0.41 U
07/2020	0.35 U	1.2	0.22 U	0.41 U
10/2020	0.35 U	1.0	0.22 U	0.41 U
01/2021	0.35 U	0.92 I	0.22 U	0.41 U
04/2021	0.35 U	0.28 U	0.22 U	0.41 U
10/2021	0.89 U	0.64 I	0.73 U	0.71 U

IW0127	TCE	cDCE	tDCE	VC
[20-28]				
06/2018	0.35 U	32.1	0.33 I	42.8
10/2018	1 U	3	1 U	1 U
01/2019	0.35 U	1.4	0.22 U	0.41 U
04/2019	1 U	4.0	1 U	1 U
07/2019	0.35 U	2.8	0.22 U	0.41 U
10/2019	0.35 U	1.6	0.22 U	0.41 U
01/2020	0.35 U	0.83 I	0.22 U	0.41 U
04/2020	0.35 U	0.5 I	0.22 U	0.41 U
07/2020	0.35 U	0.6 I	0.22 U	0.41 U
10/2020	0.35 U	0.58 I	0.22 U	0.41 U
01/2021	0.35 U	0.28 U	0.22 U	0.41 U
04/2021	0.35 U	0.28 U	0.22 U	0.41 U
10/2021	0.89 U	0.53 U	0.73 U	0.71 U

IW0141	TCE	cDCE	tDCE	VC
[23-28]				
03/2019	50 U	5600	50 U	5600
07/2019	3.5 U	809	15.3	36.8
10/2019	0.35 U	55.6	3.9	0.41 U
01/2020	0.35 U	4.7	1.3	0.41 U
04/2020	0.35 U	0.51 I	0.22 U	0.41 U
07/2020	0.35 U	1.4	0.3 I	0.41 U
10/2020	0.35 U	0.58 I	0.22 U	0.41 U
01/2021	0.35 U	0.28 U	0.22 U	0.41 U
04/2021	0.35 U	0.28 U	0.22 U	0.41 U
10/2021	0.89 U	0.53 U	0.73 U	0.71 U

IW0142	TCE	cDCE	tDCE	VC
[23-28]				
03/2019	40 U	2900	40 U	6700
07/2019	0.35 U	14.5	1.2	5.7
10/2019	0.35 U	0.84 I	0.22 U	0.41 U
01/2020	0.35 U	0.49 I	0.22 U	0.41 U
04/2020	0.35 U	0.28 U	0.22 U	0.41 U
07/2020	0.35 U	0.44 I	0.22 U	0.41 U
10/2020	0.35 U	0.28 U	0.22 U	0.41 U
01/2021	0.35 U	0.28 U	0.22 U	0.41 U
04/2021	0.35 U	0.28 U	0.22 U	0.41 U
10/2021	0.89 U	0.53 U	0.73 U	0.71 U

SW1002	TCE	cDCE	tDCE	VC
12/2016	1 U	1 U	1 U	1 U
01/2017	1 U	1 U	1 U	1 U
06/2018	0.35 U	22.4	0.22 U	93.7
10/2018	1 U	1	1 U	1 U
01/2019	0.35 U	1.7	0.22 U	0.41 U
04/2019	1 U	1 U	1 U	1 U
07/2019	0.35 U	2.0	0.22 U	0.41 U
10/2019	0.35 U	0.28 U	0.22 U	0.41 U
01/2020	0.35 U	1.1	0.22 U	0.41 U
04/2020	0.35 U	2.8	0.22 U	0.41 U
07/2020	0.35 U	1.9	0.22 U	0.66 I
10/2020	0.35 U	0.78 I	0.22 U	0.6 I
01/2021	0.35 U	0.28 U	0.22 U	0.41 U
04/2021	0.35 U	1.2	0.22 U	0.41 U
10/2021	0.89 U	2.1 I	0.73 U	0.71 U

IW0128	TCE	cDCE	tDCE	VC
[13-23]				
06/2018	17 U	4030	54.9	3050
10/2018	3 U	180	3 U	10
01/2019	0.35 U	21.5	1	2.6
04/2019	1 U	4.0	1 U	33
07/2019	0.35 U	3.3	0.47 I	2.2
10/2019	0.35 U	1.3	0.22 U	0.41 U
01/2020	0.35 U	0.81 I	0.22 U	0.49 I
04/2020	0.35 U	0.84 I	0.22 U	1.4
07/2020	0.35 U	1.1	0.22 U	0.59 I
10/2020	0.35 U	0.65 I	0.22 U	0.41 U
01/2021	0.35 U	0.5 I	0.22 U	0.41 U
04/2021	0.35 U	0.28 U	0.22 U	0.41 U
10/2021	0.89 U	0.53 U	0.73 U	0.71 U

IW0129	TCE	cDCE	tDCE	VC
[13-23]				
06/2018	0.35 U	0.54 I	0.22 U	53.5
10/2018	1 U	1 U	1 U	9.0
01/2019	0.35 U	0.28 U	0.22 U	3.4
04/2019	1 U	1 U	1 U	2.0
07/2019	0.35 U	1.2	0.22 U	5.0
10/2019	0.35 U	1.9	0.22 U	9.9
01/2020	0.35 U	1.1	0.22 U	6.9
04/2020	0.35 U	1.2	0.22 U	10.3
07/2020	0.35 U	1.1	0.22 U	14.1
10/2020	0.35 U	0.98 I	0.22 U	11.5
01/2021	0.35 U	0.81 I	0.22 U	11.6
04/2021	0.35 U	0.48 I	0.22 U	9.5
10/2021	0.89 U	0.72 I	0.73 U	6.6

IW0130	TCE	cDCE	tDCE	VC
[20-28]				
06/2018	0.35 U	1.3	0.22 U	68.7
10/2018	1 U	2	1 U	19
01/2019	0.35 U	0.99 I	0.22 U	17.5
04/2019	1 U	1.0	1 U	4.0
07/2019	0.35 U	1.0	0.22 U	9.9
10/2019	0.35 U	0.96 I	0.22 U	10.2
01/2020	0.35 U	0.86 I	0.22 U	9.9
04/2020	0.35 U	1.0	0.22 U	12.7
07/2020	0.35 U	1.1	0.22 U	23.9
10/2020	0.35 U	1.8	0.22 U	17.2
01/2021	0.35 U	0.99 I	0.22 U	18.7
04/2021	0.35 U	0.73 I	0.22 U	20.9
10/2021	0.89 U	1.2 I	0.73 U	23

SW1001	TCE	cDCE	tDCE	VC
12/2016	1 U	2.0	1 U	9.0
01/2017	1 U	2.0	1 U	3.0
06/2018	0.35 U	37.3	1.7	79.2
10/2018	1 U	1 U	1 U	1 U
01/2019	0.35 U	0.28 U	0.22 U	0.41 U
04/2019	1 U	1 U	1 U	1 U
07/2019	0.35 U	0.94 I	0.22 U	0.41 U
10/2019	0.35 U	0.28 U	0.22 U	0.41 U
01/2020	0.35 U	0.71 I	0.22 U	0.41 U
04/2020	0.35 U	0.58 I	0.22 U	0.41 U
07/2020	0.35 U	0.28 U	0.22 U	0.41 U
10/2020	0.35 U	0.28 U	0.22 U	0.41 U
01/2021	0.35 U	0.28 U	0.22 U	0.41 U
04/2021	0.35 U	0.42 I	0.22 U	0.41 U
10/2021	0.89 U	0.53 U	0.73 U	0.71 U

ASW Zone
- 1 - April 2019, OFF
- 2 - April 2019, OFF
- 3 - February 2020, 35 ASWs OFF
- 4 - February 2020, 18 ASWs OFF
- 5
- 6
- 7
- 8
- 9

HCS Capture Zone
- 1 yr
- 2 yr

IW-518 [1-11]

TCE	cDCE	tDCE	VC
12/2014 15 U	2170	41 I	819
12/2016 2.7 U	779	20.1	383
12/2018 0.35 U	6.9	0.22 U	143

Well Location
Screen Interval (feet bgs)
TCE (Trichloroethene)
cDCE (cis-1,2-Dichloroethene)
tDCE (trans-1,2-Dichloroethene)
VC (Vinyl Chloride)
Concentration in ug/L, Pink background indicates >GCTL
Sample Date

TCE	3
cDCE	70
tDCE	100
VC	1

Note: Sample qualifier descriptions:
I - between MDL and the laboratory PQL
L - off-scale high
U - not detected at associated detection limit
V - analyte detected in sample and associated method blank

FIGURE 3-2
BASELINE AND QUARTERLY PERFORMANCE GROUNDWATER SAMPLING RESULTS
LAUNCH COMPLEX 34
CAPE CANAVERAL SPACE FORCE STATION, FLORIDA

100 0 100 Feet

SECTION IV
RECOMMENDATIONS

4.1 SITE-WIDE LONG-TERM MONITORING STRATEGY

It is recommended that site-wide monitoring under the LTM program be continued on a biennial frequency. The next biennial LTM event is scheduled for December 2022 at the locations listed in Table 4-1 and Figure 4-1. These recommendations were presented in the June 2022 KSCRT meeting and received concurrence from the Team (Meeting Minute 2206-M04). The meeting minutes are provided in Appendix E.

4.2 HYDRAULIC CONTAINMENT SYSTEM

Continued operation of the HC IM as conducted to date is recommended. The IM objectives continue to be achieved, and optimizations have resulted in increased treatment and recovery efficiencies. The following items were recommended at the June 2022 KSCRT meeting for the next year of operations and received concurrence from the Team (2206-M04, Decisions D02 and D03):

- Installation of a new recovery well, screened from 90 to 100 ft bls, in the vicinity of RW20C (screened 80 to 95 ft bls) to manage recent TCE detections in monitoring well, IW0162. Pumping rates will be tested and adjusted to maximize new recovery well influence and recovery;
- Continued operation of the oxidizer for offgas treatment;
- Monthly sampling of aqueous effluent from the air strippers, and LPGAC when online;
- Quarterly sampling of combined system influent and individual recovery well influent;
- Annual sampling of vapor-phase CatOx influent and effluent;
- Annual sampling at the nine DPT locations in the DSZ (DPT593 to DPT601) at the same depth intervals as the 2021 event; and

- Annual sampling at 11 Layer 7/8 wells (IW0001D2, IW0042D2, IW0043D2, IW0044D2, IW0045D2, IW0160, IW0161, IW0162, IW0163, IW0164, IW0165). The next annual event is scheduled for December 2022.

4.3 HOT SPOT 6 AIR SPARGE SYSTEM

The HS 6 AS system is meeting performance criteria and IM objectives. Continued optimization of the current AS system is recommended to enhance and maintain operational objectives and flow rates will be adjusted as determined by performance monitoring. Once the Phase Two expansion is complete, construction completion information, OM&M, and quarterly performance monitoring data will be incorporated into subsequent Annual LC34 PMRs (2206-M04, Decision D05). The following items were recommended at the June 2022 KSCRT meeting for the next year of operation and received concurrence from the Team (2206-M04, Decision D04):

- Continued operation of 199 ASWs that are currently active (with some ASWs to be turned off when the Phase Two Expansion is installed and comes online);

- Continued routine O&M of the system; and

- Semi-annual performance monitoring at the 28 wells and 3 surface water locations (Table 4-1). The semi-annual samples will be collected in April and October 2022.

Table 4-1. LC34 Recommended Sitewide Sampling Plan for 2022

Sample Location (LC34-)	Sampling Function		
	Biennial LTM	Semi-annual HS 6 PM	Annual HCS PM
CW0002	X		
IW0001D2			X
IW0004S	X		
IW0005S	X		
IW0006I	X		
IW0009S	X		
IW0009I	X		
IW0010SR	X		
IW0010IR	X		
IW0011S	X		
IW0013I	X		
IW0014IR	X		
IW0018I	X		
IW0021I	X		
IW0022I	X		
IW0023I	X		
IW0024S	X		
IW0024I	X		
IW0025S	X		
IW0029S	X		
IW0029I	X		
IW0031I	X		
IW0032S	X		
IW0033I	X		
IW0036I	X		
IW0037S	X		
IW0037I	X		
IW0039I	X		
IW0042D2			X
IW0043D2			X
IW0044D2			X
IW0045D2			X
IW0051S	X		
IW0051I	X		
IW0054S	X		
IW0055I	X		
IW0057S		X	
IW0057I		X	
IW0058S	X		
IW0059S	X		

Table 4-1. LC34 Recommended Sitewide Sampling Plan for 2022 (Continued)

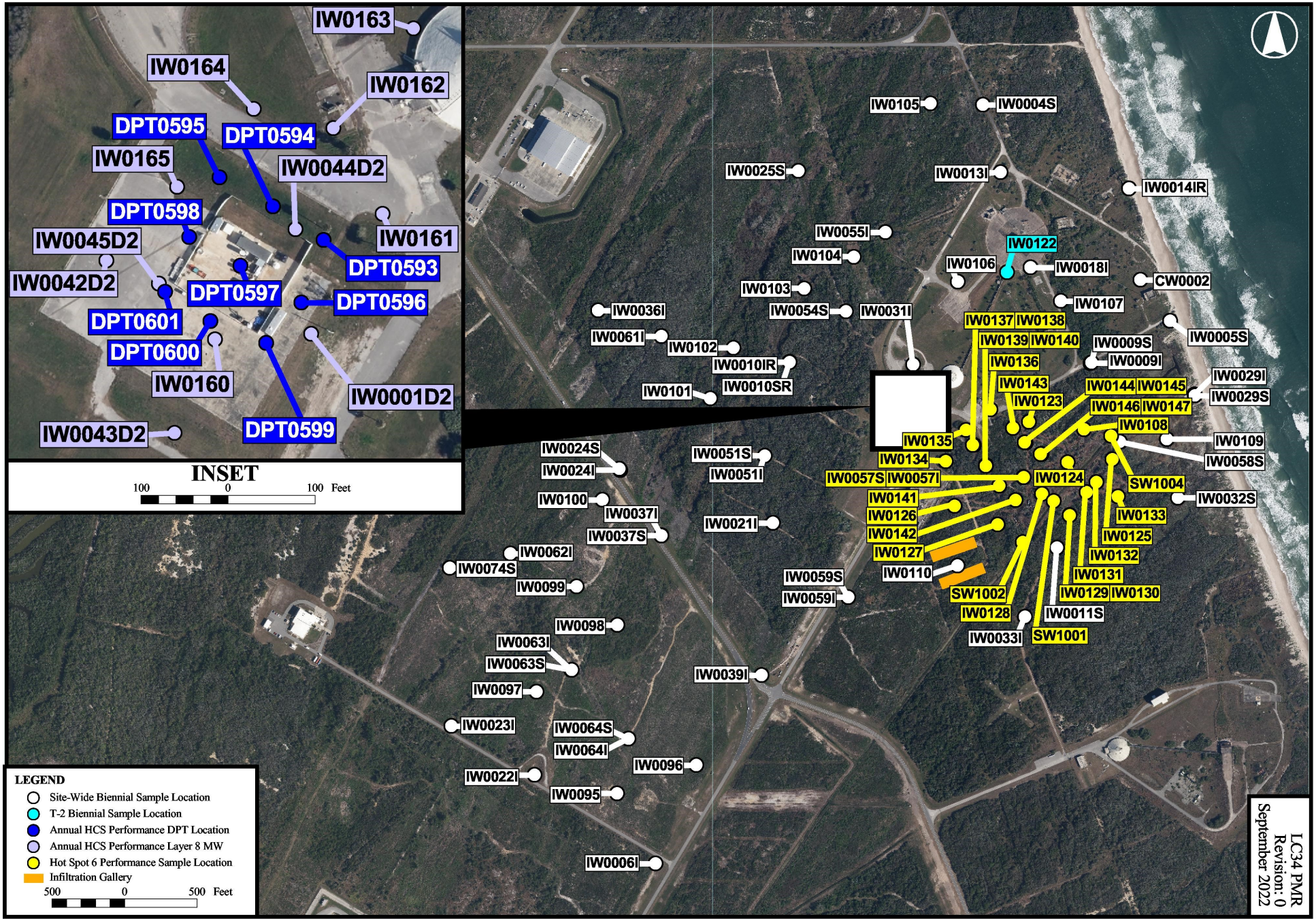
Sample Location (LC34-)	Sampling Function		
	Biennial LTM	Semi-annual HS 6 PM	Annual HCS PM
IW0059I	X		
IW0061I	X		
IW0062I	X		
IW0063S	X		
IW0063I	X		
IW0064S	X		
IW0064I	X		
IW0074S	X		
IW0095	X		
IW0096	X		
IW0097	X		
IW0098	X		
IW0099	X		
IW0100	X		
IW0101	X		
IW0102	X		
IW0103	X		
IW0104	X		
IW0105	X		
IW0106	X		
IW0107	X		
IW0108		X	
IW0109	X		
IW0110	X		
IW0122[(1)]	X		
IW0123		X	
IW0124		X	
IW0125		X	
IW0126		X	
IW0127		X	
IW0128		X	
IW0129		X	
IW0130		X	
IW0131		X	
IW0132		X	
IW0133		X	
IW0134		X	
IW0135		X	
IW0136		X	
IW0137		X	

Table 4-1. LC34 Recommended Sitewide Sampling Plan for 2022 (Continued)

Sample Location (LC34-)	Sampling Function		
	Biennial LTM	Semi-annual HS 6 PM	Annual HCS PM
IW0138		X	
IW0139		X	
IW0140		X	
IW0141		X	
IW0142		X	
IW0143		X	
IW0144		X	
IW0145		X	
IW0146		X	
IW0147		X	
SW1001		X	
SW1002		X	
SW1004		X	
IW0160			X
IW0161			X
IW0162			X
IW0163			X
IW0164			X
IW0165			X
DPT0593			X
DPT0594			X
DPT0595			X
DPT0596			X
DPT0597			X
DPT0598			X
DPT0599			X
DPT0600			X
DPT0601			X

Note:
Samples are analyzed for VOCs by EPA Method 8260B.
1 - well IW0122 is only analyzed for PCBs by Method 8082 to monitor the T2 Area.
At each DPT location 19 depth intervals are sampled; from 8 to 98 ft bls.
The next biennial sampling is December 2022.
The next annual sampling is December 2022.
The next semi-annual events are April 2022 and October 2022.

FIGURE 4-1 YEAR 13 GROUNDWATER SAMPLE LOCATIONS
LAUNCH COMPLEX 34, CAPE CANAVERAL SPACE FORCE STATION, FLORIDA



SECTION V
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APPENDIX A

GROUNDWATER SAMPLING LOGS AND FIELD DOCUMENTATION

(PROVIDED IN ELECTRONIC VERSION ONLY)

04/28/2021 LC34 112G08985

Personnel : Chuck Sorden (CS) Geologist TT
Weather : Sunny 80°F
PPE : Level D
Objective : Begin HSC supply

0800	CS on Base; Getting Equip/supplies; Calibrating			
1200	Purge	LC34-IW0133		
1215	Purge	Complete		
1220	Sample	Collected	LC34-IW0133-018.0-20210428	8260B
1235	Purge	LC34-IW0132		
1250	Purge	Complete		
1255	Sample	Collected	LC34-IW0132-018.0-20210428	8260B
1305	Purge	LC34-IW0131		
1320	Purge	Complete		
1325	Sample	Collected	LC34-IW0131-018.0-20210428	8260B
1340	Purge	LC34-IW0129		
1410	Purge	Complete		
1415	Sample	Collected	LC34-IW0129-018.0-20210428	8260B
1420	Purge	LC34-IW0130		
1435	Purge	Complete		
1440	Sample	Collected	LC34-IW0130-024.0-20210428	8260B
1450	Purge	LC34-IW0125		
1505	Purge	Complete		
1510	Sample	Collected	LC34-IW0125-018.0-20210428	8260B
1530	Sample	Collected	LC34-SW1001-000.5-20210428	8260B
1550	Sample	Collected	LC34-SW1002-000.5-20210428	8260B
1610	Sample	Collected	LC34-SW1004-000.5-20210428	8260B
1700	Offsite			

NO ALTERATION
Begun 04/28/21
@1700

04/29/2021 LC34 112G08985

Personnel : Chuck Sorden (CS) Geologist TT
Weather : Sunny 77°F
PPE : Level D
Objective : Continue HSG Sampling

0815	CS on Base; Getting Equipment/Supplies; Calibrating		
0940	Purge LC34-IW0108		
1005	Purge Complete		
1010	Sample Collected	LC34-IW0108-024.0-20210429	U8260 SL
1025	Purge LC34-IW0124		
1105	Purge Complete		
1110	Sample Collected	LC34-IW0124-018.0-20210429	U8260SL
1120	Purge LC34-IW0128		
1145	Purge Complete		
1150	Sample collected	LC34-IW0128-018.0-20210429	U8260SL
1200	Purg LC34-IW0142		
1245	Purge Complete		
1250	Sample Collected	LC34-IW0142-024.0-20210429	U8260SL
1300	Purge LC34-IW0127		
1340	Purge Complete		
1345	Sample Collected	LC34-IW0127-024.0-20210429	U8260SL
1400	Purge LC34-IW0141		
1435	Purge Complete		
1440	Sample Collected	LC34-IW0141-024.0-20210429	U8260 SL
1450	Purg LC34-IW0057$		
1525	Purge Complete		
1530	Sample Collected	LC34-IW0057$-007.7-20210429	U8260 SL
1550	CS offsite to meet Carmen		

NO Alternate
Beyond 04/29/2100
1550

04/30/2021 LC34 112G08585

Personnel : Chuck Sorden (CS) Geologist II
Weather : Sunny 76°F
PPE : Level D
Objective : Complete GW Sampling @ HSG

0730	CS on Base; Gathering Equipment/ Supplies; Calibrating		
0900	Purging LC34-IW0057I		
0915	Purge Complete		
0920	Sample Collected	LC34-IW0057I-025.5-20210430	U8260SL
0935	Purging LC34-IW0146		
1020	Purge Complete		
1025	Sample Collected	LC34-IW0146-018.0-20210430	U8260SL
1030	Purge LC34-IW0147		
1110	Purging Complete		
1115	Sample Collected	LC34-IW0147-024.0-20210430	U8260SL
1125	Purging LC34-IW0144		
1155	Purging Complete		
1200	Sample Collected	LC34-IW0144-024.0-20210430	U8260SL
1205	Purge LC34-IW0145		
1220	Purge Complete		
1225	Sample Collected	LC34-IW0145-031.5-20210430	U8260SL
1235	Purging LC34-IW0123		
1250	Purging Complete		
1255	Sample Collected	LC34-IW0123-024.0-20210430	U8260SL
1305	Purge LC34-IW0143		
1335	Purging Complete		
1340	Sample Collected	LC34-IW0143-024.0-20210430	U8260SL
1350	Purging LC34-IW0126		
1405	Purging Complete		
1410	Sample Collected	LC34-IW0126-024.0-20210430	U8260SL
1450	Purge LC34-IW0045D2		
1520	Purging Complete		
1525	Sample Collected	LC34-IW0045D2-110.0-20210430	U8260SL
1545	CS offsite to meet Carrier		
1605	Samples Relinquished; CS departs for Office		

NO Alterations
Beyond 04/30/21 @ 1605

April 23, 2021 LC34 HS6 GW Sampling

Site	LC34 HS6
Objective	GW Sampling
Personnel	MB, Melissa Bennett, Env Engineer.
Weather	84°F
PPE	Level D

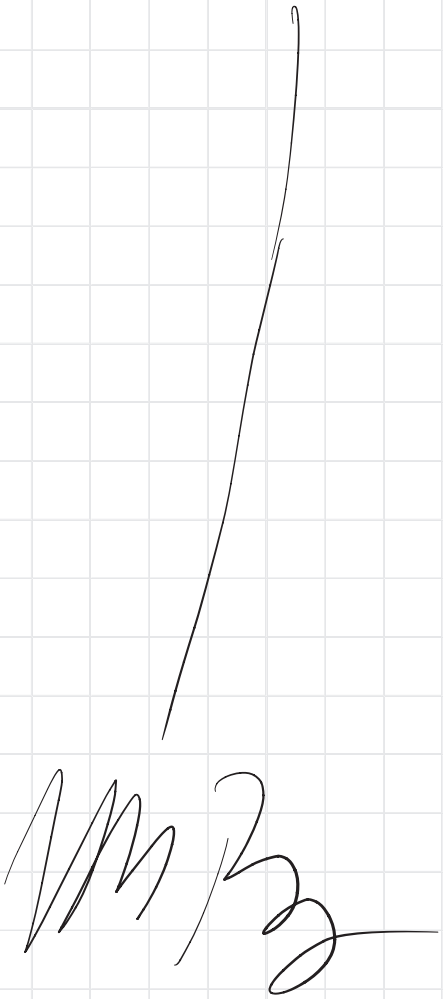
0630 MB at Cocoa office, gathering + dropping off various field supplies.
0700 MB head to NASA
0725 MB at KMFN, gathering supplies + Calibrating equipment.
0810 Calibration complete. MB to LC34.
0840 MB onsite LC34, talk with Chuck Soiden about sampling event and confirm I have everything needed. MB prep paperwork.
0905 MB initiate purge at IW0136
0930 MB collect LC34-IW0136-024.0-20210423 - 3 VOA vials with HCl - VOC
0940 MB initiate purge at IW0137
1010 MB collect LC34-IW0137-024.0-20210423
1020 MB initiate purge at IW0138
1040 MB collect LC34-IW0138-031.5-20210423
1050 MB returning emails / phone calls
1125 MB initiating purge at IW0134
1150 MB collect LC34-IW0134-024.0-20210423
1210 MB initiate purge at IW0140
1245 MB collect LC34-IW0140-024.0-20210423
1300 MB initiate purge at IW0139
1325 MB collect LC34-IW0139-018.0-20210423
1340 MB initiate purge at MW0006I
1420 MB collect LC34-IW0006I-025.5-20210423
1425 MB to fenced in area to put purge water into the system
1440 MB initiate purge at IW0135
1500 MB collect LC34-IW0135-024.0-20210423
1515 MB to fenced in area to put purge water through system + top off cooler with ice.
1530 MB offsite to CRCA to clean + put away equipment.

April 23, 2021

1600 MB at KSC badging waiting for SGS courier.

1620 Samples relinquished to SGS.

1630 MB offsite



Tetra Tech, Inc. CHAIN OF CUSTODY | NUMBER No. 2180 | PAGE 1 OF 2

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G08985	ITSC-LC34	Mark Sonnet	(412) 921-8622	SGS - Andrea Colby
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER	PHONE NUMBER	ADDRESS
Chuck Sorden		Chuck Sorden	(321) 591-7580	4405 Vineland Rd. Ste. C-15
		CARRIER/WAYBILL NUMBER		CITY, STATE
				Orlando, FL

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR 2021	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	CONTAINER TYPE PLASTIC (P) or GLASS (G): G	PRESERVATIVE USED: HCl	TYPE OF ANALYSIS: VOA 8260 SL	COMMENTS
04/28	1220	LC34-IW0133-018.0-20210428		13	23	GW	G	3	X			
↑	1255	LC34-IW0132-018.0-20210428		13	23	↑	↑	↑	↑			
	1325	LC34-IW0131-018.0-20210428		13	23							
	1415	LC34-IW0129-018.0-20210428		13	23							
	1440	LC34-IW0130-024.0-20210428		20	28							
	1510	LC34-IW0125-018.0-20210428		13	23	GW						
	1530	LC34-SW1001-000.5-20210428		0.0	0.5	SW						
↓	1550	LC34-SW1002-000.5-20210428		0.0	0.5	↓						
04/28	1610	LC34-SW1004-000.5-20210428		0.0	0.5	SW						
04/29	1010	LC34-IW0128-024.0-20210429		20	28	GW						
↑	1110	LC34-IW0124-018.0-20210429		13	23	↑						
↓	1150	LC34-IW0128-018.0-20210429		13	23	↓	↓	↓	↓			
04/29	1250	LC34-IW0142-024.0-20210429		20	28	GW	G	3	X			

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	04/29/2021	1605	1. RECEIVED BY	4/29	1605
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

Tetra Tech, Inc. CHAIN OF CUSTODY | NUMBER No. 2180 | PAGE 1 OF 2

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G08985	RSC-LC34	Mark Sonnen	(412) 921-8622	SGS - Andrew Colby
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER	PHONE NUMBER	ADDRESS
Chuck Sorden		Chuck Sorden	(321) 591-7580	4405 Vineland Rd. Ste. C-15
		CARRIER/WAYBILL NUMBER		CITY, STATE
				Orlando, FL

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR 2021	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	CONTAINER TYPE PLASTIC (P) or GLASS (G)	PRESERVATIVE USED	TYPE OF ANALYSIS: VOA 8260 SL	COMMENTS
									G	1161		
04/28	1220	LC34-IW0133-018.0-20210428		13	23	GW	G	3			X	
↑	1255	LC34-IW0132-018.0-20210428		13	23	↑	↑	↑			↑	
	1325	LC34-IW0131-018.0-20210428		13	23							
	1415	LC34-IW0129-018.0-20210428		13	23							
	1440	LC34-IW0130-024.0-20210428		20	28	↓						
	1510	LC34-IW0125-018.0-20210428		13	23	GW						
	1530	LC34-SW1001-000.5-20210428		0.0	0.5	SW						
↓	1550	LC34-SW1002-000.5-20210428		0.0	0.5	↓						
04/28	1610	LC34-SW1004-000.5-20210428		0.0	0.5	SW						
04/29	1010	LC34-IW0108-024.0-20210429		20	28	GW						
↑	1110	LC34-IW0124-018.0-20210429		13	23	↑						
↓	1150	LC34-IW0128-018.0-20210429		13	23	↓	↓	↓	↓			
04/29	1250	LC34-IW0142-024.0-20210429		20	28	GW	G	3	X			

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	04/29/2021	1605	1. RECEIVED BY	4/29	1605
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

Tetra Tech, Inc.

CHAIN OF CUSTODY | NUMBER No. 2181 | PAGE 2 OF 2

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G08985	KSC-LC34	Mark Sonnet	(412) 921-8622	SGS - Andrea Colby
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER	PHONE NUMBER	ADDRESS
[signature] Chuck Sarden		Chuck Sarden	(321) 591-7580	4405 Vineland Rd. Ste. C-15
		CARRIER/WAYBILL NUMBER		CITY, STATE
				Orlando, FL

STANDARD TAT ☑
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G

PRESERVATIVE USED: HCl

TYPE OF ANALYSIS: V8260SL

DATE YEAR 2021	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	V8260SL							COMMENTS
04/29	1345	LC34-IW0127-024.0-20210429		20	28	GW	G	3	X							
↓	1440	LC34-IW0141-024.0-20210429		20	28	↓	↓	↓	↓							
04/29	1530	LC34-~~IW0141-0~~ IW00575-007.7-20210429		~~2.9~~ 4.4	11	GW	G	3	X							

1. RELINQUISHED BY	DATE	TIME	1. RECEIVED BY	DATE	TIME
[signature]	04/29/2021	1605	JS	4/29	1605
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

Tetra Tech, Inc.

CHAIN OF CUSTODY | NUMBER No. 2181 | PAGE 2 OF 2

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G08985	KSC-LC34	Mark Sonner	(412) 921-8622	SGS - Andy Colby
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER	PHONE NUMBER	ADDRESS
Chuck Sorden		Chuck Sorden	(321) 591-7580	4405 Vineland Rd Ste. C-15
		CARRIER/WAYBILL NUMBER		CITY, STATE
				Orlando, FL

STANDARD TAT ☑
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR 2021	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	CONTAINER TYPE PLASTIC (P) or GLASS (G)	PRESERVATIVE USED	TYPE OF ANALYSIS: VOCs								COMMENTS
									G	HCl									
04/29	1345	LC34-IW0127-024.0-20210429		20	28	GW	G	3			X								
〃	1440	LC34-IW0141-024.0-20210429		20	28	〃	〃	〃			〃								
04/29	1530	LC34-~~IW0075-0077~~-20210429		24	11	GW	G	3			X								

1. RELINQUISHED BY	DATE 04/29/2021	TIME 16:05	1. RECEIVED BY	DATE 4/29	TIME 16:05
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

Tetra Tech, Inc. CHAIN OF CUSTODY | NUMBER No. 2182 | PAGE 1 OF 1

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G08985	KSC-LC34	Mark Jonnet	(412) 921-8622	SGS — Andrea Colby
SAMPLERS (SIGNATURE)		**FIELD OPERATIONS LEADER**	**PHONE NUMBER**	**ADDRESS**
Chuck Sorden		Chuck Sorden	(321) 591-7580	4405 Vineland Rd. Ste. C-15
		CARRIER/WAYBILL NUMBER		**CITY, STATE**
				Orlando, FL

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR 2021	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	CONTAINER TYPE PLASTIC (P) or GLASS (G): G	PRESERVATIVE USED: HCl	TYPE OF ANALYSIS: V8260 SL	COMMENTS
04/30	0920	LC34-IW0057I-025.5-202	0430	23	28	GW	G	3	X			
"	1025	LC34-IW0146-018.0-202	0430	13	23	"	"	"	"			
	1115	LC34-IW0147-024.0-202	0430	20	28							
	1200	LC34-IW0144-024.0-202	0430	20	28							
	1225	LC34-IW0145-031.5-202	0430	29	34							
	1255	LC34-IW0123-024.0-202	0430	20	28							
	1340	LC34-IW0143-024.0-202	0430	20	28							
	1410	LC34-IW0126-024.0-202	0430	20	28							
04/30	1525	LC34-IW0045D2-110.0-202	0430	105	115	GW	G	3	X			

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	04/30/2021	1605	1. RECEIVED BY JS 4/30	1605	
2. RELINQUISHED BY			2. RECEIVED BY		
3. RELINQUISHED BY			3. RECEIVED BY		

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

Tetra Tech, Inc. CHAIN OF CUSTODY | NUMBER No. 2182 | PAGE 1 OF 1

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G06985	KSC-LC34	Mark Jones	(412) 921-8622	SGS — Andy Colly
SAMPLERS (SIGNATURE)		**FIELD OPERATIONS LEADER**	**PHONE NUMBER**	**ADDRESS**
Chuck Sorden		Chuck Sorden	(321) 591-7580	4405 Vineland Rd Ste. C-15
		CARRIER/WAYBILL NUMBER		**CITY, STATE**
				Orlando, FL

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR 2021	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	CONTAINER TYPE PLASTIC (P) or GLASS (G): G	PRESERVATIVE USED: HCl	TYPE OF ANALYSIS: VOCs SL	COMMENTS
04/30	0920	LC34-IW00571-025.5-2021	10430	23	28	GW	G	3	X			
↑	1025	LC34-IW0146-018.0-202	10430	13	23	↑	↑	↑	↑			
	1115	LC34-IW0147-024.0-202	10430	20	28							
	1200	LC34-IW0144-024.0-202	10430	20	28							
	1225	LC34-IW0145-031.5-202	10430	29	34							
	1255	LC34-IW0123-024.0-202	10430	20	28							
	1340	LC34-IW0143-024.0-2021	10430	20	28							
↓	1410	LC34-IW0126-024.0-2021	10430	20	28	↓	↓	↓	↓			
04/30	1525	LC34-IW0145D2-110.0-202	10430	105	115	GW	G	3	X			

1. RELINQUISHED BY	DATE	TIME	1. RECEIVED BY	DATE	TIME
	04/30/2021	1605	JS 4/30	1605	
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

SITE NAME: LC34 HS6	SITE LOCATION: Kennedy Space Center	
LOCATION ID: 6I	SAMPLE ID: LC34-IW0 0061 0255 — 20210423 Sample depth (ddd.d)=[bottom of screen (feet bls)-Top depth] x 0.5-bottom of screen (feet bls)	DATE: 04-23-2021

PURGING DATA

STATIC DEPTH TO WATER (feet btoc): 4.61	CASING HEIGHT (feet als): -0.05	STATIC DEPTH TO WATER (feet bls) = DTW (btoc) - Casing Height (feet als): 4.66	WELL SCREEN INTERVAL DEPTH (feet bls): to 23-28

WELL DIAMETER (inches): 1	TUBING DIAMETER (inches): 1/8	PURGE PUMP TYPE OR BAILER: Peristaltic Pump	TOP DEPTH = top of screen or depth to water which ever is greatest (feet bls): 23	BOTTOM DEPTH (feet bls): 28

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
_____Liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
0.32 Liters 0 + (0.002 x 35) + 0.25 =

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 25.5	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 25.5	PURGING INITIATED AT: 1340	PURGING ENDED AT: 1415	TOTAL VOLUME PURGED (Liters): 8.75

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (mlpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	ORP (mV)	COLOR (describe)
1405	6.25	6.25	250	4.63	7.76	22.1	3855	0.16	3.21	59.0	clear
1410	1.25	7.50	250	4.63	7.76	22.1	3859	0.15	3.05	59.8	clear
1415	1.25	8.75	250	4.63	7.77	22.1	3861	0.15	3.17	59.6	clear
1420	Sampling										

WELL CAPACITY (Liters Per Foot): **0.75"** = 0.076; **1"** = 0.15; **1.25"** = 0.23; **2"** = 0.61; **3"** = 1.40; **4"** = 2.46; **5"** = 3.86; **6"** = 5.57; **12"** = 22.26
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): **1/8"** = 0.002; **3/16"** = 0.005; **1/4"** = 0.0098; **5/16"** = 0.015; **3/8"** = 0.023; **1/2"** = 0.038; **5/8"** = 0.06

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Melissa Bennett /tetra tech	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1420	SAMPLING ENDED AT: 1425
PUMP OR TUBING DEPTH IN WELL (feet): 25.5	SAMPLE PUMP: SM FLOW RATE (mL per minute): 100	TUBING MATERIAL CODE: Teflon	
FIELD DECONTAMINATION: **(Y)** N	FIELD-FILTERED: Y **(N)** FILTER SIZE: ____ µm Filtration Equipment Type: _____	DUPLICATE: Y **(N)**	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
1	3	CG	40 ml	HCl	None	<2	SW-846 8260B	SM

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

SITE NAME: LC34	SITE LOCATION: Kennedy Space Center	
LOC ID: LC34-IW057I	SAMPLE ID: **LC34-IW0057I-025.5-20210430** Sample depth (ddd.d)=[bottom of screen (feet bls)-Top depth] x 0.5-bottom of screen (feet bls)	DATE: **04/30/2021**

PURGING DATA

STATIC DEPTH TO WATER (feet btoc): 7.87	CASING HEIGHT (feet als): 3.5	STATIC DEPTH TO WATER (feet bls) = DTW (btoc) - Casing Height (feet als):	WELL SCREEN INTERVAL DEPTH (feet bls): 23-28

WELL DIAMETER (inches): 1.0	TUBING DIAMETER (inches): 3/16	PURGE PUMP TYPE OR BAILER: **Peristaltic Pump**	TOP DEPTH = top of screen or depth to water which ever is greatest (feet bls): 23	BOTTOM DEPTH (feet bls): 28

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

_____Liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

0.67 Liters. (0.005 x 38) + 0.475 = 0.67

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 25.5	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 25.5	PURGING INITIATED AT: 0900	PURGING ENDED AT: 0915	TOTAL VOLUME PURGED (Liters): 3.0

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (mlpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (^{O}C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	ORP (mV)	COLOR (describe)
0910	2.0	2.0	200	8.11	7.10	25.70	2898.7	0.76	2.77	217.3	Clear
0912	0.4	2.4	200	8.11	7.10	25.65	2868.6	0.69	1.09	206.3	Clear
0915	0.6	3.0	200	8.11	7.10	25.65	2931.3	0.66	1.43	211.0	Clear
0920	Sample	Collected									

WELL CAPACITY (Liters Per Foot): **0.75"** = 0.076; **1"** = 0.15; **1.25"** = 0.23; **2"** = 0.61; **3"** = 1.40; **4"** = 2.46; **5"** = 3.86; **6"** = 5.57; **12"** = 22.26
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): **1/8"** = 0.002; **3/16"** = 0.005; **1/4"** = 0.0098; **5/16"** = 0.015; **3/8"** = 0.023; **1/2"** = 0.038; **5/8"** = 0.06

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Charles Sorden/Tt	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 0920	SAMPLING ENDED AT: 0925

PUMP OR TUBING DEPTH IN WELL (feet): 25.5	SAMPLE PUMP: FLOW RATE (mL per minute): 200	TUBING MATERIAL CODE: Teflon

FIELD DECONTAMINATION: **(Y)** N	FIELD-FILTERED: Y **(N)** FILTER SIZE___ µm Filtration Equipment Type: _____	DUPLICATE: Y **(N)**

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
1	3	CG	40 ml	HCl	None	<2	SW-846 8260B	APP

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP =** Peristaltic Pump **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

SITE NAME: LC34	SITE LOCATION: Kennedy Space Center	
LOC ID: LC34-IW057S	SAMPLE ID: **LC34-IW0057S-007.7-20210429** Sample depth (ddd.d)=[bottom of screen (feet bls)-Top depth] x 0.5-bottom of screen (feet bls)	DATE: **04/29/2021**

PURGING DATA

STATIC DEPTH TO WATER (feet btoc): 7.88	CASING HEIGHT (feet als): 3.5	STATIC DEPTH TO WATER (feet bls) = DTW (btoc) - Casing Height (feet als): 4.38	WELL SCREEN INTERVAL DEPTH (feet bls): 01-11	
WELL DIAMETER (inches): 1.0	TUBING DIAMETER (inches): 3/16	PURGE PUMP TYPE OR BAILER: **Peristaltic Pump**	TOP DEPTH = top of screen or depth to water which ever is greatest (feet bls): 3.2	BOTTOM DEPTH (feet bls): 11

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

0.93 Liters. (11-4.38) x 0.15 = 0.99

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

_____Liters

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 7.7	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 7.7	PURGING INITIATED AT: 1450	PURGING ENDED AT: 1525	TOTAL VOLUME PURGED (Liters): 4.5

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (mlpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (^{O}C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	ORP (mV)	COLOR (describe)
1500	1.5	1.5	150	7.99	7.21	26.82	1941.0	2.46	1.00	153.6	Clear
1510	1.5	3.0	150	7.99	7.21	26.75	1903.1	2.98	0.92	150.9	Clear
1520	1.0	4.0	100	7.94	7.22	27.45	1932.4	3.24	1.75	147.8	Clear
1522	0.2	4.2	100	7.94	7.21	27.39	1924.9	3.23	2.05	147.8	Clear
1525	0.3	4.5	100	7.94	7.21	27.41	1922.0	3.23	2.70	147.7	Clear
1530	Sample	Collected									

WELL CAPACITY (Liters Per Foot): **0.75"** = 0.076; **1"** = 0.15; **1.25"** = 0.23; **2"** = 0.61; **3"** = 1.40; **4"** = 2.46; **5"** = 3.86; **6"** = 5.57; **12"** = 22.26
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): **1/8"** = 0.002; **3/16"** = 0.005; **1/4"** = 0.0098; **5/16"** = 0.015; **3/8"** = 0.023; **1/2"** = 0.038; **5/8"** = 0.06

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Charles SordenTt	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1530	SAMPLING ENDED AT: 1535
PUMP OR TUBING DEPTH IN WELL (feet): 7.7	SAMPLE PUMP: FLOW RATE (mL per minute): 100	TUBING MATERIAL CODE: Teflon	
FIELD DECONTAMINATION: **(Y)** N	FIELD-FILTERED: Y **(N)** FILTER SIZE___ µm Filtration Equipment Type: _____	DUPLICATE: Y **(N)**	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
1	3	CG	40 ml	HCl	None	<2	SW-846 8260B	APP

REMARKS: High D.O. from air sparging. All parameters stable. Sampled per FS2212

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP =** Peristaltic Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

SITE NAME: LC34	SITE LOCATION: Kennedy Space Center	
LOC ID: LC34-IW0108	SAMPLE ID: **LC34-IW0108-024.0-20210429** Sample depth (ddd.d)=[bottom of screen (feet bls)-Top depth] x 0.5-bottom of screen (feet bls)	DATE: **04/29/2021**

PURGING DATA

STATIC DEPTH TO WATER (feet btoc): 5.51	CASING HEIGHT (feet als): 2.5	STATIC DEPTH TO WATER (feet bls) = DTW (btoc) - Casing Height (feet als): NA	WELL SCREEN INTERVAL DEPTH (feet bls): 20-28

WELL DIAMETER (inches): 1.0	TUBING DIAMETER (inches): 3/16	PURGE PUMP TYPE OR BAILER: **Peristaltic Pump**	TOP DEPTH = top of screen or depth to water which ever is greatest (feet bls): 20	BOTTOM DEPTH (feet bls): 28

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

_____Liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

0.67 Liters. (0.005 x 38) + 0.475 = 0.67

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 24	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 24	PURGING INITIATED AT: 0940	PURGING ENDED AT: 1005	TOTAL VOLUME PURGED (Liters): 5.0

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (mlpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (^{O}C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	ORP (mV)	COLOR (describe)
1000	4.0	4.0	200	5.55	7.23	24.67	3655.9	1.55	7.85	211.8	Clear
1002	0.4	4.4	200	5.55	7.24	24.71	3624.4	1.54	7.83	210.8	Clear
1005	0.6	5.0	200	5.55	7.23	24.81	3524.9	1.54	6.37	209.4	Clear
1010	Sample	Collected									

WELL CAPACITY (Liters Per Foot): **0.75"** = 0.076; **1"** = 0.15; **1.25"** = 0.23; **2"** = 0.61; **3"** = 1.40; **4"** = 2.46; **5"** = 3.86; **6"** = 5.57; **12"** = 22.26
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): **1/8"** = 0.002; **3/16"** = 0.005; **1/4"** = 0.0098; **5/16"** = 0.015; **3/8"** = 0.023; **1/2"** = 0.038; **5/8"** = 0.06

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Charles Sorden/Tt	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1010	SAMPLING ENDED AT: 1015
PUMP OR TUBING DEPTH IN WELL (feet): 24.0	SAMPLE PUMP: FLOW RATE (mL per minute): 200	TUBING MATERIAL CODE: Teflon	
FIELD DECONTAMINATION: **(Y)** N	FIELD-FILTERED: Y **(N)** FILTER SIZE___ µm Filtration Equipment Type: _____	DUPLICATE: Y **(N)**	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
1	3	CG	40 ml	HCl	None	<2	SW-846 8260B	APP

REMARKS:
High D.O. from air sparging. All other parameters stable. Sampled per FS 2212.

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP =** Peristaltic Pump **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

SITE NAME: LC34	SITE LOCATION: Kennedy Space Center	
LOC ID: LC34-IW0123	SAMPLE ID: **LC34-IW0123-024.0-20210430** Sample depth (ddd.d)=[bottom of screen (feet bls)-Top depth] x 0.5-bottom of screen (feet bls)	DATE: **04/30/2021**

PURGING DATA

STATIC DEPTH TO WATER (feet btoc): 5.01	CASING HEIGHT (feet als): 0	STATIC DEPTH TO WATER (feet bls) = DTW (btoc) - Casing Height (feet als): NA	WELL SCREEN INTERVAL DEPTH (feet bls): 20-28

WELL DIAMETER (inches): 1.0	TUBING DIAMETER (inches): 3/16	PURGE PUMP TYPE OR BAILER: **Peristaltic Pump**	TOP DEPTH = top of screen or depth to water which ever is greatest (feet bls): 20	BOTTOM DEPTH (feet bls): 28

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

_____Liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

0.67 Liters. (0.005 x 38) + 0.475 = 0.67

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 24	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 24	PURGING INITIATED AT: 1235	PURGING ENDED AT: 1250	TOTAL VOLUME PURGED (Liters): 3.0

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (mlpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (^{O}C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	ORP (mV)	COLOR (describe)
1245	2.0	2.0	200	5.21	7.04	26.06	1946.5	0.16	6.98	-60.8	Clear
1247	0.4	2.4	200	5.21	7.04	26.00	1887.3	0.14	5.57	-64.8	Clear
1250	0.6	3.0	200	5.21	7.05	25.78	1883.8	0.14	6.21	-65.4	Clear
1255	Sample	Collected									

WELL CAPACITY (Liters Per Foot): **0.75"** = 0.076; **1"** = 0.15; **1.25"** = 0.23; **2"** = 0.61; **3"** = 1.40; **4"** = 2.46; **5"** = 3.86; **6"** = 5.57; **12"** = 22.26
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): **1/8"** = 0.002; **3/16"** = 0.005; **1/4"** = 0.0098; **5/16"** = 0.015; **3/8"** = 0.023; **1/2"** = 0.038; **5/8"** = 0.06

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Charles Sorden/Tt	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1255	SAMPLING ENDED AT: 1300
PUMP OR TUBING DEPTH IN WELL (feet): 24.0	SAMPLE PUMP: FLOW RATE (mL per minute): 200	TUBING MATERIAL CODE: Teflon	
FIELD DECONTAMINATION: **(Y)** N	FIELD-FILTERED: Y **(N)** FILTER SIZE___ µm Filtration Equipment Type: _____	DUPLICATE: Y **(N)**	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
1	3	CG	40 ml	HCl	None	<2	SW-846 8260B	APP

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP =** Peristaltic Pump **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

SITE NAME: LC34	SITE LOCATION: Kennedy Space Center	
LOC ID: LC34-IW0124	SAMPLE ID: **LC34-IW0124-018.0-20210429** Sample depth (ddd.d)=[bottom of screen (feet bls)-Top depth] x 0.5-bottom of screen (feet bls)	DATE: **04/29/2021**

PURGING DATA

STATIC DEPTH TO WATER (feet btoc): 2.99	CASING HEIGHT (feet als): 0	STATIC DEPTH TO WATER (feet bls) = DTW (btoc) - Casing Height (feet als):	WELL SCREEN INTERVAL DEPTH (feet bls): 13-23	
WELL DIAMETER (inches): 1.0	TUBING DIAMETER (inches): 3/16	PURGE PUMP TYPE OR BAILER: **Peristaltic Pump**	TOP DEPTH = top of screen or depth to water which ever is greatest (feet bls): 13	BOTTOM DEPTH (feet bls): 23

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

_____Liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

0.63 Liters. (0.005 x 33) + 0.475 = 0.63

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 18	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 18	PURGING INITIATED AT: 1025	PURGING ENDED AT: 1105	TOTAL VOLUME PURGED (Liters): 6.0

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (mlpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (^{O}C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	ORP (mV)	COLOR (describe)
1045	4.0	4.0	200	3.01	6.94	26.58	3808.0	3.95	5.75	202.0	Clear
1050	0.5	4.5	100	3.01	6.94	26.70	3738.1	4.00	2.07	197.2	Clear
1055	0.5	5.0	100	3.00	6.93	26.56	3728.5	4.02	3.91	193.2	Clear
1105	1.0	6.0	100	3.0	6.94	26.71	3656.2	3.96	4.18	189.6	Clear
1110	Sample	Collected									

WELL CAPACITY (Liters Per Foot): **0.75"** = 0.076; **1"** = 0.15; **1.25"** = 0.23; **2"** = 0.61; **3"** = 1.40; **4"** = 2.46; **5"** = 3.86; **6"** = 5.57; **12"** = 22.26
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): **1/8"** = 0.002; **3/16"** = 0.005; **1/4"** = 0.0098; **5/16"** = 0.015; **3/8"** = 0.023; **1/2"** = 0.038; **5/8"** = 0.06

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Charles Sorden/Tt	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1110	SAMPLING ENDED AT: 1115
PUMP OR TUBING DEPTH IN WELL (feet): 18.0	SAMPLE PUMP: FLOW RATE (mL per minute): 200	TUBING MATERIAL CODE: Teflon	
FIELD DECONTAMINATION: **(Y)** N	FIELD-FILTERED: Y **(N)** FILTER SIZE___ µm Filtration Equipment Type: _____	DUPLICATE: Y **(N)**	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
1	3	CG	40 ml	HCl	None	<2	SW-846 8260B	APP

REMARKS:
High D.O. from air sparging. All other parameters stable. Sampled per FS2212.

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP =** Peristaltic Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

SITE NAME: LC34	SITE LOCATION: Kennedy Space Center	
LOC ID: LC34-IW0125	SAMPLE ID: **LC34-IW0125-018.0-20210428** Sample depth (ddd.d)=[bottom of screen (feet bls)-Top depth] x 0.5-bottom of screen (feet bls)	DATE: **04/28/2021**

PURGING DATA

STATIC DEPTH TO WATER (feet btoc): 2.14	CASING HEIGHT (feet als): 0	STATIC DEPTH TO WATER (feet bls) = DTW (btoc) - Casing Height (feet als):	WELL SCREEN INTERVAL DEPTH (feet bls): 13-23	
WELL DIAMETER (inches): 1.0	TUBING DIAMETER (inches): 3/16	PURGE PUMP TYPE OR BAILER: **Peristaltic Pump**	TOP DEPTH = top of screen or depth to water which ever is greatest (feet bls): 13	BOTTOM DEPTH (feet bls): 23

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

_____Liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

0.64 Liters. (0.005 x 33) + 0.475 = 0.64

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 18	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 18	PURGING INITIATED AT: 1450	PURGING ENDED AT: 1505	TOTAL VOLUME PURGED (Liters): 3.0

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (mlpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (^{O}C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	ORP (mV)	COLOR (describe)
1500	2.0	2.0	200	2.23	7.16	25.31	6621.5	1.53	10.4	-141.3	Clear
1502	0.4	2.4	200	2.23	7.15	25.26	6488.9	1.42	8.61	-144.3	Clear
1505	0.6	3.0	200	2.23	7.15	25.16	6618.4	1.35	6.76	-147.5	Clear
1510	Sample	Collected									

WELL CAPACITY (Liters Per Foot): **0.75"** = 0.076; **1"** = 0.15; **1.25"** = 0.23; **2"** = 0.61; **3"** = 1.40; **4"** = 2.46; **5"** = 3.86; **6"** = 5.57; **12"** = 22.26
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): **1/8"** = 0.002; **3/16"** = 0.005; **1/4"** = 0.0098; **5/16"** = 0.015; **3/8"** = 0.023; **1/2"** = 0.038; **5/8"** = 0.06

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Charles Sorden/Tt	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1510	SAMPLING ENDED AT: 1515
PUMP OR TUBING DEPTH IN WELL (feet): 18.0	SAMPLE PUMP: FLOW RATE (mL per minute): 200	TUBING MATERIAL CODE: Teflon	
FIELD DECONTAMINATION: **(Y)** N	FIELD-FILTERED: Y **(N)** FILTER SIZE___ µm Filtration Equipment Type: _____	DUPLICATE: Y **(N)**	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
1	3	CG	40 ml	HCl	None	<2	SW-846 8260B	APP

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP =** Peristaltic Pump **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

SITE NAME: LC34	SITE LOCATION: Kennedy Space Center	
LOC ID: LC34-IW0126	SAMPLE ID: **LC34-IW0126-024.0-20210430** Sample depth (ddd.d)=[bottom of screen (feet bls)-Top depth] x 0.5-bottom of screen (feet bls)	DATE: **04/30/2021**

PURGING DATA

STATIC DEPTH TO WATER (feet btoc): 1..66	CASING HEIGHT (feet als): 0	STATIC DEPTH TO WATER (feet bls) = DTW (btoc) - Casing Height (feet als): NA	WELL SCREEN INTERVAL DEPTH (feet bls): 20-28	
WELL DIAMETER (inches): 1.0	TUBING DIAMETER (inches): 3/16	PURGE PUMP TYPE OR BAILER: **Peristaltic Pump**	TOP DEPTH = top of screen or depth to water which ever is greatest (feet bls): 20	BOTTOM DEPTH (feet bls): 28

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

_____Liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable) (0.005 x 38) + 0.475 = 0.67

0.67 Liters

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 24	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 24	PURGING INITIATED AT: 1350	PURGING ENDED AT: 1405	TOTAL VOLUME PURGED (Liters): 3.0

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (mlpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (^{O}C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	ORP (mV)	COLOR (describe)
1400	2.0	2.0	200	1.86	7.10	25.16	2083.3	0.12	4.09	-167.2	Clear
1402	0.4	2.4	200	1.86	7.10	25.12	2074.6	0.12	5.30	-170.8	Clear
1405	0.6	3.0	200	1.86	7.11	24.99	2015.8	0.11	3.25	-172.8	Clear
1410	Sample	Collected									

WELL CAPACITY (Liters Per Foot): **0.75"** = 0.076; **1"** = 0.15; **1.25"** = 0.23; **2"** = 0.61; **3"** = 1.40; **4"** = 2.46; **5"** = 3.86; **6"** = 5.57; **12"** = 22.26
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): **1/8"** = 0.002; **3/16"** = 0.005; **1/4"** = 0.0098; **5/16"** = 0.015; **3/8"** = 0.023; **1/2"** = 0.038; **5/8"** = 0.06

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Charles Sorden	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1410	SAMPLING ENDED AT: 1415
PUMP OR TUBING DEPTH IN WELL (feet): 24.0	SAMPLE PUMP: FLOW RATE (mL per minute): 200	TUBING MATERIAL CODE: Teflon	
FIELD DECONTAMINATION: **(Y)** N	FIELD-FILTERED: Y **(N)** FILTER SIZE___ µm Filtration Equipment Type: _____	DUPLICATE: Y **(N)**	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
1	3	CG	40 ml	HCl	None	<2	SW-846 8260B	APP

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP =** Peristaltic Pump **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

SITE NAME: LC34	SITE LOCATION: Kennedy Space Center	
LOC ID: LC34-IW0127	SAMPLE ID: **LC34-IW0127-024.0-20210429** Sample depth (ddd.d)=[bottom of screen (feet bls)-Top depth] x 0.5-bottom of screen (feet bls)	DATE: **04/29/2021**

PURGING DATA

1STATIC DEPTH TO WATER (feet btoc): 4.17	CASING HEIGHT (feet als): 0	STATIC DEPTH TO WATER (feet bls) = DTW (btoc) - Casing Height (feet als):	WELL SCREEN INTERVAL DEPTH (feet bls): 20-28

WELL DIAMETER (inches): 1.0	TUBING DIAMETER (inches): 3/16	PURGE PUMP TYPE OR BAILER: **Peristaltic Pump**	TOP DEPTH = top of screen or depth to water which ever is greatest (feet bls): 20	BOTTOM DEPTH (feet bls): 28

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

_____Liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

0.67 Liters. (0.005 x 38) + 0.475 = 0.67

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 24	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 24	PURGING INITIATED AT: 1300	PURGING ENDED AT: 1340	TOTAL VOLUME PURGED (Liters): 8.0

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (mlpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (^{O}C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	ORP (mV)	COLOR (describe)
1320	4.0	4.0	200	4.28	6.89	26.32	2227.8	1.80	7.32	156.7	Clear
1330	2.0	6.0	200	4.28	6.89	26.32	2194.6	1.61	9.57	152.7	Clear
1335	1.0	7.0	200	4.28	6.91	26.34	2356.2	1.71	9.51	150.8	Clear
1337	0.4	7.4	200	4.28	6.90	26.25	2296.6	1.62	6.81	150.5	Clear
1340	0.6	8.0	200	4.28	6.90	26.24	2352.4	1.59	6.36	149.9	Clear
1345	Sample	Collected									

WELL CAPACITY (Liters Per Foot): **0.75"** = 0.076; **1"** = 0.15; **1.25"** = 0.23; **2"** = 0.61; **3"** = 1.40; **4"** = 2.46; **5"** = 3.86; **6"** = 5.57; **12"** = 22.26
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): **1/8"** = 0.002; **3/16"** = 0.005; **1/4"** = 0.0098; **5/16"** = 0.015; **3/8"** = 0.023; **1/2"** = 0.038; **5/8"** = 0.06

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Charles Sorden/Tt	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1345	SAMPLING ENDED AT: 1350

PUMP OR TUBING DEPTH IN WELL (feet): 24.0	SAMPLE PUMP: FLOW RATE (mL per minute): 100	TUBING MATERIAL CODE: Teflon

FIELD DECONTAMINATION: **(Y)** N	FIELD-FILTERED: Y **(N)** FILTER SIZE___ µm Filtration Equipment Type: _____	DUPLICATE: Y **(N)**

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
1	3	CG	40 ml	HCl	None	<2	SW-846 8260B	APP

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP =** Peristaltic Pump **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

SITE NAME: LC34	SITE LOCATION: Kennedy Space Center	
LOC ID: LC34-IW0128	SAMPLE ID: **LC34-IW0128-018.0-20210429** Sample depth (ddd.d)=[bottom of screen (feet bls)-Top depth] x 0.5-bottom of screen (feet bls)	DATE: **04/29/2021**

PURGING DATA

STATIC DEPTH TO WATER (feet btoc): 2.25	CASING HEIGHT (feet als): 0	STATIC DEPTH TO WATER (feet bls) = DTW (btoc) - Casing Height (feet als): NA	WELL SCREEN INTERVAL DEPTH (feet bls): 13-23

WELL DIAMETER (inches): 1.0	TUBING DIAMETER (inches): 3/16	PURGE PUMP TYPE OR BAILER: **Peristaltic Pump**	TOP DEPTH = top of screen or depth to water which ever is greatest (feet bls): 13	BOTTOM DEPTH (feet bls): 23

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

_____Liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

0.64 Liters. (0.005 x 33) + 0.475 = 0.64

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 18	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 18	PURGING INITIATED AT: 1120	PURGING ENDED AT: 1145	TOTAL VOLUME PURGED (Liters): 5.0

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (mlpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (^{O}C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	ORP (mV)	COLOR (describe)
1130	2.0	2.0	200	2.40	7.05	25.38	2972.9	3.24	2.15	164.8	Clear
1140	2.0	4.0	200	2.40	7.04	25.49	2896.0	3.24	5.50	158.4	Clear
1145	1.0	5.0	200	2.40	7.03	25.55	2838.2	3.20	6.52	157.7	Clear
1150	Sample	Collected									

WELL CAPACITY (Liters Per Foot): **0.75"** = 0.076; **1"** = 0.15; **1.25"** = 0.23; **2"** = 0.61; **3"** = 1.40; **4"** = 2.46; **5"** = 3.86; **6"** = 5.57; **12"** = 22.26
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): **1/8"** = 0.002; **3/16"** = 0.005; **1/4"** = 0.0098; **5/16"** = 0.015; **3/8"** = 0.023; **1/2"** = 0.038; **5/8"** = 0.06

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Charles Sorden/Tt	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1150	SAMPLING ENDED AT: 1155
PUMP OR TUBING DEPTH IN WELL (feet): 18.0	SAMPLE PUMP: FLOW RATE (mL per minute): 200	TUBING MATERIAL CODE: Teflon	
FIELD DECONTAMINATION: **(Y)** N	FIELD-FILTERED: Y **(N)** FILTER SIZE___ µm Filtration Equipment Type: _____	DUPLICATE: Y **(N)**	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
1	3	CG	40 ml	HCl	None	<2	SW-846 8260B	APP

REMARKS:
High D.O. from air sparging. All other parameters stable. Sampled per FS2212

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP =** Peristaltic Pump **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

SITE NAME: LC34	SITE LOCATION: Kennedy Space Center	
LOC ID: LC34-IW0129	SAMPLE ID: **LC34-IW0129-018.0-20210428** Sample depth (ddd.d)=[bottom of screen (feet bls)-Top depth] x 0.5-bottom of screen (feet bls)	DATE: **04/28/2021**

PURGING DATA

STATIC DEPTH TO WATER (feet btoc. 3.59	CASING HEIGHT (feet als): 0	STATIC DEPTH TO WATER (feet bls) = DTW (btoc) - Casing Height (feet als): NA	WELL SCREEN INTERVAL DEPTH (feet bls): 13-23

WELL DIAMETER (inches): 1.0	TUBING DIAMETER (inches): 3/16	PURGE PUMP TYPE OR BAILER: **Peristaltic Pump**	TOP DEPTH = top of screen or depth to water which ever is greatest (feet bls): 13	BOTTOM DEPTH (feet bls): 23

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

_____Liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

0.64 Liters. (0.005 x 33) + 0.475 = 0.64

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 18	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 18	PURGING INITIATED AT: 1340	PURGING ENDED AT: 1410	TOTAL VOLUME PURGED (Liters): 6.0

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (mlpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (^{O}C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	ORP (mV)	COLOR (describe)
1350	2.0	2.0	200	3.66	7.14	25.49	4958.4	0.14	5.97	-71.2	Clear
1352	0.4	2.4	200	3.66	7.13	25.51	4874.7	0.20	2.41	-89.8	Clear
1355	0.6	3.0	200	3.66	7.17	25.64	4461.6	0.10	1.33	-90.6	Clear
1405	2.0	5.0	200	3.66	7.17	25.75	4456.8	0.06	1.86	-91.3	Clear
1407	0.4	5.4	200	3.66	7.17	25.77	4432.3	0.06	1.75	-91.1	Clear
1410	0.6	6.0	200	3.66	7.17	25.89	4605.7	0.09	4.11	-92.5	Clear
1415	Sample	Collected									

WELL CAPACITY (Liters Per Foot): **0.75"** = 0.076; **1"** = 0.15; **1.25"** = 0.23; **2"** = 0.61; **3"** = 1.40; **4"** = 2.46; **5"** = 3.86; **6"** = 5.57; **12"** = 22.26
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): **1/8"** = 0.002; **3/16"** = 0.005; **1/4"** = 0.0098; **5/16"** = 0.015; **3/8"** = 0.023; **1/2"** = 0.038; **5/8"** = 0.06

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Charles Sorden/Tt	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1415	SAMPLING ENDED AT: 1420

PUMP OR TUBING DEPTH IN WELL (feet): 18.0	SAMPLE PUMP: FLOW RATE (mL per minute): 200	TUBING MATERIAL CODE: Teflon

FIELD DECONTAMINATION: **(Y)** N	FIELD-FILTERED: Y **(N)** FILTER SIZE___ µm Filtration Equipment Type: _____	DUPLICATE: Y **(N)**

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
1	3	CG	40 ml	HCl	None	<2	SW-846 8260B	APP

REMARKS: High D.O. from air sparging. Sampled per FS2212.

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP =** Peristaltic Pump **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

SITE NAME: LC34	SITE LOCATION: Kennedy Space Center	
LOC ID: LC34-IW0130	SAMPLE ID: **LC34-IW0130-024.0-20210428** Sample depth (ddd.d)=[bottom of screen (feet bls)-Top depth] x 0.5-bottom of screen (feet bls)	DATE: **04/28/2021**

PURGING DATA

STATIC DEPTH TO WATER (feet btoc): 3.19	CASING HEIGHT (feet als): 0	STATIC DEPTH TO WATER (feet bls) = DTW (btoc) - Casing Height (feet als): NA	WELL SCREEN INTERVAL DEPTH (feet bls): 20-28

WELL DIAMETER (inches): 1.0	TUBING DIAMETER (inches): 3/16	PURGE PUMP TYPE OR BAILER: **Peristaltic Pump**	TOP DEPTH = top of screen or depth to water which ever is greatest (feet bls): 20	BOTTOM DEPTH (feet bls): 28

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

_____Liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

0.67 Liters. (0.005 x 38) + 0.475 = 0.67

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 24	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 24	PURGING INITIATED AT: 1420	PURGING ENDED AT: 1435	TOTAL VOLUME PURGED (Liters): 3.0

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (mlpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (^{O}C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	ORP (mV)	COLOR (describe)
1430	2.0	2.0	200	3.24	7.14	26.50	5723.3	0.09	13.25	-61.0	Clear
1432	0.4	2.4	200	3.24	7.14	26.54	5658.7	0.12	12.77	-67.9	Clear
1435	0.6	3.0	200	3.24	7.16	26.65	5703.3	0.11	8.97	-68.8	Clear
1440	Sample	Collected									

WELL CAPACITY (Liters Per Foot): **0.75"** = 0.076; **1"** = 0.15; **1.25"** = 0.23; **2"** = 0.61; **3"** = 1.40; **4"** = 2.46; **5"** = 3.86; **6"** = 5.57; **12"** = 22.26
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): **1/8"** = 0.002; **3/16"** = 0.005; **1/4"** = 0.0098; **5/16"** = 0.015; **3/8"** = 0.023; **1/2"** = 0.038; **5/8"** = 0.06

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Charles Sorden/Tt	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1440	SAMPLING ENDED AT: 1445

PUMP OR TUBING DEPTH IN WELL (feet): 24.0	SAMPLE PUMP: FLOW RATE (mL per minute): 200	TUBING MATERIAL CODE: Teflon

FIELD DECONTAMINATION: **(Y)** N	FIELD-FILTERED: Y **(N)** FILTER SIZE___ µm Filtration Equipment Type: _____	DUPLICATE: Y **(N)**

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
1	3	CG	40 ml	HCl	None	<2	SW-846 8260B	APP

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP =** Peristaltic Pump **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

SITE NAME: LC34	SITE LOCATION: Kennedy Space Center	
LOC ID: LC34-IW0131	SAMPLE ID: **LC34-IW0131-018.0-20210428** Sample depth (ddd.d)=[bottom of screen (feet bls)-Top depth] x 0.5-bottom of screen (feet bls)	DATE: **04/28/2021**

PURGING DATA

STATIC DEPTH TO WATER (feet btoc): 2.96	CASING HEIGHT (feet als): 0	STATIC DEPTH TO WATER (feet bls) = DTW (btoc) - Casing Height (feet als): NA	WELL SCREEN INTERVAL DEPTH (feet bls): 13-23

WELL DIAMETER (inches): 1.0	TUBING DIAMETER (inches): 3/16	PURGE PUMP TYPE OR BAILER: **Peristaltic Pump**	TOP DEPTH = top of screen or depth to water which ever is greatest (feet bls): 13	BOTTOM DEPTH (feet bls): 23

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

_____Liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

0.64 Liters. (0.005 x 33) + 0.475 = 0.64

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 18	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 18	PURGING INITIATED AT: 1305	PURGING ENDED AT: 1320	TOTAL VOLUME PURGED (Liters): 3.0

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (mlpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (^{O}C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	ORP (mV)	COLOR (describe)
1315	2.0	2.0	200	3.11	7.24	24.80	6392.8	0.12	9.36	-75.4	Clear
1317	0.4	2.4	200	3.11	7.24	24.82	6170.0	0.08	9.67	-75.3	Clear
1320	0.6	3.0	200	3.11	7.24	24.87	6302.7	0.08	5.91	-74.4	Clear
1325	Sample	Collected									

WELL CAPACITY (Liters Per Foot): **0.75"** = 0.076; **1"** = 0.15; **1.25"** = 0.23; **2"** = 0.61; **3"** = 1.40; **4"** = 2.46; **5"** = 3.86; **6"** = 5.57; **12"** = 22.26
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): **1/8"** = 0.002; **3/16"** = 0.005; **1/4"** = 0.0098; **5/16"** = 0.015; **3/8"** = 0.023; **1/2"** = 0.038; **5/8"** = 0.06

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Charles Sorden/Tt	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1325	SAMPLING ENDED AT: 1330
PUMP OR TUBING DEPTH IN WELL (feet): 18.0	SAMPLE PUMP: FLOW RATE (mL per minute): 200	TUBING MATERIAL CODE: Teflon	
FIELD DECONTAMINATION: **(Y)** N	FIELD-FILTERED: Y **(N)** FILTER SIZE___ µm Filtration Equipment Type: _____	DUPLICATE: Y **(N)**	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
1	3	CG	40 ml	HCl	None	<2	SW-846 8260B	APP

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP =** Peristaltic Pump **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

SITE NAME: LC34	SITE LOCATION: Kennedy Space Center	
LOC ID: LC34-IW0132	SAMPLE ID: **LC34-IW0132-018.0-20210428** Sample depth (ddd.d)=[bottom of screen (feet bls)-Top depth] x 0.5-bottom of screen (feet bls)	DATE: **04/28/2021**

PURGING DATA

STATIC DEPTH TO WATER (feet btoc): 3.09	CASING HEIGHT (feet als): 0	STATIC DEPTH TO WATER (feet bls) = DTW (btoc) - Casing Height (feet als): NA	WELL SCREEN INTERVAL DEPTH (feet bls): 13-23	
WELL DIAMETER (inches): 1.0	TUBING DIAMETER (inches): 3/16	PURGE PUMP TYPE OR BAILER: **Peristaltic Pump**	TOP DEPTH = top of screen or depth to water which ever is greatest (feet bls): 13	BOTTOM DEPTH (feet bls): 23

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

_____Liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

0.64 Liters. (0.005 x 33) + 04.75 = 0.64

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 18	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 18	PURGING INITIATED AT: 1235	PURGING ENDED AT: 1250	TOTAL VOLUME PURGED (Liters): 3.0

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (mlpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (^{O}C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	ORP (mV)	COLOR (describe)
1245	2.0	2.0	200	3.14	7.15	25.57	6070.9	0.15	7.10	-81.4	Clear
1247	0.4	2.4	200	3.14	7.15	25.68	6068.1	0.14	6.33	-80.3	Clear
1250	0.6	3.0	200	3.14	7.15	25.53	6058.1	0.14	5.88	-72.2	Clear
1255	Sample	Collected									

WELL CAPACITY (Liters Per Foot): **0.75"** = 0.076; **1"** = 0.15; **1.25"** = 0.23; **2"** = 0.61; **3"** = 1.40; **4"** = 2.46; **5"** = 3.86; **6"** = 5.57; **12"** = 22.26
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): **1/8"** = 0.002; **3/16"** = 0.005; **1/4"** = 0.0098; **5/16"** = 0.015; **3/8"** = 0.023; **1/2"** = 0.038; **5/8"** = 0.06

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Charles Sorden/Tt	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1255	SAMPLING ENDED AT: 1300
PUMP OR TUBING DEPTH IN WELL (feet): 18.0	SAMPLE PUMP: FLOW RATE (mL per minute): 200	TUBING MATERIAL CODE: Teflon	
FIELD DECONTAMINATION: **(Y)** N	FIELD-FILTERED: Y **(N)** FILTER SIZE___ µm Filtration Equipment Type: _____	DUPLICATE: Y **(N)**	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
1	3	CG	40 ml	HCl	None	<2	SW-846 8260B	APP

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP =** Peristaltic Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

SITE NAME: LC34	SITE LOCATION: Kennedy Space Center	
LOC ID: LC34-IW0133	SAMPLE ID: **LC34-IW0133-018.0-20210428** Sample depth (ddd.d)=[bottom of screen (feet bls)-Top depth] x 0.5-bottom of screen (feet bls)	DATE: **04/28/2021**

PURGING DATA

STATIC DEPTH TO WATER (feet btoc): 2.77	CASING HEIGHT (feet als): 0	STATIC DEPTH TO WATER (feet bls) = DTW (btoc) - Casing Height (feet als): NA	WELL SCREEN INTERVAL DEPTH (feet bls): 13-23

WELL DIAMETER (inches): 1.0	TUBING DIAMETER (inches): 3/16	PURGE PUMP TYPE OR BAILER: **Peristaltic Pump**	TOP DEPTH = top of screen or depth to water which ever is greatest (feet bls): 13	BOTTOM DEPTH (feet bls): 23

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

_____Liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

0.64 Liters. (0.005 x 33) + 0.475 = 0.64

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 18	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 18	PURGING INITIATED AT: 1200	PURGING ENDED AT: 1215	TOTAL VOLUME PURGED (Liters): 3.0

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (mlpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (^{O}C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	ORP (mV)	COLOR (describe)
1210	2.0	2.0	200	2.89	7.06	24.37	6106.3	0.13	5.18	-94.0	Clear
1212	0.4	2.4	200	2.89	7.08	24.39	6167.4	0.11	5.89	-113.8	Clear
1215	0.6	3.0	200	2.89	7.16	24.40	5998.7	0.14	6.95	-131.8	Clear
1220	Sample	Collected									

WELL CAPACITY (Liters Per Foot): **0.75"** = 0.076; **1"** = 0.15; **1.25"** = 0.23; **2"** = 0.61; **3"** = 1.40; **4"** = 2.46; **5"** = 3.86; **6"** = 5.57; **12"** = 22.26
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): **1/8"** = 0.002; **3/16"** = 0.005; **1/4"** = 0.0098; **5/16"** = 0.015; **3/8"** = 0.023; **1/2"** = 0.038; **5/8"** = 0.06

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Charles Sorden/Tt	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1220	SAMPLING ENDED AT: 1225
PUMP OR TUBING DEPTH IN WELL (feet): 18.0	SAMPLE PUMP: FLOW RATE (mL per minute): 200	TUBING MATERIAL CODE: Teflon	
FIELD DECONTAMINATION: **(Y)** N	FIELD-FILTERED: Y **(N)** FILTER SIZE___ µm Filtration Equipment Type: _____	DUPLICATE: Y **(N)**	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
1	3	CG	40 ml	HCl	None	<2	SW-846 8260B	APP

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP =** Peristaltic Pump **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

SITE NAME: LC34 HS6	SITE LOCATION: Kennedy Space Center	
LOCATION ID: 134	SAMPLE ID: LC34-IW01-34-024.0-20210423 Sample depth (ddd.d)=[bottom of screen (feet bls)-Top depth] x 0.5-bottom of screen (feet bls)	DATE: 04-23-2021

PURGING DATA

STATIC DEPTH TO WATER (feet btoc): 2.15	CASING HEIGHT (feet als): -0.05	STATIC DEPTH TO WATER (feet bls) = DTW (btoc) - Casing Height (feet als): 2.20	WELL SCREEN INTERVAL DEPTH (feet bls): to 20 to 28

WELL DIAMETER (inches): 1	TUBING DIAMETER (inches): 1/8	PURGE PUMP TYPE OR BAILER: Peristaltic Pump	TOP DEPTH = top of screen or depth to water which ever is greatest (feet bls): 20	BOTTOM DEPTH (feet bls): 28

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
_____Liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
0.318 Liters 0 + (0.002 x 34) + 0.25 =

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 24	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 24	PURGING INITIATED AT: 1125	PURGING ENDED AT: 1145	TOTAL VOLUME PURGED (Liters): 5.00

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (mlpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	ORP (mV)	COLOR (describe)
1135	2.50	2.50	250	2.20	7.33	22.3	2414	0.39	4.09	180.0	clear
1140	1.25	3.75	250	2.20	7.32	22.4	2416	0.38	3.96	180.2	clear
1145	1.25	5.00	250	2.20	7.33	22.4	2417	0.36	3.56	180.4	clear

WELL CAPACITY (Liters Per Foot): **0.75"** = 0.076; **1"** = 0.15; **1.25"** = 0.23; **2"** = 0.61; **3"** = 1.40; **4"** = 2.46; **5"** = 3.86; **6"** = 5.57; **12"** = 22.26
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): **1/8"** = 0.002; **3/16"** = 0.005; **1/4"** = 0.0098; **5/16"** = 0.015; **3/8"** = 0.023; **1/2"** = 0.038; **5/8"** = 0.06

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Melissa Bennett /tetra tech	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1150	SAMPLING ENDED AT: 1155

PUMP OR TUBING DEPTH IN WELL (feet): 24	SAMPLE PUMP: SM FLOW RATE (mL per minute): 100	TUBING MATERIAL CODE: Teflon

FIELD DECONTAMINATION: **(Y)** N	FIELD-FILTERED: Y **(N)** FILTER SIZE: ____ µm Filtration Equipment Type: _____	DUPLICATE: Y **(N)**

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
1	3	CG	40 ml	HCl	None	<2	SW-846 8260B	SM

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

SITE NAME: LC34 HS6	SITE LOCATION: Kennedy Space Center	
LOCATION ID: 135	SAMPLE ID: LC34-IW0135-024.0 – 20210423 Sample depth (ddd.d)=[bottom of screen (feet bls)-Top depth] x 0.5-bottom of screen (feet bls)	DATE: 04-23-2021

PURGING DATA

STATIC DEPTH TO WATER (feet btoc): 3.62	CASING HEIGHT (feet als): -0.05	STATIC DEPTH TO WATER (feet bls) = DTW (btoc) - Casing Height (feet als): 3.67	WELL SCREEN INTERVAL DEPTH (feet bls): to 20-28

WELL DIAMETER (inches): 1	TUBING DIAMETER (inches): 1/8	PURGE PUMP TYPE OR BAILER: Peristaltic Pump	TOP DEPTH = top of screen or depth to water which ever is greatest (feet bls): 20	BOTTOM DEPTH (feet bls): 28

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
_____Liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
0.31 Liters 0 + (0.002 x 30) + 0.25 = 0.318

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 24	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 24	PURGING INITIATED AT: 1440	PURGING ENDED AT: 1455	TOTAL VOLUME PURGED (Liters): 5.0

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (mlpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	ORP (mV)	COLOR (describe)
1450	2.50	2.50	250	3.65	7.26	22.2	1940	0.25	5.03	26.3	clear
1452	1.25	3.75	250	3.65	7.25	22.1	1945	0.23	4.51	26.2	clear
1455	1.25	5.00	250	3.65	7.29	22.0	1947	0.23	4.32	26.5	clear

WELL CAPACITY (Liters Per Foot): **0.75"** = 0.076; **1"** = 0.15; **1.25"** = 0.23; **2"** = 0.61; **3"** = 1.40; **4"** = 2.46; **5"** = 3.86; **6"** = 5.57; **12"** = 22.26
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): **1/8"** = 0.002; **3/16"** = 0.005; **1/4"** = 0.0098; **5/16"** = 0.015; **3/8"** = 0.023; **1/2"** = 0.038; **5/8"** = 0.06

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Melissa Bennett /tetra tech	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1500	SAMPLING ENDED AT: 1505

PUMP OR TUBING DEPTH IN WELL (feet): 24	SAMPLE PUMP: SM FLOW RATE (mL per minute): 100	TUBING MATERIAL CODE: Teflon

FIELD DECONTAMINATION: **(Y)** N	FIELD-FILTERED: Y **(N)** FILTER SIZE: ____ µm Filtration Equipment Type: _____	DUPLICATE: Y **(N)**

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
1	3	CG	40 ml	HCl	None	<2	SW-846 8260B	SM

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

SITE NAME: LC34HS6 HS6	SITE LOCATION: Kennedy Space Center	
LOCATION ID: IW0136	SAMPLE ID: LC34-IW0136-024.0-20210423 Sample depth (ddd.d)=[bottom of screen (feet bls)-Top depth] x 0.5-bottom of screen (feet bls)	DATE: 04-23-2021

PURGING DATA

STATIC DEPTH TO WATER (feet btoc): 4.67	CASING HEIGHT (feet als): -0.05	STATIC DEPTH TO WATER (feet bls) = DTW (btoc) - Casing Height (feet als):	WELL SCREEN INTERVAL DEPTH (feet bls): to 20 to 28

WELL DIAMETER (inches): 1	TUBING DIAMETER (inches): 1/8	PURGE PUMP TYPE OR BAILER: Peristaltic Pump	TOP DEPTH = top of screen or depth to water which ever is greatest (feet bls): 20	BOTTOM DEPTH (feet bls): 28

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

_____Liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

0.318 Liters 0 + (0.002 x 34) + 0.25 = .

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 24	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 24	PURGING INITIATED AT: 0905	PURGING ENDED AT: 0925	TOTAL VOLUME PURGED (Liters): 5.00

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (mlpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	ORP (mV)	COLOR (describe)
0915	2.50	2.50	250	4.63	7.25	24.0	3250	1.67	10.81	192.1	clear
0920	1.25	3.75	250	4.63	7.25	24.0	3250	1.63	10.17	192.5	clear
0925	1.25	5.00	250	4.63	7.26	24.0	3251	1.59	9.65	192.6	clear
0930	sample	collected									

WELL CAPACITY (Liters Per Foot): **0.75"** = 0.076; **1"** = 0.15; **1.25"** = 0.23; **2"** = 0.61; **3"** = 1.40; **4"** = 2.46; **5"** = 3.86; **6"** = 5.57; **12"** = 22.26
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): **1/8"** = 0.002; **3/16"** = 0.005; **1/4"** = 0.0098; **5/16"** = 0.015; **3/8"** = 0.023; **1/2"** = 0.038; **5/8"** = 0.06

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Melissa Bennett /tetra tech	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 0930	SAMPLING ENDED AT: 0935
PUMP OR TUBING DEPTH IN WELL (feet): 24	SAMPLE PUMP: SM FLOW RATE (mL per minute): 100	TUBING MATERIAL CODE: Teflon	
FIELD DECONTAMINATION: **(Y)** N	FIELD-FILTERED: Y **(N)** FILTER SIZE: ____ µm Filtration Equipment Type: _____	DUPLICATE: Y **(N)**	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
1	3	CG	40 ml	HCl	None	<2	SW-846 8260B	SM

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP =** Peristaltic Pump **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

SITE NAME: LC34 HS6	SITE LOCATION: Kennedy Space Center	
LOCATION ID: 137	SAMPLE ID: LC34-IW0137-024.0 — 20210423 Sample depth (ddd.d)=[bottom of screen (feet bls)-Top depth] x 0.5-bottom of screen (feet bls)	DATE: 04-23-2021

PURGING DATA

STATIC DEPTH TO WATER (feet btoc): 4.97	CASING HEIGHT (feet als): -0.05	STATIC DEPTH TO WATER (feet bls) = DTW (btoc) - Casing Height (feet als):	WELL SCREEN INTERVAL DEPTH (feet bls): to 20.28

WELL DIAMETER (inches): 1	TUBING DIAMETER (inches): 1/8	PURGE PUMP TYPE OR BAILER: Peristaltic Pump	TOP DEPTH = top of screen or depth to water which ever is greatest (feet bls): 20	BOTTOM DEPTH (feet bls): 28

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
_____Liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
0.318 Liters 0 + (0.002 x 34) + 0.25 =

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 24	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 24	PURGING INITIATED AT: 0940	PURGING ENDED AT: 1005	TOTAL VOLUME PURGED (Liters): 6.25

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (mlpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	ORP (mV)	COLOR (describe)
0950	2.50	2.50	250	4.99	7.48	22.1	2751	6.15	9.62	187.1	clear
0955	1.25	3.75	250	4.99	7.48	22.1	2751	5.03	8.13	187.6	clear
1000	1.25	5.00	250	4.99	7.48	22.2	2753	4.22	6.59	187.9	clear
1002	0.50	5.50	250	4.99	7.49	22.1	2756	4.23	6.09	187.8	clear
1005	0.75	6.25	250	4.99	7.48	22.2	2749	4.19	5.61	187.6	clear

WELL CAPACITY (Liters Per Foot): **0.75"** = 0.076; **1"** = 0.15; **1.25"** = 0.23; **2"** = 0.61; **3"** = 1.40; **4"** = 2.46; **5"** = 3.86; **6"** = 5.57; **12"** = 22.26
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): **1/8"** = 0.002; **3/16"** = 0.005; **1/4"** = 0.0098; **5/16"** = 0.015; **3/8"** = 0.023; **1/2"** = 0.038; **5/8"** = 0.06

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Melissa Bennett /tetra tech	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1010	SAMPLING ENDED AT: 1015

PUMP OR TUBING DEPTH IN WELL (feet): 24	SAMPLE PUMP: SM FLOW RATE (mL per minute): 100	TUBING MATERIAL CODE: Teflon

FIELD DECONTAMINATION: **(Y)** N	FIELD-FILTERED: Y **(N)** FILTER SIZE: ____ µm Filtration Equipment Type: _____	DUPLICATE: Y **(N)**

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
1	3	CG	40 ml	HCl	None	<2	SW-846 8260B	SM

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

SITE NAME: LC34 HS6	SITE LOCATION: Kennedy Space Center	
LOCATION ID: 138	SAMPLE ID: LC34-IW0138-031.5 — 20210423 Sample depth (ddd.d)=[bottom of screen (feet bls)-Top depth] x 0.5-bottom of screen (feet bls)	DATE: 04-23-2021

PURGING DATA

STATIC DEPTH TO WATER (feet btoc): 4.42	CASING HEIGHT (feet als): -0.05	STATIC DEPTH TO WATER (feet bls) = DTW (btoc) - Casing Height (feet als): 4.49	WELL SCREEN INTERVAL DEPTH (feet bls): to 29-34

WELL DIAMETER (inches): 1	TUBING DIAMETER (inches): 1/8	PURGE PUMP TYPE OR BAILER: Peristaltic Pump	TOP DEPTH = top of screen or depth to water which ever is greatest (feet bls): 29	BOTTOM DEPTH (feet bls): 34

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
_____Liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
0.32 Liters 0 + (0.002 x 38) + 0.25 =

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 31.5	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 31.5	PURGING INITIATED AT: 1020	PURGING ENDED AT: 1038	TOTAL VOLUME PURGED (Liters): 4.25

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (mlpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	ORP (mV)	COLOR (describe)
1030	2.50	2.50	250	4.49	7.58	22.1	3711	3.89	7.88	187.6	clear
1032	0.50	3.00	250	4.49	7.61	22.4	3709	3.90	6.98	188.1	clear
1035	0.75	3.75	250	4.49	7.60	22.6	3711	3.92	7.18	189.6	clear
1038	0.50	4.25	250	4.49	7.59	22.6	3715	3.94	6.17	189.6	clear

WELL CAPACITY (Liters Per Foot): **0.75"** = 0.076; **1"** = 0.15; **1.25"** = 0.23; **2"** = 0.61; **3"** = 1.40; **4"** = 2.46; **5"** = 3.86; **6"** = 5.57; **12"** = 22.26
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): **1/8"** = 0.002; **3/16"** = 0.005; **1/4"** = 0.0098; **5/16"** = 0.015; **3/8"** = 0.023; **1/2"** = 0.038; **5/8"** = 0.06

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Melissa Bennett /tetra tech	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1040	SAMPLING ENDED AT: 1045

PUMP OR TUBING DEPTH IN WELL (feet): 31.5	SAMPLE PUMP: SM FLOW RATE (mL per minute): 100	TUBING MATERIAL CODE: Teflon

FIELD DECONTAMINATION: **(Y)** N	FIELD-FILTERED: Y **(N)** FILTER SIZE: ____ µm Filtration Equipment Type: _____	DUPLICATE: Y **(N)**

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
1	3	CG	40 ml	HCl	None	<2	SW-846 8260B	SM

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

SITE NAME: LC34 HS6	SITE LOCATION: Kennedy Space Center	
LOCATION ID: 139	SAMPLE ID: LC34-IW01 39-018.0- 20210423 Sample depth (ddd.d)=[bottom of screen (feet bls)-Top depth] x 0.5-bottom of screen (feet bls)	DATE: 04-23-2021

PURGING DATA

STATIC DEPTH TO WATER (feet btoc): 1.81	CASING HEIGHT (feet als): -0.05	STATIC DEPTH TO WATER (feet bls) = DTW (btoc) - Casing Height (feet als): 1.86	WELL SCREEN INTERVAL DEPTH (feet bls): to 13-23

WELL DIAMETER (inches): 1	TUBING DIAMETER (inches): 1/8	PURGE PUMP TYPE OR BAILER: Peristaltic Pump	TOP DEPTH = top of screen or depth to water which ever is greatest (feet bls): 13	BOTTOM DEPTH (feet bls): 23

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
_____Liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
0.31 Liters 0 + (0.002 x 30) + 0.25 =

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 18	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 18	PURGING INITIATED AT: 1250	PURGING ENDED AT: 1320	TOTAL VOLUME PURGED (Liters): 7.50

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (mlpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	ORP (mV)	COLOR (describe)
1310	5.00	5.00	250	1.85	7.44	22.1	2160	7.86	5.04	188.0	clear
1315	1.25	6.25	250	1.85	7.44	22.2	2164	7.91	4.16	1883	clear
1320	1.25	7.50	250	1.85	7.44	22.1	2164	7.89	3.62	1882	clear
1325	sample	collected									

WELL CAPACITY (Liters Per Foot): **0.75"** = 0.076; **1"** = 0.15; **1.25"** = 0.23; **2"** = 0.61; **3"** = 1.40; **4"** = 2.46; **5"** = 3.86; **6"** = 5.57; **12"** = 22.26
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): **1/8"** = 0.002; **3/16"** = 0.005; **1/4"** = 0.0098; **5/16"** = 0.015; **3/8"** = 0.023; **1/2"** = 0.038; **5/8"** = 0.06

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Melissa Bennett /tetra tech	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1325	SAMPLING ENDED AT: 1330

PUMP OR TUBING DEPTH IN WELL (feet): 18	SAMPLE PUMP: SM FLOW RATE (mL per minute): 100	TUBING MATERIAL CODE: Teflon

FIELD DECONTAMINATION: **(Y)** N	FIELD-FILTERED: Y **(N)** FILTER SIZE: ____ µm Filtration Equipment Type: _____	DUPLICATE: Y **(N)**

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
1	3	CG	40 ml	HCl	None	<2	SW-846 8260B	SM

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

SITE NAME: LC34 HS6	SITE LOCATION: Kennedy Space Center	
LOCATION ID: 140	SAMPLE ID: LC34-IW0140-024.0-20210423 Sample depth (ddd.d)=[bottom of screen (feet bls)-Top depth] x 0.5-bottom of screen (feet bls)	DATE: 04-23-2021

PURGING DATA

STATIC DEPTH TO WATER (feet btoc): 1.85	CASING HEIGHT (feet als): -0.05	STATIC DEPTH TO WATER (feet bls) = DTW (btoc) - Casing Height (feet als): 1.90	WELL SCREEN INTERVAL DEPTH (feet bls): to 20-28

WELL DIAMETER (inches): 1	TUBING DIAMETER (inches): 1/8	PURGE PUMP TYPE OR BAILER: Peristaltic Pump	TOP DEPTH = top of screen or depth to water which ever is greatest (feet bls): 20	BOTTOM DEPTH (feet bls): 28

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
_____Liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
0.318 Liters 0 + (0.002 x 34) + 0.25 =

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 24	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 24	PURGING INITIATED AT: 1210	PURGING ENDED AT: 1240	TOTAL VOLUME PURGED (Liters): 7.50

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (mlpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	ORP (mV)	COLOR (describe)
1220	2.50	2.50	250	1.87	7.62	22.0	3703	5.87	8.13	186.0	clear
1225	1.25	3.75	250	1.87	7.62	22.6	3709	5.88	8.55	186.2	clear
1230	1.25	5.00	250	1.87	7.62	22.1	3707	5.87	7.61	186.7	clear
1235	1.25	6.25	250	1.87	7.62	22.0	3705	5.84	5.98	186.7	clear
1240	1.25	7.50	250	1.87	7.62	22.0	3704	5.82	5.17	186.8	clear

WELL CAPACITY (Liters Per Foot): **0.75"** = 0.076; **1"** = 0.15; **1.25"** = 0.23; **2"** = 0.61; **3"** = 1.40; **4"** = 2.46; **5"** = 3.86; **6"** = 5.57; **12"** = 22.26
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): **1/8"** = 0.002; **3/16"** = 0.005; **1/4"** = 0.0098; **5/16"** = 0.015; **3/8"** = 0.023; **1/2"** = 0.038; **5/8"** = 0.06

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Melissa Bennett /tetra tech	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1245	SAMPLING ENDED AT: 1250

PUMP OR TUBING DEPTH IN WELL (feet): 24	SAMPLE PUMP: SM FLOW RATE (mL per minute): 100	TUBING MATERIAL CODE: Teflon
FIELD DECONTAMINATION: **(Y)** N	FIELD-FILTERED: Y **(N)** FILTER SIZE: ____ µm Filtration Equipment Type: _____	DUPLICATE: Y **(N)**

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
1	3	CG	40 ml	HCl	None	<2	SW-846 8260B	SM

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

SITE NAME: LC34	SITE LOCATION: Kennedy Space Center	
LOC ID: LC34-IW0141	SAMPLE ID: **LC34-IW0141-024.0-20210429** Sample depth (ddd.d)=[bottom of screen (feet bls)-Top depth] x 0.5-bottom of screen (feet bls)	DATE: **04/29/2021**

PURGING DATA

STATIC DEPTH TO WATER (feet btoc): 3.59	CASING HEIGHT (feet als): 0	STATIC DEPTH TO WATER (feet bls) = DTW (btoc) - Casing Height (feet als):	WELL SCREEN INTERVAL DEPTH (feet bls): 20-28	
WELL DIAMETER (inches): 1.0	TUBING DIAMETER (inches): 3/16	PURGE PUMP TYPE OR BAILER: **Peristaltic Pump**	TOP DEPTH = top of screen or depth to water which ever is greatest (feet bls): 20	BOTTOM DEPTH (feet bls): 28

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

_____Liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

0.67 Liters. (0.005 x 38) + 0.475 = 0.67

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 24	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 24	PURGING INITIATED AT: 1400	PURGING ENDED AT: 1435	TOTAL VOLUME PURGED (Liters): 5.5

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (mlpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (^{O}C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	ORP (mV)	COLOR (describe)
1420	4.0	4.0	200	3.72	7.17	26.61	3433.0	3.71	3.90	157.9	Clear
1430	1.0	5.0	100	3.66	7.19	26.95	3112.3	3.68	1.89	160.6	Clear
1432	0.2	5.2	100	3.66	7.19	26.96	3000.8	3.69	1.39	161.3	Clear
1435	0.3	5.5	100	3.66	7.22	26.97	2996.3	3.69	1.46	161.0	Clear
1440	Sample	Collected									

WELL CAPACITY (Liters Per Foot): **0.75"** = 0.076; **1"** = 0.15; **1.25"** = 0.23; **2"** = 0.61; **3"** = 1.40; **4"** = 2.46; **5"** = 3.86; **6"** = 5.57; **12"** = 22.26
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): **1/8"** = 0.002; **3/16"** = 0.005; **1/4"** = 0.0098; **5/16"** = 0.015; **3/8"** = 0.023; **1/2"** = 0.038; **5/8"** = 0.06

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Charles Sorden/Tt	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1440	SAMPLING ENDED AT: 1445
PUMP OR TUBING DEPTH IN WELL (feet): 24.0	SAMPLE PUMP: FLOW RATE (mL per minute): 200	TUBING MATERIAL CODE: Teflon	
FIELD DECONTAMINATION: **(Y)** N	FIELD-FILTERED: Y **(N)** FILTER SIZE___ µm Filtration Equipment Type: _____	DUPLICATE: Y **(N)**	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
1	3	CG	40 ml	HCl	None	<2	SW-846 8260B	APP

REMARKS:
High D.O. from sparging. All parameters stable. Sampled per FS2212

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP =** Peristaltic Pump **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

SITE NAME: LC34	SITE LOCATION: Kennedy Space Center	
LOC ID: LC34-IW0142	SAMPLE ID: **LC34-IW0142-024.0-20210429** Sample depth (ddd.d)=[bottom of screen (feet bls)-Top depth] x 0.5-bottom of screen (feet bls)	DATE: **04/29/2021**

PURGING DATA

STATIC DEPTH TO WATER (feet btoc): 3.83	CASING HEIGHT (feet als): 0	STATIC DEPTH TO WATER (feet bls) = DTW (btoc) - Casing Height (feet als): NA	WELL SCREEN INTERVAL DEPTH (feet bls): 20-28

WELL DIAMETER (inches): 1.0	TUBING DIAMETER (inches): 3/16	PURGE PUMP TYPE OR BAILER: **Peristaltic Pump**	TOP DEPTH = top of screen or depth to water which ever is greatest (feet bls): 20	BOTTOM DEPTH (feet bls): 28

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

_____Liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

0.67 Liters. (0.005 x 38) + 0.475 = 0.67

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 24	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 24	PURGING INITIATED AT: 1200	PURGING ENDED AT: 1245	TOTAL VOLUME PURGED (Liters): 6.5

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (mlpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (^{O}C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	ORP (mV)	COLOR (describe)
1220	4.0	4.0	200	3.95	7.38	26.22	3163.9	4.57	13.7	167.4	Clear
1230	1.0	5.0	100	3.92	7.38	26.95	2808.4	4.31	4.66	166.2	Clear
1240	1.0	6.0	100	3.92	7.38	27.02	2963.3	4.28	2.73	160.4	Clear
1245	0.5	6.5	100	3.92	7.41	26.86	2946.5	4.28	3.05	166.3	Clear
1250	Sample	Collected									

WELL CAPACITY (Liters Per Foot): **0.75"** = 0.076; **1"** = 0.15; **1.25"** = 0.23; **2"** = 0.61; **3"** = 1.40; **4"** = 2.46; **5"** = 3.86; **6"** = 5.57; **12"** = 22.26
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): **1/8"** = 0.002; **3/16"** = 0.005; **1/4"** = 0.0098; **5/16"** = 0.015; **3/8"** = 0.023; **1/2"** = 0.038; **5/8"** = 0.06

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Charles Sorden/Tt	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1250	SAMPLING ENDED AT: 1255
PUMP OR TUBING DEPTH IN WELL (feet): 24.0	SAMPLE PUMP: FLOW RATE (mL per minute): 200	TUBING MATERIAL CODE: Teflon	
FIELD DECONTAMINATION: **(Y)** N	FIELD-FILTERED: Y **(N)** FILTER SIZE___ µm Filtration Equipment Type: _____	DUPLICATE: Y **(N)**	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
1	3	CG	40 ml	HCl	None	<2	SW-846 8260B	APP

REMARKS:
High D.O. from air sparging. All parameters stable. Sampled per FS2212.

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP =** Peristaltic Pump **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

SITE NAME: LC34	SITE LOCATION: Kennedy Space Center	
LOC ID: LC34-IW0143	SAMPLE ID: **LC34-IW0143-024.0-20210430** Sample depth (ddd.d)=[bottom of screen (feet bls)-Top depth] x 0.5-bottom of screen (feet bls)	DATE: **04/30/2021**

PURGING DATA

STATIC DEPTH TO WATER (feet btoc): 2.69	CASING HEIGHT (feet als): 0.5	STATIC DEPTH TO WATER (feet bls) = DTW (btoc) - Casing Height (feet als): NA	WELL SCREEN INTERVAL DEPTH (feet bls): 20-28

WELL DIAMETER (inches): 1.0	TUBING DIAMETER (inches): 3/16	PURGE PUMP TYPE OR BAILER: **Peristaltic Pump**	TOP DEPTH = top of screen or depth to water which ever is greatest (feet bls): 20	BOTTOM DEPTH (feet bls): 28

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

_____Liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

0.67 Liters. (0.005 x 38) + 0.475 = 0.67

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 24	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 24	PURGING INITIATED AT: 1305	PURGING ENDED AT: 1335	TOTAL VOLUME PURGED (Liters): 9.0

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (mlpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (^{O}C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	ORP (mV)	COLOR (describe)
1315	3.0	3.0	300	2.85	7.12	25.72	2484.3	5.52	5.73	45.7	Clear
1325	3.0	6.0	300	2.85	7.10	25.79	2434.2	5.15	4.37	53.2	Clear
1330	1.5	7.5	300	2.85	7.11	25.88	2420.0	4.88	4.74	55.2	Clear
1332	0.6	8.1	300	2.85	7.12	26.06	2384.6	4.82	5.17	55.7	Clear
1335	0.9	9.0	300	2.85	7.12	26.05	2380.6	4.78	5.62	56.1	Clear
1340	Sample	Collected									

WELL CAPACITY (Liters Per Foot): **0.75"** = 0.076; **1"** = 0.15; **1.25"** = 0.23; **2"** = 0.61; **3"** = 1.40; **4"** = 2.46; **5"** = 3.86; **6"** = 5.57; **12"** = 22.26
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): **1/8"** = 0.002; **3/16"** = 0.005; **1/4"** = 0.0098; **5/16"** = 0.015; **3/8"** = 0.023; **1/2"** = 0.038; **5/8"** = 0.06

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Charles Sorden/Tt	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1340	SAMPLING ENDED AT: 1345
PUMP OR TUBING DEPTH IN WELL (feet): 24.0	SAMPLE PUMP: FLOW RATE (mL per minute): 200	TUBING MATERIAL CODE: Teflon	
FIELD DECONTAMINATION: **(Y)** N	FIELD-FILTERED: Y **(N)** FILTER SIZE___ µm Filtration Equipment Type: _____	DUPLICATE: Y **(N)**	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
1	3	CG	40 ml	HCl	None	<2	SW-846 8260B	APP

REMARKS:

High D.O. from sparging. All parameters stable. Sampled per FS2212.

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP =** Peristaltic Pump **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

SITE NAME: LC34	SITE LOCATION: Kennedy Space Center	
LOC ID: LC34-IW0144	SAMPLE ID: **LC34-IW0144-024.0-20210430** Sample depth (ddd.d)=[bottom of screen (feet bls)-Top depth] x 0.5-bottom of screen (feet bls)	DATE: **04/30/2021**

PURGING DATA

STATIC DEPTH TO WATER (feet btoc): 5.81	CASING HEIGHT (feet als):	STATIC DEPTH TO WATER (feet bls) = DTW (btoc) - Casing Height (feet als): NA	WELL SCREEN INTERVAL DEPTH (feet bls): 20-28

WELL DIAMETER (inches): 1.0	TUBING DIAMETER (inches): 3/16	PURGE PUMP TYPE OR BAILER: **Peristaltic Pump**	TOP DEPTH = top of screen or depth to water which ever is greatest (feet bls): 20	BOTTOM DEPTH (feet bls): 28

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

_____Liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

0.67 Liters. (0.005 x 38) + 0.475 = 0.67

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 24	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 24	PURGING INITIATED AT: 1125	PURGING ENDED AT: 1155	TOTAL VOLUME PURGED (Liters): 6.0

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (mlpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (^{O}C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	ORP (mV)	COLOR (describe)
1135	2.0	2.0	200	5.96	7.07	26.80	2473.1	1.89	4.61	152.2	Clear
1145	2.0	4.0	200	5.96	7.06	26.89	2449.7	1.89	5.55	154.5	Clear
1155	2.0	6.0	200	5.96	7.06	26.84	2436.1	1.88	3.13	155.7	Clear
1200	Sample	Collected									

WELL CAPACITY (Liters Per Foot): **0.75"** = 0.076; **1"** = 0.15; **1.25"** = 0.23; **2"** = 0.61; **3"** = 1.40; **4"** = 2.46; **5"** = 3.86; **6"** = 5.57; **12"** = 22.26
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): **1/8"** = 0.002; **3/16"** = 0.005; **1/4"** = 0.0098; **5/16"** = 0.015; **3/8"** = 0.023; **1/2"** = 0.038; **5/8"** = 0.06

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Charles Sorden	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1200	SAMPLING ENDED AT: 1205
PUMP OR TUBING DEPTH IN WELL (feet): 24.0	SAMPLE PUMP: FLOW RATE (mL per minute): 200	TUBING MATERIAL CODE: Teflon	
FIELD DECONTAMINATION: **(Y)** N	FIELD-FILTERED: Y **(N)** FILTER SIZE___ µm Filtration Equipment Type: _____	DUPLICATE: Y **(N)**	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
1	3	CG	40 ml	HCl	None	<2	SW-846 8260B	APP

REMARKS:
High D.O. from sparging. All other parameters stable. Sampled per FS2212.

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP =** Peristaltic Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

SITE NAME: LC34	SITE LOCATION: Kennedy Space Center	
LOC ID: LC34-IW0145	SAMPLE ID: **LC34-IW0145-031.5-20210430** Sample depth (ddd.d)=[bottom of screen (feet bls)-Top depth] x 0.5-bottom of screen (feet bls)	DATE: **04/30/2021**

PURGING DATA

STATIC DEPTH TO WATER (feet btoc): 5.96	CASING HEIGHT (feet als): 0.5	STATIC DEPTH TO WATER (feet bls) = DTW (btoc) - Casing Height (feet als): NA	WELL SCREEN INTERVAL DEPTH (feet bls): 29-34

WELL DIAMETER (inches): 1.0	TUBING DIAMETER (inches): 3/16	PURGE PUMP TYPE OR BAILER: **Peristaltic Pump**	TOP DEPTH = top of screen or depth to water which ever is greatest (feet bls): 29	BOTTOM DEPTH (feet bls): 34

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

_____Liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

0.70 Liters. (0.005 x 44) + 0.475 = 0.70

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 31.5	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 31.5	PURGING INITIATED AT: 1205	PURGING ENDED AT: 1220	TOTAL VOLUME PURGED (Liters): 3.0

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (mlpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (^{O}C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	ORP (mV)	COLOR (describe)
1215	2.0	2.0	200	6.31	7.00	26.49	4091.1	0.40	7.02	-53.8	Clear
1217	0.4	2.4	200	6.31	7.00	26.39	3910.8	0.40	8.81	-45.6	Clear
1220	0.6	3.0	200	6.31	7.00	26.42	3898.9	0.39	7.27	-27.6	Clear
1225	Sample	Collected									

WELL CAPACITY (Liters Per Foot): **0.75"** = 0.076; **1"** = 0.15; **1.25"** = 0.23; **2"** = 0.61; **3"** = 1.40; **4"** = 2.46; **5"** = 3.86; **6"** = 5.57; **12"** = 22.26
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): **1/8"** = 0.002; **3/16"** = 0.005; **1/4"** = 0.0098; **5/16"** = 0.015; **3/8"** = 0.023; **1/2"** = 0.038; **5/8"** = 0.06

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Charles Sorden/Tt	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1225	SAMPLING ENDED AT: 1230
PUMP OR TUBING DEPTH IN WELL (feet): 31.5	SAMPLE PUMP: FLOW RATE (mL per minute): 200	TUBING MATERIAL CODE: Teflon	
FIELD DECONTAMINATION: **(Y)** N	FIELD-FILTERED: Y **(N)** FILTER SIZE___ µm Filtration Equipment Type: _____	DUPLICATE: Y **(N)**	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
1	3	CG	40 ml	HCl	None	<2	SW-846 8260B	APP

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP =** Peristaltic Pump **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

SITE NAME: LC34		SITE LOCATION: Kennedy Space Center
LOC ID: LC34-IW0146	SAMPLE ID: **LC34-IW0146-018.0-20210430** Sample depth (ddd.d)=[bottom of screen (feet bls)-Top depth] x 0.5-bottom of screen (feet bls)	DATE: **04/30/2021**

PURGING DATA

STATIC DEPTH TO WATER (feet btoc): 4.82	CASING HEIGHT (feet als):	STATIC DEPTH TO WATER (feet bls) = DTW (btoc) - Casing Height (feet als): NA	WELL SCREEN INTERVAL DEPTH (feet bls): 13-23

WELL DIAMETER (inches): 1.0	TUBING DIAMETER (inches): 3/16	PURGE PUMP TYPE OR BAILER: **Peristaltic Pump**	TOP DEPTH = top of screen or depth to water which ever is greatest (feet bls): 13	BOTTOM DEPTH (feet bls): 23

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

_____Liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

0.64 Liters. (0.005 x 33) + 0.475 = 0.64

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 18	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 18	PURGING INITIATED AT: 0935	PURGING ENDED AT: 1020	TOTAL VOLUME PURGED (Liters): 9.0

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (mlpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (^{O}C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	ORP (mV)	COLOR (describe)
0945	2.0	2.0	200	4.88	7.29	25.20	822.13	8.30	2.99	207.1	Clear
0955	2.0	4.0	200	4.88	7.28	25.31	297.95	8.20	4.10	205.9	Clear
1005	2.0	6.0	200	4.88	7.30	25.32	242.51	7.81	5.56	202.1	Clear
1010	1.0	7.0	200	4.88	7.30	25.41	208.9	7.63	4.00	200.8	Clear
1015	1.0	8.0	200	4.88	7.29	25.31	2581.9	7.90	1.07	189.2	Clear
1017	0.4	8.4	200	4.88	7.30	25.20	2579.6	7.88	2.39	190.3	Clear
1020	0.6	9.0	200	4.88	7.30	25.18	2577.4	7.79	2.49	191.7	Clear
1025	Sample	Collected									

WELL CAPACITY (Liters Per Foot): **0.75"** = 0.076; **1"** = 0.15; **1.25"** = 0.23; **2"** = 0.61; **3"** = 1.40; **4"** = 2.46; **5"** = 3.86; **6"** = 5.57; **12"** = 22.26
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): **1/8"** = 0.002; **3/16"** = 0.005; **1/4"** = 0.0098; **5/16"** = 0.015; **3/8"** = 0.023; **1/2"** = 0.038; **5/8"** = 0.06

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Charles Sorden/Tt	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1025	SAMPLING ENDED AT: 1030

PUMP OR TUBING DEPTH IN WELL (feet): 18.0	SAMPLE PUMP: FLOW RATE (mL per minute): 200	TUBING MATERIAL CODE: Teflon

FIELD DECONTAMINATION: **(Y)** N	FIELD-FILTERED: Y **(N)** FILTER SIZE___ µm Filtration Equipment Type: _____	DUPLICATE: Y **(N)**

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
1	3	CG	40 ml	HCl	None	<2	SW-846 8260B	APP

REMARKS: High dissolved oxygen from air sparging sampled per FS2212. All parameters stable. Cleaned conductivity sensor. Caused initial erroneous readings.

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP =** Peristaltic Pump **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

SITE NAME: LC34	SITE LOCATION: Kennedy Space Center	
LOC ID: LC34-IW0147	SAMPLE ID: **LC34-IW0147-024.0-20210430** Sample depth (ddd.d)=[bottom of screen (feet bls)-Top depth] x 0.5-bottom of screen (feet bls)	DATE: **04/30/2021**

PURGING DATA

STATIC DEPTH TO WATER (feet btoc): 4.98	CASING HEIGHT (feet als):	STATIC DEPTH TO WATER (feet bls) = DTW (btoc) - Casing Height (feet als):	WELL SCREEN INTERVAL DEPTH (feet bls): 20-28

WELL DIAMETER (inches): 1.0	TUBING DIAMETER (inches): 3/16	PURGE PUMP TYPE OR BAILER: **Peristaltic Pump**	TOP DEPTH = top of screen or depth to water which ever is greatest (feet bls): 20	BOTTOM DEPTH (feet bls): 28

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

_____Liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

0.68 Liters. (0.005 x 38) + 0.475 = 0.68

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 24	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 24	PURGING INITIATED AT: 1030	PURGING ENDED AT: 1110	TOTAL VOLUME PURGED (Liters): 12.0

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (mlpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (^{O}C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	ORP (mV)	COLOR (describe)
1040	3.0	3.0	300	5.19	7.45	25.48	2761.9	6.95	4.32	240.54	Clear
1050	3.0	6.0	300	5.19	7.45	25.61	2588.9	6.69	4.43	188.6	Clear
1055	1.5	7.5	300	5.19	7.45	25.70	2441.4	6.57	5.18	189.0	Clear
1100	1.5	9.0	300	5.19	7.45	25.76	2277.6	6.52	3.56	190.9	Clear
1102	0.6	9.6	300	5.19	7.44	25.61	2151.6	6.49	2.75	191.1	Clear
1105	0.9	10.5	300	5.19	7.44	25.72	2015.3	6.43	3.76	190.0	Clear
1107	0.6	11.1	300	5.19	7.44	25.77	1993.8	6.40	2.04	190.1	Clear
1110	0.9	12	300	5.19	7.44	25.79	1923.4	6.42	4.10	189.7	Clear
1115	Sample	Collected									

WELL CAPACITY (Liters Per Foot): **0.75"** = 0.076; **1"** = 0.15; **1.25"** = 0.23; **2"** = 0.61; **3"** = 1.40; **4"** = 2.46; **5"** = 3.86; **6"** = 5.57; **12"** = 22.26
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): **1/8"** = 0.002; **3/16"** = 0.005; **1/4"** = 0.0098; **5/16"** = 0.015; **3/8"** = 0.023; **1/2"** = 0.038; **5/8"** = 0.06

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Charles Sorden/Tt	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1115	SAMPLING ENDED AT: 1120
PUMP OR TUBING DEPTH IN WELL (feet): 24.0	SAMPLE PUMP: FLOW RATE (mL per minute): 200	TUBING MATERIAL CODE: Teflon	
FIELD DECONTAMINATION: **(Y)** N	FIELD-FILTERED: Y **(N)** FILTER SIZE___ µm Filtration Equipment Type: _____	DUPLICATE: Y **(N)**	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
1	3	CG	40 ml	HCl	None	<2	SW-846 8260B	APP

REMARKS:
High D.O. from sparging. All parameters stable. Sampled per FS2212

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP =** Peristaltic Pump **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

SITE NAME: LC34	SITE LOCATION: Kennedy Space Center	
LOC ID: LC34-IW0045D2	SAMPLE ID: **LC34-IW0045D2-110.0-20210430** Sample depth (ddd.d)=[bottom of screen (feet bls)-Top depth] x 0.5-bottom of screen (feet bls)	DATE: **04/30/2021**

PURGING DATA

STATIC DEPTH TO WATER (feet btoc): 8.56	CASING HEIGHT (feet als): 0.5	STATIC DEPTH TO WATER (feet bls) = DTW (btoc) - Casing Height (feet als): NA	WELL SCREEN INTERVAL DEPTH (feet bls): 105-115

WELL DIAMETER (inches): 3/4	TUBING DIAMETER (inches): 3/16	PURGE PUMP TYPE OR BAILER: **Peristaltic Pump**	TOP DEPTH = top of screen or depth to water which ever is greatest (feet bls): 105	BOTTOM DEPTH (feet bls): 115

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

_____Liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

1.1 Liters. (0.005 x 125) + 0.475 = 1.1

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 110	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 110	PURGING INITIATED AT: 1450	PURGING ENDED AT: 1520	TOTAL VOLUME PURGED (Liters): 6.0

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (mlpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (^{O}C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	ORP (mV)	COLOR (describe)
1510	4.0	4.0	200	8.59	7.40	27.72	2413.1	0.31	10.52	-153.8	Clear
1515	1.0	5.0	200	8.59	7.41	27.64	2415.1	0.30	8.95	-150.4	Clear
1520	1.0	6.0	200	8.59	7.41	27.84	2443.9	0.28	5.86	-147.9	Clear
1525	Sample	Collected									

WELL CAPACITY (Liters Per Foot): **0.75"** = 0.076; **1"** = 0.15; **1.25"** = 0.23; **2"** = 0.61; **3"** = 1.40; **4"** = 2.46; **5"** = 3.86; **6"** = 5.57; **12"** = 22.26
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): **1/8"** = 0.002; **3/16"** = 0.005; **1/4"** = 0.0098; **5/16"** = 0.015; **3/8"** = 0.023; **1/2"** = 0.038; **5/8"** = 0.06

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Charles Sorden/Tt	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1525	SAMPLING ENDED AT: 1530
PUMP OR TUBING DEPTH IN WELL (feet): 110	SAMPLE PUMP: FLOW RATE (mL per minute): 200	TUBING MATERIAL CODE: Teflon	
FIELD DECONTAMINATION: **(Y)** N	FIELD-FILTERED: Y **(N)** FILTER SIZE___ µm Filtration Equipment Type: _____	DUPLICATE: Y **(N)**	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
1	3	CG	40 ml	HCl	None	<2	SW-846 8260B	APP

REMARKS:

High D.O. from sparging. All parameters stable. Sampled per FS2212.

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP =** Peristaltic Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

Tetra Tech, Inc.

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: Launch Complex 34 (LC34)
Project No.: 112G08985

[ ] Stream
[ ] Spring
[ ] Pond
[ ] Lake
[X] Other: Canal
[ ] QA Sample Type:

Sample ID No.: LC324-SW01001-000.5-20210428
Sample Location: LC34-SW1001
Sampled By: C. Sorden
C.O.C. No.:

Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

		Color	pH	Cond.	Temp.	Turbidity	DO	ORP	Salinity
Date:	4/28/2021								
Time:	1530	(Visual)	(S.U.)	(µS/cm)	(^{0}C)	(NTU)	(mg/l)	(mV)	(ppt)
Depth:	0.0-0.5	**Yellow**	**7.5**	**1669**	**27.86**	**9.24**	**2.56**	**-180.1**	**0.8**
Method:	Grab								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
SW-846 8260B VOCs	HCL	3-40mL vials	X

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech, Inc.

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: Launch Complex 34 (LC34)
Project No.: 112G08985

[ ] Stream
[ ] Spring
[ ] Pond
[ ] Lake
[X] Other: Canal
[ ] QA Sample Type:

Sample ID No.: LC324-SW01002-000.5-20210428
Sample Location: LC34-SW1002
Sampled By: C. Sorden
C.O.C. No.:

Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

		Color	pH	Cond.	Temp.	Turbidity	DO	ORP	Salinity
Date:	4/28/2021	(Visual)	(S.U.)	(µS/cm)	(^{0}C)	(NTU)	(mg/l)	(mV)	(ppt)
Time:	1550								
Depth:	0-0.5	**Yellow**	**7.58**	**1473.3**	**29.21**	**19.21**	**8.93**	**-76.9**	**0.69**
Method:	Grab								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
SW-846 8260B VOCs	HCL	3-40mL vials	X

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech, Inc.

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: Launch Complex 34 (LC34)
Project No.: 112G08985

[ ] Stream
[ ] Spring
[ ] Pond
[ ] Lake
[X] Other: Canal
[ ] QA Sample Type:

Sample ID No.: LC324-SW01004-000.5-20210428
Sample Location: LC34-SW1004
Sampled By: C. Sorden
C.O.C. No.:

Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

		Color	pH	Cond.	Temp.	Turbidity	DO	ORP	Salinity
Date:	4/28/2021								
Time:	1610	(Visual)	(S.U.)	(µS/cm)	(^{0}C)	(NTU)	(mg/l)	(mV)	(ppt)
Depth:	0-0.5	**Yellow**	**8.41**	**2157.3**	**32.68**	**3.01**	**8.58**	**26.1**	**0.97**
Method:	Grab								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
SW-846 8260B VOCs	HCL	3-40mL vials	X

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech, Inc.

GROUNDWATER LEVEL MEASUREMENT SHEET

Project Name: Launch Complex 34 - Hot Spot 6 **Project No.:** 112G08985
Location: Kennedy Space Center (KSC), FL **Personnel:** Chuck Sorden
Weather Conditions: Sunny 83 degrees F **Measuring Device:** Heron Skinny Dipper
Tidally Influenced: Yes ____ No __X__ **Remarks:**

Well or Piezometer Number	Date	Time	Elevation of Reference Point (feet)*	Total Well Depth (feet)*	Water Level Indicator Reading (feet)*	Thickness of Free Product (feet)*	Groundwater Elevation (feet)*	Comments
HS6-IW0057I	10/05/21	1054		28	8.56	NA		
HS6-IW0057S	10/05/21	1053		11	8.40	NA		
HS6-IW0108	10/05/21	1048		28	6.21	NA		
HS6-IW0123	10/05/21	1117		28	5.59	NA		
HS6-IW0124	10/05/21	1049		23	3.75	NA		
HS6-IW0125	10/05/21	1045		23	2.76	NA		
HS6-IW0126	10/05/21	1154		28	2.27	NA		
HS6-IW0127	10/05/21	1108		28	4.8	NA		
HS6-IW0128	10/05/21	1105		23	2.98	NA		
HS6-IW0129	10/05/21	1033		23	4.34	NA		
HS6-IW0130	10/05/21	1034		28	4.25	NA		
HS6-IW0131	10/05/21	1036		23	3.76	NA		
HS6-IW0132	10/05/21	1037		23	3.84	NA		
HS6-IW0133	10/05/21	1039		23	3.49	NA		
HS6-IW0134	10/05/21	1156		28	2.91	NA		
HS6-IW0135	10/05/21	1158		28	3.93	NA		
HS6-IW0136	10/05/21	1121		28	5.37	NA		
HS6-IW0137	10/05/21	1200		28	5.15	NA		
HS6-IW0138	10/05/21	1201		34	5.18	NA		
HS6-IW0139	10/05/21	1155		23	2.69	NA		
HS6-IW0140	10/05/21	1154		28	2.77	NA		
HS6-IW0141	10/05/21	1111		28	4.17	NA		
HS6-IW0142	10/05/21	1052		28	4.52	NA		
HS6-IW0143	10/05/21	1120		28	3.29	NA		
HS6-IW0144	10/05/21	1114		28	6.43	NA		
HS6-IW0145	10/05/21	1114		34	6.56	NA		
HS6-IW0146	10/05/21	1112		23	5.49	NA		
HS6-IW0147	10/05/21	1113		28	5.66	NA		

* All measurements to the nearest 0.01 foot

SITE NAME: LC34	SITE LOCATION: Kennedy Space Center	
LOC ID: LC34-IW057I	SAMPLE ID: **LC34-IW0057I-025.5-20211006** Sample depth (ddd.d)=[bottom of screen (feet bls)-Top depth] x 0.5-bottom of screen (feet bls)	DATE: **10/06/2021**

PURGING DATA

STATIC DEPTH TO WATER (feet btoc): 8.68	CASING HEIGHT (feet als): 3.5	STATIC DEPTH TO WATER (feet bls) = DTW (btoc) - Casing Height (feet als): NA	WELL SCREEN INTERVAL DEPTH (feet bls): 23-28

WELL DIAMETER (inches): 1.0	TUBING DIAMETER (inches): 3/16	PURGE PUMP TYPE OR BAILER: **Peristaltic Pump**	TOP DEPTH = top of screen or depth to water which ever is greatest (feet bls): 23	BOTTOM DEPTH (feet bls): 28

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

_____Liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

0.67 Liters. (0.005 x 38) + 0.475 = 0.67

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 25.5	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 25.5	PURGING INITIATED AT: 1540	PURGING ENDED AT:	TOTAL VOLUME PURGED (Liters):

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (mlpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (^{O}C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	ORP (mV)	COLOR (describe)
1550	2.0	2.0	200	8.86	7.27	28.19	3398.7	0.60	3.81	43.5	Clear
1552	0.4	2.4	200	8.86	7.26	28.06	3348.1	0.58	3.09	47.0	Clear
1555	0.6	3.0	200	8.86	7.27	28.05	3293.5	0.59	4.08	48.1	Clear
1600	Sample	Collected									

WELL CAPACITY (Liters Per Foot): **0.75"** = 0.076; **1"** = 0.15; **1.25"** = 0.23; **2"** = 0.61; **3"** = 1.40; **4"** = 2.46; **5"** = 3.86; **6"** = 5.57; **12"** = 22.26
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): **1/8"** = 0.002; **3/16"** = 0.005; **1/4"** = 0.0098; **5/16"** = 0.015; **3/8"** = 0.023; **1/2"** = 0.038; **5/8"** = 0.06

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Chuck Sorden / Tt	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1600	SAMPLING ENDED AT: 1605
PUMP OR TUBING DEPTH IN WELL (feet): 25.5	SAMPLE PUMP: FLOW RATE (mL per minute): 200	TUBING MATERIAL CODE: Teflon	
FIELD DECONTAMINATION: **(Y)** N	FIELD-FILTERED: Y **(N)** FILTER SIZE___ µm Filtration Equipment Type: _____	DUPLICATE: Y **(N)**	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
1	3	CG	40 ml	HCl	None	<2	SW-846 8260B	APP

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP =** Peristaltic Pump **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

SITE NAME: LC34	SITE LOCATION: Kennedy Space Center	
LOC ID: LC34-IW057S	SAMPLE ID: **LC34-IW0057S-008.1-20211006** Sample depth (ddd.d)=[bottom of screen (feet bls)-Top depth] x 0.5-bottom of screen (feet bls)	DATE: **10/06/2021**

PURGING DATA

STATIC DEPTH TO WATER (feet btoc): 8.66	CASING HEIGHT (feet als): 3.5	STATIC DEPTH TO WATER (feet bls) = DTW (btoc) - Casing Height (feet als): 5.16	WELL SCREEN INTERVAL DEPTH (feet bls): 01-11	
WELL DIAMETER (inches): 1.0	TUBING DIAMETER (inches): 3/16	PURGE PUMP TYPE OR BAILER: **Peristaltic Pump**	TOP DEPTH = top of screen or depth to water which ever is greatest (feet bls):	BOTTOM DEPTH (feet bls): 11

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

0.88 Liters. (11 – 5.16) x 0.15 = 0.88

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

Liters

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 8.1	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 8.1	PURGING INITIATED AT: 1510	PURGING ENDED AT: 1525	TOTAL VOLUME PURGED (Liters):

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (mlpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (^{O}C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	ORP (mV)	COLOR (describe)
1520	2.0	2.0	200	8.66	7.27	29.46	2086.0	0.78	0.54	-78.5	Clear
1522	0.4	2.4	200	8.66	7.30	29.44	2046.3	1.03	0.48	-61.6	Clear
1525	0.6	3.0	200	8.66	7.30	29.42	2039.4	1.08	0.51	-58.8	Clear
1530	Sample	Collected									

WELL CAPACITY (Liters Per Foot): **0.75"** = 0.076; **1"** = 0.15; **1.25"** = 0.23; **2"** = 0.61; **3"** = 1.40; **4"** = 2.46; **5"** = 3.86; **6"** = 5.57; **12"** = 22.26
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): **1/8"** = 0.002; **3/16"** = 0.005; **1/4"** = 0.0098; **5/16"** = 0.015; **3/8"** = 0.023; **1/2"** = 0.038; **5/8"** = 0.06

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Chuck Sorden / Tt	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1530	SAMPLING ENDED AT: 1535
PUMP OR TUBING DEPTH IN WELL (feet): 8.1	SAMPLE PUMP: FLOW RATE (mL per minute): 200	TUBING MATERIAL CODE: Teflon	
FIELD DECONTAMINATION: **(Y)** N	FIELD-FILTERED: Y **(N)** FILTER SIZE___ µm Filtration Equipment Type:	DUPLICATE: Y **(N)**	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
1	3	CG	40 ml	HCl	None	<2	SW-846 8260B	APP

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP =** Peristaltic Pump **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

SITE NAME: LC34	SITE LOCATION: Kennedy Space Center	
LOC ID: LC34-IW0108	SAMPLE ID: **LC34-IW0108-024.0-20211005** Sample depth (ddd.d)=[bottom of screen (feet bls)-Top depth] x 0.5-bottom of screen (feet bls)	DATE: **10/05/2021**

PURGING DATA

STATIC DEPTH TO WATER (feet btoc): 6.21	CASING HEIGHT (feet als): 2.5	STATIC DEPTH TO WATER (feet bls) = DTW (btoc) - Casing Height (feet als): NA	WELL SCREEN INTERVAL DEPTH (feet bls): 20-28

WELL DIAMETER (inches): 1.0	TUBING DIAMETER (inches): 3/16	PURGE PUMP TYPE OR BAILER: **Peristaltic Pump**	TOP DEPTH = top of screen or depth to water which ever is greatest (feet bls): 20	BOTTOM DEPTH (feet bls): 28

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

_____Liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

0.67 Liters. (0.005 x 38) + 0.475 = 0.67

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 24	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 24	PURGING INITIATED AT: 1640	PURGING ENDED AT: 1720	TOTAL VOLUME PURGED (Liters): 5.0

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (mlpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (^{O}C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	ORP (mV)	COLOR (describe)
1650	2.0	2.0	200	6.40	7.41	25.50	3640.7	3.42	8.97	9.72	Clear
1700	1.0	3.0	100	6.36	7.41	25.91	3709.6	3.50	3.36	85.2	Clear
1710	1.0	4.0	100	6.36	7.41	26.03	3705.6	3.22	3.53	91.8	Clear
1720	1.0	5.0	100	6.36	7.41	26.02	3682.0	3.40	4.96	99.1	Clear
1725	Sample	Collected									

WELL CAPACITY (Liters Per Foot): **0.75"** = 0.076; **1"** = 0.15; **1.25"** = 0.23; **2"** = 0.61; **3"** = 1.40; **4"** = 2.46; **5"** = 3.86; **6"** = 5.57; **12"** = 22.26
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): **1/8"** = 0.002; **3/16"** = 0.005; **1/4"** = 0.0098; **5/16"** = 0.015; **3/8"** = 0.023; **1/2"** = 0.038; **5/8"** = 0.06

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Chuck Sorden / Tt	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1725	SAMPLING ENDED AT: 1730
PUMP OR TUBING DEPTH IN WELL (feet): 24.0	SAMPLE PUMP: FLOW RATE (mL per minute): 200	TUBING MATERIAL CODE: Teflon	
FIELD DECONTAMINATION: **(Y)** N	FIELD-FILTERED: Y **(N)** FILTER SIZE___ µm Filtration Equipment Type: _____	DUPLICATE: Y **(N)**	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
1	3	CG	40 ml	HCl	None	<2	SW-846 8260B	APP

REMARKS: High dissolved oxygen from air sparging. All parameters stable. Sampled per FS2212.

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP =** Peristaltic Pump **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

SITE NAME: LC34	SITE LOCATION: Kennedy Space Center	
LOC ID: LC34-IW0123	SAMPLE ID: **LC34-IW0123-024.0-20211007** Sample depth (ddd.d)=[bottom of screen (feet bls)-Top depth] x 0.5-bottom of screen (feet bls)	DATE: **10/07/2021**

PURGING DATA

STATIC DEPTH TO WATER (feet btoc): 5.63	CASING HEIGHT (feet als): 0	STATIC DEPTH TO WATER (feet bls) = DTW (btoc) - Casing Height (feet als):	WELL SCREEN INTERVAL DEPTH (feet bls): 20-28

WELL DIAMETER (inches): 1.0	TUBING DIAMETER (inches): 3/16	PURGE PUMP TYPE OR BAILER: **Peristaltic Pump**	TOP DEPTH = top of screen or depth to water which ever is greatest (feet bls): 20	BOTTOM DEPTH (feet bls): 28

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

_____Liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

0.67 Liters. (0.005 x 38) + 0.475 = 0.67

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 24	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 24	PURGING INITIATED AT: 1130	PURGING ENDED AT: 1145	TOTAL VOLUME PURGED (Liters): 3.0

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (mlpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (^{O}C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	ORP (mV)	COLOR (describe)
1140	2.0	2.0	200	5.67	7.25	27.64	2209.8	0.13	2.34	-31.9	Clear
1142	0.4	2.4	200	5.67	7.25	27.77	2221.7	0.14	2.94	-31.8	Clear
1145	0.6	3.0	200	5.67	7.25	27.79	2219.0	0.14	1.50	-31.4	Clear
1150	Sample	Collected									

WELL CAPACITY (Liters Per Foot): **0.75"** = 0.076; **1"** = 0.15; **1.25"** = 0.23; **2"** = 0.61; **3"** = 1.40; **4"** = 2.46; **5"** = 3.86; **6"** = 5.57; **12"** = 22.26
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): **1/8"** = 0.002; **3/16"** = 0.005; **1/4"** = 0.0098; **5/16"** = 0.015; **3/8"** = 0.023; **1/2"** = 0.038; **5/8"** = 0.06

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Chuck Sorden / Tt	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1150	SAMPLING ENDED AT: 1150
PUMP OR TUBING DEPTH IN WELL (feet): 24.0	SAMPLE PUMP: FLOW RATE (mL per minute): 200	TUBING MATERIAL CODE: Teflon	
FIELD DECONTAMINATION: **(Y)** N	FIELD-FILTERED: Y **(N)** FILTER SIZE___ µm Filtration Equipment Type: _____	DUPLICATE: Y **(N)**	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
1	3	CG	40 ml	HCl	None	<2	SW-846 8260B	APP

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP =** Peristaltic Pump **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

SITE NAME: LC34	SITE LOCATION: Kennedy Space Center	
LOC ID: LC34-IW0124	SAMPLE ID: **LC34-IW0124-018.0-20211006** Sample depth (ddd.d)=[bottom of screen (feet bls)-Top depth] x 0.5-bottom of screen (feet bls)	DATE: **10/06/2021**

PURGING DATA

STATIC DEPTH TO WATER (feet btoc): 3.80	CASING HEIGHT (feet als): 0	STATIC DEPTH TO WATER (feet bls) = DTW (btoc) - Casing Height (feet als): NA	WELL SCREEN INTERVAL DEPTH (feet bls): 13-23

WELL DIAMETER (inches): 1.0	TUBING DIAMETER (inches): 3/16	PURGE PUMP TYPE OR BAILER: **Peristaltic Pump**	TOP DEPTH = top of screen or depth to water which ever is greatest (feet bls): 13	BOTTOM DEPTH (feet bls): 23

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

_____Liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

0.63 Liters. (0.005 x 33) + 0.475 = 0.63

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 18	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 18	PURGING INITIATED AT: 1100	PURGING ENDED AT: 1200	TOTAL VOLUME PURGED (Liters): 12.0

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (mlpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (^{O}C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	ORP (mV)	COLOR (describe)
1110	2.0	2.0	200	3.86	7.13	28.80	3679.9	4.72	6.22	166.3	Clear
1120	2.0	4.0	200	3.86	7.15	27.92	3607.8	4.50	4.41	165.2	Clear
1130	2.0	6.0	200	3.86	7.15	27.72	3511.6	4.17	3.17	163.4	Clear
1140	2.0	8.0	200	3.86	7.15	27.66	3186.8	4.11	3.86	163.3	Clear
1150	2.0	10.0	200	3.86	7.15	27.58	3125.6	4.03	4.98	162.9	Clear
1200	2.0	12.0	200	3.86	7.15	27.63	3138.5	4.04	2.20	163.1	Clear
1205	Sample	Collected									

WELL CAPACITY (Liters Per Foot): **0.75"** = 0.076; **1"** = 0.15; **1.25"** = 0.23; **2"** = 0.61; **3"** = 1.40; **4"** = 2.46; **5"** = 3.86; **6"** = 5.57; **12"** = 22.26
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): **1/8"** = 0.002; **3/16"** = 0.005; **1/4"** = 0.0098; **5/16"** = 0.015; **3/8"** = 0.023; **1/2"** = 0.038; **5/8"** = 0.06

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1205	SAMPLING ENDED AT: 1210
PUMP OR TUBING DEPTH IN WELL (feet): 18.0	SAMPLE PUMP: FLOW RATE (mL per minute): 200	TUBING MATERIAL CODE: Teflon	
FIELD DECONTAMINATION: **(Y)** N	FIELD-FILTERED: Y **(N)** FILTER SIZE___ µm Filtration Equipment Type: _____	DUPLICATE: Y **(N)**	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
1	3	CG	40 ml	HCl	None	<2	SW-846 8260B	APP

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP =** Peristaltic Pump **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

SITE NAME: LC34	SITE LOCATION: Kennedy Space Center	
LOC ID: LC34-IW0125	SAMPLE ID: **LC34-IW0125-018.0-20211005** Sample depth (ddd.d)=[bottom of screen (feet bls)-Top depth] x 0.5-bottom of screen (feet bls)	DATE: **10/05/2021**

PURGING DATA

STATIC DEPTH TO WATER (feet btoc): 2.76	CASING HEIGHT (feet als): 0	STATIC DEPTH TO WATER (feet bls) = DTW (btoc) - Casing Height (feet als): NA	WELL SCREEN INTERVAL DEPTH (feet bls): 13-23

WELL DIAMETER (inches): 1.0	TUBING DIAMETER (inches): 3/16	PURGE PUMP TYPE OR BAILER: **Peristaltic Pump**	TOP DEPTH = top of screen or depth to water which ever is greatest (feet bls): 13	BOTTOM DEPTH (feet bls): 23

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

_____Liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

0.64 Liters. (0.005 x 33) + 0.475 = 0.64

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 18	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 18	PURGING INITIATED AT: 1540	PURGING ENDED AT: 1555	TOTAL VOLUME PURGED (Liters): 3.0

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (mlpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (^{O}C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	ORP (mV)	COLOR (describe)
1550	2.0	2.0	200	2.88	7.29	25.75	6325.3	0.10	7.11	-45.9	Clear
1552	0.4	2.4	200	2.88	7.30	25.68	6317.5	0.09	5.97	-50.2	Clear
1555	0.6	3.0	200	2.88	7.30	25.65	6276.0	0.09	4.51	-53.9	Clear
1600	Sample	Collected									

WELL CAPACITY (Liters Per Foot): **0.75"** = 0.076; **1"** = 0.15; **1.25"** = 0.23; **2"** = 0.61; **3"** = 1.40; **4"** = 2.46; **5"** = 3.86; **6"** = 5.57; **12"** = 22.26
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): **1/8"** = 0.002; **3/16"** = 0.005; **1/4"** = 0.0098; **5/16"** = 0.015; **3/8"** = 0.023; **1/2"** = 0.038; **5/8"** = 0.06

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Chuck Sorden / Tt	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1600	SAMPLING ENDED AT: 1605
PUMP OR TUBING DEPTH IN WELL (feet): 18.0	SAMPLE PUMP: FLOW RATE (mL per minute): 200	TUBING MATERIAL CODE: Teflon	
FIELD DECONTAMINATION: **(Y)** N	FIELD-FILTERED: Y **(N)** FILTER SIZE___ µm Filtration Equipment Type: _____	DUPLICATE: Y **(N)**	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
1	3	CG	40 ml	HCl	None	<2	SW-846 8260B	APP

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP =** Peristaltic Pump **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

SITE NAME: LC34	SITE LOCATION: Kennedy Space Center	
LOC ID: LC34-IW0126	SAMPLE ID: **LC34-IW0126-024.0-20211008** Sample depth (ddd.d)=[bottom of screen (feet bls)-Top depth] x 0.5-bottom of screen (feet bls)	DATE: **10/08/2021**

PURGING DATA

STATIC DEPTH TO WATER (feet btoc): 2.35	CASING HEIGHT (feet als): 0	STATIC DEPTH TO WATER (feet bls) = DTW (btoc) - Casing Height (feet als): NA	WELL SCREEN INTERVAL DEPTH (feet bls): 20-28

WELL DIAMETER (inches): 1.0	TUBING DIAMETER (inches): 3/16	PURGE PUMP TYPE OR BAILER: **Peristaltic Pump**	TOP DEPTH = top of screen or depth to water which ever is greatest (feet bls): 20	BOTTOM DEPTH (feet bls): 28

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

_____Liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

0.67 Liters.(0.005 x 38) + 0.475 = 0.67

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 24	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 24	PURGING INITIATED AT: 1045	PURGING ENDED AT: 1100	TOTAL VOLUME PURGED (Liters): 3.0

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (mlpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (^{O}C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	ORP (mV)	COLOR (describe)
1055	2.0	2.0	200	2.52	7.30	25.11	2050.4	0.09	4.58	-47.3	Clear
1057	0.4	2.4	200	2.52	7.30	25.13	2034.7	0.08	2.43	-51.4	Clear
1100	0.6	3.0	200	2.52	7.30	25.06	2027.5	0.08	1.12	-52.3	Clear
1105	Sample	Collected									

WELL CAPACITY (Liters Per Foot): **0.75"** = 0.076; **1"** = 0.15; **1.25"** = 0.23; **2"** = 0.61; **3"** = 1.40; **4"** = 2.46; **5"** = 3.86; **6"** = 5.57; **12"** = 22.26
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): **1/8"** = 0.002; **3/16"** = 0.005; **1/4"** = 0.0098; **5/16"** = 0.015; **3/8"** = 0.023; **1/2"** = 0.038; **5/8"** = 0.06

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Chuck Sorden / Tt	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1105	SAMPLING ENDED AT: 1110
PUMP OR TUBING DEPTH IN WELL (feet): 24.0	SAMPLE PUMP: FLOW RATE (mL per minute): 200	TUBING MATERIAL CODE: Teflon	
FIELD DECONTAMINATION: **(Y)** N	FIELD-FILTERED: Y **(N)** FILTER SIZE___ µm Filtration Equipment Type: _____	DUPLICATE: Y **(N)**	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
1	3	CG	40 ml	HCl	None	<2	SW-846 8260B	APP

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP =** Peristaltic Pump **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

SITE NAME: LC34	SITE LOCATION: Kennedy Space Center	
LOC ID: LC34-IW0127	SAMPLE ID: **LC34-IW0127-024.0-20211006** Sample depth (ddd.d)=[bottom of screen (feet bls)-Top depth] x 0.5-bottom of screen (feet bls)	DATE: **10/06/2021**

PURGING DATA

STATIC DEPTH TO WATER (feet btoc): 4.83	CASING HEIGHT (feet als): 0	STATIC DEPTH TO WATER (feet bls) = DTW (btoc) - Casing Height (feet als):	WELL SCREEN INTERVAL DEPTH (feet bls): 20-28

WELL DIAMETER (inches): 1.0	TUBING DIAMETER (inches): 3/16	PURGE PUMP TYPE OR BAILER: **Peristaltic Pump**	TOP DEPTH = top of screen or depth to water which ever is greatest (feet bls): 20	BOTTOM DEPTH (feet bls): 28

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

_____Liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

0.67 Liters. (0.005 x 38) + 0.475 = 0.67

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 24	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 24	PURGING INITIATED AT: 1420	PURGING ENDED AT: 1455	TOTAL VOLUME PURGED (Liters): 7.0

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (mlpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (^{O}C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	ORP (mV)	COLOR (describe)
1430	2.0	2.0	200	4.96	7.16	27.34	2296.8	2.54	10.62	143.5	Clear
1450	4.0	6.0	200	4.96	7.16	27.13	2308.9	2.52	5.27	142.1	Clear
1452	0.4	6.4	200	4.96	7.16	27.08	2242.7	2.50	6.13	141.9	Clear
1455	0.6	7.0	200	4.96	7.16	27.20	2264.9	2.50	5.65	142.0	Clear
1500	Sample	Collected									

WELL CAPACITY (Liters Per Foot): **0.75"** = 0.076; **1"** = 0.15; **1.25"** = 0.23; **2"** = 0.61; **3"** = 1.40; **4"** = 2.46; **5"** = 3.86; **6"** = 5.57; **12"** = 22.26
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): **1/8"** = 0.002; **3/16"** = 0.005; **1/4"** = 0.0098; **5/16"** = 0.015; **3/8"** = 0.023; **1/2"** = 0.038; **5/8"** = 0.06

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Chuck Sorden / Tt	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1500	SAMPLING ENDED AT: 1505
PUMP OR TUBING DEPTH IN WELL (feet): 24.0	SAMPLE PUMP: 200 FLOW RATE (mL per minute):	TUBING MATERIAL CODE: Teflon	
FIELD DECONTAMINATION: **(Y)** N	FIELD-FILTERED: Y **(N)** FILTER SIZE___ µm Filtration Equipment Type: _____	DUPLICATE: Y **(N)**	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
1	3	CG	40 ml	HCl	None	<2	SW-846 8260B	APP

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP =** Peristaltic Pump **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

SITE NAME: LC34	SITE LOCATION: Kennedy Space Center	
LOC ID: LC34-IW0128	SAMPLE ID: **LC34-IW0128-018.0-20211006** Sample depth (ddd.d)=[bottom of screen (feet bls)-Top depth] x 0.5-bottom of screen (feet bls)	DATE: **10/06/2021**

PURGING DATA

STATIC DEPTH TO WATER (feet btoc. 3.16	CASING HEIGHT (feet als): 0	STATIC DEPTH TO WATER (feet bls) = DTW (btoc) - Casing Height (feet als): NA	WELL SCREEN INTERVAL DEPTH (feet bls): 13-23

WELL DIAMETER (inches): 1.0	TUBING DIAMETER (inches): 3/16	PURGE PUMP TYPE OR BAILER: **Peristaltic Pump**	TOP DEPTH = top of screen or depth to water which ever is greatest (feet bls): 13	BOTTOM DEPTH (feet bls): 23

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

_____Liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

0.64 Liters. (0.005 x 33) + 0.475 = 0.64

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 18	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 18	PURGING INITIATED AT: 1315	PURGING ENDED AT: 1405	TOTAL VOLUME PURGED (Liters): 10.0

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (mlpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (^{O}C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	ORP (mV)	COLOR (describe)
1335	4.0	4.0	200	3.28	7.24	27.05	2561.4	4.72	10.65	145.7	Clear
1355	4.0	8.0	200	3.28	7.27	27.10	2538.0	4.18	2.25	141.8	Clear
1400	1.0	9.0	200	3.28	7.27	26.98	2487.1	4.17	4.06	143.4	Clear
1402	0.4	9.4	200	3.28	7.26	26.98	2562.8	4.07	3.78	143.6	Clear
1405	0.6	10.0	200	3.28	7.26	27.06	2505.7	4.01	4.54	144.4	Clear
1410	Sample	Collected									

WELL CAPACITY (Liters Per Foot): **0.75"** = 0.076; **1"** = 0.15; **1.25"** = 0.23; **2"** = 0.61; **3"** = 1.40; **4"** = 2.46; **5"** = 3.86; **6"** = 5.57; **12"** = 22.26
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): **1/8"** = 0.002; **3/16"** = 0.005; **1/4"** = 0.0098; **5/16"** = 0.015; **3/8"** = 0.023; **1/2"** = 0.038; **5/8"** = 0.06

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Chuck Sorden / Tt	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1410	SAMPLING ENDED AT: 1415

PUMP OR TUBING DEPTH IN WELL (feet): 18.0	SAMPLE PUMP: 200 FLOW RATE (mL per minute):	TUBING MATERIAL CODE: Teflon
FIELD DECONTAMINATION: **(Y)** N	FIELD-FILTERED: Y **(N)** FILTER SIZE___ µm Filtration Equipment Type: _____	DUPLICATE: Y **(N)**

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
1	3	CG	40 ml	HCl	None	<2	SW-846 8260B	APP

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP =** Peristaltic Pump **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

SITE NAME: LC34	SITE LOCATION: Kennedy Space Center	
LOC ID: LC34-IW0129	SAMPLE ID: **LC34-IW0129-018.0-20211005** Sample depth (ddd.d)=[bottom of screen (feet bls)-Top depth] x 0.5-bottom of screen (feet bls)	DATE: **10/05/2021**

PURGING DATA

STATIC DEPTH TO WATER (feet btoc.): 4.34	CASING HEIGHT (feet als): 0	STATIC DEPTH TO WATER (feet bls) = DTW (btoc) - Casing Height (feet als): NA	WELL SCREEN INTERVAL DEPTH (feet bls): 13-23

WELL DIAMETER (inches): 1.0	TUBING DIAMETER (inches): 3/16	PURGE PUMP TYPE OR BAILER: **Peristaltic Pump**	TOP DEPTH = top of screen or depth to water which ever is greatest (feet bls): 13	BOTTOM DEPTH (feet bls): 23

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

_____Liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

0.64 Liters. (0.005 x 33) + 0.475 = 0.64

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 18	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 18	PURGING INITIATED AT: 1330	PURGING ENDED AT: 1345	TOTAL VOLUME PURGED (Liters): 3.0

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (mlpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (^{O}C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	ORP (mV)	COLOR (describe)
1340	2.0	2.0	200	4.40	7.28	26.31	4750.0	0.07	3.87	-66.8	Clear
1342	0.4	2.4	200	4.40	7.28	26.36	4766.9	0.07	3.25	-66.8	Clear
1345	0.6	3.0	200	4.40	7.28	26.23	4796.0	0.06	4.59	-66.9	Clear
1350	Sample	Collected									

WELL CAPACITY (Liters Per Foot): **0.75"** = 0.076; **1"** = 0.15; **1.25"** = 0.23; **2"** = 0.61; **3"** = 1.40; **4"** = 2.46; **5"** = 3.86; **6"** = 5.57; **12"** = 22.26
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): **1/8"** = 0.002; **3/16"** = 0.005; **1/4"** = 0.0098; **5/16"** = 0.015; **3/8"** = 0.023; **1/2"** = 0.038; **5/8"** = 0.06

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Chuck Sorden / Tt	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1350	SAMPLING ENDED AT: 1355
PUMP OR TUBING DEPTH IN WELL (feet): 18.0	SAMPLE PUMP: FLOW RATE (mL per minute): 200	TUBING MATERIAL CODE: Teflon	
FIELD DECONTAMINATION: **(Y)** N	FIELD-FILTERED: Y **(N)** FILTER SIZE___ µm Filtration Equipment Type: _____	DUPLICATE: Y **(N)**	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
1	3	CG	40 ml	HCl	None	<2	SW-846 8260B	APP

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP =** Peristaltic Pump **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

SITE NAME: LC34	SITE LOCATION: Kennedy Space Center	
LOC ID: LC34-IW0130	SAMPLE ID: **LC34-IW0130-024.0-202110** Sample depth (ddd.d)=[bottom of screen (feet bls)-Top depth] x 0.5-bottom of screen (feet bls)	DATE: **10/ /2021**

PURGING DATA

STATIC DEPTH TO WATER (feet btoc): 4.25	CASING HEIGHT (feet als): 0	STATIC DEPTH TO WATER (feet bls) = DTW (btoc) - Casing Height (feet als): NA	WELL SCREEN INTERVAL DEPTH (feet bls): 20-28

WELL DIAMETER (inches): 1.0	TUBING DIAMETER (inches): 3/16	PURGE PUMP TYPE OR BAILER: **Peristaltic Pump**	TOP DEPTH = top of screen or depth to water which ever is greatest (feet bls): 20	BOTTOM DEPTH (feet bls): 28

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

_____Liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

0.67 Liters. (0.005 x 38) + 0.475 = 0.67

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 24	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 24	PURGING INITIATED AT: 1400	PURGING ENDED AT: 1415	TOTAL VOLUME PURGED (Liters): 3.0

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (mlpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (^{O}C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	ORP (mV)	COLOR (describe)
1410	2.0	2.0	200	4.34	7.28	25.55	6401.7	0.06	5.53	-45.0	Clear
1412	0.4	2.4	200	4.34	7.28	25.52	6439.6	0.05	3.18	-45.8	Clear
1415	0.6	3.0	200	4.34	7.28	25.48	6391.4	0.05	3.34	-45.7	Clear
1420	Sample	Collected									

WELL CAPACITY (Liters Per Foot): **0.75"** = 0.076; **1"** = 0.15; **1.25"** = 0.23; **2"** = 0.61; **3"** = 1.40; **4"** = 2.46; **5"** = 3.86; **6"** = 5.57; **12"** = 22.26
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): **1/8"** = 0.002; **3/16"** = 0.005; **1/4"** = 0.0098; **5/16"** = 0.015; **3/8"** = 0.023; **1/2"** = 0.038; **5/8"** = 0.06

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Chuck Sorden / Tt	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1420	SAMPLING ENDED AT: 1425
PUMP OR TUBING DEPTH IN WELL (feet): 24.0	SAMPLE PUMP: FLOW RATE (mL per minute): 200	TUBING MATERIAL CODE: Teflon	
FIELD DECONTAMINATION: **(Y)** N	FIELD-FILTERED: Y **(N)** FILTER SIZE___ µm Filtration Equipment Type: _____	DUPLICATE: Y **(N)**	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
1	3	CG	40 ml	HCl	None	<2	SW-846 8260B	APP

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP =** Peristaltic Pump **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

SITE NAME: LC34	SITE LOCATION: Kennedy Space Center	
LOC ID: LC34-IW0131	SAMPLE ID: **LC34-IW0131-018.0-20211005** Sample depth (ddd.d)=[bottom of screen (feet bls)-Top depth] x 0.5-bottom of screen (feet bls)	DATE: **10/05/2021**

PURGING DATA

STATIC DEPTH TO WATER (feet btoc): 3.76	CASING HEIGHT (feet als): 0	STATIC DEPTH TO WATER (feet bls) = DTW (btoc) - Casing Height (feet als):	WELL SCREEN INTERVAL DEPTH (feet bls): 13-23

WELL DIAMETER (inches): 1.0	TUBING DIAMETER (inches): 3/16	PURGE PUMP TYPE OR BAILER: **Peristaltic Pump**	TOP DEPTH = top of screen or depth to water which ever is greatest (feet bls): 13	BOTTOM DEPTH (feet bls): 23

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

_____Liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

0.64 Liters. (0.005 x 33) + 0.475 = 0.64

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 18	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 18	PURGING INITIATED AT: 1610	PURGING ENDED AT: 1625	TOTAL VOLUME PURGED (Liters): 3.0

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (mlpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (^{O}C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	ORP (mV)	COLOR (describe)
1620	2.0	2.0	200	3.81	7.36	25.89	6907.5	0.09	6.41	-33.4	Clear
1622	0.4	2.4	200	3.81	7.36	25.85	6935.6	0.08	5.70	-32.3	Clear
1625	0.6	3.0	200	3.81	7.36	25.80	6889.7	0.08	3.51	-30.6	Clear
1630	Sample	Collected									

WELL CAPACITY (Liters Per Foot): **0.75"** = 0.076; **1"** = 0.15; **1.25"** = 0.23; **2"** = 0.61; **3"** = 1.40; **4"** = 2.46; **5"** = 3.86; **6"** = 5.57; **12"** = 22.26
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): **1/8"** = 0.002; **3/16"** = 0.005; **1/4"** = 0.0098; **5/16"** = 0.015; **3/8"** = 0.023; **1/2"** = 0.038; **5/8"** = 0.06

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Chuck Sorden / Tt	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1630	SAMPLING ENDED AT: 1635
PUMP OR TUBING DEPTH IN WELL (feet): 18.0	SAMPLE PUMP: FLOW RATE (mL per minute): 200	TUBING MATERIAL CODE: Teflon	
FIELD DECONTAMINATION: **(Y)** N	FIELD-FILTERED: Y **(N)** FILTER SIZE___ µm Filtration Equipment Type: _____	DUPLICATE: Y **(N)**	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
1	3	CG	40 ml	HCl	None	<2	SW-846 8260B	APP

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP =** Peristaltic Pump **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

SITE NAME: LC34	SITE LOCATION: Kennedy Space Center	
LOC ID: LC34-IW0132	SAMPLE ID: **LC34-IW0132-018.0-20211005** Sample depth (ddd.d)=[bottom of screen (feet bls)-Top depth] x 0.5-bottom of screen (feet bls)	DATE: **10/05/2021**

PURGING DATA

STATIC DEPTH TO WATER (feet btoc): 3.84	CASING HEIGHT (feet als): 0	STATIC DEPTH TO WATER (feet bls) = DTW (btoc) - Casing Height (feet als): NA	WELL SCREEN INTERVAL DEPTH (feet bls): 13-23

WELL DIAMETER (inches): 1.0	TUBING DIAMETER (inches): 3/16	PURGE PUMP TYPE OR BAILER: **Peristaltic Pump**	TOP DEPTH = top of screen or depth to water which ever is greatest (feet bls): 13	BOTTOM DEPTH (feet bls): 23

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

_____Liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

0.64 Liters. (0.005 x 33) + 04.75 = 0.64

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 18	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 18	PURGING INITIATED AT: 1300	PURGING ENDED AT: 1315	TOTAL VOLUME PURGED (Liters): 3.0

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (mlpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (^{O}C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	ORP (mV)	COLOR (describe)
1310	2.0	2.0	200	3.99	7.23	27.42	5705.0	0.08	8.52	-94.1	Clear
1312	0.4	2.4	200	3.99	7.23	27.47	5720.3	0.08	5.62	-94.0	Clear
1315	0.6	3.0	200	3.99	7.24	27.41	5737.9	0.08	6.77	-94.1	Clear
1320	Sample	Collected									

WELL CAPACITY (Liters Per Foot): **0.75"** = 0.076; **1"** = 0.15; **1.25"** = 0.23; **2"** = 0.61; **3"** = 1.40; **4"** = 2.46; **5"** = 3.86; **6"** = 5.57; **12"** = 22.26
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): **1/8"** = 0.002; **3/16"** = 0.005; **1/4"** = 0.0098; **5/16"** = 0.015; **3/8"** = 0.023; **1/2"** = 0.038; **5/8"** = 0.06

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Chuck Sorden / Tt	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1320	SAMPLING ENDED AT: 1325
PUMP OR TUBING DEPTH IN WELL (feet): 18.0	SAMPLE PUMP: FLOW RATE (mL per minute): 200	TUBING MATERIAL CODE: Teflon	
FIELD DECONTAMINATION: **(Y)** N	FIELD-FILTERED: Y **(N)** FILTER SIZE___ µm Filtration Equipment Type: _____	DUPLICATE: Y **(N)**	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
1	3	CG	40 ml	HCl	None	<2	SW-846 8260B	APP

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP =** Peristaltic Pump **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

SITE NAME: LC34	SITE LOCATION: Kennedy Space Center	
LOC ID: LC34-IW0133	SAMPLE ID: **LC34-IW0133-018.0-20211005** Sample depth (ddd.d)=[bottom of screen (feet bls)-Top depth] x 0.5-bottom of screen (feet bls)	DATE: **10/ /2021**

PURGING DATA

STATIC DEPTH TO WATER (feet btoc): 3.49	CASING HEIGHT (feet als): 0	STATIC DEPTH TO WATER (feet bls) = DTW (btoc) - Casing Height (feet als): NA	WELL SCREEN INTERVAL DEPTH (feet bls): 13-23

WELL DIAMETER (inches): 1.0	TUBING DIAMETER (inches): 3/16	PURGE PUMP TYPE OR BAILER: **Peristaltic Pump**	TOP DEPTH = top of screen or depth to water which ever is greatest (feet bls): 13	BOTTOM DEPTH (feet bls): 23

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

_____Liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

0.64 Liters. (0.005 x 33) + 0.475 = 0.64

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 18	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 18	PURGING INITIATED AT: 1230	PURGING ENDED AT: 1245	TOTAL VOLUME PURGED (Liters): 3.0

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (mlpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (^{O}C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	ORP (mV)	COLOR (describe)
1240	2.0	2.0	200	3.55	7.26	26.48	7897.9	0.12	2.95	-41.8	Clear
1242	0.4	2.4	200	3.55	7.27	26.45	7877.8	0.12	2.72	-45.4	Clear
1245	0.6	3.0	200	3.55	7.27	26.54	7885.4	0.12	3.85	-48.7	Clear
1250	Sample	Collected									

WELL CAPACITY (Liters Per Foot): **0.75"** = 0.076; **1"** = 0.15; **1.25"** = 0.23; **2"** = 0.61; **3"** = 1.40; **4"** = 2.46; **5"** = 3.86; **6"** = 5.57; **12"** = 22.26
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): **1/8"** = 0.002; **3/16"** = 0.005; **1/4"** = 0.0098; **5/16"** = 0.015; **3/8"** = 0.023; **1/2"** = 0.038; **5/8"** = 0.06

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Chuck Sorden /Tt	SAMPLER(S) SIGNATURES	SAMPLING INITIATED AT: 1250	SAMPLING ENDED AT: 1355
PUMP OR TUBING DEPTH IN WELL (feet): 18.0	SAMPLE PUMP: FLOW RATE (mL per minute): 200	TUBING MATERIAL CODE: Teflon	
FIELD DECONTAMINATION: **(Y)** N	FIELD-FILTERED: Y **(N)** FILTER SIZE___ µm Filtration Equipment Type: _____	DUPLICATE: Y **(N)**	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
1	3	CG	40 ml	HCl	None	<2	SW-846 8260B	APP

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP =** Peristaltic Pump **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

SITE NAME: LC34	SITE LOCATION: Kennedy Space Center	
LOC ID: LC34-IW0134	SAMPLE ID: **LC34-IW0134-024.0-20211008** Sample depth (ddd.d)=[bottom of screen (feet bls)-Top depth] x 0.5-bottom of screen (feet bls)	DATE: **10/08/2021**

PURGING DATA

STATIC DEPTH TO WATER (feet btoc): 2.99	CASING HEIGHT (feet als): 0	STATIC DEPTH TO WATER (feet bls) = DTW (btoc) - Casing Height (feet als):	WELL SCREEN INTERVAL DEPTH (feet bls): 20-28

WELL DIAMETER (inches): 1.0	TUBING DIAMETER (inches): 3/16	PURGE PUMP TYPE OR BAILER: **Peristaltic Pump**	TOP DEPTH = top of screen or depth to water which ever is greatest (feet bls): 20	BOTTOM DEPTH (feet bls): 28

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

_____Liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

0.67 Liters. (0.005 x 38) + 0.475 = 0.67

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 24	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 24	PURGING INITIATED AT: 1105	PURGING ENDED AT: 1125	TOTAL VOLUME PURGED (Liters): 4.0

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (mlpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (^{O}C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	ORP (mV)	COLOR (describe)
1115	2.0	2.0	200	3.11	7.11	27.8	2597	0.22	20.3	-21.9	Clear
1118	0.6	2.6	200	3.09	7.11	27.9	2595	0.22	16.8	-15.2	Clear
1120	0.4	3.0	200	3.10	7.11	27.9	2588	0.22	11.5	-10.0	Clear
1123	0.6	3.6	200	3.09	7.11	27.9	2586	0.23	10.4	-4.8	Clear
1125	0.4	4.0	200	3.11	7.11	27.8	2578	0.24	7.36	4.2	Clear
1130	Sample	Collected									

WELL CAPACITY (Liters Per Foot): **0.75"** = 0.076; **1"** = 0.15; **1.25"** = 0.23; **2"** = 0.61; **3"** = 1.40; **4"** = 2.46; **5"** = 3.86; **6"** = 5.57; **12"** = 22.26
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): **1/8"** = 0.002; **3/16"** = 0.005; **1/4"** = 0.0098; **5/16"** = 0.015; **3/8"** = 0.023; **1/2"** = 0.038; **5/8"** = 0.06

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Kyle Kercher/Tetra Tech	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1130	SAMPLING ENDED AT: 1135
PUMP OR TUBING DEPTH IN WELL (feet): 24.0	SAMPLE PUMP: FLOW RATE (mL per minute):	TUBING MATERIAL CODE: Teflon	
FIELD DECONTAMINATION: **(Y)** N	FIELD-FILTERED: Y **(N)** FILTER SIZE___ µm Filtration Equipment Type: _____	DUPLICATE: Y **(N)**	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
1	3	CG	40 ml	HCl	None	<2	8260DTCL SOMO1	APP

REMARKS:
DO remained between 20-25% throughout sampling event. Sampled per FS2200. All parameters stable.

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP =** Peristaltic Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

SITE NAME: LC34	SITE LOCATION: Kennedy Space Center	
LOC ID: LC34-IW0135	SAMPLE ID: **LC34-IW0135-024.0-20211007** Sample depth (ddd.d)=[bottom of screen (feet bls)-Top depth] x 0.5-bottom of screen (feet bls)	DATE: **10/07/2021**

PURGING DATA

STATIC DEPTH TO WATER (feet btoc): 4.02	CASING HEIGHT (feet als): 0	STATIC DEPTH TO WATER (feet bls) = DTW (btoc) - Casing Height (feet als): NA	WELL SCREEN INTERVAL DEPTH (feet bls): 20-28

WELL DIAMETER (inches): 1.0	TUBING DIAMETER (inches): 3/16	PURGE PUMP TYPE OR BAILER: **Peristaltic Pump**	TOP DEPTH = top of screen or depth to water which ever is greatest (feet bls): 20	BOTTOM DEPTH (feet bls): 28

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

_____Liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

0.67 Liters. (0.005 x 38) + 0.475 = 0.67

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 24	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 24	PURGING INITIATED AT: 1720	PURGING ENDED AT: 1735	TOTAL VOLUME PURGED (Liters): 3.0

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (mlpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (^{O}C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	ORP (mV)	COLOR (describe)
1730	2.0	2.0	200	4.15	7.23	26.14	1651.3	0.08	1.88	105.0	Clear
1732	0.4	2.4	200	4.15	7.23	26.06	1624.3	0.08	2.43	103.9	Clear
1735	0.6	3.0	200	4.15	7.23	26.01	1632.0	0.09	2.32	102.7	Clear
1740	Sample	Collected									

WELL CAPACITY (Liters Per Foot): **0.75"** = 0.076; **1"** = 0.15; **1.25"** = 0.23; **2"** = 0.61; **3"** = 1.40; **4"** = 2.46; **5"** = 3.86; **6"** = 5.57; **12"** = 22.26
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): **1/8"** = 0.002; **3/16"** = 0.005; **1/4"** = 0.0098; **5/16"** = 0.015; **3/8"** = 0.023; **1/2"** = 0.038; **5/8"** = 0.06

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Chuck Sorden / Tt	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1740	SAMPLING ENDED AT: 1745
PUMP OR TUBING DEPTH IN WELL (feet): 24.0	SAMPLE PUMP FLOW RATE (mL per minute): 200	TUBING MATERIAL CODE: Teflon	
FIELD DECONTAMINATION: **(Y)** N	FIELD-FILTERED: Y **(N)** FILTER SIZE___ µm Filtration Equipment Type: _____	DUPLICATE: Y **(N)**	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
1	3	CG	40 ml	HCl	None	<2	SW-846 8260B	APP

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP =** Peristaltic Pump **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

SITE NAME: LC34	SITE LOCATION: Kennedy Space Center	
LOC ID: LC34-IW0136	SAMPLE ID: **LC34-IW0136-024.0-20211008** Sample depth (ddd.d)=[bottom of screen (feet bls)-Top depth] x 0.5-bottom of screen (feet bls)	DATE: **10/08/2021**

PURGING DATA

STATIC DEPTH TO WATER (feet btoc): 5.45	CASING HEIGHT (feet als): 0	STATIC DEPTH TO WATER (feet bls) = DTW (btoc) - Casing Height (feet als):	WELL SCREEN INTERVAL DEPTH (feet bls): 20-28

WELL DIAMETER (inches): 1.0	TUBING DIAMETER (inches): 3/16	PURGE PUMP TYPE OR BAILER: **Peristaltic Pump**	TOP DEPTH = top of screen or depth to water which ever is greatest (feet bls): 20	BOTTOM DEPTH (feet bls): 28

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

_____Liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

0.67 Liters. (0.005 x 38) + 0.475 = 0.67

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 24	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 24	PURGING INITIATED AT: 1005	PURGING ENDED AT: 1030	TOTAL VOLUME PURGED (Liters): 5.0

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (mlpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (^{O}C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	ORP (mV)	COLOR (describe)
1015	2.0	2.0	200	5.52	7.04	29.6	3648	1.61	0.90	136.2	Clear
1020	1.0	3.0	200	5.52	7.03	29.6	3634	1.57	0.61	129.1	Clear
1023	0.6	3.6	200	5.52	7.04	29.6	3635	1.57	0.37	128.4	Clear
1025	0.4	4.0	200	5.51	7.04	29.5	3628	2.01	0.51	126.9	Clear
1030	1.0	5.0	200	5.50	7.04	29.6	3622	2.00	0.40	124.4	Clear
1035	Sample	Collected									

WELL CAPACITY (Liters Per Foot): **0.75"** = 0.076; **1"** = 0.15; **1.25"** = 0.23; **2"** = 0.61; **3"** = 1.40; **4"** = 2.46; **5"** = 3.86; **6"** = 5.57; **12"** = 22.26
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): **1/8"** = 0.002; **3/16"** = 0.005; **1/4"** = 0.0098; **5/16"** = 0.015; **3/8"** = 0.023; **1/2"** = 0.038; **5/8"** = 0.06

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Kyle Kercher/Tetra Tech	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1035	SAMPLING ENDED AT: 1040
PUMP OR TUBING DEPTH IN WELL (feet): 24.0	SAMPLE PUMP: FLOW RATE (mL per minute):	TUBING MATERIAL CODE: Teflon	
FIELD DECONTAMINATION: **(Y)** N	FIELD-FILTERED: Y **(N)** FILTER SIZE___ µm Filtration Equipment Type: _____	DUPLICATE: Y **(N)**	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
1	3	CG	40 ml	HCl	None	<2	8260DTCL SOMO1	APP

REMARKS:
DO remained between 20-25% throughout sampling event. Sampled per FS2200. All parameters stable.

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP =** Peristaltic Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

SITE NAME: LC34	SITE LOCATION: Kennedy Space Center	
LOC ID: LC34-IW0137	SAMPLE ID: **LC34-IW0137-024.0-20211007** Sample depth (ddd.d)=[bottom of screen (feet bls)-Top depth] x 0.5-bottom of screen (feet bls)	DATE: **10/07/2021**

PURGING DATA

STATIC DEPTH TO WATER (feet btoc): 5.27	CASING HEIGHT (feet als): 0	STATIC DEPTH TO WATER (feet bls) = DTW (btoc) - Casing Height (feet als): NA	WELL SCREEN INTERVAL DEPTH (feet bls): 20-28

WELL DIAMETER (inches): 1.0	TUBING DIAMETER (inches): 3/16	PURGE PUMP TYPE OR BAILER: **Peristaltic Pump**	TOP DEPTH = top of screen or depth to water which ever is greatest (feet bls): 20	BOTTOM DEPTH (feet bls): 28

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

_____Liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

0.67 Liters. (0.005 x 38) + 0.475 = 0.67

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 24	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 24	PURGING INITIATED AT: 1540	PURGING ENDED AT: 1615	TOTAL VOLUME PURGED (Liters): 3.0

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (mlpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (^{O}C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	ORP (mV)	COLOR (describe)
1550	2.0	2.0	200	5.34	7.47	27.16	2779.4	4.87	13.9	157.0	Clear
1600	2.0	4.0	200	5.34	7.47	27.07	2786.4	4.35	6.75	155.7	Clear
1610	2.0	6.0	200	5.34	7.46	27.05	2736.8	4.20	6.17	154.8	Clear
1615	1.0	7.0	200	5.34	7.46	27.00	2784.2	4.40	5.08	154.5	Clear
1620	Sample	Collected									

WELL CAPACITY (Liters Per Foot): **0.75"** = 0.076; **1"** = 0.15; **1.25"** = 0.23; **2"** = 0.61; **3"** = 1.40; **4"** = 2.46; **5"** = 3.86; **6"** = 5.57; **12"** = 22.26
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): **1/8"** = 0.002; **3/16"** = 0.005; **1/4"** = 0.0098; **5/16"** = 0.015; **3/8"** = 0.023; **1/2"** = 0.038; **5/8"** = 0.06

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1620	SAMPLING ENDED AT: 1625
PUMP OR TUBING DEPTH IN WELL (feet): 24.0	SAMPLE PUMP: FLOW RATE (mL per minute):	TUBING MATERIAL CODE: Teflon	
FIELD DECONTAMINATION: **(Y)** N	FIELD-FILTERED: Y **(N)** FILTER SIZE___ µm Filtration Equipment Type: _____	DUPLICATE: Y **(N)**	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
1	3	CG	40 ml	HCl	None	<2	SW-846 8260B	APP

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP =** Peristaltic Pump **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

SITE NAME: LC34	SITE LOCATION: Kennedy Space Center	
LOC ID: LC34-IW0138	SAMPLE ID: **LC34-IW0138-031.5-20211007** Sample depth (ddd.d)=[bottom of screen (feet bls)-Top depth] x 0.5-bottom of screen (feet bls)	DATE: **10/07/2021**

PURGING DATA

STATIC DEPTH TO WATER (feet btoc): 5.14	CASING HEIGHT (feet als): 0	STATIC DEPTH TO WATER (feet bls) = DTW (btoc) - Casing Height (feet als):	WELL SCREEN INTERVAL DEPTH (feet bls): 29 - 34	
WELL DIAMETER (inches): 1.0	TUBING DIAMETER (inches): 3/16	PURGE PUMP TYPE OR BAILER: **Peristaltic Pump**	TOP DEPTH = top of screen or depth to water which ever is greatest (feet bls): 29	BOTTOM DEPTH (feet bls): 34

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

_____Liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

0.68 Liters. (0.005 x 40) + 0.475 = 0.68

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 31.5	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 31.5	PURGING INITIATED AT: 1625	PURGING ENDED AT: 1705	TOTAL VOLUME PURGED (Liters):

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (mlpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (^{O}C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	ORP (mV)	COLOR (describe)
1635	2.0	2.0	200		7.56	26.75	3537.2	5.31	9.13	157.2	Clear
1645	2.0	4.0	200		7.56	26.73	3563.7	5.08	9.34	160.8	Clear
1655	2.0	6.0	200		7.56	26.71	3673.2	5.05	5.70	154.9	Clear
1700	1.0	7.0	200		7.55	26.75	3353.8	5.02	3.76	157.0	Clear
1702	0.4	7.4	200		7.53	26.66	3356.0	4.91	4.15	160.4	Clear
1705	0.6	8.0	200		7.54	26.66	3458.5	4.91	3.25	154.9	Clear
1710	Sample	Collected									

WELL CAPACITY (Liters Per Foot): **0.75"** = 0.076; **1"** = 0.15; **1.25"** = 0.23; **2"** = 0.61; **3"** = 1.40; **4"** = 2.46; **5"** = 3.86; **6"** = 5.57; **12"** = 22.26
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): **1/8"** = 0.002; **3/16"** = 0.005; **1/4"** = 0.0098; **5/16"** = 0.015; **3/8"** = 0.023; **1/2"** = 0.038; **5/8"** = 0.06

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Chuck Sorden / Tt	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1710	SAMPLING ENDED AT: 1715
PUMP OR TUBING DEPTH IN WELL (feet): 31.5	SAMPLE PUMP: FLOW RATE (mL per minute): 200	TUBING MATERIAL CODE: Teflon	
FIELD DECONTAMINATION: **(Y)** N	FIELD-FILTERED: Y **(N)** FILTER SIZE___ µm Filtration Equipment Type: _____	DUPLICATE: Y **(N)**	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
1	3	CG	40 ml	HCl	None	<2	SW-846 8260B	APP

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP =** Peristaltic Pump **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

SITE NAME: LC34	SITE LOCATION: Kennedy Space Center	
LOC ID: LC34-IW0139	SAMPLE ID: **LC34-IW0139-018.0-20211008** Sample depth (ddd.d)=[bottom of screen (feet bls)-Top depth] x 0.5-bottom of screen (feet bls)	DATE: **10/08/2021**

PURGING DATA

STATIC DEPTH TO WATER (feet btoc. 2.71	CASING HEIGHT (feet als): 0	STATIC DEPTH TO WATER (feet bls) = DTW (btoc) - Casing Height (feet als):	WELL SCREEN INTERVAL DEPTH (feet bls): 13-23	
WELL DIAMETER (inches): 1.0	TUBING DIAMETER (inches): 3/16	PURGE PUMP TYPE OR BAILER: **Peristaltic Pump**	TOP DEPTH = top of screen or depth to water which ever is greatest (feet bls): 13	BOTTOM DEPTH (feet bls): 23

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

_____Liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

0.64 Liters. (0.005 x 33) + 0.475 = 0.64

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 18	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 18	PURGING INITIATED AT: 0825	PURGING ENDED AT: 0920	TOTAL VOLUME PURGED (Liters): 11.0

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (mlpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (^{O}C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	ORP (mV)	COLOR (describe)
0835	2.0	2.0	200	2.78	7.26	26.11	2012.5	6.67	4.48	138.4	Clear
0855	4.0	6.0	200	2.78	7.30	26.37	1886.9	6.71	4.55	156.1	Clear
0905	2.0	8.0	200	2.78	7.31	26.42	1783.8	6.49	3.42	161.1	Clear
0915	2.0	10.0	200	2.78	7.30	26.46	1842.8	6.50	3.10	167.3	Clear
0917	0.4	10.4	200	2.78	7.30	26.45	1848.7	6.56	2.89	167.5	Clear
0920	0.6	11.0	200	2.78	7.30	26.46	1827.9	6.60	2.11	168.2	Clear
0925	Sample	Collected									

WELL CAPACITY (Liters Per Foot): **0.75"** = 0.076; **1"** = 0.15; **1.25"** = 0.23; **2"** = 0.61; **3"** = 1.40; **4"** = 2.46; **5"** = 3.86; **6"** = 5.57; **12"** = 22.26
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): **1/8"** = 0.002; **3/16"** = 0.005; **1/4"** = 0.0098; **5/16"** = 0.015; **3/8"** = 0.023; **1/2"** = 0.038; **5/8"** = 0.06

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Charles Sorden/Tt	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 0925	SAMPLING ENDED AT: 0930
PUMP OR TUBING DEPTH IN WELL (feet): 18.0	SAMPLE PUMP: FLOW RATE (mL per minute): 200	TUBING MATERIAL CODE: Teflon	
FIELD DECONTAMINATION: **(Y)** N	FIELD-FILTERED: Y **(N)** FILTER SIZE___ µm Filtration Equipment Type: _____	DUPLICATE: Y **(N)**	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
1	3	CG	40 ml	HCl	None	<2	SW-846 8260B	APP

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP =** Peristaltic Pump **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

SITE NAME: LC34	SITE LOCATION: Kennedy Space Center	
LOC ID: LC34-IW0140	SAMPLE ID: **LC34-IW0140-024.0-20211008** Sample depth (ddd.d)=[bottom of screen (feet bls)-Top depth] x 0.5-bottom of screen (feet bls)	DATE: **10/08/2021**

PURGING DATA

STATIC DEPTH TO WATER (feet btoc): 2.84	CASING HEIGHT (feet als): 0.5	STATIC DEPTH TO WATER (feet bls) = DTW (btoc) - Casing Height (feet als):	WELL SCREEN INTERVAL DEPTH (feet bls): 20-28

WELL DIAMETER (inches): 1.0	TUBING DIAMETER (inches): 3/16	PURGE PUMP TYPE OR BAILER: **Peristaltic Pump**	TOP DEPTH = top of screen or depth to water which ever is greatest (feet bls): 20	BOTTOM DEPTH (feet bls): 28

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

_____Liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

0.67 Liters. (0.005 x 38) + 0.475 = 0.67

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 24	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 24	PURGING INITIATED AT: 0930	PURGING ENDED AT: 1030	TOTAL VOLUME PURGED (Liters): 12.0

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (mlpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (^{O}C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	ORP (mV)	COLOR (describe)
1000	6.0	6.0	200	2.97	7.45	26.60	3427.8	5.54	1.65	171.4	Clear
1010	2.0	8.0	200	2.97	7.44	26.70	3363.8	5.31	1.84	171.1	Clear
1020	2.0	10.0	200	2.97	7.43	26.98	3253.4	5.01	1.99	170.2	Clear
1025	1.0	11.0	200	2.97	7.43	27.06	3285.0	4.94	2.25	169.7	Clear
1030	1.0	12.0	200	2.97	7.43	26.94	3271.3	4.99	1.52	169.8	Clear
1035	Sample	Collected									

WELL CAPACITY (Liters Per Foot): **0.75"** = 0.076; **1"** = 0.15; **1.25"** = 0.23; **2"** = 0.61; **3"** = 1.40; **4"** = 2.46; **5"** = 3.86; **6"** = 5.57; **12"** = 22.26
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): **1/8"** = 0.002; **3/16"** = 0.005; **1/4"** = 0.0098; **5/16"** = 0.015; **3/8"** = 0.023; **1/2"** = 0.038; **5/8"** = 0.06

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Chuck Sorden / Tt	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1035	SAMPLING ENDED AT: 1040
PUMP OR TUBING DEPTH IN WELL (feet): 24.0	SAMPLE PUMP: FLOW RATE (mL per minute): 200	TUBING MATERIAL CODE: Teflon	
FIELD DECONTAMINATION: **(Y)** N	FIELD-FILTERED: Y **(N)** FILTER SIZE___ µm Filtration Equipment Type: _____	DUPLICATE: Y **(N)**	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
1	3	CG	40 ml	HCl	None	<2	SW-846 8260B	APP

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP =** Peristaltic Pump **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

SITE NAME: LC34	SITE LOCATION: Kennedy Space Center	
LOC ID: LC34-IW0141	SAMPLE ID: **LC34-IW0141-024.0-20211006** Sample depth (ddd.d)=[bottom of screen (feet bls)-Top depth] x 0.5-bottom of screen (feet bls)	DATE: **10/06/2021**

PURGING DATA

STATIC DEPTH TO WATER (feet btoc): 4.05	CASING HEIGHT (feet als): 0	STATIC DEPTH TO WATER (feet bls) = DTW (btoc) - Casing Height (feet als):	WELL SCREEN INTERVAL DEPTH (feet bls): 20-28	
WELL DIAMETER (inches): 1.0	TUBING DIAMETER (inches): 3/16	PURGE PUMP TYPE OR BAILER: **Peristaltic Pump**	TOP DEPTH = top of screen or depth to water which ever is greatest (feet bls): 20	BOTTOM DEPTH (feet bls): 28

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

_____Liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

0.67 Liters. (0.005 x 38) + 0.475 = 0.67

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 24	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 24	PURGING INITIATED AT: 1610	PURGING ENDED AT: 1700	TOTAL VOLUME PURGED (Liters): 10.0

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (mlpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (^{O}C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	ORP (mV)	COLOR (describe)
1630	4.0	4.0	200	4.12	7.45	26.95	3908.2	5.51	8.43	122.7	Clear
1650	4.0	8.0	200	4.12	7.44	26.97	3810.5	5.34	6.39	129.2	Clear
1700	2.0	10.0	200	4.12	7.45	26.94	3777.7	5.33	3.40	130.5	Clear
1705	Sample	Collected									

WELL CAPACITY (Liters Per Foot): **0.75"** = 0.076; **1"** = 0.15; **1.25"** = 0.23; **2"** = 0.61; **3"** = 1.40; **4"** = 2.46; **5"** = 3.86; **6"** = 5.57; **12"** = 22.26
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): **1/8"** = 0.002; **3/16"** = 0.005; **1/4"** = 0.0098; **5/16"** = 0.015; **3/8"** = 0.023; **1/2"** = 0.038; **5/8"** = 0.06

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Chuck Sorden / Tt	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1705	SAMPLING ENDED AT: 1710
PUMP OR TUBING DEPTH IN WELL (feet): 24.0	SAMPLE PUMP: FLOW RATE (mL per minute): 200	TUBING MATERIAL CODE: Teflon	
FIELD DECONTAMINATION: **(Y)** N	FIELD-FILTERED: Y **(N)** FILTER SIZE___ µm Filtration Equipment Type: _____	DUPLICATE: Y **(N)**	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
1	3	CG	40 ml	HCl	None	<2	SW-846 8260B	APP

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP =** Peristaltic Pump **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

SITE NAME: LC34	SITE LOCATION: Kennedy Space Center	
LOC ID: LC34-IW0142	SAMPLE ID: **LC34-IW0142-024.0-20211007** Sample depth (ddd.d)=[bottom of screen (feet bls)-Top depth] x 0.5-bottom of screen (feet bls)	DATE: **10/07/2021**

PURGING DATA

STATIC DEPTH TO WATER (feet btoc): 4.58	CASING HEIGHT (feet als): 0	STATIC DEPTH TO WATER (feet bls) = DTW (btoc) - Casing Height (feet als):	WELL SCREEN INTERVAL DEPTH (feet bls): 20-28	
WELL DIAMETER (inches): 1.0	TUBING DIAMETER (inches): 3/16	PURGE PUMP TYPE OR BAILER: **Peristaltic Pump**	TOP DEPTH = top of screen or depth to water which ever is greatest (feet bls): 20	BOTTOM DEPTH (feet bls): 28

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

_____Liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

0.67 Liters. (0.005 x 38) + 0.475 = 0.67

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 24	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 24	PURGING INITIATED AT: 0915	PURGING ENDED AT: 1010	TOTAL VOLUME PURGED (Liters): 11.0

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (mlpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (^{O}C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	ORP (mV)	COLOR (describe)
0925	2.0	2.0	200	4.67	7.66	26.01	3277.0	7.11	3.84	214.7	Clear
0935	2.0	4.0	200	4.67	7.65	25.99	3570.9	6.87	1.50	204.3	Clear
0945	2.0	6.0	200	4.67	7.65	25.95	3448.8	6.51	2.43	199.0	Clear
1005	4.0	10.0	200	4.67	7.66	26.00	3560.1	6.44	2.62	187.2	Clear
1007	0.4	10.4	200	4.67	7.66	25.99	3503.4	6.42	2.12	186.3	Clear
1010	0.6	11.0	200	4.67	7.66	25.99	3487.1	6.39	2.22	186.0	Clear
1015	Sample	Collected									

WELL CAPACITY (Liters Per Foot): **0.75"** = 0.076; **1"** = 0.15; **1.25"** = 0.23; **2"** = 0.61; **3"** = 1.40; **4"** = 2.46; **5"** = 3.86; **6"** = 5.57; **12"** = 22.26
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): **1/8"** = 0.002; **3/16"** = 0.005; **1/4"** = 0.0098; **5/16"** = 0.015; **3/8"** = 0.023; **1/2"** = 0.038; **5/8"** = 0.06

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Chuck Sorden / Tt	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1015	SAMPLING ENDED AT: 1020
PUMP OR TUBING DEPTH IN WELL (feet): 24.0	SAMPLE PUMP: FLOW RATE (mL per minute): 200	TUBING MATERIAL CODE: Teflon	
FIELD DECONTAMINATION: **(Y)** N	FIELD-FILTERED: Y **(N)** FILTER SIZE___ µm Filtration Equipment Type: _____	DUPLICATE: Y **(N)**	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
1	3	CG	40 ml	HCl	None	<2	SW-846 8260B	APP

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP =** Peristaltic Pump **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

SITE NAME: LC34	SITE LOCATION: Kennedy Space Center	
LOC ID: LC34-IW0143	SAMPLE ID: **LC34-IW0143-024.0-20211007** Sample depth (ddd.d)=[bottom of screen (feet bls)-Top depth] x 0.5-bottom of screen (feet bls)	DATE: **10/07/2021**

PURGING DATA

STATIC DEPTH TO WATER (feet btoc): 3.32	CASING HEIGHT (feet als): 0.5	STATIC DEPTH TO WATER (feet bls) = DTW (btoc) - Casing Height (feet als):	WELL SCREEN INTERVAL DEPTH (feet bls): 20-28

WELL DIAMETER (inches): 1.0	TUBING DIAMETER (inches): 3/16	PURGE PUMP TYPE OR BAILER: **Peristaltic Pump**	TOP DEPTH = top of screen or depth to water which ever is greatest (feet bls): 20	BOTTOM DEPTH (feet bls): 28

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

_____Liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

0.67 Liters. (0.005 x 38) + 0.475 = 0.67

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 24	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 24	PURGING INITIATED AT: 1420	PURGING ENDED AT: 1445	TOTAL VOLUME PURGED (Liters): 5.0

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (mlpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (^{O}C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	ORP (mV)	COLOR (describe)
1430	2.0	2.0	200	3.46	7.40	27.33	2569.5	7.29	5.77	163.5	Clear
1440	2.0	4.0	200	3.46	7.41	27.26	2571.9	7.02	3.41	162.6	Clear
1442	0.4	4.4	200	3.46	7.40	27.23	2525.1	7.07	2.90	162.7	Clear
1445	0.6	5.0	200	3.46	7.41	27.15	2515.2	7.06	1.93	163.1	Clear
1450	Sample	Collected									

WELL CAPACITY (Liters Per Foot): **0.75"** = 0.076; **1"** = 0.15; **1.25"** = 0.23; **2"** = 0.61; **3"** = 1.40; **4"** = 2.46; **5"** = 3.86; **6"** = 5.57; **12"** = 22.26
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): **1/8"** = 0.002; **3/16"** = 0.005; **1/4"** = 0.0098; **5/16"** = 0.015; **3/8"** = 0.023; **1/2"** = 0.038; **5/8"** = 0.06

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Chuck Sorden / Tt	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1450	SAMPLING ENDED AT: 1455

PUMP OR TUBING DEPTH IN WELL (feet): 24.0	SAMPLE PUMP: FLOW RATE (mL per minute): 200	TUBING MATERIAL CODE: Teflon

FIELD DECONTAMINATION: **(Y)** N	FIELD-FILTERED: Y **(N)** FILTER SIZE___ µm Filtration Equipment Type: _____	DUPLICATE: Y **(N)**

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
1	3	CG	40 ml	HCl	None	<2	SW-846 8260B	APP

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP =** Peristaltic Pump **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

SITE NAME: LC34	SITE LOCATION: Kennedy Space Center	
LOC ID: LC34-IW0144	SAMPLE ID: **LC34-IW0144-024.0-20211007** Sample depth (ddd.d)=[bottom of screen (feet bls)-Top depth] x 0.5-bottom of screen (feet bls)	DATE: **10/07/2021**

PURGING DATA

STATIC DEPTH TO WATER (feet btoc): 6.79	CASING HEIGHT (feet als): 0.5	STATIC DEPTH TO WATER (feet bls) = DTW (btoc) - Casing Height (feet als):	WELL SCREEN INTERVAL DEPTH (feet bls): 20-28

WELL DIAMETER (inches): 1.0	TUBING DIAMETER (inches): 3/16	PURGE PUMP TYPE OR BAILER: **Peristaltic Pump**	TOP DEPTH = top of screen or depth to water which ever is greatest (feet bls): 20	BOTTOM DEPTH (feet bls): 28

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

_____Liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

0.67 Liters. (0.005 x 38) + 0.475 = 0.67

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 24	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 24	PURGING INITIATED AT: 1030	PURGING ENDED AT: 1045	TOTAL VOLUME PURGED (Liters): 3.0

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (mlpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (^{O}C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	ORP (mV)	COLOR (describe)
1040	2.0	2.0	200	6.85	7.27	26.93	2390.3	1.54	4.04	171.7	Clear
1042	0.4	2.4	200	6.85	7.28	27.08	2390.9	1.52	1.87	169.0	Clear
1045	0.6	3.0	200	6.85	7.28	27.01	2391.3	1.53	1.71	168.8	Clear
1050	Sample	Collected									

WELL CAPACITY (Liters Per Foot): **0.75"** = 0.076; **1"** = 0.15; **1.25"** = 0.23; **2"** = 0.61; **3"** = 1.40; **4"** = 2.46; **5"** = 3.86; **6"** = 5.57; **12"** = 22.26
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): **1/8"** = 0.002; **3/16"** = 0.005; **1/4"** = 0.0098; **5/16"** = 0.015; **3/8"** = 0.023; **1/2"** = 0.038; **5/8"** = 0.06

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1050	SAMPLING ENDED AT: 1055
PUMP OR TUBING DEPTH IN WELL (feet): 24.0	SAMPLE PUMP: FLOW RATE (mL per minute):	TUBING MATERIAL CODE: Teflon	
FIELD DECONTAMINATION: **(Y)** N	FIELD-FILTERED: Y **(N)** FILTER SIZE___ µm Filtration Equipment Type: _____	DUPLICATE: Y **(N)**	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
1	3	CG	40 ml	HCl	None	<2	SW-846 8260B	APP

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP =** Peristaltic Pump **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

SITE NAME: LC34	SITE LOCATION: Kennedy Space Center	
LOC ID: LC34-IW0145	SAMPLE ID: **LC34-IW0145-031.5-20211007** Sample depth (ddd.d)=[bottom of screen (feet bls)-Top depth] x 0.5-bottom of screen (feet bls)	DATE: **10/07/2021**

PURGING DATA

STATIC DEPTH TO WATER (feet btoc): 6,62	CASING HEIGHT (feet als): 0.5	STATIC DEPTH TO WATER (feet bls) = DTW (btoc) - Casing Height (feet als):	WELL SCREEN INTERVAL DEPTH (feet bls): 29-34

WELL DIAMETER (inches): 1.0	TUBING DIAMETER (inches): 3/16	PURGE PUMP TYPE OR BAILER: **Peristaltic Pump**	TOP DEPTH = top of screen or depth to water which ever is greatest (feet bls): 29	BOTTOM DEPTH (feet bls): 34

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

_____Liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

0.70 Liters. (0.005 x 44) + 0.475 = 0.70

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 31.5	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 31.5	PURGING INITIATED AT: 1100	PURGING ENDED AT: 1115	TOTAL VOLUME PURGED (Liters): 3.0

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (mlpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (^{O}C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	ORP (mV)	COLOR (describe)
1110	2.0	2.0	200	6.89	7.22	26.76	3754.4	0.25	5.02	-4.1	Clear
1112	0.4	2.4	200	6.89	7.22	26.72	3743.7	0.25	4.38	-2.4	Clear
1115	0.6	3.0	200	6.89	7.23	26.64	3745.9	0.25	3.75	-0.4	Clear
1120	Sample	Collected									

WELL CAPACITY (Liters Per Foot): **0.75"** = 0.076; **1"** = 0.15; **1.25"** = 0.23; **2"** = 0.61; **3"** = 1.40; **4"** = 2.46; **5"** = 3.86; **6"** = 5.57; **12"** = 22.26
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): **1/8"** = 0.002; **3/16"** = 0.005; **1/4"** = 0.0098; **5/16"** = 0.015; **3/8"** = 0.023; **1/2"** = 0.038; **5/8"** = 0.06

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Chuck Sorden / Tt	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1120	SAMPLING ENDED AT: 1125
PUMP OR TUBING DEPTH IN WELL (feet): 31.5	SAMPLE PUMP: FLOW RATE (mL per minute): 200	TUBING MATERIAL CODE: Teflon	
FIELD DECONTAMINATION: **(Y)** N	FIELD-FILTERED: Y **(N)** FILTER SIZE___ µm Filtration Equipment Type: _____	DUPLICATE: Y **(N)**	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
1	3	CG	40 ml	HCl	None	<2	SW-846 8260B	APP

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP =** Peristaltic Pump **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

SITE NAME: LC34	SITE LOCATION: Kennedy Space Center	
LOC ID: LC34-IW0146	SAMPLE ID: **LC34-IW0146-018.0-20211007** Sample depth (ddd.d)=[bottom of screen (feet bls)-Top depth] x 0.5-bottom of screen (feet bls)	DATE: **10/07/2021**

PURGING DATA

STATIC DEPTH TO WATER (feet btoc): 5.59	CASING HEIGHT (feet als): 0.5	STATIC DEPTH TO WATER (feet bls) = DTW (btoc) - Casing Height (feet als):	WELL SCREEN INTERVAL DEPTH (feet bls): 13-23

WELL DIAMETER (inches): 1.0	TUBING DIAMETER (inches): 3/16	PURGE PUMP TYPE OR BAILER: **Peristaltic Pump**	TOP DEPTH = top of screen or depth to water which ever is greatest (feet bls): 13	BOTTOM DEPTH (feet bls): 23

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

_____Liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

0.64 Liters. (0.005 x 33) + 0.475 = 0.64

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 18	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 18	PURGING INITIATED AT: 1320	PURGING ENDED AT: 1400	TOTAL VOLUME PURGED (Liters): 8.0

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (mlpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (^{O}C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	ORP (mV)	COLOR (describe)
1340	4.0	4.0	200	5.72	7.50	26.84	2008.8	8.52	3.46	151.4	Clear
1350	2.0	6.0	200	5.72	7.51	27.21	1936.8	7.91	4.58	155.6	Clear
1355	1.0	7.0	200	5.72	7.50	27.27	1945.6	7.93	3.05	155.7	Clear
1400	1.0	8.0	200	5.72	7.51	27.21	1920.6	7.92	1.01	156.4	Clear
1405	Sample	Collected									

WELL CAPACITY (Liters Per Foot): **0.75"** = 0.076; **1"** = 0.15; **1.25"** = 0.23; **2"** = 0.61; **3"** = 1.40; **4"** = 2.46; **5"** = 3.86; **6"** = 5.57; **12"** = 22.26
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): **1/8"** = 0.002; **3/16"** = 0.005; **1/4"** = 0.0098; **5/16"** = 0.015; **3/8"** = 0.023; **1/2"** = 0.038; **5/8"** = 0.06

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Chuck Sorden /Tt	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1405	SAMPLING ENDED AT: 1410
PUMP OR TUBING DEPTH IN WELL (feet): 18.0	SAMPLE PUMP FLOW RATE (mL per minute): 200	TUBING MATERIAL CODE: Teflon	
FIELD DECONTAMINATION: **(Y)** N	FIELD-FILTERED: Y **(N)** FILTER SIZE___ µm Filtration Equipment Type: _____	DUPLICATE: Y **(N)**	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
1	3	CG	40 ml	HCl	None	<2	SW-846 8260B	APP

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP =** Peristaltic Pump **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

SITE NAME: LC34	SITE LOCATION: Kennedy Space Center	
LOC ID: LC34-IW0147	SAMPLE ID: **LC34-IW0147-024.0-20211007** Sample depth (ddd.d)=[bottom of screen (feet bls)-Top depth] x 0.5-bottom of screen (feet bls)	DATE: **10/07/2021**

PURGING DATA

STATIC DEPTH TO WATER (feet btoc): 5.71	CASING HEIGHT (feet als): 0.5	STATIC DEPTH TO WATER (feet bls) = DTW (btoc) - Casing Height (feet als):	WELL SCREEN INTERVAL DEPTH (feet bls): 20-28	
WELL DIAMETER (inches): 1.0	TUBING DIAMETER (inches): 3/16	PURGE PUMP TYPE OR BAILER: **Peristaltic Pump**	TOP DEPTH = top of screen or depth to water which ever is greatest (feet bls): 20	BOTTOM DEPTH (feet bls): 28

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

_____Liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

0.68 Liters. (0.005 x 38) + 0.475 = 0.68

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 24	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 24	PURGING INITIATED AT: 1210	PURGING ENDED AT: 1245	TOTAL VOLUME PURGED (Liters): 7.0%

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (mlpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (^{O}C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	ORP (mV)	COLOR (describe)
1220	2.0	2.0	200	5.85	7.60	27.43	3031.2	7.42	2.54	116.5	Clear
1240	4.0	6.0	200	5.85	7.62	27.50	3280.6	7.60	1.57	121.8	Clear
1245	1.0	7.0	200	5.85	7.64	27.53	3266.4	7.55	1.08	127.0	Clear
1250	Sample	Collected									

WELL CAPACITY (Liters Per Foot): **0.75"** = 0.076; **1"** = 0.15; **1.25"** = 0.23; **2"** = 0.61; **3"** = 1.40; **4"** = 2.46; **5"** = 3.86; **6"** = 5.57; **12"** = 22.26
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): **1/8"** = 0.002; **3/16"** = 0.005; **1/4"** = 0.0098; **5/16"** = 0.015; **3/8"** = 0.023; **1/2"** = 0.038; **5/8"** = 0.06

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Chuck Sorden / Tt	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1250	SAMPLING ENDED AT: 1255
PUMP OR TUBING DEPTH IN WELL (feet): 24.0	SAMPLE PUMP: FLOW RATE (mL per minute): 200	TUBING MATERIAL CODE: Teflon	
FIELD DECONTAMINATION: **(Y)** N	FIELD-FILTERED: Y **(N)** FILTER SIZE___ µm Filtration Equipment Type: _____	DUPLICATE: Y **(N)**	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
1	3	CG	40 ml	HCl	None	<2	SW-846 8260B	APP

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP =** Peristaltic Pump **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

Tetra Tech, Inc.

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: Launch Complex 34 (LC34)
Project No.: 112G08985

[ ] Stream
[ ] Spring
[ ] Pond
[ ] Lake
[X] Other: Canal
[ ] QA Sample Type:

Sample ID No.: LC34-SW01001-000.5-20211008
Sample Location: LC34-SW1001
Sampled By: Chuck Sorden, Kyle Kercher
C.O.C. No.:

Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

		Color	pH	Cond.	Temp.	Turbidity	DO	ORP	Salinity
Date:	10/8/2021								
Time:	1220	(Visual)	(S.U.)	(µS/cm)	(^{0}C)	(NTU)	(mg/l)	(mV)	(ppt)
Depth:	0.0-0.5	**Clear**	**7.59**	**1914.7**	**29.54**	**10.6**	**5.66**	**-4.4**	**0.9**
Method:	Grab								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
SW-846 8260B VOCs	HCL	3-40mL vials	X

OBSERVATIONS / NOTES:

MAP:

See figure.

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech, Inc.

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: Launch Complex 34 (LC34)
Project No.: 112G08985

[ ] Stream
[ ] Spring
[ ] Pond
[ ] Lake
[X] Other: Canal
[ ] QA Sample Type:

Sample ID No.: LC324-SW01002-000.5-202110
Sample Location: LC34-SW1002
Sampled By: Chuck Sorden, Kyle Kercher
C.O.C. No.:

Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

		Color	pH	Cond.	Temp.	Turbidity	DO	ORP	Salinity
Date:	10/8/2021								
Time:	1245	(Visual)	(S.U.)	(µS/cm)	(^{0}C)	(NTU)	(mg/l)	(mV)	(ppt)
Depth:	0-0.5	**Clear**	**7.57**	**1765.8**	**30.01**	**3.53**	**5.26**	**84.1**	**0.83**
Method:	Grab								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
SW-846 8260B VOCs	HCL	3-40mL vials	X

OBSERVATIONS / NOTES:

MAP:

See figure.

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech, Inc.

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: Launch Complex 34 (LC34)
Project No.: 112G08985
Sample ID No.: LC324-SW01004-000.5-20211008
Sample Location: LC34-SW1004
Sampled By: Chuck Sorden, Kyle Kercher
C.O.C. No.:

[ ] Stream
[ ] Spring
[ ] Pond
[ ] Lake
[X] Other: Canal
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

		Color	pH	Cond.	Temp.	Turbidity	DO	ORP	Salinity
Date:	10/8/2021								
Time:	1155	(Visual)	(S.U.)	(µS/cm)	(^{0}C)	(NTU)	(mg/l)	(mV)	(ppt)
Depth:	0-0.5	**Clear**	**7.77**	**1974.6**	**30.39**	**6.17**	**9.45**	**91.5**	**0.92**
Method:	Grab								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
SW-846 8260B VOCs	HCL	3-40mL vials	X

OBSERVATIONS / NOTES:

MAP:

See figure

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Date: 12/20/2021
Personnel: Daniel Forester (Tetra Tech)
Zeff Ziggler (Driller, DRILLPRO)
Colten Hest (Crew, DRILLPRO)
Start Time: 830

Weather: Cloudy 70°F
Objective: LC34 DPT Sampling
HAS: PPE, Weather, Enviroment
End Time: 1730

Location ID (LC34-)	Sample Depth (ft bls)	Sample ID	Top Depth (ft bls)	Botom Depth (ft bls)	Sample Time	Comments
DPT0601	8	LC34-DPT0601-008.0-20211220	6	10	950	gray, no odor
	13	LC34-DPT0601-013.0-20211220	11	15	955	gray, no odor
	18	LC34-DPT0601-018.0-20211220	16	20	1010	gray, no odor
	23	LC34-DPT0601-023.0-20211220	21	25	1025	gray, no odor
	28	LC34-DPT0601-028.0-20211220	26	30	1035	gray, no odor
	33	LC34-DPT0601-033.0-20211220	31	35	1045	gray, no odor
	38	LC34-DPT0601-038.0-20211220	36	40	1055	gray, no odor
	43	LC34-DPT0601-043.0-20211220	41	45	1115	gray, no odor
	48	LC34-DPT0601-048.0-20211220	46	50	1130	gray, no odor
	53	LC34-DPT0601-053.0-20211220	51	55	1145	gray, no odor
	58	LC34-DPT0601-058.0-20211220	56	60	1300	gray, no odor
	63	LC34-DPT0601-063.0-20211220	61	65	1315	gray, no odor
	68	LC34-DPT0600-068.0-20211220	66	70	1345	gray, no odor
	73	LC34-DPT0600-073.0-20211220	71	75	1415	gray, no odor
	78	LC34-DPT0600-078.0-20211220	76	80	1435	gray, no odor
	83	LC34-DPT0600-083.0-20211220	81	85	1500	gray, no odor
	88	LC34-DPT0601-088.0-20211220	86	90	1520	gray, no odor
	93	LC34-DPT0601-093.0-20211220	91	95	1540	gray, no odor
	98	LC34-DPT0601-098.0-20211220	96	100	1605	gray, no odor
DPT0600	8	LC34-DPT0600-008.0-20211220	6	10	1635	gray, no odor
	13	LC34-DPT0600-013.0-20211220	11	15	1655	gray, no odor
	18	LC34-DPT0600-018.0-20211220	16	20	1705	gray, no odor
	23	LC34-DPT0600-023.0-20211220	21	25	1715	gray, no odor

Signature: Sarah Daughrose

Daniel Forester

Date: 12/20/2021
Personnel: Sarah Damphouse (Tetra Tech)
Mickey Zitter (Driller, DRILLPRO)
Christian (Crew, DRILLPRO)
Dalton (Crew, DRILLPRO)
Start Time: 830

Weather: Cloudy 70°F
Objective: LC34 DPT Sampling
HAS: PPE, Weather, Enviroment
End Time: 1730

Location ID (LC34-)	Sample Depth (ft bls)	Sample ID	Top Depth (ft bls)	Botom Depth (ft bls)	Sample Time	Comments
DPT0598	8	LC34-DPT0598-008.0-20211220	6	10	945	gray, no odor
	13	LC34-DPT0598-013.0-20211220	11	15	1000	gray, no odor
	18	LC34-DPT0598-018.0-20211220	16	20	1005	gray, no odor
	23	LC34-DPT0598-023.0-20211220	21	25	1020	gray, no odor
	28	LC34-DPT0598-028.0-20211220	26	30	1030	gray, no odor
	33	LC34-DPT0598-038.0-20211220	31	35	1040	gray, no odor
	38	LC34-DPT0598-038.0-20211220	36	40	1100	gray, no odor
	43	LC34-DPT0598-043.0-20211220	41	45	1120	gray, no odor
	48	LC34-DPT0598-048.0-20211220	46	50	1135	gray, no odor
	53	LC34-DPT0598-053.0-20211220	51	55	1150	gray, no odor
	58	LC34-DPT0598-058.0-20211220	56	60	1230	gray, no odor
	63	LC34-DPT0598-063.0-20211220	61	65	1310	gray, no odor
	68	LC34-DPT0598-068.0-20211220	66	70	1320	gray, no odor
	73	LC34-DPT0598-073.0-20211220	71	75	1350	gray, no odor
	78	LC34-DPT0598-078.0-20211220	76	80	1420	gray, no odor
	83	LC34-DPT0598-083.0-20211220	81	85	1440	gray, no odor
	88	LC34-DPT0598-088.0-20211220	86	90	1510	gray, no odor
	93	LC34-DPT0598-093.0-20211220	91	95	1545	gray, no odor
	98	LC34-DPT0598-098.0-20211220	96	100	1610	gray, no odor
DPT0597	8	LC34-DPT0597-008.0-20171110	6	10	1720	gray, no odor

Signature: Sarah Damphouse

Daniel Forester

Date: 12/21/2021
Personnel: Daniel Forester (Tetra Tech)
Zeff Ziggler (Driller, DRILLPRO)
Colten Hest (Crew, DRILLPRO)
Start Time: 700

Weather: Cloudy/Rain 68°F
Objective: LC34 DPT Sampling
HAS: PPE, Weather, Enviroment
End Time: 1730

Location ID (LC34-)	Sample Depth (ft bls)	Sample ID	Top Depth (ft bls)	Botom Depth (ft bls)	Sample Time	Comments
DPT0600	28	LC34-DPT0600-028.0-20211221	26	30	710	gray, no odor
	33	LC34-DPT0600-033.0-20211221	31	35	725	gray, no odor
	38	LC34-DPT0600-038.0-20211221	36	40	735	gray, no odor
	43	LC34-DPT0600-043.0-20211221	41	45	745	gray, no odor
	48	LC34-DPT0600-048.0-20211221	46	50	800	gray, no odor
	53	LC34-DPT0600-053.0-20211221	51	55	815	gray, no odor
	58	LC34-DPT0600-058.0-20211221	56	60	830	gray, no odor
	63	LC34-DPT0600-063.0-20211221	61	65	845	gray, no odor
	68	LC34-DPT0600-068.0-20211221	66	70	915	gray, no odor
	73	LC34-DPT0600-073.0-20211221	71	75	935	gray, no odor
	78	LC34-DPT0600-078.0-20211221	76	80	1005	gray, no odor
	83	LC34-DPT0600-083.0-20211221	81	85	1025	gray, no odor
	88	LC34-DPT0600-088.0-20211221	86	90	1055	gray, no odor
	93	LC34-DPT0600-093.0-20211221	91	95	1115	gray, no odor
	98	LC34-DPT0600-098.0-20211221	96	100	1145	gray, no odor
DPT0599	8	LC34-DPT0599-008.0-20211221	6	10	1305	gray, no odor
	13	LC34-DPT0599-013.0-20211221	11	15	1310	gray, no odor
	18	LC34-DPT0599-018.0-20211221	16	20	1320	gray, no odor
	23	LC34-DPT0599-023.0-20211221	21	25	1330	gray, no odor
	28	LC34-DPT0599-028.0-20211221	26	30	1340	gray, no odor
	33	LC34-DPT0599-033.0-20211221	31	35	1400	gray, no odor
	38	LC34-DPT0599-038.0-20211221	36	40	1405	gray, no odor
	43	LC34-DPT0599-043.0-20211221	41	45	1415	gray, no odor
	48	LC34-DPT0599-048.0-20211221	46	50	1430	gray, silty, solvent odor
	53	LC34-DPT0599-053.0-20211221	51	55	1445	gray, no odor
	58	LC34-DPT0599-058.0-20211221	56	60	1455	gray, no odor
	63	LC34-DPT0599-063.0-20211221	61	65	1515	gray, no odor
	68	LC34-DPT0599-068.0-20211221	66	70	1525	gray, no odor
	73	LC34-DPT0599-073.0-20211221	71	75	1550	gray, no odor
	78	LC34-DPT0599-078.0-20211221	76	80	1605	gray, no odor
	83	LC34-DPT0599-083.0-20211221	81	85	1625	gray, no odor
	88	LC34-DPT0599-088.0-20211221	86	90	1645	gray, no odor
	93	LC34-DPT0599-093.0-20211221	91	95	1710	gray, no odor

Signature:

Sarah Dauphinais

Daniel Forester

Date: 12/21/2021
Personnel: Sarah Damphouse (Tetra Tech)
Mickey Zitter (Driller, DRILLPRO)
Christian (Crew, DRILLPRO)
Dalton (Crew, DRILLPRO)
Start Time: 645

Weather: Cloudy/Rain 68°F
Objective: LC34 DPT Sampling
HAS: PPE, Weather, Enviroment
End Time: 1730

Location ID (LC34-)	Sample Depth (ft bls)	Sample ID	Top Depth (ft bls)	Botom Depth (ft bls)	Sample Time	Comments
DPT0597	13	LC34-DPT0597-013.0-20171110	11	15	705	gray, no odor
	18	LC34-DPT0597-018.0-20171110	16	20	720	gray, no odor
	23	LC34-DPT0597-023.0-20171110	21	25	730	gray, no odor
	28	LC34-DPT0597-028.0-20171110	26	30	740	gray, no odor
	33	LC34-DPT0597-033.0-20171110	31	35	755	gray, no odor
	38	LC34-DPT0597-038.0-20171110	36	40	810	gray, no odor
	43	LC34-DPT0597-043.0-20171110	41	45	825	gray, no odor
	48	LC34-DPT0597-048.0-20171110	46	50	840	gray, no odor
	53	LC34-DPT0597-053.0-20171110	51	55	905	gray, solvent odor
	58	LC34-DPT0597-058.0-20171110	56	60	920	gray, solvent odor
	63	LC34-DPT0597-063.0-20171110	61	65	945	gray, no odor
	68	LC34-DPT0597-008.0-20181109	66	70	1010	gray, no odor
	73	LC34-DPT0597-013.0-20181109	71	75	1045	gray, no odor
	78	LC34-DPT0597-018.0-20181109	76	80	1120	gray, no odor
	82	LC34-DPT0597-023.0-20181109	81	85	1140	gray, no odor
	88	LC34-DPT0597-028.0-20181109	86	90	1215	gray, no odor
	93	LC34-DPT0597-033.0-20181109	91	95	1315	gray, no odor
	98	LC34-DPT0597-038.0-20181109	96	100	1345	gray, no odor
DPT0596	8	LC34-DPT0596-008.0-20171109	6	10	1440	gray, no odor
	13	LC34-DPT0596-013.0-20171109	11	15	1445	gray, no odor
	18	LC34-DPT0596-018.0-20171109	16	20	1500	gray, no odor
	23	LC34-DPT0596-023.0-20171109	21	25	1510	gray, no odor
	28	LC34-DPT0596-028.0-20171109	26	30	1520	gray, no odor
	33	LC34-DPT0596-033.0-20171109	31	35	1540	gray, no odor
	38	LC34-DPT0596-038.0-20171109	36	40	1555	gray, no odor
	43	LC34-DPT0596-043.0-20171109	41	45	1610	gray, no odor
	48	LC34-DPT0596-048.0-20171109	46	50	1630	gray, no odor
	53	LC34-DPT0596-053.0-20171109	51	55	1650	gray, no odor
	58	LC34-DPT0596-058.0-20171109	56	60	1705	gray, no odor

Signature: Sarah Damphousse

Daniel Forester

Date: 12/22/2021
Personnel: Daniel Forester (Tetra Tech)
Zeff Ziggler (Driller, DRILLPRO)
Colten Hest (Crew, DRILLPRO)

Weather: rtly Cloudy 69°F
Objective: LC34 DPT Sampling
HAS: PPE, Weather, Enviroment

Start Time: 700 End Time: 1700

Location ID (LC34-)	Sample Depth (ft bls)	Sample ID	Top Depth (ft bls)	Botom Depth (ft bls)	Sample Time	Comments
DPT0599	98	LC34-DPT0599-098.0-20211222	96	100	730	gray, no odor
DPT0595	8	LC34-DPT0595-008.0-20211222	6	10	825	gray, no odor
	13	LC34-DPT0595-013.0-20211222	11	15	835	gray, no odor
	18	LC34-DPT0595-018.0-20211222	16	20	845	gray, no odor
	23	LC34-DPT0595-023.0-20211222	21	25	855	gray, no odor
	28	LC34-DPT0595-028.0-20211222	26	30	905	gray, no odor
	33	LC34-DPT0595-033.0-20211222	31	35	915	gray, no odor
	38	LC34-DPT0595-038.0-20211222	36	40	925	gray, no odor
	43	LC34-DPT0595-043.0-20211222	41	45	935	gray, no odor
	48	LC34-DPT0595-048.0-20211222	46	50	945	gray, no odor
	53	LC34-DPT0595-053.0-20211222	51	55	1005	gray, no odor
	58	LC34-DPT0595-058.0-20211222	56	60	1015	gray, no odor
	63	LC34-DPT0595-063.0-20211222	61	65	1035	gray, no odor
	68	LC34-DPT0595-068.0-20211222	66	70	1055	gray, no odor
	73	LC34-DPT0595-073.0-20211222	71	75	1125	gray, no odor
	78	LC34-DPT0595-078.0-20211222	76	80	1215	gray, no odor
	83	LC34-DPT0595-083.0-20211222	81	85	1235	gray, no odor
	88	LC34-DPT0595-088.0-20211222	86	90	1305	gray, no odor
	93	LC34-DPT0595-093.0-20211222	91	95	1335	gray, no odor
	98	LC34-DPT0595-098.0-20211222	96	100	1355	gray, no odor
DPT0594	8	LC34-DPT0594-008.0-20211222	6	10	1435	gray, no odor
	13	LC34-DPT0594-013.0-20211222	11	15	1445	gray, no odor
	18	LC34-DPT0594-018.0-20211222	16	20	1455	gray, no odor
	23	LC34-DPT0594-023.0-20211222	21	25	1505	gray, no odor
	28	LC34-DPT0594-028.0-20211222	26	30	1510	gray, no odor
	33	LC34-DPT0594-033.0-20211222	31	35	1520	gray, no odor
	38	LC34-DPT0594-038.0-20211222	36	40	1530	gray, no odor
	43	LC34-DPT0594-043.0-20211222	41	45	1540	gray, no odor
	48	LC34-DPT0594-048.0-20211222	46	50	1550	gray, no odor
	53	LC34-DPT0594-053.0-20211222	51	55	1610	gray, solvent odor
	58	LC34-DPT0594-058.0-20211222	56	60	1620	gray, solvent odor
	63	LC34-DPT0594-063.0-20211222	61	65	1640	gray, no odor

Signature:

Date: 12/22/2021
Personnel: Sarah Damphouse (Tetra Tech)
Mickey Zitter (Driller, DRILLPRO)
Christian (Crew, DRILLPRO)
Dalton (Crew, DRILLPRO)
Start Time: 700

Weather: Partly Cloudy 69°F
Objective: LC34 DPT Sampling
HAS: PPE, Weather, Enviroment
End Time: 1700

Location ID (LC34-)	Sample Depth (ft bls)	Sample ID	Top Depth (ft bls)	Botom Depth (ft bls)	Sample Time	Comments
DPT0596	63	LC34-DPT0596-063.0-20211222	61	65	725	gray, no odor
	68	LC34-DPT0596-068.0-20211222	66	70	755	gray, no odor
	73	LC34-DPT0596-073.0-20211222	71	75	830	gray, no odor
	78	LC34-DPT0596-078.0-20211222	76	80	900	gray, no odor
	83	LC34-DPT0596-083.0-20211222	81	85	930	gray, no odor
	88	LC34-DPT0596-088.0-20211222	86	90	1000	gray, no odor
	93	LC34-DPT0596-093.0-20211222	91	95	1030	gray, no odor
	98	LC34-DPT0596-098.0-20211222	96	100	1100	gray, no odor
DPT0593	8	LC34-DPT0593-008.0-20211222	6	10	1250	gray, no odor
	13	LC34-DPT0593-013.0-20211222	11	15	1300	gray, no odor
	18	LC34-DPT0593-018.0-20211222	16	20	1310	gray, no odor
	23	LC34-DPT0593-023.0-20211222	21	25	1315	gray, no odor
	28	LC34-DPT0593-028.0-20211222	26	30	1330	gray, no odor
	33	LC34-DPT0593-033.0-20211222	31	35	1340	gray, no odor
	38	LC34-DPT0593-038.0-20211222	36	40	1355	gray, no odor
	43	LC34-DPT0593-043.0-20211222	41	45	1420	gray, no odor
	48	LC34-DPT0593-048.0-20211222	46	50	1450	gray, solvent odor
	53	LC34-DPT0593-053.0-20211222	51	55	1515	gray, no odor
	58	LC34-DPT0593-058.0-20211222	56	60	1535	gray, no odor
	63	LC34-DPT0593-063.0-20211222	61	65	1605	gray, no odor
	68	LC34-DPT0593-068.0-20211222	66	70	1625	gray, no odor
	73	LC34-DPT0593-073.0-20211222	71	75	1650	gray, no odor

Signature: Sarah Damphousse

Daniel Forester

Date: 12/23/2021
Personnel: Daniel Forester (Tetra Tech)
Zeff Ziggler (Driller, DRILLPRO)
Colten Hest (Crew, DRILLPRO)
Start Time: 700

Weather: Sunny 70°F
Objective: LC34 DPT Sampling
HAS PPE, Weather, Enviroment
End Time: 1100

Location ID (LC34-)	Sample Depth (ft bls)	Sample ID	Top Depth (ft bls)	Botom Depth (ft bls)	Sample Time	Comments
DPT0594	68	LC34-DPT0594-068.0-20211223	66	70	720	gray, no odor
	73	LC34-DPT0594-073.0-20211223	71	75	740	gray, no odor
	78	LC34-DPT0594-078.0-20211223	76	80	800	gray, no odor
	83	LC34-DPT0594-083.0-20211223	81	85	820	gray, no odor
	88	LC34-DPT0594-088.0-20211223	86	90	845	gray, solvent odor
	93	LC34-DPT0594-093.0-20211223	91	95	910	gray, solvent odor
	98	LC34-DPT0594-098.0-20211223	96	100	940	gray, solvent odor

Signature: Daniel Forester

Sarah Dauphinais

Date: 12/23/2021
Personnel: Sarah Damphouse (Tetra Tech)
Mickey Zitter (Driller, DRILLPRO)
Christian (Crew, DRILLPRO)
Dalton (Crew, DRILLPRO)
Start Time: 700

Weather: Sunny 70°F
Objective: LC34 DPT Sampling
HAS: PPE, Weather, Enviroment
End Time: 1100

Location ID (LC34-)	Sample Depth (ft bls)	Sample ID	Top Depth (ft bls)	Botom Depth (ft bls)	Sample Time	Comments
DPT0593	78	LC34-DPT0593-078.0-20211223	76	80	725	gray, no odor
	83	LC34-DPT0593-083.0-20211223	81	85	755	gray, no odor
	88	LC34-DPT0593-088.0-20211223	86	90	825	gray, no odor
	93	LC34-DPT0593-093.0-20211223	91	95	900	gray, no odor
	98	LC34-DPT0593-098.0-20211223	96	100	930	gray, no odor

Signature: Sarah Damphouse

Daniel Forester

TETRA TECH

INSTRUMENT CALIBRATION LOGSHEET

PROJECT NAME : _____

SITE NAME: _____

PROJECT NO.: _____

INSTRUMENT NAME/MODEL YSI ProQ/Plus/ProQ Muti meters / LaMotte 2020e ntu

MANUFACTURER: YSI / LaMotte

SERIAL NUMBER: 21D101766/19F101434/21D101770 / Me14842

Date of Calibration (mm/dd/yr)	Person Performing Calibration (Name)	pH (S.U.)				Cond. (µS/cm)	D.O. (mg/L)	Temp. °C	ORP (mV)	Salinity (%)	Turbidity (0) (NTUs)	Turbidity (10) (NTUs)	Calibration Standard Lot # / Expiration Date	Remarks
	R Siegel 21D101766	*Pre*											*Lot #1GF009*	
		Post											*Exp. Date:06/23*	pH = 4
	R Siegel 19F101434	*Pre*											*Lot #1GF484*	
		Post											*Exp. Date:06/23*	pH = 7
	R Siegel 21D101770	*Pre*											*Lot #1GF482*	
		Post											*Exp. Date:06/23*	pH = 10
		Pre											*Lot #1GF406*	
		Post											*Exp. Date:06/22*	Conductivity = 1413 µS/cm
		Pre											*Lot # 4801*	
		Post											*Exp. Date:11/24*	ORP = 240 mV
		Pre											*Lot #21030063*	
		Post											*Exp. Date: 7/22*	Turb.=0 ntu
		Pre											*Lot # 20320111*	
		Post											*Exp. Date 5/22*	Turb.=10 ntu
		Pre												
		Post												
		Pre												
		Post												
		Pre												
		Post												

SITE NAME: LC34	SITE LOCATION: Kennedy Space Center	
LOC ID: LC34-IW0001D2	SAMPLE ID: **LC34-IW0001D2-110.0-20211223** Sample depth (ddd.d)=[bottom of screen (feet bls)-Top depth] x 0.5-bottom of screen (feet bls)	DATE: **12/23/2021**

PURGING DATA

STATIC DEPTH TO WATER (feet btoc): 4.53	CASING HEIGHT (feet als): 0	STATIC DEPTH TO WATER (feet bls) = DTW (btoc) - Casing Height (feet als):	WELL SCREEN INTERVAL DEPTH (feet bls): 105-115

WELL DIAMETER (inches): 1.0	TUBING DIAMETER (inches): 3/16	PURGE PUMP TYPE OR BAILER: **Peristaltic Pump**	TOP DEPTH = top of screen or depth to water which ever is greatest (feet bls): 105	BOTTOM DEPTH (feet bls): 115

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

_____Liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

1.1 Liters. (0.005 x 125) + 0.475 = 1.1

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 110.0	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 110.0	PURGING INITIATED AT: 0925	PURGING ENDED AT: 0959	TOTAL VOLUME PURGED (Liters): 6.8

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (mlpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	ORP (mV)	COLOR (describe)
0935	2.0	2.0	200.0	4.68	7.55	22.5	2380.0	0.09	25.3	-80.0	clear
0940	1.0	3.0	200.0	4.68	7.70	22.4	2563.0	0.07	21.1	-150.0	
0945	1.0	4.0	200.0	4.68	7.76	22.5	2611.0	0.08	13.2	-170.0	
0950	1.0	5.0	200.0	4.68	7.81	22.7	2640.0	0.09	7.37	-188.5	
0955	1.0	6.0	200.0	4.68	7.81	22.6	2640.0	0.09	5.73	-202.5	
0959	0.8	6.8	200.0	4.68	7.82	22.6	2644.0	0.10	3.22	-207.5	Clear
1000	Sample	collected									

WELL CAPACITY (Liters Per Foot): **0.75"** = 0.076; **1"** = 0.15; **1.25"** = 0.23; **2"** = 0.61; **3"** = 1.40; **4"** = 2.46; **5"** = 3.86; **6"** = 5.57; **12"** = 22.26
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): **1/8"** = 0.002; **3/16"** = 0.005; **1/4"** = 0.0098; **5/16"** = 0.015; **3/8"** = 0.023; **1/2"** = 0.038; **5/8"** = 0.06

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Robert Siegel /Tetra Tech	SAMPLER(S) ~~SIGNATURES~~:	SAMPLING INITIATED AT: 1000	SAMPLING ENDED AT: 1010
PUMP OR TUBING DEPTH IN WELL (feet): 110.0	SAMPLE PUMP: FLOW RATE (mL per minute): 200.0	TUBING MATERIAL CODE: Teflon	
FIELD DECONTAMINATION: **(Y)** N	FIELD-FILTERED: Y **(N)** FILTER SIZE___ µm Filtration Equipment Type: _____	DUPLICATE: Y **(N)**	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
1	3	CG	40 ml	HCl+ice	None	<2	8260DTCL SOMO1	APP

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP =** Peristaltic Pump **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

SITE NAME: LC34	SITE LOCATION: Kennedy Space Center	
LOC ID: LC34-IW0042D2	SAMPLE ID: **LC34-IW0042D2-089.5-20211223** Sample depth (ddd.d)=[bottom of screen (feet bls)-Top depth] x 0.5-bottom of screen (feet bls)	DATE: **12/23/2021**

PURGING DATA

STATIC DEPTH TO WATER (feet btoc): 5.50	CASING HEIGHT (feet als): 0	STATIC DEPTH TO WATER (feet bls) = DTW (btoc) - Casing Height (feet als): 5.50	WELL SCREEN INTERVAL DEPTH (feet bls): 87-92

WELL DIAMETER (inches): 1.0	TUBING DIAMETER (inches): 3/16	PURGE PUMP TYPE OR BAILER: **Peristaltic Pump**	TOP DEPTH = top of screen or depth to water which ever is greatest (feet bls): 87	BOTTOM DEPTH (feet bls): 92

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

_____Liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

0.99 Liters. (0.005 x 102) + 0.475 = 0.99

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 89.5	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 89.5	PURGING INITIATED AT: 0900	PURGING ENDED AT: 0924	TOTAL VOLUME PURGED (Liters): 2.4

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (mlpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	ORP (mV)	COLOR (describe)
0915	1.5	1.5	100	13.37	7.84	25.5	2486	0.21/2%	27.0	-190	None
0918	0.3	1.8	100	13.40	7.86	25.7	2573	0.19/2%	19.2	190	None
0921	0.3	2.1	100	13.42	7.87	25.7	2563	0.20/2%	18.4	-191	None
0924	0.3	2.4	100	13.42	7.88	25.7	2549	0.18/2%	16.6	-190	None

WELL CAPACITY (Liters Per Foot): **0.75"** = 0.076; **1"** = 0.15; **1.25"** = 0.23; **2"** = 0.61; **3"** = 1.40; **4"** = 2.46; **5"** = 3.86; **6"** = 5.57; **12"** = 22.26
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): **1/8"** = 0.002; **3/16"** = 0.005; **1/4"** = 0.0098; **5/16"** = 0.015; **3/8"** = 0.023; **1/2"** = 0.038; **5/8"** = 0.06

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: James Lloyd /Tetra Tech	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 0925	SAMPLING ENDED AT: 0930
PUMP OR TUBING DEPTH IN WELL (feet): 89.5	SAMPLE PUMP: FLOW RATE (mL per minute): 100	TUBING MATERIAL CODE: Teflon	
FIELD DECONTAMINATION: **(Y)** N	FIELD-FILTERED: Y **(N)** FILTER SIZE___ µm Filtration Equipment Type: _____	DUPLICATE: Y **(N)**	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
1	3	CG	40 ml	HCl	None	<2	8260DTCL SOMO1	APP

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP =** Peristaltic Pump **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

SITE NAME: LC34	SITE LOCATION: Kennedy Space Center	
LOC ID: LC34-IW0043D2	SAMPLE ID: **LC34-IW0043D2-110.0-20211223** Sample depth (ddd.d)=[bottom of screen (feet bls)-Top depth] x 0.5-bottom of screen (feet bls)	DATE: **12/23/2021**

PURGING DATA

STATIC DEPTH TO WATER (feet btoc): 3.62	CASING HEIGHT (feet als): NA	STATIC DEPTH TO WATER (feet bls) = DTW (btoc) - Casing Height (feet als): NA	WELL SCREEN INTERVAL DEPTH (feet bls): 105-115

WELL DIAMETER (inches): 1.0	TUBING DIAMETER (inches): 3/16	PURGE PUMP TYPE OR BAILER: **Peristaltic Pump**	TOP DEPTH = top of screen or depth to water which ever is greatest (feet bls): 105	BOTTOM DEPTH (feet bls): 115

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

_____Liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

1.1 Liters. (0.005 x 125) + 0.475 = 1.1

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 110.0	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 110.0	PURGING INITIATED AT: 0905	PURGING ENDED AT: 0925	TOTAL VOLUME PURGED (Liters): 5.0

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (mlpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (^{O}C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	ORP (mV)	COLOR (describe)
0915	2.5	2.5	250	4.09	8.07	24.0	2459	0.12	5.12	-353.6	Clear
0920	1.25	3.75	250	4.09	8.06	24.1	2451	0.11	4.22	-355.8	Clear
0925	1.25	5.0	250	4.09	8.05	24.1	2463	0.11	3.78	-356.5	Clear
0930	Sample	Collected									

WELL CAPACITY (Liters Per Foot): **0.75"** = 0.076; **1"** = 0.15; **1.25"** = 0.23; **2"** = 0.61; **3"** = 1.40; **4"** = 2.46; **5"** = 3.86; **6"** = 5.57; **12"** = 22.26
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): **1/8"** = 0.002; **3/16"** = 0.005; **1/4"** = 0.0098; **5/16"** = 0.015; **3/8"** = 0.023; **1/2"** = 0.038; **5/8"** = 0.06

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Chuck Sorden /Tetra Tech	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 0930	SAMPLING ENDED AT: 0935
PUMP OR TUBING DEPTH IN WELL (feet): 110.0	SAMPLE PUMP: FLOW RATE (mL per minute): 250	TUBING MATERIAL CODE: Teflon	
FIELD DECONTAMINATION: **(Y)** N	FIELD-FILTERED: Y **(N)** FILTER SIZE___ µm Filtration Equipment Type: _____	DUPLICATE: Y **(N)**	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
1	3	CG	40 ml	HCl	None	<2	8260DTCL SOMO1	APP

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP =** Peristaltic Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

SITE NAME: LC34	SITE LOCATION: Kennedy Space Center	
LOC ID: LC34-IW0044D2	SAMPLE ID: **LC34-IW0044D2-110.0-20211223** Sample depth (ddd.d)=[bottom of screen (feet bls)-Top depth] x 0.5-bottom of screen (feet bls)	DATE: **12/23/2021**

PURGING DATA

STATIC DEPTH TO WATER (feet btoc): 3.15	CASING HEIGHT (feet als): NA	STATIC DEPTH TO WATER (feet bls) = DTW (btoc) - Casing Height (feet als): NA	WELL SCREEN INTERVAL DEPTH (feet bls): 105-115

WELL DIAMETER (inches): 1.0	TUBING DIAMETER (inches): 3/16	PURGE PUMP TYPE OR BAILER: **Peristaltic Pump**	TOP DEPTH = top of screen or depth to water which ever is greatest (feet bls): 105	BOTTOM DEPTH (feet bls): 115

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

_____Liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

1.1 Liters. (0.005 x 125) + 0.475 = 1.1

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 110.0	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 110.0	PURGING INITIATED AT: 1030	PURGING ENDED AT: 1110	TOTAL VOLUME PURGED (Liters): 10.0

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (mlpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (^{O}C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	ORP (mV)	COLOR (describe)
1040	2.5	2.5	250	3.37	8.14	25.6	2692	0.38	5.85	-359.8	Clear
1050	2.5	5.0	250	3.37	8.08	25.5	2715	0.22	3.30	-356.1	Clear
1100	2.5	7.5	250	3.37	7.95	25.7	2719	0.23	1.55	-356.0	Clear
1110	2.5	10.0	250	3.37	7.95	25.7	2713	0.21	0.89	-355.9	Clear
1115	Sample	Collected									

WELL CAPACITY (Liters Per Foot): **0.75"** = 0.076; **1"** = 0.15; **1.25"** = 0.23; **2"** = 0.61; **3"** = 1.40; **4"** = 2.46; **5"** = 3.86; **6"** = 5.57; **12"** = 22.26
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): **1/8"** = 0.002; **3/16"** = 0.005; **1/4"** = 0.0098; **5/16"** = 0.015; **3/8"** = 0.023; **1/2"** = 0.038; **5/8"** = 0.06

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Chuck Sorden /Tetra Tech	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1115	SAMPLING ENDED AT: 1120
PUMP OR TUBING DEPTH IN WELL (feet): 110.0	SAMPLE PUMP: FLOW RATE (mL per minute): 250	TUBING MATERIAL CODE: Teflon	
FIELD DECONTAMINATION: **(Y)** N	FIELD-FILTERED: Y **(N)** FILTER SIZE___ µm Filtration Equipment Type: _____	DUPLICATE: Y **(N)**	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
1	3	CG	40 ml	HCl	None	<2	8260DTCL SOMO1	APP

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP =** Peristaltic Pump **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

SITE NAME: LC34	SITE LOCATION: Kennedy Space Center	
LOC ID: LC34-IW0045D2	SAMPLE ID: **LC34-IW0045D2-110.0-20211223** Sample depth (ddd.d)=[bottom of screen (feet bls)-Top depth] x 0.5-bottom of screen (feet bls)	DATE: **12/23/2021**

PURGING DATA

STATIC DEPTH TO WATER (feet btoc): 5.15	CASING HEIGHT (feet als): 0	STATIC DEPTH TO WATER (feet bls) = DTW (btoc) - Casing Height (feet als): 5.15	WELL SCREEN INTERVAL DEPTH (feet bls): 105-115	
WELL DIAMETER (inches): 1.0	TUBING DIAMETER (inches): 3/16	PURGE PUMP TYPE OR BAILER: **Peristaltic Pump**	TOP DEPTH = top of screen or depth to water which ever is greatest (feet bls): 105	BOTTOM DEPTH (feet bls): 115

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

_____Liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

1.1 Liters. (0.005 x 125) + 0.475 = 1.1

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 110.0	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 110.0	PURGING INITIATED AT: 0955	PURGING ENDED AT: 1014	TOTAL VOLUME PURGED (Liters): 3.8

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (mlpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	ORP (mV)	COLOR (describe)
1005	2.0	2.0	200	5.23	7.84	24.0	2567	0.60/7%	6.08	-274	None
1008	0.6	2.6	200	5.23	7.87	24.0	2567	0.35/4%	5.64	-281	None
1011	0.6	3.2	200	5.23	7.88	24.0	2569	0.29/3%	4.72	-291	None
1014	0.6	3.8	200	5.23	7.89	24.1	2570	0.28/3%	2.72	-294	None

WELL CAPACITY (Liters Per Foot): **0.75"** = 0.076; **1"** = 0.15; **1.25"** = 0.23; **2"** = 0.61; **3"** = 1.40; **4"** = 2.46; **5"** = 3.86; **6"** = 5.57; **12"** = 22.26
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): **1/8"** = 0.002; **3/16"** = 0.005; **1/4"** = 0.0098; **5/16"** = 0.015; **3/8"** = 0.023; **1/2"** = 0.038; **5/8"** = 0.06

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: James Lloyd /Tetra Tech	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1015	SAMPLING ENDED AT: 1020
PUMP OR TUBING DEPTH IN WELL (feet): 110.0	SAMPLE PUMP: FLOW RATE (mL per minute): 200	TUBING MATERIAL CODE: Teflon	
FIELD DECONTAMINATION: **(Y)** N	FIELD-FILTERED: Y **(N)** FILTER SIZE___ µm Filtration Equipment Type: _____	DUPLICATE: Y **(N)**	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
1	3	CG	40 ml	HCl	None	<2	8260DTCL SOMO1	APP

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP =** Peristaltic Pump **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

SITE NAME: LC34	SITE LOCATION: Kennedy Space Center	
LOC ID: LC34-IW0160	SAMPLE ID: **LC34-IW0160-110.0-20211223** Sample depth (ddd.d)=[bottom of screen (feet bls)-Top depth] x 0.5-bottom of screen (feet bls)	DATE: **12/23/2021**

PURGING DATA

STATIC DEPTH TO WATER (feet btoc): 5.49	CASING HEIGHT (feet als): 0	STATIC DEPTH TO WATER (feet bls) = DTW (btoc) - Casing Height (feet als):	WELL SCREEN INTERVAL DEPTH (feet bls): 105-115	
WELL DIAMETER (inches): 1.0	TUBING DIAMETER (inches): 3/16	PURGE PUMP TYPE OR BAILER: **Peristaltic Pump**	TOP DEPTH = top of screen or depth to water which ever is greatest (feet bls): 105	BOTTOM DEPTH (feet bls): 115

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

_____Liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

1.1 Liters. (0.005 x 125) + 0.475 = 1.1

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 110.0	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 110.0	PURGING INITIATED AT: 0945	PURGING ENDED AT: 1005	TOTAL VOLUME PURGED (Liters): 5.0

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (mlpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	ORP (mV)	COLOR (describe)
0955	2.5	2.5	250	5.85	7.87	25.9	2678	0.21	4.23	-369.8	Clear
1000	1.25	3.75	250	5.85	7.82	25.9	2673	0.17	1.74	-364.9	Clear
1005	1.25	5.0	250	5.85	7.82	26.1	2679	0.17	0.88	-364.3	Clear
1010	Sample	Collected									

WELL CAPACITY (Liters Per Foot): **0.75"** = 0.076; **1"** = 0.15; **1.25"** = 0.23; **2"** = 0.61; **3"** = 1.40; **4"** = 2.46; **5"** = 3.86; **6"** = 5.57; **12"** = 22.26
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): **1/8"** = 0.002; **3/16"** = 0.005; **1/4"** = 0.0098; **5/16"** = 0.015; **3/8"** = 0.023; **1/2"** = 0.038; **5/8"** = 0.06

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Chuck Sorden /Tetra Tech	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1010	SAMPLING ENDED AT: 1015
PUMP OR TUBING DEPTH IN WELL (feet): 110.0	SAMPLE PUMP: FLOW RATE (mL per minute): 250	TUBING MATERIAL CODE: Teflon	
FIELD DECONTAMINATION: **(Y)** N	FIELD-FILTERED: Y **(N)** FILTER SIZE___ µm Filtration Equipment Type: _____	DUPLICATE: Y **(N)**	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
1	3	CG	40 ml	HCl	None	<2	8260DTCL SOMO1	APP

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP =** Peristaltic Pump **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

SITE NAME: LC34	SITE LOCATION: Kennedy Space Center	
LOC ID: LC34-IW0161	SAMPLE ID: **LC34-IW0161-110.0-20211223** Sample depth (ddd.d)=[bottom of screen (feet bls)-Top depth] x 0.5-bottom of screen (feet bls)	DATE: **12/23/2021**

PURGING DATA

STATIC DEPTH TO WATER (feet btoc): 3.39	CASING HEIGHT (feet als): NA	STATIC DEPTH TO WATER (feet bls) = DTW (btoc) - Casing Height (feet als): NA	WELL SCREEN INTERVAL DEPTH (feet bls): 105-115

WELL DIAMETER (inches): 1.0	TUBING DIAMETER (inches): 3/16	PURGE PUMP TYPE OR BAILER: **Peristaltic Pump**	TOP DEPTH = top of screen or depth to water which ever is greatest (feet bls): 105	BOTTOM DEPTH (feet bls): 115

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

_____Liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

1.1 Liters. (0.005 x 125) + 0.475 = 1.1

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 110.0	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 110.0	PURGING INITIATED AT: 1205	PURGING ENDED AT: 1225	TOTAL VOLUME PURGED (Liters): 5.0

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (mlpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (^{O}C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	ORP (mV)	COLOR (describe)
1215	2.5	2.5	250	3.45	7.76	26.2	2775	0.21	3.07	-345.9	Clear
1220	1.25	3.75	250	3.45	7.77	26.1	2769	0.21	2.42	-345.7	Clear
1225	1.25	5.0	250	345							
1230	Sample	Collected									

WELL CAPACITY (Liters Per Foot): **0.75"** = 0.076; **1"** = 0.15; **1.25"** = 0.23; **2"** = 0.61; **3"** = 1.40; **4"** = 2.46; **5"** = 3.86; **6"** = 5.57; **12"** = 22.26
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): **1/8"** = 0.002; **3/16"** = 0.005; **1/4"** = 0.0098; **5/16"** = 0.015; **3/8"** = 0.023; **1/2"** = 0.038; **5/8"** = 0.06

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Chuck Sorden /Tetra Tech	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1230	SAMPLING ENDED AT: 1235
PUMP OR TUBING DEPTH IN WELL (feet): 110.0	SAMPLE PUMP: FLOW RATE (mL per minute): 250	TUBING MATERIAL CODE: Teflon	
FIELD DECONTAMINATION: **(Y)** N	FIELD-FILTERED: Y **(N)** FILTER SIZE___ µm Filtration Equipment Type: _____	DUPLICATE: Y **(N)**	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
1	3	CG	40 ml	HCl	None	<2	8260DTCL SOMO1	APP

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP =** Peristaltic Pump **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

SITE NAME: LC34	SITE LOCATION: Kennedy Space Center	
LOC ID: LC34-IW0162	SAMPLE ID: **LC34-IW0162-110.0-20211223** Sample depth (ddd.d)=[bottom of screen (feet bls)-Top depth] x 0.5-bottom of screen (feet bls)	DATE: **12/23/2021**

PURGING DATA

STATIC DEPTH TO WATER (feet btoc): 3.22	CASING HEIGHT (feet als): NA	STATIC DEPTH TO WATER (feet bls) = DTW (btoc) - Casing Height (feet als): NA	WELL SCREEN INTERVAL DEPTH (feet bls): 105-115

WELL DIAMETER (inches): 1.0	TUBING DIAMETER (inches): 3/16	PURGE PUMP TYPE OR BAILER: **Peristaltic Pump**	TOP DEPTH = top of screen or depth to water which ever is greatest (feet bls): 105	BOTTOM DEPTH (feet bls): 115

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

_____Liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

1.1 Liters. (0.005 x 125) + 0.475 = 1.1

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 110.0	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 110.0	PURGING INITIATED AT: 1130	PURGING ENDED AT: 1150	TOTAL VOLUME PURGED (Liters): 5.0

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (mlpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	ORP (mV)	COLOR (describe)
1140	2.5	2.5	250	3.32	7.79	25.1	2793	0.27	2.67	-351.9	Clear
1145	1.25	3.75	250	3.32	7.79	25.0	2789	0.25	2.22	-350.7	Clear
1150	1.25	5.0	250	3.32	7.78	25.1	2790	0.23	1.53	-350.4	Clear
1155	Sample	Collected									

WELL CAPACITY (Liters Per Foot): **0.75"** = 0.076; **1"** = 0.15; **1.25"** = 0.23; **2"** = 0.61; **3"** = 1.40; **4"** = 2.46; **5"** = 3.86; **6"** = 5.57; **12"** = 22.26
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): **1/8"** = 0.002; **3/16"** = 0.005; **1/4"** = 0.0098; **5/16"** = 0.015; **3/8"** = 0.023; **1/2"** = 0.038; **5/8"** = 0.06

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Chuck Sorden /Tetra Tech	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1155	SAMPLING ENDED AT: 1200
PUMP OR TUBING DEPTH IN WELL (feet): 110.0	SAMPLE PUMP: FLOW RATE (mL per minute): 250	TUBING MATERIAL CODE: Teflon	
FIELD DECONTAMINATION: **(Y)** N	FIELD-FILTERED: Y **(N)** FILTER SIZE___ µm Filtration Equipment Type: _____	DUPLICATE: Y **(N)**	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
1	3	CG	40 ml	HCl	None	<2	8260DTCL SOMO1	APP

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP =** Peristaltic Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

SITE NAME: LC34	SITE LOCATION: Kennedy Space Center	
LOC ID: LC34-IW0163	SAMPLE ID: **LC34-IW0163-110.0-20211223** Sample depth (ddd.d)=[bottom of screen (feet bls)-Top depth] x 0.5-bottom of screen (feet bls)	DATE: **12/23/2021**

PURGING DATA

STATIC DEPTH TO WATER (feet btoc): 3.50	CASING HEIGHT (feet als): 0	STATIC DEPTH TO WATER (feet bls) = DTW (btoc) - Casing Height (feet als):	WELL SCREEN INTERVAL DEPTH (feet bls): 105-115	
WELL DIAMETER (inches): 1.0	TUBING DIAMETER (inches): 3/16	PURGE PUMP TYPE OR BAILER: **Peristaltic Pump**	TOP DEPTH = top of screen or depth to water which ever is greatest (feet bls): 105	BOTTOM DEPTH (feet bls): 115

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

_____Liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

1.1 Liters. (0.005 x 125) + 0.475 = 1.1

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 110.0	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 110.0	PURGING INITIATED AT: 1125	PURGING ENDED AT: 1149	TOTAL VOLUME PURGED (Liters): 6.72

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (mlpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	ORP (mV)	COLOR (describe)
1135	2.80	2.80	280.0	3.55	7.80	21.4	2875.0	0.10	7.42	-247.0	Clear
1140	1.40	4.20	280.0	3.55	7.80	21.5	2891.0	0.10	2.78	-249.2	
1145	1.40	5.60	280.0	3.55	7.79	21.4	2890.0	0.09	1.73	-250.5	
1149	1.12	6.72	280.0	3.55	7.80	21.4	2895.0	0.09	2.33	-251.0	Clear
1150	sample	collected									

WELL CAPACITY (Liters Per Foot): **0.75"** = 0.076; **1"** = 0.15; **1.25"** = 0.23; **2"** = 0.61; **3"** = 1.40; **4"** = 2.46; **5"** = 3.86; **6"** = 5.57; **12"** = 22.26
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): **1/8"** = 0.002; **3/16"** = 0.005; **1/4"** = 0.0098; **5/16"** = 0.015; **3/8"** = 0.023; **1/2"** = 0.038; **5/8"** = 0.06

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Robert Siegel. /Tetra Tech	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1150	SAMPLING ENDED AT: 1200
PUMP OR TUBING DEPTH IN WELL (feet): 110.0	SAMPLE PUMP: FLOW RATE (mL per minute): 250.0	TUBING MATERIAL CODE: Teflon	
FIELD DECONTAMINATION: **(Y)** N	FIELD-FILTERED: Y **(N)** FILTER SIZE___ µm Filtration Equipment Type: _____	DUPLICATE: Y **(N)**	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
163	3	CG	40 ml	HCl+ice	None	<2	8260DTCL SOMO1	APP

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP =** Peristaltic Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

SITE NAME: LC34	SITE LOCATION: Kennedy Space Center	
LOC ID: LC34-IW0164	SAMPLE ID: **LC34-IW0164-110.0-20211223** Sample depth (ddd.d)=[bottom of screen (feet bls)-Top depth] x 0.5-bottom of screen (feet bls)	DATE: **12/23/2021**

PURGING DATA

STATIC DEPTH TO WATER (feet btoc): 2.80	CASING HEIGHT (feet als): 0	STATIC DEPTH TO WATER (feet bls) = DTW (btoc) - Casing Height (feet als): 2.80	WELL SCREEN INTERVAL DEPTH (feet bls): 105-115

WELL DIAMETER (inches): 1.0	TUBING DIAMETER (inches): 3/16	PURGE PUMP TYPE OR BAILER: **Peristaltic Pump**	TOP DEPTH = top of screen or depth to water which ever is greatest (feet bls): 105	BOTTOM DEPTH (feet bls): 115

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

_____Liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

1.1 Liters. (0.005 x 125) + 0.475 = 1.1

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 110.0	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 110.0	PURGING INITIATED AT: 1120	PURGING ENDED AT: 1146	TOTAL VOLUME PURGED (Liters): 5.2

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (mlpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (^{O}C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	ORP (mV)	COLOR (describe)
1140	4.0	4.0	200	2.90	7.90	24.5	2666	0.27/3%	3.56	-338	None
1143	0.6	4.6	200	2.90	7.90	24.5	2666	0.27/3%	2.38	-338	None
1146	0.6	5.2	200	2.90	7.90	24.5	2666	0.27/3%	3.63	-339	None

WELL CAPACITY (Liters Per Foot): **0.75"** = 0.076; **1"** = 0.15; **1.25"** = 0.23; **2"** = 0.61; **3"** = 1.40; **4"** = 2.46; **5"** = 3.86; **6"** = 5.57; **12"** = 22.26
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): **1/8"** = 0.002; **3/16"** = 0.005; **1/4"** = 0.0098; **5/16"** = 0.015; **3/8"** = 0.023; **1/2"** = 0.038; **5/8"** = 0.06

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: James Lloyd /Tetra Tech	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1150	SAMPLING ENDED AT: 1155
PUMP OR TUBING DEPTH IN WELL (feet): 110.0	SAMPLE PUMP: FLOW RATE (mL per minute): 200	TUBING MATERIAL CODE: Teflon	
FIELD DECONTAMINATION: **(Y)** N	FIELD-FILTERED: Y **(N)** FILTER SIZE___ µm Filtration Equipment Type: _____	DUPLICATE: Y **(N)**	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
1	3	CG	40 ml	HCl	None	<2	8260DTCL SOMO1	APP

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP =** Peristaltic Pump **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

SITE NAME: LC34	SITE LOCATION: Kennedy Space Center	
LOC ID: LC34-IW0165	SAMPLE ID: **LC34-IW0165-110.0-20211223** Sample depth (ddd.d)=[bottom of screen (feet bls)-Top depth] x 0.5-bottom of screen (feet bls)	DATE: **12/23/2021**

PURGING DATA

STATIC DEPTH TO WATER (feet btoc): 4.17	CASING HEIGHT (feet als): 0	STATIC DEPTH TO WATER (feet bls) = DTW (btoc) - Casing Height (feet als):	WELL SCREEN INTERVAL DEPTH (feet bls): 105-115	
WELL DIAMETER (inches): 1.0	TUBING DIAMETER (inches): 3/16	PURGE PUMP TYPE OR BAILER: **Peristaltic Pump**	TOP DEPTH = top of screen or depth to water which ever is greatest (feet bls): 105	BOTTOM DEPTH (feet bls): 115

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

_____Liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

1.1 Liters. (0.005 x 125) + 0.475 = 1.1

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 110.0	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 110.0	PURGING INITIATED AT: 1030	PURGING ENDED AT: 1054	TOTAL VOLUME PURGED (Liters): 6.72

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (mlpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	ORP (mV)	COLOR (describe)
1040	2.80	2.80	280.0	4.30	7.85	21.6	2706.0	0.41	8.83	-229.0	Clear
1045	1.40	4.20	280.0	4.30	7.84	21.9	2713.0	0.12	4.75	-234.5	
1050	1.40	5.60	280.0	4.30	7.83	21.7	2715.0	0.11	5.17	-236.5	
1054	1.12	6.72	280.0	4.30	7.83	21.9	2720.0	0.11	3.52	-239.0	Clear
1055	Sample	Collected									

WELL CAPACITY (Liters Per Foot): **0.75"** = 0.076; **1"** = 0.15; **1.25"** = 0.23; **2"** = 0.61; **3"** = 1.40; **4"** = 2.46; **5"** = 3.86; **6"** = 5.57; **12"** = 22.26
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): **1/8"** = 0.002; **3/16"** = 0.005; **1/4"** = 0.0098; **5/16"** = 0.015; **3/8"** = 0.023; **1/2"** = 0.038; **5/8"** = 0.06

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Robert Siegel /Tetra Tech	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1055	SAMPLING ENDED AT: 1105
PUMP OR TUBING DEPTH IN WELL (feet): 110.0	SAMPLE PUMP: FLOW RATE (mL per minute): 250.0	TUBING MATERIAL CODE: Teflon	
FIELD DECONTAMINATION: **(Y)** N	FIELD-FILTERED: Y **(N)** FILTER SIZE___ µm Filtration Equipment Type: _____	DUPLICATE: Y **(N)**	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
165	3	CG	40 ml	HCl+ice	None	<2	8260DTCL SOMO1	APP

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP =** Peristaltic Pump **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

02/04/2022 **LC34** **112G08985**

Personnel: Chuck Sorden (CS) Geologist Tt
Weather: Sunny – 80 degrees F
PPE: Level D
Objective: Resample LC34-IW0162

1410: CS on site at LC34-IW0162; replacing tubing with new HDPE
1425: Purging LC34-IW0162
1455: Purging Complete
1500: Sample Collected LC34-IW0162-110.0-20220204 8260DTCL
1515: Site secured; CS offsite to meet ENCO courier @ KSC Badging Office

NO ALTERATION BEYOND 02/02/2022
@ 1515

SITE NAME: LC34	SITE LOCATION: Kennedy Space Center	
LOC ID: LC34-IW0162	SAMPLE ID: **LC34-IW0162-110.0-20220204** Sample depth (ddd.d)=[bottom of screen (feet bls)-Top depth] x 0.5-bottom of screen (feet bls)	DATE: **02/04/2022**

PURGING DATA

STATIC DEPTH TO WATER (feet btoc): 4.16	CASING HEIGHT (feet als): NA	STATIC DEPTH TO WATER (feet bls) = DTW (btoc) - Casing Height (feet als): NA	WELL SCREEN INTERVAL DEPTH (feet bls): 105-115

WELL DIAMETER (inches): 1.0	TUBING DIAMETER (inches): 3/16	PURGE PUMP TYPE OR BAILER: **Peristaltic Pump**	TOP DEPTH = top of screen or depth to water which ever is greatest (feet bls): 105	BOTTOM DEPTH (feet bls): 115

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

_____Liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

1.1 Liters. (0.005 x 125) + 0.475 = 1.1

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 110.0	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 110.0	PURGING INITIATED AT: 1425	PURGING ENDED AT: 1455	TOTAL VOLUME PURGED (Liters): 9.0

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (mlpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (^{O}C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	ORP (mV)	COLOR (describe)
1445	6.0	6.0	300	4.25	7.65	25.67	2583.1	0.07	6.29	-219.9	Clear
1450	1.5	7.5	300	4.25	7.66	25.63	2539.9	0.06	5.21	-227.9	Clear
1455	1.5	9.0	300	4.25	7.65	25.62	2554.3	0.05	5.84	-232.5	Clear
1500	Sample	Collected									

WELL CAPACITY (Liters Per Foot): **0.75"** = 0.076; **1"** = 0.15; **1.25"** = 0.23; **2"** = 0.61; **3"** = 1.40; **4"** = 2.46; **5"** = 3.86; **6"** = 5.57; **12"** = 22.26
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): **1/8"** = 0.002; **3/16"** = 0.005; **1/4"** = 0.0098; **5/16"** = 0.015; **3/8"** = 0.023; **1/2"** = 0.038; **5/8"** = 0.06

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Chuck Sorden /Tetra Tech	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1500	SAMPLING ENDED AT: 1505
PUMP OR TUBING DEPTH IN WELL (feet): 110.0	SAMPLE PUMP: FLOW RATE (mL per minute): 250	TUBING MATERIAL CODE: NEW HDPE	
FIELD DECONTAMINATION: **(Y)** N	FIELD-FILTERED: Y **(N)** FILTER SIZE___ µm Filtration Equipment Type: _____	DUPLICATE: Y **(N)**	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
1	4	CG	40 ml	HCl/None	None	<2/See above	8260DTCL SOMO1	APP

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP =** Peristaltic Pump **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

APPENDIX B

LABORATORY ANALYTICAL REPORTS

(PROVIDED IN ELECTRONIC VERSION ONLY)

National Aeronautics and
Space Administration

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Caitlin Brice, M.S. — Signature

12/27/18 — Date

SGS Legal Reviewed CM

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Company Representative Name: Caitlin Brice
Company Representative Title: General Manager
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November 17, 2017

Tetra Tech, Inc.
661 Andersen Drive
Foster Plaza VII
5th Floor
Pittsburgh, PA 15220

Attention: Jennifer Buel

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Thank you.
ENVIRONMENTAL CONSERVATION LABORATORIES, INC.

James W Gregory
Senior Vice President

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

Tetra Tech NUS

NASA-LC 34, Freedom Rd, CCAFS, FL

112G08985

SGS Job Number: FA91859

Sampling Date: 12/20/21

Report to:

Tetra-Tech,Inc.
661 Andersen Dr Foster Plaza 7
Pittsburgh, PA 15220
mark.jonnet@tetratech.com; carrie.stock@tetratech.com;
amy.thomson@tetratech.com
ATTN: Mark Jonnet

Total number of pages in report: **135**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Norm Farmer
Technical Director

Client Service contact: Andrea Colby 407-425-6700

Certifications: FL(E83510), LA(03051), KS(E-10327), NC(573), NJ(FL002), NY(12022), SC(96038001) DoD ELAP(ANAB L2229), AZ(AZ0806), CA(2937), TX(T104704404), PA(68-03573), VA(460177), AL, AK, AR, CT, IA, KY, MA, MI. MS, ND, NH, NV, OK, OR, IL, UT, VT, WA, WI, WV

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SGS North America Inc.

Sample Summary

Tetra Tech NUS

Job No: FA91859

NASA-LC 34, Freedom Rd, CCAFS, FL
Project No: 112G08985

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
FA91859-1	12/20/21	09:45	DF	12/20/21	AQ	Ground Water	LC34-DPT0598-008.0-20211220
FA91859-2	12/20/21	10:00	DF	12/20/21	AQ	Ground Water	LC34-DPT0598-013.0-20211220
FA91859-3	12/20/21	10:05	DF	12/20/21	AQ	Ground Water	LC34-DPT0598-018.0-20211220
FA91859-4	12/20/21	10:20	DF	12/20/21	AQ	Ground Water	LC34-DPT0598-023.0-20211220
FA91859-5	12/20/21	10:30	DF	12/20/21	AQ	Ground Water	LC34-DPT0598-028.0-20211220
FA91859-6	12/20/21	10:40	DF	12/20/21	AQ	Ground Water	LC34-DPT0598-033.0-20211220
FA91859-7	12/20/21	11:00	DF	12/20/21	AQ	Ground Water	LC34-DPT0598-038.0-20211220
FA91859-8	12/20/21	11:20	DF	12/20/21	AQ	Ground Water	LC34-DPT0598-043.0-20211220
FA91859-9	12/20/21	11:35	DF	12/20/21	AQ	Ground Water	LC34-DPT0598-048.0-20211220
FA91859-10	12/20/21	11:50	DF	12/20/21	AQ	Ground Water	LC34-DPT0598-053.0-20211220
FA91859-11	12/20/21	12:30	DF	12/20/21	AQ	Ground Water	LC34-DPT0598-058.0-20211220
FA91859-12	12/20/21	13:10	DF	12/20/21	AQ	Ground Water	LC34-DPT0598-063.0-20211220
FA91859-13	12/20/21	13:20	DF	12/20/21	AQ	Ground Water	LC34-DPT0598-068.0-20211220

Sample Summary
(continued)

Tetra Tech NUS

Job No: FA91859

NASA-LC 34, Freedom Rd, CCAFS, FL
Project No: 112G08985

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
FA91859-14	12/20/21	09:50	DF	12/20/21	AQ	Ground Water	LC34-DPT0601-008.0-20211220
FA91859-15	12/20/21	09:55	DF	12/20/21	AQ	Ground Water	LC34-DPT0601-013.0-20211220
FA91859-16	12/20/21	10:10	DF	12/20/21	AQ	Ground Water	LC34-DPT0601-018.0-20211220
FA91859-17	12/20/21	10:25	DF	12/20/21	AQ	Ground Water	LC34-DPT0601-023.0-20211220
FA91859-18	12/20/21	10:35	DF	12/20/21	AQ	Ground Water	LC34-DPT0601-028.0-20211220
FA91859-19	12/20/21	10:45	DF	12/20/21	AQ	Ground Water	LC34-DPT0601-033.0-20211220
FA91859-20	12/20/21	10:55	DF	12/20/21	AQ	Ground Water	LC34-DPT0601-038.0-20211220
FA91859-21	12/20/21	11:15	DF	12/20/21	AQ	Ground Water	LC34-DPT0601-043.0-20211220
FA91859-22	12/20/21	11:30	DF	12/20/21	AQ	Ground Water	LC34-DPT0601-048.0-20211220
FA91859-23	12/20/21	11:45	DF	12/20/21	AQ	Ground Water	LC34-DPT0601-053.0-20211220
FA91859-24	12/20/21	13:00	DF	12/20/21	AQ	Ground Water	LC34-DPT0601-058.0-20211220
FA91859-25	12/20/21	13:15	DF	12/20/21	AQ	Ground Water	LC34-DPT0601-063.0-20211220
FA91859-26	12/20/21	13:45	DF	12/20/21	AQ	Ground Water	LC34-DPT0601-068.0-20211220

Sample Summary
(continued)

Tetra Tech NUS

Job No: FA91859

NASA-LC 34, Freedom Rd, CCAFS, FL
Project No: 112G08985

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
FA91859-27	12/20/21	13:50	DF	12/20/21	AQ	Ground Water	LC34-DPT0598-073.0-20211220
FA91859-28	12/20/21	14:20	DF	12/20/21	AQ	Ground Water	LC34-DPT0598-078.0-20211220
FA91859-29	12/20/21	14:40	DF	12/20/21	AQ	Ground Water	LC34-DPT0598-083.0-20211220
FA91859-30	12/20/21	15:10	DF	12/20/21	AQ	Ground Water	LC34-DPT0598-088.0-20211220
FA91859-31	12/20/21	15:45	DF	12/20/21	AQ	Ground Water	LC34-DPT0598-093.0-20211220
FA91859-32	12/20/21	16:10	DF	12/20/21	AQ	Ground Water	LC34-DPT0598-098.0-20211220
FA91859-33	12/20/21	14:15	DF	12/20/21	AQ	Ground Water	LC34-DPT0601-073.0-20211220
FA91859-34	12/20/21	14:35	DF	12/20/21	AQ	Ground Water	LC34-DPT0601-078.0-20211220
FA91859-35	12/20/21	15:00	DF	12/20/21	AQ	Ground Water	LC34-DPT0601-083.0-20211220
FA91859-36	12/20/21	15:20	DF	12/20/21	AQ	Ground Water	LC34-DPT0601-088.0-20211220
FA91859-37	12/20/21	15:40	DF	12/20/21	AQ	Ground Water	LC34-DPT0601-093.0-20211220
FA91859-38	12/20/21	16:05	DF	12/20/21	AQ	Ground Water	LC34-DPT0601-098.0-20211220

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Tetra Tech NUS **Job No:** FA91859

Site: NASA-LC 34, Freedom Rd, CCAFS, FL **Report Date:** 1/19/2022 11:19:48

On 12/20/2021, 38 Sample(s), 0 Trip Blank(s) were received at SGS North America Inc. at a maximum corrected temperature of 2.2 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. Job Number of FA91859 was Assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

MS Volatiles By Method SW846 8260B

Matrix: AQ **Batch ID:** V1A1662

V1A1662-BS: No MS/MSD available for this run.

For Sample(s) FA91859-1, FA91859-2, FA91859-3, FA91859-4, FA91859-5, FA91859-6 are associated with an CCV that has a recovery for Dichlorodifluoromethane outside high control limit.

FA91859-1 for Chloroethane: Associated Initial Calibration outside control limits (%RSD > 15%); sample is ND.

FA91859-1 for Dichlorodifluoromethane: Associated CCV outside of control limits high.

FA91859-1 for Trichlorofluoromethane: Associated CCV outside of control limits high, sample was ND.

FA91859-1: Sample was not preserved to a pH < 2.

FA91859-2 for Chloroethane: Associated Initial Calibration outside control limits (%RSD > 15%); sample is ND.

FA91859-2 for Dichlorodifluoromethane: Associated CCV outside of control limits high.

FA91859-2 for Trichlorofluoromethane: Associated CCV outside of control limits high, sample was ND.

FA91859-2: Sample was not preserved to a pH < 2.

FA91859-3 for Chloroethane: Associated Initial Calibration outside control limits (%RSD > 15%); sample is ND.

FA91859-3 for Dichlorodifluoromethane: Associated CCV outside of control limits high.

FA91859-3 for Trichlorofluoromethane: Associated CCV outside of control limits high, sample was ND.

FA91859-3: Sample was not preserved to a pH < 2.

FA91859-4 for Chloroethane: Associated Initial Calibration outside control limits (%RSD > 15%); sample is ND.

FA91859-4 for Dichlorodifluoromethane: Associated CCV outside of control limits high.

FA91859-4 for Trichlorofluoromethane: Associated CCV outside of control limits high, sample was ND.

FA91859-4: Sample was not preserved to a pH < 2.

FA91859-5 for Chloroethane: Associated Initial Calibration outside control limits (%RSD > 15%); sample is ND.

FA91859-5 for Dichlorodifluoromethane: Associated CCV outside of control limits high.

FA91859-5 for Trichlorofluoromethane: Associated CCV outside of control limits high, sample was ND.

FA91859-5: Sample was not preserved to a pH < 2.

FA91859-6 for Chloroethane: Associated Initial Calibration outside control limits (%RSD > 15%); sample is ND.

FA91859-6 for Dichlorodifluoromethane: Associated CCV outside of control limits high.

FA91859-6 for trans-1,2-Dichloroethylene: No sample available for reanalysis.

FA91859-6 for Trichlorofluoromethane: Associated CCV outside of control limits high, sample was ND.

FA91859-6: Sample was not preserved to a pH < 2.

FA91859-7 for Chloroethane: Associated Initial Calibration outside control limits (%RSD > 15%); sample is ND.

FA91859-7 for Dichlorodifluoromethane: Associated CCV outside of control limits high, sample was ND.

FA91859-7: Sample was not preserved to a pH < 2.

FA91859-8 for Chloroethane: Associated Initial Calibration outside control limits (%RSD > 15%); sample is ND.

FA91859-8 for Dichlorodifluoromethane: Associated CCV outside of control limits high, sample was ND.

FA91859-8: Sample was not preserved to a pH < 2.

Matrix: AQ **Batch ID:** V1A1673

Sample(s) FA91890-1MS, FA91890-1MSD were used as the QC samples indicated.

The following samples were run outside of holding time for method SW846 8260B: FA91859-12

Matrix Spike Recovery(s) for Trichloroethylene are outside control limits. Outside control limits due to high level in sample relative to spike amount.

Sample(s) FA91859-10, FA91859-11, FA91859-12, FA91859-9 have surrogates outside control limits.

MS Volatiles By Method SW846 8260B

Matrix: AQ **Batch ID:** V1A1673

FA91859-9: Sample was not preserved to a pH < 2. Sample analyzed beyond hold time; reported results are considered minimum values. Confirmation run.

FA91859-10: Sample was not preserved to a pH < 2. Sample analyzed beyond hold time; reported results are considered minimum values. Confirmation run.

FA91859-11: Sample was not preserved to a pH < 2. Sample analyzed beyond hold time; reported results are considered minimum values. Confirmation run.

FA91859-12: Sample was not preserved to a pH < 2. Sample analyzed beyond hold time; reported results are considered minimum values.

Matrix: AQ **Batch ID:** V1P3364

Sample(s) FA91702-5MS, FA91702-5MSD were used as the QC samples indicated.

Blank Spike Recovery(s) for Methyl Bromide are outside control limits.

FA91859-33 for Methyl Bromide: Associated ICV, CCV, and BS recovery outside control limits high, sample was ND.

FA91859-33: Sample was not preserved to a pH < 2.

FA91859-34 for Methyl Bromide: Associated ICV, CCV, and BS recovery outside control limits high, sample was ND.

FA91859-34: Sample was not preserved to a pH < 2.

FA91859-35 for Methyl Bromide: Associated ICV, CCV, and BS recovery outside control limits high, sample was ND.

FA91859-35: Sample was not preserved to a pH < 2.

FA91859-36 for Methyl Bromide: Associated ICV, CCV, and BS recovery outside control limits high, sample was ND.

FA91859-36: Sample was not preserved to a pH < 2.

FA91859-37 for Methyl Bromide: Associated ICV, CCV, and BS recovery outside control limits high, sample was ND.

FA91859-37: Sample was not preserved to a pH < 2.

FA91859-38 for Methyl Bromide: Associated ICV, CCV, and BS recovery outside control limits high, sample was ND.

FA91859-38: Sample was not preserved to a pH < 2.

Matrix: AQ **Batch ID:** V1P3380

No MS/MSD available for this run.

The following samples were run outside of holding time for method SW846 8260B: FA91859-14, FA91859-15, FA91859-16, FA91859-23, FA91859-24

FA91859-14: Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA91859-15: Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA91859-16: Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA91859-17: Sample was not preserved to a pH < 2. Confirmation run beyond holdtime.

FA91859-18: Sample was not preserved to a pH < 2. Confirmation run beyond holdtime.

FA91859-19: Sample was not preserved to a pH < 2. Confirmation run beyond holdtime.

FA91859-20: Sample was not preserved to a pH < 2. Confirmation run beyond holdtime.

FA91859-21: Sample was not preserved to a pH < 2. Confirmation run beyond holdtime.

FA91859-23: Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA91859-24: Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

Matrix: AQ **Batch ID:** V2A1657

V2A1657-BS: No MS/MSD available for this run.

FA91859-13 for Chloroethane: Associated Initial Calibration outside control limits (%RSD > 15%).

FA91859-13 for Trichlorofluoromethane: Associated CCV outside of control limits high, sample was ND.

FA91859-13: Sample was not preserved to a pH < 2.

FA91859-14 for Chloroethane: Associated Initial Calibration outside control limits (%RSD > 15%); sample is ND.

FA91859-14 for Trichlorofluoromethane: Associated CCV outside of control limits high, sample was ND.

FA91859-14: Sample was not preserved to a pH < 2.

FA91859-15 for Chloroethane: Associated Initial Calibration outside control limits (%RSD > 15%); sample is ND.

FA91859-15 for Trichlorofluoromethane: Associated CCV outside of control limits high, sample was ND.

FA91859-15: Sample was not preserved to a pH < 2.

FA91859-16 for Chloroethane: Associated Initial Calibration outside control limits (%RSD > 15%); sample is ND.

FA91859-16 for Trichlorofluoromethane: Associated CCV outside of control limits high, sample was ND.

MS Volatiles By Method SW846 8260B

Matrix: AQ **Batch ID:** V2A1657

FA91859-16: Sample was not preserved to a pH < 2.

FA91859-17 for Chloroethane: Associated Initial Calibration outside control limits (%RSD > 15%); sample is ND.

FA91859-17 for cis-1,2-Dichloroethylene: Suspected carry-over. Confirmed by reanalysis beyond hold-time.

FA91859-17 for Trichlorofluoromethane: Associated CCV outside of control limits high, sample was ND.

FA91859-17: Sample was not preserved to a pH < 2.

FA91859-18 for Chloroethane: Associated Initial Calibration outside control limits (%RSD > 15%); sample is ND.

FA91859-18 for Trichlorofluoromethane: Associated CCV outside of control limits high, sample was ND.

FA91859-18 for Vinyl Chloride: Results confirmed by re-analysis beyond hold time.

FA91859-18: Sample was not preserved to a pH < 2.

FA91859-19 for Chloroethane: Associated Initial Calibration outside control limits (%RSD > 15%); sample is ND.

FA91859-19 for Trichlorofluoromethane: Associated CCV outside of control limits high, sample was ND.

FA91859-19: Sample was not preserved to a pH < 2.

FA91859-20 for Chloroethane: Associated Initial Calibration outside control limits (%RSD > 15%); sample is ND.

FA91859-20 for Trichloroethylene: Suspected carry-over. Confirmed ND beyond holdtime.

FA91859-20 for Trichlorofluoromethane: Associated CCV outside of control limits high, sample was ND.

FA91859-20: Sample was not preserved to a pH < 2.

FA91859-21 for Chloroethane: Associated Initial Calibration outside control limits (%RSD > 15%); sample is ND.

FA91859-21 for Trichloroethylene: Suspected carry-over. Confirmed ND by reanalysis beyond hold-time.

FA91859-21 for Trichlorofluoromethane: Associated CCV outside of control limits high, sample was ND.

FA91859-21: Sample was not preserved to a pH < 2.

FA91859-22 for Chloroethane: Associated Initial Calibration outside control limits (%RSD > 15%).

FA91859-22 for Trichlorofluoromethane: Associated CCV outside of control limits high, sample was ND.

FA91859-22: Sample was not preserved to a pH < 2.

FA91859-23 for Chloroethane: Associated Initial Calibration outside control limits (%RSD > 15%); sample is ND.

FA91859-23 for Trichlorofluoromethane: Associated CCV outside of control limits high, sample was ND.

FA91859-23: Sample was not preserved to a pH < 2.

FA91859-24 for Chloroethane: Associated Initial Calibration outside control limits (%RSD > 15%); sample is ND.

FA91859-24 for Trichlorofluoromethane: Associated CCV outside of control limits high, sample was ND.

FA91859-24: Sample was not preserved to a pH < 2.

FA91859-25 for Chloroethane: Associated Initial Calibration outside control limits (%RSD > 15%); sample is ND.

FA91859-25 for Trichlorofluoromethane: Associated CCV outside of control limits high, sample was ND.

FA91859-25: Sample was not preserved to a pH < 2.

FA91859-26 for Chloroethane: Associated Initial Calibration outside control limits.

FA91859-26 for cis-1,2-Dichloroethylene: Compound was below calibration range in higher dilution.

FA91859-26 for Trichlorofluoromethane: Associated CCV outside of control limits high, sample was ND.

FA91859-26: Sample was not preserved to a pH < 2.

Matrix: AQ **Batch ID:** VC6187

Sample(s) FA91699-3MS, FA91699-3MSD were used as the QC samples indicated.

The following samples were run outside of holding time for method SW846 8260B: FA91859-35

FA91859-35: Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

Matrix: AQ **Batch ID:** VI2437

Sample(s) FA91823-5MS, FA91823-5MSD were used as the QC samples indicated.

The following samples were run outside of holding time for method SW846 8260B: FA91859-2

FA91859-2: Sample re-analyzed beyond hold time and was not preserved to a pH < 2; reported results are considered minimum values.

Matrix: AQ **Batch ID:** VI2440

Sample(s) FA91859-28MS, FA91859-28MSD were used as the QC samples indicated.

The following samples were run outside of holding time for method SW846 8260B: FA91859-1, FA91859-10, FA91859-11, FA91859-12, FA91859-27, FA91859-28, FA91859-29, FA91859-3, FA91859-30, FA91859-31, FA91859-32, FA91859-4, FA91859-5, FA91859-6, FA91859-7, FA91859-8, FA91859-9

Matrix Spike/Matrix Spike Duplicate Recovery(s) for Methyl Bromide are outside control limits. Probable cause is due to matrix interference.

MS Volatiles By Method SW846 8260B

Matrix: AQ **Batch ID:** VI2440

Matrix Spike/Matrix Spike Duplicate Recovery(s) for Trichloroethylene are outside control limits. Outside control limits due to high level in sample relative to spike amount.

For Sample(s) FA91859-10, FA91859-11, FA91859-12, FA91859-27, FA91859-28, FA91859-29, FA91859-30, FA91859-31, FA91859-32, FA91859-9 are associated with an CCV that has a recovery for Chloroethane outside low control limits.

FA91859-1: Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA91859-3: Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA91859-4: Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA91859-5: Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA91859-6: Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA91859-7: Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA91859-8: Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA91859-9: Sample was not preserved to a pH < 2. Sample analyzed beyond hold time; reported results are considered minimum values.

FA91859-10: Sample was not preserved to a pH < 2. Sample analyzed beyond hold time; reported results are considered minimum values.

FA91859-11: Sample was not preserved to a pH < 2. Sample analyzed beyond hold time; reported results are considered minimum values.

FA91859-12: Sample was not preserved to a pH < 2. Sample analyzed beyond hold time; reported results are considered minimum values.

FA91859-26: Sample was not preserved to a pH < 2. Confirmation run beyond holdtime.

FA91859-27: Sample was not preserved to a pH < 2. Sample analyzed beyond hold time; reported results are considered minimum values.

FA91859-28: Sample was not preserved to a pH < 2. Sample analyzed beyond hold time; reported results are considered minimum values.

FA91859-29: Sample vial(s) contained significant headspace and were not preserved to a pH < 2. Sample analyzed beyond hold time; reported results are considered minimum values.

FA91859-30: Sample vial(s) contained bubbles greater than 6mm. Sample was not preserved to a pH < 2. Sample analyzed beyond hold time; reported results are considered minimum values.

FA91859-31: Sample was not preserved to a pH < 2. Sample analyzed beyond hold time; reported results are considered minimum values.

FA91859-32: Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA91859-8 for Trichloroethylene: Insufficient sample available for reanalysis.

FA91859-9 for Acetone: Associated ICV outside control limits high, however sample ND.

FA91859-9 for Chloroethane: Associated CCV outside of control limits low.

FA91859-9 for Methyl Bromide: Associated CCV outside of control limits high, sample was ND.

FA91859-10 for Acetone: Associated ICV outside control limits high, however sample ND.

FA91859-10 for Chloroethane: Associated CCV outside of control limits low.

FA91859-10 for Methyl Bromide: Associated CCV outside of control limits high, sample was ND.

FA91859-11 for Acetone: Associated ICV outside control limits high, however sample ND.

FA91859-11 for Chloroethane: Associated CCV outside of control limits low.

FA91859-11 for Methyl Bromide: Associated CCV outside of control limits high, sample was ND.

FA91859-12 for Acetone: Associated ICV outside control limits high, however sample ND.

FA91859-12 for Chloroethane: Associated CCV outside of control limits low.

FA91859-12 for Methyl Bromide: Associated CCV outside of control limits high, sample was ND.

FA91859-27 for Acetone: Associated ICV outside control limits high, however sample ND.

FA91859-27 for Chloroethane: Associated CCV outside of control limits low.

FA91859-27 for Methyl Bromide: Associated CCV outside of control limits high, sample was ND.

FA91859-28 for Acetone: Associated ICV outside control limits high, however sample ND.

FA91859-28 for Chloroethane: Associated CCV outside of control limits low.

MS Volatiles By Method SW846 8260B

Matrix: AQ **Batch ID:** VI2440

FA91859-28 for Methyl Bromide: Associated CCV outside of control limits high, sample was ND.

FA91859-29 for Acetone: Associated ICV outside control limits high, however sample ND.

FA91859-29 for Chloroethane: Associated CCV outside of control limits low.

FA91859-29 for Methyl Bromide: Associated CCV outside of control limits high, sample was ND.

FA91859-29 for Trichloroethylene: Insufficient sample available for reanalysis.

FA91859-31 for Acetone: Associated ICV outside control limits high, however sample ND.

FA91859-31 for Chloroethane: Associated CCV outside of control limits low.

FA91859-31 for Methyl Bromide: Associated CCV outside of control limits high, sample was ND.

FA91859-31 for Trichloroethylene: Suspected carry-over.

FA91859-32 for Acetone: Associated ICV outside control limits high, however sample ND.

FA91859-32 for Chloroethane: Associated CCV outside of control limits low.

FA91859-32 for Methyl Bromide: Associated CCV outside of control limits high, sample was ND.

Matrix: AQ **Batch ID:** VY2526

Sample(s) FA91859-28MS, FA91859-28MSD were used as the QC samples indicated.

The following samples were run outside of holding time for method SW846 8260B: FA91859-28

FA91859-28: Sample was not preserved to a pH < 2. Sample analyzed beyond hold time; reported results are considered minimum values.

Narrative prepared by:

_____

Kim Benham, Client Services *(Signature on File)*

Summary of Hits

Job Number: FA91859
Account: Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL
Collected: 12/20/21

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	PQL	MDL	Units	Method
FA91859-1	**LC34-DPT0598-008.0-20211220**					
Dichlorodifluoromethane [a]		1.7 I	2.0	0.50	ug/l	SW846 8260B
1,1-Dichloroethylene [b]		8.5	1.0	0.32	ug/l	SW846 8260B
cis-1,2-Dichloroethylene [c]		1920 Q	200	55	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [b]		20.7	1.0	0.22	ug/l	SW846 8260B
Freon 113 [b]		20.2	1.0	0.48	ug/l	SW846 8260B
Trichloroethylene [c]		12400 Q	200	69	ug/l	SW846 8260B
Vinyl Chloride [b]		28.3	1.0	0.41	ug/l	SW846 8260B
FA91859-2	**LC34-DPT0598-013.0-20211220**					
Carbon Disulfide [b]		0.63 I	2.0	0.53	ug/l	SW846 8260B
Dichlorodifluoromethane [a]		4.5	2.0	0.50	ug/l	SW846 8260B
1,1-Dichloroethylene [b]		6.3	1.0	0.32	ug/l	SW846 8260B
cis-1,2-Dichloroethylene [d]		716 Q	50	14	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [b]		14.5	1.0	0.22	ug/l	SW846 8260B
Freon 113 [b]		98.2	1.0	0.48	ug/l	SW846 8260B
Trichloroethylene [d]		868 Q	50	17	ug/l	SW846 8260B
Vinyl Chloride [b]		25.8	1.0	0.41	ug/l	SW846 8260B
FA91859-3	**LC34-DPT0598-018.0-20211220**					
Dichlorodifluoromethane [a]		2.6	2.0	0.50	ug/l	SW846 8260B
1,1-Dichloroethylene [b]		4.8	1.0	0.32	ug/l	SW846 8260B
cis-1,2-Dichloroethylene [c]		864 Q	20	5.5	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [b]		10.2	1.0	0.22	ug/l	SW846 8260B
Freon 113 [b]		15.6	1.0	0.48	ug/l	SW846 8260B
Trichloroethylene [c]		648 Q	20	6.9	ug/l	SW846 8260B
Vinyl Chloride [b]		64.9	1.0	0.41	ug/l	SW846 8260B
FA91859-4	**LC34-DPT0598-023.0-20211220**					
Dichlorodifluoromethane [a]		3.3	2.0	0.50	ug/l	SW846 8260B
1,1-Dichloroethylene [b]		23.5	1.0	0.32	ug/l	SW846 8260B
cis-1,2-Dichloroethylene [c]		3980 Q	500	140	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [b]		76.9	1.0	0.22	ug/l	SW846 8260B
Freon 113 [b]		31.8	1.0	0.48	ug/l	SW846 8260B
Toluene [b]		0.42 I	1.0	0.30	ug/l	SW846 8260B
Trichloroethylene [c]		25500 Q	500	170	ug/l	SW846 8260B
FA91859-5	**LC34-DPT0598-028.0-20211220**					
Carbon Disulfide [b]		0.61 I	2.0	0.53	ug/l	SW846 8260B
Dichlorodifluoromethane [a]		1.4 I	2.0	0.50	ug/l	SW846 8260B

Summary of Hits

Job Number: FA91859
Account: Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL
Collected: 12/20/21

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	PQL	MDL	Units	Method
1,1-Dichloroethylene [b]		13.6	1.0	0.32	ug/l	SW846 8260B
cis-1,2-Dichloroethylene [c]		3560 Q	250	69	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [b]		37.3	1.0	0.22	ug/l	SW846 8260B
Freon 113 [b]		6.0	1.0	0.48	ug/l	SW846 8260B
Toluene [b]		0.62 I	1.0	0.30	ug/l	SW846 8260B
Trichloroethylene [c]		19800 Q	250	86	ug/l	SW846 8260B
Vinyl Chloride [c]		211 IQ	250	100	ug/l	SW846 8260B
FA91859-6	**LC34-DPT0598-033.0-20211220**					
Acetone [b]		14.0 I	25	10	ug/l	SW846 8260B
Benzene [b]		0.34 I	1.0	0.31	ug/l	SW846 8260B
2-Butanone (MEK) [b]		2.2 I	5.0	2.0	ug/l	SW846 8260B
Carbon Disulfide [b]		7.9	2.0	0.53	ug/l	SW846 8260B
Dichlorodifluoromethane [a]		5.4	2.0	0.50	ug/l	SW846 8260B
1,1-Dichloroethylene [b]		69.3	1.0	0.32	ug/l	SW846 8260B
cis-1,2-Dichloroethylene [c]		21500 Q	1000	280	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [e]		156 L	1.0	0.22	ug/l	SW846 8260B
Freon 113 [b]		3.5	1.0	0.48	ug/l	SW846 8260B
Toluene [b]		1.9	1.0	0.30	ug/l	SW846 8260B
Trichloroethylene [c]		71300 Q	1000	350	ug/l	SW846 8260B
Vinyl Chloride [c]		975 IQ	1000	410	ug/l	SW846 8260B
FA91859-7	**LC34-DPT0598-038.0-20211220**					
1,1-Dichloroethylene [b]		34.4	25	8.1	ug/l	SW846 8260B
cis-1,2-Dichloroethylene [c]		4070 Q	500	140	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [b]		48.3	25	5.5	ug/l	SW846 8260B
Trichloroethylene [c]		19000 Q	500	170	ug/l	SW846 8260B
Vinyl Chloride [b]		195	25	10	ug/l	SW846 8260B
FA91859-8	**LC34-DPT0598-043.0-20211220**					
1,1-Dichloroethylene [b]		203 I	250	81	ug/l	SW846 8260B
cis-1,2-Dichloroethylene [c]		53600 Q	1000	280	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [b]		357	250	55	ug/l	SW846 8260B
Trichloroethylene [f]		105000 LQ	1000	350	ug/l	SW846 8260B
Vinyl Chloride [b]		3340	250	100	ug/l	SW846 8260B
FA91859-9	**LC34-DPT0598-048.0-20211220**					
cis-1,2-Dichloroethylene [g]		106000 Q	2000	550	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [g]		1660 IQ	2000	440	ug/l	SW846 8260B
Trichloroethylene [g]		49700 Q	2000	690	ug/l	SW846 8260B
Vinyl Chloride [g]		4390 Q	2000	820	ug/l	SW846 8260B

Summary of Hits

Job Number: FA91859
Account: Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL
Collected: 12/20/21

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	PQL	MDL	Units	Method
FA91859-10	**LC34-DPT0598-053.0-20211220**					
cis-1,2-Dichloroethylene [g]		14100 Q	500	140	ug/l	SW846 8260B
Trichloroethylene [g]		29600 Q	500	170	ug/l	SW846 8260B
Vinyl Chloride [g]		475 IQ	500	200	ug/l	SW846 8260B
FA91859-11	**LC34-DPT0598-058.0-20211220**					
cis-1,2-Dichloroethylene [g]		2940 Q	50	14	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [g]		30.3 IQ	50	11	ug/l	SW846 8260B
Trichloroethylene [g]		207 Q	50	17	ug/l	SW846 8260B
Vinyl Chloride [g]		338 Q	50	20	ug/l	SW846 8260B
FA91859-12	**LC34-DPT0598-063.0-20211220**					
cis-1,2-Dichloroethylene [h]		190 Q	5.0	1.4	ug/l	SW846 8260B
Trichloroethylene [h]		377 Q	5.0	1.7	ug/l	SW846 8260B
Vinyl Chloride [h]		8.2 Q	5.0	2.0	ug/l	SW846 8260B
FA91859-13	**LC34-DPT0598-068.0-20211220**					
cis-1,2-Dichloroethylene [b]		6.1	1.0	0.28	ug/l	SW846 8260B
Trichloroethylene [b]		19.6	1.0	0.35	ug/l	SW846 8260B
FA91859-14	**LC34-DPT0601-008.0-20211220**					
1,1-Dichloroethylene [b]		4.0	1.0	0.32	ug/l	SW846 8260B
cis-1,2-Dichloroethylene [b]		37.9	1.0	0.28	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [b]		4.7	1.0	0.22	ug/l	SW846 8260B
Freon 113 [b]		3.1	1.0	0.48	ug/l	SW846 8260B
Trichloroethylene [c]		2870 Q	50	17	ug/l	SW846 8260B
Vinyl Chloride [b]		1.4	1.0	0.41	ug/l	SW846 8260B
FA91859-15	**LC34-DPT0601-013.0-20211220**					
1,1-Dichloroethylene [b]		3.1	1.0	0.32	ug/l	SW846 8260B
cis-1,2-Dichloroethylene [c]		1790 Q	20	5.5	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [b]		7.1	1.0	0.22	ug/l	SW846 8260B
Freon 113 [b]		3.8	1.0	0.48	ug/l	SW846 8260B
Trichloroethylene [c]		795 Q	20	6.9	ug/l	SW846 8260B
Vinyl Chloride [b]		21.7	1.0	0.41	ug/l	SW846 8260B

Summary of Hits

Job Number: FA91859
Account: Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL
Collected: 12/20/21

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	PQL	MDL	Units	Method
FA91859-16	**LC34-DPT0601-018.0-20211220**					
Dichlorodifluoromethane [b]		2.6	2.0	0.50	ug/l	SW846 8260B
1,1-Dichloroethylene [b]		14.2	1.0	0.32	ug/l	SW846 8260B
cis-1,2-Dichloroethylene [c]		2610 Q	200	55	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [b]		37.9	1.0	0.22	ug/l	SW846 8260B
Freon 113 [b]		38.4	1.0	0.48	ug/l	SW846 8260B
Trichloroethylene [c]		15300 Q	200	69	ug/l	SW846 8260B
Vinyl Chloride [c]		125 IQ	200	82	ug/l	SW846 8260B
FA91859-17	**LC34-DPT0601-023.0-20211220**					
Dichlorodifluoromethane [b]		1.3 I	2.0	0.50	ug/l	SW846 8260B
1,1-Dichloroethylene [b]		0.44 I	1.0	0.32	ug/l	SW846 8260B
cis-1,2-Dichloroethylene [i]		35.6	1.0	0.28	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [b]		0.98 I	1.0	0.22	ug/l	SW846 8260B
Freon 113 [b]		3.1	1.0	0.48	ug/l	SW846 8260B
Trichloroethylene [i]		18.0	1.0	0.35	ug/l	SW846 8260B
Vinyl Chloride [b]		62.1	1.0	0.41	ug/l	SW846 8260B
FA91859-18	**LC34-DPT0601-028.0-20211220**					
1,1-Dichloroethylene [b]		3.0	1.0	0.32	ug/l	SW846 8260B
cis-1,2-Dichloroethylene [b]		10.1	1.0	0.28	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [b]		8.8	1.0	0.22	ug/l	SW846 8260B
Trichloroethylene [b]		10.8	1.0	0.35	ug/l	SW846 8260B
Vinyl Chloride [j]		243 L	1.0	0.41	ug/l	SW846 8260B
FA91859-19	**LC34-DPT0601-033.0-20211220**					
cis-1,2-Dichloroethylene [b]		8.2 I	10	2.8	ug/l	SW846 8260B
Trichloroethylene [b]		17.3	10	3.5	ug/l	SW846 8260B
Vinyl Chloride [b]		30.2	10	4.1	ug/l	SW846 8260B
FA91859-20	**LC34-DPT0601-038.0-20211220**					
cis-1,2-Dichloroethylene [b]		1210	250	69	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [b]		127 I	250	55	ug/l	SW846 8260B
Trichloroethylene [k]		948	250	86	ug/l	SW846 8260B
Vinyl Chloride [b]		1010	250	100	ug/l	SW846 8260B
FA91859-21	**LC34-DPT0601-043.0-20211220**					
cis-1,2-Dichloroethylene [b]		8760	500	140	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [b]		555	500	110	ug/l	SW846 8260B

Summary of Hits

Job Number: FA91859
Account: Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL
Collected: 12/20/21

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	PQL	MDL	Units	Method
Trichloroethylene [l]		674	500	170	ug/l	SW846 8260B
Vinyl Chloride [b]		2730	500	200	ug/l	SW846 8260B
FA91859-22	**LC34-DPT0601-048.0-20211220**					
cis-1,2-Dichloroethylene [b]		49800	1000	280	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [b]		1560	1000	220	ug/l	SW846 8260B
Trichloroethylene [b]		2160	1000	350	ug/l	SW846 8260B
Vinyl Chloride [b]		2720	1000	410	ug/l	SW846 8260B
FA91859-23	**LC34-DPT0601-053.0-20211220**					
1,1-Dichloroethylene [b]		11.7	1.0	0.32	ug/l	SW846 8260B
cis-1,2-Dichloroethylene [c]		5190 Q	100	28	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [c]		63.3 IQ	100	22	ug/l	SW846 8260B
Trichloroethylene [b]		6.5	1.0	0.35	ug/l	SW846 8260B
Vinyl Chloride [c]		442 Q	100	41	ug/l	SW846 8260B
FA91859-24	**LC34-DPT0601-058.0-20211220**					
cis-1,2-Dichloroethylene [c]		76.4 Q	2.0	0.55	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [b]		2.2	2.0	0.44	ug/l	SW846 8260B
Trichloroethylene [c]		5.4 Q	2.0	0.69	ug/l	SW846 8260B
Vinyl Chloride [b]		6.8	2.0	0.82	ug/l	SW846 8260B
FA91859-25	**LC34-DPT0601-063.0-20211220**					
cis-1,2-Dichloroethylene [b]		16.2	1.0	0.28	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [b]		1.2	1.0	0.22	ug/l	SW846 8260B
Trichloroethylene [b]		10.2	1.0	0.35	ug/l	SW846 8260B
Vinyl Chloride [b]		1.3	1.0	0.41	ug/l	SW846 8260B
FA91859-26	**LC34-DPT0601-068.0-20211220**					
1,1-Dichloroethylene [b]		0.82 I	1.0	0.32	ug/l	SW846 8260B
cis-1,2-Dichloroethylene [m]		105 L	1.0	0.28	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [b]		1.4	1.0	0.22	ug/l	SW846 8260B
Trichloroethylene [m]		203 L	1.0	0.35	ug/l	SW846 8260B
Vinyl Chloride [b]		12.2	1.0	0.41	ug/l	SW846 8260B
FA91859-27	**LC34-DPT0598-073.0-20211220**					
Trichloroethylene [g]		790 Q	200	69	ug/l	SW846 8260B

Summary of Hits

Job Number: FA91859
Account: Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL
Collected: 12/20/21

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	PQL	MDL	Units	Method
FA91859-28	**LC34-DPT0598-078.0-20211220**					
cis-1,2-Dichloroethylene [g]		11000 Q	10000	2800	ug/l	SW846 8260B
Trichloroethylene [n]		3070000 LQ	20000	6900	ug/l	SW846 8260B
FA91859-29	**LC34-DPT0598-083.0-20211220**					
1,1-Dichloroethylene [o]		74.3 IQ	200	64	ug/l	SW846 8260B
cis-1,2-Dichloroethylene [o]		5760 Q	200	55	ug/l	SW846 8260B
Freon 113 [o]		279 Q	200	96	ug/l	SW846 8260B
Trichloroethylene [p]		230000 LQ	200	69	ug/l	SW846 8260B
FA91859-30	**LC34-DPT0598-088.0-20211220**					
1,1-Dichloroethylene [q]		6.2 IQ	10	3.2	ug/l	SW846 8260B
cis-1,2-Dichloroethylene [q]		335 Q	10	2.8	ug/l	SW846 8260B
Trichloroethylene [r]		6500 LQ	10	3.5	ug/l	SW846 8260B
Vinyl Chloride [q]		7.0 IQ	10	4.1	ug/l	SW846 8260B
FA91859-31	**LC34-DPT0598-093.0-20211220**					
cis-1,2-Dichloroethylene [g]		349 Q	10	2.8	ug/l	SW846 8260B
Trichloroethylene [s]		173 Q	10	3.5	ug/l	SW846 8260B
FA91859-32	**LC34-DPT0598-098.0-20211220**					
cis-1,2-Dichloroethylene [c]		37100 Q	1000	280	ug/l	SW846 8260B
Trichloroethylene [c]		82000 Q	1000	350	ug/l	SW846 8260B
FA91859-33	**LC34-DPT0601-073.0-20211220**					
cis-1,2-Dichloroethylene [b]		61.0	2.5	0.69	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [b]		2.3 I	2.5	0.55	ug/l	SW846 8260B
Trichloroethylene [b]		68.1	2.5	0.86	ug/l	SW846 8260B
Vinyl Chloride [b]		67.5	2.5	1.0	ug/l	SW846 8260B
FA91859-34	**LC34-DPT0601-078.0-20211220**					
cis-1,2-Dichloroethylene [b]		2390	100	28	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [b]		38.7 I	100	22	ug/l	SW846 8260B
Trichloroethylene [b]		690	100	35	ug/l	SW846 8260B
Vinyl Chloride [b]		156	100	41	ug/l	SW846 8260B

Summary of Hits

Job Number: FA91859
Account: Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL
Collected: 12/20/21

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	PQL	MDL	Units	Method
FA91859-35	**LC34-DPT0601-083.0-20211220**					
cis-1,2-Dichloroethylene [b]		42.2	1.0	0.28	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [b]		0.80 I	1.0	0.22	ug/l	SW846 8260B
Trichloroethylene [c]		80.3 Q	2.0	0.69	ug/l	SW846 8260B
Vinyl Chloride [b]		2.0	1.0	0.41	ug/l	SW846 8260B
FA91859-36	**LC34-DPT0601-088.0-20211220**					
cis-1,2-Dichloroethylene [b]		15.8	1.0	0.28	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [b]		0.49 I	1.0	0.22	ug/l	SW846 8260B
Trichloroethylene [b]		29.6	1.0	0.35	ug/l	SW846 8260B
Vinyl Chloride [b]		0.68 I	1.0	0.41	ug/l	SW846 8260B
FA91859-37	**LC34-DPT0601-093.0-20211220**					
cis-1,2-Dichloroethylene [b]		28.0	1.0	0.28	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [b]		0.79 I	1.0	0.22	ug/l	SW846 8260B
Trichloroethylene [b]		13.1	1.0	0.35	ug/l	SW846 8260B
Vinyl Chloride [b]		1.2	1.0	0.41	ug/l	SW846 8260B
FA91859-38	**LC34-DPT0601-098.0-20211220**					
Carbon Disulfide [b]		0.61 I	2.0	0.53	ug/l	SW846 8260B
cis-1,2-Dichloroethylene [b]		4.4	1.0	0.28	ug/l	SW846 8260B
Trichloroethylene [b]		36.2	1.0	0.35	ug/l	SW846 8260B

(a) Sample was not preserved to a pH < 2. Associated CCV outside of control limits high.
(b) Sample was not preserved to a pH < 2.
(c) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(d) Sample re-analyzed beyond hold time and was not preserved to a pH < 2; reported results are considered minimum values.
(e) Sample was not preserved to a pH < 2. No sample available for reanalysis.
(f) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values. Insufficient sample available for reanalysis.
(g) Sample was not preserved to a pH < 2. Sample analyzed beyond hold time; reported results are considered minimum values.
(h) Sample was not preserved to a pH < 2. Sample analyzed beyond hold time; reported results are considered minimum values. Results from different vials are not consistent; higher results were reported.
(i) Sample was not preserved to a pH < 2. Suspected carry-over. Confirmed by reanalysis beyond hold-time.
(j) Sample was not preserved to a pH < 2. Results confirmed by re-analysis beyond hold time.
(k) Sample was not preserved to a pH < 2. Suspected carry-over. Confirmed ND beyond holdtime.
(l) Sample was not preserved to a pH < 2. Suspected carry-over. Confirmed ND by reanalysis beyond hold-time.
(m) Sample was not preserved to a pH < 2. Compound was below calibration range in higher dilution.

Summary of Hits

Job Number: FA91859
Account: Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL
Collected: 12/20/21

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	PQL	MDL	Units	Method

(n) Sample was not preserved to a pH < 2. Sample analyzed beyond hold time; reported results are considered minimum values. No sample available for reanalysis.
(o) Sample vial(s) contained significant headspace and were not preserved to a pH < 2. Sample analyzed beyond hold time; reported results are considered minimum values.
(p) Sample vial(s) contained significant headspace and were not preserved to a pH < 2. Sample analyzed beyond hold time; reported results are considered minimum values. Insufficient sample available for reanalysis.
(q) Sample vial(s) contained bubbles greater than 6mm. Sample was not preserved to a pH < 2. Sample analyzed beyond hold time; reported results are considered minimum values.
(r) Sample vial(s) contained bubbles greater than 6mm. Sample was not preserved to a pH < 2. Sample analyzed beyond hold time; reported results are considered minimum values. Insufficient sample available for reanalysis.
(s) Sample was not preserved to a pH < 2. Sample analyzed beyond hold time; reported results are considered minimum values. Suspected carry-over.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	LC34-DPT0598-008.0-20211220		
Lab Sample ID:	FA91859-1	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1A40823.D	1	12/26/21 17:30	CV	n/a	n/a	V1A1662
Run #2 [b]	I73488.D	200	01/14/22 00:09	LR	n/a	n/a	VI2440

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	10 U	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane [c]	0.67 UJ	2.0	0.67	ug/l	J
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane [d]	1.7	2.0	0.50	ug/l	I
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	8.5	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	1920 [e]	200	55	ug/l	Q
156-60-5	trans-1,2-Dichloroethylene	20.7	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113	20.2	1.0	0.48	ug/l	
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0598-008.0-20211220		
Lab Sample ID:	FA91859-1	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	2.0 U	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.30 U	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	12400 [e]	200	69	ug/l	Q
75-69-4	Trichlorofluoromethane [f]	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	28.3	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	108%	93%	83-118%
17060-07-0	1,2-Dichloroethane-D4	109%	99%	79-125%
2037-26-5	Toluene-D8	97%	103%	85-112%
460-00-4	4-Bromofluorobenzene	103%	102%	83-118%

(a) Sample was not preserved to a pH < 2.
(b) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(c) Associated Initial Calibration outside control limits (%RSD > 15%); however sample is ND.
(d) Associated CCV outside of control limits high.
(e) Result is from Run# 2
(f) Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range
I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0598-013.0-20211220		
Lab Sample ID:	FA91859-2	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1A40825.D	1	12/26/21 17:59	CV	n/a	n/a	V1A1662
Run #2 [b]	I73448.D	50	01/13/22 06:55	LR	n/a	n/a	VI2437

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	10 U	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	0.63	2.0	0.53	ug/l	I
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane [c]	0.67 UJ	2.0	0.67	ug/l	J
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane [d]	4.5	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	6.3	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	716 [e]	50	14	ug/l	Q
156-60-5	trans-1,2-Dichloroethylene	14.5	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113	98.2	1.0	0.48	ug/l	
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0598-013.0-20211220		
Lab Sample ID:	FA91859-2	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	2.0 U	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.30 U	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	868 [e]	50	17	ug/l	Q
75-69-4	Trichlorofluoromethane [f]	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	25.8	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	108%	101%	83-118%
17060-07-0	1,2-Dichloroethane-D4	112%	106%	79-125%
2037-26-5	Toluene-D8	97%	100%	85-112%
460-00-4	4-Bromofluorobenzene	101%	99%	83-118%

(a) Sample was not preserved to a pH < 2.
(b) Sample re-analyzed beyond hold time and was not preserved to a pH < 2; reported results are considered minimum values.
(c) Associated Initial Calibration outside control limits (%RSD > 15%); however sample is ND.
(d) Associated CCV outside of control limits high.
(e) Result is from Run# 2
(f) Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0598-018.0-20211220		
Lab Sample ID:	FA91859-3	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1A40827.D	1	12/26/21 18:29	CV	n/a	n/a	V1A1662
Run #2 [b]	I73489.D	20	01/14/22 00:34	LR	n/a	n/a	VI2440

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	10 U	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane [c]	0.67 UJ	2.0	0.67	ug/l	J
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane [d]	2.6	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	4.8	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	864 [e]	20	5.5	ug/l	Q
156-60-5	trans-1,2-Dichloroethylene	10.2	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113	15.6	1.0	0.48	ug/l	
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0598-018.0-20211220		
Lab Sample ID:	FA91859-3	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	2.0 U	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.30 U	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	648 [e]	20	6.9	ug/l	Q
75-69-4	Trichlorofluoromethane [f]	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	64.9	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	108%	95%	83-118%
17060-07-0	1,2-Dichloroethane-D4	113%	99%	79-125%
2037-26-5	Toluene-D8	97%	103%	85-112%
460-00-4	4-Bromofluorobenzene	99%	103%	83-118%

(a) Sample was not preserved to a pH < 2.
(b) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(c) Associated Initial Calibration outside control limits (%RSD > 15%); however sample is ND.
(d) Associated CCV outside of control limits high.
(e) Result is from Run# 2
(f) Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range
I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: LC34-DPT0598-023.0-20211220
Lab Sample ID: FA91859-4
Matrix: AQ - Ground Water
Method: SW846 8260B
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Date Sampled: 12/20/21
Date Received: 12/20/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1A40829.D	1	12/26/21 18:58	CV	n/a	n/a	V1A1662
Run #2 [b]	I73490.D	500	01/14/22 00:58	LR	n/a	n/a	VI2440

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	10 U	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane [c]	0.67 UJ	2.0	0.67	ug/l	J
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane [d]	3.3	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	23.5	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	3980 [e]	500	140	ug/l	Q
156-60-5	trans-1,2-Dichloroethylene	76.9	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113	31.8	1.0	0.48	ug/l	
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0598-023.0-20211220		
Lab Sample ID:	FA91859-4	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	2.0 U	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.42	1.0	0.30	ug/l	I
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	25500 [e]	500	170	ug/l	Q
75-69-4	Trichlorofluoromethane [f]	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	200 UQ [e]	500	200	ug/l	Q
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	112%	93%	83-118%
17060-07-0	1,2-Dichloroethane-D4	114%	100%	79-125%
2037-26-5	Toluene-D8	96%	103%	85-112%
460-00-4	4-Bromofluorobenzene	105%	99%	83-118%

(a) Sample was not preserved to a pH < 2.
(b) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(c) Associated Initial Calibration outside control limits (%RSD > 15%); however sample is ND.
(d) Associated CCV outside of control limits high.
(e) Result is from Run# 2
(f) Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range
I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0598-028.0-20211220		
Lab Sample ID:	FA91859-5	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1A40831.D	1	12/26/21 19:27	CV	n/a	n/a	V1A1662
Run #2 [b]	I73491.D	250	01/14/22 01:23	LR	n/a	n/a	VI2440

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	10 U	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	0.61	2.0	0.53	ug/l	I
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane [c]	0.67 UJ	2.0	0.67	ug/l	J
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane [d]	1.4	2.0	0.50	ug/l	I
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	13.6	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	3560 [e]	250	69	ug/l	Q
156-60-5	trans-1,2-Dichloroethylene	37.3	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113	6.0	1.0	0.48	ug/l	
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0598-028.0-20211220		
Lab Sample ID:	FA91859-5	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	2.0 U	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.62	1.0	0.30	ug/l	I
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	19800 [e]	250	86	ug/l	Q
75-69-4	Trichlorofluoromethane [f]	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	211 [e]	250	100	ug/l	IQ
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	110%	94%	83-118%
17060-07-0	1,2-Dichloroethane-D4	109%	99%	79-125%
2037-26-5	Toluene-D8	97%	102%	85-112%
460-00-4	4-Bromofluorobenzene	100%	100%	83-118%

(a) Sample was not preserved to a pH < 2.
(b) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(c) Associated Initial Calibration outside control limits (%RSD > 15%); however sample is ND.
(d) Associated CCV outside of control limits high.
(e) Result is from Run# 2
(f) Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range
I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: LC34-DPT0598-033.0-20211220
Lab Sample ID: FA91859-6
Matrix: AQ - Ground Water
Method: SW846 8260B
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Date Sampled: 12/20/21
Date Received: 12/20/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1A40833.D	1	12/26/21 19:56	CV	n/a	n/a	V1A1662
Run #2 [b]	I73492.D	1000	01/14/22 01:48	LR	n/a	n/a	VI2440

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	14.0	25	10	ug/l	I
71-43-2	Benzene	0.34	1.0	0.31	ug/l	I
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	2.2	5.0	2.0	ug/l	I
75-15-0	Carbon Disulfide	7.9	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane [c]	0.67 UJ	2.0	0.67	ug/l	J
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane [d]	5.4	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	69.3	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	21500 [e]	1000	280	ug/l	Q
156-60-5	trans-1,2-Dichloroethylene [f]	156	1.0	0.22	ug/l	L
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113	3.5	1.0	0.48	ug/l	
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0598-033.0-20211220		
Lab Sample ID:	FA91859-6	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	2.0 U	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	1.9	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	71300 [e]	1000	350	ug/l	Q
75-69-4	Trichlorofluoromethane [g]	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	975 [e]	1000	410	ug/l	IQ
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%	94%	83-118%
17060-07-0	1,2-Dichloroethane-D4	115%	100%	79-125%
2037-26-5	Toluene-D8	98%	103%	85-112%
460-00-4	4-Bromofluorobenzene	103%	98%	83-118%

(a) Sample was not preserved to a pH < 2.
(b) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(c) Associated Initial Calibration outside control limits (%RSD > 15%); however sample is ND.
(d) Associated CCV outside of control limits high.
(e) Result is from Run# 2
(f) No sample available for reanalysis.
(g) Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range
I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0598-038.0-20211220		
Lab Sample ID:	FA91859-7	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1A40835.D	25	12/26/21 20:26	CV	n/a	n/a	V1A1662
Run #2 [b]	I73493.D	500	01/14/22 02:12	LR	n/a	n/a	VI2440

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	250 U	630	250	ug/l	
71-43-2	Benzene	7.8 U	25	7.8	ug/l	
74-97-5	Bromochloromethane	11 U	25	11	ug/l	
75-27-4	Bromodichloromethane	6.1 U	25	6.1	ug/l	
75-25-2	Bromoform	10 U	25	10	ug/l	
78-93-3	2-Butanone (MEK)	50 U	130	50	ug/l	
75-15-0	Carbon Disulfide	13 U	50	13	ug/l	
56-23-5	Carbon Tetrachloride	8.9 U	25	8.9	ug/l	
108-90-7	Chlorobenzene	5.0 U	25	5.0	ug/l	
75-00-3	Chloroethane [c]	17 UJ	50	17	ug/l	J
67-66-3	Chloroform	7.5 U	25	7.5	ug/l	
110-82-7	Cyclohexane	9.8 U	25	9.8	ug/l	
124-48-1	Dibromochloromethane	6.9 U	25	6.9	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	26 U	130	26	ug/l	
106-93-4	1,2-Dibromoethane	6.9 U	50	6.9	ug/l	
75-71-8	Dichlorodifluoromethane [d]	13 U	50	13	ug/l	
95-50-1	1,2-Dichlorobenzene	8.1 U	25	8.1	ug/l	
541-73-1	1,3-Dichlorobenzene	5.4 U	25	5.4	ug/l	
106-46-7	1,4-Dichlorobenzene	6.4 U	25	6.4	ug/l	
75-34-3	1,1-Dichloroethane	8.5 U	25	8.5	ug/l	
107-06-2	1,2-Dichloroethane	7.8 U	25	7.8	ug/l	
75-35-4	1,1-Dichloroethylene	34.4	25	8.1	ug/l	
156-59-2	cis-1,2-Dichloroethylene	4070 [e]	500	140	ug/l	Q
156-60-5	trans-1,2-Dichloroethylene	48.3	25	5.5	ug/l	
78-87-5	1,2-Dichloropropane	11 U	25	11	ug/l	
10061-01-5	cis-1,3-Dichloropropene	7.3 U	25	7.3	ug/l	
10061-02-6	trans-1,3-Dichloropropene	5.4 U	25	5.4	ug/l	
100-41-4	Ethylbenzene	8.9 U	25	8.9	ug/l	
76-13-1	Freon 113	12 U	25	12	ug/l	
591-78-6	2-Hexanone	50 U	250	50	ug/l	
98-82-8	Isopropylbenzene	5.5 U	25	5.5	ug/l	
79-20-9	Methyl Acetate	130 U	500	130	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0598-038.0-20211220		
Lab Sample ID:	FA91859-7	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	50 U	130	50	ug/l	
74-87-3	Methyl Chloride	13 U	50	13	ug/l	
75-09-2	Methylene Chloride	50 U	130	50	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	25 U	130	25	ug/l	
1634-04-4	Methyl Tert Butyl Ether	5.7 U	25	5.7	ug/l	
100-42-5	Styrene	5.6 U	25	5.6	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	6.9 U	25	6.9	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	7.5 U	25	7.5	ug/l	
127-18-4	Tetrachloroethylene	5.4 U	25	5.4	ug/l	
108-88-3	Toluene	7.5 U	25	7.5	ug/l	
87-61-6	1,2,3-Trichlorobenzene	15 U	50	15	ug/l	
120-82-1	1,2,4-Trichlorobenzene	13 U	50	13	ug/l	
71-55-6	1,1,1-Trichloroethane	6.2 U	25	6.2	ug/l	
79-00-5	1,1,2-Trichloroethane	12 U	25	12	ug/l	
79-01-6	Trichloroethylene	19000 [e]	500	170	ug/l	Q
75-69-4	Trichlorofluoromethane [d]	13 U	50	13	ug/l	
75-01-4	Vinyl Chloride	195	25	10	ug/l	
1330-20-7	Xylene (total)	18 U	75	18	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	108%	97%	83-118%
17060-07-0	1,2-Dichloroethane-D4	115%	103%	79-125%
2037-26-5	Toluene-D8	97%	102%	85-112%
460-00-4	4-Bromofluorobenzene	100%	103%	83-118%

(a) Sample was not preserved to a pH < 2.
(b) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(c) Associated Initial Calibration outside control limits (%RSD > 15%); however sample is ND.
(d) Associated CCV outside of control limits high, sample was ND.
(e) Result is from Run# 2

U = Not detected MDL = Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range
I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0598-043.0-20211220		
Lab Sample ID:	FA91859-8	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1A40836.D	250	12/26/21 20:46	CV	n/a	n/a	V1A1662
Run #2 [b]	I73494.D	1000	01/14/22 02:37	LR	n/a	n/a	VI2440

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	2500 U	6300	2500	ug/l	
71-43-2	Benzene	78 U	250	78	ug/l	
74-97-5	Bromochloromethane	110 U	250	110	ug/l	
75-27-4	Bromodichloromethane	61 U	250	61	ug/l	
75-25-2	Bromoform	100 U	250	100	ug/l	
78-93-3	2-Butanone (MEK)	500 U	1300	500	ug/l	
75-15-0	Carbon Disulfide	130 U	500	130	ug/l	
56-23-5	Carbon Tetrachloride	89 U	250	89	ug/l	
108-90-7	Chlorobenzene	50 U	250	50	ug/l	
75-00-3	Chloroethane [c]	170 UJ	500	170	ug/l	J
67-66-3	Chloroform	75 U	250	75	ug/l	
110-82-7	Cyclohexane	98 U	250	98	ug/l	
124-48-1	Dibromochloromethane	69 U	250	69	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	260 U	1300	260	ug/l	
106-93-4	1,2-Dibromoethane	69 U	500	69	ug/l	
75-71-8	Dichlorodifluoromethane [d]	130 U	500	130	ug/l	
95-50-1	1,2-Dichlorobenzene	81 U	250	81	ug/l	
541-73-1	1,3-Dichlorobenzene	54 U	250	54	ug/l	
106-46-7	1,4-Dichlorobenzene	64 U	250	64	ug/l	
75-34-3	1,1-Dichloroethane	85 U	250	85	ug/l	
107-06-2	1,2-Dichloroethane	78 U	250	78	ug/l	
75-35-4	1,1-Dichloroethylene	203	250	81	ug/l	I
156-59-2	cis-1,2-Dichloroethylene	53600 [e]	1000	280	ug/l	Q
156-60-5	trans-1,2-Dichloroethylene	357	250	55	ug/l	
78-87-5	1,2-Dichloropropane	110 U	250	110	ug/l	
10061-01-5	cis-1,3-Dichloropropene	73 U	250	73	ug/l	
10061-02-6	trans-1,3-Dichloropropene	54 U	250	54	ug/l	
100-41-4	Ethylbenzene	89 U	250	89	ug/l	
76-13-1	Freon 113	120 U	250	120	ug/l	
591-78-6	2-Hexanone	500 U	2500	500	ug/l	
98-82-8	Isopropylbenzene	55 U	250	55	ug/l	
79-20-9	Methyl Acetate	1300 U	5000	1300	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0598-043.0-20211220		
Lab Sample ID:	FA91859-8	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	500 U	1300	500	ug/l	
74-87-3	Methyl Chloride	130 U	500	130	ug/l	
75-09-2	Methylene Chloride	500 U	1300	500	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	250 U	1300	250	ug/l	
1634-04-4	Methyl Tert Butyl Ether	57 U	250	57	ug/l	
100-42-5	Styrene	56 U	250	56	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	69 U	250	69	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	75 U	250	75	ug/l	
127-18-4	Tetrachloroethylene	54 U	250	54	ug/l	
108-88-3	Toluene	75 U	250	75	ug/l	
87-61-6	1,2,3-Trichlorobenzene	150 U	500	150	ug/l	
120-82-1	1,2,4-Trichlorobenzene	130 U	500	130	ug/l	
71-55-6	1,1,1-Trichloroethane	62 U	250	62	ug/l	
79-00-5	1,1,2-Trichloroethane	120 U	250	120	ug/l	
79-01-6	Trichloroethylene [f]	105000 [e]	1000	350	ug/l	LQ
75-69-4	Trichlorofluoromethane [d]	130 U	500	130	ug/l	
75-01-4	Vinyl Chloride	3340	250	100	ug/l	
1330-20-7	Xylene (total)	180 U	750	180	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	108%	96%	83-118%
17060-07-0	1,2-Dichloroethane-D4	114%	101%	79-125%
2037-26-5	Toluene-D8	97%	103%	85-112%
460-00-4	4-Bromofluorobenzene	101%	98%	83-118%

(a) Sample was not preserved to a pH < 2.
(b) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(c) Associated Initial Calibration outside control limits (%RSD > 15%); however sample is ND.
(d) Associated CCV outside of control limits high, sample was ND.
(e) Result is from Run# 2
(f) Insufficient sample available for reanalysis.

U = Not detected MDL = Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range
I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0598-048.0-20211220		
Lab Sample ID:	FA91859-9	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	I73495.D	2000	01/14/22 03:01	LR	n/a	n/a	VI2440
Run #2 [b]	1A41284.D	2000	01/12/22 20:05	CV	n/a	n/a	V1A1673

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone [c]	20000 UQ	50000	20000	ug/l	Q
71-43-2	Benzene	620 UQ	2000	620	ug/l	Q
74-97-5	Bromochloromethane	900 UQ	2000	900	ug/l	Q
75-27-4	Bromodichloromethane	480 UQ	2000	480	ug/l	Q
75-25-2	Bromoform	810 UQ	2000	810	ug/l	Q
78-93-3	2-Butanone (MEK)	4000 UQ	10000	4000	ug/l	Q
75-15-0	Carbon Disulfide	1100 UQ	4000	1100	ug/l	Q
56-23-5	Carbon Tetrachloride	710 UQ	2000	710	ug/l	Q
108-90-7	Chlorobenzene	400 UQ	2000	400	ug/l	Q
75-00-3	Chloroethane [d]	1300 UJQ	4000	1300	ug/l	JQ
67-66-3	Chloroform	600 UQ	2000	600	ug/l	Q
110-82-7	Cyclohexane	780 UQ	2000	780	ug/l	Q
124-48-1	Dibromochloromethane	550 UQ	2000	550	ug/l	Q
96-12-8	1,2-Dibromo-3-chloropropane	2100 UQ	10000	2100	ug/l	Q
106-93-4	1,2-Dibromoethane	550 UQ	4000	550	ug/l	Q
75-71-8	Dichlorodifluoromethane	1000 UQ	4000	1000	ug/l	Q
95-50-1	1,2-Dichlorobenzene	650 UQ	2000	650	ug/l	Q
541-73-1	1,3-Dichlorobenzene	430 UQ	2000	430	ug/l	Q
106-46-7	1,4-Dichlorobenzene	510 UQ	2000	510	ug/l	Q
75-34-3	1,1-Dichloroethane	680 UQ	2000	680	ug/l	Q
107-06-2	1,2-Dichloroethane	620 UQ	2000	620	ug/l	Q
75-35-4	1,1-Dichloroethylene	640 UQ	2000	640	ug/l	Q
156-59-2	cis-1,2-Dichloroethylene	106000	2000	550	ug/l	Q
156-60-5	trans-1,2-Dichloroethylene	1660	2000	440	ug/l	IQ
78-87-5	1,2-Dichloropropane	850 UQ	2000	850	ug/l	Q
10061-01-5	cis-1,3-Dichloropropene	580 UQ	2000	580	ug/l	Q
10061-02-6	trans-1,3-Dichloropropene	430 UQ	2000	430	ug/l	Q
100-41-4	Ethylbenzene	710 UQ	2000	710	ug/l	Q
76-13-1	Freon 113	960 UQ	2000	960	ug/l	Q
591-78-6	2-Hexanone	4000 UQ	20000	4000	ug/l	Q
98-82-8	Isopropylbenzene	440 UQ	2000	440	ug/l	Q
79-20-9	Methyl Acetate	10000 UQ	40000	10000	ug/l	Q

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0598-048.0-20211220		
Lab Sample ID:	FA91859-9	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide [e]	4000 UQ	10000	4000	ug/l	Q
74-87-3	Methyl Chloride	1000 UQ	4000	1000	ug/l	Q
75-09-2	Methylene Chloride	4000 UQ	10000	4000	ug/l	Q
108-10-1	4-Methyl-2-pentanone (MIBK)	2000 UQ	10000	2000	ug/l	Q
1634-04-4	Methyl Tert Butyl Ether	460 UQ	2000	460	ug/l	Q
100-42-5	Styrene	440 UQ	2000	440	ug/l	Q
630-20-6	1,1,1,2-Tetrachloroethane	550 UQ	2000	550	ug/l	Q
79-34-5	1,1,2,2-Tetrachloroethane	600 UQ	2000	600	ug/l	Q
127-18-4	Tetrachloroethylene	430 UQ	2000	430	ug/l	Q
108-88-3	Toluene	600 UQ	2000	600	ug/l	Q
87-61-6	1,2,3-Trichlorobenzene	1200 UQ	4000	1200	ug/l	Q
120-82-1	1,2,4-Trichlorobenzene	1000 UQ	4000	1000	ug/l	Q
71-55-6	1,1,1-Trichloroethane	500 UQ	2000	500	ug/l	Q
79-00-5	1,1,2-Trichloroethane	930 UQ	2000	930	ug/l	Q
79-01-6	Trichloroethylene	49700	2000	690	ug/l	Q
75-69-4	Trichlorofluoromethane	1000 UQ	4000	1000	ug/l	Q
75-01-4	Vinyl Chloride	4390	2000	820	ug/l	Q
1330-20-7	Xylene (total)	1400 UQ	6000	1400	ug/l	Q

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%	67% [f]	83-118%
17060-07-0	1,2-Dichloroethane-D4	101%	21% [f]	79-125%
2037-26-5	Toluene-D8	104%	187% [f]	85-112%
460-00-4	4-Bromofluorobenzene	98%	158% [f]	83-118%

(a) Sample was not preserved to a pH < 2. Sample analyzed beyond hold time; reported results are considered minimum values.
(b) Sample was not preserved to a pH < 2. Sample analyzed beyond hold time; reported results are considered minimum values. Confirmation run.
(c) Associated ICV outside control limits high, however sample ND.
(d) Associated CCV outside of control limits low.
(e) Associated CCV outside of control limits high, sample was ND.
(f) Outside control limits.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0598-053.0-20211220		
Lab Sample ID:	FA91859-10	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1A41286.D	2.5	01/12/22 20:34	CV	n/a	n/a	V1A1673
Run #2 [b]	I73496.D	500	01/14/22 03:26	LR	n/a	n/a	VI2440

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone [c]	5000 UQ [d]	13000	5000	ug/l	Q
71-43-2	Benzene	160 UQ [d]	500	160	ug/l	Q
74-97-5	Bromochloromethane	230 UQ [d]	500	230	ug/l	Q
75-27-4	Bromodichloromethane	120 UQ [d]	500	120	ug/l	Q
75-25-2	Bromoform	200 UQ [d]	500	200	ug/l	Q
78-93-3	2-Butanone (MEK)	1000 UQ [d]	2500	1000	ug/l	Q
75-15-0	Carbon Disulfide	270 UQ [d]	1000	270	ug/l	Q
56-23-5	Carbon Tetrachloride	180 UQ [d]	500	180	ug/l	Q
108-90-7	Chlorobenzene	100 UQ [d]	500	100	ug/l	Q
75-00-3	Chloroethane [e]	330 UJQ [d]	1000	330	ug/l	JQ
67-66-3	Chloroform	150 UQ [d]	500	150	ug/l	Q
110-82-7	Cyclohexane	200 UQ [d]	500	200	ug/l	Q
124-48-1	Dibromochloromethane	140 UQ [d]	500	140	ug/l	Q
96-12-8	1,2-Dibromo-3-chloropropane	520 UQ [d]	2500	520	ug/l	Q
106-93-4	1,2-Dibromoethane	140 UQ [d]	1000	140	ug/l	Q
75-71-8	Dichlorodifluoromethane	250 UQ [d]	1000	250	ug/l	Q
95-50-1	1,2-Dichlorobenzene	160 UQ [d]	500	160	ug/l	Q
541-73-1	1,3-Dichlorobenzene	110 UQ [d]	500	110	ug/l	Q
106-46-7	1,4-Dichlorobenzene	130 UQ [d]	500	130	ug/l	Q
75-34-3	1,1-Dichloroethane	170 UQ [d]	500	170	ug/l	Q
107-06-2	1,2-Dichloroethane	160 UQ [d]	500	160	ug/l	Q
75-35-4	1,1-Dichloroethylene	160 UQ [d]	500	160	ug/l	Q
156-59-2	cis-1,2-Dichloroethylene	14100 [d]	500	140	ug/l	Q
156-60-5	trans-1,2-Dichloroethylene	110 UQ [d]	500	110	ug/l	Q
78-87-5	1,2-Dichloropropane	210 UQ [d]	500	210	ug/l	Q
10061-01-5	cis-1,3-Dichloropropene	150 UQ [d]	500	150	ug/l	Q
10061-02-6	trans-1,3-Dichloropropene	110 UQ [d]	500	110	ug/l	Q
100-41-4	Ethylbenzene	180 UQ [d]	500	180	ug/l	Q
76-13-1	Freon 113	240 UQ [d]	500	240	ug/l	Q
591-78-6	2-Hexanone	1000 UQ [d]	5000	1000	ug/l	Q
98-82-8	Isopropylbenzene	110 UQ [d]	500	110	ug/l	Q
79-20-9	Methyl Acetate	2500 UQ [d]	10000	2500	ug/l	Q

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0598-053.0-20211220		
Lab Sample ID:	FA91859-10	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide [f]	1000 UQ [d]	2500	1000	ug/l	Q
74-87-3	Methyl Chloride	250 UQ [d]	1000	250	ug/l	Q
75-09-2	Methylene Chloride	1000 UQ [d]	2500	1000	ug/l	Q
108-10-1	4-Methyl-2-pentanone (MIBK)	500 UQ [d]	2500	500	ug/l	Q
1634-04-4	Methyl Tert Butyl Ether	110 UQ [d]	500	110	ug/l	Q
100-42-5	Styrene	110 UQ [d]	500	110	ug/l	Q
630-20-6	1,1,1,2-Tetrachloroethane	140 UQ [d]	500	140	ug/l	Q
79-34-5	1,1,2,2-Tetrachloroethane	150 UQ [d]	500	150	ug/l	Q
127-18-4	Tetrachloroethylene	110 UQ [d]	500	110	ug/l	Q
108-88-3	Toluene	150 UQ [d]	500	150	ug/l	Q
87-61-6	1,2,3-Trichlorobenzene	310 UQ [d]	1000	310	ug/l	Q
120-82-1	1,2,4-Trichlorobenzene	250 UQ [d]	1000	250	ug/l	Q
71-55-6	1,1,1-Trichloroethane	120 UQ [d]	500	120	ug/l	Q
79-00-5	1,1,2-Trichloroethane	230 UQ [d]	500	230	ug/l	Q
79-01-6	Trichloroethylene	29600 [d]	500	170	ug/l	Q
75-69-4	Trichlorofluoromethane	250 UQ [d]	1000	250	ug/l	Q
75-01-4	Vinyl Chloride	475 [d]	500	200	ug/l	IQ
1330-20-7	Xylene (total)	360 UQ [d]	1500	360	ug/l	Q

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	82% [g]	97%	83-118%
17060-07-0	1,2-Dichloroethane-D4	36% [g]	102%	79-125%
2037-26-5	Toluene-D8	128% [g]	101%	85-112%
460-00-4	4-Bromofluorobenzene	130% [g]	99%	83-118%

(a) Sample was not preserved to a pH < 2. Sample analyzed beyond hold time; reported results are considered minimum values. Confirmation run.
(b) Sample was not preserved to a pH < 2. Sample analyzed beyond hold time; reported results are considered minimum values.
(c) Associated ICV outside control limits high, however sample ND.
(d) Result is from Run# 2
(e) Associated CCV outside of control limits low.
(f) Associated CCV outside of control limits high, sample was ND.
(g) Outside control limits.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0598-058.0-20211220		
Lab Sample ID:	FA91859-11	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1A41288.D	25	01/12/22 21:03	CV	n/a	n/a	V1A1673
Run #2 [b]	I73497.D	50	01/14/22 03:50	LR	n/a	n/a	VI2440

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone [c]	500 UQ [d]	1300	500	ug/l	Q
71-43-2	Benzene	16 UQ [d]	50	16	ug/l	Q
74-97-5	Bromochloromethane	23 UQ [d]	50	23	ug/l	Q
75-27-4	Bromodichloromethane	12 UQ [d]	50	12	ug/l	Q
75-25-2	Bromoform	20 UQ [d]	50	20	ug/l	Q
78-93-3	2-Butanone (MEK)	100 UQ [d]	250	100	ug/l	Q
75-15-0	Carbon Disulfide	27 UQ [d]	100	27	ug/l	Q
56-23-5	Carbon Tetrachloride	18 UQ [d]	50	18	ug/l	Q
108-90-7	Chlorobenzene	10 UQ [d]	50	10	ug/l	Q
75-00-3	Chloroethane [e]	33 UJQ [d]	100	33	ug/l	JQ
67-66-3	Chloroform	15 UQ [d]	50	15	ug/l	Q
110-82-7	Cyclohexane	20 UQ [d]	50	20	ug/l	Q
124-48-1	Dibromochloromethane	14 UQ [d]	50	14	ug/l	Q
96-12-8	1,2-Dibromo-3-chloropropane	52 UQ [d]	250	52	ug/l	Q
106-93-4	1,2-Dibromoethane	14 UQ [d]	100	14	ug/l	Q
75-71-8	Dichlorodifluoromethane	25 UQ [d]	100	25	ug/l	Q
95-50-1	1,2-Dichlorobenzene	16 UQ [d]	50	16	ug/l	Q
541-73-1	1,3-Dichlorobenzene	11 UQ [d]	50	11	ug/l	Q
106-46-7	1,4-Dichlorobenzene	13 UQ [d]	50	13	ug/l	Q
75-34-3	1,1-Dichloroethane	17 UQ [d]	50	17	ug/l	Q
107-06-2	1,2-Dichloroethane	16 UQ [d]	50	16	ug/l	Q
75-35-4	1,1-Dichloroethylene	16 UQ [d]	50	16	ug/l	Q
156-59-2	cis-1,2-Dichloroethylene	2940 [d]	50	14	ug/l	Q
156-60-5	trans-1,2-Dichloroethylene	30.3 [d]	50	11	ug/l	IQ
78-87-5	1,2-Dichloropropane	21 UQ [d]	50	21	ug/l	Q
10061-01-5	cis-1,3-Dichloropropene	15 UQ [d]	50	15	ug/l	Q
10061-02-6	trans-1,3-Dichloropropene	11 UQ [d]	50	11	ug/l	Q
100-41-4	Ethylbenzene	18 UQ [d]	50	18	ug/l	Q
76-13-1	Freon 113	24 UQ [d]	50	24	ug/l	Q
591-78-6	2-Hexanone	100 UQ [d]	500	100	ug/l	Q
98-82-8	Isopropylbenzene	11 UQ [d]	50	11	ug/l	Q
79-20-9	Methyl Acetate	250 UQ [d]	1000	250	ug/l	Q

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0598-058.0-20211220		
Lab Sample ID:	FA91859-11	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide [f]	100 UQ [d]	250	100	ug/l	Q
74-87-3	Methyl Chloride	25 UQ [d]	100	25	ug/l	Q
75-09-2	Methylene Chloride	100 UQ [d]	250	100	ug/l	Q
108-10-1	4-Methyl-2-pentanone (MIBK)	50 UQ [d]	250	50	ug/l	Q
1634-04-4	Methyl Tert Butyl Ether	11 UQ [d]	50	11	ug/l	Q
100-42-5	Styrene	11 UQ [d]	50	11	ug/l	Q
630-20-6	1,1,1,2-Tetrachloroethane	14 UQ [d]	50	14	ug/l	Q
79-34-5	1,1,2,2-Tetrachloroethane	15 UQ [d]	50	15	ug/l	Q
127-18-4	Tetrachloroethylene	11 UQ [d]	50	11	ug/l	Q
108-88-3	Toluene	15 UQ [d]	50	15	ug/l	Q
87-61-6	1,2,3-Trichlorobenzene	31 UQ [d]	100	31	ug/l	Q
120-82-1	1,2,4-Trichlorobenzene	25 UQ [d]	100	25	ug/l	Q
71-55-6	1,1,1-Trichloroethane	12 UQ [d]	50	12	ug/l	Q
79-00-5	1,1,2-Trichloroethane	23 UQ [d]	50	23	ug/l	Q
79-01-6	Trichloroethylene	207 [d]	50	17	ug/l	Q
75-69-4	Trichlorofluoromethane	25 UQ [d]	100	25	ug/l	Q
75-01-4	Vinyl Chloride	338 [d]	50	20	ug/l	Q
1330-20-7	Xylene (total)	36 UQ [d]	150	36	ug/l	Q

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	67% [g]	98%	83-118%
17060-07-0	1,2-Dichloroethane-D4	18% [g]	105%	79-125%
2037-26-5	Toluene-D8	187% [g]	102%	85-112%
460-00-4	4-Bromofluorobenzene	157% [g]	99%	83-118%

(a) Sample was not preserved to a pH < 2. Sample analyzed beyond hold time; reported results are considered minimum values. Confirmation run.
(b) Sample was not preserved to a pH < 2. Sample analyzed beyond hold time; reported results are considered minimum values.
(c) Associated ICV outside control limits high, however sample ND.
(d) Result is from Run# 2
(e) Associated CCV outside of control limits low.
(f) Associated CCV outside of control limits high, sample was ND.
(g) Outside control limits.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0598-063.0-20211220		
Lab Sample ID:	FA91859-12	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	I73498.D	5	01/14/22 04:15	LR	n/a	n/a	VI2440
Run #2 [a]	1A41290.D	5	01/12/22 21:32	CV	n/a	n/a	V1A1673

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone [b]	50 UQ	130	50	ug/l	Q
71-43-2	Benzene	1.6 UQ	5.0	1.6	ug/l	Q
74-97-5	Bromochloromethane	2.3 UQ	5.0	2.3	ug/l	Q
75-27-4	Bromodichloromethane	1.2 UQ	5.0	1.2	ug/l	Q
75-25-2	Bromoform	2.0 UQ	5.0	2.0	ug/l	Q
78-93-3	2-Butanone (MEK)	10 UQ	25	10	ug/l	Q
75-15-0	Carbon Disulfide	2.7 UQ	10	2.7	ug/l	Q
56-23-5	Carbon Tetrachloride	1.8 UQ	5.0	1.8	ug/l	Q
108-90-7	Chlorobenzene	1.0 UQ	5.0	1.0	ug/l	Q
75-00-3	Chloroethane [c]	3.3 UJQ	10	3.3	ug/l	JQ
67-66-3	Chloroform	1.5 UQ	5.0	1.5	ug/l	Q
110-82-7	Cyclohexane	2.0 UQ	5.0	2.0	ug/l	Q
124-48-1	Dibromochloromethane	1.4 UQ	5.0	1.4	ug/l	Q
96-12-8	1,2-Dibromo-3-chloropropane	5.2 UQ	25	5.2	ug/l	Q
106-93-4	1,2-Dibromoethane	1.4 UQ	10	1.4	ug/l	Q
75-71-8	Dichlorodifluoromethane	2.5 UQ	10	2.5	ug/l	Q
95-50-1	1,2-Dichlorobenzene	1.6 UQ	5.0	1.6	ug/l	Q
541-73-1	1,3-Dichlorobenzene	1.1 UQ	5.0	1.1	ug/l	Q
106-46-7	1,4-Dichlorobenzene	1.3 UQ	5.0	1.3	ug/l	Q
75-34-3	1,1-Dichloroethane	1.7 UQ	5.0	1.7	ug/l	Q
107-06-2	1,2-Dichloroethane	1.6 UQ	5.0	1.6	ug/l	Q
75-35-4	1,1-Dichloroethylene	1.6 UQ	5.0	1.6	ug/l	Q
156-59-2	cis-1,2-Dichloroethylene [d]	190 [e]	5.0	1.4	ug/l	Q
156-60-5	trans-1,2-Dichloroethylene	1.1 UQ	5.0	1.1	ug/l	Q
78-87-5	1,2-Dichloropropane	2.1 UQ	5.0	2.1	ug/l	Q
10061-01-5	cis-1,3-Dichloropropene	1.5 UQ	5.0	1.5	ug/l	Q
10061-02-6	trans-1,3-Dichloropropene	1.1 UQ	5.0	1.1	ug/l	Q
100-41-4	Ethylbenzene	1.8 UQ	5.0	1.8	ug/l	Q
76-13-1	Freon 113	2.4 UQ	5.0	2.4	ug/l	Q
591-78-6	2-Hexanone	10 UQ	50	10	ug/l	Q
98-82-8	Isopropylbenzene	1.1 UQ	5.0	1.1	ug/l	Q
79-20-9	Methyl Acetate	25 UQ	100	25	ug/l	Q

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0598-063.0-20211220		
Lab Sample ID:	FA91859-12	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide [f]	10 UQ	25	10	ug/l	Q
74-87-3	Methyl Chloride	2.5 UQ	10	2.5	ug/l	Q
75-09-2	Methylene Chloride	10 UQ	25	10	ug/l	Q
108-10-1	4-Methyl-2-pentanone (MIBK)	5.0 UQ	25	5.0	ug/l	Q
1634-04-4	Methyl Tert Butyl Ether	1.1 UQ	5.0	1.1	ug/l	Q
100-42-5	Styrene	1.1 UQ	5.0	1.1	ug/l	Q
630-20-6	1,1,1,2-Tetrachloroethane	1.4 UQ	5.0	1.4	ug/l	Q
79-34-5	1,1,2,2-Tetrachloroethane	1.5 UQ	5.0	1.5	ug/l	Q
127-18-4	Tetrachloroethylene	1.1 UQ	5.0	1.1	ug/l	Q
108-88-3	Toluene	1.5 UQ	5.0	1.5	ug/l	Q
87-61-6	1,2,3-Trichlorobenzene	3.1 UQ	10	3.1	ug/l	Q
120-82-1	1,2,4-Trichlorobenzene	2.5 UQ	10	2.5	ug/l	Q
71-55-6	1,1,1-Trichloroethane	1.2 UQ	5.0	1.2	ug/l	Q
79-00-5	1,1,2-Trichloroethane	2.3 UQ	5.0	2.3	ug/l	Q
79-01-6	Trichloroethylene [d]	377 [e]	5.0	1.7	ug/l	Q
75-69-4	Trichlorofluoromethane	2.5 UQ	10	2.5	ug/l	Q
75-01-4	Vinyl Chloride [d]	8.2 [e]	5.0	2.0	ug/l	Q
1330-20-7	Xylene (total)	3.6 UQ	15	3.6	ug/l	Q

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%	87%	83-118%
17060-07-0	1,2-Dichloroethane-D4	105%	65% [g]	79-125%
2037-26-5	Toluene-D8	102%	106%	85-112%
460-00-4	4-Bromofluorobenzene	97%	100%	83-118%

(a) Sample was not preserved to a pH < 2. Sample analyzed beyond hold time; reported results are considered minimum values.
(b) Associated ICV outside control limits high, however sample ND.
(c) Associated CCV outside of control limits low.
(d) Results from different vials are not consistent; higher results were reported.
(e) Result is from Run# 2
(f) Associated CCV outside of control limits high, sample was ND.
(g) Outside control limits.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0598-068.0-20211220		
Lab Sample ID:	FA91859-13	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	2A40810.D	1	12/26/21 14:20	CV	n/a	n/a	V2A1657
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	10 U	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane [b]	0.67 UJ	2.0	0.67	ug/l	J
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	0.50 U	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.32 U	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	6.1	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.22 U	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113	0.48 U	1.0	0.48	ug/l	
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0598-068.0-20211220		
Lab Sample ID:	FA91859-13	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	2.0 U	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.30 U	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	19.6	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane [c]	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	0.41 U	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		83-118%
17060-07-0	1,2-Dichloroethane-D4	100%		79-125%
2037-26-5	Toluene-D8	98%		85-112%
460-00-4	4-Bromofluorobenzene	103%		83-118%

(a) Sample was not preserved to a pH < 2.
(b) Associated Initial Calibration outside control limits (%RSD > 15%).
(c) Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0601-008.0-20211220		
Lab Sample ID:	FA91859-14	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	2A40812.D	1	12/26/21 14:49	CV	n/a	n/a	V2A1657
Run #2 [b]	1P84735.D	50	01/12/22 17:49	CF	n/a	n/a	V1P3380

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	10 U	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane [c]	0.67 UJ	2.0	0.67	ug/l	J
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	0.50 U	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	4.0	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	37.9	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	4.7	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113	3.1	1.0	0.48	ug/l	
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0601-008.0-20211220		
Lab Sample ID:	FA91859-14	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	2.0 U	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.30 U	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	2870 [d]	50	17	ug/l	Q
75-69-4	Trichlorofluoromethane [e]	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	1.4	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%	100%	83-118%
17060-07-0	1,2-Dichloroethane-D4	109%	98%	79-125%
2037-26-5	Toluene-D8	98%	98%	85-112%
460-00-4	4-Bromofluorobenzene	102%	103%	83-118%

(a) Sample was not preserved to a pH < 2.
(b) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(c) Associated Initial Calibration outside control limits (%RSD > 15%); however sample is ND.
(d) Result is from Run# 2
(e) Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range
I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0601-013.0-20211220		
Lab Sample ID:	FA91859-15	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	2A40814.D	1	12/26/21 15:18	CV	n/a	n/a	V2A1657
Run #2 [b]	1P84737.D	20	01/12/22 18:21	CF	n/a	n/a	V1P3380

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	10 U	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane [c]	0.67 UJ	2.0	0.67	ug/l	J
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	0.50 U	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	3.1	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	1790 [d]	20	5.5	ug/l	Q
156-60-5	trans-1,2-Dichloroethylene	7.1	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113	3.8	1.0	0.48	ug/l	
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0601-013.0-20211220		
Lab Sample ID:	FA91859-15	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	2.0 U	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.30 U	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	795 [d]	20	6.9	ug/l	Q
75-69-4	Trichlorofluoromethane [e]	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	21.7	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%	101%	83-118%
17060-07-0	1,2-Dichloroethane-D4	97%	96%	79-125%
2037-26-5	Toluene-D8	100%	95%	85-112%
460-00-4	4-Bromofluorobenzene	102%	107%	83-118%

(a) Sample was not preserved to a pH < 2.
(b) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(c) Associated Initial Calibration outside control limits (%RSD > 15%); however sample is ND.
(d) Result is from Run# 2
(e) Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range
I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0601-018.0-20211220		
Lab Sample ID:	FA91859-16	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	2A40816.D	1	12/26/21 15:47	CV	n/a	n/a	V2A1657
Run #2 [b]	1P84739.D	200	01/12/22 18:52	CF	n/a	n/a	V1P3380

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	10 U	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane [c]	0.67 UJ	2.0	0.67	ug/l	J
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	2.6	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	14.2	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	2610 [d]	200	55	ug/l	Q
156-60-5	trans-1,2-Dichloroethylene	37.9	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113	38.4	1.0	0.48	ug/l	
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0601-018.0-20211220		
Lab Sample ID:	FA91859-16	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	2.0 U	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.30 U	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	15300 [d]	200	69	ug/l	Q
75-69-4	Trichlorofluoromethane [e]	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	125 [d]	200	82	ug/l	IQ
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%	101%	83-118%
17060-07-0	1,2-Dichloroethane-D4	110%	100%	79-125%
2037-26-5	Toluene-D8	97%	97%	85-112%
460-00-4	4-Bromofluorobenzene	102%	104%	83-118%

(a) Sample was not preserved to a pH < 2.
(b) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(c) Associated Initial Calibration outside control limits (%RSD > 15%); however sample is ND.
(d) Result is from Run# 2
(e) Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: LC34-DPT0601-023.0-20211220
Lab Sample ID: FA91859-17
Matrix: AQ - Ground Water
Method: SW846 8260B
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Date Sampled: 12/20/21
Date Received: 12/20/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	2A40818.D	1	12/26/21 16:17	CV	n/a	n/a	V2A1657
Run #2 [b]	1P84723.D	1	01/12/22 14:40	CF	n/a	n/a	V1P3380

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	10 U	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane [c]	0.67 UJ	2.0	0.67	ug/l	J
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	1.3	2.0	0.50	ug/l	I
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.44	1.0	0.32	ug/l	I
156-59-2	cis-1,2-Dichloroethylene [d]	35.6	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.98	1.0	0.22	ug/l	I
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113	3.1	1.0	0.48	ug/l	
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0601-023.0-20211220		
Lab Sample ID:	FA91859-17	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	2.0 U	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.30 U	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene [d]	18.0	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane [e]	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	62.1	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%	100%	83-118%
17060-07-0	1,2-Dichloroethane-D4	114%	97%	79-125%
2037-26-5	Toluene-D8	96%	98%	85-112%
460-00-4	4-Bromofluorobenzene	102%	105%	83-118%

(a) Sample was not preserved to a pH < 2.
(b) Sample was not preserved to a pH < 2. Confirmation run beyond holdtime.
(c) Associated Initial Calibration outside control limits (%RSD > 15%); however sample is ND.
(d) Suspected carry-over. Confirmed by reanalysis beyond hold-time.
(e) Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0601-028.0-20211220		
Lab Sample ID:	FA91859-18	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	2A40820.D	1	12/26/21 16:46	CV	n/a	n/a	V2A1657
Run #2 [b]	1P84727.D	5	01/12/22 15:43	CF	n/a	n/a	V1P3380

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	10 U	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane [c]	0.67 UJ	2.0	0.67	ug/l	J
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	0.50 U	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	3.0	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	10.1	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	8.8	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113	0.48 U	1.0	0.48	ug/l	
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0601-028.0-20211220		
Lab Sample ID:	FA91859-18	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	2.0 U	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.30 U	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	10.8	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane [d]	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride [e]	243	1.0	0.41	ug/l	L
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%	100%	83-118%
17060-07-0	1,2-Dichloroethane-D4	111%	97%	79-125%
2037-26-5	Toluene-D8	97%	97%	85-112%
460-00-4	4-Bromofluorobenzene	101%	103%	83-118%

(a) Sample was not preserved to a pH < 2.
(b) Sample was not preserved to a pH < 2. Confirmation run beyond holdtime.
(c) Associated Initial Calibration outside control limits (%RSD > 15%); however sample is ND.
(d) Associated CCV outside of control limits high, sample was ND.
(e) Results confirmed by re-analysis beyond hold time.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0601-033.0-20211220		
Lab Sample ID:	FA91859-19	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1P84725.D	1	01/12/22 15:11	CF	n/a	n/a	V1P3380
Run #2 [b]	2A40822.D	10	12/26/21 17:15	CV	n/a	n/a	V2A1657

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	100 U [c]	250	100	ug/l	
71-43-2	Benzene	3.1 U [c]	10	3.1	ug/l	
74-97-5	Bromochloromethane	4.5 U [c]	10	4.5	ug/l	
75-27-4	Bromodichloromethane	2.4 U [c]	10	2.4	ug/l	
75-25-2	Bromoform	4.1 U [c]	10	4.1	ug/l	
78-93-3	2-Butanone (MEK)	20 U [c]	50	20	ug/l	
75-15-0	Carbon Disulfide	5.3 U [c]	20	5.3	ug/l	
56-23-5	Carbon Tetrachloride	3.6 U [c]	10	3.6	ug/l	
108-90-7	Chlorobenzene	2.0 U [c]	10	2.0	ug/l	
75-00-3	Chloroethane [d]	6.7 UJ [c]	20	6.7	ug/l	J
67-66-3	Chloroform	3.0 U [c]	10	3.0	ug/l	
110-82-7	Cyclohexane	3.9 U [c]	10	3.9	ug/l	
124-48-1	Dibromochloromethane	2.8 U [c]	10	2.8	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	10 U [c]	50	10	ug/l	
106-93-4	1,2-Dibromoethane	2.8 U [c]	20	2.8	ug/l	
75-71-8	Dichlorodifluoromethane	5.0 U [c]	20	5.0	ug/l	
95-50-1	1,2-Dichlorobenzene	3.2 U [c]	10	3.2	ug/l	
541-73-1	1,3-Dichlorobenzene	2.2 U [c]	10	2.2	ug/l	
106-46-7	1,4-Dichlorobenzene	2.6 U [c]	10	2.6	ug/l	
75-34-3	1,1-Dichloroethane	3.4 U [c]	10	3.4	ug/l	
107-06-2	1,2-Dichloroethane	3.1 U [c]	10	3.1	ug/l	
75-35-4	1,1-Dichloroethylene	3.2 U [c]	10	3.2	ug/l	
156-59-2	cis-1,2-Dichloroethylene	8.2 [c]	10	2.8	ug/l	I
156-60-5	trans-1,2-Dichloroethylene	2.2 U [c]	10	2.2	ug/l	
78-87-5	1,2-Dichloropropane	4.3 U [c]	10	4.3	ug/l	
10061-01-5	cis-1,3-Dichloropropene	2.9 U [c]	10	2.9	ug/l	
10061-02-6	trans-1,3-Dichloropropene	2.1 U [c]	10	2.1	ug/l	
100-41-4	Ethylbenzene	3.6 U [c]	10	3.6	ug/l	
76-13-1	Freon 113	4.8 U [c]	10	4.8	ug/l	
591-78-6	2-Hexanone	20 U [c]	100	20	ug/l	
98-82-8	Isopropylbenzene	2.2 U [c]	10	2.2	ug/l	
79-20-9	Methyl Acetate	50 U [c]	200	50	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0601-033.0-20211220		
Lab Sample ID:	FA91859-19	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	20 U [c]	50	20	ug/l	
74-87-3	Methyl Chloride	5.0 U [c]	20	5.0	ug/l	
75-09-2	Methylene Chloride	20 U [c]	50	20	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	10 U [c]	50	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	2.3 U [c]	10	2.3	ug/l	
100-42-5	Styrene	2.2 U [c]	10	2.2	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	2.8 U [c]	10	2.8	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	3.0 U [c]	10	3.0	ug/l	
127-18-4	Tetrachloroethylene	2.2 U [c]	10	2.2	ug/l	
108-88-3	Toluene	3.0 U [c]	10	3.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	6.1 U [c]	20	6.1	ug/l	
120-82-1	1,2,4-Trichlorobenzene	5.0 U [c]	20	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	2.5 U [c]	10	2.5	ug/l	
79-00-5	1,1,2-Trichloroethane	4.7 U [c]	10	4.7	ug/l	
79-01-6	Trichloroethylene	17.3 [c]	10	3.5	ug/l	
75-69-4	Trichlorofluoromethane [e]	5.0 U [c]	20	5.0	ug/l	
75-01-4	Vinyl Chloride	30.2 [c]	10	4.1	ug/l	
1330-20-7	Xylene (total)	7.2 U [c]	30	7.2	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%	105%	83-118%
17060-07-0	1,2-Dichloroethane-D4	98%	110%	79-125%
2037-26-5	Toluene-D8	97%	97%	85-112%
460-00-4	4-Bromofluorobenzene	107%	102%	83-118%

(a) Sample was not preserved to a pH < 2. Confirmation run beyond holdtime.
(b) Sample was not preserved to a pH < 2.
(c) Result is from Run# 2
(d) Associated Initial Calibration outside control limits (%RSD > 15%); however sample is ND.
(e) Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range
I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0601-038.0-20211220		
Lab Sample ID:	FA91859-20	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1P84741.D	20	01/12/22 19:23	CF	n/a	n/a	V1P3380
Run #2 [b]	2A40824.D	250	12/26/21 17:45	CV	n/a	n/a	V2A1657

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	2500 U [c]	6300	2500	ug/l	
71-43-2	Benzene	78 U [c]	250	78	ug/l	
74-97-5	Bromochloromethane	110 U [c]	250	110	ug/l	
75-27-4	Bromodichloromethane	61 U [c]	250	61	ug/l	
75-25-2	Bromoform	100 U [c]	250	100	ug/l	
78-93-3	2-Butanone (MEK)	500 U [c]	1300	500	ug/l	
75-15-0	Carbon Disulfide	130 U [c]	500	130	ug/l	
56-23-5	Carbon Tetrachloride	89 U [c]	250	89	ug/l	
108-90-7	Chlorobenzene	50 U [c]	250	50	ug/l	
75-00-3	Chloroethane [d]	170 UJ [c]	500	170	ug/l	J
67-66-3	Chloroform	75 U [c]	250	75	ug/l	
110-82-7	Cyclohexane	98 U [c]	250	98	ug/l	
124-48-1	Dibromochloromethane	69 U [c]	250	69	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	260 U [c]	1300	260	ug/l	
106-93-4	1,2-Dibromoethane	69 U [c]	500	69	ug/l	
75-71-8	Dichlorodifluoromethane	130 U [c]	500	130	ug/l	
95-50-1	1,2-Dichlorobenzene	81 U [c]	250	81	ug/l	
541-73-1	1,3-Dichlorobenzene	54 U [c]	250	54	ug/l	
106-46-7	1,4-Dichlorobenzene	64 U [c]	250	64	ug/l	
75-34-3	1,1-Dichloroethane	85 U [c]	250	85	ug/l	
107-06-2	1,2-Dichloroethane	78 U [c]	250	78	ug/l	
75-35-4	1,1-Dichloroethylene	81 U [c]	250	81	ug/l	
156-59-2	cis-1,2-Dichloroethylene	1210 [c]	250	69	ug/l	
156-60-5	trans-1,2-Dichloroethylene	127 [c]	250	55	ug/l	I
78-87-5	1,2-Dichloropropane	110 U [c]	250	110	ug/l	
10061-01-5	cis-1,3-Dichloropropene	73 U [c]	250	73	ug/l	
10061-02-6	trans-1,3-Dichloropropene	54 U [c]	250	54	ug/l	
100-41-4	Ethylbenzene	89 U [c]	250	89	ug/l	
76-13-1	Freon 113	120 U [c]	250	120	ug/l	
591-78-6	2-Hexanone	500 U [c]	2500	500	ug/l	
98-82-8	Isopropylbenzene	55 U [c]	250	55	ug/l	
79-20-9	Methyl Acetate	1300 U [c]	5000	1300	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0601-038.0-20211220		
Lab Sample ID:	FA91859-20	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	500 U [c]	1300	500	ug/l	
74-87-3	Methyl Chloride	130 U [c]	500	130	ug/l	
75-09-2	Methylene Chloride	500 U [c]	1300	500	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	250 U [c]	1300	250	ug/l	
1634-04-4	Methyl Tert Butyl Ether	57 U [c]	250	57	ug/l	
100-42-5	Styrene	56 U [c]	250	56	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	69 U [c]	250	69	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	75 U [c]	250	75	ug/l	
127-18-4	Tetrachloroethylene	54 U [c]	250	54	ug/l	
108-88-3	Toluene	75 U [c]	250	75	ug/l	
87-61-6	1,2,3-Trichlorobenzene	150 U [c]	500	150	ug/l	
120-82-1	1,2,4-Trichlorobenzene	130 U [c]	500	130	ug/l	
71-55-6	1,1,1-Trichloroethane	62 U [c]	250	62	ug/l	
79-00-5	1,1,2-Trichloroethane	120 U [c]	250	120	ug/l	
79-01-6	Trichloroethylene [e]	948 [c]	250	86	ug/l	
75-69-4	Trichlorofluoromethane [f]	130 U [c]	500	130	ug/l	
75-01-4	Vinyl Chloride	1010 [c]	250	100	ug/l	
1330-20-7	Xylene (total)	180 U [c]	750	180	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%	108%	83-118%
17060-07-0	1,2-Dichloroethane-D4	98%	114%	79-125%
2037-26-5	Toluene-D8	96%	96%	85-112%
460-00-4	4-Bromofluorobenzene	105%	100%	83-118%

(a) Sample was not preserved to a pH < 2. Confirmation run beyond holdtime.
(b) Sample was not preserved to a pH < 2.
(c) Result is from Run# 2
(d) Associated Initial Calibration outside control limits (%RSD > 15%); however sample is ND.
(e) Suspected carry-over. Confirmed ND beyond holdtime.
(f) Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range
I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0601-043.0-20211220		
Lab Sample ID:	FA91859-21	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1P84743.D	100	01/12/22 19:55	CF	n/a	n/a	V1P3380
Run #2 [b]	2A40826.D	500	12/26/21 18:14	CV	n/a	n/a	V2A1657

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	5000 U [c]	13000	5000	ug/l	
71-43-2	Benzene	160 U [c]	500	160	ug/l	
74-97-5	Bromochloromethane	230 U [c]	500	230	ug/l	
75-27-4	Bromodichloromethane	120 U [c]	500	120	ug/l	
75-25-2	Bromoform	200 U [c]	500	200	ug/l	
78-93-3	2-Butanone (MEK)	1000 U [c]	2500	1000	ug/l	
75-15-0	Carbon Disulfide	270 U [c]	1000	270	ug/l	
56-23-5	Carbon Tetrachloride	180 U [c]	500	180	ug/l	
108-90-7	Chlorobenzene	100 U [c]	500	100	ug/l	
75-00-3	Chloroethane [d]	330 UJ [c]	1000	330	ug/l	J
67-66-3	Chloroform	150 U [c]	500	150	ug/l	
110-82-7	Cyclohexane	200 U [c]	500	200	ug/l	
124-48-1	Dibromochloromethane	140 U [c]	500	140	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	520 U [c]	2500	520	ug/l	
106-93-4	1,2-Dibromoethane	140 U [c]	1000	140	ug/l	
75-71-8	Dichlorodifluoromethane	250 U [c]	1000	250	ug/l	
95-50-1	1,2-Dichlorobenzene	160 U [c]	500	160	ug/l	
541-73-1	1,3-Dichlorobenzene	110 U [c]	500	110	ug/l	
106-46-7	1,4-Dichlorobenzene	130 U [c]	500	130	ug/l	
75-34-3	1,1-Dichloroethane	170 U [c]	500	170	ug/l	
107-06-2	1,2-Dichloroethane	160 U [c]	500	160	ug/l	
75-35-4	1,1-Dichloroethylene	160 U [c]	500	160	ug/l	
156-59-2	cis-1,2-Dichloroethylene	8760 [c]	500	140	ug/l	
156-60-5	trans-1,2-Dichloroethylene	555 [c]	500	110	ug/l	
78-87-5	1,2-Dichloropropane	210 U [c]	500	210	ug/l	
10061-01-5	cis-1,3-Dichloropropene	150 U [c]	500	150	ug/l	
10061-02-6	trans-1,3-Dichloropropene	110 U [c]	500	110	ug/l	
100-41-4	Ethylbenzene	180 U [c]	500	180	ug/l	
76-13-1	Freon 113	240 U [c]	500	240	ug/l	
591-78-6	2-Hexanone	1000 U [c]	5000	1000	ug/l	
98-82-8	Isopropylbenzene	110 U [c]	500	110	ug/l	
79-20-9	Methyl Acetate	2500 U [c]	10000	2500	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0601-043.0-20211220		
Lab Sample ID:	FA91859-21	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	1000 U [c]	2500	1000	ug/l	
74-87-3	Methyl Chloride	250 U [c]	1000	250	ug/l	
75-09-2	Methylene Chloride	1000 U [c]	2500	1000	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	500 U [c]	2500	500	ug/l	
1634-04-4	Methyl Tert Butyl Ether	110 U [c]	500	110	ug/l	
100-42-5	Styrene	110 U [c]	500	110	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	140 U [c]	500	140	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	150 U [c]	500	150	ug/l	
127-18-4	Tetrachloroethylene	110 U [c]	500	110	ug/l	
108-88-3	Toluene	150 U [c]	500	150	ug/l	
87-61-6	1,2,3-Trichlorobenzene	310 U [c]	1000	310	ug/l	
120-82-1	1,2,4-Trichlorobenzene	250 U [c]	1000	250	ug/l	
71-55-6	1,1,1-Trichloroethane	120 U [c]	500	120	ug/l	
79-00-5	1,1,2-Trichloroethane	230 U [c]	500	230	ug/l	
79-01-6	Trichloroethylene [e]	674 [c]	500	170	ug/l	
75-69-4	Trichlorofluoromethane [f]	250 U [c]	1000	250	ug/l	
75-01-4	Vinyl Chloride	2730 [c]	500	200	ug/l	
1330-20-7	Xylene (total)	360 U [c]	1500	360	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%	106%	83-118%
17060-07-0	1,2-Dichloroethane-D4	99%	113%	79-125%
2037-26-5	Toluene-D8	98%	97%	85-112%
460-00-4	4-Bromofluorobenzene	103%	102%	83-118%

(a) Sample was not preserved to a pH < 2. Confirmation run beyond holdtime.
(b) Sample was not preserved to a pH < 2.
(c) Result is from Run# 2
(d) Associated Initial Calibration outside control limits (%RSD > 15%); however sample is ND.
(e) Suspected carry-over. Confirmed ND by reanalysis beyond hold-time.
(f) Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0601-048.0-20211220		
Lab Sample ID:	FA91859-22	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	2A40828.D	1000	12/26/21 18:43	CV	n/a	n/a	V2A1657
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	10000 U	25000	10000	ug/l	
71-43-2	Benzene	310 U	1000	310	ug/l	
74-97-5	Bromochloromethane	450 U	1000	450	ug/l	
75-27-4	Bromodichloromethane	240 U	1000	240	ug/l	
75-25-2	Bromoform	410 U	1000	410	ug/l	
78-93-3	2-Butanone (MEK)	2000 U	5000	2000	ug/l	
75-15-0	Carbon Disulfide	530 U	2000	530	ug/l	
56-23-5	Carbon Tetrachloride	360 U	1000	360	ug/l	
108-90-7	Chlorobenzene	200 U	1000	200	ug/l	
75-00-3	Chloroethane [b]	670 UJ	2000	670	ug/l	J
67-66-3	Chloroform	300 U	1000	300	ug/l	
110-82-7	Cyclohexane	390 U	1000	390	ug/l	
124-48-1	Dibromochloromethane	280 U	1000	280	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1000 U	5000	1000	ug/l	
106-93-4	1,2-Dibromoethane	280 U	2000	280	ug/l	
75-71-8	Dichlorodifluoromethane	500 U	2000	500	ug/l	
95-50-1	1,2-Dichlorobenzene	320 U	1000	320	ug/l	
541-73-1	1,3-Dichlorobenzene	220 U	1000	220	ug/l	
106-46-7	1,4-Dichlorobenzene	260 U	1000	260	ug/l	
75-34-3	1,1-Dichloroethane	340 U	1000	340	ug/l	
107-06-2	1,2-Dichloroethane	310 U	1000	310	ug/l	
75-35-4	1,1-Dichloroethylene	320 U	1000	320	ug/l	
156-59-2	cis-1,2-Dichloroethylene	49800	1000	280	ug/l	
156-60-5	trans-1,2-Dichloroethylene	1560	1000	220	ug/l	
78-87-5	1,2-Dichloropropane	430 U	1000	430	ug/l	
10061-01-5	cis-1,3-Dichloropropene	290 U	1000	290	ug/l	
10061-02-6	trans-1,3-Dichloropropene	210 U	1000	210	ug/l	
100-41-4	Ethylbenzene	360 U	1000	360	ug/l	
76-13-1	Freon 113	480 U	1000	480	ug/l	
591-78-6	2-Hexanone	2000 U	10000	2000	ug/l	
98-82-8	Isopropylbenzene	220 U	1000	220	ug/l	
79-20-9	Methyl Acetate	5000 U	20000	5000	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0601-048.0-20211220		
Lab Sample ID:	FA91859-22	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	2000 U	5000	2000	ug/l	
74-87-3	Methyl Chloride	500 U	2000	500	ug/l	
75-09-2	Methylene Chloride	2000 U	5000	2000	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1000 U	5000	1000	ug/l	
1634-04-4	Methyl Tert Butyl Ether	230 U	1000	230	ug/l	
100-42-5	Styrene	220 U	1000	220	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	280 U	1000	280	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	300 U	1000	300	ug/l	
127-18-4	Tetrachloroethylene	220 U	1000	220	ug/l	
108-88-3	Toluene	300 U	1000	300	ug/l	
87-61-6	1,2,3-Trichlorobenzene	610 U	2000	610	ug/l	
120-82-1	1,2,4-Trichlorobenzene	500 U	2000	500	ug/l	
71-55-6	1,1,1-Trichloroethane	250 U	1000	250	ug/l	
79-00-5	1,1,2-Trichloroethane	470 U	1000	470	ug/l	
79-01-6	Trichloroethylene	2160	1000	350	ug/l	
75-69-4	Trichlorofluoromethane [c]	500 U	2000	500	ug/l	
75-01-4	Vinyl Chloride	2720	1000	410	ug/l	
1330-20-7	Xylene (total)	720 U	3000	720	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%		83-118%
17060-07-0	1,2-Dichloroethane-D4	108%		79-125%
2037-26-5	Toluene-D8	98%		85-112%
460-00-4	4-Bromofluorobenzene	102%		83-118%

(a) Sample was not preserved to a pH < 2.
(b) Associated Initial Calibration outside control limits (%RSD > 15%).
(c) Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0601-053.0-20211220		
Lab Sample ID:	FA91859-23	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	2A40830.D	1	12/26/21 19:13	CV	n/a	n/a	V2A1657
Run #2 [b]	1P84745.D	100	01/12/22 20:26	CF	n/a	n/a	V1P3380

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	10 U	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane [c]	0.67 UJ	2.0	0.67	ug/l	J
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	0.50 U	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	11.7	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	5190 [d]	100	28	ug/l	Q
156-60-5	trans-1,2-Dichloroethylene	63.3 [d]	100	22	ug/l	IQ
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113	0.48 U	1.0	0.48	ug/l	
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0601-053.0-20211220		
Lab Sample ID:	FA91859-23	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	2.0 U	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.30 U	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	6.5	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane [e]	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	442 [d]	100	41	ug/l	Q
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	112%	100%	83-118%
17060-07-0	1,2-Dichloroethane-D4	110%	98%	79-125%
2037-26-5	Toluene-D8	97%	97%	85-112%
460-00-4	4-Bromofluorobenzene	104%	106%	83-118%

(a) Sample was not preserved to a pH < 2.
(b) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(c) Associated Initial Calibration outside control limits (%RSD > 15%); however sample is ND.
(d) Result is from Run# 2
(e) Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range
I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0601-058.0-20211220		
Lab Sample ID:	FA91859-24	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	2A40832.D	2	12/26/21 19:42	CV	n/a	n/a	V2A1657
Run #2 [b]	1P84747.D	2	01/12/22 20:57	CF	n/a	n/a	V1P3380

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	20 U	50	20	ug/l	
71-43-2	Benzene	0.62 U	2.0	0.62	ug/l	
74-97-5	Bromochloromethane	0.90 U	2.0	0.90	ug/l	
75-27-4	Bromodichloromethane	0.48 U	2.0	0.48	ug/l	
75-25-2	Bromoform	0.81 U	2.0	0.81	ug/l	
78-93-3	2-Butanone (MEK)	4.0 U	10	4.0	ug/l	
75-15-0	Carbon Disulfide	1.1 U	4.0	1.1	ug/l	
56-23-5	Carbon Tetrachloride	0.71 U	2.0	0.71	ug/l	
108-90-7	Chlorobenzene	0.40 U	2.0	0.40	ug/l	
75-00-3	Chloroethane [c]	1.3 UJ	4.0	1.3	ug/l	J
67-66-3	Chloroform	0.60 U	2.0	0.60	ug/l	
110-82-7	Cyclohexane	0.78 U	2.0	0.78	ug/l	
124-48-1	Dibromochloromethane	0.55 U	2.0	0.55	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	2.1 U	10	2.1	ug/l	
106-93-4	1,2-Dibromoethane	0.55 U	4.0	0.55	ug/l	
75-71-8	Dichlorodifluoromethane	1.0 U	4.0	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	0.65 U	2.0	0.65	ug/l	
541-73-1	1,3-Dichlorobenzene	0.43 U	2.0	0.43	ug/l	
106-46-7	1,4-Dichlorobenzene	0.51 U	2.0	0.51	ug/l	
75-34-3	1,1-Dichloroethane	0.68 U	2.0	0.68	ug/l	
107-06-2	1,2-Dichloroethane	0.62 U	2.0	0.62	ug/l	
75-35-4	1,1-Dichloroethylene	0.64 U	2.0	0.64	ug/l	
156-59-2	cis-1,2-Dichloroethylene	76.4 [d]	2.0	0.55	ug/l	Q
156-60-5	trans-1,2-Dichloroethylene	2.2	2.0	0.44	ug/l	
78-87-5	1,2-Dichloropropane	0.85 U	2.0	0.85	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.58 U	2.0	0.58	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.43 U	2.0	0.43	ug/l	
100-41-4	Ethylbenzene	0.71 U	2.0	0.71	ug/l	
76-13-1	Freon 113	0.96 U	2.0	0.96	ug/l	
591-78-6	2-Hexanone	4.0 U	20	4.0	ug/l	
98-82-8	Isopropylbenzene	0.44 U	2.0	0.44	ug/l	
79-20-9	Methyl Acetate	10 U	40	10	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0601-058.0-20211220		
Lab Sample ID:	FA91859-24	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	4.0 U	10	4.0	ug/l	
74-87-3	Methyl Chloride	1.0 U	4.0	1.0	ug/l	
75-09-2	Methylene Chloride	4.0 U	10	4.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	2.0 U	10	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.46 U	2.0	0.46	ug/l	
100-42-5	Styrene	0.44 U	2.0	0.44	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.55 U	2.0	0.55	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.60 U	2.0	0.60	ug/l	
127-18-4	Tetrachloroethylene	0.43 U	2.0	0.43	ug/l	
108-88-3	Toluene	0.60 U	2.0	0.60	ug/l	
87-61-6	1,2,3-Trichlorobenzene	1.2 U	4.0	1.2	ug/l	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	4.0	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	0.50 U	2.0	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	0.93 U	2.0	0.93	ug/l	
79-01-6	Trichloroethylene	5.4 [d]	2.0	0.69	ug/l	Q
75-69-4	Trichlorofluoromethane [e]	1.0 U	4.0	1.0	ug/l	
75-01-4	Vinyl Chloride	6.8	2.0	0.82	ug/l	
1330-20-7	Xylene (total)	1.4 U	6.0	1.4	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%	100%	83-118%
17060-07-0	1,2-Dichloroethane-D4	113%	98%	79-125%
2037-26-5	Toluene-D8	97%	97%	85-112%
460-00-4	4-Bromofluorobenzene	103%	106%	83-118%

(a) Sample was not preserved to a pH < 2.
(b) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(c) Associated Initial Calibration outside control limits (%RSD > 15%); however sample is ND.
(d) Result is from Run# 2
(e) Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range
I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0601-063.0-20211220		
Lab Sample ID:	FA91859-25	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	2A40834.D	1	12/26/21 20:11	CV	n/a	n/a	V2A1657
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	10 U	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane [b]	0.67 UJ	2.0	0.67	ug/l	J
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	0.50 U	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.32 U	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	16.2	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	1.2	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113	0.48 U	1.0	0.48	ug/l	
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0601-063.0-20211220		
Lab Sample ID:	FA91859-25	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	2.0 U	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.30 U	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	10.2	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane [c]	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	1.3	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	110%		83-118%
17060-07-0	1,2-Dichloroethane-D4	115%		79-125%
2037-26-5	Toluene-D8	97%		85-112%
460-00-4	4-Bromofluorobenzene	102%		83-118%

(a) Sample was not preserved to a pH < 2.
(b) Associated Initial Calibration outside control limits (%RSD > 15%); however sample is ND.
(c) Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0601-068.0-20211220		
Lab Sample ID:	FA91859-26	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	2A40836.D	1	12/26/21 20:46	CV	n/a	n/a	V2A1657
Run #2 [b]	I73499.D	200	01/14/22 04:39	LR	n/a	n/a	VI2440

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	10 U	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane [c]	0.67 UJ	2.0	0.67	ug/l	J
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	0.50 U	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.82	1.0	0.32	ug/l	I
156-59-2	cis-1,2-Dichloroethylene [d]	105	1.0	0.28	ug/l	L
156-60-5	trans-1,2-Dichloroethylene	1.4	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113	0.48 U	1.0	0.48	ug/l	
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0601-068.0-20211220		
Lab Sample ID:	FA91859-26	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	2.0 U	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.30 U	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene [d]	203	1.0	0.35	ug/l	L
75-69-4	Trichlorofluoromethane [e]	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	12.2	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%	99%	83-118%
17060-07-0	1,2-Dichloroethane-D4	111%	106%	79-125%
2037-26-5	Toluene-D8	99%	104%	85-112%
460-00-4	4-Bromofluorobenzene	104%	102%	83-118%

(a) Sample was not preserved to a pH < 2.
(b) Sample was not preserved to a pH < 2. Confirmation run beyond holdtime.
(c) Associated Initial Calibration outside control limits.
(d) Compound was below calibration range in higher dilution.
(e) Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0598-073.0-20211220		
Lab Sample ID:	FA91859-27	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	I73500.D	200	01/14/22 05:04	LR	n/a	n/a	VI2440
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone [b]	2000 UQ	5000	2000	ug/l	Q
71-43-2	Benzene	62 UQ	200	62	ug/l	Q
74-97-5	Bromochloromethane	90 UQ	200	90	ug/l	Q
75-27-4	Bromodichloromethane	48 UQ	200	48	ug/l	Q
75-25-2	Bromoform	81 UQ	200	81	ug/l	Q
78-93-3	2-Butanone (MEK)	400 UQ	1000	400	ug/l	Q
75-15-0	Carbon Disulfide	110 UQ	400	110	ug/l	Q
56-23-5	Carbon Tetrachloride	71 UQ	200	71	ug/l	Q
108-90-7	Chlorobenzene	40 UQ	200	40	ug/l	Q
75-00-3	Chloroethane [c]	130 UJQ	400	130	ug/l	JQ
67-66-3	Chloroform	60 UQ	200	60	ug/l	Q
110-82-7	Cyclohexane	78 UQ	200	78	ug/l	Q
124-48-1	Dibromochloromethane	55 UQ	200	55	ug/l	Q
96-12-8	1,2-Dibromo-3-chloropropane	210 UQ	1000	210	ug/l	Q
106-93-4	1,2-Dibromoethane	55 UQ	400	55	ug/l	Q
75-71-8	Dichlorodifluoromethane	100 UQ	400	100	ug/l	Q
95-50-1	1,2-Dichlorobenzene	65 UQ	200	65	ug/l	Q
541-73-1	1,3-Dichlorobenzene	43 UQ	200	43	ug/l	Q
106-46-7	1,4-Dichlorobenzene	51 UQ	200	51	ug/l	Q
75-34-3	1,1-Dichloroethane	68 UQ	200	68	ug/l	Q
107-06-2	1,2-Dichloroethane	62 UQ	200	62	ug/l	Q
75-35-4	1,1-Dichloroethylene	64 UQ	200	64	ug/l	Q
156-59-2	cis-1,2-Dichloroethylene	55 UQ	200	55	ug/l	Q
156-60-5	trans-1,2-Dichloroethylene	44 UQ	200	44	ug/l	Q
78-87-5	1,2-Dichloropropane	85 UQ	200	85	ug/l	Q
10061-01-5	cis-1,3-Dichloropropene	58 UQ	200	58	ug/l	Q
10061-02-6	trans-1,3-Dichloropropene	43 UQ	200	43	ug/l	Q
100-41-4	Ethylbenzene	71 UQ	200	71	ug/l	Q
76-13-1	Freon 113	96 UQ	200	96	ug/l	Q
591-78-6	2-Hexanone	400 UQ	2000	400	ug/l	Q
98-82-8	Isopropylbenzene	44 UQ	200	44	ug/l	Q
79-20-9	Methyl Acetate	1000 UQ	4000	1000	ug/l	Q

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0598-073.0-20211220		
Lab Sample ID:	FA91859-27	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide [d]	400 UQ	1000	400	ug/l	Q
74-87-3	Methyl Chloride	100 UQ	400	100	ug/l	Q
75-09-2	Methylene Chloride	400 UQ	1000	400	ug/l	Q
108-10-1	4-Methyl-2-pentanone (MIBK)	200 UQ	1000	200	ug/l	Q
1634-04-4	Methyl Tert Butyl Ether	46 UQ	200	46	ug/l	Q
100-42-5	Styrene	44 UQ	200	44	ug/l	Q
630-20-6	1,1,1,2-Tetrachloroethane	55 UQ	200	55	ug/l	Q
79-34-5	1,1,2,2-Tetrachloroethane	60 UQ	200	60	ug/l	Q
127-18-4	Tetrachloroethylene	43 UQ	200	43	ug/l	Q
108-88-3	Toluene	60 UQ	200	60	ug/l	Q
87-61-6	1,2,3-Trichlorobenzene	120 UQ	400	120	ug/l	Q
120-82-1	1,2,4-Trichlorobenzene	100 UQ	400	100	ug/l	Q
71-55-6	1,1,1-Trichloroethane	50 UQ	200	50	ug/l	Q
79-00-5	1,1,2-Trichloroethane	93 UQ	200	93	ug/l	Q
79-01-6	Trichloroethylene	790	200	69	ug/l	Q
75-69-4	Trichlorofluoromethane	100 UQ	400	100	ug/l	Q
75-01-4	Vinyl Chloride	82 UQ	200	82	ug/l	Q
1330-20-7	Xylene (total)	140 UQ	600	140	ug/l	Q

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		83-118%
17060-07-0	1,2-Dichloroethane-D4	106%		79-125%
2037-26-5	Toluene-D8	99%		85-112%
460-00-4	4-Bromofluorobenzene	96%		83-118%

(a) Sample was not preserved to a pH < 2. Sample analyzed beyond hold time; reported results are considered minimum values.
(b) Associated ICV outside control limits high, however sample ND.
(c) Associated CCV outside of control limits low.
(d) Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range
I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0598-078.0-20211220		
Lab Sample ID:	FA91859-28	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	I73501.D	10000	01/14/22 05:28	LR	n/a	n/a	VI2440
Run #2 [a]	Y60688.D	20000	01/17/22 21:06	CF	n/a	n/a	VY2526

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone [b]	100000 UQ	250000	100000	ug/l	Q
71-43-2	Benzene	3100 UQ	10000	3100	ug/l	Q
74-97-5	Bromochloromethane	4500 UQ	10000	4500	ug/l	Q
75-27-4	Bromodichloromethane	2400 UQ	10000	2400	ug/l	Q
75-25-2	Bromoform	4100 UQ	10000	4100	ug/l	Q
78-93-3	2-Butanone (MEK)	20000 UQ	50000	20000	ug/l	Q
75-15-0	Carbon Disulfide	5300 UQ	20000	5300	ug/l	Q
56-23-5	Carbon Tetrachloride	3600 UQ	10000	3600	ug/l	Q
108-90-7	Chlorobenzene	2000 UQ	10000	2000	ug/l	Q
75-00-3	Chloroethane [c]	6700 UJQ	20000	6700	ug/l	JQ
67-66-3	Chloroform	3000 UQ	10000	3000	ug/l	Q
110-82-7	Cyclohexane	3900 UQ	10000	3900	ug/l	Q
124-48-1	Dibromochloromethane	2800 UQ	10000	2800	ug/l	Q
96-12-8	1,2-Dibromo-3-chloropropane	10000 UQ	50000	10000	ug/l	Q
106-93-4	1,2-Dibromoethane	2800 UQ	20000	2800	ug/l	Q
75-71-8	Dichlorodifluoromethane	5000 UQ	20000	5000	ug/l	Q
95-50-1	1,2-Dichlorobenzene	3200 UQ	10000	3200	ug/l	Q
541-73-1	1,3-Dichlorobenzene	2200 UQ	10000	2200	ug/l	Q
106-46-7	1,4-Dichlorobenzene	2600 UQ	10000	2600	ug/l	Q
75-34-3	1,1-Dichloroethane	3400 UQ	10000	3400	ug/l	Q
107-06-2	1,2-Dichloroethane	3100 UQ	10000	3100	ug/l	Q
75-35-4	1,1-Dichloroethylene	3200 UQ	10000	3200	ug/l	Q
156-59-2	cis-1,2-Dichloroethylene	11000	10000	2800	ug/l	Q
156-60-5	trans-1,2-Dichloroethylene	2200 UQ	10000	2200	ug/l	Q
78-87-5	1,2-Dichloropropane	4300 UQ	10000	4300	ug/l	Q
10061-01-5	cis-1,3-Dichloropropene	2900 UQ	10000	2900	ug/l	Q
10061-02-6	trans-1,3-Dichloropropene	2100 UQ	10000	2100	ug/l	Q
100-41-4	Ethylbenzene	3600 UQ	10000	3600	ug/l	Q
76-13-1	Freon 113	4800 UQ	10000	4800	ug/l	Q
591-78-6	2-Hexanone	20000 UQ	100000	20000	ug/l	Q
98-82-8	Isopropylbenzene	2200 UQ	10000	2200	ug/l	Q
79-20-9	Methyl Acetate	50000 UQ	200000	50000	ug/l	Q

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0598-078.0-20211220		
Lab Sample ID:	FA91859-28	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide [d]	20000 UQ	50000	20000	ug/l	Q
74-87-3	Methyl Chloride	5000 UQ	20000	5000	ug/l	Q
75-09-2	Methylene Chloride	20000 UQ	50000	20000	ug/l	Q
108-10-1	4-Methyl-2-pentanone (MIBK)	10000 UQ	50000	10000	ug/l	Q
1634-04-4	Methyl Tert Butyl Ether	2300 UQ	10000	2300	ug/l	Q
100-42-5	Styrene	2200 UQ	10000	2200	ug/l	Q
630-20-6	1,1,1,2-Tetrachloroethane	2800 UQ	10000	2800	ug/l	Q
79-34-5	1,1,2,2-Tetrachloroethane	3000 UQ	10000	3000	ug/l	Q
127-18-4	Tetrachloroethylene	2200 UQ	10000	2200	ug/l	Q
108-88-3	Toluene	3000 UQ	10000	3000	ug/l	Q
87-61-6	1,2,3-Trichlorobenzene	6100 UQ	20000	6100	ug/l	Q
120-82-1	1,2,4-Trichlorobenzene	5000 UQ	20000	5000	ug/l	Q
71-55-6	1,1,1-Trichloroethane	2500 UQ	10000	2500	ug/l	Q
79-00-5	1,1,2-Trichloroethane	4700 UQ	10000	4700	ug/l	Q
79-01-6	Trichloroethylene [e]	3070000 [f]	20000	6900	ug/l	LQ
75-69-4	Trichlorofluoromethane	5000 UQ	20000	5000	ug/l	Q
75-01-4	Vinyl Chloride	4100 UQ	10000	4100	ug/l	Q
1330-20-7	Xylene (total)	7200 UQ	30000	7200	ug/l	Q

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%	95%	83-118%
17060-07-0	1,2-Dichloroethane-D4	105%	100%	79-125%
2037-26-5	Toluene-D8	102%	96%	85-112%
460-00-4	4-Bromofluorobenzene	97%	93%	83-118%

(a) Sample was not preserved to a pH < 2. Sample analyzed beyond hold time; reported results are considered minimum values.
(b) Associated ICV outside control limits high, however sample ND.
(c) Associated CCV outside of control limits low.
(d) Associated CCV outside of control limits high, sample was ND.
(e) No sample available for reanalysis.
(f) Result is from Run# 2

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0598-083.0-20211220		
Lab Sample ID:	FA91859-29	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	I73502.D	200	01/14/22 05:53	LR	n/a	n/a	VI2440
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone [b]	2000 UQ	5000	2000	ug/l	Q
71-43-2	Benzene	62 UQ	200	62	ug/l	Q
74-97-5	Bromochloromethane	90 UQ	200	90	ug/l	Q
75-27-4	Bromodichloromethane	48 UQ	200	48	ug/l	Q
75-25-2	Bromoform	81 UQ	200	81	ug/l	Q
78-93-3	2-Butanone (MEK)	400 UQ	1000	400	ug/l	Q
75-15-0	Carbon Disulfide	110 UQ	400	110	ug/l	Q
56-23-5	Carbon Tetrachloride	71 UQ	200	71	ug/l	Q
108-90-7	Chlorobenzene	40 UQ	200	40	ug/l	Q
75-00-3	Chloroethane [c]	130 UJQ	400	130	ug/l	JQ
67-66-3	Chloroform	60 UQ	200	60	ug/l	Q
110-82-7	Cyclohexane	78 UQ	200	78	ug/l	Q
124-48-1	Dibromochloromethane	55 UQ	200	55	ug/l	Q
96-12-8	1,2-Dibromo-3-chloropropane	210 UQ	1000	210	ug/l	Q
106-93-4	1,2-Dibromoethane	55 UQ	400	55	ug/l	Q
75-71-8	Dichlorodifluoromethane	100 UQ	400	100	ug/l	Q
95-50-1	1,2-Dichlorobenzene	65 UQ	200	65	ug/l	Q
541-73-1	1,3-Dichlorobenzene	43 UQ	200	43	ug/l	Q
106-46-7	1,4-Dichlorobenzene	51 UQ	200	51	ug/l	Q
75-34-3	1,1-Dichloroethane	68 UQ	200	68	ug/l	Q
107-06-2	1,2-Dichloroethane	62 UQ	200	62	ug/l	Q
75-35-4	1,1-Dichloroethylene	74.3	200	64	ug/l	IQ
156-59-2	cis-1,2-Dichloroethylene	5760	200	55	ug/l	Q
156-60-5	trans-1,2-Dichloroethylene	44 UQ	200	44	ug/l	Q
78-87-5	1,2-Dichloropropane	85 UQ	200	85	ug/l	Q
10061-01-5	cis-1,3-Dichloropropene	58 UQ	200	58	ug/l	Q
10061-02-6	trans-1,3-Dichloropropene	43 UQ	200	43	ug/l	Q
100-41-4	Ethylbenzene	71 UQ	200	71	ug/l	Q
76-13-1	Freon 113	279	200	96	ug/l	Q
591-78-6	2-Hexanone	400 UQ	2000	400	ug/l	Q
98-82-8	Isopropylbenzene	44 UQ	200	44	ug/l	Q
79-20-9	Methyl Acetate	1000 UQ	4000	1000	ug/l	Q

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0598-083.0-20211220		
Lab Sample ID:	FA91859-29	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide [d]	400 UQ	1000	400	ug/l	Q
74-87-3	Methyl Chloride	100 UQ	400	100	ug/l	Q
75-09-2	Methylene Chloride	400 UQ	1000	400	ug/l	Q
108-10-1	4-Methyl-2-pentanone (MIBK)	200 UQ	1000	200	ug/l	Q
1634-04-4	Methyl Tert Butyl Ether	46 UQ	200	46	ug/l	Q
100-42-5	Styrene	44 UQ	200	44	ug/l	Q
630-20-6	1,1,1,2-Tetrachloroethane	55 UQ	200	55	ug/l	Q
79-34-5	1,1,2,2-Tetrachloroethane	60 UQ	200	60	ug/l	Q
127-18-4	Tetrachloroethylene	43 UQ	200	43	ug/l	Q
108-88-3	Toluene	60 UQ	200	60	ug/l	Q
87-61-6	1,2,3-Trichlorobenzene	120 UQ	400	120	ug/l	Q
120-82-1	1,2,4-Trichlorobenzene	100 UQ	400	100	ug/l	Q
71-55-6	1,1,1-Trichloroethane	50 UQ	200	50	ug/l	Q
79-00-5	1,1,2-Trichloroethane	93 UQ	200	93	ug/l	Q
79-01-6	Trichloroethylene [e]	230000	200	69	ug/l	LQ
75-69-4	Trichlorofluoromethane	100 UQ	400	100	ug/l	Q
75-01-4	Vinyl Chloride	82 UQ	200	82	ug/l	Q
1330-20-7	Xylene (total)	140 UQ	600	140	ug/l	Q

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		83-118%
17060-07-0	1,2-Dichloroethane-D4	104%		79-125%
2037-26-5	Toluene-D8	103%		85-112%
460-00-4	4-Bromofluorobenzene	100%		83-118%

(a) Sample vial(s) contained significant headspace and were not preserved to a pH < 2. Sample analyzed beyond hold time; reported results are considered minimum values.
(b) Associated ICV outside control limits high, however sample ND.
(c) Associated CCV outside of control limits low.
(d) Associated CCV outside of control limits high, sample was ND.
(e) Insufficient sample available for reanalysis.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0598-088.0-20211220		
Lab Sample ID:	FA91859-30	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	I73503.D	10	01/14/22 06:18	LR	n/a	n/a	VI2440
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone [b]	100 UQ	250	100	ug/l	Q
71-43-2	Benzene	3.1 UQ	10	3.1	ug/l	Q
74-97-5	Bromochloromethane	4.5 UQ	10	4.5	ug/l	Q
75-27-4	Bromodichloromethane	2.4 UQ	10	2.4	ug/l	Q
75-25-2	Bromoform	4.1 UQ	10	4.1	ug/l	Q
78-93-3	2-Butanone (MEK)	20 UQ	50	20	ug/l	Q
75-15-0	Carbon Disulfide	5.3 UQ	20	5.3	ug/l	Q
56-23-5	Carbon Tetrachloride	3.6 UQ	10	3.6	ug/l	Q
108-90-7	Chlorobenzene	2.0 UQ	10	2.0	ug/l	Q
75-00-3	Chloroethane [c]	6.7 UJQ	20	6.7	ug/l	JQ
67-66-3	Chloroform	3.0 UQ	10	3.0	ug/l	Q
110-82-7	Cyclohexane	3.9 UQ	10	3.9	ug/l	Q
124-48-1	Dibromochloromethane	2.8 UQ	10	2.8	ug/l	Q
96-12-8	1,2-Dibromo-3-chloropropane	10 UQ	50	10	ug/l	Q
106-93-4	1,2-Dibromoethane	2.8 UQ	20	2.8	ug/l	Q
75-71-8	Dichlorodifluoromethane	5.0 UQ	20	5.0	ug/l	Q
95-50-1	1,2-Dichlorobenzene	3.2 UQ	10	3.2	ug/l	Q
541-73-1	1,3-Dichlorobenzene	2.2 UQ	10	2.2	ug/l	Q
106-46-7	1,4-Dichlorobenzene	2.6 UQ	10	2.6	ug/l	Q
75-34-3	1,1-Dichloroethane	3.4 UQ	10	3.4	ug/l	Q
107-06-2	1,2-Dichloroethane	3.1 UQ	10	3.1	ug/l	Q
75-35-4	1,1-Dichloroethylene	6.2	10	3.2	ug/l	IQ
156-59-2	cis-1,2-Dichloroethylene	335	10	2.8	ug/l	Q
156-60-5	trans-1,2-Dichloroethylene	2.2 UQ	10	2.2	ug/l	Q
78-87-5	1,2-Dichloropropane	4.3 UQ	10	4.3	ug/l	Q
10061-01-5	cis-1,3-Dichloropropene	2.9 UQ	10	2.9	ug/l	Q
10061-02-6	trans-1,3-Dichloropropene	2.1 UQ	10	2.1	ug/l	Q
100-41-4	Ethylbenzene	3.6 UQ	10	3.6	ug/l	Q
76-13-1	Freon 113	4.8 UQ	10	4.8	ug/l	Q
591-78-6	2-Hexanone	20 UQ	100	20	ug/l	Q
98-82-8	Isopropylbenzene	2.2 UQ	10	2.2	ug/l	Q
79-20-9	Methyl Acetate	50 UQ	200	50	ug/l	Q

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0598-088.0-20211220		
Lab Sample ID:	FA91859-30	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide [d]	20 UQ	50	20	ug/l	Q
74-87-3	Methyl Chloride	5.0 UQ	20	5.0	ug/l	Q
75-09-2	Methylene Chloride	20 UQ	50	20	ug/l	Q
108-10-1	4-Methyl-2-pentanone (MIBK)	10 UQ	50	10	ug/l	Q
1634-04-4	Methyl Tert Butyl Ether	2.3 UQ	10	2.3	ug/l	Q
100-42-5	Styrene	2.2 UQ	10	2.2	ug/l	Q
630-20-6	1,1,1,2-Tetrachloroethane	2.8 UQ	10	2.8	ug/l	Q
79-34-5	1,1,2,2-Tetrachloroethane	3.0 UQ	10	3.0	ug/l	Q
127-18-4	Tetrachloroethylene	2.2 UQ	10	2.2	ug/l	Q
108-88-3	Toluene	3.0 UQ	10	3.0	ug/l	Q
87-61-6	1,2,3-Trichlorobenzene	6.1 UQ	20	6.1	ug/l	Q
120-82-1	1,2,4-Trichlorobenzene	5.0 UQ	20	5.0	ug/l	Q
71-55-6	1,1,1-Trichloroethane	2.5 UQ	10	2.5	ug/l	Q
79-00-5	1,1,2-Trichloroethane	4.7 UQ	10	4.7	ug/l	Q
79-01-6	Trichloroethylene [e]	6500	10	3.5	ug/l	LQ
75-69-4	Trichlorofluoromethane	5.0 UQ	20	5.0	ug/l	Q
75-01-4	Vinyl Chloride	7.0	10	4.1	ug/l	IQ
1330-20-7	Xylene (total)	7.2 UQ	30	7.2	ug/l	Q

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		83-118%
17060-07-0	1,2-Dichloroethane-D4	103%		79-125%
2037-26-5	Toluene-D8	102%		85-112%
460-00-4	4-Bromofluorobenzene	96%		83-118%

(a) Sample vial(s) contained bubbles greater than 6mm. Sample was not preserved to a pH < 2. Sample analyzed beyond hold time; reported results are considered minimum values.
(b) Associated ICV outside control limits high, however sample ND.
(c) Associated CCV outside of control limits low.
(d) Associated CCV outside of control limits high, sample was ND.
(e) Insufficient sample available for reanalysis.

U = Not detected MDL = Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range
I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0598-093.0-20211220		
Lab Sample ID:	FA91859-31	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	I73504.D	10	01/14/22 06:42	LR	n/a	n/a	VI2440
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone [b]	100 UQ	250	100	ug/l	Q
71-43-2	Benzene	3.1 UQ	10	3.1	ug/l	Q
74-97-5	Bromochloromethane	4.5 UQ	10	4.5	ug/l	Q
75-27-4	Bromodichloromethane	2.4 UQ	10	2.4	ug/l	Q
75-25-2	Bromoform	4.1 UQ	10	4.1	ug/l	Q
78-93-3	2-Butanone (MEK)	20 UQ	50	20	ug/l	Q
75-15-0	Carbon Disulfide	5.3 UQ	20	5.3	ug/l	Q
56-23-5	Carbon Tetrachloride	3.6 UQ	10	3.6	ug/l	Q
108-90-7	Chlorobenzene	2.0 UQ	10	2.0	ug/l	Q
75-00-3	Chloroethane [c]	6.7 UJQ	20	6.7	ug/l	JQ
67-66-3	Chloroform	3.0 UQ	10	3.0	ug/l	Q
110-82-7	Cyclohexane	3.9 UQ	10	3.9	ug/l	Q
124-48-1	Dibromochloromethane	2.8 UQ	10	2.8	ug/l	Q
96-12-8	1,2-Dibromo-3-chloropropane	10 UQ	50	10	ug/l	Q
106-93-4	1,2-Dibromoethane	2.8 UQ	20	2.8	ug/l	Q
75-71-8	Dichlorodifluoromethane	5.0 UQ	20	5.0	ug/l	Q
95-50-1	1,2-Dichlorobenzene	3.2 UQ	10	3.2	ug/l	Q
541-73-1	1,3-Dichlorobenzene	2.2 UQ	10	2.2	ug/l	Q
106-46-7	1,4-Dichlorobenzene	2.6 UQ	10	2.6	ug/l	Q
75-34-3	1,1-Dichloroethane	3.4 UQ	10	3.4	ug/l	Q
107-06-2	1,2-Dichloroethane	3.1 UQ	10	3.1	ug/l	Q
75-35-4	1,1-Dichloroethylene	3.2 UQ	10	3.2	ug/l	Q
156-59-2	cis-1,2-Dichloroethylene	349	10	2.8	ug/l	Q
156-60-5	trans-1,2-Dichloroethylene	2.2 UQ	10	2.2	ug/l	Q
78-87-5	1,2-Dichloropropane	4.3 UQ	10	4.3	ug/l	Q
10061-01-5	cis-1,3-Dichloropropene	2.9 UQ	10	2.9	ug/l	Q
10061-02-6	trans-1,3-Dichloropropene	2.1 UQ	10	2.1	ug/l	Q
100-41-4	Ethylbenzene	3.6 UQ	10	3.6	ug/l	Q
76-13-1	Freon 113	4.8 UQ	10	4.8	ug/l	Q
591-78-6	2-Hexanone	20 UQ	100	20	ug/l	Q
98-82-8	Isopropylbenzene	2.2 UQ	10	2.2	ug/l	Q
79-20-9	Methyl Acetate	50 UQ	200	50	ug/l	Q

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0598-093.0-20211220		
Lab Sample ID:	FA91859-31	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide [d]	20 UQ	50	20	ug/l	Q
74-87-3	Methyl Chloride	5.0 UQ	20	5.0	ug/l	Q
75-09-2	Methylene Chloride	20 UQ	50	20	ug/l	Q
108-10-1	4-Methyl-2-pentanone (MIBK)	10 UQ	50	10	ug/l	Q
1634-04-4	Methyl Tert Butyl Ether	2.3 UQ	10	2.3	ug/l	Q
100-42-5	Styrene	2.2 UQ	10	2.2	ug/l	Q
630-20-6	1,1,1,2-Tetrachloroethane	2.8 UQ	10	2.8	ug/l	Q
79-34-5	1,1,2,2-Tetrachloroethane	3.0 UQ	10	3.0	ug/l	Q
127-18-4	Tetrachloroethylene	2.2 UQ	10	2.2	ug/l	Q
108-88-3	Toluene	3.0 UQ	10	3.0	ug/l	Q
87-61-6	1,2,3-Trichlorobenzene	6.1 UQ	20	6.1	ug/l	Q
120-82-1	1,2,4-Trichlorobenzene	5.0 UQ	20	5.0	ug/l	Q
71-55-6	1,1,1-Trichloroethane	2.5 UQ	10	2.5	ug/l	Q
79-00-5	1,1,2-Trichloroethane	4.7 UQ	10	4.7	ug/l	Q
79-01-6	Trichloroethylene [e]	173	10	3.5	ug/l	Q
75-69-4	Trichlorofluoromethane	5.0 UQ	20	5.0	ug/l	Q
75-01-4	Vinyl Chloride	4.1 UQ	10	4.1	ug/l	Q
1330-20-7	Xylene (total)	7.2 UQ	30	7.2	ug/l	Q

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		83-118%
17060-07-0	1,2-Dichloroethane-D4	106%		79-125%
2037-26-5	Toluene-D8	105%		85-112%
460-00-4	4-Bromofluorobenzene	98%		83-118%

(a) Sample was not preserved to a pH < 2. Sample analyzed beyond hold time; reported results are considered minimum values.
(b) Associated ICV outside control limits high, however sample ND.
(c) Associated CCV outside of control limits low.
(d) Associated CCV outside of control limits high, sample was ND.
(e) Suspected carry-over.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0598-098.0-20211220		
Lab Sample ID:	FA91859-32	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	I73505.D	1000	01/14/22 07:07	LR	n/a	n/a	VI2440
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone [b]	10000 UQ	25000	10000	ug/l	Q
71-43-2	Benzene	310 UQ	1000	310	ug/l	Q
74-97-5	Bromochloromethane	450 UQ	1000	450	ug/l	Q
75-27-4	Bromodichloromethane	240 UQ	1000	240	ug/l	Q
75-25-2	Bromoform	410 UQ	1000	410	ug/l	Q
78-93-3	2-Butanone (MEK)	2000 UQ	5000	2000	ug/l	Q
75-15-0	Carbon Disulfide	530 UQ	2000	530	ug/l	Q
56-23-5	Carbon Tetrachloride	360 UQ	1000	360	ug/l	Q
108-90-7	Chlorobenzene	200 UQ	1000	200	ug/l	Q
75-00-3	Chloroethane [c]	670 UJQ	2000	670	ug/l	JQ
67-66-3	Chloroform	300 UQ	1000	300	ug/l	Q
110-82-7	Cyclohexane	390 UQ	1000	390	ug/l	Q
124-48-1	Dibromochloromethane	280 UQ	1000	280	ug/l	Q
96-12-8	1,2-Dibromo-3-chloropropane	1000 UQ	5000	1000	ug/l	Q
106-93-4	1,2-Dibromoethane	280 UQ	2000	280	ug/l	Q
75-71-8	Dichlorodifluoromethane	500 UQ	2000	500	ug/l	Q
95-50-1	1,2-Dichlorobenzene	320 UQ	1000	320	ug/l	Q
541-73-1	1,3-Dichlorobenzene	220 UQ	1000	220	ug/l	Q
106-46-7	1,4-Dichlorobenzene	260 UQ	1000	260	ug/l	Q
75-34-3	1,1-Dichloroethane	340 UQ	1000	340	ug/l	Q
107-06-2	1,2-Dichloroethane	310 UQ	1000	310	ug/l	Q
75-35-4	1,1-Dichloroethylene	320 UQ	1000	320	ug/l	Q
156-59-2	cis-1,2-Dichloroethylene	37100	1000	280	ug/l	Q
156-60-5	trans-1,2-Dichloroethylene	220 UQ	1000	220	ug/l	Q
78-87-5	1,2-Dichloropropane	430 UQ	1000	430	ug/l	Q
10061-01-5	cis-1,3-Dichloropropene	290 UQ	1000	290	ug/l	Q
10061-02-6	trans-1,3-Dichloropropene	210 UQ	1000	210	ug/l	Q
100-41-4	Ethylbenzene	360 UQ	1000	360	ug/l	Q
76-13-1	Freon 113	480 UQ	1000	480	ug/l	Q
591-78-6	2-Hexanone	2000 UQ	10000	2000	ug/l	Q
98-82-8	Isopropylbenzene	220 UQ	1000	220	ug/l	Q
79-20-9	Methyl Acetate	5000 UQ	20000	5000	ug/l	Q

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0598-098.0-20211220		
Lab Sample ID:	FA91859-32	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide [d]	2000 UQ	5000	2000	ug/l	Q
74-87-3	Methyl Chloride	500 UQ	2000	500	ug/l	Q
75-09-2	Methylene Chloride	2000 UQ	5000	2000	ug/l	Q
108-10-1	4-Methyl-2-pentanone (MIBK)	1000 UQ	5000	1000	ug/l	Q
1634-04-4	Methyl Tert Butyl Ether	230 UQ	1000	230	ug/l	Q
100-42-5	Styrene	220 UQ	1000	220	ug/l	Q
630-20-6	1,1,1,2-Tetrachloroethane	280 UQ	1000	280	ug/l	Q
79-34-5	1,1,2,2-Tetrachloroethane	300 UQ	1000	300	ug/l	Q
127-18-4	Tetrachloroethylene	220 UQ	1000	220	ug/l	Q
108-88-3	Toluene	300 UQ	1000	300	ug/l	Q
87-61-6	1,2,3-Trichlorobenzene	610 UQ	2000	610	ug/l	Q
120-82-1	1,2,4-Trichlorobenzene	500 UQ	2000	500	ug/l	Q
71-55-6	1,1,1-Trichloroethane	250 UQ	1000	250	ug/l	Q
79-00-5	1,1,2-Trichloroethane	470 UQ	1000	470	ug/l	Q
79-01-6	Trichloroethylene	82000	1000	350	ug/l	Q
75-69-4	Trichlorofluoromethane	500 UQ	2000	500	ug/l	Q
75-01-4	Vinyl Chloride	410 UQ	1000	410	ug/l	Q
1330-20-7	Xylene (total)	720 UQ	3000	720	ug/l	Q

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		83-118%
17060-07-0	1,2-Dichloroethane-D4	105%		79-125%
2037-26-5	Toluene-D8	101%		85-112%
460-00-4	4-Bromofluorobenzene	98%		83-118%

(a) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(b) Associated ICV outside control limits high, however sample ND.
(c) Associated CCV outside of control limits low.
(d) Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0601-073.0-20211220		
Lab Sample ID:	FA91859-33	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1P84101.D	2.5	12/26/21 22:30	CV	n/a	n/a	V1P3364
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	25 U	63	25	ug/l	
71-43-2	Benzene	0.78 U	2.5	0.78	ug/l	
74-97-5	Bromochloromethane	1.1 U	2.5	1.1	ug/l	
75-27-4	Bromodichloromethane	0.61 U	2.5	0.61	ug/l	
75-25-2	Bromoform	1.0 U	2.5	1.0	ug/l	
78-93-3	2-Butanone (MEK)	5.0 U	13	5.0	ug/l	
75-15-0	Carbon Disulfide	1.3 U	5.0	1.3	ug/l	
56-23-5	Carbon Tetrachloride	0.89 U	2.5	0.89	ug/l	
108-90-7	Chlorobenzene	0.50 U	2.5	0.50	ug/l	
75-00-3	Chloroethane	1.7 U	5.0	1.7	ug/l	
67-66-3	Chloroform	0.75 U	2.5	0.75	ug/l	
110-82-7	Cyclohexane	0.98 U	2.5	0.98	ug/l	
124-48-1	Dibromochloromethane	0.69 U	2.5	0.69	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	2.6 U	13	2.6	ug/l	
106-93-4	1,2-Dibromoethane	0.69 U	5.0	0.69	ug/l	
75-71-8	Dichlorodifluoromethane	1.3 U	5.0	1.3	ug/l	
95-50-1	1,2-Dichlorobenzene	0.81 U	2.5	0.81	ug/l	
541-73-1	1,3-Dichlorobenzene	0.54 U	2.5	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	0.64 U	2.5	0.64	ug/l	
75-34-3	1,1-Dichloroethane	0.85 U	2.5	0.85	ug/l	
107-06-2	1,2-Dichloroethane	0.78 U	2.5	0.78	ug/l	
75-35-4	1,1-Dichloroethylene	0.81 U	2.5	0.81	ug/l	
156-59-2	cis-1,2-Dichloroethylene	61.0	2.5	0.69	ug/l	
156-60-5	trans-1,2-Dichloroethylene	2.3	2.5	0.55	ug/l	I
78-87-5	1,2-Dichloropropane	1.1 U	2.5	1.1	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.73 U	2.5	0.73	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.54 U	2.5	0.54	ug/l	
100-41-4	Ethylbenzene	0.89 U	2.5	0.89	ug/l	
76-13-1	Freon 113	1.2 U	2.5	1.2	ug/l	
591-78-6	2-Hexanone	5.0 U	25	5.0	ug/l	
98-82-8	Isopropylbenzene	0.55 U	2.5	0.55	ug/l	
79-20-9	Methyl Acetate	13 U	50	13	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0601-073.0-20211220		
Lab Sample ID:	FA91859-33	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide [b]	5.0 U	13	5.0	ug/l	
74-87-3	Methyl Chloride	1.3 U	5.0	1.3	ug/l	
75-09-2	Methylene Chloride	5.0 U	13	5.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	2.5 U	13	2.5	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.57 U	2.5	0.57	ug/l	
100-42-5	Styrene	0.56 U	2.5	0.56	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.69 U	2.5	0.69	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.75 U	2.5	0.75	ug/l	
127-18-4	Tetrachloroethylene	0.54 U	2.5	0.54	ug/l	
108-88-3	Toluene	0.75 U	2.5	0.75	ug/l	
87-61-6	1,2,3-Trichlorobenzene	1.5 U	5.0	1.5	ug/l	
120-82-1	1,2,4-Trichlorobenzene	1.3 U	5.0	1.3	ug/l	
71-55-6	1,1,1-Trichloroethane	0.62 U	2.5	0.62	ug/l	
79-00-5	1,1,2-Trichloroethane	1.2 U	2.5	1.2	ug/l	
79-01-6	Trichloroethylene	68.1	2.5	0.86	ug/l	
75-69-4	Trichlorofluoromethane	1.3 U	5.0	1.3	ug/l	
75-01-4	Vinyl Chloride	67.5	2.5	1.0	ug/l	
1330-20-7	Xylene (total)	1.8 U	7.5	1.8	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		83-118%
17060-07-0	1,2-Dichloroethane-D4	111%		79-125%
2037-26-5	Toluene-D8	96%		85-112%
460-00-4	4-Bromofluorobenzene	98%		83-118%

(a) Sample was not preserved to a pH < 2.
(b) Associated ICV, CCV, and BS recovery outside control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0601-078.0-20211220		
Lab Sample ID:	FA91859-34	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1P84103.D	100	12/26/21 23:02	CV	n/a	n/a	V1P3364
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	1000 U	2500	1000	ug/l	
71-43-2	Benzene	31 U	100	31	ug/l	
74-97-5	Bromochloromethane	45 U	100	45	ug/l	
75-27-4	Bromodichloromethane	24 U	100	24	ug/l	
75-25-2	Bromoform	41 U	100	41	ug/l	
78-93-3	2-Butanone (MEK)	200 U	500	200	ug/l	
75-15-0	Carbon Disulfide	53 U	200	53	ug/l	
56-23-5	Carbon Tetrachloride	36 U	100	36	ug/l	
108-90-7	Chlorobenzene	20 U	100	20	ug/l	
75-00-3	Chloroethane	67 U	200	67	ug/l	
67-66-3	Chloroform	30 U	100	30	ug/l	
110-82-7	Cyclohexane	39 U	100	39	ug/l	
124-48-1	Dibromochloromethane	28 U	100	28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	100 U	500	100	ug/l	
106-93-4	1,2-Dibromoethane	28 U	200	28	ug/l	
75-71-8	Dichlorodifluoromethane	50 U	200	50	ug/l	
95-50-1	1,2-Dichlorobenzene	32 U	100	32	ug/l	
541-73-1	1,3-Dichlorobenzene	22 U	100	22	ug/l	
106-46-7	1,4-Dichlorobenzene	26 U	100	26	ug/l	
75-34-3	1,1-Dichloroethane	34 U	100	34	ug/l	
107-06-2	1,2-Dichloroethane	31 U	100	31	ug/l	
75-35-4	1,1-Dichloroethylene	32 U	100	32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	2390	100	28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	38.7	100	22	ug/l	I
78-87-5	1,2-Dichloropropane	43 U	100	43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	29 U	100	29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	21 U	100	21	ug/l	
100-41-4	Ethylbenzene	36 U	100	36	ug/l	
76-13-1	Freon 113	48 U	100	48	ug/l	
591-78-6	2-Hexanone	200 U	1000	200	ug/l	
98-82-8	Isopropylbenzene	22 U	100	22	ug/l	
79-20-9	Methyl Acetate	500 U	2000	500	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0601-078.0-20211220		
Lab Sample ID:	FA91859-34	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide [b]	200 U	500	200	ug/l	
74-87-3	Methyl Chloride	50 U	200	50	ug/l	
75-09-2	Methylene Chloride	200 U	500	200	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	100 U	500	100	ug/l	
1634-04-4	Methyl Tert Butyl Ether	23 U	100	23	ug/l	
100-42-5	Styrene	22 U	100	22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	28 U	100	28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	30 U	100	30	ug/l	
127-18-4	Tetrachloroethylene	22 U	100	22	ug/l	
108-88-3	Toluene	30 U	100	30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	61 U	200	61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	50 U	200	50	ug/l	
71-55-6	1,1,1-Trichloroethane	25 U	100	25	ug/l	
79-00-5	1,1,2-Trichloroethane	47 U	100	47	ug/l	
79-01-6	Trichloroethylene	690	100	35	ug/l	
75-69-4	Trichlorofluoromethane	50 U	200	50	ug/l	
75-01-4	Vinyl Chloride	156	100	41	ug/l	
1330-20-7	Xylene (total)	72 U	300	72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		83-118%
17060-07-0	1,2-Dichloroethane-D4	107%		79-125%
2037-26-5	Toluene-D8	96%		85-112%
460-00-4	4-Bromofluorobenzene	102%		83-118%

(a) Sample was not preserved to a pH < 2.
(b) Associated ICV, CCV, and BS recovery outside control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range
I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0601-083.0-20211220		
Lab Sample ID:	FA91859-35	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1P84105.D	1	12/26/21 23:34	CV	n/a	n/a	V1P3364
Run #2 [b]	C0153320.D	2	01/13/22 07:27	LV	n/a	n/a	VC6187

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	10 U	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.67 U	2.0	0.67	ug/l	
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	0.50 U	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.32 U	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	42.2	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.80	1.0	0.22	ug/l	I
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113	0.48 U	1.0	0.48	ug/l	
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0601-083.0-20211220		
Lab Sample ID:	FA91859-35	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide [c]	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	2.0 U	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.30 U	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	80.3 [d]	2.0	0.69	ug/l	Q
75-69-4	Trichlorofluoromethane	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	2.0	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%	91%	83-118%
17060-07-0	1,2-Dichloroethane-D4	98%	96%	79-125%
2037-26-5	Toluene-D8	96%	100%	85-112%
460-00-4	4-Bromofluorobenzene	101%	112%	83-118%

(a) Sample was not preserved to a pH < 2.
(b) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(c) Associated ICV, CCV, and BS recovery outside control limits high, sample was ND.
(d) Result is from Run# 2

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0601-088.0-20211220		
Lab Sample ID:	FA91859-36	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1P84107.D	1	12/27/21 00:06	CV	n/a	n/a	V1P3364
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	10 U	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.67 U	2.0	0.67	ug/l	
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	0.50 U	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.32 U	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	15.8	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.49	1.0	0.22	ug/l	I
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113	0.48 U	1.0	0.48	ug/l	
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0601-088.0-20211220		
Lab Sample ID:	FA91859-36	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide [b]	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	2.0 U	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.30 U	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	29.6	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	0.68	1.0	0.41	ug/l	I
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		83-118%
17060-07-0	1,2-Dichloroethane-D4	104%		79-125%
2037-26-5	Toluene-D8	98%		85-112%
460-00-4	4-Bromofluorobenzene	98%		83-118%

(a) Sample was not preserved to a pH < 2.
(b) Associated ICV, CCV, and BS recovery outside control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range
I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0601-093.0-20211220		
Lab Sample ID:	FA91859-37	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1P84109.D	1	12/27/21 00:37	CV	n/a	n/a	V1P3364
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	10 U	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.67 U	2.0	0.67	ug/l	
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	0.50 U	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.32 U	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	28.0	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.79	1.0	0.22	ug/l	I
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113	0.48 U	1.0	0.48	ug/l	
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0601-093.0-20211220		
Lab Sample ID:	FA91859-37	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide [b]	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	2.0 U	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.30 U	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	13.1	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	1.2	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		83-118%
17060-07-0	1,2-Dichloroethane-D4	102%		79-125%
2037-26-5	Toluene-D8	96%		85-112%
460-00-4	4-Bromofluorobenzene	101%		83-118%

(a) Sample was not preserved to a pH < 2.
(b) Associated ICV, CCV, and BS recovery outside control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range
I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0601-098.0-20211220		
Lab Sample ID:	FA91859-38	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1P84111.D	1	12/27/21 01:09	CV	n/a	n/a	V1P3364
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	10 U	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	0.61	2.0	0.53	ug/l	I
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.67 U	2.0	0.67	ug/l	
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	0.50 U	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.32 U	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	4.4	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.22 U	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113	0.48 U	1.0	0.48	ug/l	
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0601-098.0-20211220		
Lab Sample ID:	FA91859-38	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide [b]	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	2.0 U	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.30 U	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	36.2	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	0.41 U	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		83-118%
17060-07-0	1,2-Dichloroethane-D4	103%		79-125%
2037-26-5	Toluene-D8	97%		85-112%
460-00-4	4-Bromofluorobenzene	102%		83-118%

(a) Sample was not preserved to a pH < 2.
(b) Associated ICV, CCV, and BS recovery outside control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range
I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

5

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

FA91859

Tetra Tech, Inc. CHAIN OF CUSTODY | NUMBER No. 1365 | PAGE 1 OF 4

PROJECT NO: 112G08985	FACILITY: LC34	PROJECT MANAGER MARK TOMNEY	PHONE NUMBER 412 921 8622	LABORATORY NAME AND CONTACT: SGS
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER DAN FORESTER	PHONE NUMBER 304 -7801426	ADDRESS
		CARRIER/WAYBILL NUMBER COURIER		CITY, STATE ORLANDO, FL

STANDARD TAT ☒ RUSH TAT ☐ ☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G

PRESERVATIVE USED: NA

TYPE OF ANALYSIS: VOC's 8260

	DATE YEAR 2021	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS		COMMENTS
1	DEC	0945	LC34-DPT0598-008-20211220		6	10	GW	G	3	X	
2		1000	LC34-DPT0598-013.0-20211220		11	15					
3		1005	LC34-DPT0598-018.0-20211220		16	20					
4		1020	LC34-DPT0598-023.0-20211220		21	25					
5		1030	LC34-DPT0598-028.0-20211220		26	30					
6		1040	LC34-DPT0598-033.0-20211220		31	35					
7		1100	LC34-DPT0598-038.0-20211220		36	40					
8		1120	LC34-DPT0598-043.0-20211220		41	45					
9		1135	LC34-DPT0598-048.0-20211220		46	50					
10		1150	LC34-DPT0598-053.0-20211220		51	55					
11		1230	LC34-DPT0598-058.0-20211220		56	60					2.2C ZR4
12		1310	LC34-DPT0598-063.0-20211220		61	65					
13		1320	LC34-DPT0598-068.0-20211220		66	70					

INITIAL ASSESSMENT SM

LABEL VERIFICATION CM

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	20 DEC 21	16:50	1. RECEIVED BY	12-12-21	16:50
2. RELINQUISHED BY	12/12/21	18:14	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R FORM NO. TtNUS-001

5.1 5

FA91859: Chain of Custody
Page 1 of 5

FA91859

Tetra Tech, Inc. CHAIN OF CUSTODY | NUMBER No. 3162 | PAGE 2 OF 4

PROJECT NO: 112G089905	FACILITY LC34	PROJECT MANAGER Mark Joanet	PHONE NUMBER 412.921.8622	LABORATORY NAME AND CONTACT: SGS
SAMPLERS (SIGNATURE) Dan Forester		FIELD OPERATIONS LEADER Dan Forester	PHONE NUMBER 304-780-1426	ADDRESS
		CARRIER/WAYBILL NUMBER		CITY, STATE Orlando FL

STANDARD TAT ☒
RUSH TAT ☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G
PRESERVATIVE USED: None
TYPE OF ANALYSIS: VOCs 8260

	DATE 2021	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS		COMMENTS
14	12/20	0950	LC34-DPT0601-008.0-20211220		6	10	GW	G	3	Y	
15		0955	LC34-DPT0601-013.0-20211220		11	15					
16		1010	LC34-DPT0601-018.0-20211220		16	20					
17		~~1025~~ 1020	LC34-DPT0601-023.0-20211220		21	25					
18		1035	LC34-DPT0601-028.0-20211220		26	30					
19		1045	LC34-DPT0601-033.0-20211220		31	35					
20		1055	LC34-DPT0601-038.0-20211220		36	40					
21		1115	LC34-DPT0601-043.0-20211220		41	45					
22		1130	LC34-DPT0601-048.0-20211220		46	50					
23		1145	LC34-DPT0601-053.0-20211220		51	55					
24		1300	LC34-DPT0601-058.0-20211220		56	60					
25		1315	LC34-DPT0601-063.0-20211220		61	65					
26		1345	LC34-DPT0601-068.0-20211220		66	70					

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	12/20/21	16:50	1. RECEIVED BY	12/20/21	16:50
2. RELINQUISHED BY	12/20/21	18:14	2. RECEIVED BY		
3. RELINQUISHED BY			3. RECEIVED BY		

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R FORM NO. TtNUS-001

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FA91859

Tetra Tech, Inc. CHAIN OF CUSTODY NUMBER No. 1368 PAGE 3 OF 4

PROJECT NO: 112G-08985	FACILITY: LC 34	PROJECT MANAGER Mark Jonnet	PHONE NUMBER 412-921-8622	LABORATORY NAME AND CONTACT: SGS
SAMPLERS (SIGNATURE) DAN FORESTER		FIELD OPERATIONS LEADER Dan Forester	PHONE NUMBER 304-780-1426	ADDRESS
		CARRIER/WAYBILL NUMBER		CITY, STATE Orlando FL

STANDARD TAT ☒
RUSH TAT ☐ ☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

	DATE YEAR	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	CONTAINER TYPE PLASTIC (P) or GLASS (G)	PRESERVATIVE USED	TYPE OF ANALYSIS VOCs 8260	COMMENTS
										G	None		
27	12/20	1350	LC34-DPT0598-073.0-2021	1220	71	75	GW	G	3			X	
28		1420	LC34-DPT0598-078.0-2021	1220	76	80							
29		1440	LC34-DPT0598-083.0-2021	1220	81	85							
30		1510	LC34-DPT0598-088.0-2021	1220	86	90							
31		1545	LC34-DPT0598-093.0-2021	1220	91	95							
32		1610	LC34-DPT0598-098.0-2021	1220	96	100							

1. RELINQUISHED BY	DATE 20 Dec 21	TIME 1650	1. RECEIVED BY	DATE 12/20/21	TIME 1650
2. RELINQUISHED BY	DATE 12/20/21	TIME 1814	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY) 4/02R FORM NO. TtNUS-001

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FA91859: Chain of Custody
Page 3 of 5

FA91859

Tetra Tech, Inc. CHAIN OF CUSTODY | NUMBER No. 1367 | PAGE 4 OF 4

PROJECT NO: 112G08905	FACILITY: LC34	PROJECT MANAGER Mark Jonnet	PHONE NUMBER 912.921.8622	LABORATORY NAME AND CONTACT: SGS
SAMPLERS (SIGNATURE) Dan Forsyth		FIELD OPERATIONS LEADER Dan Forsyth	PHONE NUMBER 304.780.1426	ADDRESS
		CARRIER/WAYBILL NUMBER		CITY, STATE Orlando FL

STANDARD TAT [X]
RUSH TAT [ ] 24 hr. [ ] 48 hr. [ ] 72 hr. [ ] 7 day [ ] 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G
PRESERVATIVE USED: none
TYPE OF ANALYSIS: VOCs 8260

	DATE YEAR 2021	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS		COMMENTS
33	12/20	1415	LC34-DPT0601-073.0-202112		71	75	GW	G	3	X	
34		1435	LC34-DPT0601-078.0-202012		76	80					
35		1500	LC34-DPT0601-083.0-202012		81	85					
36		1520	LC34-DPT0601-088.0-202012		86	90					
37		1540	LC34-DPT0601-093.0-202012		91	95					
38		1605	LC34-DPT0601-098.0-202012		96	100					

1. RELINQUISHED BY	DATE October 21	TIME 16:50	1. RECEIVED BY	DATE 12/22/21	TIME 10:50
2. RELINQUISHED BY	DATE 12/22/21	TIME 19:14	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TINUS-001

5.1 5

FA91859: Chain of Custody
Page 4 of 5

SGS Sample Receipt Summary

Job Number: FA91859 **Client:** TETRA TECH **Project:** 112G08985

Date / Time Received: 12/20/2021 6:18:00 PM **Delivery Method:** COURIER **Airbill #'s:**

Therm ID: IR 1; **Therm CF:** 0.2; **# of Coolers:** 1

Cooler Temps (Raw Measured) °C: Cooler 1: (2.0);

Cooler Temps (Corrected) °C: Cooler 1: (2.2);

Cooler Information	Y	or	N
1. Custody Seals Present	☑		☐
2. Custody Seals Intact	☑		☐
3. Temp criteria achieved	☑		☐
4. Cooler temp verification	IR Gun		
5. Cooler media	Ice (Bag)		

Trip Blank Information	Y	or	N	N/A
1. Trip Blank present / cooler	☐		☑	☐
2. Trip Blank listed on COC	☐		☑	☐

	W	or	S	N/A
3. Type Of TB Received	☐		☐	☑

Sample Information	Y	or	N	N/A
1. Sample labels present on bottles	☑		☐	
2. Samples preserved properly	☑		☐	
3. Sufficient volume/containers recvd for analysis:	☑		☐	
4. Condition of sample	Intact			
5. Sample recvd within HT	☑		☐	
6. Dates/Times/IDs on COC match Sample Label	☑		☐	
7. VOCs have headspace	☐		☑	☐
8. Bottles received for unspecified tests	☐		☑	
9. Compositing instructions clear	☐		☐	☑
10. Voa Soil Kits/Jars received past 48hrs?	☐		☐	☑
11. % Solids Jar received?	☐		☐	☑
12. Residual Chlorine Present?	☐		☐	☑

Misc. Information

Number of Encores: 25-Gram _____ 5-Gram _____ Number of 5035 Field Kits: _____ Number of Lab Filtered Metals: _____

Test Strip Lot #s: pH 0-3 230315 pH 10-12 219813A Other: (Specify) _____ _____

Residual Chlorine Test Strip Lot #: _____

Comments

SM001
Rev. Date 05/24/17

Technician: STEPHENP Date: 12/20/2021 6:18:00 P Reviewer: _____ Date: _____

5.1 5

FA91859: Chain of Custody
Page 5 of 5

MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: FA91859
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1662-MB	1A40807.D	1	12/26/21	CV	n/a	n/a	V1A1662

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91859-1, FA91859-2, FA91859-3, FA91859-4, FA91859-5, FA91859-6, FA91859-7, FA91859-8

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
71-43-2	Benzene	ND	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.24	ug/l	
75-25-2	Bromoform	ND	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	ND	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.67	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
110-82-7	Cyclohexane	ND	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.32	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.36	ug/l	
76-13-1	Freon 113	ND	1.0	0.48	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	ND	20	5.0	ug/l	
74-83-9	Methyl Bromide	ND	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	ND	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	ND	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.23	ug/l	

Method Blank Summary

Job Number: FA91859
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1662-MB	1A40807.D	1	12/26/21	CV	n/a	n/a	V1A1662

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91859-1, FA91859-2, FA91859-3, FA91859-4, FA91859-5, FA91859-6, FA91859-7, FA91859-8

CAS No.	Compound	Result	RL	MDL	Units	Q
100-42-5	Styrene	ND	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	101%	83-118%
17060-07-0	1,2-Dichloroethane-D4	103%	79-125%
2037-26-5	Toluene-D8	98%	85-112%
460-00-4	4-Bromofluorobenzene	101%	83-118%

Method Blank Summary

Job Number: FA91859
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2A1657-MB	2A40808.D	1	12/26/21	CV	n/a	n/a	V2A1657

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91859-13, FA91859-14, FA91859-15, FA91859-16, FA91859-17, FA91859-18, FA91859-19, FA91859-20, FA91859-21, FA91859-22, FA91859-23, FA91859-24, FA91859-25, FA91859-26

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
71-43-2	Benzene	ND	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.24	ug/l	
75-25-2	Bromoform	ND	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	ND	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.67	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
110-82-7	Cyclohexane	ND	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.36	ug/l	
76-13-1	Freon 113	ND	1.0	0.48	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	ND	20	5.0	ug/l	
74-83-9	Methyl Bromide	ND	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	ND	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	ND	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.0	ug/l	

Method Blank Summary

Job Number: FA91859
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2A1657-MB	2A40808.D	1	12/26/21	CV	n/a	n/a	V2A1657

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91859-13, FA91859-14, FA91859-15, FA91859-16, FA91859-17, FA91859-18, FA91859-19, FA91859-20, FA91859-21, FA91859-22, FA91859-23, FA91859-24, FA91859-25, FA91859-26

CAS No.	Compound	Result	RL	MDL	Units	Q
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.23	ug/l	
100-42-5	Styrene	ND	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	101%	83-118%
17060-07-0	1,2-Dichloroethane-D4	104%	79-125%
2037-26-5	Toluene-D8	97%	85-112%
460-00-4	4-Bromofluorobenzene	102%	83-118%

Method Blank Summary

Job Number: FA91859
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1P3364-MB	1P84079.D	1	12/26/21	CV	n/a	n/a	V1P3364

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91859-33, FA91859-34, FA91859-35, FA91859-36, FA91859-37, FA91859-38

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
71-43-2	Benzene	ND	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.24	ug/l	
75-25-2	Bromoform	ND	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	ND	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.67	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
110-82-7	Cyclohexane	ND	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.36	ug/l	
76-13-1	Freon 113	ND	1.0	0.48	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	ND	20	5.0	ug/l	
74-83-9	Methyl Bromide	ND	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	ND	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	ND	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.0	ug/l	

Method Blank Summary

Job Number: FA91859
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1P3364-MB	1P84079.D	1	12/26/21	CV	n/a	n/a	V1P3364

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91859-33, FA91859-34, FA91859-35, FA91859-36, FA91859-37, FA91859-38

CAS No.	Compound	Result	RL	MDL	Units	Q
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.23	ug/l	
100-42-5	Styrene	ND	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	98%	83-118%
17060-07-0	1,2-Dichloroethane-D4	103%	79-125%
2037-26-5	Toluene-D8	100%	85-112%
460-00-4	4-Bromofluorobenzene	100%	83-118%

Method Blank Summary

Job Number: FA91859
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1673-MB	1A41250.D	1	01/12/22	CV	n/a	n/a	V1A1673

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91859-12

CAS No.	Compound	Result	RL	MDL	Units	Q
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.28	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.35	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	0.41	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	97%	83-118%
17060-07-0	1,2-Dichloroethane-D4	97%	79-125%
2037-26-5	Toluene-D8	99%	85-112%
460-00-4	4-Bromofluorobenzene	97%	83-118%

Method Blank Summary

Job Number: FA91859
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI2437-MB	I73431.D	1	01/12/22	LR	n/a	n/a	VI2437

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91859-2

CAS No.	Compound	Result	RL	MDL	Units	Q
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.28	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.35	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	95%	83-118%
17060-07-0	1,2-Dichloroethane-D4	100%	79-125%
2037-26-5	Toluene-D8	102%	85-112%
460-00-4	4-Bromofluorobenzene	100%	83-118%

Method Blank Summary

Job Number: FA91859
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VC6187-MB	C0153303.D	1	01/13/22	LV	n/a	n/a	VC6187

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91859-35

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	1.0	0.35	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	92%	83-118%
17060-07-0	1,2-Dichloroethane-D4	95%	79-125%
2037-26-5	Toluene-D8	105%	85-112%
460-00-4	4-Bromofluorobenzene	109%	83-118%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
124-38-9	Carbon dioxide	1.93	97	ug/l	JN
	Total TIC, Volatile		0	ug/l	

Method Blank Summary

Job Number: FA91859
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI2440-MB	I73485.D	1	01/13/22	LR	n/a	n/a	VI2440

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91859-1, FA91859-3, FA91859-4, FA91859-5, FA91859-6, FA91859-7, FA91859-8, FA91859-10, FA91859-11, FA91859-12, FA91859-27, FA91859-28, FA91859-29, FA91859-30, FA91859-31, FA91859-32

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
71-43-2	Benzene	ND	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.24	ug/l	
75-25-2	Bromoform	ND	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	ND	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.67	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
110-82-7	Cyclohexane	ND	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.36	ug/l	
76-13-1	Freon 113	ND	1.0	0.48	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	ND	20	5.0	ug/l	
74-83-9	Methyl Bromide	ND	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	ND	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	ND	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.0	ug/l	

Method Blank Summary

Job Number: FA91859
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI2440-MB	I73485.D	1	01/13/22	LR	n/a	n/a	VI2440

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91859-1, FA91859-3, FA91859-4, FA91859-5, FA91859-6, FA91859-7, FA91859-8, FA91859-10, FA91859-11, FA91859-12, FA91859-27, FA91859-28, FA91859-29, FA91859-30, FA91859-31, FA91859-32

CAS No.	Compound	Result	RL	MDL	Units	Q
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.23	ug/l	
100-42-5	Styrene	ND	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	93%	83-118%
17060-07-0	1,2-Dichloroethane-D4	100%	79-125%
2037-26-5	Toluene-D8	102%	85-112%
460-00-4	4-Bromofluorobenzene	101%	83-118%

Method Blank Summary

Job Number: FA91859
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VY2526-MB	Y60677.D	1	01/17/22	CF	n/a	n/a	VY2526

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91859-28

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	1.0	0.35	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	95%	83-118%
17060-07-0	1,2-Dichloroethane-D4	99%	79-125%
2037-26-5	Toluene-D8	97%	85-112%
460-00-4	4-Bromofluorobenzene	95%	83-118%

Blank Spike Summary

Job Number: FA91859
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1662-BS [a]	1A40803.D	1	12/26/21	CV	n/a	n/a	V1A1662

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91859-1, FA91859-2, FA91859-3, FA91859-4, FA91859-5, FA91859-6, FA91859-7, FA91859-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	118	94	50-147
71-43-2	Benzene	25	24.8	99	81-122
74-97-5	Bromochloromethane	25	26.4	106	76-123
75-27-4	Bromodichloromethane	25	25.3	101	79-123
75-25-2	Bromoform	25	23.3	93	66-123
78-93-3	2-Butanone (MEK)	125	117	94	56-143
75-15-0	Carbon Disulfide	25	26.6	106	66-148
56-23-5	Carbon Tetrachloride	25	28.0	112	76-136
108-90-7	Chlorobenzene	25	24.9	100	82-124
75-00-3	Chloroethane	25	29.9	120	62-144
67-66-3	Chloroform	25	24.9	100	80-124
110-82-7	Cyclohexane	25	26.1	104	73-138
124-48-1	Dibromochloromethane	25	24.4	98	78-122
96-12-8	1,2-Dibromo-3-chloropropane	25	23.5	94	64-123
106-93-4	1,2-Dibromoethane	25	25.1	100	75-120
75-71-8	Dichlorodifluoromethane	25	29.1	116	42-167
95-50-1	1,2-Dichlorobenzene	25	24.7	99	82-124
541-73-1	1,3-Dichlorobenzene	25	25.7	103	84-125
106-46-7	1,4-Dichlorobenzene	25	24.7	99	78-120
75-34-3	1,1-Dichloroethane	25	25.5	102	81-122
107-06-2	1,2-Dichloroethane	25	24.9	100	75-125
75-35-4	1,1-Dichloroethylene	25	26.0	104	78-137
156-60-5	trans-1,2-Dichloroethylene	25	25.5	102	76-127
78-87-5	1,2-Dichloropropane	25	24.7	99	76-124
10061-01-5	cis-1,3-Dichloropropene	25	26.0	104	75-118
10061-02-6	trans-1,3-Dichloropropene	25	26.5	106	80-120
100-41-4	Ethylbenzene	25	25.7	103	81-121
76-13-1	Freon 113	25	29.1	116	72-134
591-78-6	2-Hexanone	125	115	92	61-129
98-82-8	Isopropylbenzene	25	26.6	106	83-132
79-20-9	Methyl Acetate	125	117	94	65-126
74-83-9	Methyl Bromide	25	24.2	97	59-143
74-87-3	Methyl Chloride	25	27.6	110	50-159
75-09-2	Methylene Chloride	25	20.6	82	69-135
108-10-1	4-Methyl-2-pentanone (MIBK)	125	113	90	66-122
1634-04-4	Methyl Tert Butyl Ether	25	25.0	100	72-117

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA91859
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1662-BS [a]	1A40803.D	1	12/26/21	CV	n/a	n/a	V1A1662

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91859-1, FA91859-2, FA91859-3, FA91859-4, FA91859-5, FA91859-6, FA91859-7, FA91859-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
100-42-5	Styrene	25	25.9	104	78-119
630-20-6	1,1,1,2-Tetrachloroethane	25	27.9	112	77-122
79-34-5	1,1,2,2-Tetrachloroethane	25	23.8	95	72-120
127-18-4	Tetrachloroethylene	25	27.1	108	76-135
108-88-3	Toluene	25	25.3	101	80-120
87-61-6	1,2,3-Trichlorobenzene	25	26.2	105	68-131
120-82-1	1,2,4-Trichlorobenzene	25	25.9	104	73-129
71-55-6	1,1,1-Trichloroethane	25	26.5	106	75-130
79-00-5	1,1,2-Trichloroethane	25	24.4	98	76-119
75-69-4	Trichlorofluoromethane	25	36.0	144	71-156
75-01-4	Vinyl Chloride	25	29.9	120	69-159
1330-20-7	Xylene (total)	75	77.7	104	80-126

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	104%	83-118%
17060-07-0	1,2-Dichloroethane-D4	103%	79-125%
2037-26-5	Toluene-D8	100%	85-112%
460-00-4	4-Bromofluorobenzene	104%	83-118%

(a) No MS/MSD available for this run.

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA91859
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2A1657-BS [a]	2A40804.D	1	12/26/21	CV	n/a	n/a	V2A1657

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91859-13, FA91859-14, FA91859-15, FA91859-16, FA91859-17, FA91859-18, FA91859-19, FA91859-20, FA91859-21, FA91859-22, FA91859-23, FA91859-24, FA91859-25, FA91859-26

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	102	82	50-147
71-43-2	Benzene	25	24.9	100	81-122
74-97-5	Bromochloromethane	25	25.1	100	76-123
75-27-4	Bromodichloromethane	25	25.1	100	79-123
75-25-2	Bromoform	25	23.3	93	66-123
78-93-3	2-Butanone (MEK)	125	101	81	56-143
75-15-0	Carbon Disulfide	25	27.3	109	66-148
56-23-5	Carbon Tetrachloride	25	27.5	110	76-136
108-90-7	Chlorobenzene	25	24.2	97	82-124
75-00-3	Chloroethane	25	33.8	135	62-144
67-66-3	Chloroform	25	25.3	101	80-124
110-82-7	Cyclohexane	25	26.1	104	73-138
124-48-1	Dibromochloromethane	25	22.9	92	78-122
96-12-8	1,2-Dibromo-3-chloropropane	25	21.9	88	64-123
106-93-4	1,2-Dibromoethane	25	24.7	99	75-120
75-71-8	Dichlorodifluoromethane	25	25.7	103	42-167
95-50-1	1,2-Dichlorobenzene	25	24.5	98	82-124
541-73-1	1,3-Dichlorobenzene	25	25.4	102	84-125
106-46-7	1,4-Dichlorobenzene	25	24.2	97	78-120
75-34-3	1,1-Dichloroethane	25	25.3	101	81-122
107-06-2	1,2-Dichloroethane	25	25.2	101	75-125
75-35-4	1,1-Dichloroethylene	25	26.4	106	78-137
156-59-2	cis-1,2-Dichloroethylene	25	25.1	100	78-120
156-60-5	trans-1,2-Dichloroethylene	25	25.7	103	76-127
78-87-5	1,2-Dichloropropane	25	24.5	98	76-124
10061-01-5	cis-1,3-Dichloropropene	25	26.1	104	75-118
10061-02-6	trans-1,3-Dichloropropene	25	26.3	105	80-120
100-41-4	Ethylbenzene	25	25.1	100	81-121
76-13-1	Freon 113	25	29.2	117	72-134
591-78-6	2-Hexanone	125	102	82	61-129
98-82-8	Isopropylbenzene	25	26.1	104	83-132
79-20-9	Methyl Acetate	125	108	86	65-126
74-83-9	Methyl Bromide	25	25.0	100	59-143
74-87-3	Methyl Chloride	25	23.0	92	50-159
75-09-2	Methylene Chloride	25	20.5	82	69-135
108-10-1	4-Methyl-2-pentanone (MIBK)	125	103	82	66-122

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA91859
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2A1657-BS [a]	2A40804.D	1	12/26/21	CV	n/a	n/a	V2A1657

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91859-13, FA91859-14, FA91859-15, FA91859-16, FA91859-17, FA91859-18, FA91859-19, FA91859-20, FA91859-21, FA91859-22, FA91859-23, FA91859-24, FA91859-25, FA91859-26

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
1634-04-4	Methyl Tert Butyl Ether	25	25.4	102	72-117
100-42-5	Styrene	25	25.3	101	78-119
630-20-6	1,1,1,2-Tetrachloroethane	25	27.5	110	77-122
79-34-5	1,1,2,2-Tetrachloroethane	25	23.2	93	72-120
127-18-4	Tetrachloroethylene	25	26.9	108	76-135
108-88-3	Toluene	25	24.7	99	80-120
87-61-6	1,2,3-Trichlorobenzene	25	25.6	102	68-131
120-82-1	1,2,4-Trichlorobenzene	25	25.2	101	73-129
71-55-6	1,1,1-Trichloroethane	25	26.9	108	75-130
79-00-5	1,1,2-Trichloroethane	25	24.2	97	76-119
79-01-6	Trichloroethylene	25	26.1	104	81-126
75-69-4	Trichlorofluoromethane	25	31.9	128	71-156
75-01-4	Vinyl Chloride	25	24.8	99	69-159
1330-20-7	Xylene (total)	75	75.3	100	80-126

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	105%	83-118%
17060-07-0	1,2-Dichloroethane-D4	105%	79-125%
2037-26-5	Toluene-D8	99%	85-112%
460-00-4	4-Bromofluorobenzene	104%	83-118%

(a) No MS/MSD available for this run.

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA91859
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1P3364-BS	1P84075.D	1	12/26/21	CV	n/a	n/a	V1P3364

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91859-33, FA91859-34, FA91859-35, FA91859-36, FA91859-37, FA91859-38

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	121	97	50-147
71-43-2	Benzene	25	24.7	99	81-122
74-97-5	Bromochloromethane	25	20.8	83	76-123
75-27-4	Bromodichloromethane	25	24.5	98	79-123
75-25-2	Bromoform	25	23.0	92	66-123
78-93-3	2-Butanone (MEK)	125	125	100	56-143
75-15-0	Carbon Disulfide	25	22.7	91	66-148
56-23-5	Carbon Tetrachloride	25	23.5	94	76-136
108-90-7	Chlorobenzene	25	23.3	93	82-124
75-00-3	Chloroethane	25	22.9	92	62-144
67-66-3	Chloroform	25	22.8	91	80-124
110-82-7	Cyclohexane	25	24.6	98	73-138
124-48-1	Dibromochloromethane	25	23.5	94	78-122
96-12-8	1,2-Dibromo-3-chloropropane	25	23.1	92	64-123
106-93-4	1,2-Dibromoethane	25	23.4	94	75-120
75-71-8	Dichlorodifluoromethane	25	22.5	90	42-167
95-50-1	1,2-Dichlorobenzene	25	23.1	92	82-124
541-73-1	1,3-Dichlorobenzene	25	23.6	94	84-125
106-46-7	1,4-Dichlorobenzene	25	22.4	90	78-120
75-34-3	1,1-Dichloroethane	25	24.6	98	81-122
107-06-2	1,2-Dichloroethane	25	22.4	90	75-125
75-35-4	1,1-Dichloroethylene	25	24.4	98	78-137
156-59-2	cis-1,2-Dichloroethylene	25	23.3	93	78-120
156-60-5	trans-1,2-Dichloroethylene	25	24.2	97	76-127
78-87-5	1,2-Dichloropropane	25	24.7	99	76-124
10061-01-5	cis-1,3-Dichloropropene	25	25.3	101	75-118
10061-02-6	trans-1,3-Dichloropropene	25	24.9	100	80-120
100-41-4	Ethylbenzene	25	24.0	96	81-121
76-13-1	Freon 113	25	23.9	96	72-134
591-78-6	2-Hexanone	125	122	98	61-129
98-82-8	Isopropylbenzene	25	24.5	98	83-132
79-20-9	Methyl Acetate	125	112	90	65-126
74-83-9	Methyl Bromide	25	36.3	145*	59-143
74-87-3	Methyl Chloride	25	21.9	88	50-159
75-09-2	Methylene Chloride	25	18.7	75	69-135
108-10-1	4-Methyl-2-pentanone (MIBK)	125	123	98	66-122

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA91859
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1P3364-BS	1P84075.D	1	12/26/21	CV	n/a	n/a	V1P3364

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91859-33, FA91859-34, FA91859-35, FA91859-36, FA91859-37, FA91859-38

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
1634-04-4	Methyl Tert Butyl Ether	25	22.2	89	72-117
100-42-5	Styrene	25	24.9	100	78-119
630-20-6	1,1,1,2-Tetrachloroethane	25	24.4	98	77-122
79-34-5	1,1,2,2-Tetrachloroethane	25	23.0	92	72-120
127-18-4	Tetrachloroethylene	25	23.0	92	76-135
108-88-3	Toluene	25	24.0	96	80-120
87-61-6	1,2,3-Trichlorobenzene	25	24.0	96	68-131
120-82-1	1,2,4-Trichlorobenzene	25	22.9	92	73-129
71-55-6	1,1,1-Trichloroethane	25	23.3	93	75-130
79-00-5	1,1,2-Trichloroethane	25	23.9	96	76-119
79-01-6	Trichloroethylene	25	24.1	96	81-126
75-69-4	Trichlorofluoromethane	25	24.8	99	71-156
75-01-4	Vinyl Chloride	25	25.9	104	69-159
1330-20-7	Xylene (total)	75	71.8	96	80-126

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	101%	83-118%
17060-07-0	1,2-Dichloroethane-D4	99%	79-125%
2037-26-5	Toluene-D8	99%	85-112%
460-00-4	4-Bromofluorobenzene	99%	83-118%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA91859
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1673-BS	1A41246.D	1	01/12/22	CV	n/a	n/a	V1A1673

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91859-12

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
156-59-2	cis-1,2-Dichloroethylene	25	21.7	87	78-120
79-01-6	Trichloroethylene	25	22.5	90	81-126
75-01-4	Vinyl Chloride	25	25.8	103	69-159

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	99%	83-118%
17060-07-0	1,2-Dichloroethane-D4	95%	79-125%
2037-26-5	Toluene-D8	100%	85-112%
460-00-4	4-Bromofluorobenzene	101%	83-118%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA91859
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI2437-BS	I73429.D	1	01/12/22	LR	n/a	n/a	VI2437

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91859-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
156-59-2	cis-1,2-Dichloroethylene	25	24.3	97	78-120
79-01-6	Trichloroethylene	25	24.4	98	81-126

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	98%	83-118%
17060-07-0	1,2-Dichloroethane-D4	99%	79-125%
2037-26-5	Toluene-D8	103%	85-112%
460-00-4	4-Bromofluorobenzene	101%	83-118%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA91859
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VC6187-BS	C0153300.D	1	01/12/22	LV	n/a	n/a	VC6187

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91859-35

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
79-01-6	Trichloroethylene	25	23.9	96	81-126

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	92%	83-118%
17060-07-0	1,2-Dichloroethane-D4	96%	79-125%
2037-26-5	Toluene-D8	103%	85-112%
460-00-4	4-Bromofluorobenzene	107%	83-118%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA91859
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI2440-BS	I73483.D	1	01/13/22	LR	n/a	n/a	VI2440

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91859-1, FA91859-3, FA91859-4, FA91859-5, FA91859-6, FA91859-7, FA91859-8, FA91859-10, FA91859-11, FA91859-12, FA91859-27, FA91859-28, FA91859-29, FA91859-30, FA91859-31, FA91859-32

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	163	130	50-147
71-43-2	Benzene	25	23.6	94	81-122
74-97-5	Bromochloromethane	25	20.7	83	76-123
75-27-4	Bromodichloromethane	25	23.0	92	79-123
75-25-2	Bromoform	25	22.5	90	66-123
78-93-3	2-Butanone (MEK)	125	129	103	56-143
75-15-0	Carbon Disulfide	25	18.6	74	66-148
56-23-5	Carbon Tetrachloride	25	22.5	90	76-136
108-90-7	Chlorobenzene	25	23.5	94	82-124
75-00-3	Chloroethane	25	20.2	81	62-144
67-66-3	Chloroform	25	21.7	87	80-124
110-82-7	Cyclohexane	25	22.8	91	73-138
124-48-1	Dibromochloromethane	25	22.7	91	78-122
96-12-8	1,2-Dibromo-3-chloropropane	25	23.0	92	64-123
106-93-4	1,2-Dibromoethane	25	23.9	96	75-120
75-71-8	Dichlorodifluoromethane	25	19.8	79	42-167
95-50-1	1,2-Dichlorobenzene	25	24.3	97	82-124
541-73-1	1,3-Dichlorobenzene	25	24.7	99	84-125
106-46-7	1,4-Dichlorobenzene	25	22.5	90	78-120
75-34-3	1,1-Dichloroethane	25	23.1	92	81-122
107-06-2	1,2-Dichloroethane	25	22.3	89	75-125
75-35-4	1,1-Dichloroethylene	25	22.6	90	78-137
156-59-2	cis-1,2-Dichloroethylene	25	23.5	94	78-120
156-60-5	trans-1,2-Dichloroethylene	25	23.6	94	76-127
78-87-5	1,2-Dichloropropane	25	23.6	94	76-124
10061-01-5	cis-1,3-Dichloropropene	25	23.5	94	75-118
10061-02-6	trans-1,3-Dichloropropene	25	24.7	99	80-120
100-41-4	Ethylbenzene	25	25.0	100	81-121
76-13-1	Freon 113	25	20.5	82	72-134
591-78-6	2-Hexanone	125	122	98	61-129
98-82-8	Isopropylbenzene	25	26.7	107	83-132
79-20-9	Methyl Acetate	125	103	82	65-126
74-83-9	Methyl Bromide	25	35.2	141	59-143
74-87-3	Methyl Chloride	25	22.5	90	50-159
75-09-2	Methylene Chloride	25	18.7	75	69-135
108-10-1	4-Methyl-2-pentanone (MIBK)	125	133	106	66-122

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA91859
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI2440-BS	I73483.D	1	01/13/22	LR	n/a	n/a	VI2440

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91859-1, FA91859-3, FA91859-4, FA91859-5, FA91859-6, FA91859-7, FA91859-8, FA91859-10, FA91859-11, FA91859-12, FA91859-27, FA91859-28, FA91859-29, FA91859-30, FA91859-31, FA91859-32

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
1634-04-4	Methyl Tert Butyl Ether	25	21.2	85	72-117
100-42-5	Styrene	25	25.5	102	78-119
630-20-6	1,1,1,2-Tetrachloroethane	25	24.9	100	77-122
79-34-5	1,1,2,2-Tetrachloroethane	25	23.5	94	72-120
127-18-4	Tetrachloroethylene	25	25.3	101	76-135
108-88-3	Toluene	25	24.6	98	80-120
87-61-6	1,2,3-Trichlorobenzene	25	24.2	97	68-131
120-82-1	1,2,4-Trichlorobenzene	25	24.2	97	73-129
71-55-6	1,1,1-Trichloroethane	25	22.8	91	75-130
79-00-5	1,1,2-Trichloroethane	25	23.7	95	76-119
79-01-6	Trichloroethylene	25	23.4	94	81-126
75-69-4	Trichlorofluoromethane	25	24.5	98	71-156
75-01-4	Vinyl Chloride	25	23.3	93	69-159
1330-20-7	Xylene (total)	75	76.3	102	80-126

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	96%	83-118%
17060-07-0	1,2-Dichloroethane-D4	98%	79-125%
2037-26-5	Toluene-D8	104%	85-112%
460-00-4	4-Bromofluorobenzene	103%	83-118%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA91859
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VY2526-BS	Y60689.D	1	01/17/22	CF	n/a	n/a	VY2526

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91859-28

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
79-01-6	Trichloroethylene	25	29.0	116	81-126

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	103%	83-118%
17060-07-0	1,2-Dichloroethane-D4	99%	79-125%
2037-26-5	Toluene-D8	98%	85-112%
460-00-4	4-Bromofluorobenzene	97%	83-118%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA91859
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA91702-5MS	1P84113.D	1	12/27/21	CV	n/a	n/a	V1P3364
FA91702-5MSD	1P84115.D	1	12/27/21	CV	n/a	n/a	V1P3364
FA91702-5	1P84095.D	1	12/26/21	CV	n/a	n/a	V1P3364

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91859-33, FA91859-34, FA91859-35, FA91859-36, FA91859-37, FA91859-38

CAS No.	Compound	FA91702-5 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		125	137	110	125	133	106	3	50-147/21
71-43-2	Benzene	ND		25	24.9	100	25	25.1	100	1	81-122/14
74-97-5	Bromochloromethane	ND		25	20.9	84	25	22.0	88	5	76-123/14
75-27-4	Bromodichloromethane	ND		25	24.3	97	25	24.9	100	2	79-123/19
75-25-2	Bromoform	ND		25	21.3	85	25	21.3	85	0	66-123/21
78-93-3	2-Butanone (MEK)	ND		125	133	106	125	129	103	3	56-143/18
75-15-0	Carbon Disulfide	ND		25	21.2	85	25	23.4	94	10	66-148/23
56-23-5	Carbon Tetrachloride	ND		25	24.8	99	25	24.8	99	0	76-136/23
108-90-7	Chlorobenzene	ND		25	22.9	92	25	23.1	92	1	82-124/14
75-00-3	Chloroethane	ND		25	26.5	106	25	27.8	111	5	62-144/20
67-66-3	Chloroform	ND		25	23.9	96	25	23.7	95	1	80-124/15
110-82-7	Cyclohexane	ND		25	23.9	96	25	24.7	99	3	73-138/18
124-48-1	Dibromochloromethane	ND		25	22.4	90	25	22.5	90	0	78-122/19
96-12-8	1,2-Dibromo-3-chloropropane	ND		25	23.9	96	25	23.7	95	1	64-123/18
106-93-4	1,2-Dibromoethane	ND		25	23.0	92	25	22.8	91	1	75-120/13
75-71-8	Dichlorodifluoromethane	ND		25	22.5	90	25	23.6	94	5	42-167/19
95-50-1	1,2-Dichlorobenzene	ND		25	22.4	90	25	22.3	89	0	82-124/14
541-73-1	1,3-Dichlorobenzene	ND		25	23.0	92	25	23.1	92	0	84-125/14
106-46-7	1,4-Dichlorobenzene	ND		25	21.8	87	25	21.9	88	0	78-120/15
75-34-3	1,1-Dichloroethane	ND		25	25.1	100	25	25.2	101	0	81-122/15
107-06-2	1,2-Dichloroethane	ND		25	25.1	100	25	24.6	98	2	75-125/14
75-35-4	1,1-Dichloroethylene	ND		25	25.7	103	25	26.2	105	2	78-137/18
156-59-2	cis-1,2-Dichloroethylene	4.5		25	28.0	94	25	28.6	96	2	78-120/15
156-60-5	trans-1,2-Dichloroethylene	ND		25	24.8	99	25	25.0	100	1	76-127/17
78-87-5	1,2-Dichloropropane	ND		25	24.7	99	25	25.2	101	2	76-124/14
10061-01-5	cis-1,3-Dichloropropene	ND		25	23.3	93	25	23.9	96	3	75-118/23
10061-02-6	trans-1,3-Dichloropropene	ND		25	23.3	93	25	23.7	95	2	80-120/22
100-41-4	Ethylbenzene	ND		25	23.2	93	25	23.8	95	3	81-121/14
76-13-1	Freon 113	ND		25	24.0	96	25	25.2	101	5	72-134/20
591-78-6	2-Hexanone	ND		125	131	105	125	127	102	3	61-129/18
98-82-8	Isopropylbenzene	ND		25	23.5	94	25	23.7	95	1	83-132/15
79-20-9	Methyl Acetate	ND		125	111	89	125	106	85	5	65-126/18
74-83-9	Methyl Bromide	ND		25	28.1	112	25	33.4	134	17	59-143/19
74-87-3	Methyl Chloride	ND		25	19.6	78	25	20.6	82	5	50-159/19
75-09-2	Methylene Chloride	ND		25	19.1	76	25	19.3	77	1	69-135/16
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		125	127	102	125	124	99	2	66-122/16

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA91859
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA91702-5MS	1P84113.D	1	12/27/21	CV	n/a	n/a	V1P3364
FA91702-5MSD	1P84115.D	1	12/27/21	CV	n/a	n/a	V1P3364
FA91702-5	1P84095.D	1	12/26/21	CV	n/a	n/a	V1P3364

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91859-33, FA91859-34, FA91859-35, FA91859-36, FA91859-37, FA91859-38

CAS No.	Compound	FA91702-5 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
1634-04-4	Methyl Tert Butyl Ether	ND		25	23.4	94	25	23.0	92	2	72-117/14
100-42-5	Styrene	ND		25	24.0	96	25	24.3	97	1	78-119/23
630-20-6	1,1,1,2-Tetrachloroethane	ND		25	23.9	96	25	23.8	95	0	77-122/19
79-34-5	1,1,2,2-Tetrachloroethane	ND		25	24.2	97	25	23.7	95	2	72-120/14
127-18-4	Tetrachloroethylene	ND		25	21.3	85	25	21.5	86	1	76-135/16
108-88-3	Toluene	ND		25	23.2	93	25	23.5	94	1	80-120/14
87-61-6	1,2,3-Trichlorobenzene	ND		25	21.8	87	25	22.6	90	4	68-131/25
120-82-1	1,2,4-Trichlorobenzene	ND		25	21.8	87	25	22.3	89	2	73-129/20
71-55-6	1,1,1-Trichloroethane	ND		25	24.1	96	25	24.2	97	0	75-130/16
79-00-5	1,1,2-Trichloroethane	ND		25	22.7	91	25	22.8	91	0	76-119/14
79-01-6	Trichloroethylene	9.2		25	33.0	95	25	33.1	96	0	81-126/15
75-69-4	Trichlorofluoromethane	ND		25	29.3	117	25	28.2	113	4	71-156/21
75-01-4	Vinyl Chloride	ND		25	24.8	99	25	26.4	106	6	69-159/18
1330-20-7	Xylene (total)	ND		75	71.2	95	75	71.5	95	0	80-126/15

CAS No.	Surrogate Recoveries	MS	MSD	FA91702-5	Limits
1868-53-7	Dibromofluoromethane	102%	101%	100%	83-118%
17060-07-0	1,2-Dichloroethane-D4	104%	104%	105%	79-125%
2037-26-5	Toluene-D8	98%	98%	98%	85-112%
460-00-4	4-Bromofluorobenzene	101%	99%	102%	83-118%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA91859
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA91890-1MS	1A41292.D	50	01/12/22	CV	n/a	n/a	V1A1673
FA91890-1MSD	1A41293.D	50	01/12/22	CV	n/a	n/a	V1A1673
FA91890-1 [a]	1A41260.D	50	01/12/22	CV	n/a	n/a	V1A1673

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91859-12

CAS No.	Compound	FA91890-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
156-59-2	cis-1,2-Dichloroethylene	83.2		1250	1280	96	1250	1320	99	3	78-120/15
79-01-6	Trichloroethylene	5200	LQY	1250	6060	69* [b]	1250	6640	115	9	81-126/15
75-01-4	Vinyl Chloride	50 U		1250	1260	101	1250	1370	110	8	69-159/18

CAS No.	Surrogate Recoveries	MS	MSD	FA91890-1	Limits
1868-53-7	Dibromofluoromethane	94%	93%	96%	83-118%
17060-07-0	1,2-Dichloroethane-D4	81%	83%	96%	79-125%
2037-26-5	Toluene-D8	102%	103%	100%	85-112%
460-00-4	4-Bromofluorobenzene	98%	99%	97%	83-118%

(a) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(b) Outside control limits due to high level in sample relative to spike amount.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA91859
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA91823-5MS	I73450.D	1	01/13/22	LR	n/a	n/a	VI2437
FA91823-5MSD	I73451.D	1	01/13/22	LR	n/a	n/a	VI2437
FA91823-5 [a]	I73440.D	1	01/13/22	LR	n/a	n/a	VI2437

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91859-2

CAS No.	Compound	FA91823-5 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
156-59-2	cis-1,2-Dichloroethylene	ND		25	23.6	94	25	23.6	94	0	78-120/15
79-01-6	Trichloroethylene	11.6		25	36.8	101	25	36.1	98	2	81-126/15

CAS No.	Surrogate Recoveries	MS	MSD	FA91823-5	Limits
1868-53-7	Dibromofluoromethane	98%	99%	98%	83-118%
17060-07-0	1,2-Dichloroethane-D4	104%	102%	104%	79-125%
2037-26-5	Toluene-D8	95%	97%	102%	85-112%
460-00-4	4-Bromofluorobenzene	94%	96%	99%	83-118%

(a) Confirmation run beyond holdtime.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA91859
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA91699-3MS	C0153324.D	1	01/13/22	LV	n/a	n/a	VC6187
FA91699-3MSD	C0153325.D	1	01/13/22	LV	n/a	n/a	VC6187
FA91699-3 [a]	C0153307.D	1	01/13/22	LV	n/a	n/a	VC6187

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91859-35

CAS No.	Compound	FA91699-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
79-01-6	Trichloroethylene	1.0 U		25	23.0	92	25	23.2	93	1	81-126/15

CAS No.	Surrogate Recoveries	MS	MSD	FA91699-3	Limits
1868-53-7	Dibromofluoromethane	97%	96%	96%	83-118%
17060-07-0	1,2-Dichloroethane-D4	100%	98%	95%	79-125%
2037-26-5	Toluene-D8	103%	106%	102%	85-112%
460-00-4	4-Bromofluorobenzene	106%	107%	104%	83-118%

(a) Confirmation run beyond holdtime.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA91859
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA91859-28MS	I73506.D	10000	01/14/22	LR	n/a	n/a	VI2440
FA91859-28MSD	I73507.D	10000	01/14/22	LR	n/a	n/a	VI2440
FA91859-28 [a]	I73501.D	10000	01/14/22	LR	n/a	n/a	VI2440

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91859-1, FA91859-3, FA91859-4, FA91859-5, FA91859-6, FA91859-7, FA91859-8, FA91859-9, FA91859-10, FA91859-11, FA91859-12, FA91859-27, FA91859-28, FA91859-29, FA91859-30, FA91859-31, FA91859-32

CAS No.	Compound	FA91859-28 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	250000 UQ	Q	1250000	1260000	101	1250000	1260000	101	0	50-147/21
71-43-2	Benzene	10000 UQ	Q	250000	251000	100	250000	247000	99	2	81-122/14
74-97-5	Bromochloromethane	10000 UQ	Q	250000	213000	85	250000	210000	84	1	76-123/14
75-27-4	Bromodichloromethane	10000 UQ	Q	250000	232000	93	250000	236000	94	2	79-123/19
75-25-2	Bromoform	10000 UQ	Q	250000	207000	83	250000	207000	83	0	66-123/21
78-93-3	2-Butanone (MEK)	50000 UQ	Q	1250000	1180000	94	1250000	1190000	95	1	56-143/18
75-15-0	Carbon Disulfide	20000 UQ	Q	250000	171000	68	250000	169000	68	1	66-148/23
56-23-5	Carbon Tetrachloride	10000 UQ	Q	250000	222000	89	250000	220000	88	1	76-136/23
108-90-7	Chlorobenzene	10000 UQ	Q	250000	236000	94	250000	236000	94	0	82-124/14
75-00-3	Chloroethane	20000 UJQ	JQ	250000	235000	94	250000	244000	98	4	62-144/20
67-66-3	Chloroform	10000 UQ	Q	250000	226000	90	250000	226000	90	0	80-124/15
110-82-7	Cyclohexane	10000 UQ	Q	250000	221000	88	250000	222000	89	0	73-138/18
124-48-1	Dibromochloromethane	10000 UQ	Q	250000	214000	86	250000	219000	88	2	78-122/19
96-12-8	1,2-Dibromo-3-chloropropane	50000 UQ	Q	250000	217000	87	250000	216000	86	0	64-123/18
106-93-4	1,2-Dibromoethane	20000 UQ	Q	250000	228000	91	250000	230000	92	1	75-120/13
75-71-8	Dichlorodifluoromethane	20000 UQ	Q	250000	174000	70	250000	200000	80	14	42-167/19
95-50-1	1,2-Dichlorobenzene	10000 UQ	Q	250000	235000	94	250000	230000	92	2	82-124/14
541-73-1	1,3-Dichlorobenzene	10000 UQ	Q	250000	241000	96	250000	243000	97	1	84-125/14
106-46-7	1,4-Dichlorobenzene	10000 UQ	Q	250000	225000	90	250000	222000	89	1	78-120/15
75-34-3	1,1-Dichloroethane	10000 UQ	Q	250000	240000	96	250000	241000	96	0	81-122/15
107-06-2	1,2-Dichloroethane	10000 UQ	Q	250000	240000	96	250000	235000	94	2	75-125/14
75-35-4	1,1-Dichloroethylene	10000 UQ	Q	250000	219000	88	250000	216000	86	1	78-137/18
156-59-2	cis-1,2-Dichloroethylene	11000	Q	250000	242000	92	250000	244000	93	1	78-120/15
156-60-5	trans-1,2-Dichloroethylene	10000 UQ	Q	250000	234000	94	250000	236000	94	1	76-127/17
78-87-5	1,2-Dichloropropane	10000 UQ	Q	250000	238000	95	250000	238000	95	0	76-124/14
10061-01-5	cis-1,3-Dichloropropene	10000 UQ	Q	250000	218000	87	250000	224000	90	3	75-118/23
10061-02-6	trans-1,3-Dichloropropene	10000 UQ	Q	250000	225000	90	250000	226000	90	0	80-120/22
100-41-4	Ethylbenzene	10000 UQ	Q	250000	244000	98	250000	246000	98	1	81-121/14
76-13-1	Freon 113	10000 UQ	Q	250000	213000	85	250000	208000	83	2	72-134/20
591-78-6	2-Hexanone	100000 UQ	Q	1250000	1130000	90	1250000	1150000	92	2	61-129/18
98-82-8	Isopropylbenzene	10000 UQ	Q	250000	242000	97	250000	248000	99	2	83-132/15
79-20-9	Methyl Acetate	200000 UQ	Q	1250000	1070000	86	1250000	1050000	84	2	65-126/18
74-83-9	Methyl Bromide	50000 UQ	Q	250000	359000	144*	250000	385000	154*	7	59-143/19
74-87-3	Methyl Chloride	20000 UQ	Q	250000	218000	87	250000	243000	97	11	50-159/19
75-09-2	Methylene Chloride	50000 UQ	Q	250000	203000	81	250000	201000	80	1	69-135/16
108-10-1	4-Methyl-2-pentanone (MIBK)	50000 UQ	Q	1250000	1250000	100	1250000	1270000	102	2	66-122/16

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA91859
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA91859-28MS	I73506.D	10000	01/14/22	LR	n/a	n/a	VI2440
FA91859-28MSD	I73507.D	10000	01/14/22	LR	n/a	n/a	VI2440
FA91859-28 [a]	I73501.D	10000	01/14/22	LR	n/a	n/a	VI2440

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91859-1, FA91859-3, FA91859-4, FA91859-5, FA91859-6, FA91859-7, FA91859-8, FA91859-9, FA91859-10, FA91859-11, FA91859-12, FA91859-27, FA91859-28, FA91859-29, FA91859-30, FA91859-31, FA91859-32

CAS No.	Compound	FA91859-28 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
1634-04-4	Methyl Tert Butyl Ether	10000 UQ	Q	250000	195000	78	250000	199000	80	2	72-117/14
100-42-5	Styrene	10000 UQ	Q	250000	240000	96	250000	244000	98	2	78-119/23
630-20-6	1,1,1,2-Tetrachloroethane	10000 UQ	Q	250000	245000	98	250000	246000	98	0	77-122/19
79-34-5	1,1,2,2-Tetrachloroethane	10000 UQ	Q	250000	238000	95	250000	236000	94	1	72-120/14
127-18-4	Tetrachloroethylene	10000 UQ	Q	250000	266000	106	250000	267000	107	0	76-135/16
108-88-3	Toluene	10000 UQ	Q	250000	239000	96	250000	240000	96	0	80-120/14
87-61-6	1,2,3-Trichlorobenzene	20000 UQ	Q	250000	226000	90	250000	226000	90	0	68-131/25
120-82-1	1,2,4-Trichlorobenzene	20000 UQ	Q	250000	215000	86	250000	213000	85	1	73-129/20
71-55-6	1,1,1-Trichloroethane	10000 UQ	Q	250000	230000	92	250000	230000	92	0	75-130/16
79-00-5	1,1,2-Trichloroethane	10000 UQ	Q	250000	240000	96	250000	235000	94	2	76-119/14
79-01-6	Trichloroethylene	1620000	LQ	250000	1710000	36* [b]	250000	1600000	-8* [b]	7	81-126/15
75-69-4	Trichlorofluoromethane	20000 UQ	Q	250000	266000	106	250000	253000	101	5	71-156/21
75-01-4	Vinyl Chloride	10000 UQ	Q	250000	219000	88	250000	243000	97	10	69-159/18
1330-20-7	Xylene (total)	30000 UQ	Q	750000	723000	96	750000	736000	98	2	80-126/15

CAS No.	Surrogate Recoveries	MS	MSD	FA91859-28	Limits
1868-53-7	Dibromofluoromethane	99%	98%	97%Q	83-118%
17060-07-0	1,2-Dichloroethane-D4	103%	102%	105%Q	79-125%
2037-26-5	Toluene-D8	99%	100%	102%Q	85-112%
460-00-4	4-Bromofluorobenzene	96%	97%	97%Q	83-118%

(a) Sample was not preserved to a pH < 2. Sample analyzed beyond hold time; reported results are considered minimum values.
(b) Outside control limits due to high level in sample relative to spike amount.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA91859
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA91859-28MS	Y60690.D	20000	01/17/22	CF	n/a	n/a	VY2526
FA91859-28MSD	Y60691.D	20000	01/17/22	CF	n/a	n/a	VY2526
FA91859-28 [a]	Y60688.D	20000	01/17/22	CF	n/a	n/a	VY2526

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91859-28

CAS No.	Compound	FA91859-28 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
79-01-6	Trichloroethylene	3070000	LQ	500000	3560000	98	500000	3580000	102	1	81-126/15

CAS No.	Surrogate Recoveries	MS	MSD	FA91859-28	Limits
1868-53-7	Dibromofluoromethane	102%	101%	95%	83-118%
17060-07-0	1,2-Dichloroethane-D4	100%	98%	100%	79-125%
2037-26-5	Toluene-D8	98%	97%	96%	85-112%
460-00-4	4-Bromofluorobenzene	98%	96%	93%	83-118%

(a) Sample was not preserved to a pH < 2. Sample analyzed beyond hold time; reported results are considered minimum values.

* = Outside of Control Limits.

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

Tetra Tech NUS

NASA-LC 34, Freedom Rd, CCAFS, FL

112G08985

SGS Job Number: FA91890

Sampling Dates: 12/20/21 - 12/21/21

Report to:

Tetra-Tech, Inc.
661 Andersen Dr Foster Plaza 7
Pittsburgh, PA 15220
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amy.thomson@tetratech.com
ATTN: Mark Jonnet

Total number of pages in report: **214**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Norm Farmer
Technical Director

Client Service contact: Andrea Colby 407-425-6700

Certifications: FL(E83510), LA(03051), KS(E-10327), NC(573), NJ(FL002), NY(12022), SC(96038001) DoD ELAP(ANAB L2229), AZ(AZ0806), CA(2937), TX(T104704404), PA(68-03573), VA(460177), AL, AK, AR, CT, IA, KY, MA, MI. MS, ND, NH, NV, OK, OR, IL, UT, VT, WA, WI, WV

January 24, 2022

Mr. Mark Jonnet
Tetra Tech
661 Andersen Drive
Pittsburgh, PA 15220

RE: SGS North America Inc. - Orlando job FA91890 Reissue

Dear Mr. Jonnet,

The final report for job number FA91890 has been edited to reflect requested corrections. These edits have been incorporated into the revised report.

The Y data qualifiers have been removed per your request.

SGS North America Inc. - Orlando apologies for any inconvenience this may have caused. Please feel free to contact us if we can be of further assistance.

Sincerely,

SGS North America, Inc. - Orlando

Sections: 1 2 3 4 5 6

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SGS North America Inc.

Sample Summary

Tetra Tech NUS

Job No: FA91890

NASA-LC 34, Freedom Rd, CCAFS, FL
Project No: 112G08985

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
FA91890-1	12/20/21	17:20	DF	12/21/21	AQ	Ground Water	LC34-DPT0597-008.0-20211220
FA91890-2	12/21/21	07:05	DF	12/21/21	AQ	Ground Water	LC34-DPT0597-013.0-20211221
FA91890-3	12/21/21	07:20	DF	12/21/21	AQ	Ground Water	LC34-DPT0597-018.0-20211221
FA91890-4	12/21/21	07:30	DF	12/21/21	AQ	Ground Water	LC34-DPT0597-023.0-20211221
FA91890-5	12/21/21	07:40	DF	12/21/21	AQ	Ground Water	LC34-DPT0597-028.0-20211221
FA91890-6	12/21/21	07:55	DF	12/21/21	AQ	Ground Water	LC34-DPT0597-033.0-20211221
FA91890-7	12/21/21	08:10	DF	12/21/21	AQ	Ground Water	LC34-DPT0597-038.0-20211221
FA91890-8	12/21/21	09:25	DF	12/21/21	AQ	Ground Water	LC34-DPT0597-043.0-20211221
FA91890-9	12/21/21	08:40	DF	12/21/21	AQ	Ground Water	LC34-DPT0597-048.0-20211221
FA91890-10	12/21/21	09:05	DF	12/21/21	AQ	Ground Water	LC34-DPT0597-053.0-20211221
FA91890-11	12/21/21	09:20	DF	12/21/21	AQ	Ground Water	LC34-DPT0597-058.0-20211221
FA91890-12	12/21/21	09:45	DF	12/21/21	AQ	Ground Water	LC34-DPT0597-063.0-20211221
FA91890-13	12/21/21	10:10	DF	12/21/21	AQ	Ground Water	LC34-DPT0597-068.0-20211221

SGS North America Inc.

Sample Summary
(continued)

Tetra Tech NUS

Job No: FA91890

NASA-LC 34, Freedom Rd, CCAFS, FL
Project No: 112G08985

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
FA91890-14	12/20/21	16:35	DF	12/21/21	AQ	Ground Water	LC34-DPT0600-008.0-20211220
FA91890-15	12/20/21	16:55	DF	12/21/21	AQ	Ground Water	LC34-DPT0600-013.0-20211220
FA91890-16	12/20/21	17:05	DF	12/21/21	AQ	Ground Water	LC34-DPT0600-018.0-20211220
FA91890-17	12/20/21	17:15	DF	12/21/21	AQ	Ground Water	LC34-DPT0600-023.0-20211220
FA91890-18	12/21/21	07:10	DF	12/21/21	AQ	Ground Water	LC34-DPT0600-028.0-20211221
FA91890-19	12/21/21	07:25	DF	12/21/21	AQ	Ground Water	LC34-DPT0600-033.0-20211221
FA91890-20	12/21/21	07:35	DF	12/21/21	AQ	Ground Water	LC34-DPT0600-038.0-20211221
FA91890-21	12/21/21	07:45	DF	12/21/21	AQ	Ground Water	LC34-DPT0600-043.0-20211221
FA91890-22	12/21/21	08:00	DF	12/21/21	AQ	Ground Water	LC34-DPT0600-048.0-20211221
FA91890-23	12/21/21	08:15	DF	12/21/21	AQ	Ground Water	LC34-DPT0600-053.0-20211221
FA91890-24	12/21/21	08:30	DF	12/21/21	AQ	Ground Water	LC34-DPT0600-058.0-20211221
FA91890-25	12/21/21	08:45	DF	12/21/21	AQ	Ground Water	LC34-DPT0600-063.0-20211221
FA91890-26	12/21/21	09:15	DF	12/21/21	AQ	Ground Water	LC34-DPT0600-068.0-20211221

Sample Summary
(continued)

Tetra Tech NUS

Job No: FA91890

NASA-LC 34, Freedom Rd, CCAFS, FL
Project No: 112G08985

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
FA91890-27	12/21/21	09:35	DF	12/21/21	AQ	Ground Water	LC34-DPT0600-073.0-20211221
FA91890-28	12/21/21	10:05	DF	12/21/21	AQ	Ground Water	LC34-DPT0600-078.0-20211221
FA91890-29	12/21/21	10:25	DF	12/21/21	AQ	Ground Water	LC34-DPT0600-083.0-20211221
FA91890-30	12/21/21	10:55	DF	12/21/21	AQ	Ground Water	LC34-DPT0600-088.0-20211221
FA91890-31	12/21/21	11:15	DF	12/21/21	AQ	Ground Water	LC34-DPT0600-093.0-20211221
FA91890-32	12/21/21	11:45	DF	12/21/21	AQ	Ground Water	LC34-DPT0600-098.0-20211221
FA91890-33	12/21/21	13:05	DF	12/21/21	AQ	Ground Water	LC34-DPT0599-008.0-20211221
FA91890-34	12/21/21	13:10	DF	12/21/21	AQ	Ground Water	LC34-DPT0599-013.0-20211221
FA91890-35	12/21/21	13:20	DF	12/21/21	AQ	Ground Water	LC34-DPT0599-018.0-20211221
FA91890-36	12/21/21	13:30	DF	12/21/21	AQ	Ground Water	LC34-DPT0599-023.0-20211221
FA91890-37	12/21/21	13:40	DF	12/21/21	AQ	Ground Water	LC34-DPT0599-028.0-20211221
FA91890-38	12/21/21	14:00	DF	12/21/21	AQ	Ground Water	LC34-DPT0599-033.0-20211221
FA91890-39	12/21/21	14:05	DF	12/21/21	AQ	Ground Water	LC34-DPT0599-038.0-20211221

Sample Summary
(continued)

Tetra Tech NUS

Job No: FA91890

NASA-LC 34, Freedom Rd, CCAFS, FL
Project No: 112G08985

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
FA91890-40	12/21/21	10:45	DF	12/21/21	AQ	Ground Water	LC34-DPT0597-073.0-20211221
FA91890-41	12/21/21	11:20	DF	12/21/21	AQ	Ground Water	LC34-DPT0597-078.0-20211221
FA91890-42	12/21/21	11:40	DF	12/21/21	AQ	Ground Water	LC34-DPT0597-083.0-20211221
FA91890-43	12/21/21	12:15	DF	12/21/21	AQ	Ground Water	LC34-DPT0597-088.0-20211221
FA91890-44	12/21/21	13:15	DF	12/21/21	AQ	Ground Water	LC34-DPT0597-093.0-20211221
FA91890-45	12/21/21	13:45	DF	12/21/21	AQ	Ground Water	LC34-DPT0597-098.0-20211221
FA91890-46	12/21/21	14:40	DF	12/21/21	AQ	Ground Water	LC34-DPT0596-008.0-20211221
FA91890-47	12/21/21	14:45	DF	12/21/21	AQ	Ground Water	LC34-DPT0596-013.0-20211221
FA91890-48	12/21/21	15:00	DF	12/21/21	AQ	Ground Water	LC34-DPT0596-018.0-20211221
FA91890-49	12/21/21	15:10	DF	12/21/21	AQ	Ground Water	LC34-DPT0596-023.0-20211221
FA91890-50	12/21/21	15:20	DF	12/21/21	AQ	Ground Water	LC34-DPT0596-028.0-20211221
FA91890-51	12/21/21	15:40	DF	12/21/21	AQ	Ground Water	LC34-DPT0596-033.0-20211221
FA91890-52	12/21/21	15:55	DF	12/21/21	AQ	Ground Water	LC34-DPT0596-038.0-20211221

Sample Summary
(continued)

Tetra Tech NUS

Job No: FA91890

NASA-LC 34, Freedom Rd, CCAFS, FL
Project No: 112G08985

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
FA91890-53	12/21/21	14:15	DF	12/21/21	AQ	Ground Water	LC34-DPT0599-043.0-20211221
FA91890-54	12/21/21	14:30	DF	12/21/21	AQ	Ground Water	LC34-DPT0599-048.0-20211221
FA91890-55	12/21/21	14:45	DF	12/21/21	AQ	Ground Water	LC34-DPT0599-053.0-20211221
FA91890-56	12/21/21	14:55	DF	12/21/21	AQ	Ground Water	LC34-DPT0599-058.0-20211221
FA91890-57	12/21/21	15:15	DF	12/21/21	AQ	Ground Water	LC34-DPT0599-063.0-20211221
FA91890-58	12/21/21	15:25	DF	12/21/21	AQ	Ground Water	LC34-DPT0599-068.0-20211221
FA91890-59	12/21/21	15:50	DF	12/21/21	AQ	Ground Water	LC34-DPT0599-073.0-20211221

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Tetra Tech NUS **Job No:** FA91890

Site: NASA-LC 34, Freedom Rd, CCAFS, FL **Report Date** 1/19/2022 11:36:47

On 12/21/2021, 59 Sample(s), 0 Trip Blank(s) were received at SGS North America Inc. at a maximum corrected temperature of 2 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. Job Number of FA91890 was Assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section. Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages

MS Volatiles By Method SW846 8260B

Matrix: AQ **Batch ID:** V1A1668

Sample(s) FA91823-20MS, FA91823-20MSD were used as the QC samples indicated.

The following samples were run outside of holding time for method SW846 8260B: FA91890-47, FA91890-48, FA91890-49, FA91890-50, FA91890-51, FA91890-52, FA91890-53, FA91890-54, FA91890-55, FA91890-56

Sample(s) FA91890-48, FA91890-50, FA91890-51, FA91890-52, FA91890-54, FA91890-56 are associated with an CCV that has a recovery for Bromochloromethane, Carbon Disulfide, Freon 113, Trichlorofluoromethane, outside high control limit.

FA91890-47: Sample was not preserved to pH < 2. Sample analyzed beyond hold time; reported results are considered minimum values.

FA91890-47 for Bromochloromethane: Associated CCV outside of control limits high, sample was ND.

FA91890-48: Sample was not preserved to pH < 2. Sample analyzed beyond hold time; reported results are considered minimum values.

FA91890-48 for Bromochloromethane: Associated CCV outside of control limits high.

FA91890-49: Sample was not preserved to pH < 2. Sample analyzed beyond hold time; reported results are considered minimum values.

FA91890-49 for Bromochloromethane: Associated CCV outside of control limits high, sample was ND.

FA91890-50 for Bromochloromethane: Associated CCV outside of control limits high.

FA91890-50: Sample was not preserved to pH < 2. Sample analyzed beyond hold time; reported results are considered minimum values.

FA91890-51 for Bromochloromethane: Associated CCV outside of control limits high.

FA91890-51: Sample was not preserved to pH < 2. Sample analyzed beyond hold time; reported results are considered minimum values.

FA91890-52 for Bromochloromethane: Associated CCV outside of control limits high.

FA91890-52: Sample was not preserved to a pH < 2. Sample analyzed beyond hold time; reported results are considered minimum values.

FA91890-53 for Bromochloromethane: Associated CCV outside of control limits high, sample was ND.

FA91890-53: Sample was not preserved to pH < 2. Sample analyzed beyond hold time; reported results are considered minimum values.

FA91890-54 for Bromochloromethane: Associated CCV outside of control limits high.

FA91890-54: Sample was not preserved to a pH < 2. Sample analyzed beyond hold time; reported results are considered minimum values.

FA91890-55 for Bromochloromethane: Associated CCV outside of control limits high, sample was ND.

FA91890-55: Sample was not preserved to pH < 2. Sample analyzed beyond hold time; reported results are considered minimum values.

FA91890-56: Sample analyzed beyond hold time and was not preserved to a pH < 2; reported results are considered minimum values.

MS Volatiles By Method SW846 8260B

Matrix: AQ **Batch ID:** V1A1673

Sample(s) FA91890-1MS, FA91890-1MSD were used as the QC samples indicated.

The following samples were run outside of holding time for method SW846 8260B: FA91890-1, FA91890-14, FA91890-15, FA91890-17

Matrix Spike Recovery(s) for Trichloroethylene are outside control limits. Outside control limits due to high level in sample relative to spike amount.

Sample(s) FA91890-14, FA91890-15 have surrogates outside control limits.

FA91890-1: Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA91890-15: Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA91890-14: Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA91890-17: Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

Matrix: AQ **Batch ID:** V1P3366

Sample(s) FA91890-23MS, FA91890-23MSD were used as the QC samples indicated.

Blank Spike Recovery(s) for Methyl Bromide are outside control limits.

Matrix Spike Recovery(s) for Methyl Bromide are outside control limits. Probable cause is due to matrix interference.

Matrix Spike Duplicate Recovery(s) for Methyl Bromide are outside control limits. Probable cause is due to matrix interference.

FA91890-20: Sample was not preserved to pH < 2.

FA91890-7: Sample was not preserved to pH < 2.

FA91890-22: Sample was not preserved to a pH < 2.

FA91890-9: Sample was not preserved to pH < 2.

FA91890-18: Sample was not preserved to pH < 2.

FA91890-6: Sample was not preserved to pH < 2.

FA91890-21: Sample was not preserved to a pH < 2.

FA91890-19: Sample was not preserved to pH < 2.

FA91890-8: Sample was not preserved to pH < 2.

FA91890-3: Sample was not preserved to pH < 2.

FA91890-5: Sample was not preserved to pH < 2.

FA91890-10: Sample was not preserved to pH < 2.

FA91890-2: Sample was not preserved to pH < 2.

FA91890-12: Sample was not preserved to pH < 2.

FA91890-13: Sample was not preserved to pH < 2.

FA91890-23: Sample was not preserved to a pH < 2.

FA91890-4: Sample was not preserved to pH < 2.

FA91890-11: Sample was not preserved to pH < 2.

FA91890-18 for Trichlorofluoromethane: Associated CCV outside of control limits high, sample was ND.

FA91890-10 for Trichlorofluoromethane: Associated CCV outside of control limits high, sample was ND.

FA91890-4 for Trichlorofluoromethane: Associated CCV outside of control limits high, sample was ND.

FA91890-4 for Methyl Bromide: Associated ICV, BS, CCV, and, ECC recovery outside control limits high, sample is ND.

FA91890-19 for Methyl Bromide: Associated ICV, CCV, and BS outside control limits high, however sample ND.

FA91890-18 for Methyl Bromide: Associated ICV, CCV, and BS outside control limits high, however sample ND.

FA91890-22 for Trichlorofluoromethane: Associated CCV outside of control limits high, sample was ND.

FA91890-3 for Trichlorofluoromethane: Associated CCV outside of control limits high, sample was ND.

FA91890-12 for Methyl Bromide: Associated ICV, CCV, and BS outside control limits high, however sample ND.

FA91890-2 for Methyl Bromide: Associated ICV, CCV, and BS outside control limits high, however sample ND.

FA91890-12 for Trichlorofluoromethane: Associated CCV outside of control limits high, sample was ND.

FA91890-2 for Trichlorofluoromethane: Associated CCV outside of control limits high, sample was ND.

FA91890-23 for Methyl Bromide: Associated ICV, CCV, and BS outside control limits high, however sample ND.

FA91890-20 for Trichlorofluoromethane: Associated CCV outside of control limits high, sample was ND.

FA91890-13 for Methyl Bromide: Associated ICV, CCV, and BS outside control limits high, however sample ND.

FA91890-21 for Trichlorofluoromethane: Associated CCV outside of control limits high, sample was ND.

FA91890-3 for Methyl Bromide: Associated ICV, BS, CCV, and, ECC recovery outside control limits high, sample is ND.

FA91890-11 for Trichloroethylene: Results from different vials are not consistent; higher results were reported.

FA91890-11 for Methyl Bromide: Associated ICV, CCV, and BS outside control limits high, however sample ND.

FA91890-19 for Trichlorofluoromethane: Associated CCV outside of control limits high, sample was ND.

FA91890-10 for Methyl Bromide: Associated ICV, CCV, and BS outside control limits high, however sample ND.

FA91890-21 for Methyl Bromide: Associated ICV, CCV, and BS outside control limits high, however sample ND.

FA91890-13 for Trichlorofluoromethane: Associated CCV outside of control limits high, sample was ND.

FA91890-5 for Trichlorofluoromethane: Associated CCV outside of control limits high, sample was ND.

FA91890-20 for Methyl Bromide: Associated ICV, CCV, and BS outside control limits high, however sample ND.

FA91890-6 for Methyl Bromide: Associated ICV, BS, CCV, and, ECC recovery outside control limits high, sample is ND.

FA91890-7 for Trichlorofluoromethane: Associated CCV outside of control limits high, sample was ND.

FA91890-7 for Methyl Bromide: Associated ICV, CCV, and BS outside control limits high, however sample ND.

FA91890-22 for Methyl Bromide: Associated ICV, CCV, and BS outside control limits high, however sample ND.

FA91890-5 for Methyl Bromide: Associated ICV, BS, CCV, and, ECC recovery outside control limits high, sample is ND.

FA91890-8 for Trichlorofluoromethane: Associated CCV outside of control limits high, sample was ND.

FA91890-9 for Methyl Bromide: Associated ICV, CCV, and BS outside control limits high, however sample ND.

FA91890-8 for Methyl Bromide: Associated ICV, CCV, and BS outside control limits high, however sample ND.

FA91890-9 for Trichlorofluoromethane: Associated CCV outside of control limits high, sample was ND.

FA91890-6 for Trichlorofluoromethane: Associated CCV outside of control limits high, sample was ND.

FA91890-11 for Trichlorofluoromethane: Associated CCV outside of control limits high, sample was ND.

Matrix: AQ **Batch ID:** V1P3372

Sample(s) FA91933-14MS, FA91933-14MSD were used as the QC samples indicated.

The following samples were run outside of holding time for method SW846 8260B: FA91890-57, FA91890-58, FA91890-59

Blank Spike Recovery(s) for Methyl Bromide are outside control limits.

Matrix Spike Recovery(s) for Methyl Bromide, Methylene Chloride are outside control limits. Probable cause is due to matrix interference.

Matrix Spike Duplicate Recovery(s) for Methyl Bromide, Methylene Chloride are outside control limits. Probable cause is due to matrix interference.

For Sample(s) FA91890-57, FA91890-58, FA91890-59 are associated with an CCV that has a recovery for Methyl Chloride, outside low control limit.

For Sample(s) FA91890-59 are associated with an CCV that has a recovery for Bromoform, Trichlorofluoromethane outside high control limit.

FA91890-57: Sample was not preserved to a pH < 2. Sample analyzed beyond hold time; reported results are considered minimum values.

FA91890-58: Sample was not preserved to a pH < 2. Sample analyzed beyond hold time; reported results are considered minimum values.

FA91890-59: Sample was not preserved to a pH < 2. Sample analyzed beyond hold time; reported results are considered minimum values.

Matrix: AQ **Batch ID:** V1P3376

Sample(s) FA91890-8MS, FA91890-8MSD were used as the QC samples indicated.

The following samples were run outside of holding time for method SW846 8260B: FA91890-2, FA91890-3, FA91890-4, FA91890-5, FA91890-6, FA91890-7, FA91890-8

Matrix Spike Recovery(s) for Trichloroethylene are outside control limits. Outside control limits due to high level in sample relative to spike amount.

Matrix Spike Duplicate Recovery(s) for Trichloroethylene are outside control limits. Probable cause is due to matrix interference.

FA91890-2: Sample was not preserved to pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA91890-3: Sample was not preserved to pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA91890-4: Sample was not preserved to pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA91890-5: Sample was not preserved to pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA91890-6: Sample was not preserved to pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA91890-7: Sample was not preserved to pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA91890-8: Sample was not preserved to pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

Matrix: AQ **Batch ID:** V2P3359

Sample(s) FA91689-1MS, FA91689-1MSD were used as the QC samples indicated.

V2P3359-MB: Sample was treated with an anti-foaming agent.

FA91890-1 for 4-Methyl-2-pentanone (MIBK): Associated CCV outside of control limits high, sample was ND.

FA91890-1: Sample was not preserved to a pH < 2.

FA91890-14 for 4-Methyl-2-pentanone (MIBK): Associated CCV outside of control limits high, sample was ND.

FA91890-14: Sample was not preserved to a pH < 2.

FA91890-15 for 4-Methyl-2-pentanone (MIBK): Associated CCV outside of control limits high, sample was ND.

FA91890-15: Sample was not preserved to a pH < 2.

FA91890-16 for 4-Methyl-2-pentanone (MIBK): Associated CCV outside of control limits high, sample was ND.

FA91890-16: Sample was not preserved to a pH < 2.

FA91890-17 for 4-Methyl-2-pentanone (MIBK): Associated CCV outside of control limits high, sample was ND.

FA91890-17: Sample was not preserved to a pH < 2.

Matrix: AQ **Batch ID:** V2P3361

Sample(s) FA91890-41MS, FA91890-41MSD were used as the QC samples indicated.

Matrix Spike Recovery(s) for Trichloroethylene are outside control limits. Outside control limits due to high level in sample relative to spike amount.

Matrix Spike Duplicate Recovery(s) for Trichloroethylene are outside control limits. Probable cause is due to matrix interference.

Sample(s) FA91890-24, FA91890-25, FA91890-26, FA91890-27, FA91890-28, FA91890-29, FA91890-30, FA91890-31, FA91890-32, FA91890-33, FA91890-34, FA91890-35, FA91890-36, FA91890-37, FA91890-38, FA91890-39, FA91890-40, FA91890-41 are associated with an CCV that has a recovery for Methylene Chloride outside low control limit.

FA91890-24 for Methylene Chloride: Associated CCV outside of control limits low.

FA91890-24: Sample was not preserved to a pH < 2.

FA91890-25 for Methylene Chloride: Associated CCV outside of control limits low.

FA91890-25: Sample was not preserved to a pH < 2.

FA91890-26 for Methylene Chloride: Associated CCV outside of control limits low.

FA91890-26: Sample was not preserved to a pH < 2.

FA91890-27 for Methylene Chloride: Associated CCV outside of control limits low.

FA91890-27: Sample was not preserved to a pH < 2.

FA91890-28 for Methylene Chloride: Associated CCV outside of control limits low.

FA91890-28: Sample was not preserved to a pH < 2.

FA91890-29 for Methylene Chloride: Associated CCV outside of control limits low.

FA91890-29: Sample was not preserved to a pH < 2.

FA91890-30 for Methylene Chloride: Associated CCV outside of control limits low.

FA91890-30: Sample was not preserved to a pH < 2.

FA91890-31 for Methylene Chloride: Associated CCV outside of control limits low.

FA91890-31: Sample was not preserved to a pH < 2.

FA91890-32 for Methylene Chloride: Associated CCV outside of control limits low.

FA91890-32: Sample was not preserved to a pH < 2.

FA91890-33 for cis-1,2-Dichloroethylene: Suspected carry-over. Confirmed ND by reanalysis beyond hold-time.

FA91890-33 for Methylene Chloride: Associated CCV outside of control limits low.

FA91890-33 for Trichloroethylene: Suspected carry-over. Confirmed by reanalysis beyond hold-time.

FA91890-33: Sample was not preserved to a pH < 2.

FA91890-34 for Methylene Chloride: Associated CCV outside of control limits low.

FA91890-34: Sample was not preserved to a pH < 2.

FA91890-35 for Methylene Chloride: Associated CCV outside of control limits low.

FA91890-36 for Methylene Chloride: Associated CCV outside of control limits low.

FA91890-36: Sample was not preserved to a pH < 2.

FA91890-37 for Methylene Chloride: Associated CCV outside of control limits low.

FA91890-37: Sample was not preserved to a pH < 2.

FA91890-38 for Methylene Chloride: Associated CCV outside of control limits low.

FA91890-38: Sample was not preserved to a pH < 2.

FA91890-39 for Methylene Chloride: Associated CCV outside of control limits low.

FA91890-39: Sample was not preserved to a pH < 2.

FA91890-40 for Methylene Chloride: Associated CCV outside of control limits low.

FA91890-40: Sample was not preserved to a pH < 2.

FA91890-41 for Methylene Chloride: Associated CCV outside of control limits low.

FA91890-41: Sample was not preserved to a pH < 2.

Matrix: AQ **Batch ID:** V2P3369

Sample(s) FA91890-20MS, FA91890-20MSD were used as the QC samples indicated.

The following samples were run outside of holding time for method SW846 8260B: FA91890-9 FA91890-10, FA91890-12, FA91890-13, FA91890-19, FA91890-20, FA91890-42, FA91890-44, FA91890-45, FA91890-46,

Matrix Spike Recovery(s) for cis-1,2-Dichloroethylene, Trichloroethylene are outside control limits. Outside control limits due to high level in sample relative to spike amount.

Matrix Spike Duplicate Recovery(s) for Trichloroethylene are outside control limits. Probable cause is due to matrix interference.

FA91890-9: Sample was not preserved to pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA91890-10: Sample was not preserved to pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA91890-11: Sample was not preserved to pH < 2. Confirmation run beyond holdtime. Results from different vials are not consistent; higher results were reported.

FA91890-12: Sample was not preserved to pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA91890-13: Sample was not preserved to pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA91890-18: Sample was not preserved to pH < 2. Confirmation run beyond holdtime.

FA91890-19: Sample was not preserved to pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA91890-20: Sample was not preserved to pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA91890-42: Sample was not preserved to pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA91890-43: Sample was not preserved to pH < 2. Confirmation run beyond holdtime. Results from different vials are not consistent; higher results were reported.

FA91890-44: Sample was not preserved to pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA91890-45: Sample was not preserved to pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA91890-46: Sample was not preserved to pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

Matrix: AQ **Batch ID:** V2P3370

FA91890-59: Sample was not preserved to a pH < 2. Confirmation run beyond holdtime.

Matrix: AQ **Batch ID:** V2P3374

FA91890-48: Sample was not preserved to a pH < 2. Confirmation run.

FA91890-51: Sample was not preserved to a pH < 2. Confirmation run.

FA91890-50: Sample was not preserved to a pH < 2. Confirmation run.

Matrix: AQ **Batch ID:** VC6187

Sample(s) FA91699-3MS, FA91699-3MSD were used as the QC samples indicated.

The following samples were run outside of holding time for method SW846 8260B: FA91890-21, FA91890-22, FA91890-23

FA91890-21: Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA91890-22: Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA91890-23: Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

Matrix: AQ **Batch ID:** VC6189

Sample(s) FA91890-24MS, FA91890-24MSD were used as the QC samples indicated.

The following samples were run outside of holding time for method SW846 8260B: FA91890-24, FA91890-27, FA91890-28, FA91890-29, FA91890-30, FA91890-31, FA91890-32, FA91890-34, FA91890-35, FA91890-36, FA91890-37, FA91890-38.

For Sample(s) FA91890-35 are associated with an CCV that has a recovery for Vinyl Chloride outside high control limit.

FA91890-24: Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA91890-26: Sample was not preserved to a pH < 2. Confirmation run beyond holdtime.

FA91890-27: Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA91890-28: Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered

minimum values.

FA91890-29: Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA91890-30: Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA91890-31: Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA91890-32: Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA91890-33: Sample was not preserved to a pH < 2. Confirmation run beyond holdtime.

FA91890-34: Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA91890-35: Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA91890-36: Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA91890-37: Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA91890-38: Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

Matrix: AQ **Batch ID:** VI2417

Sample(s) FA91974-15MS, FA91974-15MSD were used as the QC samples indicated.

Matrix Spike Recovery(s) for Methyl Bromide are outside control limits. Probable cause is due to matrix interference.

RPD(s) for MSD for Methyl Bromide are outside control limits for sample FA91974-15MSD. Probable cause is due to sample non-homogeneity.

For Sample(s) FA91890-42, FA91890-43, FA91890-44, FA91890-45, FA91890-46 are associated with an CCV that has a recovery for Methyl Bromide outside low control limit.

VI2417-MB: Sample was treated with an anti-foaming agent.

FA91890-42 for Chloroethane: Associated CCV outside of control limits high, sample was ND.

FA91890-42 for Methyl Bromide: Associated CCV outside of control limits low.

FA91890-42: Sample was not preserved to pH < 2.

FA91890-43 for Chloroethane: Associated CCV outside of control limits high, sample was ND.

FA91890-43 for Methyl Bromide: Associated CCV outside of control limits low.

FA91890-43 for Trichloroethylene: Results from different vials are not consistent; higher results were reported.

FA91890-43: Sample was not preserved to pH < 2.

FA91890-44 for Chloroethane: Associated CCV outside of control limits high, sample was ND.

FA91890-44 for Methyl Bromide: Associated CCV outside of control limits low.

FA91890-44: Sample was not preserved to pH < 2.

FA91890-45 for Chloroethane: Associated CCV outside of control limits high, sample was ND.

FA91890-45 for Methyl Bromide: Associated CCV outside of control limits low.

FA91890-45: Sample was not preserved to pH < 2.

FA91890-46 for Chloroethane: Associated CCV outside of control limits high, sample was ND.

FA91890-46 for Methyl Bromide: Associated CCV outside of control limits low.

FA91890-46: Sample was not preserved to pH < 2.

Matrix: AQ **Batch ID:** VI2437

Sample(s) FA91823-5MS, FA91823-5MSD were used as the QC samples indicated.

The following samples were run outside of holding time for method SW846 8260B: FA91890-56

FA91890-56: Sample analyzed beyond hold time and was not preserved to a pH < 2; reported results are considered minimum values.

Matrix: AQ **Batch ID:** VI2440

Sample(s) FA91859-28MS, FA91859-28MSD were used as the QC samples indicated.

The following samples were run outside of holding time for method SW846 8260B: FA91890-16

Matrix Spike Recovery(s) for Trichloroethylene are outside control limits. Outside control limits due to high level in sample relative to spike amount.

Matrix Spike Duplicate Recovery(s) for Trichloroethylene are outside control limits. Probable cause is due to matrix interference.

FA91890-16: Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

Matrix: AQ **Batch ID:** VI2443

Sample(s) FA91890-54MS, FA91890-54MSD were used as the QC samples indicated.

The following samples were run outside of holding time for method SW846 8260B: FA91890-52, FA91890-54

For Sample(s) FA91890-52 are associated with an CCV that has a recovery for cis-1,2-Dichloroethylene outside low control limit.

FA91890-52: Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA91890-54: Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

SGS North America Inc. certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted. Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria. SGS North America Inc. is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety.

Narrative prepared by:

_____

Ariel Hartney, Client Services (signature on file)

Summary of Hits

Job Number: FA91890
Account: Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL
Collected: 12/20/21 thru 12/21/21

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	PQL	MDL	Units	Method
FA91890-1	**LC34-DPT0597-008.0-20211220**					
Chloroform [a]		1.0	1.0	0.30	ug/l	SW846 8260B
1,1-Dichloroethylene [a]		0.94 I	1.0	0.32	ug/l	SW846 8260B
cis-1,2-Dichloroethylene [a]		76.5	1.0	0.28	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [a]		4.0	1.0	0.22	ug/l	SW846 8260B
Freon 113 [a]		2.8	1.0	0.48	ug/l	SW846 8260B
Tetrachloroethylene [a]		0.26 I	1.0	0.22	ug/l	SW846 8260B
Trichloroethylene [b]		5200 LQ	50	17	ug/l	SW846 8260B
Vinyl Chloride [a]		1.6	1.0	0.41	ug/l	SW846 8260B
FA91890-2	**LC34-DPT0597-013.0-20211221**					
Chloroform [c]		0.38 I	1.0	0.30	ug/l	SW846 8260B
1,1-Dichloroethylene [c]		15.2	1.0	0.32	ug/l	SW846 8260B
cis-1,2-Dichloroethylene [d]		7020 Q	200	55	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [c]		97.5	1.0	0.22	ug/l	SW846 8260B
Freon 113 [c]		8.7	1.0	0.48	ug/l	SW846 8260B
Tetrachloroethylene [c]		0.29 I	1.0	0.22	ug/l	SW846 8260B
Toluene [c]		0.65 I	1.0	0.30	ug/l	SW846 8260B
Trichloroethylene [e]		45900 LQ	200	69	ug/l	SW846 8260B
Vinyl Chloride [c]		86.0	1.0	0.41	ug/l	SW846 8260B
FA91890-3	**LC34-DPT0597-018.0-20211221**					
Benzene [c]		0.32 I	1.0	0.31	ug/l	SW846 8260B
1,1-Dichloroethane [c]		0.47 I	1.0	0.34	ug/l	SW846 8260B
1,1-Dichloroethylene [c]		29.3	1.0	0.32	ug/l	SW846 8260B
cis-1,2-Dichloroethylene [d]		8080 Q	200	55	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [d]		63.2 IQ	200	44	ug/l	SW846 8260B
Freon 113 [c]		46.7	1.0	0.48	ug/l	SW846 8260B
Tetrachloroethylene [c]		0.81 I	1.0	0.22	ug/l	SW846 8260B
Toluene [c]		1.6	1.0	0.30	ug/l	SW846 8260B
Trichloroethylene [e]		112000 LQ	200	69	ug/l	SW846 8260B
Vinyl Chloride [d]		120 IQ	200	82	ug/l	SW846 8260B
FA91890-4	**LC34-DPT0597-023.0-20211221**					
Benzene [c]		0.36 I	1.0	0.31	ug/l	SW846 8260B
1,1-Dichloroethane [c]		0.85 I	1.0	0.34	ug/l	SW846 8260B
1,2-Dichloroethane [c]		0.57 I	1.0	0.31	ug/l	SW846 8260B
1,1-Dichloroethylene [c]		59.1	1.0	0.32	ug/l	SW846 8260B
cis-1,2-Dichloroethylene [d]		16600 Q	200	55	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [d]		94.5 IQ	200	44	ug/l	SW846 8260B
Freon 113 [c]		18.2	1.0	0.48	ug/l	SW846 8260B

Summary of Hits

Job Number: FA91890
Account: Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL
Collected: 12/20/21 thru 12/21/21

Lab Sample ID / Client Sample ID / Analyte	Result/ Qual	PQL	MDL	Units	Method
Methylene Chloride [c]	2.5 I	5.0	2.0	ug/l	SW846 8260B
Tetrachloroethylene [c]	0.40 I	1.0	0.22	ug/l	SW846 8260B
Toluene [c]	1.8	1.0	0.30	ug/l	SW846 8260B
Trichloroethylene [e]	115000 LQ	200	69	ug/l	SW846 8260B
Vinyl Chloride [d]	84.7 IQ	200	82	ug/l	SW846 8260B
FA91890-5 LC34-DPT0597-028.0-20211221					
1,1-Dichloroethylene [c]	1.0	1.0	0.32	ug/l	SW846 8260B
cis-1,2-Dichloroethylene [d]	80.6 Q	2.0	0.55	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [c]	0.66 I	1.0	0.22	ug/l	SW846 8260B
Freon 113 [c]	0.87 I	1.0	0.48	ug/l	SW846 8260B
Trichloroethylene [c]	83.3	1.0	0.35	ug/l	SW846 8260B
Vinyl Chloride [c]	20.2	1.0	0.41	ug/l	SW846 8260B
FA91890-6 LC34-DPT0597-033.0-20211221					
Acetone [c]	27.8	25	10	ug/l	SW846 8260B
Benzene [c]	0.43 I	1.0	0.31	ug/l	SW846 8260B
2-Butanone (MEK) [c]	4.5 I	5.0	2.0	ug/l	SW846 8260B
1,1-Dichloroethane [c]	1.0	1.0	0.34	ug/l	SW846 8260B
1,1-Dichloroethylene [c]	83.9	1.0	0.32	ug/l	SW846 8260B
cis-1,2-Dichloroethylene [e]	26900 LQ	200	55	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [d]	137 IQ	200	44	ug/l	SW846 8260B
Ethylbenzene [c]	0.67 I	1.0	0.36	ug/l	SW846 8260B
Freon 113 [c]	10.9	1.0	0.48	ug/l	SW846 8260B
Methylene Chloride [c]	2.7 I	5.0	2.0	ug/l	SW846 8260B
Tetrachloroethylene [c]	0.50 I	1.0	0.22	ug/l	SW846 8260B
Toluene [c]	5.1	1.0	0.30	ug/l	SW846 8260B
Trichloroethylene [e]	161000 LQ	200	69	ug/l	SW846 8260B
Vinyl Chloride [d]	194 IQ	200	82	ug/l	SW846 8260B
Xylene (total) [c]	2.2 I	3.0	0.72	ug/l	SW846 8260B
FA91890-7 LC34-DPT0597-038.0-20211221					
1,1-Dichloroethylene [c]	21.3 I	25	8.1	ug/l	SW846 8260B
cis-1,2-Dichloroethylene [d]	8820 Q	1000	280	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [c]	62.4	25	5.5	ug/l	SW846 8260B
Freon 113 [c]	14.3 I	25	12	ug/l	SW846 8260B
Trichloroethylene [e]	122000 LQ	1000	350	ug/l	SW846 8260B
Vinyl Chloride [c]	158	25	10	ug/l	SW846 8260B
FA91890-8 LC34-DPT0597-043.0-20211221					
cis-1,2-Dichloroethylene [c]	12600	1000	280	ug/l	SW846 8260B

Summary of Hits

Job Number: FA91890
Account: Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL
Collected: 12/20/21 thru 12/21/21

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	PQL	MDL	Units	Method
trans-1,2-Dichloroethylene [c]		301 I	1000	220	ug/l	SW846 8260B
Trichloroethylene [e]		1260000 LQ	10000	3500	ug/l	SW846 8260B
FA91890-9	**LC34-DPT0597-048.0-20211221**					
cis-1,2-Dichloroethylene [c]		29000	10000	2800	ug/l	SW846 8260B
Trichloroethylene [d]		1460000 Q	20000	6900	ug/l	SW846 8260B
FA91890-10	**LC34-DPT0597-053.0-20211221**					
cis-1,2-Dichloroethylene [c]		122000	10000	2800	ug/l	SW846 8260B
Freon 113 [c]		4940 I	10000	4800	ug/l	SW846 8260B
Trichloroethylene [d]		3060000 Q	100000	35000	ug/l	SW846 8260B
Vinyl Chloride [c]		4560 I	10000	4100	ug/l	SW846 8260B
FA91890-11	**LC34-DPT0597-058.0-20211221**					
cis-1,2-Dichloroethylene [c]		338000	25000	6900	ug/l	SW846 8260B
Trichloroethylene [f]		15400000 L	25000	8600	ug/l	SW846 8260B
Vinyl Chloride [c]		20600 I	25000	10000	ug/l	SW846 8260B
FA91890-12	**LC34-DPT0597-063.0-20211221**					
1,1-Dichloroethylene [c]		170 I	500	160	ug/l	SW846 8260B
cis-1,2-Dichloroethylene [g]		73900 Q	10000	2800	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [c]		303 I	500	110	ug/l	SW846 8260B
Trichloroethylene [d]		990000 Q	10000	3500	ug/l	SW846 8260B
Vinyl Chloride [c]		2410	500	200	ug/l	SW846 8260B
FA91890-13	**LC34-DPT0597-068.0-20211221**					
1,1-Dichloroethylene [c]		1.9	1.0	0.32	ug/l	SW846 8260B
cis-1,2-Dichloroethylene [d]		108 Q	50	14	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [c]		1.3	1.0	0.22	ug/l	SW846 8260B
Freon 113 [c]		5.5	1.0	0.48	ug/l	SW846 8260B
Toluene [c]		0.30 I	1.0	0.30	ug/l	SW846 8260B
Trichloroethylene [e]		7400 LQ	50	17	ug/l	SW846 8260B
Vinyl Chloride [c]		9.4	1.0	0.41	ug/l	SW846 8260B
FA91890-14	**LC34-DPT0600-008.0-20211220**					
1,1-Dichloroethylene [a]		0.35 I	1.0	0.32	ug/l	SW846 8260B
cis-1,2-Dichloroethylene [a]		7.5	1.0	0.28	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [a]		0.32 I	1.0	0.22	ug/l	SW846 8260B
Freon 113 [a]		1.3	1.0	0.48	ug/l	SW846 8260B

Summary of Hits

Job Number: FA91890
Account: Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL
Collected: 12/20/21 thru 12/21/21

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	PQL	MDL	Units	Method
Trichloroethylene [h]		324 Q	10	3.5	ug/l	SW846 8260B
Vinyl Chloride [a]		0.55 I	1.0	0.41	ug/l	SW846 8260B
FA91890-15	**LC34-DPT0600-013.0-20211220**					
1,1-Dichloroethylene [a]		19.8	1.0	0.32	ug/l	SW846 8260B
cis-1,2-Dichloroethylene [h]		3410 Q	100	28	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [a]		32.6	1.0	0.22	ug/l	SW846 8260B
Freon 113 [a]		3.1	1.0	0.48	ug/l	SW846 8260B
Toluene [a]		0.94 I	1.0	0.30	ug/l	SW846 8260B
Trichloroethylene [b]		24100 LQ	100	35	ug/l	SW846 8260B
Vinyl Chloride [a]		35.5	1.0	0.41	ug/l	SW846 8260B
FA91890-16	**LC34-DPT0600-018.0-20211220**					
1,1-Dichloroethylene [a]		11.9	1.0	0.32	ug/l	SW846 8260B
cis-1,2-Dichloroethylene [h]		2210 Q	250	69	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [a]		33.8	1.0	0.22	ug/l	SW846 8260B
Trichloroethylene [h]		10900 Q	250	86	ug/l	SW846 8260B
Vinyl Chloride [a]		91.0	1.0	0.41	ug/l	SW846 8260B
FA91890-17	**LC34-DPT0600-023.0-20211220**					
Acetone [a]		12.9 I	25	10	ug/l	SW846 8260B
Benzene [a]		0.64 I	1.0	0.31	ug/l	SW846 8260B
2-Butanone (MEK) [a]		2.6 I	5.0	2.0	ug/l	SW846 8260B
1,1-Dichloroethylene [a]		20.5	1.0	0.32	ug/l	SW846 8260B
cis-1,2-Dichloroethylene [h]		5360 Q	100	28	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [a]		69.6	1.0	0.22	ug/l	SW846 8260B
Toluene [a]		0.33 I	1.0	0.30	ug/l	SW846 8260B
Trichloroethylene [b]		23400 LQ	100	35	ug/l	SW846 8260B
Vinyl Chloride [h]		192 Q	100	41	ug/l	SW846 8260B
FA91890-18	**LC34-DPT0600-028.0-20211221**					
cis-1,2-Dichloroethylene [c]		19.4	1.0	0.28	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [c]		0.30 I	1.0	0.22	ug/l	SW846 8260B
Trichloroethylene [c]		44.5	1.0	0.35	ug/l	SW846 8260B
Vinyl Chloride [c]		20.0	1.0	0.41	ug/l	SW846 8260B
FA91890-19	**LC34-DPT0600-033.0-20211221**					
Acetone [c]		28.7	25	10	ug/l	SW846 8260B
2-Butanone (MEK) [c]		4.6 I	5.0	2.0	ug/l	SW846 8260B
Carbon Disulfide [c]		19.2	2.0	0.53	ug/l	SW846 8260B

Summary of Hits

Job Number: FA91890
Account: Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL
Collected: 12/20/21 thru 12/21/21

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	PQL	MDL	Units	Method
1,1-Dichloroethylene [c]		18.7	1.0	0.32	ug/l	SW846 8260B
cis-1,2-Dichloroethylene [d]		9130 Q	100	28	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [d]		71.9 IQ	100	22	ug/l	SW846 8260B
Toluene [c]		0.46 I	1.0	0.30	ug/l	SW846 8260B
Trichloroethylene [e]		41900 LQ	100	35	ug/l	SW846 8260B
Vinyl Chloride [d]		183 Q	100	41	ug/l	SW846 8260B
FA91890-20	**LC34-DPT0600-038.0-20211221**					
Acetone [c]		38.8	25	10	ug/l	SW846 8260B
2-Butanone (MEK) [c]		5.8	5.0	2.0	ug/l	SW846 8260B
Carbon Disulfide [c]		59.1	2.0	0.53	ug/l	SW846 8260B
1,1-Dichloroethane [c]		0.45 I	1.0	0.34	ug/l	SW846 8260B
1,1-Dichloroethylene [c]		16.9	1.0	0.32	ug/l	SW846 8260B
cis-1,2-Dichloroethylene [d]		7480 Q	100	28	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [d]		73.5 IQ	100	22	ug/l	SW846 8260B
Toluene [c]		0.77 I	1.0	0.30	ug/l	SW846 8260B
Trichloroethylene [e]		54000 LQ	100	35	ug/l	SW846 8260B
Vinyl Chloride [d]		242 Q	100	41	ug/l	SW846 8260B
FA91890-21	**LC34-DPT0600-043.0-20211221**					
cis-1,2-Dichloroethylene [a]		14800	200	55	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [a]		178 I	200	44	ug/l	SW846 8260B
Trichloroethylene [h]		74600 Q	1000	350	ug/l	SW846 8260B
Vinyl Chloride [a]		1480	200	82	ug/l	SW846 8260B
FA91890-22	**LC34-DPT0600-048.0-20211221**					
cis-1,2-Dichloroethylene [a]		28500	500	140	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [a]		203 I	500	110	ug/l	SW846 8260B
Trichloroethylene [h]		76800 Q	1000	350	ug/l	SW846 8260B
Vinyl Chloride [a]		889	500	200	ug/l	SW846 8260B
FA91890-23	**LC34-DPT0600-053.0-20211221**					
cis-1,2-Dichloroethylene [a]		18100	200	55	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [a]		175 I	200	44	ug/l	SW846 8260B
Trichloroethylene [h]		260 Q	200	69	ug/l	SW846 8260B
Vinyl Chloride [a]		2450	200	82	ug/l	SW846 8260B
FA91890-24	**LC34-DPT0600-058.0-20211221**					
cis-1,2-Dichloroethylene [a]		535	10	2.8	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [a]		6.7 I	10	2.2	ug/l	SW846 8260B

Summary of Hits

Job Number: FA91890
Account: Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL
Collected: 12/20/21 thru 12/21/21

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	PQL	MDL	Units	Method
Trichloroethylene [h]		434 Q	10	3.5	ug/l	SW846 8260B
Vinyl Chloride [a]		289	10	4.1	ug/l	SW846 8260B
FA91890-25	**LC34-DPT0600-063.0-20211221**					
cis-1,2-Dichloroethylene [a]		443	5.0	1.4	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [a]		2.5 I	5.0	1.1	ug/l	SW846 8260B
Trichloroethylene [a]		400	5.0	1.7	ug/l	SW846 8260B
Vinyl Chloride [a]		49.0	5.0	2.0	ug/l	SW846 8260B
FA91890-26	**LC34-DPT0600-068.0-20211221**					
cis-1,2-Dichloroethylene [a]		13.3	2.0	0.55	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [a]		3.6	2.0	0.44	ug/l	SW846 8260B
Trichloroethylene [a]		84.9	2.0	0.69	ug/l	SW846 8260B
Vinyl Chloride [a]		6.8	2.0	0.82	ug/l	SW846 8260B
FA91890-27	**LC34-DPT0600-073.0-20211221**					
Carbon Disulfide [a]		1.1 I	4.0	1.1	ug/l	SW846 8260B
1,1-Dichloroethylene [a]		1.3 I	2.0	0.64	ug/l	SW846 8260B
cis-1,2-Dichloroethylene [h]		421 Q	10	2.8	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [a]		10.0	2.0	0.44	ug/l	SW846 8260B
Trichloroethylene [h]		339 Q	10	3.5	ug/l	SW846 8260B
Vinyl Chloride [a]		10.1	2.0	0.82	ug/l	SW846 8260B
FA91890-28	**LC34-DPT0600-078.0-20211221**					
cis-1,2-Dichloroethylene [a]		312	20	5.5	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [a]		12.5 I	20	4.4	ug/l	SW846 8260B
Trichloroethylene [h]		49.1 Q	5.0	1.7	ug/l	SW846 8260B
Vinyl Chloride [a]		44.5	20	8.2	ug/l	SW846 8260B
FA91890-29	**LC34-DPT0600-083.0-20211221**					
cis-1,2-Dichloroethylene [a]		68.1	1.0	0.28	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [a]		1.1	1.0	0.22	ug/l	SW846 8260B
Trichloroethylene [h]		85.7 Q	2.0	0.69	ug/l	SW846 8260B
Vinyl Chloride [a]		5.8	1.0	0.41	ug/l	SW846 8260B
FA91890-30	**LC34-DPT0600-088.0-20211221**					
cis-1,2-Dichloroethylene [a]		22.0	1.0	0.28	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [a]		0.30 I	1.0	0.22	ug/l	SW846 8260B
Trichloroethylene [h]		78.1 Q	2.0	0.69	ug/l	SW846 8260B

Summary of Hits

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Account: Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL
Collected: 12/20/21 thru 12/21/21

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	PQL	MDL	Units	Method
Vinyl Chloride [a]		0.69 I	1.0	0.41	ug/l	SW846 8260B
FA91890-31	**LC34-DPT0600-093.0-20211221**					
1,1-Dichloroethylene [a]		0.46 I	1.0	0.32	ug/l	SW846 8260B
cis-1,2-Dichloroethylene [h]		90.2 Q	5.0	1.4	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [a]		0.88 I	1.0	0.22	ug/l	SW846 8260B
Trichloroethylene [h]		160 Q	5.0	1.7	ug/l	SW846 8260B
Vinyl Chloride [a]		6.8	1.0	0.41	ug/l	SW846 8260B
FA91890-32	**LC34-DPT0600-098.0-20211221**					
Acetone [a]		13.6 I	25	10	ug/l	SW846 8260B
2-Butanone (MEK) [a]		2.9 I	5.0	2.0	ug/l	SW846 8260B
1,1-Dichloroethylene [a]		0.93 I	1.0	0.32	ug/l	SW846 8260B
cis-1,2-Dichloroethylene [h]		310 Q	20	5.5	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [a]		3.7	1.0	0.22	ug/l	SW846 8260B
Trichloroethylene [h]		790 Q	20	6.9	ug/l	SW846 8260B
Vinyl Chloride [a]		18.2	1.0	0.41	ug/l	SW846 8260B
FA91890-33	**LC34-DPT0599-008.0-20211221**					
cis-1,2-Dichloroethylene [i]		3.8	1.0	0.28	ug/l	SW846 8260B
Trichloroethylene [j]		69.6	1.0	0.35	ug/l	SW846 8260B
Vinyl Chloride [a]		0.74 I	1.0	0.41	ug/l	SW846 8260B
FA91890-34	**LC34-DPT0599-013.0-20211221**					
1,1-Dichloroethylene [a]		4.5	1.0	0.32	ug/l	SW846 8260B
cis-1,2-Dichloroethylene [h]		1360 Q	20	5.5	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [a]		15.5	1.0	0.22	ug/l	SW846 8260B
Freon 113 [a]		1.7	1.0	0.48	ug/l	SW846 8260B
Trichloroethylene [b]		2100 LQ	20	6.9	ug/l	SW846 8260B
Vinyl Chloride [a]		28.5	1.0	0.41	ug/l	SW846 8260B
FA91890-35	**LC34-DPT0599-018.0-20211221**					
Acetone		27.3	25	10	ug/l	SW846 8260B
2-Butanone (MEK)		4.4 I	5.0	2.0	ug/l	SW846 8260B
Carbon Disulfide		7.0	2.0	0.53	ug/l	SW846 8260B
1,1-Dichloroethane		0.54 I	1.0	0.34	ug/l	SW846 8260B
1,1-Dichloroethylene		45.0	1.0	0.32	ug/l	SW846 8260B
cis-1,2-Dichloroethylene [b]		21300 LQ	200	55	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [h]		248	200	44	ug/l	SW846 8260B
Freon 113		13.5	1.0	0.48	ug/l	SW846 8260B

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Tetrachloroethylene		0.85 I	1.0	0.22	ug/l	SW846 8260B
Toluene		0.82 I	1.0	0.30	ug/l	SW846 8260B
Trichloroethylene		7200 L	1.0	0.35	ug/l	SW846 8260B
Vinyl Chloride [k]		398 Q	200	82	ug/l	SW846 8260B
FA91890-36	**LC34-DPT0599-023.0-20211221**					
Acetone [a]		76.1 I	130	50	ug/l	SW846 8260B
2-Butanone (MEK) [a]		12.8 I	25	10	ug/l	SW846 8260B
Carbon Disulfide [a]		70.8	10	2.7	ug/l	SW846 8260B
1,1-Dichloroethylene [a]		31.0	5.0	1.6	ug/l	SW846 8260B
cis-1,2-Dichloroethylene [h]		33100 Q	500	140	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [a]		343	5.0	1.1	ug/l	SW846 8260B
Freon 113 [a]		7.4	5.0	2.4	ug/l	SW846 8260B
Trichloroethylene [b]		225000 LQ	500	170	ug/l	SW846 8260B
Vinyl Chloride [a]		390	5.0	2.0	ug/l	SW846 8260B
FA91890-37	**LC34-DPT0599-028.0-20211221**					
cis-1,2-Dichloroethylene [a]		15600	500	140	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [a]		243 I	500	110	ug/l	SW846 8260B
Trichloroethylene [h]		187000 Q	2500	860	ug/l	SW846 8260B
Vinyl Chloride [a]		371 I	500	200	ug/l	SW846 8260B
FA91890-38	**LC34-DPT0599-033.0-20211221**					
cis-1,2-Dichloroethylene [h]		3130 Q	500	140	ug/l	SW846 8260B
Trichloroethylene [h]		39700 Q	500	170	ug/l	SW846 8260B
FA91890-39	**LC34-DPT0599-038.0-20211221**					
cis-1,2-Dichloroethylene [a]		39000	10000	2800	ug/l	SW846 8260B
Trichloroethylene [a]		755000	10000	3500	ug/l	SW846 8260B
FA91890-40	**LC34-DPT0597-073.0-20211221**					
cis-1,2-Dichloroethylene [a]		115 I	200	55	ug/l	SW846 8260B
Trichloroethylene [a]		4810	200	69	ug/l	SW846 8260B
FA91890-41	**LC34-DPT0597-078.0-20211221**					
cis-1,2-Dichloroethylene [a]		9330 I	10000	2800	ug/l	SW846 8260B
Trichloroethylene [a]		830000	10000	3500	ug/l	SW846 8260B

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FA91890-42	**LC34-DPT0597-083.0-20211221**					
cis-1,2-Dichloroethylene [c]		1650	500	140	ug/l	SW846 8260B
Freon 113 [c]		1320	500	240	ug/l	SW846 8260B
Trichloroethylene [d]		472000 Q	10000	3500	ug/l	SW846 8260B
FA91890-43	**LC34-DPT0597-088.0-20211221**					
cis-1,2-Dichloroethylene [c]		125	10	2.8	ug/l	SW846 8260B
Trichloroethylene [f]		11800 L	10	3.5	ug/l	SW846 8260B
FA91890-44	**LC34-DPT0597-093.0-20211221**					
cis-1,2-Dichloroethylene [c]		92.4	10	2.8	ug/l	SW846 8260B
Trichloroethylene [d]		4590 Q	100	35	ug/l	SW846 8260B
FA91890-45	**LC34-DPT0597-098.0-20211221**					
cis-1,2-Dichloroethylene [c]		82.5	10	2.8	ug/l	SW846 8260B
Freon 113 [c]		12.2	10	4.8	ug/l	SW846 8260B
Trichloroethylene [d]		19400 Q	500	170	ug/l	SW846 8260B
Vinyl Chloride [c]		4.5 I	10	4.1	ug/l	SW846 8260B
FA91890-46	**LC34-DPT0596-008.0-20211221**					
1,1-Dichloroethylene [c]		5.3 I	10	3.2	ug/l	SW846 8260B
cis-1,2-Dichloroethylene [d]		3160 Q	100	28	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [c]		18.0	10	2.2	ug/l	SW846 8260B
Trichloroethylene [d]		2260 Q	100	35	ug/l	SW846 8260B
Vinyl Chloride [c]		61.8	10	4.1	ug/l	SW846 8260B
FA91890-47	**LC34-DPT0596-013.0-20211221**					
cis-1,2-Dichloroethylene [l]		11100 Q	250	69	ug/l	SW846 8260B
FA91890-48	**LC34-DPT0596-018.0-20211221**					
cis-1,2-Dichloroethylene [l]		21400 Q	500	140	ug/l	SW846 8260B
Trichloroethylene [l]		81500 Q	500	170	ug/l	SW846 8260B
FA91890-49	**LC34-DPT0596-023.0-20211221**					
cis-1,2-Dichloroethylene [l]		26100 Q	500	140	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [l]		347 IQ	500	110	ug/l	SW846 8260B
Trichloroethylene [l]		48300 Q	500	170	ug/l	SW846 8260B

Summary of Hits

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Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	PQL	MDL	Units	Method
FA91890-50	**LC34-DPT0596-028.0-20211221**					
cis-1,2-Dichloroethylene [l]		36300 Q	500	140	ug/l	SW846 8260B
Trichloroethylene [l]		96100 Q	500	170	ug/l	SW846 8260B
Vinyl Chloride [l]		515 Q	500	200	ug/l	SW846 8260B
FA91890-51	**LC34-DPT0596-033.0-20211221**					
cis-1,2-Dichloroethylene [l]		50800 LQ	500	140	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [l]		324 IQ	500	110	ug/l	SW846 8260B
Trichloroethylene [l]		72100 Q	500	170	ug/l	SW846 8260B
FA91890-52	**LC34-DPT0596-038.0-20211221**					
cis-1,2-Dichloroethylene [m]		38800 QJ	1000	280	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [n]		688 Q	500	110	ug/l	SW846 8260B
Trichloroethylene [n]		36100 Q	500	170	ug/l	SW846 8260B
Vinyl Chloride [n]		1220 Q	500	200	ug/l	SW846 8260B
FA91890-53	**LC34-DPT0599-043.0-20211221**					
cis-1,2-Dichloroethylene [l]		121000 Q	5000	1400	ug/l	SW846 8260B
Trichloroethylene [l]		274000 Q	5000	1700	ug/l	SW846 8260B
Vinyl Chloride [l]		3950 IQ	5000	2000	ug/l	SW846 8260B
FA91890-54	**LC34-DPT0599-048.0-20211221**					
cis-1,2-Dichloroethylene [n]		48300 Q	10000	2800	ug/l	SW846 8260B
Trichloroethylene [h]		1480000 Q	20000	6900	ug/l	SW846 8260B
FA91890-55	**LC34-DPT0599-053.0-20211221**					
cis-1,2-Dichloroethylene [l]		121000 Q	5000	1400	ug/l	SW846 8260B
Trichloroethylene [l]		294000 Q	5000	1700	ug/l	SW846 8260B
Vinyl Chloride [l]		4660 IQ	5000	2000	ug/l	SW846 8260B
FA91890-56	**LC34-DPT0599-058.0-20211221**					
cis-1,2-Dichloroethylene [o]		13700 Q	500	140	ug/l	SW846 8260B
Trichloroethylene [o]		86800 Q	2500	860	ug/l	SW846 8260B
FA91890-57	**LC34-DPT0599-063.0-20211221**					
cis-1,2-Dichloroethylene [n]		2300 Q	250	69	ug/l	SW846 8260B

Summary of Hits

Job Number: FA91890
Account: Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL
Collected: 12/20/21 thru 12/21/21

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	PQL	MDL	Units	Method
Trichloroethylene [n]		15700 Q	250	86	ug/l	SW846 8260B
FA91890-58	**LC34-DPT0599-068.0-20211221**					
cis-1,2-Dichloroethylene [n]		300 Q	250	69	ug/l	SW846 8260B
Trichloroethylene [n]		14500 Q	250	86	ug/l	SW846 8260B
FA91890-59	**LC34-DPT0599-073.0-20211221**					
cis-1,2-Dichloroethylene [n]		175 IQ	250	69	ug/l	SW846 8260B
Trichloroethylene [n]		1480 Q	250	86	ug/l	SW846 8260B

(a) Sample was not preserved to a pH < 2.
(b) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values. No sample available for reanalysis.
(c) Sample was not preserved to pH < 2.
(d) Sample was not preserved to pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(e) Sample was not preserved to pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values. No sample available for reanalysis.
(f) Sample was not preserved to pH < 2. Results from different vials are not consistent; higher results were reported.
(g) Sample was not preserved to pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values. Results from different vials are not consistent; higher results were reported.
(h) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(i) Sample was not preserved to a pH < 2. Suspected carry-over. Confirmed ND by reanalysis beyond hold-time.
(j) Sample was not preserved to a pH < 2. Suspected carry-over. Confirmed by reanalysis beyond hold-time.
(k) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values. Associated CCV outside of control limits high. Confirmed by reanalysis.
(l) Sample was not preserved to pH < 2. Sample analyzed beyond hold time; reported results are considered minimum values.
(m) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values. Associated CCV outside of control limits low.
(n) Sample was not preserved to a pH < 2. Sample analyzed beyond hold time; reported results are considered minimum values.
(o) Sample analyzed beyond hold time and was not preserved to a pH < 2; reported results are considered minimum values.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	LC34-DPT0597-008.0-20211220		
Lab Sample ID:	FA91890-1	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	2P84082.D	1	12/26/21 17:29	CV	n/a	n/a	V2P3359
Run #2 [b]	1A41260.D	50	01/12/22 14:21	CV	n/a	n/a	V1A1673

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	10 U	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.67 U	2.0	0.67	ug/l	
67-66-3	Chloroform	1.0	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	0.50 U	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.94	1.0	0.32	ug/l	I
156-59-2	cis-1,2-Dichloroethylene	76.5	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	4.0	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113	2.8	1.0	0.48	ug/l	
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0597-008.0-20211220		
Lab Sample ID:	FA91890-1	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	2.0 U	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIB [c]	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.26	1.0	0.22	ug/l	I
108-88-3	Toluene	0.30 U	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene [d]	5200 [e]	50	17	ug/l	LQ
75-69-4	Trichlorofluoromethane	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	1.6	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%	96%	83-118%
17060-07-0	1,2-Dichloroethane-D4	98%	96%	79-125%
2037-26-5	Toluene-D8	99%	100%	85-112%
460-00-4	4-Bromofluorobenzene	102%	97%	83-118%

(a) Sample was not preserved to a pH < 2.
(b) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(c) Associated CCV outside of control limits high, sample was ND.
(d) No sample available for reanalysis.
(e) Result is from Run# 2

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0597-013.0-20211221		
Lab Sample ID:	FA91890-2	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1P84179.D	1	12/28/21 12:40	CF	n/a	n/a	V1P3366
Run #2 [b]	1P84533.D	200	01/07/22 18:02	CF	n/a	n/a	V1P3376

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	10 U	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.67 U	2.0	0.67	ug/l	
67-66-3	Chloroform	0.38	1.0	0.30	ug/l	I
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	0.50 U	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	15.2	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	7020 [c]	200	55	ug/l	Q
156-60-5	trans-1,2-Dichloroethylene	97.5	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113	8.7	1.0	0.48	ug/l	
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0597-013.0-20211221		
Lab Sample ID:	FA91890-2	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide [d]	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	2.0 U	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.29	1.0	0.22	ug/l	I
108-88-3	Toluene	0.65	1.0	0.30	ug/l	I
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene [e]	45900 [c]	200	69	ug/l	LQ
75-69-4	Trichlorofluoromethane [f]	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	86.0	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%	104%	83-118%
17060-07-0	1,2-Dichloroethane-D4	105%	108%	79-125%
2037-26-5	Toluene-D8	96%	99%	85-112%
460-00-4	4-Bromofluorobenzene	96%	102%	83-118%

(a) Sample was not preserved to pH < 2.
(b) Sample was not preserved to pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(c) Result is from Run# 2
(d) Associated ICV, CCV, and BS outside control limits high, however sample ND.
(e) No sample available for reanalysis.
(f) Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0597-018.0-20211221		
Lab Sample ID:	FA91890-3	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1P84181.D	1	12/28/21 13:11	CF	n/a	n/a	V1P3366
Run #2 [b]	1P84535.D	200	01/07/22 18:34	CF	n/a	n/a	V1P3376

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	10 U	25	10	ug/l	
71-43-2	Benzene	0.32	1.0	0.31	ug/l	I
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.67 U	2.0	0.67	ug/l	
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	0.50 U	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.47	1.0	0.34	ug/l	I
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	29.3	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	8080 [c]	200	55	ug/l	Q
156-60-5	trans-1,2-Dichloroethylene	63.2 [c]	200	44	ug/l	IQ
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113	46.7	1.0	0.48	ug/l	
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0597-018.0-20211221		
Lab Sample ID:	FA91890-3	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide [d]	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	2.0 U	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.81	1.0	0.22	ug/l	I
108-88-3	Toluene	1.6	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene [e]	112000 [c]	200	69	ug/l	LQ
75-69-4	Trichlorofluoromethane [f]	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	120 [c]	200	82	ug/l	IQ
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%	103%	83-118%
17060-07-0	1,2-Dichloroethane-D4	111%	109%	79-125%
2037-26-5	Toluene-D8	97%	99%	85-112%
460-00-4	4-Bromofluorobenzene	96%	104%	83-118%

(a) Sample was not preserved to pH < 2.
(b) Sample was not preserved to pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(c) Result is from Run# 2
(d) Associated ICV, BS, CCV, and, ECC recovery outside control limits high, sample is ND.
(e) No sample available for reanalysis.
(f) Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0597-023.0-20211221		
Lab Sample ID:	FA91890-4	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1P84183.D	1	12/28/21 13:43	CF	n/a	n/a	V1P3366
Run #2 [b]	1P84537.D	200	01/07/22 19:06	CF	n/a	n/a	V1P3376

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	10 U	25	10	ug/l	
71-43-2	Benzene	0.36	1.0	0.31	ug/l	I
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.67 U	2.0	0.67	ug/l	
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	0.50 U	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.85	1.0	0.34	ug/l	I
107-06-2	1,2-Dichloroethane	0.57	1.0	0.31	ug/l	I
75-35-4	1,1-Dichloroethylene	59.1	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	16600 [c]	200	55	ug/l	Q
156-60-5	trans-1,2-Dichloroethylene	94.5 [c]	200	44	ug/l	IQ
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113	18.2	1.0	0.48	ug/l	
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0597-023.0-20211221		
Lab Sample ID:	FA91890-4	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide [d]	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	2.5	5.0	2.0	ug/l	I
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.40	1.0	0.22	ug/l	I
108-88-3	Toluene	1.8	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene [e]	115000 [c]	200	69	ug/l	LQ
75-69-4	Trichlorofluoromethane [f]	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	84.7 [c]	200	82	ug/l	IQ
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%	106%	83-118%
17060-07-0	1,2-Dichloroethane-D4	108%	110%	79-125%
2037-26-5	Toluene-D8	96%	98%	85-112%
460-00-4	4-Bromofluorobenzene	96%	103%	83-118%

(a) Sample was not preserved to pH < 2.
(b) Sample was not preserved to pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(c) Result is from Run# 2
(d) Associated ICV, BS, CCV, and, ECC recovery outside control limits high, sample is ND.
(e) No sample available for reanalysis.
(f) Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0597-028.0-20211221		
Lab Sample ID:	FA91890-5	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1P84185.D	1	12/28/21 14:15	CF	n/a	n/a	V1P3366
Run #2 [b]	1P84539.D	2	01/07/22 19:37	CF	n/a	n/a	V1P3376

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	10 U	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.67 U	2.0	0.67	ug/l	
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	0.50 U	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	1.0	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	80.6 [c]	2.0	0.55	ug/l	Q
156-60-5	trans-1,2-Dichloroethylene	0.66	1.0	0.22	ug/l	I
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113	0.87	1.0	0.48	ug/l	I
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0597-028.0-20211221		
Lab Sample ID:	FA91890-5	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide [d]	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	2.0 U	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.30 U	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	83.3	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane [e]	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	20.2	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%	105%	83-118%
17060-07-0	1,2-Dichloroethane-D4	105%	117%	79-125%
2037-26-5	Toluene-D8	95%	102%	85-112%
460-00-4	4-Bromofluorobenzene	102%	101%	83-118%

(a) Sample was not preserved to pH < 2.
(b) Sample was not preserved to pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(c) Result is from Run# 2
(d) Associated ICV, BS, CCV, and, ECC recovery outside control limits high, sample is ND.
(e) Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: LC34-DPT0597-033.0-20211221
Lab Sample ID: FA91890-6
Matrix: AQ - Ground Water
Method: SW846 8260B
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Date Sampled: 12/21/21
Date Received: 12/21/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1P84187.D	1	12/28/21 14:46	CF	n/a	n/a	V1P3366
Run #2 [b]	1P84541.D	200	01/07/22 20:08	CF	n/a	n/a	V1P3376

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	27.8	25	10	ug/l	
71-43-2	Benzene	0.43	1.0	0.31	ug/l	I
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	4.5	5.0	2.0	ug/l	I
75-15-0	Carbon Disulfide	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.67 U	2.0	0.67	ug/l	
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	0.50 U	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	1.0	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	83.9	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene [c]	26900 [d]	200	55	ug/l	LQ
156-60-5	trans-1,2-Dichloroethylene	137 [d]	200	44	ug/l	IQ
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.67	1.0	0.36	ug/l	I
76-13-1	Freon 113	10.9	1.0	0.48	ug/l	
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0597-033.0-20211221		
Lab Sample ID:	FA91890-6	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide [e]	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	2.7	5.0	2.0	ug/l	I
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.50	1.0	0.22	ug/l	I
108-88-3	Toluene	5.1	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene [c]	161000 [d]	200	69	ug/l	LQ
75-69-4	Trichlorofluoromethane [f]	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	194 [d]	200	82	ug/l	IQ
1330-20-7	Xylene (total)	2.2	3.0	0.72	ug/l	I

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%	104%	83-118%
17060-07-0	1,2-Dichloroethane-D4	105%	113%	79-125%
2037-26-5	Toluene-D8	95%	101%	85-112%
460-00-4	4-Bromofluorobenzene	97%	102%	83-118%

(a) Sample was not preserved to pH < 2.
(b) Sample was not preserved to pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(c) No sample available for reanalysis.
(d) Result is from Run# 2
(e) Associated ICV, BS, CCV, and, ECC recovery outside control limits high, sample is ND.
(f) Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0597-038.0-20211221		
Lab Sample ID:	FA91890-7	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1P84197.D	25	12/28/21 17:24	CF	n/a	n/a	V1P3366
Run #2 [b]	1P84543.D	1000	01/07/22 20:40	CF	n/a	n/a	V1P3376

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	250 U	630	250	ug/l	
71-43-2	Benzene	7.8 U	25	7.8	ug/l	
74-97-5	Bromochloromethane	11 U	25	11	ug/l	
75-27-4	Bromodichloromethane	6.1 U	25	6.1	ug/l	
75-25-2	Bromoform	10 U	25	10	ug/l	
78-93-3	2-Butanone (MEK)	50 U	130	50	ug/l	
75-15-0	Carbon Disulfide	13 U	50	13	ug/l	
56-23-5	Carbon Tetrachloride	8.9 U	25	8.9	ug/l	
108-90-7	Chlorobenzene	5.0 U	25	5.0	ug/l	
75-00-3	Chloroethane	17 U	50	17	ug/l	
67-66-3	Chloroform	7.5 U	25	7.5	ug/l	
110-82-7	Cyclohexane	9.8 U	25	9.8	ug/l	
124-48-1	Dibromochloromethane	6.9 U	25	6.9	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	26 U	130	26	ug/l	
106-93-4	1,2-Dibromoethane	6.9 U	50	6.9	ug/l	
75-71-8	Dichlorodifluoromethane	13 U	50	13	ug/l	
95-50-1	1,2-Dichlorobenzene	8.1 U	25	8.1	ug/l	
541-73-1	1,3-Dichlorobenzene	5.4 U	25	5.4	ug/l	
106-46-7	1,4-Dichlorobenzene	6.4 U	25	6.4	ug/l	
75-34-3	1,1-Dichloroethane	8.5 U	25	8.5	ug/l	
107-06-2	1,2-Dichloroethane	7.8 U	25	7.8	ug/l	
75-35-4	1,1-Dichloroethylene	21.3	25	8.1	ug/l	I
156-59-2	cis-1,2-Dichloroethylene	8820 [c]	1000	280	ug/l	Q
156-60-5	trans-1,2-Dichloroethylene	62.4	25	5.5	ug/l	
78-87-5	1,2-Dichloropropane	11 U	25	11	ug/l	
10061-01-5	cis-1,3-Dichloropropene	7.3 U	25	7.3	ug/l	
10061-02-6	trans-1,3-Dichloropropene	5.4 U	25	5.4	ug/l	
100-41-4	Ethylbenzene	8.9 U	25	8.9	ug/l	
76-13-1	Freon 113	14.3	25	12	ug/l	I
591-78-6	2-Hexanone	50 U	250	50	ug/l	
98-82-8	Isopropylbenzene	5.5 U	25	5.5	ug/l	
79-20-9	Methyl Acetate	130 U	500	130	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0597-038.0-20211221		
Lab Sample ID:	FA91890-7	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide [d]	50 U	130	50	ug/l	
74-87-3	Methyl Chloride	13 U	50	13	ug/l	
75-09-2	Methylene Chloride	50 U	130	50	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	25 U	130	25	ug/l	
1634-04-4	Methyl Tert Butyl Ether	5.7 U	25	5.7	ug/l	
100-42-5	Styrene	5.6 U	25	5.6	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	6.9 U	25	6.9	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	7.5 U	25	7.5	ug/l	
127-18-4	Tetrachloroethylene	5.4 U	25	5.4	ug/l	
108-88-3	Toluene	7.5 U	25	7.5	ug/l	
87-61-6	1,2,3-Trichlorobenzene	15 U	50	15	ug/l	
120-82-1	1,2,4-Trichlorobenzene	13 U	50	13	ug/l	
71-55-6	1,1,1-Trichloroethane	6.2 U	25	6.2	ug/l	
79-00-5	1,1,2-Trichloroethane	12 U	25	12	ug/l	
79-01-6	Trichloroethylene [e]	122000 [c]	1000	350	ug/l	LQ
75-69-4	Trichlorofluoromethane [f]	13 U	50	13	ug/l	
75-01-4	Vinyl Chloride	158	25	10	ug/l	
1330-20-7	Xylene (total)	18 U	75	18	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%	105%	83-118%
17060-07-0	1,2-Dichloroethane-D4	106%	113%	79-125%
2037-26-5	Toluene-D8	98%	100%	85-112%
460-00-4	4-Bromofluorobenzene	99%	103%	83-118%

(a) Sample was not preserved to pH < 2.
(b) Sample was not preserved to pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(c) Result is from Run# 2
(d) Associated ICV, CCV, and BS outside control limits high, however sample ND.
(e) No sample available for reanalysis.
(f) Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0597-043.0-20211221		
Lab Sample ID:	FA91890-8	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1P84199.D	1000	12/28/21 17:56	CF	n/a	n/a	V1P3366
Run #2 [b]	1P84545.D	10000	01/07/22 21:11	CF	n/a	n/a	V1P3376

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	10000 U	25000	10000	ug/l	
71-43-2	Benzene	310 U	1000	310	ug/l	
74-97-5	Bromochloromethane	450 U	1000	450	ug/l	
75-27-4	Bromodichloromethane	240 U	1000	240	ug/l	
75-25-2	Bromoform	410 U	1000	410	ug/l	
78-93-3	2-Butanone (MEK)	2000 U	5000	2000	ug/l	
75-15-0	Carbon Disulfide	530 U	2000	530	ug/l	
56-23-5	Carbon Tetrachloride	360 U	1000	360	ug/l	
108-90-7	Chlorobenzene	200 U	1000	200	ug/l	
75-00-3	Chloroethane	670 U	2000	670	ug/l	
67-66-3	Chloroform	300 U	1000	300	ug/l	
110-82-7	Cyclohexane	390 U	1000	390	ug/l	
124-48-1	Dibromochloromethane	280 U	1000	280	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1000 U	5000	1000	ug/l	
106-93-4	1,2-Dibromoethane	280 U	2000	280	ug/l	
75-71-8	Dichlorodifluoromethane	500 U	2000	500	ug/l	
95-50-1	1,2-Dichlorobenzene	320 U	1000	320	ug/l	
541-73-1	1,3-Dichlorobenzene	220 U	1000	220	ug/l	
106-46-7	1,4-Dichlorobenzene	260 U	1000	260	ug/l	
75-34-3	1,1-Dichloroethane	340 U	1000	340	ug/l	
107-06-2	1,2-Dichloroethane	310 U	1000	310	ug/l	
75-35-4	1,1-Dichloroethylene	320 U	1000	320	ug/l	
156-59-2	cis-1,2-Dichloroethylene	12600	1000	280	ug/l	
156-60-5	trans-1,2-Dichloroethylene	301	1000	220	ug/l	I
78-87-5	1,2-Dichloropropane	430 U	1000	430	ug/l	
10061-01-5	cis-1,3-Dichloropropene	290 U	1000	290	ug/l	
10061-02-6	trans-1,3-Dichloropropene	210 U	1000	210	ug/l	
100-41-4	Ethylbenzene	360 U	1000	360	ug/l	
76-13-1	Freon 113	480 U	1000	480	ug/l	
591-78-6	2-Hexanone	2000 U	10000	2000	ug/l	
98-82-8	Isopropylbenzene	220 U	1000	220	ug/l	
79-20-9	Methyl Acetate	5000 U	20000	5000	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0597-043.0-20211221		
Lab Sample ID:	FA91890-8	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide [c]	2000 U	5000	2000	ug/l	
74-87-3	Methyl Chloride	500 U	2000	500	ug/l	
75-09-2	Methylene Chloride	2000 U	5000	2000	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1000 U	5000	1000	ug/l	
1634-04-4	Methyl Tert Butyl Ether	230 U	1000	230	ug/l	
100-42-5	Styrene	220 U	1000	220	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	280 U	1000	280	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	300 U	1000	300	ug/l	
127-18-4	Tetrachloroethylene	220 U	1000	220	ug/l	
108-88-3	Toluene	300 U	1000	300	ug/l	
87-61-6	1,2,3-Trichlorobenzene	610 U	2000	610	ug/l	
120-82-1	1,2,4-Trichlorobenzene	500 U	2000	500	ug/l	
71-55-6	1,1,1-Trichloroethane	250 U	1000	250	ug/l	
79-00-5	1,1,2-Trichloroethane	470 U	1000	470	ug/l	
79-01-6	Trichloroethylene [d]	1260000 [e]	10000	3500	ug/l	LQ
75-69-4	Trichlorofluoromethane [f]	500 U	2000	500	ug/l	
75-01-4	Vinyl Chloride	410 U	1000	410	ug/l	
1330-20-7	Xylene (total)	720 U	3000	720	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%	105%	83-118%
17060-07-0	1,2-Dichloroethane-D4	104%	112%	79-125%
2037-26-5	Toluene-D8	95%	99%	85-112%
460-00-4	4-Bromofluorobenzene	100%	103%	83-118%

(a) Sample was not preserved to pH < 2.
(b) Sample was not preserved to pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(c) Associated ICV, CCV, and BS outside control limits high, however sample ND.
(d) No sample available for reanalysis.
(e) Result is from Run# 2
(f) Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0597-048.0-20211221		
Lab Sample ID:	FA91890-9	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1P84201.D	10000	12/28/21 18:27	CF	n/a	n/a	V1P3366
Run #2 [b]	2P84538.D	20000	01/07/22 19:21	CF	n/a	n/a	V2P3369

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	100000 U	250000	100000	ug/l	
71-43-2	Benzene	3100 U	10000	3100	ug/l	
74-97-5	Bromochloromethane	4500 U	10000	4500	ug/l	
75-27-4	Bromodichloromethane	2400 U	10000	2400	ug/l	
75-25-2	Bromoform	4100 U	10000	4100	ug/l	
78-93-3	2-Butanone (MEK)	20000 U	50000	20000	ug/l	
75-15-0	Carbon Disulfide	5300 U	20000	5300	ug/l	
56-23-5	Carbon Tetrachloride	3600 U	10000	3600	ug/l	
108-90-7	Chlorobenzene	2000 U	10000	2000	ug/l	
75-00-3	Chloroethane	6700 U	20000	6700	ug/l	
67-66-3	Chloroform	3000 U	10000	3000	ug/l	
110-82-7	Cyclohexane	3900 U	10000	3900	ug/l	
124-48-1	Dibromochloromethane	2800 U	10000	2800	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	10000 U	50000	10000	ug/l	
106-93-4	1,2-Dibromoethane	2800 U	20000	2800	ug/l	
75-71-8	Dichlorodifluoromethane	5000 U	20000	5000	ug/l	
95-50-1	1,2-Dichlorobenzene	3200 U	10000	3200	ug/l	
541-73-1	1,3-Dichlorobenzene	2200 U	10000	2200	ug/l	
106-46-7	1,4-Dichlorobenzene	2600 U	10000	2600	ug/l	
75-34-3	1,1-Dichloroethane	3400 U	10000	3400	ug/l	
107-06-2	1,2-Dichloroethane	3100 U	10000	3100	ug/l	
75-35-4	1,1-Dichloroethylene	3200 U	10000	3200	ug/l	
156-59-2	cis-1,2-Dichloroethylene	29000	10000	2800	ug/l	
156-60-5	trans-1,2-Dichloroethylene	2200 U	10000	2200	ug/l	
78-87-5	1,2-Dichloropropane	4300 U	10000	4300	ug/l	
10061-01-5	cis-1,3-Dichloropropene	2900 U	10000	2900	ug/l	
10061-02-6	trans-1,3-Dichloropropene	2100 U	10000	2100	ug/l	
100-41-4	Ethylbenzene	3600 U	10000	3600	ug/l	
76-13-1	Freon 113	4800 U	10000	4800	ug/l	
591-78-6	2-Hexanone	20000 U	100000	20000	ug/l	
98-82-8	Isopropylbenzene	2200 U	10000	2200	ug/l	
79-20-9	Methyl Acetate	50000 U	200000	50000	ug/l	

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PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0597-048.0-20211221		
Lab Sample ID:	FA91890-9	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide [c]	20000 U	50000	20000	ug/l	
74-87-3	Methyl Chloride	5000 U	20000	5000	ug/l	
75-09-2	Methylene Chloride	20000 U	50000	20000	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	10000 U	50000	10000	ug/l	
1634-04-4	Methyl Tert Butyl Ether	2300 U	10000	2300	ug/l	
100-42-5	Styrene	2200 U	10000	2200	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	2800 U	10000	2800	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	3000 U	10000	3000	ug/l	
127-18-4	Tetrachloroethylene	2200 U	10000	2200	ug/l	
108-88-3	Toluene	3000 U	10000	3000	ug/l	
87-61-6	1,2,3-Trichlorobenzene	6100 U	20000	6100	ug/l	
120-82-1	1,2,4-Trichlorobenzene	5000 U	20000	5000	ug/l	
71-55-6	1,1,1-Trichloroethane	2500 U	10000	2500	ug/l	
79-00-5	1,1,2-Trichloroethane	4700 U	10000	4700	ug/l	
79-01-6	Trichloroethylene	1460000 [d]	20000	6900	ug/l	Q
75-69-4	Trichlorofluoromethane [e]	5000 U	20000	5000	ug/l	
75-01-4	Vinyl Chloride	4100 U	10000	4100	ug/l	
1330-20-7	Xylene (total)	7200 U	30000	7200	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%	103%	83-118%
17060-07-0	1,2-Dichloroethane-D4	111%	109%	79-125%
2037-26-5	Toluene-D8	96%	101%	85-112%
460-00-4	4-Bromofluorobenzene	98%	106%	83-118%

(a) Sample was not preserved to pH < 2.
(b) Sample was not preserved to pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(c) Associated ICV, CCV, and BS outside control limits high, however sample ND.
(d) Result is from Run# 2
(e) Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0597-053.0-20211221		
Lab Sample ID:	FA91890-10	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1P84203.D	10000	12/28/21 18:59	CF	n/a	n/a	V1P3366
Run #2 [b]	2P84540.D	100000	01/07/22 19:52	CF	n/a	n/a	V2P3369

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	100000 U	250000	100000	ug/l	
71-43-2	Benzene	3100 U	10000	3100	ug/l	
74-97-5	Bromochloromethane	4500 U	10000	4500	ug/l	
75-27-4	Bromodichloromethane	2400 U	10000	2400	ug/l	
75-25-2	Bromoform	4100 U	10000	4100	ug/l	
78-93-3	2-Butanone (MEK)	20000 U	50000	20000	ug/l	
75-15-0	Carbon Disulfide	5300 U	20000	5300	ug/l	
56-23-5	Carbon Tetrachloride	3600 U	10000	3600	ug/l	
108-90-7	Chlorobenzene	2000 U	10000	2000	ug/l	
75-00-3	Chloroethane	6700 U	20000	6700	ug/l	
67-66-3	Chloroform	3000 U	10000	3000	ug/l	
110-82-7	Cyclohexane	3900 U	10000	3900	ug/l	
124-48-1	Dibromochloromethane	2800 U	10000	2800	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	10000 U	50000	10000	ug/l	
106-93-4	1,2-Dibromoethane	2800 U	20000	2800	ug/l	
75-71-8	Dichlorodifluoromethane	5000 U	20000	5000	ug/l	
95-50-1	1,2-Dichlorobenzene	3200 U	10000	3200	ug/l	
541-73-1	1,3-Dichlorobenzene	2200 U	10000	2200	ug/l	
106-46-7	1,4-Dichlorobenzene	2600 U	10000	2600	ug/l	
75-34-3	1,1-Dichloroethane	3400 U	10000	3400	ug/l	
107-06-2	1,2-Dichloroethane	3100 U	10000	3100	ug/l	
75-35-4	1,1-Dichloroethylene	3200 U	10000	3200	ug/l	
156-59-2	cis-1,2-Dichloroethylene	122000	10000	2800	ug/l	
156-60-5	trans-1,2-Dichloroethylene	2200 U	10000	2200	ug/l	
78-87-5	1,2-Dichloropropane	4300 U	10000	4300	ug/l	
10061-01-5	cis-1,3-Dichloropropene	2900 U	10000	2900	ug/l	
10061-02-6	trans-1,3-Dichloropropene	2100 U	10000	2100	ug/l	
100-41-4	Ethylbenzene	3600 U	10000	3600	ug/l	
76-13-1	Freon 113	4940	10000	4800	ug/l	I
591-78-6	2-Hexanone	20000 U	100000	20000	ug/l	
98-82-8	Isopropylbenzene	2200 U	10000	2200	ug/l	
79-20-9	Methyl Acetate	50000 U	200000	50000	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0597-053.0-20211221		
Lab Sample ID:	FA91890-10	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide [c]	20000 U	50000	20000	ug/l	
74-87-3	Methyl Chloride	5000 U	20000	5000	ug/l	
75-09-2	Methylene Chloride	20000 U	50000	20000	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	10000 U	50000	10000	ug/l	
1634-04-4	Methyl Tert Butyl Ether	2300 U	10000	2300	ug/l	
100-42-5	Styrene	2200 U	10000	2200	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	2800 U	10000	2800	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	3000 U	10000	3000	ug/l	
127-18-4	Tetrachloroethylene	2200 U	10000	2200	ug/l	
108-88-3	Toluene	3000 U	10000	3000	ug/l	
87-61-6	1,2,3-Trichlorobenzene	6100 U	20000	6100	ug/l	
120-82-1	1,2,4-Trichlorobenzene	5000 U	20000	5000	ug/l	
71-55-6	1,1,1-Trichloroethane	2500 U	10000	2500	ug/l	
79-00-5	1,1,2-Trichloroethane	4700 U	10000	4700	ug/l	
79-01-6	Trichloroethylene	3060000 [d]	100000	35000	ug/l	Q
75-69-4	Trichlorofluoromethane [e]	5000 U	20000	5000	ug/l	
75-01-4	Vinyl Chloride	4560	10000	4100	ug/l	I
1330-20-7	Xylene (total)	7200 U	30000	7200	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%	102%	83-118%
17060-07-0	1,2-Dichloroethane-D4	110%	105%	79-125%
2037-26-5	Toluene-D8	96%	101%	85-112%
460-00-4	4-Bromofluorobenzene	99%	102%	83-118%

(a) Sample was not preserved to pH < 2.
(b) Sample was not preserved to pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(c) Associated ICV, CCV, and BS outside control limits high, however sample ND.
(d) Result is from Run# 2
(e) Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0597-058.0-20211221		
Lab Sample ID:	FA91890-11	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1P84205.D	25000	12/28/21 19:30	CF	n/a	n/a	V1P3366
Run #2 [b]	2P84542.D	200000	01/07/22 20:24	CF	n/a	n/a	V2P3369

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	250000 U	630000	250000	ug/l	
71-43-2	Benzene	7800 U	25000	7800	ug/l	
74-97-5	Bromochloromethane	11000 U	25000	11000	ug/l	
75-27-4	Bromodichloromethane	6100 U	25000	6100	ug/l	
75-25-2	Bromoform	10000 U	25000	10000	ug/l	
78-93-3	2-Butanone (MEK)	50000 U	130000	50000	ug/l	
75-15-0	Carbon Disulfide	13000 U	50000	13000	ug/l	
56-23-5	Carbon Tetrachloride	8900 U	25000	8900	ug/l	
108-90-7	Chlorobenzene	5000 U	25000	5000	ug/l	
75-00-3	Chloroethane	17000 U	50000	17000	ug/l	
67-66-3	Chloroform	7500 U	25000	7500	ug/l	
110-82-7	Cyclohexane	9800 U	25000	9800	ug/l	
124-48-1	Dibromochloromethane	6900 U	25000	6900	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	26000 U	130000	26000	ug/l	
106-93-4	1,2-Dibromoethane	6900 U	50000	6900	ug/l	
75-71-8	Dichlorodifluoromethane	13000 U	50000	13000	ug/l	
95-50-1	1,2-Dichlorobenzene	8100 U	25000	8100	ug/l	
541-73-1	1,3-Dichlorobenzene	5400 U	25000	5400	ug/l	
106-46-7	1,4-Dichlorobenzene	6400 U	25000	6400	ug/l	
75-34-3	1,1-Dichloroethane	8500 U	25000	8500	ug/l	
107-06-2	1,2-Dichloroethane	7800 U	25000	7800	ug/l	
75-35-4	1,1-Dichloroethylene	8100 U	25000	8100	ug/l	
156-59-2	cis-1,2-Dichloroethylene	338000	25000	6900	ug/l	
156-60-5	trans-1,2-Dichloroethylene	5500 U	25000	5500	ug/l	
78-87-5	1,2-Dichloropropane	11000 U	25000	11000	ug/l	
10061-01-5	cis-1,3-Dichloropropene	7300 U	25000	7300	ug/l	
10061-02-6	trans-1,3-Dichloropropene	5400 U	25000	5400	ug/l	
100-41-4	Ethylbenzene	8900 U	25000	8900	ug/l	
76-13-1	Freon 113	12000 U	25000	12000	ug/l	
591-78-6	2-Hexanone	50000 U	250000	50000	ug/l	
98-82-8	Isopropylbenzene	5500 U	25000	5500	ug/l	
79-20-9	Methyl Acetate	130000 U	500000	130000	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0597-058.0-20211221		
Lab Sample ID:	FA91890-11	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide [c]	50000 U	130000	50000	ug/l	
74-87-3	Methyl Chloride	13000 U	50000	13000	ug/l	
75-09-2	Methylene Chloride	50000 U	130000	50000	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	25000 U	130000	25000	ug/l	
1634-04-4	Methyl Tert Butyl Ether	5700 U	25000	5700	ug/l	
100-42-5	Styrene	5600 U	25000	5600	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	6900 U	25000	6900	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	7500 U	25000	7500	ug/l	
127-18-4	Tetrachloroethylene	5400 U	25000	5400	ug/l	
108-88-3	Toluene	7500 U	25000	7500	ug/l	
87-61-6	1,2,3-Trichlorobenzene	15000 U	50000	15000	ug/l	
120-82-1	1,2,4-Trichlorobenzene	13000 U	50000	13000	ug/l	
71-55-6	1,1,1-Trichloroethane	6200 U	25000	6200	ug/l	
79-00-5	1,1,2-Trichloroethane	12000 U	25000	12000	ug/l	
79-01-6	Trichloroethylene [d]	15400000	25000	8600	ug/l	L
75-69-4	Trichlorofluoromethane [e]	13000 U	50000	13000	ug/l	
75-01-4	Vinyl Chloride	20600	25000	10000	ug/l	I
1330-20-7	Xylene (total)	18000 U	75000	18000	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%	105%	83-118%
17060-07-0	1,2-Dichloroethane-D4	111%	109%	79-125%
2037-26-5	Toluene-D8	97%	101%	85-112%
460-00-4	4-Bromofluorobenzene	99%	104%	83-118%

(a) Sample was not preserved to pH < 2.
(b) Sample was not preserved to pH < 2. Confirmation run beyond holdtime. Results from different vials are not consistent; higher results were reported.
(c) Associated ICV, CCV, and BS outside control limits high, however sample ND.
(d) Results from different vials are not consistent; higher results were reported.
(e) Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0597-063.0-20211221		
Lab Sample ID:	FA91890-12	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1P84207.D	500	12/28/21 20:01	CF	n/a	n/a	V1P3366
Run #2 [b]	2P84544.D	10000	01/07/22 20:55	CF	n/a	n/a	V2P3369

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	5000 U	13000	5000	ug/l	
71-43-2	Benzene	160 U	500	160	ug/l	
74-97-5	Bromochloromethane	230 U	500	230	ug/l	
75-27-4	Bromodichloromethane	120 U	500	120	ug/l	
75-25-2	Bromoform	200 U	500	200	ug/l	
78-93-3	2-Butanone (MEK)	1000 U	2500	1000	ug/l	
75-15-0	Carbon Disulfide	270 U	1000	270	ug/l	
56-23-5	Carbon Tetrachloride	180 U	500	180	ug/l	
108-90-7	Chlorobenzene	100 U	500	100	ug/l	
75-00-3	Chloroethane	330 U	1000	330	ug/l	
67-66-3	Chloroform	150 U	500	150	ug/l	
110-82-7	Cyclohexane	200 U	500	200	ug/l	
124-48-1	Dibromochloromethane	140 U	500	140	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	520 U	2500	520	ug/l	
106-93-4	1,2-Dibromoethane	140 U	1000	140	ug/l	
75-71-8	Dichlorodifluoromethane	250 U	1000	250	ug/l	
95-50-1	1,2-Dichlorobenzene	160 U	500	160	ug/l	
541-73-1	1,3-Dichlorobenzene	110 U	500	110	ug/l	
106-46-7	1,4-Dichlorobenzene	130 U	500	130	ug/l	
75-34-3	1,1-Dichloroethane	170 U	500	170	ug/l	
107-06-2	1,2-Dichloroethane	160 U	500	160	ug/l	
75-35-4	1,1-Dichloroethylene	170	500	160	ug/l	I
156-59-2	cis-1,2-Dichloroethylene [c]	73900 [d]	10000	2800	ug/l	Q
156-60-5	trans-1,2-Dichloroethylene	303	500	110	ug/l	I
78-87-5	1,2-Dichloropropane	210 U	500	210	ug/l	
10061-01-5	cis-1,3-Dichloropropene	150 U	500	150	ug/l	
10061-02-6	trans-1,3-Dichloropropene	110 U	500	110	ug/l	
100-41-4	Ethylbenzene	180 U	500	180	ug/l	
76-13-1	Freon 113	240 U	500	240	ug/l	
591-78-6	2-Hexanone	1000 U	5000	1000	ug/l	
98-82-8	Isopropylbenzene	110 U	500	110	ug/l	
79-20-9	Methyl Acetate	2500 U	10000	2500	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0597-063.0-20211221		
Lab Sample ID:	FA91890-12	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide [e]	1000 U	2500	1000	ug/l	
74-87-3	Methyl Chloride	250 U	1000	250	ug/l	
75-09-2	Methylene Chloride	1000 U	2500	1000	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	500 U	2500	500	ug/l	
1634-04-4	Methyl Tert Butyl Ether	110 U	500	110	ug/l	
100-42-5	Styrene	110 U	500	110	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	140 U	500	140	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	150 U	500	150	ug/l	
127-18-4	Tetrachloroethylene	110 U	500	110	ug/l	
108-88-3	Toluene	150 U	500	150	ug/l	
87-61-6	1,2,3-Trichlorobenzene	310 U	1000	310	ug/l	
120-82-1	1,2,4-Trichlorobenzene	250 U	1000	250	ug/l	
71-55-6	1,1,1-Trichloroethane	120 U	500	120	ug/l	
79-00-5	1,1,2-Trichloroethane	230 U	500	230	ug/l	
79-01-6	Trichloroethylene	990000 [d]	10000	3500	ug/l	Q
75-69-4	Trichlorofluoromethane [f]	250 U	1000	250	ug/l	
75-01-4	Vinyl Chloride	2410	500	200	ug/l	
1330-20-7	Xylene (total)	360 U	1500	360	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%	106%	83-118%
17060-07-0	1,2-Dichloroethane-D4	110%	115%	79-125%
2037-26-5	Toluene-D8	98%	103%	85-112%
460-00-4	4-Bromofluorobenzene	99%	103%	83-118%

(a) Sample was not preserved to pH < 2.
(b) Sample was not preserved to pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(c) Results from different vials are not consistent; higher results were reported.
(d) Result is from Run# 2
(e) Associated ICV, CCV, and BS outside control limits high, however sample ND.
(f) Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range
I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0597-068.0-20211221		
Lab Sample ID:	FA91890-13	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1P84189.D	1	12/28/21 15:18	CF	n/a	n/a	V1P3366
Run #2 [b]	2P84546.D	50	01/07/22 21:27	CF	n/a	n/a	V2P3369

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	10 U	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.67 U	2.0	0.67	ug/l	
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	0.50 U	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	1.9	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	108 [c]	50	14	ug/l	Q
156-60-5	trans-1,2-Dichloroethylene	1.3	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113	5.5	1.0	0.48	ug/l	
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0597-068.0-20211221		
Lab Sample ID:	FA91890-13	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide [d]	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	2.0 U	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.30	1.0	0.30	ug/l	I
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene [e]	7400 [c]	50	17	ug/l	LQ
75-69-4	Trichlorofluoromethane [f]	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	9.4	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%	106%	83-118%
17060-07-0	1,2-Dichloroethane-D4	111%	114%	79-125%
2037-26-5	Toluene-D8	100%	99%	85-112%
460-00-4	4-Bromofluorobenzene	98%	102%	83-118%

(a) Sample was not preserved to pH < 2.
(b) Sample was not preserved to pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(c) Result is from Run# 2
(d) Associated ICV, CCV, and BS outside control limits high, however sample ND.
(e) No sample available for reanalysis.
(f) Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0600-008.0-20211220		
Lab Sample ID:	FA91890-14	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	2P84084.D	1	12/26/21 18:01	CV	n/a	n/a	V2P3359
Run #2 [b]	1A41262.D	10	01/12/22 14:49	CV	n/a	n/a	V1A1673

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	10 U	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.67 U	2.0	0.67	ug/l	
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	0.50 U	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.35	1.0	0.32	ug/l	I
156-59-2	cis-1,2-Dichloroethylene	7.5	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.32	1.0	0.22	ug/l	I
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113	1.3	1.0	0.48	ug/l	
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0600-008.0-20211220		
Lab Sample ID:	FA91890-14	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	2.0 U	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIB [c]	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.30 U	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	324 [d]	10	3.5	ug/l	Q
75-69-4	Trichlorofluoromethane	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	0.55	1.0	0.41	ug/l	I
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%	84%	83-118%
17060-07-0	1,2-Dichloroethane-D4	104%	53% [e]	79-125%
2037-26-5	Toluene-D8	99%	110%	85-112%
460-00-4	4-Bromofluorobenzene	99%	101%	83-118%

(a) Sample was not preserved to a pH < 2.
(b) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(c) Associated CCV outside of control limits high, sample was ND.
(d) Result is from Run# 2
(e) Outside control limits.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0600-013.0-20211220		
Lab Sample ID:	FA91890-15	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	2P84086.D	1	12/26/21 18:32	CV	n/a	n/a	V2P3359
Run #2 [b]	1A41264.D	100	01/12/22 15:18	CV	n/a	n/a	V1A1673

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	10 U	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.67 U	2.0	0.67	ug/l	
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	0.50 U	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	19.8	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	3410 [c]	100	28	ug/l	Q
156-60-5	trans-1,2-Dichloroethylene	32.6	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113	3.1	1.0	0.48	ug/l	
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0600-013.0-20211220		
Lab Sample ID:	FA91890-15	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	2.0 U	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIB [d]	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.94	1.0	0.30	ug/l	I
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene [e]	24100 [c]	100	35	ug/l	LQ
75-69-4	Trichlorofluoromethane	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	35.5	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%	84%	83-118%
17060-07-0	1,2-Dichloroethane-D4	102%	60% [f]	79-125%
2037-26-5	Toluene-D8	102%	108%	85-112%
460-00-4	4-Bromofluorobenzene	101%	100%	83-118%

(a) Sample was not preserved to a pH < 2.
(b) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(c) Result is from Run# 2
(d) Associated CCV outside of control limits high, sample was ND.
(e) No sample available for reanalysis.
(f) Outside control limits.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0600-018.0-20211220		
Lab Sample ID:	FA91890-16	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	2P84088.D	1	12/26/21 19:04	CV	n/a	n/a	V2P3359
Run #2 [b]	I73487.D	250	01/13/22 23:45	LR	n/a	n/a	VI2440

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	10 U	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.67 U	2.0	0.67	ug/l	
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	0.50 U	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	11.9	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	2210 [c]	250	69	ug/l	Q
156-60-5	trans-1,2-Dichloroethylene	33.8	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113	0.61	1.0	0.48	ug/l	
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0600-018.0-20211220		
Lab Sample ID:	FA91890-16	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	2.0 U	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIB [d]	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.30 U	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	10900 [c]	250	86	ug/l	Q
75-69-4	Trichlorofluoromethane	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	91.0	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%	92%	83-118%
17060-07-0	1,2-Dichloroethane-D4	99%	98%	79-125%
2037-26-5	Toluene-D8	100%	107%	85-112%
460-00-4	4-Bromofluorobenzene	102%	99%	83-118%

(a) Sample was not preserved to a pH < 2.
(b) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(c) Result is from Run# 2
(d) Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0600-023.0-20211220		
Lab Sample ID:	FA91890-17	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	2P84090.D	1	12/26/21 19:36	CV	n/a	n/a	V2P3359
Run #2 [b]	1A41268.D	100	01/12/22 16:15	CV	n/a	n/a	V1A1673

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	12.9	25	10	ug/l	I
71-43-2	Benzene	0.64	1.0	0.31	ug/l	I
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	2.6	5.0	2.0	ug/l	I
75-15-0	Carbon Disulfide	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.67 U	2.0	0.67	ug/l	
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	0.50 U	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	20.5	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	5360 [c]	100	28	ug/l	Q
156-60-5	trans-1,2-Dichloroethylene	69.6	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113	0.48 U	1.0	0.48	ug/l	
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0600-023.0-20211220		
Lab Sample ID:	FA91890-17	**Date Sampled:**	12/20/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	2.0 U	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIB [d]	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.33	1.0	0.30	ug/l	I
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene [e]	23400 [c]	100	35	ug/l	LQ
75-69-4	Trichlorofluoromethane	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	192 [c]	100	41	ug/l	Q
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%	94%	83-118%
17060-07-0	1,2-Dichloroethane-D4	98%	87%	79-125%
2037-26-5	Toluene-D8	99%	101%	85-112%
460-00-4	4-Bromofluorobenzene	103%	98%	83-118%

(a) Sample was not preserved to a pH < 2.
(b) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(c) Result is from Run# 2
(d) Associated CCV outside of control limits high, sample was ND.
(e) No sample available for reanalysis.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0600-028.0-20211221		
Lab Sample ID:	FA91890-18	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1P84191.D	1	12/28/21 15:49	CF	n/a	n/a	V1P3366
Run #2 [b]	2P84536.D	1	01/07/22 18:50	CF	n/a	n/a	V2P3369

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	10 U	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.67 U	2.0	0.67	ug/l	
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	0.50 U	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.56	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	19.4	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.30	1.0	0.22	ug/l	I
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113	0.48 U	1.0	0.48	ug/l	
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0600-028.0-20211221		
Lab Sample ID:	FA91890-18	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide [c]	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	2.0 U	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.30 U	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	44.5	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane [d]	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	20.0	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%	105%	83-118%
17060-07-0	1,2-Dichloroethane-D4	107%	110%	79-125%
2037-26-5	Toluene-D8	96%	100%	85-112%
460-00-4	4-Bromofluorobenzene	97%	104%	83-118%

(a) Sample was not preserved to pH < 2.
(b) Sample was not preserved to pH < 2. Confirmation run beyond holdtime.
(c) Associated ICV, CCV, and BS outside control limits high, however sample ND.
(d) Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0600-033.0-20211221		
Lab Sample ID:	FA91890-19	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1P84193.D	1	12/28/21 16:21	CF	n/a	n/a	V1P3366
Run #2 [b]	2P84548.D	100	01/07/22 21:59	CF	n/a	n/a	V2P3369

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	28.7	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	4.6	5.0	2.0	ug/l	I
75-15-0	Carbon Disulfide	19.2	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.67 U	2.0	0.67	ug/l	
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	0.50 U	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	18.7	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	9130 [c]	100	28	ug/l	Q
156-60-5	trans-1,2-Dichloroethylene	71.9 [c]	100	22	ug/l	IQ
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113	0.48 U	1.0	0.48	ug/l	
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0600-033.0-20211221		
Lab Sample ID:	FA91890-19	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide [d]	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	2.0 U	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.46	1.0	0.30	ug/l	I
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene [e]	41900 [c]	100	35	ug/l	LQ
75-69-4	Trichlorofluoromethane [f]	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	183 [c]	100	41	ug/l	Q
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%	105%	83-118%
17060-07-0	1,2-Dichloroethane-D4	108%	105%	79-125%
2037-26-5	Toluene-D8	99%	100%	85-112%
460-00-4	4-Bromofluorobenzene	99%	104%	83-118%

(a) Sample was not preserved to pH < 2.
(b) Sample was not preserved to pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(c) Result is from Run# 2
(d) Associated ICV, CCV, and BS outside control limits high, however sample ND.
(e) No sample available for reanalysis.
(f) Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0600-038.0-20211221		
Lab Sample ID:	FA91890-20	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1P84195.D	1	12/28/21 16:53	CF	n/a	n/a	V1P3366
Run #2 [b]	2P84550.D	100	01/07/22 22:32	CF	n/a	n/a	V2P3369

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	38.8	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	5.8	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	59.1	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.67 U	2.0	0.67	ug/l	
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	0.50 U	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.45	1.0	0.34	ug/l	I
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	16.9	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	7480 [c]	100	28	ug/l	Q
156-60-5	trans-1,2-Dichloroethylene	73.5 [c]	100	22	ug/l	IQ
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113	0.48 U	1.0	0.48	ug/l	
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0600-038.0-20211221		
Lab Sample ID:	FA91890-20	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide [d]	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	2.0 U	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.77	1.0	0.30	ug/l	I
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene [e]	54000 [c]	100	35	ug/l	LQ
75-69-4	Trichlorofluoromethane [f]	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	242 [c]	100	41	ug/l	Q
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	108%	103%	83-118%
17060-07-0	1,2-Dichloroethane-D4	107%	108%	79-125%
2037-26-5	Toluene-D8	96%	101%	85-112%
460-00-4	4-Bromofluorobenzene	99%	104%	83-118%

(a) Sample was not preserved to pH < 2.
(b) Sample was not preserved to pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(c) Result is from Run# 2
(d) Associated ICV, CCV, and BS outside control limits high, however sample ND.
(e) No sample available for reanalysis.
(f) Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0600-043.0-20211221		
Lab Sample ID:	FA91890-21	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1P84209.D	200	12/28/21 20:33	CF	n/a	n/a	V1P3366
Run #2 [b]	C0153321.D	1000	01/13/22 07:50	LV	n/a	n/a	VC6187

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	2000 U	5000	2000	ug/l	
71-43-2	Benzene	62 U	200	62	ug/l	
74-97-5	Bromochloromethane	90 U	200	90	ug/l	
75-27-4	Bromodichloromethane	48 U	200	48	ug/l	
75-25-2	Bromoform	81 U	200	81	ug/l	
78-93-3	2-Butanone (MEK)	400 U	1000	400	ug/l	
75-15-0	Carbon Disulfide	110 U	400	110	ug/l	
56-23-5	Carbon Tetrachloride	71 U	200	71	ug/l	
108-90-7	Chlorobenzene	40 U	200	40	ug/l	
75-00-3	Chloroethane	130 U	400	130	ug/l	
67-66-3	Chloroform	60 U	200	60	ug/l	
110-82-7	Cyclohexane	78 U	200	78	ug/l	
124-48-1	Dibromochloromethane	55 U	200	55	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	210 U	1000	210	ug/l	
106-93-4	1,2-Dibromoethane	55 U	400	55	ug/l	
75-71-8	Dichlorodifluoromethane	100 U	400	100	ug/l	
95-50-1	1,2-Dichlorobenzene	65 U	200	65	ug/l	
541-73-1	1,3-Dichlorobenzene	43 U	200	43	ug/l	
106-46-7	1,4-Dichlorobenzene	51 U	200	51	ug/l	
75-34-3	1,1-Dichloroethane	68 U	200	68	ug/l	
107-06-2	1,2-Dichloroethane	62 U	200	62	ug/l	
75-35-4	1,1-Dichloroethylene	64 U	200	64	ug/l	
156-59-2	cis-1,2-Dichloroethylene	14800	200	55	ug/l	
156-60-5	trans-1,2-Dichloroethylene	178	200	44	ug/l	I
78-87-5	1,2-Dichloropropane	85 U	200	85	ug/l	
10061-01-5	cis-1,3-Dichloropropene	58 U	200	58	ug/l	
10061-02-6	trans-1,3-Dichloropropene	43 U	200	43	ug/l	
100-41-4	Ethylbenzene	71 U	200	71	ug/l	
76-13-1	Freon 113	96 U	200	96	ug/l	
591-78-6	2-Hexanone	400 U	2000	400	ug/l	
98-82-8	Isopropylbenzene	44 U	200	44	ug/l	
79-20-9	Methyl Acetate	1000 U	4000	1000	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0600-043.0-20211221		
Lab Sample ID:	FA91890-21	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide [c]	400 U	1000	400	ug/l	
74-87-3	Methyl Chloride	100 U	400	100	ug/l	
75-09-2	Methylene Chloride	400 U	1000	400	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	200 U	1000	200	ug/l	
1634-04-4	Methyl Tert Butyl Ether	46 U	200	46	ug/l	
100-42-5	Styrene	44 U	200	44	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	55 U	200	55	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	60 U	200	60	ug/l	
127-18-4	Tetrachloroethylene	43 U	200	43	ug/l	
108-88-3	Toluene	60 U	200	60	ug/l	
87-61-6	1,2,3-Trichlorobenzene	120 U	400	120	ug/l	
120-82-1	1,2,4-Trichlorobenzene	100 U	400	100	ug/l	
71-55-6	1,1,1-Trichloroethane	50 U	200	50	ug/l	
79-00-5	1,1,2-Trichloroethane	93 U	200	93	ug/l	
79-01-6	Trichloroethylene	74600 [d]	1000	350	ug/l	Q
75-69-4	Trichlorofluoromethane [e]	100 U	400	100	ug/l	
75-01-4	Vinyl Chloride	1480	200	82	ug/l	
1330-20-7	Xylene (total)	140 U	600	140	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%	88%	83-118%
17060-07-0	1,2-Dichloroethane-D4	109%	94%	79-125%
2037-26-5	Toluene-D8	94%	103%	85-112%
460-00-4	4-Bromofluorobenzene	101%	107%	83-118%

(a) Sample was not preserved to a pH < 2.
(b) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(c) Associated ICV, CCV, and BS outside control limits high, however sample ND.
(d) Result is from Run# 2
(e) Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0600-048.0-20211221		
Lab Sample ID:	FA91890-22	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1P84211.D	500	12/28/21 21:04	CF	n/a	n/a	V1P3366
Run #2 [b]	C0153322.D	1000	01/13/22 08:14	LV	n/a	n/a	VC6187

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	5000 U	13000	5000	ug/l	
71-43-2	Benzene	160 U	500	160	ug/l	
74-97-5	Bromochloromethane	230 U	500	230	ug/l	
75-27-4	Bromodichloromethane	120 U	500	120	ug/l	
75-25-2	Bromoform	200 U	500	200	ug/l	
78-93-3	2-Butanone (MEK)	1000 U	2500	1000	ug/l	
75-15-0	Carbon Disulfide	270 U	1000	270	ug/l	
56-23-5	Carbon Tetrachloride	180 U	500	180	ug/l	
108-90-7	Chlorobenzene	100 U	500	100	ug/l	
75-00-3	Chloroethane	330 U	1000	330	ug/l	
67-66-3	Chloroform	150 U	500	150	ug/l	
110-82-7	Cyclohexane	200 U	500	200	ug/l	
124-48-1	Dibromochloromethane	140 U	500	140	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	520 U	2500	520	ug/l	
106-93-4	1,2-Dibromoethane	140 U	1000	140	ug/l	
75-71-8	Dichlorodifluoromethane	250 U	1000	250	ug/l	
95-50-1	1,2-Dichlorobenzene	160 U	500	160	ug/l	
541-73-1	1,3-Dichlorobenzene	110 U	500	110	ug/l	
106-46-7	1,4-Dichlorobenzene	130 U	500	130	ug/l	
75-34-3	1,1-Dichloroethane	170 U	500	170	ug/l	
107-06-2	1,2-Dichloroethane	160 U	500	160	ug/l	
75-35-4	1,1-Dichloroethylene	160 U	500	160	ug/l	
156-59-2	cis-1,2-Dichloroethylene	28500	500	140	ug/l	
156-60-5	trans-1,2-Dichloroethylene	203	500	110	ug/l	I
78-87-5	1,2-Dichloropropane	210 U	500	210	ug/l	
10061-01-5	cis-1,3-Dichloropropene	150 U	500	150	ug/l	
10061-02-6	trans-1,3-Dichloropropene	110 U	500	110	ug/l	
100-41-4	Ethylbenzene	180 U	500	180	ug/l	
76-13-1	Freon 113	240 U	500	240	ug/l	
591-78-6	2-Hexanone	1000 U	5000	1000	ug/l	
98-82-8	Isopropylbenzene	110 U	500	110	ug/l	
79-20-9	Methyl Acetate	2500 U	10000	2500	ug/l	

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PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0600-048.0-20211221		
Lab Sample ID:	FA91890-22	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide [c]	1000 U	2500	1000	ug/l	
74-87-3	Methyl Chloride	250 U	1000	250	ug/l	
75-09-2	Methylene Chloride	1000 U	2500	1000	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	500 U	2500	500	ug/l	
1634-04-4	Methyl Tert Butyl Ether	110 U	500	110	ug/l	
100-42-5	Styrene	110 U	500	110	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	140 U	500	140	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	150 U	500	150	ug/l	
127-18-4	Tetrachloroethylene	110 U	500	110	ug/l	
108-88-3	Toluene	150 U	500	150	ug/l	
87-61-6	1,2,3-Trichlorobenzene	310 U	1000	310	ug/l	
120-82-1	1,2,4-Trichlorobenzene	250 U	1000	250	ug/l	
71-55-6	1,1,1-Trichloroethane	120 U	500	120	ug/l	
79-00-5	1,1,2-Trichloroethane	230 U	500	230	ug/l	
79-01-6	Trichloroethylene	76800 [d]	1000	350	ug/l	Q
75-69-4	Trichlorofluoromethane [e]	250 U	1000	250	ug/l	
75-01-4	Vinyl Chloride	889	500	200	ug/l	
1330-20-7	Xylene (total)	360 U	1500	360	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%	93%	83-118%
17060-07-0	1,2-Dichloroethane-D4	108%	98%	79-125%
2037-26-5	Toluene-D8	94%	104%	85-112%
460-00-4	4-Bromofluorobenzene	101%	109%	83-118%

(a) Sample was not preserved to a pH < 2.
(b) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(c) Associated ICV, CCV, and BS outside control limits high, however sample ND.
(d) Result is from Run# 2
(e) Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0600-053.0-20211221		
Lab Sample ID:	FA91890-23	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1P84213.D	200	12/28/21 21:36	CF	n/a	n/a	V1P3366
Run #2 [b]	C0153323.D	200	01/13/22 08:37	LV	n/a	n/a	VC6187

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	2000 U	5000	2000	ug/l	
71-43-2	Benzene	62 U	200	62	ug/l	
74-97-5	Bromochloromethane	90 U	200	90	ug/l	
75-27-4	Bromodichloromethane	48 U	200	48	ug/l	
75-25-2	Bromoform	81 U	200	81	ug/l	
78-93-3	2-Butanone (MEK)	400 U	1000	400	ug/l	
75-15-0	Carbon Disulfide	110 U	400	110	ug/l	
56-23-5	Carbon Tetrachloride	71 U	200	71	ug/l	
108-90-7	Chlorobenzene	40 U	200	40	ug/l	
75-00-3	Chloroethane	130 U	400	130	ug/l	
67-66-3	Chloroform	60 U	200	60	ug/l	
110-82-7	Cyclohexane	78 U	200	78	ug/l	
124-48-1	Dibromochloromethane	55 U	200	55	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	210 U	1000	210	ug/l	
106-93-4	1,2-Dibromoethane	55 U	400	55	ug/l	
75-71-8	Dichlorodifluoromethane	100 U	400	100	ug/l	
95-50-1	1,2-Dichlorobenzene	65 U	200	65	ug/l	
541-73-1	1,3-Dichlorobenzene	43 U	200	43	ug/l	
106-46-7	1,4-Dichlorobenzene	51 U	200	51	ug/l	
75-34-3	1,1-Dichloroethane	68 U	200	68	ug/l	
107-06-2	1,2-Dichloroethane	62 U	200	62	ug/l	
75-35-4	1,1-Dichloroethylene	64 U	200	64	ug/l	
156-59-2	cis-1,2-Dichloroethylene	18100	200	55	ug/l	
156-60-5	trans-1,2-Dichloroethylene	175	200	44	ug/l	I
78-87-5	1,2-Dichloropropane	85 U	200	85	ug/l	
10061-01-5	cis-1,3-Dichloropropene	58 U	200	58	ug/l	
10061-02-6	trans-1,3-Dichloropropene	43 U	200	43	ug/l	
100-41-4	Ethylbenzene	71 U	200	71	ug/l	
76-13-1	Freon 113	96 U	200	96	ug/l	
591-78-6	2-Hexanone	400 U	2000	400	ug/l	
98-82-8	Isopropylbenzene	44 U	200	44	ug/l	
79-20-9	Methyl Acetate	1000 U	4000	1000	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0600-053.0-20211221		
Lab Sample ID:	FA91890-23	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide [c]	400 U	1000	400	ug/l	
74-87-3	Methyl Chloride	100 U	400	100	ug/l	
75-09-2	Methylene Chloride	400 U	1000	400	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	200 U	1000	200	ug/l	
1634-04-4	Methyl Tert Butyl Ether	46 U	200	46	ug/l	
100-42-5	Styrene	44 U	200	44	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	55 U	200	55	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	60 U	200	60	ug/l	
127-18-4	Tetrachloroethylene	43 U	200	43	ug/l	
108-88-3	Toluene	60 U	200	60	ug/l	
87-61-6	1,2,3-Trichlorobenzene	120 U	400	120	ug/l	
120-82-1	1,2,4-Trichlorobenzene	100 U	400	100	ug/l	
71-55-6	1,1,1-Trichloroethane	50 U	200	50	ug/l	
79-00-5	1,1,2-Trichloroethane	93 U	200	93	ug/l	
79-01-6	Trichloroethylene	260 [d]	200	69	ug/l	Q
75-69-4	Trichlorofluoromethane	100 U	400	100	ug/l	
75-01-4	Vinyl Chloride	2450	200	82	ug/l	
1330-20-7	Xylene (total)	140 U	600	140	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%	92%	83-118%
17060-07-0	1,2-Dichloroethane-D4	107%	98%	79-125%
2037-26-5	Toluene-D8	93%	101%	85-112%
460-00-4	4-Bromofluorobenzene	101%	108%	83-118%

(a) Sample was not preserved to a pH < 2.
(b) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(c) Associated ICV, CCV, and BS outside control limits high, however sample ND.
(d) Result is from Run# 2

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0600-058.0-20211221		
Lab Sample ID:	FA91890-24	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	2P84194.D	10	12/28/21 16:37	CF	n/a	n/a	V2P3361
Run #2 [b]	C0153366.D	10	01/14/22 02:07	LV	n/a	n/a	VC6189

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	100 U	250	100	ug/l	
71-43-2	Benzene	3.1 U	10	3.1	ug/l	
74-97-5	Bromochloromethane	4.5 U	10	4.5	ug/l	
75-27-4	Bromodichloromethane	2.4 U	10	2.4	ug/l	
75-25-2	Bromoform	4.1 U	10	4.1	ug/l	
78-93-3	2-Butanone (MEK)	20 U	50	20	ug/l	
75-15-0	Carbon Disulfide	5.3 U	20	5.3	ug/l	
56-23-5	Carbon Tetrachloride	3.6 U	10	3.6	ug/l	
108-90-7	Chlorobenzene	2.0 U	10	2.0	ug/l	
75-00-3	Chloroethane	6.7 U	20	6.7	ug/l	
67-66-3	Chloroform	3.0 U	10	3.0	ug/l	
110-82-7	Cyclohexane	3.9 U	10	3.9	ug/l	
124-48-1	Dibromochloromethane	2.8 U	10	2.8	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	10 U	50	10	ug/l	
106-93-4	1,2-Dibromoethane	2.8 U	20	2.8	ug/l	
75-71-8	Dichlorodifluoromethane	5.0 U	20	5.0	ug/l	
95-50-1	1,2-Dichlorobenzene	3.2 U	10	3.2	ug/l	
541-73-1	1,3-Dichlorobenzene	2.2 U	10	2.2	ug/l	
106-46-7	1,4-Dichlorobenzene	2.6 U	10	2.6	ug/l	
75-34-3	1,1-Dichloroethane	3.4 U	10	3.4	ug/l	
107-06-2	1,2-Dichloroethane	3.1 U	10	3.1	ug/l	
75-35-4	1,1-Dichloroethylene	3.2 U	10	3.2	ug/l	
156-59-2	cis-1,2-Dichloroethylene	535	10	2.8	ug/l	
156-60-5	trans-1,2-Dichloroethylene	6.7	10	2.2	ug/l	I
78-87-5	1,2-Dichloropropane	4.3 U	10	4.3	ug/l	
10061-01-5	cis-1,3-Dichloropropene	2.9 U	10	2.9	ug/l	
10061-02-6	trans-1,3-Dichloropropene	2.1 U	10	2.1	ug/l	
100-41-4	Ethylbenzene	3.6 U	10	3.6	ug/l	
76-13-1	Freon 113	4.8 U	10	4.8	ug/l	
591-78-6	2-Hexanone	20 U	100	20	ug/l	
98-82-8	Isopropylbenzene	2.2 U	10	2.2	ug/l	
79-20-9	Methyl Acetate	50 U	200	50	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0600-058.0-20211221		
Lab Sample ID:	FA91890-24	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	20 U	50	20	ug/l	
74-87-3	Methyl Chloride	5.0 U	20	5.0	ug/l	
75-09-2	Methylene Chloride [c]	20 UJ	50	20	ug/l	J
108-10-1	4-Methyl-2-pentanone (MIBK)	10 U	50	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	2.3 U	10	2.3	ug/l	
100-42-5	Styrene	2.2 U	10	2.2	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	2.8 U	10	2.8	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	3.0 U	10	3.0	ug/l	
127-18-4	Tetrachloroethylene	2.2 U	10	2.2	ug/l	
108-88-3	Toluene	3.0 U	10	3.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	6.1 U	20	6.1	ug/l	
120-82-1	1,2,4-Trichlorobenzene	5.0 U	20	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	2.5 U	10	2.5	ug/l	
79-00-5	1,1,2-Trichloroethane	4.7 U	10	4.7	ug/l	
79-01-6	Trichloroethylene	434 [d]	10	3.5	ug/l	Q
75-69-4	Trichlorofluoromethane	5.0 U	20	5.0	ug/l	
75-01-4	Vinyl Chloride	289	10	4.1	ug/l	
1330-20-7	Xylene (total)	7.2 U	30	7.2	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%	92%	83-118%
17060-07-0	1,2-Dichloroethane-D4	103%	92%	79-125%
2037-26-5	Toluene-D8	97%	103%	85-112%
460-00-4	4-Bromofluorobenzene	99%	108%	83-118%

(a) Sample was not preserved to a pH < 2.
(b) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(c) Associated CCV outside of control limits low.
(d) Result is from Run# 2

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0600-063.0-20211221		
Lab Sample ID:	FA91890-25	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	2P84196.D	5	12/28/21 17:08	CF	n/a	n/a	V2P3361
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	50 U	130	50	ug/l	
71-43-2	Benzene	1.6 U	5.0	1.6	ug/l	
74-97-5	Bromochloromethane	2.3 U	5.0	2.3	ug/l	
75-27-4	Bromodichloromethane	1.2 U	5.0	1.2	ug/l	
75-25-2	Bromoform	2.0 U	5.0	2.0	ug/l	
78-93-3	2-Butanone (MEK)	10 U	25	10	ug/l	
75-15-0	Carbon Disulfide	2.7 U	10	2.7	ug/l	
56-23-5	Carbon Tetrachloride	1.8 U	5.0	1.8	ug/l	
108-90-7	Chlorobenzene	1.0 U	5.0	1.0	ug/l	
75-00-3	Chloroethane	3.3 U	10	3.3	ug/l	
67-66-3	Chloroform	1.5 U	5.0	1.5	ug/l	
110-82-7	Cyclohexane	2.0 U	5.0	2.0	ug/l	
124-48-1	Dibromochloromethane	1.4 U	5.0	1.4	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	5.2 U	25	5.2	ug/l	
106-93-4	1,2-Dibromoethane	1.4 U	10	1.4	ug/l	
75-71-8	Dichlorodifluoromethane	2.5 U	10	2.5	ug/l	
95-50-1	1,2-Dichlorobenzene	1.6 U	5.0	1.6	ug/l	
541-73-1	1,3-Dichlorobenzene	1.1 U	5.0	1.1	ug/l	
106-46-7	1,4-Dichlorobenzene	1.3 U	5.0	1.3	ug/l	
75-34-3	1,1-Dichloroethane	1.7 U	5.0	1.7	ug/l	
107-06-2	1,2-Dichloroethane	1.6 U	5.0	1.6	ug/l	
75-35-4	1,1-Dichloroethylene	1.6 U	5.0	1.6	ug/l	
156-59-2	cis-1,2-Dichloroethylene	443	5.0	1.4	ug/l	
156-60-5	trans-1,2-Dichloroethylene	2.5	5.0	1.1	ug/l	I
78-87-5	1,2-Dichloropropane	2.1 U	5.0	2.1	ug/l	
10061-01-5	cis-1,3-Dichloropropene	1.5 U	5.0	1.5	ug/l	
10061-02-6	trans-1,3-Dichloropropene	1.1 U	5.0	1.1	ug/l	
100-41-4	Ethylbenzene	1.8 U	5.0	1.8	ug/l	
76-13-1	Freon 113	2.4 U	5.0	2.4	ug/l	
591-78-6	2-Hexanone	10 U	50	10	ug/l	
98-82-8	Isopropylbenzene	1.1 U	5.0	1.1	ug/l	
79-20-9	Methyl Acetate	25 U	100	25	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0600-063.0-20211221		
Lab Sample ID:	FA91890-25	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	10 U	25	10	ug/l	
74-87-3	Methyl Chloride	2.5 U	10	2.5	ug/l	
75-09-2	Methylene Chloride [b]	10 UJ	25	10	ug/l	J
108-10-1	4-Methyl-2-pentanone (MIBK)	5.0 U	25	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	1.1 U	5.0	1.1	ug/l	
100-42-5	Styrene	1.1 U	5.0	1.1	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	1.4 U	5.0	1.4	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	1.5 U	5.0	1.5	ug/l	
127-18-4	Tetrachloroethylene	1.1 U	5.0	1.1	ug/l	
108-88-3	Toluene	1.5 U	5.0	1.5	ug/l	
87-61-6	1,2,3-Trichlorobenzene	3.1 U	10	3.1	ug/l	
120-82-1	1,2,4-Trichlorobenzene	2.5 U	10	2.5	ug/l	
71-55-6	1,1,1-Trichloroethane	1.2 U	5.0	1.2	ug/l	
79-00-5	1,1,2-Trichloroethane	2.3 U	5.0	2.3	ug/l	
79-01-6	Trichloroethylene	400	5.0	1.7	ug/l	
75-69-4	Trichlorofluoromethane	2.5 U	10	2.5	ug/l	
75-01-4	Vinyl Chloride	49.0	5.0	2.0	ug/l	
1330-20-7	Xylene (total)	3.6 U	15	3.6	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		83-118%
17060-07-0	1,2-Dichloroethane-D4	100%		79-125%
2037-26-5	Toluene-D8	99%		85-112%
460-00-4	4-Bromofluorobenzene	100%		83-118%

(a) Sample was not preserved to a pH < 2.
(b) Associated CCV outside of control limits low.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0600-068.0-20211221		
Lab Sample ID:	FA91890-26	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	C0153364.D	1	01/14/22 01:19	LV	n/a	n/a	VC6189
Run #2 [b]	2P84198.D	2	12/28/21 17:40	CF	n/a	n/a	V2P3361

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	20 U [c]	50	20	ug/l	
71-43-2	Benzene	0.62 U [c]	2.0	0.62	ug/l	
74-97-5	Bromochloromethane	0.90 U [c]	2.0	0.90	ug/l	
75-27-4	Bromodichloromethane	0.48 U [c]	2.0	0.48	ug/l	
75-25-2	Bromoform	0.81 U [c]	2.0	0.81	ug/l	
78-93-3	2-Butanone (MEK)	4.0 U [c]	10	4.0	ug/l	
75-15-0	Carbon Disulfide	1.1 U [c]	4.0	1.1	ug/l	
56-23-5	Carbon Tetrachloride	0.71 U [c]	2.0	0.71	ug/l	
108-90-7	Chlorobenzene	0.40 U [c]	2.0	0.40	ug/l	
75-00-3	Chloroethane	1.3 U [c]	4.0	1.3	ug/l	
67-66-3	Chloroform	0.60 U [c]	2.0	0.60	ug/l	
110-82-7	Cyclohexane	0.78 U [c]	2.0	0.78	ug/l	
124-48-1	Dibromochloromethane	0.55 U [c]	2.0	0.55	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	2.1 U [c]	10	2.1	ug/l	
106-93-4	1,2-Dibromoethane	0.55 U [c]	4.0	0.55	ug/l	
75-71-8	Dichlorodifluoromethane	1.0 U [c]	4.0	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	0.65 U [c]	2.0	0.65	ug/l	
541-73-1	1,3-Dichlorobenzene	0.43 U [c]	2.0	0.43	ug/l	
106-46-7	1,4-Dichlorobenzene	0.51 U [c]	2.0	0.51	ug/l	
75-34-3	1,1-Dichloroethane	0.68 U [c]	2.0	0.68	ug/l	
107-06-2	1,2-Dichloroethane	0.62 U [c]	2.0	0.62	ug/l	
75-35-4	1,1-Dichloroethylene	0.64 U [c]	2.0	0.64	ug/l	
156-59-2	cis-1,2-Dichloroethylene	13.3 [c]	2.0	0.55	ug/l	
156-60-5	trans-1,2-Dichloroethylene	3.6 [c]	2.0	0.44	ug/l	
78-87-5	1,2-Dichloropropane	0.85 U [c]	2.0	0.85	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.58 U [c]	2.0	0.58	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.43 U [c]	2.0	0.43	ug/l	
100-41-4	Ethylbenzene	0.71 U [c]	2.0	0.71	ug/l	
76-13-1	Freon 113	0.96 U [c]	2.0	0.96	ug/l	
591-78-6	2-Hexanone	4.0 U [c]	20	4.0	ug/l	
98-82-8	Isopropylbenzene	0.44 U [c]	2.0	0.44	ug/l	
79-20-9	Methyl Acetate	10 U [c]	40	10	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0600-068.0-20211221		
Lab Sample ID:	FA91890-26	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	4.0 U [c]	10	4.0	ug/l	
74-87-3	Methyl Chloride	1.0 U [c]	4.0	1.0	ug/l	
75-09-2	Methylene Chloride [d]	4.0 UJ [c]	10	4.0	ug/l	J
108-10-1	4-Methyl-2-pentanone (MIBK)	2.0 U [c]	10	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.46 U [c]	2.0	0.46	ug/l	
100-42-5	Styrene	0.44 U [c]	2.0	0.44	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.55 U [c]	2.0	0.55	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.60 U [c]	2.0	0.60	ug/l	
127-18-4	Tetrachloroethylene	0.43 U [c]	2.0	0.43	ug/l	
108-88-3	Toluene	0.60 U [c]	2.0	0.60	ug/l	
87-61-6	1,2,3-Trichlorobenzene	1.2 U [c]	4.0	1.2	ug/l	
120-82-1	1,2,4-Trichlorobenzene	1.0 U [c]	4.0	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	0.50 U [c]	2.0	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	0.93 U [c]	2.0	0.93	ug/l	
79-01-6	Trichloroethylene	84.9 [c]	2.0	0.69	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U [c]	4.0	1.0	ug/l	
75-01-4	Vinyl Chloride	6.8 [c]	2.0	0.82	ug/l	
1330-20-7	Xylene (total)	1.4 U [c]	6.0	1.4	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%	100%	83-118%
17060-07-0	1,2-Dichloroethane-D4	96%	105%	79-125%
2037-26-5	Toluene-D8	103%	99%	85-112%
460-00-4	4-Bromofluorobenzene	105%	98%	83-118%

(a) Sample was not preserved to a pH < 2. Confirmation run beyond holdtime.
(b) Sample was not preserved to a pH < 2.
(c) Result is from Run# 2
(d) Associated CCV outside of control limits low.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0600-073.0-20211221		
Lab Sample ID:	FA91890-27	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	2P84200.D	2	12/28/21 18:12	CF	n/a	n/a	V2P3361
Run #2 [b]	C0153367.D	10	01/14/22 02:30	LV	n/a	n/a	VC6189

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	20 U	50	20	ug/l	
71-43-2	Benzene	0.62 U	2.0	0.62	ug/l	
74-97-5	Bromochloromethane	0.90 U	2.0	0.90	ug/l	
75-27-4	Bromodichloromethane	0.48 U	2.0	0.48	ug/l	
75-25-2	Bromoform	0.81 U	2.0	0.81	ug/l	
78-93-3	2-Butanone (MEK)	4.0 U	10	4.0	ug/l	
75-15-0	Carbon Disulfide	1.1	4.0	1.1	ug/l	I
56-23-5	Carbon Tetrachloride	0.71 U	2.0	0.71	ug/l	
108-90-7	Chlorobenzene	0.40 U	2.0	0.40	ug/l	
75-00-3	Chloroethane	1.3 U	4.0	1.3	ug/l	
67-66-3	Chloroform	0.60 U	2.0	0.60	ug/l	
110-82-7	Cyclohexane	0.78 U	2.0	0.78	ug/l	
124-48-1	Dibromochloromethane	0.55 U	2.0	0.55	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	2.1 U	10	2.1	ug/l	
106-93-4	1,2-Dibromoethane	0.55 U	4.0	0.55	ug/l	
75-71-8	Dichlorodifluoromethane	1.0 U	4.0	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	0.65 U	2.0	0.65	ug/l	
541-73-1	1,3-Dichlorobenzene	0.43 U	2.0	0.43	ug/l	
106-46-7	1,4-Dichlorobenzene	0.51 U	2.0	0.51	ug/l	
75-34-3	1,1-Dichloroethane	0.68 U	2.0	0.68	ug/l	
107-06-2	1,2-Dichloroethane	0.62 U	2.0	0.62	ug/l	
75-35-4	1,1-Dichloroethylene	1.3	2.0	0.64	ug/l	I
156-59-2	cis-1,2-Dichloroethylene	421 [c]	10	2.8	ug/l	Q
156-60-5	trans-1,2-Dichloroethylene	10.0	2.0	0.44	ug/l	
78-87-5	1,2-Dichloropropane	0.85 U	2.0	0.85	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.58 U	2.0	0.58	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.43 U	2.0	0.43	ug/l	
100-41-4	Ethylbenzene	0.71 U	2.0	0.71	ug/l	
76-13-1	Freon 113	0.96 U	2.0	0.96	ug/l	
591-78-6	2-Hexanone	4.0 U	20	4.0	ug/l	
98-82-8	Isopropylbenzene	0.44 U	2.0	0.44	ug/l	
79-20-9	Methyl Acetate	10 U	40	10	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0600-073.0-20211221		
Lab Sample ID:	FA91890-27	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	4.0 U	10	4.0	ug/l	
74-87-3	Methyl Chloride	1.0 U	4.0	1.0	ug/l	
75-09-2	Methylene Chloride [d]	4.0 UJ	10	4.0	ug/l	J
108-10-1	4-Methyl-2-pentanone (MIBK)	2.0 U	10	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.46 U	2.0	0.46	ug/l	
100-42-5	Styrene	0.44 U	2.0	0.44	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.55 U	2.0	0.55	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.60 U	2.0	0.60	ug/l	
127-18-4	Tetrachloroethylene	0.43 U	2.0	0.43	ug/l	
108-88-3	Toluene	0.60 U	2.0	0.60	ug/l	
87-61-6	1,2,3-Trichlorobenzene	1.2 U	4.0	1.2	ug/l	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	4.0	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	0.50 U	2.0	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	0.93 U	2.0	0.93	ug/l	
79-01-6	Trichloroethylene	339 [c]	10	3.5	ug/l	Q
75-69-4	Trichlorofluoromethane	1.0 U	4.0	1.0	ug/l	
75-01-4	Vinyl Chloride	10.1	2.0	0.82	ug/l	
1330-20-7	Xylene (total)	1.4 U	6.0	1.4	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%	99%	83-118%
17060-07-0	1,2-Dichloroethane-D4	102%	94%	79-125%
2037-26-5	Toluene-D8	96%	103%	85-112%
460-00-4	4-Bromofluorobenzene	98%	111%	83-118%

(a) Sample was not preserved to a pH < 2.
(b) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(c) Result is from Run# 2
(d) Associated CCV outside of control limits low.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0600-078.0-20211221		
Lab Sample ID:	FA91890-28	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	C0153368.D	5	01/14/22 02:54	LV	n/a	n/a	VC6189
Run #2 [b]	2P84202.D	20	12/28/21 18:43	CF	n/a	n/a	V2P3361

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	200 U [c]	500	200	ug/l	
71-43-2	Benzene	6.2 U [c]	20	6.2	ug/l	
74-97-5	Bromochloromethane	9.0 U [c]	20	9.0	ug/l	
75-27-4	Bromodichloromethane	4.8 U [c]	20	4.8	ug/l	
75-25-2	Bromoform	8.1 U [c]	20	8.1	ug/l	
78-93-3	2-Butanone (MEK)	40 U [c]	100	40	ug/l	
75-15-0	Carbon Disulfide	11 U [c]	40	11	ug/l	
56-23-5	Carbon Tetrachloride	7.1 U [c]	20	7.1	ug/l	
108-90-7	Chlorobenzene	4.0 U [c]	20	4.0	ug/l	
75-00-3	Chloroethane	13 U [c]	40	13	ug/l	
67-66-3	Chloroform	6.0 U [c]	20	6.0	ug/l	
110-82-7	Cyclohexane	7.8 U [c]	20	7.8	ug/l	
124-48-1	Dibromochloromethane	5.5 U [c]	20	5.5	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	21 U [c]	100	21	ug/l	
106-93-4	1,2-Dibromoethane	5.5 U [c]	40	5.5	ug/l	
75-71-8	Dichlorodifluoromethane	10 U [c]	40	10	ug/l	
95-50-1	1,2-Dichlorobenzene	6.5 U [c]	20	6.5	ug/l	
541-73-1	1,3-Dichlorobenzene	4.3 U [c]	20	4.3	ug/l	
106-46-7	1,4-Dichlorobenzene	5.1 U [c]	20	5.1	ug/l	
75-34-3	1,1-Dichloroethane	6.8 U [c]	20	6.8	ug/l	
107-06-2	1,2-Dichloroethane	6.2 U [c]	20	6.2	ug/l	
75-35-4	1,1-Dichloroethylene	6.4 U [c]	20	6.4	ug/l	
156-59-2	cis-1,2-Dichloroethylene	312 [c]	20	5.5	ug/l	
156-60-5	trans-1,2-Dichloroethylene	12.5 [c]	20	4.4	ug/l	I
78-87-5	1,2-Dichloropropane	8.5 U [c]	20	8.5	ug/l	
10061-01-5	cis-1,3-Dichloropropene	5.8 U [c]	20	5.8	ug/l	
10061-02-6	trans-1,3-Dichloropropene	4.3 U [c]	20	4.3	ug/l	
100-41-4	Ethylbenzene	7.1 U [c]	20	7.1	ug/l	
76-13-1	Freon 113	9.6 U [c]	20	9.6	ug/l	
591-78-6	2-Hexanone	40 U [c]	200	40	ug/l	
98-82-8	Isopropylbenzene	4.4 U [c]	20	4.4	ug/l	
79-20-9	Methyl Acetate	100 U [c]	400	100	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0600-078.0-20211221		
Lab Sample ID:	FA91890-28	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	40 U [c]	100	40	ug/l	
74-87-3	Methyl Chloride	10 U [c]	40	10	ug/l	
75-09-2	Methylene Chloride [d]	40 UJ [c]	100	40	ug/l	J
108-10-1	4-Methyl-2-pentanone (MIBK)	20 U [c]	100	20	ug/l	
1634-04-4	Methyl Tert Butyl Ether	4.6 U [c]	20	4.6	ug/l	
100-42-5	Styrene	4.4 U [c]	20	4.4	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	5.5 U [c]	20	5.5	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	6.0 U [c]	20	6.0	ug/l	
127-18-4	Tetrachloroethylene	4.3 U [c]	20	4.3	ug/l	
108-88-3	Toluene	6.0 U [c]	20	6.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	12 U [c]	40	12	ug/l	
120-82-1	1,2,4-Trichlorobenzene	10 U [c]	40	10	ug/l	
71-55-6	1,1,1-Trichloroethane	5.0 U [c]	20	5.0	ug/l	
79-00-5	1,1,2-Trichloroethane	9.3 U [c]	20	9.3	ug/l	
79-01-6	Trichloroethylene	49.1	5.0	1.7	ug/l	Q
75-69-4	Trichlorofluoromethane	10 U [c]	40	10	ug/l	
75-01-4	Vinyl Chloride	44.5 [c]	20	8.2	ug/l	
1330-20-7	Xylene (total)	14 U [c]	60	14	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%	103%	83-118%
17060-07-0	1,2-Dichloroethane-D4	97%	99%	79-125%
2037-26-5	Toluene-D8	102%	96%	85-112%
460-00-4	4-Bromofluorobenzene	109%	99%	83-118%

(a) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(b) Sample was not preserved to a pH < 2.
(c) Result is from Run# 2
(d) Associated CCV outside of control limits low.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0600-083.0-20211221		
Lab Sample ID:	FA91890-29	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	2P84180.D	1	12/28/21 12:55	CF	n/a	n/a	V2P3361
Run #2 [b]	C0153369.D	2	01/14/22 03:18	LV	n/a	n/a	VC6189

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	10 U	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.67 U	2.0	0.67	ug/l	
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	0.50 U	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.32 U	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	68.1	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	1.1	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113	0.48 U	1.0	0.48	ug/l	
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0600-083.0-20211221		
Lab Sample ID:	FA91890-29	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride [c]	2.0 UJ	5.0	2.0	ug/l	J
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.30 U	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	85.7 [d]	2.0	0.69	ug/l	Q
75-69-4	Trichlorofluoromethane	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	5.8	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%	95%	83-118%
17060-07-0	1,2-Dichloroethane-D4	101%	93%	79-125%
2037-26-5	Toluene-D8	97%	105%	85-112%
460-00-4	4-Bromofluorobenzene	101%	107%	83-118%

(a) Sample was not preserved to a pH < 2.
(b) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(c) Associated CCV outside of control limits low.
(d) Result is from Run# 2

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0600-088.0-20211221		
Lab Sample ID:	FA91890-30	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	2P84182.D	1	12/28/21 13:27	CF	n/a	n/a	V2P3361
Run #2 [b]	C0153370.D	2	01/14/22 03:41	LV	n/a	n/a	VC6189

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	10 U	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.67 U	2.0	0.67	ug/l	
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	0.50 U	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.32 U	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	22.0	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.30	1.0	0.22	ug/l	I
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113	0.48 U	1.0	0.48	ug/l	
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0600-088.0-20211221		
Lab Sample ID:	FA91890-30	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride [c]	2.0 UJ	5.0	2.0	ug/l	J
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.30 U	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	78.1 [d]	2.0	0.69	ug/l	Q
75-69-4	Trichlorofluoromethane	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	0.69	1.0	0.41	ug/l	I
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%	94%	83-118%
17060-07-0	1,2-Dichloroethane-D4	98%	91%	79-125%
2037-26-5	Toluene-D8	98%	102%	85-112%
460-00-4	4-Bromofluorobenzene	100%	106%	83-118%

(a) Sample was not preserved to a pH < 2.
(b) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(c) Associated CCV outside of control limits low.
(d) Result is from Run# 2

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0600-093.0-20211221		
Lab Sample ID:	FA91890-31	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	2P84184.D	1	12/28/21 13:59	CF	n/a	n/a	V2P3361
Run #2 [b]	C0153371.D	5	01/14/22 04:05	LV	n/a	n/a	VC6189

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	10 U	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.67 U	2.0	0.67	ug/l	
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	0.50 U	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.46	1.0	0.32	ug/l	I
156-59-2	cis-1,2-Dichloroethylene	90.2 [c]	5.0	1.4	ug/l	Q
156-60-5	trans-1,2-Dichloroethylene	0.88	1.0	0.22	ug/l	I
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113	0.48 U	1.0	0.48	ug/l	
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0600-093.0-20211221		
Lab Sample ID:	FA91890-31	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride [d]	2.0 UJ	5.0	2.0	ug/l	J
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.30 U	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	160 [c]	5.0	1.7	ug/l	Q
75-69-4	Trichlorofluoromethane	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	6.8	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%	94%	83-118%
17060-07-0	1,2-Dichloroethane-D4	96%	96%	79-125%
2037-26-5	Toluene-D8	98%	104%	85-112%
460-00-4	4-Bromofluorobenzene	101%	109%	83-118%

(a) Sample was not preserved to a pH < 2.
(b) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(c) Result is from Run# 2
(d) Associated CCV outside of control limits low.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0600-098.0-20211221		
Lab Sample ID:	FA91890-32	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	2P84186.D	1	12/28/21 14:30	CF	n/a	n/a	V2P3361
Run #2 [b]	C0153372.D	20	01/14/22 04:28	LV	n/a	n/a	VC6189

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	13.6	25	10	ug/l	I
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	2.9	5.0	2.0	ug/l	I
75-15-0	Carbon Disulfide	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.67 U	2.0	0.67	ug/l	
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	0.50 U	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.93	1.0	0.32	ug/l	I
156-59-2	cis-1,2-Dichloroethylene	310 [c]	20	5.5	ug/l	Q
156-60-5	trans-1,2-Dichloroethylene	3.7	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113	0.48 U	1.0	0.48	ug/l	
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0600-098.0-20211221		
Lab Sample ID:	FA91890-32	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride [d]	2.0 UJ	5.0	2.0	ug/l	J
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.30 U	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	790 [c]	20	6.9	ug/l	Q
75-69-4	Trichlorofluoromethane	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	18.2	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%	93%	83-118%
17060-07-0	1,2-Dichloroethane-D4	103%	94%	79-125%
2037-26-5	Toluene-D8	101%	103%	85-112%
460-00-4	4-Bromofluorobenzene	98%	110%	83-118%

(a) Sample was not preserved to a pH < 2.
(b) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(c) Result is from Run# 2
(d) Associated CCV outside of control limits low.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0599-008.0-20211221		
Lab Sample ID:	FA91890-33	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	2P84188.D	1	12/28/21 15:02	CF	n/a	n/a	V2P3361
Run #2 [b]	C0153365.D	1	01/14/22 01:43	LV	n/a	n/a	VC6189

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	10 U	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.67 U	2.0	0.67	ug/l	
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	0.50 U	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.32 U	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene [c]	3.8	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.22 U	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113	0.48 U	1.0	0.48	ug/l	
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0599-008.0-20211221		
Lab Sample ID:	FA91890-33	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride [d]	2.0 UJ	5.0	2.0	ug/l	J
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.30 U	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene [e]	69.6	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	0.74	1.0	0.41	ug/l	I
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%	92%	83-118%
17060-07-0	1,2-Dichloroethane-D4	98%	95%	79-125%
2037-26-5	Toluene-D8	98%	103%	85-112%
460-00-4	4-Bromofluorobenzene	102%	108%	83-118%

(a) Sample was not preserved to a pH < 2.
(b) Sample was not preserved to a pH < 2. Confirmation run beyond holdtime.
(c) Suspected carry-over. Confirmed ND by reanalysis beyond hold-time.
(d) Associated CCV outside of control limits low.
(e) Suspected carry-over. Confirmed by reanalysis beyond hold-time.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0599-013.0-20211221		
Lab Sample ID:	FA91890-34	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	2P84190.D	1	12/28/21 15:34	CF	n/a	n/a	V2P3361
Run #2 [b]	C0153373.D	20	01/14/22 04:52	LV	n/a	n/a	VC6189

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	10 U U	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.67 U	2.0	0.67	ug/l	
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	0.50 U	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	4.5	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	1360 [c]	20	5.5	ug/l	Q
156-60-5	trans-1,2-Dichloroethylene	15.5	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113	1.7	1.0	0.48	ug/l	
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0599-013.0-20211221		
Lab Sample ID:	FA91890-34	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride [d]	2.0 UJ	5.0	2.0	ug/l	J
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.30 U	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene [e]	2100 [c]	20	6.9	ug/l	LQ
75-69-4	Trichlorofluoromethane	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	28.5	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%	95%	83-118%
17060-07-0	1,2-Dichloroethane-D4	97%	93%	79-125%
2037-26-5	Toluene-D8	99%	102%	85-112%
460-00-4	4-Bromofluorobenzene	100%	109%	83-118%

(a) Sample was not preserved to a pH < 2.
(b) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(c) Result is from Run# 2
(d) Associated CCV outside of control limits low.
(e) No sample available for reanalysis.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0599-018.0-20211221		
Lab Sample ID:	FA91890-35	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2P84192.D	1	12/28/21 16:05	CF	n/a	n/a	V2P3361
Run #2 [a]	C0153374.D	200	01/14/22 05:16	LV	n/a	n/a	VC6189

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	27.3	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	4.4	5.0	2.0	ug/l	I
75-15-0	Carbon Disulfide	7.0	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.67 U	2.0	0.67	ug/l	
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	0.50 U	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.54	1.0	0.34	ug/l	I
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	45.0	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene [b]	21300 [c]	200	55	ug/l	LQ
156-60-5	trans-1,2-Dichloroethylene	248 [c]	200	44	ug/l	
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113	13.5	1.0	0.48	ug/l	
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0599-018.0-20211221		
Lab Sample ID:	FA91890-35	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride [d]	2.0 UJ	5.0	2.0	ug/l	J
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.85	1.0	0.22	ug/l	I
108-88-3	Toluene	0.82	1.0	0.30	ug/l	I
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	7200	1.0	0.35	ug/l	L
75-69-4	Trichlorofluoromethane	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride [e]	398 [c]	200	82	ug/l	Q
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%	91%	83-118%
17060-07-0	1,2-Dichloroethane-D4	99%	95%	79-125%
2037-26-5	Toluene-D8	98%	102%	85-112%
460-00-4	4-Bromofluorobenzene	101%	110%	83-118%

(a) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(b) No sample available for reanalysis.
(c) Result is from Run# 2
(d) Associated CCV outside of control limits low.
(e) Associated CCV outside of control limits high. Confirmed by reanalysis.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0599-023.0-20211221		
Lab Sample ID:	FA91890-36	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	2P84204.D	5	12/28/21 19:14	CF	n/a	n/a	V2P3361
Run #2 [b]	C0153375.D	500	01/14/22 05:39	LV	n/a	n/a	VC6189

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	76.1	130	50	ug/l	I
71-43-2	Benzene	1.6 U	5.0	1.6	ug/l	
74-97-5	Bromochloromethane	2.3 U	5.0	2.3	ug/l	
75-27-4	Bromodichloromethane	1.2 U	5.0	1.2	ug/l	
75-25-2	Bromoform	2.0 U	5.0	2.0	ug/l	
78-93-3	2-Butanone (MEK)	12.8	25	10	ug/l	I
75-15-0	Carbon Disulfide	70.8	10	2.7	ug/l	
56-23-5	Carbon Tetrachloride	1.8 U	5.0	1.8	ug/l	
108-90-7	Chlorobenzene	1.0 U	5.0	1.0	ug/l	
75-00-3	Chloroethane	3.3 U	10	3.3	ug/l	
67-66-3	Chloroform	1.5 U	5.0	1.5	ug/l	
110-82-7	Cyclohexane	2.0 U	5.0	2.0	ug/l	
124-48-1	Dibromochloromethane	1.4 U	5.0	1.4	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	5.2 U	25	5.2	ug/l	
106-93-4	1,2-Dibromoethane	1.4 U	10	1.4	ug/l	
75-71-8	Dichlorodifluoromethane	2.5 U	10	2.5	ug/l	
95-50-1	1,2-Dichlorobenzene	1.6 U	5.0	1.6	ug/l	
541-73-1	1,3-Dichlorobenzene	1.1 U	5.0	1.1	ug/l	
106-46-7	1,4-Dichlorobenzene	1.3 U	5.0	1.3	ug/l	
75-34-3	1,1-Dichloroethane	1.7 U	5.0	1.7	ug/l	
107-06-2	1,2-Dichloroethane	1.6 U	5.0	1.6	ug/l	
75-35-4	1,1-Dichloroethylene	31.0	5.0	1.6	ug/l	
156-59-2	cis-1,2-Dichloroethylene	33100 [c]	500	140	ug/l	Q
156-60-5	trans-1,2-Dichloroethylene	343	5.0	1.1	ug/l	
78-87-5	1,2-Dichloropropane	2.1 U	5.0	2.1	ug/l	
10061-01-5	cis-1,3-Dichloropropene	1.5 U	5.0	1.5	ug/l	
10061-02-6	trans-1,3-Dichloropropene	1.1 U	5.0	1.1	ug/l	
100-41-4	Ethylbenzene	1.8 U	5.0	1.8	ug/l	
76-13-1	Freon 113	7.4	5.0	2.4	ug/l	
591-78-6	2-Hexanone	10 U	50	10	ug/l	
98-82-8	Isopropylbenzene	1.1 U	5.0	1.1	ug/l	
79-20-9	Methyl Acetate	25 U	100	25	ug/l	

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PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0599-023.0-20211221		
Lab Sample ID:	FA91890-36	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	10 U	25	10	ug/l	
74-87-3	Methyl Chloride	2.5 U	10	2.5	ug/l	
75-09-2	Methylene Chloride [d]	10 UJ	25	10	ug/l	J
108-10-1	4-Methyl-2-pentanone (MIBK)	5.0 U	25	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	1.1 U	5.0	1.1	ug/l	
100-42-5	Styrene	1.1 U	5.0	1.1	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	1.4 U	5.0	1.4	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	1.5 U	5.0	1.5	ug/l	
127-18-4	Tetrachloroethylene	1.1 U	5.0	1.1	ug/l	
108-88-3	Toluene	1.5 U	5.0	1.5	ug/l	
87-61-6	1,2,3-Trichlorobenzene	3.1 U	10	3.1	ug/l	
120-82-1	1,2,4-Trichlorobenzene	2.5 U	10	2.5	ug/l	
71-55-6	1,1,1-Trichloroethane	1.2 U	5.0	1.2	ug/l	
79-00-5	1,1,2-Trichloroethane	2.3 U	5.0	2.3	ug/l	
79-01-6	Trichloroethylene [e]	225000 [c]	500	170	ug/l	LQ
75-69-4	Trichlorofluoromethane	2.5 U	10	2.5	ug/l	
75-01-4	Vinyl Chloride	390	5.0	2.0	ug/l	
1330-20-7	Xylene (total)	3.6 U	15	3.6	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	108%	88%	83-118%
17060-07-0	1,2-Dichloroethane-D4	101%	92%	79-125%
2037-26-5	Toluene-D8	98%	101%	85-112%
460-00-4	4-Bromofluorobenzene	102%	110%	83-118%

(a) Sample was not preserved to a pH < 2.
(b) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(c) Result is from Run# 2
(d) Associated CCV outside of control limits low.
(e) No sample available for reanalysis.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0599-028.0-20211221		
Lab Sample ID:	FA91890-37	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	2P84206.D	500	12/28/21 19:46	CF	n/a	n/a	V2P3361
Run #2 [b]	C0153376.D	2500	01/14/22 06:03	LV	n/a	n/a	VC6189

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	5000 U	13000	5000	ug/l	
71-43-2	Benzene	160 U	500	160	ug/l	
74-97-5	Bromochloromethane	230 U	500	230	ug/l	
75-27-4	Bromodichloromethane	120 U	500	120	ug/l	
75-25-2	Bromoform	200 U	500	200	ug/l	
78-93-3	2-Butanone (MEK)	1000 U	2500	1000	ug/l	
75-15-0	Carbon Disulfide	270 U	1000	270	ug/l	
56-23-5	Carbon Tetrachloride	180 U	500	180	ug/l	
108-90-7	Chlorobenzene	100 U	500	100	ug/l	
75-00-3	Chloroethane	330 U	1000	330	ug/l	
67-66-3	Chloroform	150 U	500	150	ug/l	
110-82-7	Cyclohexane	200 U	500	200	ug/l	
124-48-1	Dibromochloromethane	140 U	500	140	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	520 U	2500	520	ug/l	
106-93-4	1,2-Dibromoethane	140 U	1000	140	ug/l	
75-71-8	Dichlorodifluoromethane	250 U	1000	250	ug/l	
95-50-1	1,2-Dichlorobenzene	160 U	500	160	ug/l	
541-73-1	1,3-Dichlorobenzene	110 U	500	110	ug/l	
106-46-7	1,4-Dichlorobenzene	130 U	500	130	ug/l	
75-34-3	1,1-Dichloroethane	170 U	500	170	ug/l	
107-06-2	1,2-Dichloroethane	160 U	500	160	ug/l	
75-35-4	1,1-Dichloroethylene	160 U	500	160	ug/l	
156-59-2	cis-1,2-Dichloroethylene	15600	500	140	ug/l	
156-60-5	trans-1,2-Dichloroethylene	243	500	110	ug/l	I
78-87-5	1,2-Dichloropropane	210 U	500	210	ug/l	
10061-01-5	cis-1,3-Dichloropropene	150 U	500	150	ug/l	
10061-02-6	trans-1,3-Dichloropropene	110 U	500	110	ug/l	
100-41-4	Ethylbenzene	180 U	500	180	ug/l	
76-13-1	Freon 113	240 U	500	240	ug/l	
591-78-6	2-Hexanone	1000 U	5000	1000	ug/l	
98-82-8	Isopropylbenzene	110 U	500	110	ug/l	
79-20-9	Methyl Acetate	2500 U	10000	2500	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0599-028.0-20211221		
Lab Sample ID:	FA91890-37	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	1000 U	2500	1000	ug/l	
74-87-3	Methyl Chloride	250 U	1000	250	ug/l	
75-09-2	Methylene Chloride [c]	1000 UJ	2500	1000	ug/l	J
108-10-1	4-Methyl-2-pentanone (MIBK)	500 U	2500	500	ug/l	
1634-04-4	Methyl Tert Butyl Ether	110 U	500	110	ug/l	
100-42-5	Styrene	110 U	500	110	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	140 U	500	140	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	150 U	500	150	ug/l	
127-18-4	Tetrachloroethylene	110 U	500	110	ug/l	
108-88-3	Toluene	150 U	500	150	ug/l	
87-61-6	1,2,3-Trichlorobenzene	310 U	1000	310	ug/l	
120-82-1	1,2,4-Trichlorobenzene	250 U	1000	250	ug/l	
71-55-6	1,1,1-Trichloroethane	120 U	500	120	ug/l	
79-00-5	1,1,2-Trichloroethane	230 U	500	230	ug/l	
79-01-6	Trichloroethylene	187000 [d]	2500	860	ug/l	Q
75-69-4	Trichlorofluoromethane	250 U	1000	250	ug/l	
75-01-4	Vinyl Chloride	371	500	200	ug/l	I
1330-20-7	Xylene (total)	360 U	1500	360	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%	91%	83-118%
17060-07-0	1,2-Dichloroethane-D4	99%	94%	79-125%
2037-26-5	Toluene-D8	98%	105%	85-112%
460-00-4	4-Bromofluorobenzene	100%	107%	83-118%

(a) Sample was not preserved to a pH < 2.
(b) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(c) Associated CCV outside of control limits low.
(d) Result is from Run# 2

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0599-033.0-20211221		
Lab Sample ID:	FA91890-38	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	C0153377.D	500	01/14/22 06:26	LV	n/a	n/a	VC6189
Run #2 [b]	2P84208.D	2000	12/28/21 20:17	CF	n/a	n/a	V2P3361

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	20000 U [c]	50000	20000	ug/l	
71-43-2	Benzene	620 U [c]	2000	620	ug/l	
74-97-5	Bromochloromethane	900 U [c]	2000	900	ug/l	
75-27-4	Bromodichloromethane	480 U [c]	2000	480	ug/l	
75-25-2	Bromoform	810 U [c]	2000	810	ug/l	
78-93-3	2-Butanone (MEK)	4000 U [c]	10000	4000	ug/l	
75-15-0	Carbon Disulfide	1100 U [c]	4000	1100	ug/l	
56-23-5	Carbon Tetrachloride	710 U [c]	2000	710	ug/l	
108-90-7	Chlorobenzene	400 U [c]	2000	400	ug/l	
75-00-3	Chloroethane	1300 U [c]	4000	1300	ug/l	
67-66-3	Chloroform	600 U [c]	2000	600	ug/l	
110-82-7	Cyclohexane	780 U [c]	2000	780	ug/l	
124-48-1	Dibromochloromethane	550 U [c]	2000	550	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	2100 U [c]	10000	2100	ug/l	
106-93-4	1,2-Dibromoethane	550 U [c]	4000	550	ug/l	
75-71-8	Dichlorodifluoromethane	1000 U [c]	4000	1000	ug/l	
95-50-1	1,2-Dichlorobenzene	650 U [c]	2000	650	ug/l	
541-73-1	1,3-Dichlorobenzene	430 U [c]	2000	430	ug/l	
106-46-7	1,4-Dichlorobenzene	510 U [c]	2000	510	ug/l	
75-34-3	1,1-Dichloroethane	680 U [c]	2000	680	ug/l	
107-06-2	1,2-Dichloroethane	620 U [c]	2000	620	ug/l	
75-35-4	1,1-Dichloroethylene	640 U [c]	2000	640	ug/l	
156-59-2	cis-1,2-Dichloroethylene	3130	500	140	ug/l	Q
156-60-5	trans-1,2-Dichloroethylene	110 UQ	500	110	ug/l	Q
78-87-5	1,2-Dichloropropane	850 U [c]	2000	850	ug/l	
10061-01-5	cis-1,3-Dichloropropene	580 U [c]	2000	580	ug/l	
10061-02-6	trans-1,3-Dichloropropene	430 U [c]	2000	430	ug/l	
100-41-4	Ethylbenzene	710 U [c]	2000	710	ug/l	
76-13-1	Freon 113	960 U [c]	2000	960	ug/l	
591-78-6	2-Hexanone	4000 U [c]	20000	4000	ug/l	
98-82-8	Isopropylbenzene	440 U [c]	2000	440	ug/l	
79-20-9	Methyl Acetate	10000 U [c]	40000	10000	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0599-033.0-20211221		
Lab Sample ID:	FA91890-38	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	4000 U [c]	10000	4000	ug/l	
74-87-3	Methyl Chloride	1000 U [c]	4000	1000	ug/l	
75-09-2	Methylene Chloride [d]	4000 UJ [c]	10000	4000	ug/l	J
108-10-1	4-Methyl-2-pentanone (MIBK)	2000 U [c]	10000	2000	ug/l	
1634-04-4	Methyl Tert Butyl Ether	460 U [c]	2000	460	ug/l	
100-42-5	Styrene	440 U [c]	2000	440	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	550 U [c]	2000	550	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	600 U [c]	2000	600	ug/l	
127-18-4	Tetrachloroethylene	430 U [c]	2000	430	ug/l	
108-88-3	Toluene	600 U [c]	2000	600	ug/l	
87-61-6	1,2,3-Trichlorobenzene	1200 U [c]	4000	1200	ug/l	
120-82-1	1,2,4-Trichlorobenzene	1000 U [c]	4000	1000	ug/l	
71-55-6	1,1,1-Trichloroethane	500 U [c]	2000	500	ug/l	
79-00-5	1,1,2-Trichloroethane	930 U [c]	2000	930	ug/l	
79-01-6	Trichloroethylene	39700	500	170	ug/l	Q
75-69-4	Trichlorofluoromethane	1000 U [c]	4000	1000	ug/l	
75-01-4	Vinyl Chloride	820 U [c]	2000	820	ug/l	
1330-20-7	Xylene (total)	1400 U [c]	6000	1400	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	92%	102%	83-118%
17060-07-0	1,2-Dichloroethane-D4	93%	107%	79-125%
2037-26-5	Toluene-D8	103%	96%	85-112%
460-00-4	4-Bromofluorobenzene	108%	98%	83-118%

(a) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(b) Sample was not preserved to a pH < 2.
(c) Result is from Run# 2
(d) Associated CCV outside of control limits low.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0599-038.0-20211221		
Lab Sample ID:	FA91890-39	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	2P84210.D	10000	12/28/21 20:48	CF	n/a	n/a	V2P3361
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	100000 U	250000	100000	ug/l	
71-43-2	Benzene	3100 U	10000	3100	ug/l	
74-97-5	Bromochloromethane	4500 U	10000	4500	ug/l	
75-27-4	Bromodichloromethane	2400 U	10000	2400	ug/l	
75-25-2	Bromoform	4100 U	10000	4100	ug/l	
78-93-3	2-Butanone (MEK)	20000 U	50000	20000	ug/l	
75-15-0	Carbon Disulfide	5300 U	20000	5300	ug/l	
56-23-5	Carbon Tetrachloride	3600 U	10000	3600	ug/l	
108-90-7	Chlorobenzene	2000 U	10000	2000	ug/l	
75-00-3	Chloroethane	6700 U	20000	6700	ug/l	
67-66-3	Chloroform	3000 U	10000	3000	ug/l	
110-82-7	Cyclohexane	3900 U	10000	3900	ug/l	
124-48-1	Dibromochloromethane	2800 U	10000	2800	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	10000 U	50000	10000	ug/l	
106-93-4	1,2-Dibromoethane	2800 U	20000	2800	ug/l	
75-71-8	Dichlorodifluoromethane	5000 U	20000	5000	ug/l	
95-50-1	1,2-Dichlorobenzene	3200 U	10000	3200	ug/l	
541-73-1	1,3-Dichlorobenzene	2200 U	10000	2200	ug/l	
106-46-7	1,4-Dichlorobenzene	2600 U	10000	2600	ug/l	
75-34-3	1,1-Dichloroethane	3400 U	10000	3400	ug/l	
107-06-2	1,2-Dichloroethane	3100 U	10000	3100	ug/l	
75-35-4	1,1-Dichloroethylene	3200 U	10000	3200	ug/l	
156-59-2	cis-1,2-Dichloroethylene	39000	10000	2800	ug/l	
156-60-5	trans-1,2-Dichloroethylene	2200 U	10000	2200	ug/l	
78-87-5	1,2-Dichloropropane	4300 U	10000	4300	ug/l	
10061-01-5	cis-1,3-Dichloropropene	2900 U	10000	2900	ug/l	
10061-02-6	trans-1,3-Dichloropropene	2100 U	10000	2100	ug/l	
100-41-4	Ethylbenzene	3600 U	10000	3600	ug/l	
76-13-1	Freon 113	4800 U	10000	4800	ug/l	
591-78-6	2-Hexanone	20000 U	100000	20000	ug/l	
98-82-8	Isopropylbenzene	2200 U	10000	2200	ug/l	
79-20-9	Methyl Acetate	50000 U	200000	50000	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0599-038.0-20211221		
Lab Sample ID:	FA91890-39	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	20000 U	50000	20000	ug/l	
74-87-3	Methyl Chloride	5000 U	20000	5000	ug/l	
75-09-2	Methylene Chloride [b]	20000 UJ	50000	20000	ug/l	J
108-10-1	4-Methyl-2-pentanone (MIBK)	10000 U	50000	10000	ug/l	
1634-04-4	Methyl Tert Butyl Ether	2300 U	10000	2300	ug/l	
100-42-5	Styrene	2200 U	10000	2200	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	2800 U	10000	2800	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	3000 U	10000	3000	ug/l	
127-18-4	Tetrachloroethylene	2200 U	10000	2200	ug/l	
108-88-3	Toluene	3000 U	10000	3000	ug/l	
87-61-6	1,2,3-Trichlorobenzene	6100 U	20000	6100	ug/l	
120-82-1	1,2,4-Trichlorobenzene	5000 U	20000	5000	ug/l	
71-55-6	1,1,1-Trichloroethane	2500 U	10000	2500	ug/l	
79-00-5	1,1,2-Trichloroethane	4700 U	10000	4700	ug/l	
79-01-6	Trichloroethylene	755000	10000	3500	ug/l	
75-69-4	Trichlorofluoromethane	5000 U	20000	5000	ug/l	
75-01-4	Vinyl Chloride	4100 U	10000	4100	ug/l	
1330-20-7	Xylene (total)	7200 U	30000	7200	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		83-118%
17060-07-0	1,2-Dichloroethane-D4	101%		79-125%
2037-26-5	Toluene-D8	97%		85-112%
460-00-4	4-Bromofluorobenzene	100%		83-118%

(a) Sample was not preserved to a pH < 2.
(b) Associated CCV outside of control limits low.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0597-073.0-20211221		
Lab Sample ID:	FA91890-40	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	2P84212.D	200	12/28/21 21:20	CF	n/a	n/a	V2P3361
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	2000 U	5000	2000	ug/l	
71-43-2	Benzene	62 U	200	62	ug/l	
74-97-5	Bromochloromethane	90 U	200	90	ug/l	
75-27-4	Bromodichloromethane	48 U	200	48	ug/l	
75-25-2	Bromoform	81 U	200	81	ug/l	
78-93-3	2-Butanone (MEK)	400 U	1000	400	ug/l	
75-15-0	Carbon Disulfide	110 U	400	110	ug/l	
56-23-5	Carbon Tetrachloride	71 U	200	71	ug/l	
108-90-7	Chlorobenzene	40 U	200	40	ug/l	
75-00-3	Chloroethane	130 U	400	130	ug/l	
67-66-3	Chloroform	60 U	200	60	ug/l	
110-82-7	Cyclohexane	78 U	200	78	ug/l	
124-48-1	Dibromochloromethane	55 U	200	55	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	210 U	1000	210	ug/l	
106-93-4	1,2-Dibromoethane	55 U	400	55	ug/l	
75-71-8	Dichlorodifluoromethane	100 U	400	100	ug/l	
95-50-1	1,2-Dichlorobenzene	65 U	200	65	ug/l	
541-73-1	1,3-Dichlorobenzene	43 U	200	43	ug/l	
106-46-7	1,4-Dichlorobenzene	51 U	200	51	ug/l	
75-34-3	1,1-Dichloroethane	68 U	200	68	ug/l	
107-06-2	1,2-Dichloroethane	62 U	200	62	ug/l	
75-35-4	1,1-Dichloroethylene	64 U	200	64	ug/l	
156-59-2	cis-1,2-Dichloroethylene	115	200	55	ug/l	I
156-60-5	trans-1,2-Dichloroethylene	44 U	200	44	ug/l	
78-87-5	1,2-Dichloropropane	85 U	200	85	ug/l	
10061-01-5	cis-1,3-Dichloropropene	58 U	200	58	ug/l	
10061-02-6	trans-1,3-Dichloropropene	43 U	200	43	ug/l	
100-41-4	Ethylbenzene	71 U	200	71	ug/l	
76-13-1	Freon 113	96 U	200	96	ug/l	
591-78-6	2-Hexanone	400 U	2000	400	ug/l	
98-82-8	Isopropylbenzene	44 U	200	44	ug/l	
79-20-9	Methyl Acetate	1000 U	4000	1000	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0597-073.0-20211221		
Lab Sample ID:	FA91890-40	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	400 U	1000	400	ug/l	
74-87-3	Methyl Chloride	100 U	400	100	ug/l	
75-09-2	Methylene Chloride [b]	400 UJ	1000	400	ug/l	J
108-10-1	4-Methyl-2-pentanone (MIBK)	200 U	1000	200	ug/l	
1634-04-4	Methyl Tert Butyl Ether	46 U	200	46	ug/l	
100-42-5	Styrene	44 U	200	44	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	55 U	200	55	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	60 U	200	60	ug/l	
127-18-4	Tetrachloroethylene	43 U	200	43	ug/l	
108-88-3	Toluene	60 U	200	60	ug/l	
87-61-6	1,2,3-Trichlorobenzene	120 U	400	120	ug/l	
120-82-1	1,2,4-Trichlorobenzene	100 U	400	100	ug/l	
71-55-6	1,1,1-Trichloroethane	50 U	200	50	ug/l	
79-00-5	1,1,2-Trichloroethane	93 U	200	93	ug/l	
79-01-6	Trichloroethylene	4810	200	69	ug/l	
75-69-4	Trichlorofluoromethane	100 U	400	100	ug/l	
75-01-4	Vinyl Chloride	82 U	200	82	ug/l	
1330-20-7	Xylene (total)	140 U	600	140	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		83-118%
17060-07-0	1,2-Dichloroethane-D4	109%		79-125%
2037-26-5	Toluene-D8	97%		85-112%
460-00-4	4-Bromofluorobenzene	97%		83-118%

(a) Sample was not preserved to a pH < 2.
(b) Associated CCV outside of control limits low.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0597-078.0-20211221		
Lab Sample ID:	FA91890-41	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	2P84214.D	10000	12/28/21 21:52	CF	n/a	n/a	V2P3361
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	100000 U	250000	100000	ug/l	
71-43-2	Benzene	3100 U	10000	3100	ug/l	
74-97-5	Bromochloromethane	4500 U	10000	4500	ug/l	
75-27-4	Bromodichloromethane	2400 U	10000	2400	ug/l	
75-25-2	Bromoform	4100 U	10000	4100	ug/l	
78-93-3	2-Butanone (MEK)	20000 U	50000	20000	ug/l	
75-15-0	Carbon Disulfide	5300 U	20000	5300	ug/l	
56-23-5	Carbon Tetrachloride	3600 U	10000	3600	ug/l	
108-90-7	Chlorobenzene	2000 U	10000	2000	ug/l	
75-00-3	Chloroethane	6700 U	20000	6700	ug/l	
67-66-3	Chloroform	3000 U	10000	3000	ug/l	
110-82-7	Cyclohexane	3900 U	10000	3900	ug/l	
124-48-1	Dibromochloromethane	2800 U	10000	2800	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	10000 U	50000	10000	ug/l	
106-93-4	1,2-Dibromoethane	2800 U	20000	2800	ug/l	
75-71-8	Dichlorodifluoromethane	5000 U	20000	5000	ug/l	
95-50-1	1,2-Dichlorobenzene	3200 U	10000	3200	ug/l	
541-73-1	1,3-Dichlorobenzene	2200 U	10000	2200	ug/l	
106-46-7	1,4-Dichlorobenzene	2600 U	10000	2600	ug/l	
75-34-3	1,1-Dichloroethane	3400 U	10000	3400	ug/l	
107-06-2	1,2-Dichloroethane	3100 U	10000	3100	ug/l	
75-35-4	1,1-Dichloroethylene	3200 U	10000	3200	ug/l	
156-59-2	cis-1,2-Dichloroethylene	9330	10000	2800	ug/l	I
156-60-5	trans-1,2-Dichloroethylene	2200 U	10000	2200	ug/l	
78-87-5	1,2-Dichloropropane	4300 U	10000	4300	ug/l	
10061-01-5	cis-1,3-Dichloropropene	2900 U	10000	2900	ug/l	
10061-02-6	trans-1,3-Dichloropropene	2100 U	10000	2100	ug/l	
100-41-4	Ethylbenzene	3600 U	10000	3600	ug/l	
76-13-1	Freon 113	4800 U	10000	4800	ug/l	
591-78-6	2-Hexanone	20000 U	100000	20000	ug/l	
98-82-8	Isopropylbenzene	2200 UQ	10000	2200	ug/l	Q
79-20-9	Methyl Acetate	50000 U	200000	50000	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0597-078.0-20211221		
Lab Sample ID:	FA91890-41	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	20000 U	50000	20000	ug/l	
74-87-3	Methyl Chloride	5000 U	20000	5000	ug/l	
75-09-2	Methylene Chloride [b]	20000 UJ	50000	20000	ug/l	J
108-10-1	4-Methyl-2-pentanone (MIBK)	10000 U	50000	10000	ug/l	
1634-04-4	Methyl Tert Butyl Ether	2300 U	10000	2300	ug/l	
100-42-5	Styrene	2200 U	10000	2200	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	2800 U	10000	2800	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	3000 U	10000	3000	ug/l	
127-18-4	Tetrachloroethylene	2200 U	10000	2200	ug/l	
108-88-3	Toluene	3000 U	10000	3000	ug/l	
87-61-6	1,2,3-Trichlorobenzene	6100 U	20000	6100	ug/l	
120-82-1	1,2,4-Trichlorobenzene	5000 U	20000	5000	ug/l	
71-55-6	1,1,1-Trichloroethane	2500 U	10000	2500	ug/l	
79-00-5	1,1,2-Trichloroethane	4700 U	10000	4700	ug/l	
79-01-6	Trichloroethylene	830000	10000	3500	ug/l	
75-69-4	Trichlorofluoromethane	5000 U	20000	5000	ug/l	
75-01-4	Vinyl Chloride	4100 U	10000	4100	ug/l	
1330-20-7	Xylene (total)	7200 U	30000	7200	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		83-118%
17060-07-0	1,2-Dichloroethane-D4	101%		79-125%
2037-26-5	Toluene-D8	96%		85-112%
460-00-4	4-Bromofluorobenzene	101%		83-118%

(a) Sample was not preserved to a pH < 2.
(b) Associated CCV outside of control limits low.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0597-083.0-20211221		
Lab Sample ID:	FA91890-42	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	I73039.D	500	12/28/21 17:22	LR	n/a	n/a	VI2417
Run #2 [b]	2P84516.D	10000	01/07/22 13:32	CF	n/a	n/a	V2P3369

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	5000 U	13000	5000	ug/l	
71-43-2	Benzene	160 U	500	160	ug/l	
74-97-5	Bromochloromethane	230 U	500	230	ug/l	
75-27-4	Bromodichloromethane	120 U	500	120	ug/l	
75-25-2	Bromoform	200 U	500	200	ug/l	
78-93-3	2-Butanone (MEK)	1000 U	2500	1000	ug/l	
75-15-0	Carbon Disulfide	270 U	1000	270	ug/l	
56-23-5	Carbon Tetrachloride	180 U	500	180	ug/l	
108-90-7	Chlorobenzene	100 U	500	100	ug/l	
75-00-3	Chloroethane [c]	330 U	1000	330	ug/l	
67-66-3	Chloroform	150 U	500	150	ug/l	
110-82-7	Cyclohexane	200 U	500	200	ug/l	
124-48-1	Dibromochloromethane	140 U	500	140	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	520 U	2500	520	ug/l	
106-93-4	1,2-Dibromoethane	140 U	1000	140	ug/l	
75-71-8	Dichlorodifluoromethane	250 U	1000	250	ug/l	
95-50-1	1,2-Dichlorobenzene	160 U	500	160	ug/l	
541-73-1	1,3-Dichlorobenzene	110 U	500	110	ug/l	
106-46-7	1,4-Dichlorobenzene	130 U	500	130	ug/l	
75-34-3	1,1-Dichloroethane	170 U	500	170	ug/l	
107-06-2	1,2-Dichloroethane	160 U	500	160	ug/l	
75-35-4	1,1-Dichloroethylene	160 U	500	160	ug/l	
156-59-2	cis-1,2-Dichloroethylene	1650	500	140	ug/l	
156-60-5	trans-1,2-Dichloroethylene	110 U	500	110	ug/l	
78-87-5	1,2-Dichloropropane	210 U	500	210	ug/l	
10061-01-5	cis-1,3-Dichloropropene	150 U	500	150	ug/l	
10061-02-6	trans-1,3-Dichloropropene	110 U	500	110	ug/l	
100-41-4	Ethylbenzene	180 U	500	180	ug/l	
76-13-1	Freon 113	1320	500	240	ug/l	
591-78-6	2-Hexanone	1000 U	5000	1000	ug/l	
98-82-8	Isopropylbenzene	110 U	500	110	ug/l	
79-20-9	Methyl Acetate	2500 U	10000	2500	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0597-083.0-20211221		
Lab Sample ID:	FA91890-42	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide [d]	1000 UJ	2500	1000	ug/l	J
74-87-3	Methyl Chloride	250 U	1000	250	ug/l	
75-09-2	Methylene Chloride	1000 U	2500	1000	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	500 U	2500	500	ug/l	
1634-04-4	Methyl Tert Butyl Ether	110 U	500	110	ug/l	
100-42-5	Styrene	110 U	500	110	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	140 U	500	140	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	150 U	500	150	ug/l	
127-18-4	Tetrachloroethylene	110 U	500	110	ug/l	
108-88-3	Toluene	150 U	500	150	ug/l	
87-61-6	1,2,3-Trichlorobenzene	310 U	1000	310	ug/l	
120-82-1	1,2,4-Trichlorobenzene	250 U	1000	250	ug/l	
71-55-6	1,1,1-Trichloroethane	120 U	500	120	ug/l	
79-00-5	1,1,2-Trichloroethane	230 U	500	230	ug/l	
79-01-6	Trichloroethylene	472000 [e]	10000	3500	ug/l	Q
75-69-4	Trichlorofluoromethane	250 U	1000	250	ug/l	
75-01-4	Vinyl Chloride	200 U	500	200	ug/l	
1330-20-7	Xylene (total)	360 U	1500	360	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%	100%	83-118%
17060-07-0	1,2-Dichloroethane-D4	113%	103%	79-125%
2037-26-5	Toluene-D8	95%	102%	85-112%
460-00-4	4-Bromofluorobenzene	94%	105%	83-118%

(a) Sample was not preserved to pH < 2.
(b) Sample was not preserved to pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(c) Associated CCV outside of control limits high, sample was ND.
(d) Associated CCV outside of control limits low.
(e) Result is from Run# 2

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0597-088.0-20211221		
Lab Sample ID:	FA91890-43	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	I73040.D	10	12/28/21 17:46	LR	n/a	n/a	VI2417
Run #2 [b]	2P84518.D	200	01/07/22 14:04	CF	n/a	n/a	V2P3369

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	100 U	250	100	ug/l	
71-43-2	Benzene	3.1 U	10	3.1	ug/l	
74-97-5	Bromochloromethane	4.5 U	10	4.5	ug/l	
75-27-4	Bromodichloromethane	2.4 U	10	2.4	ug/l	
75-25-2	Bromoform	4.1 U	10	4.1	ug/l	
78-93-3	2-Butanone (MEK)	20 U	50	20	ug/l	
75-15-0	Carbon Disulfide	5.3 U	20	5.3	ug/l	
56-23-5	Carbon Tetrachloride	3.6 U	10	3.6	ug/l	
108-90-7	Chlorobenzene	2.0 U	10	2.0	ug/l	
75-00-3	Chloroethane [c]	6.7 U	20	6.7	ug/l	
67-66-3	Chloroform	3.0 U	10	3.0	ug/l	
110-82-7	Cyclohexane	3.9 U	10	3.9	ug/l	
124-48-1	Dibromochloromethane	2.8 U	10	2.8	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	10 U	50	10	ug/l	
106-93-4	1,2-Dibromoethane	2.8 U	20	2.8	ug/l	
75-71-8	Dichlorodifluoromethane	5.0 U	20	5.0	ug/l	
95-50-1	1,2-Dichlorobenzene	3.2 U	10	3.2	ug/l	
541-73-1	1,3-Dichlorobenzene	2.2 U	10	2.2	ug/l	
106-46-7	1,4-Dichlorobenzene	2.6 U	10	2.6	ug/l	
75-34-3	1,1-Dichloroethane	3.4 U	10	3.4	ug/l	
107-06-2	1,2-Dichloroethane	3.1 U	10	3.1	ug/l	
75-35-4	1,1-Dichloroethylene	3.2 U	10	3.2	ug/l	
156-59-2	cis-1,2-Dichloroethylene	125	10	2.8	ug/l	
156-60-5	trans-1,2-Dichloroethylene	2.2 U	10	2.2	ug/l	
78-87-5	1,2-Dichloropropane	4.3 U	10	4.3	ug/l	
10061-01-5	cis-1,3-Dichloropropene	2.9 U	10	2.9	ug/l	
10061-02-6	trans-1,3-Dichloropropene	2.1 U	10	2.1	ug/l	
100-41-4	Ethylbenzene	3.6 U	10	3.6	ug/l	
76-13-1	Freon 113	4.8 U	10	4.8	ug/l	
591-78-6	2-Hexanone	20 U	100	20	ug/l	
98-82-8	Isopropylbenzene	2.2 U	10	2.2	ug/l	
79-20-9	Methyl Acetate	50 U	200	50	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0597-088.0-20211221		
Lab Sample ID:	FA91890-43	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide [d]	20 UJ	50	20	ug/l	J
74-87-3	Methyl Chloride	5.0 U	20	5.0	ug/l	
75-09-2	Methylene Chloride	20 U	50	20	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	10 U	50	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	2.3 U	10	2.3	ug/l	
100-42-5	Styrene	2.2 U	10	2.2	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	2.8 U	10	2.8	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	3.0 U	10	3.0	ug/l	
127-18-4	Tetrachloroethylene	2.2 U	10	2.2	ug/l	
108-88-3	Toluene	3.0 U	10	3.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	6.1 U	20	6.1	ug/l	
120-82-1	1,2,4-Trichlorobenzene	5.0 U	20	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	2.5 U	10	2.5	ug/l	
79-00-5	1,1,2-Trichloroethane	4.7 U	10	4.7	ug/l	
79-01-6	Trichloroethylene [e]	11800	10	3.5	ug/l	L
75-69-4	Trichlorofluoromethane	5.0 U	20	5.0	ug/l	
75-01-4	Vinyl Chloride	4.1 U	10	4.1	ug/l	
1330-20-7	Xylene (total)	7.2 U	30	7.2	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%	103%	83-118%
17060-07-0	1,2-Dichloroethane-D4	111%	103%	79-125%
2037-26-5	Toluene-D8	96%	101%	85-112%
460-00-4	4-Bromofluorobenzene	95%	105%	83-118%

(a) Sample was not preserved to pH < 2.
(b) Sample was not preserved to pH < 2. Confirmation run beyond holdtime. Results from different vials are not consistent; higher results were reported.
(c) Associated CCV outside of control limits high, sample was ND.
(d) Associated CCV outside of control limits low.
(e) Results from different vials are not consistent; higher results were reported.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0597-093.0-20211221		
Lab Sample ID:	FA91890-44	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	I73041.D	10	12/28/21 18:10	LR	n/a	n/a	VI2417
Run #2 [b]	2P84520.D	100	01/07/22 14:36	CF	n/a	n/a	V2P3369

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	100 U	250	100	ug/l	
71-43-2	Benzene	3.1 U	10	3.1	ug/l	
74-97-5	Bromochloromethane	4.5 U	10	4.5	ug/l	
75-27-4	Bromodichloromethane	2.4 U	10	2.4	ug/l	
75-25-2	Bromoform	4.1 U	10	4.1	ug/l	
78-93-3	2-Butanone (MEK)	20 U	50	20	ug/l	
75-15-0	Carbon Disulfide	5.3 U	20	5.3	ug/l	
56-23-5	Carbon Tetrachloride	3.6 U	10	3.6	ug/l	
108-90-7	Chlorobenzene	2.0 U	10	2.0	ug/l	
75-00-3	Chloroethane [c]	6.7 U	20	6.7	ug/l	
67-66-3	Chloroform	3.0 U	10	3.0	ug/l	
110-82-7	Cyclohexane	3.9 U	10	3.9	ug/l	
124-48-1	Dibromochloromethane	2.8 U	10	2.8	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	10 U	50	10	ug/l	
106-93-4	1,2-Dibromoethane	2.8 U	20	2.8	ug/l	
75-71-8	Dichlorodifluoromethane	5.0 U	20	5.0	ug/l	
95-50-1	1,2-Dichlorobenzene	3.2 U	10	3.2	ug/l	
541-73-1	1,3-Dichlorobenzene	2.2 U	10	2.2	ug/l	
106-46-7	1,4-Dichlorobenzene	2.6 U	10	2.6	ug/l	
75-34-3	1,1-Dichloroethane	3.4 U	10	3.4	ug/l	
107-06-2	1,2-Dichloroethane	3.1 U	10	3.1	ug/l	
75-35-4	1,1-Dichloroethylene	3.2 U	10	3.2	ug/l	
156-59-2	cis-1,2-Dichloroethylene	92.4	10	2.8	ug/l	
156-60-5	trans-1,2-Dichloroethylene	2.2 U	10	2.2	ug/l	
78-87-5	1,2-Dichloropropane	4.3 U	10	4.3	ug/l	
10061-01-5	cis-1,3-Dichloropropene	2.9 U	10	2.9	ug/l	
10061-02-6	trans-1,3-Dichloropropene	2.1 U	10	2.1	ug/l	
100-41-4	Ethylbenzene	3.6 U	10	3.6	ug/l	
76-13-1	Freon 113	4.8 U	10	4.8	ug/l	
591-78-6	2-Hexanone	20 U	100	20	ug/l	
98-82-8	Isopropylbenzene	2.2 U	10	2.2	ug/l	
79-20-9	Methyl Acetate	50 U	200	50	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0597-093.0-20211221		
Lab Sample ID:	FA91890-44	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide [d]	20 UJ	50	20	ug/l	J
74-87-3	Methyl Chloride	5.0 U	20	5.0	ug/l	
75-09-2	Methylene Chloride	20 U	50	20	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	10 U	50	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	2.3 U	10	2.3	ug/l	
100-42-5	Styrene	2.2 U	10	2.2	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	2.8 U	10	2.8	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	3.0 U	10	3.0	ug/l	
127-18-4	Tetrachloroethylene	2.2 U	10	2.2	ug/l	
108-88-3	Toluene	3.0 U	10	3.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	6.1 U	20	6.1	ug/l	
120-82-1	1,2,4-Trichlorobenzene	5.0 U	20	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	2.5 U	10	2.5	ug/l	
79-00-5	1,1,2-Trichloroethane	4.7 U	10	4.7	ug/l	
79-01-6	Trichloroethylene	4590 [e]	100	35	ug/l	Q
75-69-4	Trichlorofluoromethane	5.0 U	20	5.0	ug/l	
75-01-4	Vinyl Chloride	4.1 U	10	4.1	ug/l	
1330-20-7	Xylene (total)	7.2 U	30	7.2	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%	101%	83-118%
17060-07-0	1,2-Dichloroethane-D4	113%	102%	79-125%
2037-26-5	Toluene-D8	95%	102%	85-112%
460-00-4	4-Bromofluorobenzene	95%	101%	83-118%

(a) Sample was not preserved to pH < 2.
(b) Sample was not preserved to pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(c) Associated CCV outside of control limits high, sample was ND.
(d) Associated CCV outside of control limits low.
(e) Result is from Run# 2

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: LC34-DPT0597-098.0-20211221
Lab Sample ID: FA91890-45
Matrix: AQ - Ground Water
Method: SW846 8260B
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Date Sampled: 12/21/21
Date Received: 12/21/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	I73042.D	10	12/28/21 18:34	LR	n/a	n/a	VI2417
Run #2 [b]	2P84522.D	500	01/07/22 15:08	CF	n/a	n/a	V2P3369

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	100 U	250	100	ug/l	
71-43-2	Benzene	3.1 U	10	3.1	ug/l	
74-97-5	Bromochloromethane	4.5 U	10	4.5	ug/l	
75-27-4	Bromodichloromethane	2.4 U	10	2.4	ug/l	
75-25-2	Bromoform	4.1 U	10	4.1	ug/l	
78-93-3	2-Butanone (MEK)	20 U	50	20	ug/l	
75-15-0	Carbon Disulfide	5.3 U	20	5.3	ug/l	
56-23-5	Carbon Tetrachloride	3.6 U	10	3.6	ug/l	
108-90-7	Chlorobenzene	2.0 U	10	2.0	ug/l	
75-00-3	Chloroethane [c]	6.7 U	20	6.7	ug/l	
67-66-3	Chloroform	3.0 U	10	3.0	ug/l	
110-82-7	Cyclohexane	3.9 U	10	3.9	ug/l	
124-48-1	Dibromochloromethane	2.8 U	10	2.8	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	10 U	50	10	ug/l	
106-93-4	1,2-Dibromoethane	2.8 U	20	2.8	ug/l	
75-71-8	Dichlorodifluoromethane	5.0 U	20	5.0	ug/l	
95-50-1	1,2-Dichlorobenzene	3.2 U	10	3.2	ug/l	
541-73-1	1,3-Dichlorobenzene	2.2 U	10	2.2	ug/l	
106-46-7	1,4-Dichlorobenzene	2.6 U	10	2.6	ug/l	
75-34-3	1,1-Dichloroethane	3.4 U	10	3.4	ug/l	
107-06-2	1,2-Dichloroethane	3.1 U	10	3.1	ug/l	
75-35-4	1,1-Dichloroethylene	3.2 U	10	3.2	ug/l	
156-59-2	cis-1,2-Dichloroethylene	82.5	10	2.8	ug/l	
156-60-5	trans-1,2-Dichloroethylene	2.2 U	10	2.2	ug/l	
78-87-5	1,2-Dichloropropane	4.3 U	10	4.3	ug/l	
10061-01-5	cis-1,3-Dichloropropene	2.9 U	10	2.9	ug/l	
10061-02-6	trans-1,3-Dichloropropene	2.1 U	10	2.1	ug/l	
100-41-4	Ethylbenzene	3.6 U	10	3.6	ug/l	
76-13-1	Freon 113	12.2	10	4.8	ug/l	
591-78-6	2-Hexanone	20 U	100	20	ug/l	
98-82-8	Isopropylbenzene	2.2 U	10	2.2	ug/l	
79-20-9	Methyl Acetate	50 U	200	50	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0597-098.0-20211221		
Lab Sample ID:	FA91890-45	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide [d]	20 UJ	50	20	ug/l	J
74-87-3	Methyl Chloride	5.0 U	20	5.0	ug/l	
75-09-2	Methylene Chloride	20 U	50	20	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	10 U	50	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	2.3 U	10	2.3	ug/l	
100-42-5	Styrene	2.2 U	10	2.2	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	2.8 U	10	2.8	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	3.0 U	10	3.0	ug/l	
127-18-4	Tetrachloroethylene	2.2 U	10	2.2	ug/l	
108-88-3	Toluene	3.0 U	10	3.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	6.1 U	20	6.1	ug/l	
120-82-1	1,2,4-Trichlorobenzene	5.0 U	20	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	2.5 U	10	2.5	ug/l	
79-00-5	1,1,2-Trichloroethane	4.7 U	10	4.7	ug/l	
79-01-6	Trichloroethylene	19400 [e]	500	170	ug/l	Q
75-69-4	Trichlorofluoromethane	5.0 U	20	5.0	ug/l	
75-01-4	Vinyl Chloride	4.5	10	4.1	ug/l	I
1330-20-7	Xylene (total)	7.2 U	30	7.2	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%	102%	83-118%
17060-07-0	1,2-Dichloroethane-D4	114%	102%	79-125%
2037-26-5	Toluene-D8	95%	101%	85-112%
460-00-4	4-Bromofluorobenzene	95%	104%	83-118%

(a) Sample was not preserved to pH < 2.
(b) Sample was not preserved to pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(c) Associated CCV outside of control limits high, sample was ND.
(d) Associated CCV outside of control limits low.
(e) Result is from Run# 2

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0596-008.0-20211221		
Lab Sample ID:	FA91890-46	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	I73043.D	10	12/28/21 18:59	LR	n/a	n/a	VI2417
Run #2 [b]	2P84524.D	100	01/07/22 15:39	CF	n/a	n/a	V2P3369

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	100 U	250	100	ug/l	
71-43-2	Benzene	3.1 U	10	3.1	ug/l	
74-97-5	Bromochloromethane	4.5 U	10	4.5	ug/l	
75-27-4	Bromodichloromethane	2.4 U	10	2.4	ug/l	
75-25-2	Bromoform	4.1 U	10	4.1	ug/l	
78-93-3	2-Butanone (MEK)	20 U	50	20	ug/l	
75-15-0	Carbon Disulfide	5.3 U	20	5.3	ug/l	
56-23-5	Carbon Tetrachloride	3.6 U	10	3.6	ug/l	
108-90-7	Chlorobenzene	2.0 U	10	2.0	ug/l	
75-00-3	Chloroethane [c]	6.7 U	20	6.7	ug/l	
67-66-3	Chloroform	3.0 U	10	3.0	ug/l	
110-82-7	Cyclohexane	3.9 U	10	3.9	ug/l	
124-48-1	Dibromochloromethane	2.8 U	10	2.8	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	10 U	50	10	ug/l	
106-93-4	1,2-Dibromoethane	2.8 U	20	2.8	ug/l	
75-71-8	Dichlorodifluoromethane	5.0 U	20	5.0	ug/l	
95-50-1	1,2-Dichlorobenzene	3.2 U	10	3.2	ug/l	
541-73-1	1,3-Dichlorobenzene	2.2 U	10	2.2	ug/l	
106-46-7	1,4-Dichlorobenzene	2.6 U	10	2.6	ug/l	
75-34-3	1,1-Dichloroethane	3.4 U	10	3.4	ug/l	
107-06-2	1,2-Dichloroethane	3.1 U	10	3.1	ug/l	
75-35-4	1,1-Dichloroethylene	5.3	10	3.2	ug/l	I
156-59-2	cis-1,2-Dichloroethylene	3160 [d]	100	28	ug/l	Q
156-60-5	trans-1,2-Dichloroethylene	18.0	10	2.2	ug/l	
78-87-5	1,2-Dichloropropane	4.3 U	10	4.3	ug/l	
10061-01-5	cis-1,3-Dichloropropene	2.9 U	10	2.9	ug/l	
10061-02-6	trans-1,3-Dichloropropene	2.1 U	10	2.1	ug/l	
100-41-4	Ethylbenzene	3.6 U	10	3.6	ug/l	
76-13-1	Freon 113	4.8 U	10	4.8	ug/l	
591-78-6	2-Hexanone	20 U	100	20	ug/l	
98-82-8	Isopropylbenzene	2.2 U	10	2.2	ug/l	
79-20-9	Methyl Acetate	50 U	200	50	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0596-008.0-20211221		
Lab Sample ID:	FA91890-46	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide [e]	20 UJ	50	20	ug/l	J
74-87-3	Methyl Chloride	5.0 U	20	5.0	ug/l	
75-09-2	Methylene Chloride	20 U	50	20	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	10 U	50	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	2.3 U	10	2.3	ug/l	
100-42-5	Styrene	2.2 U	10	2.2	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	2.8 U	10	2.8	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	3.0 U	10	3.0	ug/l	
127-18-4	Tetrachloroethylene	2.2 U	10	2.2	ug/l	
108-88-3	Toluene	3.0 U	10	3.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	6.1 U	20	6.1	ug/l	
120-82-1	1,2,4-Trichlorobenzene	5.0 U	20	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	2.5 U	10	2.5	ug/l	
79-00-5	1,1,2-Trichloroethane	4.7 U	10	4.7	ug/l	
79-01-6	Trichloroethylene	2260 [d]	100	35	ug/l	Q
75-69-4	Trichlorofluoromethane	5.0 U	20	5.0	ug/l	
75-01-4	Vinyl Chloride	61.8	10	4.1	ug/l	
1330-20-7	Xylene (total)	7.2 U	30	7.2	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%	100%	83-118%
17060-07-0	1,2-Dichloroethane-D4	114%	107%	79-125%
2037-26-5	Toluene-D8	96%	102%	85-112%
460-00-4	4-Bromofluorobenzene	94%	102%	83-118%

(a) Sample was not preserved to pH < 2.
(b) Sample was not preserved to pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(c) Associated CCV outside of control limits high, sample was ND.
(d) Result is from Run# 2
(e) Associated CCV outside of control limits low.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0596-013.0-20211221		
Lab Sample ID:	FA91890-47	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1A41109.D	250	01/04/22 19:10	CF	n/a	n/a	V1A1668
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	2500 UQ	6300	2500	ug/l	Q
71-43-2	Benzene	78 UQ	250	78	ug/l	Q
74-97-5	Bromochloromethane [b]	110 UQ	250	110	ug/l	Q
75-27-4	Bromodichloromethane	61 UQ	250	61	ug/l	Q
75-25-2	Bromoform	100 UQ	250	100	ug/l	Q
78-93-3	2-Butanone (MEK)	500 UQ	1300	500	ug/l	Q
75-15-0	Carbon Disulfide [b]	130 UQ	500	130	ug/l	Q
56-23-5	Carbon Tetrachloride	89 UQ	250	89	ug/l	Q
108-90-7	Chlorobenzene	50 UQ	250	50	ug/l	Q
75-00-3	Chloroethane	170 UQ	500	170	ug/l	Q
67-66-3	Chloroform	75 UQ	250	75	ug/l	Q
110-82-7	Cyclohexane	98 UQ	250	98	ug/l	Q
124-48-1	Dibromochloromethane	69 UQ	250	69	ug/l	Q
96-12-8	1,2-Dibromo-3-chloropropane	260 UQ	1300	260	ug/l	Q
106-93-4	1,2-Dibromoethane	69 UQ	500	69	ug/l	Q
75-71-8	Dichlorodifluoromethane	130 UQ	500	130	ug/l	Q
95-50-1	1,2-Dichlorobenzene	81 UQ	250	81	ug/l	Q
541-73-1	1,3-Dichlorobenzene	54 UQ	250	54	ug/l	Q
106-46-7	1,4-Dichlorobenzene	64 UQ	250	64	ug/l	Q
75-34-3	1,1-Dichloroethane	85 UQ	250	85	ug/l	Q
107-06-2	1,2-Dichloroethane	78 UQ	250	78	ug/l	Q
75-35-4	1,1-Dichloroethylene	81 UQ	250	81	ug/l	Q
156-59-2	cis-1,2-Dichloroethylene	11100	250	69	ug/l	Q
156-60-5	trans-1,2-Dichloroethylene	55 UQ	250	55	ug/l	Q
78-87-5	1,2-Dichloropropane	110 UQ	250	110	ug/l	Q
10061-01-5	cis-1,3-Dichloropropene	73 UQ	250	73	ug/l	Q
10061-02-6	trans-1,3-Dichloropropene	54 UQ	250	54	ug/l	Q
100-41-4	Ethylbenzene	89 UQ	250	89	ug/l	Q
76-13-1	Freon 113 [b]	120 UQ	250	120	ug/l	Q
591-78-6	2-Hexanone	500 UQ	2500	500	ug/l	Q
98-82-8	Isopropylbenzene	55 UQ	250	55	ug/l	Q
79-20-9	Methyl Acetate	1300 UQ	5000	1300	ug/l	Q

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0596-013.0-20211221		
Lab Sample ID:	FA91890-47	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	500 UQ	1300	500	ug/l	Q
74-87-3	Methyl Chloride	130 UQ	500	130	ug/l	Q
75-09-2	Methylene Chloride	500 UQ	1300	500	ug/l	Q
108-10-1	4-Methyl-2-pentanone (MIBK)	250 UQ	1300	250	ug/l	Q
1634-04-4	Methyl Tert Butyl Ether	57 UQ	250	57	ug/l	Q
100-42-5	Styrene	56 UQ	250	56	ug/l	Q
630-20-6	1,1,1,2-Tetrachloroethane	69 UQ	250	69	ug/l	Q
79-34-5	1,1,2,2-Tetrachloroethane	75 UQ	250	75	ug/l	Q
127-18-4	Tetrachloroethylene	54 UQ	250	54	ug/l	Q
108-88-3	Toluene	75 UQ	250	75	ug/l	Q
87-61-6	1,2,3-Trichlorobenzene	150 UQ	500	150	ug/l	Q
120-82-1	1,2,4-Trichlorobenzene	130 UQ	500	130	ug/l	Q
71-55-6	1,1,1-Trichloroethane	62 UQ	250	62	ug/l	Q
79-00-5	1,1,2-Trichloroethane	120 UQ	250	120	ug/l	Q
79-01-6	Trichloroethylene	86 UQ	250	86	ug/l	Q
75-69-4	Trichlorofluoromethane [b]	130 UQ	500	130	ug/l	Q
75-01-4	Vinyl Chloride	100 UQ	250	100	ug/l	Q
1330-20-7	Xylene (total)	180 UQ	750	180	ug/l	Q

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		83-118%
17060-07-0	1,2-Dichloroethane-D4	104%		79-125%
2037-26-5	Toluene-D8	94%		85-112%
460-00-4	4-Bromofluorobenzene	97%		83-118%

(a) Sample was not preserved to pH < 2. Sample analyzed beyond hold time; reported results are considered minimum values.
(b) Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0596-018.0-20211221		
Lab Sample ID:	FA91890-48	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1A41110.D	500	01/04/22 19:35	CF	n/a	n/a	V1A1668
Run #2 [b]	2P84752.D	1000	01/12/22 22:17	CF	n/a	n/a	V2P3374

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	5000 UQ	13000	5000	ug/l	Q
71-43-2	Benzene	160 UQ	500	160	ug/l	Q
74-97-5	Bromochloromethane [c]	230 UQ	500	230	ug/l	Q
75-27-4	Bromodichloromethane	120 UQ	500	120	ug/l	Q
75-25-2	Bromoform	200 UQ	500	200	ug/l	Q
78-93-3	2-Butanone (MEK)	1000 UQ	2500	1000	ug/l	Q
75-15-0	Carbon Disulfide [c]	270 UQ	1000	270	ug/l	Q
56-23-5	Carbon Tetrachloride	180 UQ	500	180	ug/l	Q
108-90-7	Chlorobenzene	100 UQ	500	100	ug/l	Q
75-00-3	Chloroethane	330 UQ	1000	330	ug/l	Q
67-66-3	Chloroform	150 UQ	500	150	ug/l	Q
110-82-7	Cyclohexane	200 UQ	500	200	ug/l	Q
124-48-1	Dibromochloromethane	140 UQ	500	140	ug/l	Q
96-12-8	1,2-Dibromo-3-chloropropane	520 UQ	2500	520	ug/l	Q
106-93-4	1,2-Dibromoethane	140 UQ	1000	140	ug/l	Q
75-71-8	Dichlorodifluoromethane	250 UQ	1000	250	ug/l	Q
95-50-1	1,2-Dichlorobenzene	160 UQ	500	160	ug/l	Q
541-73-1	1,3-Dichlorobenzene	110 UQ	500	110	ug/l	Q
106-46-7	1,4-Dichlorobenzene	130 UQ	500	130	ug/l	Q
75-34-3	1,1-Dichloroethane	170 UQ	500	170	ug/l	Q
107-06-2	1,2-Dichloroethane	160 UQ	500	160	ug/l	Q
75-35-4	1,1-Dichloroethylene	160 UQ	500	160	ug/l	Q
156-59-2	cis-1,2-Dichloroethylene	21400	500	140	ug/l	Q
156-60-5	trans-1,2-Dichloroethylene	110 UQ	500	110	ug/l	Q
78-87-5	1,2-Dichloropropane	210 UQ	500	210	ug/l	Q
10061-01-5	cis-1,3-Dichloropropene	150 UQ	500	150	ug/l	Q
10061-02-6	trans-1,3-Dichloropropene	110 UQ	500	110	ug/l	Q
100-41-4	Ethylbenzene	180 UQ	500	180	ug/l	Q
76-13-1	Freon 113 [c]	240 UQ	500	240	ug/l	Q
591-78-6	2-Hexanone	1000 UQ	5000	1000	ug/l	Q
98-82-8	Isopropylbenzene	110 UQ	500	110	ug/l	Q
79-20-9	Methyl Acetate	2500 UQ	10000	2500	ug/l	Q

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0596-018.0-20211221		
Lab Sample ID:	FA91890-48	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	1000 UQ	2500	1000	ug/l	Q
74-87-3	Methyl Chloride	250 UQ	1000	250	ug/l	Q
75-09-2	Methylene Chloride	1000 UQ	2500	1000	ug/l	Q
108-10-1	4-Methyl-2-pentanone (MIBK)	500 UQ	2500	500	ug/l	Q
1634-04-4	Methyl Tert Butyl Ether	110 UQ	500	110	ug/l	Q
100-42-5	Styrene	110 UQ	500	110	ug/l	Q
630-20-6	1,1,1,2-Tetrachloroethane	140 UQ	500	140	ug/l	Q
79-34-5	1,1,2,2-Tetrachloroethane	150 UQ	500	150	ug/l	Q
127-18-4	Tetrachloroethylene	110 UQ	500	110	ug/l	Q
108-88-3	Toluene	150 UQ	500	150	ug/l	Q
87-61-6	1,2,3-Trichlorobenzene	310 UQ	1000	310	ug/l	Q
120-82-1	1,2,4-Trichlorobenzene	250 UQ	1000	250	ug/l	Q
71-55-6	1,1,1-Trichloroethane	120 UQ	500	120	ug/l	Q
79-00-5	1,1,2-Trichloroethane	230 UQ	500	230	ug/l	Q
79-01-6	Trichloroethylene	81500	500	170	ug/l	Q
75-69-4	Trichlorofluoromethane [c]	250 UQ	1000	250	ug/l	Q
75-01-4	Vinyl Chloride	200 UQ	500	200	ug/l	Q
1330-20-7	Xylene (total)	360 UQ	1500	360	ug/l	Q

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%	101%	83-118%
17060-07-0	1,2-Dichloroethane-D4	104%	96%	79-125%
2037-26-5	Toluene-D8	94%	97%	85-112%
460-00-4	4-Bromofluorobenzene	98%	103%	83-118%

(a) Sample was not preserved to pH < 2. Sample analyzed beyond hold time; reported results are considered minimum values.
(b) Sample was not preserved to a pH < 2. Confirmation run.
(c) Associated CCV outside of control limits high.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0596-023.0-20211221		
Lab Sample ID:	FA91890-49	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1A41111.D	500	01/04/22 19:59	CF	n/a	n/a	V1A1668
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	5000 UQ	13000	5000	ug/l	Q
71-43-2	Benzene	160 UQ	500	160	ug/l	Q
74-97-5	Bromochloromethane [b]	230 UQ	500	230	ug/l	Q
75-27-4	Bromodichloromethane	120 UQ	500	120	ug/l	Q
75-25-2	Bromoform	200 UQ	500	200	ug/l	Q
78-93-3	2-Butanone (MEK)	1000 UQ	2500	1000	ug/l	Q
75-15-0	Carbon Disulfide [b]	270 UQ	1000	270	ug/l	Q
56-23-5	Carbon Tetrachloride	180 UQ	500	180	ug/l	Q
108-90-7	Chlorobenzene	100 UQ	500	100	ug/l	Q
75-00-3	Chloroethane	330 UQ	1000	330	ug/l	Q
67-66-3	Chloroform	150 UQ	500	150	ug/l	Q
110-82-7	Cyclohexane	200 UQ	500	200	ug/l	Q
124-48-1	Dibromochloromethane	140 UQ	500	140	ug/l	Q
96-12-8	1,2-Dibromo-3-chloropropane	520 UQ	2500	520	ug/l	Q
106-93-4	1,2-Dibromoethane	140 UQ	1000	140	ug/l	Q
75-71-8	Dichlorodifluoromethane	250 UQ	1000	250	ug/l	Q
95-50-1	1,2-Dichlorobenzene	160 UQ	500	160	ug/l	Q
541-73-1	1,3-Dichlorobenzene	110 UQ	500	110	ug/l	Q
106-46-7	1,4-Dichlorobenzene	130 UQ	500	130	ug/l	Q
75-34-3	1,1-Dichloroethane	170 UQ	500	170	ug/l	Q
107-06-2	1,2-Dichloroethane	160 UQ	500	160	ug/l	Q
75-35-4	1,1-Dichloroethylene	160 UQ	500	160	ug/l	Q
156-59-2	cis-1,2-Dichloroethylene	26100	500	140	ug/l	Q
156-60-5	trans-1,2-Dichloroethylene	347	500	110	ug/l	IQ
78-87-5	1,2-Dichloropropane	210 UQ	500	210	ug/l	Q
10061-01-5	cis-1,3-Dichloropropene	150 UQ	500	150	ug/l	Q
10061-02-6	trans-1,3-Dichloropropene	110 UQ	500	110	ug/l	Q
100-41-4	Ethylbenzene	180 UQ	500	180	ug/l	Q
76-13-1	Freon 113 [b]	240 UQ	500	240	ug/l	Q
591-78-6	2-Hexanone	1000 UQ	5000	1000	ug/l	Q
98-82-8	Isopropylbenzene	110 UQ	500	110	ug/l	Q
79-20-9	Methyl Acetate	2500 UQ	10000	2500	ug/l	Q

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0596-023.0-20211221		
Lab Sample ID:	FA91890-49	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	1000 UQ	2500	1000	ug/l	Q
74-87-3	Methyl Chloride	250 UQ	1000	250	ug/l	Q
75-09-2	Methylene Chloride	1000 UQ	2500	1000	ug/l	Q
108-10-1	4-Methyl-2-pentanone (MIBK)	500 UQ	2500	500	ug/l	Q
1634-04-4	Methyl Tert Butyl Ether	110 UQ	500	110	ug/l	Q
100-42-5	Styrene	110 UQ	500	110	ug/l	Q
630-20-6	1,1,1,2-Tetrachloroethane	140 UQ	500	140	ug/l	Q
79-34-5	1,1,2,2-Tetrachloroethane	150 UQ	500	150	ug/l	Q
127-18-4	Tetrachloroethylene	110 UQ	500	110	ug/l	Q
108-88-3	Toluene	150 UQ	500	150	ug/l	Q
87-61-6	1,2,3-Trichlorobenzene	310 UQ	1000	310	ug/l	Q
120-82-1	1,2,4-Trichlorobenzene	250 UQ	1000	250	ug/l	Q
71-55-6	1,1,1-Trichloroethane	120 UQ	500	120	ug/l	Q
79-00-5	1,1,2-Trichloroethane	230 UQ	500	230	ug/l	Q
79-01-6	Trichloroethylene	48300	500	170	ug/l	Q
75-69-4	Trichlorofluoromethane [b]	250 UQ	1000	250	ug/l	Q
75-01-4	Vinyl Chloride	461	500	200	ug/l	Q
1330-20-7	Xylene (total)	360 UQ	1500	360	ug/l	Q

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		83-118%
17060-07-0	1,2-Dichloroethane-D4	107%		79-125%
2037-26-5	Toluene-D8	95%		85-112%
460-00-4	4-Bromofluorobenzene	99%		83-118%

(a) Sample was not preserved to pH < 2. Sample analyzed beyond hold time; reported results are considered minimum values.
(b) Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: LC34-DPT0596-028.0-20211221
Lab Sample ID: FA91890-50
Matrix: AQ - Ground Water
Method: SW846 8260B
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Date Sampled: 12/21/21
Date Received: 12/21/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1A41112.D	500	01/04/22 20:24	CF	n/a	n/a	V1A1668
Run #2 [b]	2P84754.D	2000	01/12/22 22:48	CF	n/a	n/a	V2P3374

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	5000 UQ	13000	5000	ug/l	Q
71-43-2	Benzene	160 UQ	500	160	ug/l	Q
74-97-5	Bromochloromethane [c]	230 UQ	500	230	ug/l	Q
75-27-4	Bromodichloromethane	120 UQ	500	120	ug/l	Q
75-25-2	Bromoform	200 UQ	500	200	ug/l	Q
78-93-3	2-Butanone (MEK)	1000 UQ	2500	1000	ug/l	Q
75-15-0	Carbon Disulfide [c]	270 UQ	1000	270	ug/l	Q
56-23-5	Carbon Tetrachloride	180 UQ	500	180	ug/l	Q
108-90-7	Chlorobenzene	100 UQ	500	100	ug/l	Q
75-00-3	Chloroethane	330 UQ	1000	330	ug/l	Q
67-66-3	Chloroform	150 UQ	500	150	ug/l	Q
110-82-7	Cyclohexane	200 UQ	500	200	ug/l	Q
124-48-1	Dibromochloromethane	140 UQ	500	140	ug/l	Q
96-12-8	1,2-Dibromo-3-chloropropane	520 UQ	2500	520	ug/l	Q
106-93-4	1,2-Dibromoethane	140 UQ	1000	140	ug/l	Q
75-71-8	Dichlorodifluoromethane	250 UQ	1000	250	ug/l	Q
95-50-1	1,2-Dichlorobenzene	160 UQ	500	160	ug/l	Q
541-73-1	1,3-Dichlorobenzene	110 UQ	500	110	ug/l	Q
106-46-7	1,4-Dichlorobenzene	130 UQ	500	130	ug/l	Q
75-34-3	1,1-Dichloroethane	170 UQ	500	170	ug/l	Q
107-06-2	1,2-Dichloroethane	160 UQ	500	160	ug/l	Q
75-35-4	1,1-Dichloroethylene	160 UQ	500	160	ug/l	Q
156-59-2	cis-1,2-Dichloroethylene	36300	500	140	ug/l	Q
156-60-5	trans-1,2-Dichloroethylene	110 UQ	500	110	ug/l	Q
78-87-5	1,2-Dichloropropane	210 UQ	500	210	ug/l	Q
10061-01-5	cis-1,3-Dichloropropene	150 UQ	500	150	ug/l	Q
10061-02-6	trans-1,3-Dichloropropene	110 UQ	500	110	ug/l	Q
100-41-4	Ethylbenzene	180 UQ	500	180	ug/l	Q
76-13-1	Freon 113 [c]	240 UQ	500	240	ug/l	Q
591-78-6	2-Hexanone	1000 UQ	5000	1000	ug/l	Q
98-82-8	Isopropylbenzene	110 UQ	500	110	ug/l	Q
79-20-9	Methyl Acetate	2500 UQ	10000	2500	ug/l	Q

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0596-028.0-20211221		
Lab Sample ID:	FA91890-50	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	1000 UQ	2500	1000	ug/l	Q
74-87-3	Methyl Chloride	250 UQ	1000	250	ug/l	Q
75-09-2	Methylene Chloride	1000 UQ	2500	1000	ug/l	Q
108-10-1	4-Methyl-2-pentanone (MIBK)	500 UQ	2500	500	ug/l	Q
1634-04-4	Methyl Tert Butyl Ether	110 UQ	500	110	ug/l	Q
100-42-5	Styrene	110 UQ	500	110	ug/l	Q
630-20-6	1,1,1,2-Tetrachloroethane	140 UQ	500	140	ug/l	Q
79-34-5	1,1,2,2-Tetrachloroethane	150 UQ	500	150	ug/l	Q
127-18-4	Tetrachloroethylene	110 UQ	500	110	ug/l	Q
108-88-3	Toluene	150 UQ	500	150	ug/l	Q
87-61-6	1,2,3-Trichlorobenzene	310 UQ	1000	310	ug/l	Q
120-82-1	1,2,4-Trichlorobenzene	250 UQ	1000	250	ug/l	Q
71-55-6	1,1,1-Trichloroethane	120 UQ	500	120	ug/l	Q
79-00-5	1,1,2-Trichloroethane	230 UQ	500	230	ug/l	Q
79-01-6	Trichloroethylene	96100	500	170	ug/l	Q
75-69-4	Trichlorofluoromethane [c]	250 UQ	1000	250	ug/l	Q
75-01-4	Vinyl Chloride	515	500	200	ug/l	Q
1330-20-7	Xylene (total)	360 UQ	1500	360	ug/l	Q

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%	100%	83-118%
17060-07-0	1,2-Dichloroethane-D4	105%	94%	79-125%
2037-26-5	Toluene-D8	95%	97%	85-112%
460-00-4	4-Bromofluorobenzene	98%	105%	83-118%

(a) Sample was not preserved to pH < 2. Sample analyzed beyond hold time; reported results are considered minimum values.
(b) Sample was not preserved to a pH < 2. Confirmation run.
(c) Associated CCV outside of control limits high.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0596-033.0-20211221		
Lab Sample ID:	FA91890-51	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1A41113.D	500	01/04/22 20:49	CF	n/a	n/a	V1A1668
Run #2 [b]	2P84756.D	1000	01/12/22 23:19	CF	n/a	n/a	V2P3374

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	5000 UQ	13000	5000	ug/l	Q
71-43-2	Benzene	160 UQ	500	160	ug/l	Q
74-97-5	Bromochloromethane [c]	230 UQ	500	230	ug/l	Q
75-27-4	Bromodichloromethane	120 UQ	500	120	ug/l	Q
75-25-2	Bromoform	200 UQ	500	200	ug/l	Q
78-93-3	2-Butanone (MEK)	1000 UQ	2500	1000	ug/l	Q
75-15-0	Carbon Disulfide [c]	270 UQ	1000	270	ug/l	Q
56-23-5	Carbon Tetrachloride	180 UQ	500	180	ug/l	Q
108-90-7	Chlorobenzene	100 UQ	500	100	ug/l	Q
75-00-3	Chloroethane	330 UQ	1000	330	ug/l	Q
67-66-3	Chloroform	150 UQ	500	150	ug/l	Q
110-82-7	Cyclohexane	200 UQ	500	200	ug/l	Q
124-48-1	Dibromochloromethane	140 UQ	500	140	ug/l	Q
96-12-8	1,2-Dibromo-3-chloropropane	520 UQ	2500	520	ug/l	Q
106-93-4	1,2-Dibromoethane	140 UQ	1000	140	ug/l	Q
75-71-8	Dichlorodifluoromethane	250 UQ	1000	250	ug/l	Q
95-50-1	1,2-Dichlorobenzene	160 UQ	500	160	ug/l	Q
541-73-1	1,3-Dichlorobenzene	110 UQ	500	110	ug/l	Q
106-46-7	1,4-Dichlorobenzene	130 UQ	500	130	ug/l	Q
75-34-3	1,1-Dichloroethane	170 UQ	500	170	ug/l	Q
107-06-2	1,2-Dichloroethane	160 UQ	500	160	ug/l	Q
75-35-4	1,1-Dichloroethylene	160 UQ	500	160	ug/l	Q
156-59-2	cis-1,2-Dichloroethylene	50800	500	140	ug/l	LQ
156-60-5	trans-1,2-Dichloroethylene	324	500	110	ug/l	IQ
78-87-5	1,2-Dichloropropane	210 UQ	500	210	ug/l	Q
10061-01-5	cis-1,3-Dichloropropene	150 UQ	500	150	ug/l	Q
10061-02-6	trans-1,3-Dichloropropene	110 UQ	500	110	ug/l	Q
100-41-4	Ethylbenzene	180 UQ	500	180	ug/l	Q
76-13-1	Freon 113 [c]	240 UQ	500	240	ug/l	Q
591-78-6	2-Hexanone	1000 UQ	5000	1000	ug/l	Q
98-82-8	Isopropylbenzene	110 UQ	500	110	ug/l	Q
79-20-9	Methyl Acetate	2500 UQ	10000	2500	ug/l	Q

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0596-033.0-20211221		
Lab Sample ID:	FA91890-51	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	1000 UQ	2500	1000	ug/l	Q
74-87-3	Methyl Chloride	250 UQ	1000	250	ug/l	Q
75-09-2	Methylene Chloride	1000 UQ	2500	1000	ug/l	Q
108-10-1	4-Methyl-2-pentanone (MIBK)	500 UQ	2500	500	ug/l	Q
1634-04-4	Methyl Tert Butyl Ether	110 UQ	500	110	ug/l	Q
100-42-5	Styrene	110 UQ	500	110	ug/l	Q
630-20-6	1,1,1,2-Tetrachloroethane	140 UQ	500	140	ug/l	Q
79-34-5	1,1,2,2-Tetrachloroethane	150 UQ	500	150	ug/l	Q
127-18-4	Tetrachloroethylene	110 UQ	500	110	ug/l	Q
108-88-3	Toluene	150 UQ	500	150	ug/l	Q
87-61-6	1,2,3-Trichlorobenzene	310 UQ	1000	310	ug/l	Q
120-82-1	1,2,4-Trichlorobenzene	250 UQ	1000	250	ug/l	Q
71-55-6	1,1,1-Trichloroethane	120 UQ	500	120	ug/l	Q
79-00-5	1,1,2-Trichloroethane	230 UQ	500	230	ug/l	Q
79-01-6	Trichloroethylene	72100	500	170	ug/l	Q
75-69-4	Trichlorofluoromethane [c]	250 UQ	1000	250	ug/l	Q
75-01-4	Vinyl Chloride	380	500	200	ug/l	Q
1330-20-7	Xylene (total)	360 UQ	1500	360	ug/l	Q

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%	100%	83-118%
17060-07-0	1,2-Dichloroethane-D4	106%	94%	79-125%
2037-26-5	Toluene-D8	94%	97%	85-112%
460-00-4	4-Bromofluorobenzene	95%	104%	83-118%

(a) Sample was not preserved to pH < 2. Sample analyzed beyond hold time; reported results are considered minimum values.
(b) Sample was not preserved to a pH < 2. Confirmation run.
(c) Associated CCV outside of control limits high.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0596-038.0-20211221		
Lab Sample ID:	FA91890-52	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1A41114.D	500	01/04/22 21:13	CF	n/a	n/a	V1A1668
Run #2 [b]	I73560.D	1000	01/15/22 07:13	LR	n/a	n/a	VI2443

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	5000 UQ	13000	5000	ug/l	Q
71-43-2	Benzene	160 UQ	500	160	ug/l	Q
74-97-5	Bromochloromethane [c]	230 UQ	500	230	ug/l	Q
75-27-4	Bromodichloromethane	120 UQ	500	120	ug/l	Q
75-25-2	Bromoform	200 UQ	500	200	ug/l	Q
78-93-3	2-Butanone (MEK)	1000 UQ	2500	1000	ug/l	Q
75-15-0	Carbon Disulfide [c]	270 UQ	1000	270	ug/l	Q
56-23-5	Carbon Tetrachloride	180 UQ	500	180	ug/l	Q
108-90-7	Chlorobenzene	100 UQ	500	100	ug/l	Q
75-00-3	Chloroethane	330 UQ	1000	330	ug/l	Q
67-66-3	Chloroform	150 UQ	500	150	ug/l	Q
110-82-7	Cyclohexane	200 UQ	500	200	ug/l	Q
124-48-1	Dibromochloromethane	140 UQ	500	140	ug/l	Q
96-12-8	1,2-Dibromo-3-chloropropane	520 UQ	2500	520	ug/l	Q
106-93-4	1,2-Dibromoethane	140 UQ	1000	140	ug/l	Q
75-71-8	Dichlorodifluoromethane	250 UQ	1000	250	ug/l	Q
95-50-1	1,2-Dichlorobenzene	160 UQ	500	160	ug/l	Q
541-73-1	1,3-Dichlorobenzene	110 UQ	500	110	ug/l	Q
106-46-7	1,4-Dichlorobenzene	130 UQ	500	130	ug/l	Q
75-34-3	1,1-Dichloroethane	170 UQ	500	170	ug/l	Q
107-06-2	1,2-Dichloroethane	160 UQ	500	160	ug/l	Q
75-35-4	1,1-Dichloroethylene	160 UQ	500	160	ug/l	Q
156-59-2	cis-1,2-Dichloroethylene [d]	38800 [e]	1000	280	ug/l	QJ
156-60-5	trans-1,2-Dichloroethylene	688	500	110	ug/l	Q
78-87-5	1,2-Dichloropropane	210 UQ	500	210	ug/l	Q
10061-01-5	cis-1,3-Dichloropropene	150 UQ	500	150	ug/l	Q
10061-02-6	trans-1,3-Dichloropropene	110 UQ	500	110	ug/l	Q
100-41-4	Ethylbenzene	180 UQ	500	180	ug/l	Q
76-13-1	Freon 113 [c]	240 UQ	500	240	ug/l	Q
591-78-6	2-Hexanone	1000 UQ	5000	1000	ug/l	Q
98-82-8	Isopropylbenzene	110 UQ	500	110	ug/l	Q
79-20-9	Methyl Acetate	2500 UQ	10000	2500	ug/l	Q

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0596-038.0-20211221		
Lab Sample ID:	FA91890-52	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	1000 UQ	2500	1000	ug/l	Q
74-87-3	Methyl Chloride	250 UQ	1000	250	ug/l	Q
75-09-2	Methylene Chloride	1000 UQ	2500	1000	ug/l	Q
108-10-1	4-Methyl-2-pentanone (MIBK)	500 UQ	2500	500	ug/l	Q
1634-04-4	Methyl Tert Butyl Ether	110 UQ	500	110	ug/l	Q
100-42-5	Styrene	110 UQ	500	110	ug/l	Q
630-20-6	1,1,1,2-Tetrachloroethane	140 UQ	500	140	ug/l	Q
79-34-5	1,1,2,2-Tetrachloroethane	150 UQ	500	150	ug/l	Q
127-18-4	Tetrachloroethylene	110 UQ	500	110	ug/l	Q
108-88-3	Toluene	150 UQ	500	150	ug/l	Q
87-61-6	1,2,3-Trichlorobenzene	310 UQ	1000	310	ug/l	Q
120-82-1	1,2,4-Trichlorobenzene	250 UQ	1000	250	ug/l	Q
71-55-6	1,1,1-Trichloroethane	120 UQ	500	120	ug/l	Q
79-00-5	1,1,2-Trichloroethane	230 UQ	500	230	ug/l	Q
79-01-6	Trichloroethylene	36100	500	170	ug/l	Q
75-69-4	Trichlorofluoromethane [c]	250 UQ	1000	250	ug/l	Q
75-01-4	Vinyl Chloride	1220	500	200	ug/l	Q
1330-20-7	Xylene (total)	360 UQ	1500	360	ug/l	Q

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%	102%	83-118%
17060-07-0	1,2-Dichloroethane-D4	104%	109%	79-125%
2037-26-5	Toluene-D8	95%	103%	85-112%
460-00-4	4-Bromofluorobenzene	97%	95%	83-118%

(a) Sample was not preserved to a pH < 2. Sample analyzed beyond hold time; reported results are considered minimum values.
(b) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(c) Associated CCV outside of control limits high.
(d) Associated CCV outside of control limits low.
(e) Result is from Run# 2

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0599-043.0-20211221		
Lab Sample ID:	FA91890-53	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1A41115.D	5000	01/04/22 21:38	CF	n/a	n/a	V1A1668
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	50000 UQ	130000	50000	ug/l	Q
71-43-2	Benzene	1600 UQ	5000	1600	ug/l	Q
74-97-5	Bromochloromethane [b]	2300 UQ	5000	2300	ug/l	Q
75-27-4	Bromodichloromethane	1200 UQ	5000	1200	ug/l	Q
75-25-2	Bromoform	2000 UQ	5000	2000	ug/l	Q
78-93-3	2-Butanone (MEK)	10000 UQ	25000	10000	ug/l	Q
75-15-0	Carbon Disulfide [b]	2700 UQ	10000	2700	ug/l	Q
56-23-5	Carbon Tetrachloride	1800 UQ	5000	1800	ug/l	Q
108-90-7	Chlorobenzene	1000 UQ	5000	1000	ug/l	Q
75-00-3	Chloroethane	3300 UQ	10000	3300	ug/l	Q
67-66-3	Chloroform	1500 UQ	5000	1500	ug/l	Q
110-82-7	Cyclohexane	2000 UQ	5000	2000	ug/l	Q
124-48-1	Dibromochloromethane	1400 UQ	5000	1400	ug/l	Q
96-12-8	1,2-Dibromo-3-chloropropane	5200 UQ	25000	5200	ug/l	Q
106-93-4	1,2-Dibromoethane	1400 UQ	10000	1400	ug/l	Q
75-71-8	Dichlorodifluoromethane	2500 UQ	10000	2500	ug/l	Q
95-50-1	1,2-Dichlorobenzene	1600 UQ	5000	1600	ug/l	Q
541-73-1	1,3-Dichlorobenzene	1100 UQ	5000	1100	ug/l	Q
106-46-7	1,4-Dichlorobenzene	1300 UQ	5000	1300	ug/l	Q
75-34-3	1,1-Dichloroethane	1700 UQ	5000	1700	ug/l	Q
107-06-2	1,2-Dichloroethane	1600 UQ	5000	1600	ug/l	Q
75-35-4	1,1-Dichloroethylene	1600 UQ	5000	1600	ug/l	Q
156-59-2	cis-1,2-Dichloroethylene	121000	5000	1400	ug/l	Q
156-60-5	trans-1,2-Dichloroethylene	1100 UQ	5000	1100	ug/l	Q
78-87-5	1,2-Dichloropropane	2100 UQ	5000	2100	ug/l	Q
10061-01-5	cis-1,3-Dichloropropene	1500 UQ	5000	1500	ug/l	Q
10061-02-6	trans-1,3-Dichloropropene	1100 UQ	5000	1100	ug/l	Q
100-41-4	Ethylbenzene	1800 UQ	5000	1800	ug/l	Q
76-13-1	Freon 113 [b]	2400 UQ	5000	2400	ug/l	Q
591-78-6	2-Hexanone	10000 UQ	50000	10000	ug/l	Q
98-82-8	Isopropylbenzene	1100 UQ	5000	1100	ug/l	Q
79-20-9	Methyl Acetate	25000 UQ	100000	25000	ug/l	Q

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0599-043.0-20211221		
Lab Sample ID:	FA91890-53	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	10000 UQ	25000	10000	ug/l	Q
74-87-3	Methyl Chloride	2500 UQ	10000	2500	ug/l	Q
75-09-2	Methylene Chloride	10000 UQ	25000	10000	ug/l	Q
108-10-1	4-Methyl-2-pentanone (MIBK)	5000 UQ	25000	5000	ug/l	Q
1634-04-4	Methyl Tert Butyl Ether	1100 UQ	5000	1100	ug/l	Q
100-42-5	Styrene	1100 UQ	5000	1100	ug/l	Q
630-20-6	1,1,1,2-Tetrachloroethane	1400 UQ	5000	1400	ug/l	Q
79-34-5	1,1,2,2-Tetrachloroethane	1500 UQ	5000	1500	ug/l	Q
127-18-4	Tetrachloroethylene	1100 UQ	5000	1100	ug/l	Q
108-88-3	Toluene	1500 UQ	5000	1500	ug/l	Q
87-61-6	1,2,3-Trichlorobenzene	3100 UQ	10000	3100	ug/l	Q
120-82-1	1,2,4-Trichlorobenzene	2500 UQ	10000	2500	ug/l	Q
71-55-6	1,1,1-Trichloroethane	1200 UQ	5000	1200	ug/l	Q
79-00-5	1,1,2-Trichloroethane	2300 UQ	5000	2300	ug/l	Q
79-01-6	Trichloroethylene	274000	5000	1700	ug/l	Q
75-69-4	Trichlorofluoromethane [b]	2500 UQ	10000	2500	ug/l	Q
75-01-4	Vinyl Chloride	3950	5000	2000	ug/l	IQ
1330-20-7	Xylene (total)	3600 UQ	15000	3600	ug/l	Q

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		83-118%
17060-07-0	1,2-Dichloroethane-D4	105%		79-125%
2037-26-5	Toluene-D8	94%		85-112%
460-00-4	4-Bromofluorobenzene	97%		83-118%

(a) Sample was not preserved to pH < 2. Sample analyzed beyond hold time; reported results are considered minimum values.
(b) Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0599-048.0-20211221		
Lab Sample ID:	FA91890-54	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1A41116.D	10000	01/04/22 22:02	CF	n/a	n/a	V1A1668
Run #2 [b]	I73561.D	20000	01/15/22 07:38	LR	n/a	n/a	VI2443

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	100000 UQ	250000	100000	ug/l	Q
71-43-2	Benzene	3100 UQ	10000	3100	ug/l	Q
74-97-5	Bromochloromethane [c]	4500 UQ	10000	4500	ug/l	Q
75-27-4	Bromodichloromethane	2400 UQ	10000	2400	ug/l	Q
75-25-2	Bromoform	4100 UQ	10000	4100	ug/l	Q
78-93-3	2-Butanone (MEK)	20000 UQ	50000	20000	ug/l	Q
75-15-0	Carbon Disulfide [c]	5300 UQ	20000	5300	ug/l	Q
56-23-5	Carbon Tetrachloride	3600 UQ	10000	3600	ug/l	Q
108-90-7	Chlorobenzene	2000 UQ	10000	2000	ug/l	Q
75-00-3	Chloroethane	6700 UQ	20000	6700	ug/l	Q
67-66-3	Chloroform	3000 UQ	10000	3000	ug/l	Q
110-82-7	Cyclohexane	3900 UQ	10000	3900	ug/l	Q
124-48-1	Dibromochloromethane	2800 UQ	10000	2800	ug/l	Q
96-12-8	1,2-Dibromo-3-chloropropane	10000 UQ	50000	10000	ug/l	Q
106-93-4	1,2-Dibromoethane	2800 UQ	20000	2800	ug/l	Q
75-71-8	Dichlorodifluoromethane	5000 UQ	20000	5000	ug/l	Q
95-50-1	1,2-Dichlorobenzene	3200 UQ	10000	3200	ug/l	Q
541-73-1	1,3-Dichlorobenzene	2200 UQ	10000	2200	ug/l	Q
106-46-7	1,4-Dichlorobenzene	2600 UQ	10000	2600	ug/l	Q
75-34-3	1,1-Dichloroethane	3400 UQ	10000	3400	ug/l	Q
107-06-2	1,2-Dichloroethane	3100 UQ	10000	3100	ug/l	Q
75-35-4	1,1-Dichloroethylene	3200 UQ	10000	3200	ug/l	Q
156-59-2	cis-1,2-Dichloroethylene	48300	10000	2800	ug/l	Q
156-60-5	trans-1,2-Dichloroethylene	2200 UQ	10000	2200	ug/l	Q
78-87-5	1,2-Dichloropropane	4300 UQ	10000	4300	ug/l	Q
10061-01-5	cis-1,3-Dichloropropene	2900 UQ	10000	2900	ug/l	Q
10061-02-6	trans-1,3-Dichloropropene	2100 UQ	10000	2100	ug/l	Q
100-41-4	Ethylbenzene	3600 UQ	10000	3600	ug/l	Q
76-13-1	Freon 113 [c]	4800 UQ	10000	4800	ug/l	Q
591-78-6	2-Hexanone	20000 UQ	100000	20000	ug/l	Q
98-82-8	Isopropylbenzene	2200 UQ	10000	2200	ug/l	Q
79-20-9	Methyl Acetate	50000 UQ	200000	50000	ug/l	Q

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0599-048.0-20211221		
Lab Sample ID:	FA91890-54	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	20000 UQ	50000	20000	ug/l	Q
74-87-3	Methyl Chloride	5000 UQ	20000	5000	ug/l	Q
75-09-2	Methylene Chloride	20000 UQ	50000	20000	ug/l	Q
108-10-1	4-Methyl-2-pentanone (MIBK)	10000 UQ	50000	10000	ug/l	Q
1634-04-4	Methyl Tert Butyl Ether	2300 UQ	10000	2300	ug/l	Q
100-42-5	Styrene	2200 UQ	10000	2200	ug/l	Q
630-20-6	1,1,1,2-Tetrachloroethane	2800 UQ	10000	2800	ug/l	Q
79-34-5	1,1,2,2-Tetrachloroethane	3000 UQ	10000	3000	ug/l	Q
127-18-4	Tetrachloroethylene	2200 UQ	10000	2200	ug/l	Q
108-88-3	Toluene	3000 UQ	10000	3000	ug/l	Q
87-61-6	1,2,3-Trichlorobenzene	6100 UQ	20000	6100	ug/l	Q
120-82-1	1,2,4-Trichlorobenzene	5000 UQ	20000	5000	ug/l	Q
71-55-6	1,1,1-Trichloroethane	2500 UQ	10000	2500	ug/l	Q
79-00-5	1,1,2-Trichloroethane	4700 UQ	10000	4700	ug/l	Q
79-01-6	Trichloroethylene	1480000 [d]	20000	6900	ug/l	Q
75-69-4	Trichlorofluoromethane [c]	5000 UQ	20000	5000	ug/l	Q
75-01-4	Vinyl Chloride	4100 UQ	10000	4100	ug/l	Q
1330-20-7	Xylene (total)	7200 UQ	30000	7200	ug/l	Q

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%	102%	83-118%
17060-07-0	1,2-Dichloroethane-D4	106%	110%	79-125%
2037-26-5	Toluene-D8	94%	103%	85-112%
460-00-4	4-Bromofluorobenzene	95%	96%	83-118%

(a) Sample was not preserved to a pH < 2. Sample analyzed beyond hold time; reported results are considered minimum values.
(b) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(c) Associated CCV outside of control limits high.
(d) Result is from Run# 2

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0599-053.0-20211221		
Lab Sample ID:	FA91890-55	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1A41117.D	5000	01/04/22 22:27	CF	n/a	n/a	V1A1668
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	50000 UQ	130000	50000	ug/l	Q
71-43-2	Benzene	1600 UQ	5000	1600	ug/l	Q
74-97-5	Bromochloromethane [b]	2300 UQ	5000	2300	ug/l	Q
75-27-4	Bromodichloromethane	1200 UQ	5000	1200	ug/l	Q
75-25-2	Bromoform	2000 UQ	5000	2000	ug/l	Q
78-93-3	2-Butanone (MEK)	10000 UQ	25000	10000	ug/l	Q
75-15-0	Carbon Disulfide [b]	2700 UQ	10000	2700	ug/l	Q
56-23-5	Carbon Tetrachloride	1800 UQ	5000	1800	ug/l	Q
108-90-7	Chlorobenzene	1000 UQ	5000	1000	ug/l	Q
75-00-3	Chloroethane	3300 UQ	10000	3300	ug/l	Q
67-66-3	Chloroform	1500 UQ	5000	1500	ug/l	Q
110-82-7	Cyclohexane	2000 UQ	5000	2000	ug/l	Q
124-48-1	Dibromochloromethane	1400 UQ	5000	1400	ug/l	Q
96-12-8	1,2-Dibromo-3-chloropropane	5200 UQ	25000	5200	ug/l	Q
106-93-4	1,2-Dibromoethane	1400 UQ	10000	1400	ug/l	Q
75-71-8	Dichlorodifluoromethane	2500 UQ	10000	2500	ug/l	Q
95-50-1	1,2-Dichlorobenzene	1600 UQ	5000	1600	ug/l	Q
541-73-1	1,3-Dichlorobenzene	1100 UQ	5000	1100	ug/l	Q
106-46-7	1,4-Dichlorobenzene	1300 UQ	5000	1300	ug/l	Q
75-34-3	1,1-Dichloroethane	1700 UQ	5000	1700	ug/l	Q
107-06-2	1,2-Dichloroethane	1600 UQ	5000	1600	ug/l	Q
75-35-4	1,1-Dichloroethylene	1600 UQ	5000	1600	ug/l	Q
156-59-2	cis-1,2-Dichloroethylene	121000	5000	1400	ug/l	Q
156-60-5	trans-1,2-Dichloroethylene	1100 UQ	5000	1100	ug/l	Q
78-87-5	1,2-Dichloropropane	2100 UQ	5000	2100	ug/l	Q
10061-01-5	cis-1,3-Dichloropropene	1500 UQ	5000	1500	ug/l	Q
10061-02-6	trans-1,3-Dichloropropene	1100 UQ	5000	1100	ug/l	Q
100-41-4	Ethylbenzene	1800 UQ	5000	1800	ug/l	Q
76-13-1	Freon 113 [b]	2400 UQ	5000	2400	ug/l	Q
591-78-6	2-Hexanone	10000 UQ	50000	10000	ug/l	Q
98-82-8	Isopropylbenzene	1100 UQ	5000	1100	ug/l	Q
79-20-9	Methyl Acetate	25000 UQ	100000	25000	ug/l	Q

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0599-053.0-20211221		
Lab Sample ID:	FA91890-55	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	10000 UQ	25000	10000	ug/l	Q
74-87-3	Methyl Chloride	2500 UQ	10000	2500	ug/l	Q
75-09-2	Methylene Chloride	10000 UQ	25000	10000	ug/l	Q
108-10-1	4-Methyl-2-pentanone (MIBK)	5000 UQ	25000	5000	ug/l	Q
1634-04-4	Methyl Tert Butyl Ether	1100 UQ	5000	1100	ug/l	Q
100-42-5	Styrene	1100 UQ	5000	1100	ug/l	Q
630-20-6	1,1,1,2-Tetrachloroethane	1400 UQ	5000	1400	ug/l	Q
79-34-5	1,1,2,2-Tetrachloroethane	1500 UQ	5000	1500	ug/l	Q
127-18-4	Tetrachloroethylene	1100 UQ	5000	1100	ug/l	Q
108-88-3	Toluene	1500 UQ	5000	1500	ug/l	Q
87-61-6	1,2,3-Trichlorobenzene	3100 UQ	10000	3100	ug/l	Q
120-82-1	1,2,4-Trichlorobenzene	2500 UQ	10000	2500	ug/l	Q
71-55-6	1,1,1-Trichloroethane	1200 UQ	5000	1200	ug/l	Q
79-00-5	1,1,2-Trichloroethane	2300 UQ	5000	2300	ug/l	Q
79-01-6	Trichloroethylene	294000	5000	1700	ug/l	Q
75-69-4	Trichlorofluoromethane [b]	2500 UQ	10000	2500	ug/l	Q
75-01-4	Vinyl Chloride	4660	5000	2000	ug/l	IQ
1330-20-7	Xylene (total)	3600 UQ	15000	3600	ug/l	Q

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%		83-118%
17060-07-0	1,2-Dichloroethane-D4	106%		79-125%
2037-26-5	Toluene-D8	94%		85-112%
460-00-4	4-Bromofluorobenzene	97%		83-118%

(a) Sample was not preserved to pH < 2. Sample analyzed beyond hold time; reported results are considered minimum values.
(b) Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0599-058.0-20211221		
Lab Sample ID:	FA91890-56	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1A41118.D	500	01/04/22 22:52	CF	n/a	n/a	V1A1668
Run #2 [a]	I73449.D	2500	01/13/22 07:19	LR	n/a	n/a	VI2437

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	5000 UQ	13000	5000	ug/l	Q
71-43-2	Benzene	160 UQ	500	160	ug/l	Q
74-97-5	Bromochloromethane [b]	230 UQ	500	230	ug/l	Q
75-27-4	Bromodichloromethane	120 UQ	500	120	ug/l	Q
75-25-2	Bromoform	200 UQ	500	200	ug/l	Q
78-93-3	2-Butanone (MEK)	1000 UQ	2500	1000	ug/l	Q
75-15-0	Carbon Disulfide [b]	270 UQ	1000	270	ug/l	Q
56-23-5	Carbon Tetrachloride	180 UQ	500	180	ug/l	Q
108-90-7	Chlorobenzene	100 UQ	500	100	ug/l	Q
75-00-3	Chloroethane	330 UQ	1000	330	ug/l	Q
67-66-3	Chloroform	150 UQ	500	150	ug/l	Q
110-82-7	Cyclohexane	200 UQ	500	200	ug/l	Q
124-48-1	Dibromochloromethane	140 UQ	500	140	ug/l	Q
96-12-8	1,2-Dibromo-3-chloropropane	520 UQ	2500	520	ug/l	Q
106-93-4	1,2-Dibromoethane	140 UQ	1000	140	ug/l	Q
75-71-8	Dichlorodifluoromethane	250 UQ	1000	250	ug/l	Q
95-50-1	1,2-Dichlorobenzene	160 UQ	500	160	ug/l	Q
541-73-1	1,3-Dichlorobenzene	110 UQ	500	110	ug/l	Q
106-46-7	1,4-Dichlorobenzene	130 UQ	500	130	ug/l	Q
75-34-3	1,1-Dichloroethane	170 UQ	500	170	ug/l	Q
107-06-2	1,2-Dichloroethane	160 UQ	500	160	ug/l	Q
75-35-4	1,1-Dichloroethylene	160 UQ	500	160	ug/l	Q
156-59-2	cis-1,2-Dichloroethylene	13700	500	140	ug/l	Q
156-60-5	trans-1,2-Dichloroethylene	110 UQ	500	110	ug/l	Q
78-87-5	1,2-Dichloropropane	210 UQ	500	210	ug/l	Q
10061-01-5	cis-1,3-Dichloropropene	150 UQ	500	150	ug/l	Q
10061-02-6	trans-1,3-Dichloropropene	110 UQ	500	110	ug/l	Q
100-41-4	Ethylbenzene	180 UQ	500	180	ug/l	Q
76-13-1	Freon 113 [b]	240 UQ	500	240	ug/l	Q
591-78-6	2-Hexanone	1000 UQ	5000	1000	ug/l	Q
98-82-8	Isopropylbenzene	110 UQ	500	110	ug/l	Q
79-20-9	Methyl Acetate	2500 UQ	10000	2500	ug/l	Q

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0599-058.0-20211221		
Lab Sample ID:	FA91890-56	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	1000 UQ	2500	1000	ug/l	Q
74-87-3	Methyl Chloride	250 UQ	1000	250	ug/l	Q
75-09-2	Methylene Chloride	1000 UQ	2500	1000	ug/l	Q
108-10-1	4-Methyl-2-pentanone (MIBK)	500 UQ	2500	500	ug/l	Q
1634-04-4	Methyl Tert Butyl Ether	110 UQ	500	110	ug/l	Q
100-42-5	Styrene	110 UQ	500	110	ug/l	Q
630-20-6	1,1,1,2-Tetrachloroethane	140 UQ	500	140	ug/l	Q
79-34-5	1,1,2,2-Tetrachloroethane	150 UQ	500	150	ug/l	Q
127-18-4	Tetrachloroethylene	110 UQ	500	110	ug/l	Q
108-88-3	Toluene	150 UQ	500	150	ug/l	Q
87-61-6	1,2,3-Trichlorobenzene	310 UQ	1000	310	ug/l	Q
120-82-1	1,2,4-Trichlorobenzene	250 UQ	1000	250	ug/l	Q
71-55-6	1,1,1-Trichloroethane	120 UQ	500	120	ug/l	Q
79-00-5	1,1,2-Trichloroethane	230 UQ	500	230	ug/l	Q
79-01-6	Trichloroethylene	86800 [c]	2500	860	ug/l	Q
75-69-4	Trichlorofluoromethane [b]	250 UQ	1000	250	ug/l	Q
75-01-4	Vinyl Chloride	200 UQ	500	200	ug/l	Q
1330-20-7	Xylene (total)	360 UQ	1500	360	ug/l	Q

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%	100%	83-118%
17060-07-0	1,2-Dichloroethane-D4	110%	107%	79-125%
2037-26-5	Toluene-D8	94%	103%	85-112%
460-00-4	4-Bromofluorobenzene	99%	98%	83-118%

(a) Sample analyzed beyond hold time and was not preserved to a pH < 2; reported results are considered minimum values.
(b) Associated CCV outside of control limits high.
(c) Result is from Run# 2

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0599-063.0-20211221		
Lab Sample ID:	FA91890-57	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1P84453.D	250	01/05/22 19:44	CF	n/a	n/a	V1P3372
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	2500 UQ	6300	2500	ug/l	Q
71-43-2	Benzene	78 UQ	250	78	ug/l	Q
74-97-5	Bromochloromethane	110 UQ	250	110	ug/l	Q
75-27-4	Bromodichloromethane	61 UQ	250	61	ug/l	Q
75-25-2	Bromoform [b]	100 UQ	250	100	ug/l	Q
78-93-3	2-Butanone (MEK)	500 UQ	1300	500	ug/l	Q
75-15-0	Carbon Disulfide	130 UQ	500	130	ug/l	Q
56-23-5	Carbon Tetrachloride	89 UQ	250	89	ug/l	Q
108-90-7	Chlorobenzene	50 UQ	250	50	ug/l	Q
75-00-3	Chloroethane	170 UQ	500	170	ug/l	Q
67-66-3	Chloroform	75 UQ	250	75	ug/l	Q
110-82-7	Cyclohexane	98 UQ	250	98	ug/l	Q
124-48-1	Dibromochloromethane	69 UQ	250	69	ug/l	Q
96-12-8	1,2-Dibromo-3-chloropropane	260 UQ	1300	260	ug/l	Q
106-93-4	1,2-Dibromoethane	69 UQ	500	69	ug/l	Q
75-71-8	Dichlorodifluoromethane	130 UQ	500	130	ug/l	Q
95-50-1	1,2-Dichlorobenzene	81 UQ	250	81	ug/l	Q
541-73-1	1,3-Dichlorobenzene	54 UQ	250	54	ug/l	Q
106-46-7	1,4-Dichlorobenzene	64 UQ	250	64	ug/l	Q
75-34-3	1,1-Dichloroethane	85 UQ	250	85	ug/l	Q
107-06-2	1,2-Dichloroethane	78 UQ	250	78	ug/l	Q
75-35-4	1,1-Dichloroethylene	81 UQ	250	81	ug/l	Q
156-59-2	cis-1,2-Dichloroethylene	2300	250	69	ug/l	Q
156-60-5	trans-1,2-Dichloroethylene	55 UQ	250	55	ug/l	Q
78-87-5	1,2-Dichloropropane	110 UQ	250	110	ug/l	Q
10061-01-5	cis-1,3-Dichloropropene	73 UQ	250	73	ug/l	Q
10061-02-6	trans-1,3-Dichloropropene	54 UQ	250	54	ug/l	Q
100-41-4	Ethylbenzene	89 UQ	250	89	ug/l	Q
76-13-1	Freon 113	120 UQ	250	120	ug/l	Q
591-78-6	2-Hexanone	500 UQ	2500	500	ug/l	Q
98-82-8	Isopropylbenzene	55 UQ	250	55	ug/l	Q
79-20-9	Methyl Acetate	1300 UQ	5000	1300	ug/l	Q

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0599-063.0-20211221		
Lab Sample ID:	FA91890-57	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide [c]	500 UQ	1300	500	ug/l	Q
74-87-3	Methyl Chloride [d]	130 UQJ	500	130	ug/l	QJ
75-09-2	Methylene Chloride [d]	500 UQJ	1300	500	ug/l	QJ
108-10-1	4-Methyl-2-pentanone (MIBK)	250 UQ	1300	250	ug/l	Q
1634-04-4	Methyl Tert Butyl Ether	57 UQ	250	57	ug/l	Q
100-42-5	Styrene	56 UQ	250	56	ug/l	Q
630-20-6	1,1,1,2-Tetrachloroethane	69 UQ	250	69	ug/l	Q
79-34-5	1,1,2,2-Tetrachloroethane	75 UQ	250	75	ug/l	Q
127-18-4	Tetrachloroethylene	54 UQ	250	54	ug/l	Q
108-88-3	Toluene	75 UQ	250	75	ug/l	Q
87-61-6	1,2,3-Trichlorobenzene	150 UQ	500	150	ug/l	Q
120-82-1	1,2,4-Trichlorobenzene	130 UQ	500	130	ug/l	Q
71-55-6	1,1,1-Trichloroethane	62 UQ	250	62	ug/l	Q
79-00-5	1,1,2-Trichloroethane	120 UQ	250	120	ug/l	Q
79-01-6	Trichloroethylene	15700	250	86	ug/l	Q
75-69-4	Trichlorofluoromethane [b]	130 UQ	500	130	ug/l	Q
75-01-4	Vinyl Chloride	100 UQ	250	100	ug/l	Q
1330-20-7	Xylene (total)	180 UQ	750	180	ug/l	Q

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		83-118%
17060-07-0	1,2-Dichloroethane-D4	107%		79-125%
2037-26-5	Toluene-D8	100%		85-112%
460-00-4	4-Bromofluorobenzene	103%		83-118%

(a) Sample was not preserved to a pH < 2. Sample analyzed beyond hold time; reported results are considered minimum values.
(b) Associated CCV outside of control limits high, sample was ND.
(c) Associated ICV, BS, CCV recovery outside control limits high, sample was ND.
(d) Associated CCV outside of control limits low.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0599-068.0-20211221		
Lab Sample ID:	FA91890-58	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1P84455.D	250	01/05/22 20:16	CF	n/a	n/a	V1P3372
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	2500 UQ	6300	2500	ug/l	Q
71-43-2	Benzene	78 UQ	250	78	ug/l	Q
74-97-5	Bromochloromethane	110 UQ	250	110	ug/l	Q
75-27-4	Bromodichloromethane	61 UQ	250	61	ug/l	Q
75-25-2	Bromoform [b]	100 UQ	250	100	ug/l	Q
78-93-3	2-Butanone (MEK)	500 UQ	1300	500	ug/l	Q
75-15-0	Carbon Disulfide	130 UQ	500	130	ug/l	Q
56-23-5	Carbon Tetrachloride	89 UQ	250	89	ug/l	Q
108-90-7	Chlorobenzene	50 UQ	250	50	ug/l	Q
75-00-3	Chloroethane	170 UQ	500	170	ug/l	Q
67-66-3	Chloroform	75 UQ	250	75	ug/l	Q
110-82-7	Cyclohexane	98 UQ	250	98	ug/l	Q
124-48-1	Dibromochloromethane	69 UQ	250	69	ug/l	Q
96-12-8	1,2-Dibromo-3-chloropropane	260 UQ	1300	260	ug/l	Q
106-93-4	1,2-Dibromoethane	69 UQ	500	69	ug/l	Q
75-71-8	Dichlorodifluoromethane	130 UQ	500	130	ug/l	Q
95-50-1	1,2-Dichlorobenzene	81 UQ	250	81	ug/l	Q
541-73-1	1,3-Dichlorobenzene	54 UQ	250	54	ug/l	Q
106-46-7	1,4-Dichlorobenzene	64 UQ	250	64	ug/l	Q
75-34-3	1,1-Dichloroethane	85 UQ	250	85	ug/l	Q
107-06-2	1,2-Dichloroethane	78 UQ	250	78	ug/l	Q
75-35-4	1,1-Dichloroethylene	81 UQ	250	81	ug/l	Q
156-59-2	cis-1,2-Dichloroethylene	300	250	69	ug/l	Q
156-60-5	trans-1,2-Dichloroethylene	55 UQ	250	55	ug/l	Q
78-87-5	1,2-Dichloropropane	110 UQ	250	110	ug/l	Q
10061-01-5	cis-1,3-Dichloropropene	73 UQ	250	73	ug/l	Q
10061-02-6	trans-1,3-Dichloropropene	54 UQ	250	54	ug/l	Q
100-41-4	Ethylbenzene	89 UQ	250	89	ug/l	Q
76-13-1	Freon 113	120 UQ	250	120	ug/l	Q
591-78-6	2-Hexanone	500 UQ	2500	500	ug/l	Q
98-82-8	Isopropylbenzene	55 UQ	250	55	ug/l	Q
79-20-9	Methyl Acetate	1300 UQ	5000	1300	ug/l	Q

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0599-068.0-20211221		
Lab Sample ID:	FA91890-58	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide [c]	500 UQ	1300	500	ug/l	Q
74-87-3	Methyl Chloride [d]	130 UQJ	500	130	ug/l	QJ
75-09-2	Methylene Chloride [d]	500 UQJ	1300	500	ug/l	QJ
108-10-1	4-Methyl-2-pentanone (MIBK)	250 UQ	1300	250	ug/l	Q
1634-04-4	Methyl Tert Butyl Ether	57 UQ	250	57	ug/l	Q
100-42-5	Styrene	56 UQ	250	56	ug/l	Q
630-20-6	1,1,1,2-Tetrachloroethane	69 UQ	250	69	ug/l	Q
79-34-5	1,1,2,2-Tetrachloroethane	75 UQ	250	75	ug/l	Q
127-18-4	Tetrachloroethylene	54 UQ	250	54	ug/l	Q
108-88-3	Toluene	75 UQ	250	75	ug/l	Q
87-61-6	1,2,3-Trichlorobenzene	150 UQ	500	150	ug/l	Q
120-82-1	1,2,4-Trichlorobenzene	130 UQ	500	130	ug/l	Q
71-55-6	1,1,1-Trichloroethane	62 UQ	250	62	ug/l	Q
79-00-5	1,1,2-Trichloroethane	120 UQ	250	120	ug/l	Q
79-01-6	Trichloroethylene	14500	250	86	ug/l	Q
75-69-4	Trichlorofluoromethane [b]	130 UQ	500	130	ug/l	Q
75-01-4	Vinyl Chloride	100 UQ	250	100	ug/l	Q
1330-20-7	Xylene (total)	180 UQ	750	180	ug/l	Q

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		83-118%
17060-07-0	1,2-Dichloroethane-D4	105%		79-125%
2037-26-5	Toluene-D8	100%		85-112%
460-00-4	4-Bromofluorobenzene	103%		83-118%

(a) Sample was not preserved to a pH < 2. Sample analyzed beyond hold time; reported results are considered minimum values.
(b) Associated CCV outside of control limits high, sample was ND.
(c) Associated ICV, BS, CCV recovery outside control limits high, sample was ND.
(d) Associated CCV outside of control limits low.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0599-073.0-20211221		
Lab Sample ID:	FA91890-59	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	2P84582.D	20	01/08/22 12:15	CG	n/a	n/a	V2P3370
Run #2 [b]	1P84457.D	250	01/05/22 20:48	CF	n/a	n/a	V1P3372

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	2500 UQ [c]	6300	2500	ug/l	Q
71-43-2	Benzene	78 UQ [c]	250	78	ug/l	Q
74-97-5	Bromochloromethane	110 UQ [c]	250	110	ug/l	Q
75-27-4	Bromodichloromethane	61 UQ [c]	250	61	ug/l	Q
75-25-2	Bromoform [d]	100 UQ [c]	250	100	ug/l	Q
78-93-3	2-Butanone (MEK)	500 UQ [c]	1300	500	ug/l	Q
75-15-0	Carbon Disulfide	130 UQ [c]	500	130	ug/l	Q
56-23-5	Carbon Tetrachloride	89 UQ [c]	250	89	ug/l	Q
108-90-7	Chlorobenzene	50 UQ [c]	250	50	ug/l	Q
75-00-3	Chloroethane	170 UQ [c]	500	170	ug/l	Q
67-66-3	Chloroform	75 UQ [c]	250	75	ug/l	Q
110-82-7	Cyclohexane	98 UQ [c]	250	98	ug/l	Q
124-48-1	Dibromochloromethane	69 UQ [c]	250	69	ug/l	Q
96-12-8	1,2-Dibromo-3-chloropropane	260 UQ [c]	1300	260	ug/l	Q
106-93-4	1,2-Dibromoethane	69 UQ [c]	500	69	ug/l	Q
75-71-8	Dichlorodifluoromethane	130 UQ [c]	500	130	ug/l	Q
95-50-1	1,2-Dichlorobenzene	81 UQ [c]	250	81	ug/l	Q
541-73-1	1,3-Dichlorobenzene	54 UQ [c]	250	54	ug/l	Q
106-46-7	1,4-Dichlorobenzene	64 UQ [c]	250	64	ug/l	Q
75-34-3	1,1-Dichloroethane	85 UQ [c]	250	85	ug/l	Q
107-06-2	1,2-Dichloroethane	78 UQ [c]	250	78	ug/l	Q
75-35-4	1,1-Dichloroethylene	81 UQ [c]	250	81	ug/l	Q
156-59-2	cis-1,2-Dichloroethylene	175 [c]	250	69	ug/l	IQ
156-60-5	trans-1,2-Dichloroethylene	55 UQ [c]	250	55	ug/l	Q
78-87-5	1,2-Dichloropropane	110 UQ [c]	250	110	ug/l	Q
10061-01-5	cis-1,3-Dichloropropene	73 UQ [c]	250	73	ug/l	Q
10061-02-6	trans-1,3-Dichloropropene	54 UQ [c]	250	54	ug/l	Q
100-41-4	Ethylbenzene	89 UQ [c]	250	89	ug/l	Q
76-13-1	Freon 113	120 UQ [c]	250	120	ug/l	Q
591-78-6	2-Hexanone	500 UQ [c]	2500	500	ug/l	Q
98-82-8	Isopropylbenzene	55 UQ [c]	250	55	ug/l	Q
79-20-9	Methyl Acetate	1300 UQ [c]	5000	1300	ug/l	Q

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0599-073.0-20211221		
Lab Sample ID:	FA91890-59	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/21/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide [e]	500 UQ [c]	1300	500	ug/l	Q
74-87-3	Methyl Chloride [f]	130 UQJ [c]	500	130	ug/l	QJ
75-09-2	Methylene Chloride [f]	500 UQJ [c]	1300	500	ug/l	QJ
108-10-1	4-Methyl-2-pentanone (MIBK)	250 UQ [c]	1300	250	ug/l	Q
1634-04-4	Methyl Tert Butyl Ether	57 UQ [c]	250	57	ug/l	Q
100-42-5	Styrene	56 UQ [c]	250	56	ug/l	Q
630-20-6	1,1,1,2-Tetrachloroethane	69 UQ [c]	250	69	ug/l	Q
79-34-5	1,1,2,2-Tetrachloroethane	75 UQ [c]	250	75	ug/l	Q
127-18-4	Tetrachloroethylene	54 UQ [c]	250	54	ug/l	Q
108-88-3	Toluene	75 UQ [c]	250	75	ug/l	Q
87-61-6	1,2,3-Trichlorobenzene	150 UQ [c]	500	150	ug/l	Q
120-82-1	1,2,4-Trichlorobenzene	130 UQ [c]	500	130	ug/l	Q
71-55-6	1,1,1-Trichloroethane	62 UQ [c]	250	62	ug/l	Q
79-00-5	1,1,2-Trichloroethane	120 UQ [c]	250	120	ug/l	Q
79-01-6	Trichloroethylene	1480 [c]	250	86	ug/l	Q
75-69-4	Trichlorofluoromethane [d]	130 UQ [c]	500	130	ug/l	Q
75-01-4	Vinyl Chloride	100 UQ [c]	250	100	ug/l	Q
1330-20-7	Xylene (total)	180 UQ [c]	750	180	ug/l	Q

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%	102%	83-118%
17060-07-0	1,2-Dichloroethane-D4	104%	114%	79-125%
2037-26-5	Toluene-D8	100%	101%	85-112%
460-00-4	4-Bromofluorobenzene	105%	100%	83-118%

(a) Sample was not preserved to a pH < 2. Confirmation run beyond holdtime.
(b) Sample was not preserved to a pH < 2. Sample analyzed beyond hold time; reported results are considered minimum values.
(c) Result is from Run# 2
(d) Associated CCV outside of control limits high.
(e) Associated ICV, BS, CCV recovery outside control limits high, sample was ND.
(f) Associated CCV outside of control limits low.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

5

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

FA91890

Tetra Tech, Inc.

CHAIN OF CUSTODY NUMBER No. 1370 PAGE 1 OF 5

PROJECT NO: 112G08985	FACILITY: LC34	PROJECT MANAGER: MARK JENNET	PHONE NUMBER: 412 921 8622
SAMPLERS (SIGNATURE): JOHN FORRESTER		FIELD OPERATIONS LEADER: JAN FORRESTER	PHONE NUMBER: 304-780-1426
		CARRIER/WAYBILL NUMBER: COURIER	CITY, STATE: ORLANDO, FL

LABORATORY NAME AND CONTACT: SGS

ADDRESS:

STANDARD TAT ☑
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

	DATE YEAR 2021	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	CONTAINER TYPE PLASTIC (P) or GLASS (G): G	PRESERVATIVE USED: NA	TYPE OF ANALYSIS: VOCs 8260	COMMENTS
1	DEC 20	1720	LC34-DPT0597-008.0-20211220		6	10	GW	G	3			X	
2	DEC 21	0705	LC34-DPT0597-013.0-20211221		11	15							
3		0720	LC34-DPT0597-018.0-20211221		16	20							
4		0730	LC34-DPT0597-023.0-20211221		21	25							
5		0740	LC34-DPT0597-028.0-20211221		26	30							
6		0755	LC34-DPT0597-033.0-20211221		31	35							
7		0810	LC34-DPT0597-038.0-20211221		36	40							
8		0825	LC34-DPT0597-043.0-20211221		41	45							
9		0840	LC34-DPT0597-048.0-20211221		46	50							
10		0905	LC34-DPT0597-053.0-20211221		51	55							
11		0920	LC34-DPT0597-058.0-20211221		56	60							
12		0945	LC34-DPT0597-063.0-20211221		61	65							
13		1010	LC34-DPT0597-068.0-20211221		66	70	W	X	X	X			

INITIAL ASSESSMENT: SM

LABEL VERIFICATION:

2.0 CIR1
0.4C IR1

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	12/21/21	1430	1. RECEIVED BY		
2. RELINQUISHED BY	12/21/21	1800	2. RECEIVED BY	12/21/21	16:30
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

FA91890: Chain of Custody
Page 1 of 6

FA91890

Tetra Tech, Inc.

CHAIN OF CUSTODY NUMBER No. 1369 PAGE 2 OF 5

PROJECT NO: 112G08985	FACILITY: LC34	PROJECT MANAGER MARK JOHNSON	PHONE NUMBER 412 921 8622	LABORATORY NAME AND CONTACT: SGS
SAMPLERS (SIGNATURE) DAN FORESTER		FIELD OPERATIONS LEADER DAN FORESTER	PHONE NUMBER 304-780 1426	ADDRESS
		CARRIER/WAYBILL NUMBER COURIER		CITY, STATE ORLANDO FL

STANDARD TAT ☒ RUSH TAT ☐ ☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G

PRESERVATIVE USED: NA

	DATE YEAR	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS: VOCs 8260	COMMENTS
14	2021 DEC	1635	LC34-DPT0600-008.0-20211220		6	10	GW	G	3	X	
15		1655	LC34-DPT0600-013.0-20211220		11	15					
16		1705	LC34-DPT0600-018.0-20211220		16	20					
17	↓	1715	LC34-DPT0600-023.0-20211220		21	25					
18	21 DEC	0710	LC34-DPT0600-028.0-20211221		26	30					
19		0725	LC34-DPT0600-033.0-20211221		31	35					
20		0735	LC34-DPT0600-038.0-20211221		36	40					
21		0745	LC34-DPT0600-043.0-20211221		41	45					
22		0800	LC34-DPT0600-048.0-20211221		46	50					
23		0815	LC34-DPT0600-053.0-20211221		51	55					
24		0830	LC34-DPT0600-058.0-20211221		56	60					
25		0845	LC34-DPT0600-063.0-20211221		61	65					
26		0915	LC34-DPT0600-068.0-20211221		66	70					

1. RELINQUISHED BY	DATE 12/21/21	TIME 930	1. RECEIVED BY	DATE 12/21/21	TIME 16:20
2. RELINQUISHED BY	DATE 12/21/21	TIME 15:00	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R FORM NO. TtNUS-001

FA91890: Chain of Custody
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FA91890

Tetra Tech, Inc.

CHAIN OF CUSTODY NUMBER No. 1371 PAGE 3 OF 5

PROJECT NO: 112G-08985	FACILITY: LC34	PROJECT MANAGER MARK JONNET	PHONE NUMBER 412-921-8622	LABORATORY NAME AND CONTACT: SGS
SAMPLERS (SIGNATURE) DAN FORESTER		FIELD OPERATIONS LEADER DAN FORESTER	PHONE NUMBER 304-780-1426	ADDRESS
		CARRIER/WAYBILL NUMBER		CITY, STATE Orlando FL

STANDARD TAT ☒
RUSH TAT ☐ ☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G
PRESERVATIVE USED: None
TYPE OF ANALYSIS: VOCs 8260

	DATE YEAR	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	VOCs 8260	COMMENTS
27	2021	0945	LC34-DPT0680-073.0-20211221		71	75	GW	G	3	X	time 0935
28		1005	LC34-DPT0600-078.0-20211221		76	80					
29		1025	LC34-DPT0600-083.0-20211221		81	85					
30		1045	LC34-DPT0600-088.0-20211221		86	90					time 1055
31		1115	LC34-DPT0600-093.0-20211221		91	95					
32		1145	LC34-DPT0600-098.0-20211221		96	100					
33		1305	LC34-DPT0599-008.0-20211221		6	10					
34		1310	LC34-DPT0599-013.0-20211221		11	15					
35		1320	LC34-DPT0599-018.0-20211221		16	20					
36		1330	LC34-DPT0599-023.0-20211221		21	25					
37		1340	LC34-DPT0599-028.0-20211221		26	30					
38		1400	LC34-DPT0599-033.0-20211221		31	35					
39		1405	LC34-DPT0599-038.0-20211221		36	40					

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	12/21/21	1430	1. RECEIVED BY	12/21/21	1650
2. RELINQUISHED BY	12/21/21	1700	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY) 4/02R
FORM NO. TtNUS-001

FA91890

Tetra Tech, Inc.

CHAIN OF CUSTODY | NUMBER No. 1372 | PAGE 4B OF 5

PROJECT NO: 112G08985	FACILITY: LC34	PROJECT MANAGER MARK Jennet	PHONE NUMBER 412-921-8622	LABORATORY NAME AND CONTACT: SGS
SAMPLERS (SIGNATURE) DAN FORESTER		FIELD OPERATIONS LEADER DAN Forester	PHONE NUMBER 304-780-1426	ADDRESS
		CARRIER/WAYBILL NUMBER		CITY, STATE Orlando FL

STANDARD TAT ☒
RUSH TAT ☐ ☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

	DATE YEAR 2021	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	CONTAINER TYPE PLASTIC (P) or GLASS (G)	PRESERVATIVE USED	TYPE OF ANALYSIS VOCs 8260	None	COMMENTS
40	12/21	1045	LC34-DPT0597-073.0-20211221		71	75	GW	G	3	G		X		
41		1120	LC34-DPT0597-078.0-20211221		76	80								
42		1140	LC34-DPT0597-083.0-20211221		81	85								
43		1215	LC34-DPT0597-088.0-20211221		86	90								
44		1315	LC34-DPT0597-093.0-20211221		91	95								
45		1345	LC34-DPT0597-098.0-20211221		96	100								
46		1440	LC34-DPT0596-008.0-20211221		6	10								
47		1445	LC34-DPT0596-013.0-20211221		11	15								
48	1500	1600	LC34-DPT0596-018.0-20211221		16	20								time 1500
49		1510	LC34-DPT0596-023.0-20211221		21	25								
50		1520	LC34-DPT0596-028.0-20211221		26	30								
51		1540	LC34-DPT0596-033.0-20211221		~~26~~ 31	~~30~~ 35								
52		1555	LC34-DPT0596-038.0-20211221		~~31~~ 36	~~35~~ 40								

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	12/21/21	1930	1. RECEIVED BY	12/21/21	16:30
2. RELINQUISHED BY	12/21/21	18:00	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

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FA91890: Chain of Custody
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FA91890

Tetra Tech, Inc.

CHAIN OF CUSTODY NUMBER No. 1373 PAGE 5 OF 5

PROJECT NO: 112G-08985	FACILITY: LC34	PROJECT MANAGER MARK Jonnet	PHONE NUMBER 412-921-8622	LABORATORY NAME AND CONTACT: SGS	
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER Dan Forester	PHONE NUMBER 304-780-1426	ADDRESS Orlando FL	
		CARRIER/WAYBILL NUMBER		CITY, STATE	

STANDARD TAT ☒
RUSH TAT ☐ ☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

	DATE YEAR 2021	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	CONTAINER TYPE PLASTIC (P) or GLASS (G): G	PRESERVATIVE USED: None	TYPE OF ANALYSIS: VOCs 8260	COMMENTS
53	12/21	1415	LC34-DPT0599-043.0-20211221		41	45	GW	G	3			Y	
54		1430	LC34-DPT0599-048.0-20211221		46	50							
55		1445	LC34-DPT0599-053.0-20211221		51	55							
56		1455	LC34-DPT0599-058.0-20211221		56	60							
57		1515	LC34-DPT0599-063.0-20211221		61	65							
58		1525	LC34-DPT0599-068.0-20211221		66	70							
59		1550	LC34-DPT0599-073.0-20211221		71	75							

1. RELINQUISHED BY	DATE 12/21/21	TIME 1730	1. RECEIVED BY	DATE 12/21/21	TIME 16:30
2. RELINQUISHED BY	DATE 12/21/21	TIME 18:00	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

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FA91890: Chain of Custody
Page 5 of 6

SGS Sample Receipt Summary

Job Number: FA91890 **Client:** TETRA TECH **Project:** 112G08985

Date / Time Received: 12/21/2021 4:00:00 PM **Delivery Method:** COURIER **Airbill #'s:**

Therm ID: IR 1; **Therm CF:** 0.2; **# of Coolers:** 2

Cooler Temps (Raw Measured) °C: Cooler 1: (1.8); Cooler 2: (0.2);

Cooler Temps (Corrected) °C: Cooler 1: (2.0); Cooler 2: (0.4);

Cooler Information	Y	or	N
1. Custody Seals Present	☑		☐
2. Custody Seals Intact	☑		☐
3. Temp criteria achieved	☑		☐
4. Cooler temp verification	IR Gun		
5. Cooler media	Ice (Bag)		

Trip Blank Information	Y	or	N	N/A
1. Trip Blank present / cooler	☐		☑	☐
2. Trip Blank listed on COC	☐		☑	☐

	W	or	S	N/A
3. Type Of TB Received	☐		☐	☑

Sample Information	Y	or	N	N/A
1. Sample labels present on bottles	☑		☐	
2. Samples preserved properly	☑		☐	
3. Sufficient volume/containers recvd for analysis:	☑		☐	
4. Condition of sample	Intact			
5. Sample recvd within HT	☑		☐	
6. Dates/Times/IDs on COC match Sample Label	☑		☐	
7. VOCs have headspace	☑		☐	☐
8. Bottles received for unspecified tests	☐		☑	
9. Compositing instructions clear	☐		☐	☑
10. Voa Soil Kits/Jars received past 48hrs?	☐		☐	☑
11. % Solids Jar received?	☐		☐	☑
12. Residual Chlorine Present?	☐		☐	☑

Misc. Information

Number of Encores: 25-Gram _____ 5-Gram _____ Number of 5035 Field Kits: _____ Number of Lab Filtered Metals: _____

Test Strip Lot #s: pH 0-3 230315 pH 10-12 219813A Other: (Specify) _____ _____

Residual Chlorine Test Strip Lot #: _____

Comments SAMPLES #10, #11, AND #28 RECEIVED ONE 40ml VOA VIAL WITH HEADSPACE EACH
SAMPLES #25, #50, AND #58 RECEIVED TWO 40ml VOA VIALS WITH HEADSPACE EACH

SM001
Rev. Date 05/24/17

Technician: STEPHENP Date: 12/21/2021 4:00:00 P Reviewer: _____ Date: _____

MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: FA91890
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2P3359-MB [a]	2P84080.D	1	12/26/21	CV	n/a	n/a	V2P3359

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91890-1, FA91890-14, FA91890-15, FA91890-16, FA91890-17

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
71-43-2	Benzene	ND	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.24	ug/l	
75-25-2	Bromoform	ND	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	ND	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.67	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
110-82-7	Cyclohexane	ND	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.36	ug/l	
76-13-1	Freon 113	ND	1.0	0.48	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	ND	20	5.0	ug/l	
74-83-9	Methyl Bromide	ND	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	ND	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	ND	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.0	ug/l	

Method Blank Summary

Job Number: FA91890
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2P3359-MB [a]	2P84080.D	1	12/26/21	CV	n/a	n/a	V2P3359

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91890-1, FA91890-14, FA91890-15, FA91890-16, FA91890-17

CAS No.	Compound	Result	RL	MDL	Units	Q
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.23	ug/l	
100-42-5	Styrene	ND	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	99%	83-118%
17060-07-0	1,2-Dichloroethane-D4	95%	79-125%
2037-26-5	Toluene-D8	99%	85-112%
460-00-4	4-Bromofluorobenzene	107%	83-118%

(a) Sample was treated with an anti-foaming agent.

Method Blank Summary

Job Number: FA91890
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1P3366-MB	1P84177.D	1	12/28/21	CF	n/a	n/a	V1P3366

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91890-2, FA91890-3, FA91890-4, FA91890-5, FA91890-6, FA91890-7, FA91890-8, FA91890-9, FA91890-10, FA91890-11, FA91890-12, FA91890-13, FA91890-18, FA91890-19, FA91890-20, FA91890-21, FA91890-22, FA91890-23

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
71-43-2	Benzene	ND	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.24	ug/l	
75-25-2	Bromoform	ND	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	ND	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.67	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
110-82-7	Cyclohexane	ND	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.36	ug/l	
76-13-1	Freon 113	ND	1.0	0.48	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	ND	20	5.0	ug/l	
74-83-9	Methyl Bromide	ND	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	ND	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	ND	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.0	ug/l	

Method Blank Summary

Job Number: FA91890
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1P3366-MB	1P84177.D	1	12/28/21	CF	n/a	n/a	V1P3366

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91890-2, FA91890-3, FA91890-4, FA91890-5, FA91890-6, FA91890-7, FA91890-8, FA91890-9, FA91890-10, FA91890-11, FA91890-12, FA91890-13, FA91890-18, FA91890-19, FA91890-20, FA91890-21, FA91890-22, FA91890-23

CAS No.	Compound	Result	RL	MDL	Units	Q
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.23	ug/l	
100-42-5	Styrene	ND	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	100%	83-118%
17060-07-0	1,2-Dichloroethane-D4	106%	79-125%
2037-26-5	Toluene-D8	95%	85-112%
460-00-4	4-Bromofluorobenzene	100%	83-118%

Method Blank Summary

Job Number: FA91890
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2P3361-MB	2P84178.D	1	12/28/21	CF	n/a	n/a	V2P3361

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91890-24, FA91890-25, FA91890-26, FA91890-27, FA91890-28, FA91890-29, FA91890-30, FA91890-31, FA91890-32, FA91890-33, FA91890-34, FA91890-35, FA91890-36, FA91890-37, FA91890-38, FA91890-39, FA91890-40, FA91890-41

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
71-43-2	Benzene	ND	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.24	ug/l	
75-25-2	Bromoform	ND	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	ND	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.67	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
110-82-7	Cyclohexane	ND	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.36	ug/l	
76-13-1	Freon 113	ND	1.0	0.48	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	ND	20	5.0	ug/l	
74-83-9	Methyl Bromide	ND	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	ND	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	ND	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.0	ug/l	

Method Blank Summary

Job Number: FA91890
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2P3361-MB	2P84178.D	1	12/28/21	CF	n/a	n/a	V2P3361

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91890-24, FA91890-25, FA91890-26, FA91890-27, FA91890-28, FA91890-29, FA91890-30, FA91890-31, FA91890-32, FA91890-33, FA91890-34, FA91890-35, FA91890-36, FA91890-37, FA91890-38, FA91890-39, FA91890-40, FA91890-41

CAS No.	Compound	Result	RL	MDL	Units	Q
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.23	ug/l	
100-42-5	Styrene	ND	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	100%	83-118%
17060-07-0	1,2-Dichloroethane-D4	103%	79-125%
2037-26-5	Toluene-D8	97%	85-112%
460-00-4	4-Bromofluorobenzene	102%	83-118%

Method Blank Summary

Job Number: FA91890
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI2417-MB [a]	I73031.D	1	12/28/21	LR	n/a	n/a	VI2417

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91890-42, FA91890-43, FA91890-44, FA91890-45, FA91890-46

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
71-43-2	Benzene	ND	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.24	ug/l	
75-25-2	Bromoform	ND	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	ND	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.67	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
110-82-7	Cyclohexane	ND	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.36	ug/l	
76-13-1	Freon 113	ND	1.0	0.48	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	ND	20	5.0	ug/l	
74-83-9	Methyl Bromide	ND	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	ND	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	ND	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.0	ug/l	

Method Blank Summary

Job Number: FA91890
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI2417-MB [a]	I73031.D	1	12/28/21	LR	n/a	n/a	VI2417

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91890-42, FA91890-43, FA91890-44, FA91890-45, FA91890-46

CAS No.	Compound	Result	RL	MDL	Units	Q
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.23	ug/l	
100-42-5	Styrene	ND	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	100%	83-118%
17060-07-0	1,2-Dichloroethane-D4	112%	79-125%
2037-26-5	Toluene-D8	95%	85-112%
460-00-4	4-Bromofluorobenzene	99%	83-118%

(a) Sample was treated with an anti-foaming agent.

Method Blank Summary

Job Number: FA91890
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1668-MB	1A41098.D	1	01/04/22	CF	n/a	n/a	V1A1668

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91890-47, FA91890-48, FA91890-49, FA91890-50, FA91890-51, FA91890-52, FA91890-53, FA91890-54, FA91890-55, FA91890-56

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
71-43-2	Benzene	ND	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.24	ug/l	
75-25-2	Bromoform	ND	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	ND	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.67	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
110-82-7	Cyclohexane	ND	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.36	ug/l	
76-13-1	Freon 113	ND	1.0	0.48	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	ND	20	5.0	ug/l	
74-83-9	Methyl Bromide	ND	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	ND	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	ND	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.0	ug/l	

Method Blank Summary

Job Number: FA91890
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1668-MB	1A41098.D	1	01/04/22	CF	n/a	n/a	V1A1668

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91890-47, FA91890-48, FA91890-49, FA91890-50, FA91890-51, FA91890-52, FA91890-53, FA91890-54, FA91890-55, FA91890-56

CAS No.	Compound	Result	RL	MDL	Units	Q
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.23	ug/l	
100-42-5	Styrene	ND	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	99%	83-118%
17060-07-0	1,2-Dichloroethane-D4	100%	79-125%
2037-26-5	Toluene-D8	94%	85-112%
460-00-4	4-Bromofluorobenzene	99%	83-118%

Method Blank Summary

Job Number: FA91890
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1P3372-MB	1P84429.D	1	01/05/22	CF	n/a	n/a	V1P3372

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91890-57, FA91890-58, FA91890-59

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
71-43-2	Benzene	ND	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.24	ug/l	
75-25-2	Bromoform	ND	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	ND	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.67	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
110-82-7	Cyclohexane	ND	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.36	ug/l	
76-13-1	Freon 113	ND	1.0	0.48	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	ND	20	5.0	ug/l	
74-83-9	Methyl Bromide	ND	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	ND	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	ND	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.0	ug/l	

Method Blank Summary

Job Number: FA91890
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1P3372-MB	1P84429.D	1	01/05/22	CF	n/a	n/a	V1P3372

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91890-57, FA91890-58, FA91890-59

CAS No.	Compound	Result	RL	MDL	Units	Q
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.23	ug/l	
100-42-5	Styrene	ND	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	97%	83-118%
17060-07-0	1,2-Dichloroethane-D4	99%	79-125%
2037-26-5	Toluene-D8	101%	85-112%
460-00-4	4-Bromofluorobenzene	105%	83-118%

Method Blank Summary

Job Number: FA91890
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1P3376-MB	1P84513.D	1	01/07/22	CF	n/a	n/a	V1P3376

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91890-2, FA91890-3, FA91890-4, FA91890-5, FA91890-6, FA91890-7, FA91890-8

CAS No.	Compound	Result	RL	MDL	Units	Q
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.22	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.35	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	0.41	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	100%	83-118%
17060-07-0	1,2-Dichloroethane-D4	105%	79-125%
2037-26-5	Toluene-D8	101%	85-112%
460-00-4	4-Bromofluorobenzene	102%	83-118%

Method Blank Summary

Job Number: FA91890
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2P3369-MB	2P84514.D	1	01/07/22	CF	n/a	n/a	V2P3369

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91890-9, FA91890-10, FA91890-12, FA91890-13, FA91890-19, FA91890-20, FA91890-42, FA91890-44, FA91890-45, FA91890-46

CAS No.	Compound	Result	RL	MDL	Units	Q
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.22	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.35	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	0.41	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	102%	83-118%
17060-07-0	1,2-Dichloroethane-D4	99%	79-125%
2037-26-5	Toluene-D8	99%	85-112%
460-00-4	4-Bromofluorobenzene	103%	83-118%

Method Blank Summary

Job Number: FA91890
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1673-MB	1A41250.D	1	01/12/22	CV	n/a	n/a	V1A1673

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91890-1, FA91890-14, FA91890-15, FA91890-17

CAS No.	Compound	Result	RL	MDL	Units	Q
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.28	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.35	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	0.41	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	97%	83-118%
17060-07-0	1,2-Dichloroethane-D4	97%	79-125%
2037-26-5	Toluene-D8	99%	85-112%
460-00-4	4-Bromofluorobenzene	97%	83-118%

Method Blank Summary

Job Number: FA91890
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI2437-MB	I73431.D	1	01/12/22	LR	n/a	n/a	VI2437

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91890-56

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	1.0	0.35	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	95%	83-118%
17060-07-0	1,2-Dichloroethane-D4	100%	79-125%
2037-26-5	Toluene-D8	102%	85-112%
460-00-4	4-Bromofluorobenzene	100%	83-118%

Method Blank Summary

Job Number: FA91890
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VC6187-MB	C0153303.D	1	01/13/22	LV	n/a	n/a	VC6187

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91890-21, FA91890-22, FA91890-23

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	1.0	0.35	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	92%	83-118%
17060-07-0	1,2-Dichloroethane-D4	95%	79-125%
2037-26-5	Toluene-D8	105%	85-112%
460-00-4	4-Bromofluorobenzene	109%	83-118%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
124-38-9	Carbon dioxide	1.93	97	ug/l	JN
	Total TIC, Volatile		0	ug/l	

Method Blank Summary

Job Number: FA91890
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI2440-MB	I73485.D	1	01/13/22	LR	n/a	n/a	VI2440

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91890-16

CAS No.	Compound	Result	RL	MDL	Units	Q
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.28	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.35	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	93%	83-118%
17060-07-0	1,2-Dichloroethane-D4	100%	79-125%
2037-26-5	Toluene-D8	102%	85-112%
460-00-4	4-Bromofluorobenzene	101%	83-118%

Method Blank Summary

Job Number: FA91890
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VC6189-MB	C0153363.D	1	01/14/22	LV	n/a	n/a	VC6189

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91890-27, FA91890-29, FA91890-30, FA91890-31, FA91890-32, FA91890-34, FA91890-35, FA91890-36, FA91890-37, FA91890-38

CAS No.	Compound	Result	RL	MDL	Units	Q
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.22	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.35	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	0.41	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	93%	83-118%
17060-07-0	1,2-Dichloroethane-D4	92%	79-125%
2037-26-5	Toluene-D8	102%	85-112%
460-00-4	4-Bromofluorobenzene	108%	83-118%

Method Blank Summary

Job Number: FA91890
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI2443-MB	I73541.D	1	01/14/22	LR	n/a	n/a	VI2443

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91890-52

CAS No.	Compound	Result	RL	MDL	Units	Q
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.28	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	95%	83-118%
17060-07-0	1,2-Dichloroethane-D4	103%	79-125%
2037-26-5	Toluene-D8	102%	85-112%
460-00-4	4-Bromofluorobenzene	98%	83-118%

Blank Spike Summary

Job Number: FA91890
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2P3359-BS	2P84076.D	1	12/26/21	CV	n/a	n/a	V2P3359

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91890-1, FA91890-14, FA91890-15, FA91890-16, FA91890-17

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	126	101	50-147
71-43-2	Benzene	25	27.1	108	81-122
74-97-5	Bromochloromethane	25	22.7	91	76-123
75-27-4	Bromodichloromethane	25	25.2	101	79-123
75-25-2	Bromoform	25	23.2	93	66-123
78-93-3	2-Butanone (MEK)	125	132	106	56-143
75-15-0	Carbon Disulfide	25	26.0	104	66-148
56-23-5	Carbon Tetrachloride	25	25.2	101	76-136
108-90-7	Chlorobenzene	25	25.1	100	82-124
75-00-3	Chloroethane	25	26.2	105	62-144
67-66-3	Chloroform	25	24.9	100	80-124
110-82-7	Cyclohexane	25	28.1	112	73-138
124-48-1	Dibromochloromethane	25	23.4	94	78-122
96-12-8	1,2-Dibromo-3-chloropropane	25	24.9	100	64-123
106-93-4	1,2-Dibromoethane	25	25.2	101	75-120
75-71-8	Dichlorodifluoromethane	25	22.9	92	42-167
95-50-1	1,2-Dichlorobenzene	25	25.2	101	82-124
541-73-1	1,3-Dichlorobenzene	25	26.1	104	84-125
106-46-7	1,4-Dichlorobenzene	25	24.7	99	78-120
75-34-3	1,1-Dichloroethane	25	26.6	106	81-122
107-06-2	1,2-Dichloroethane	25	25.3	101	75-125
75-35-4	1,1-Dichloroethylene	25	26.8	107	78-137
156-59-2	cis-1,2-Dichloroethylene	25	25.8	103	78-120
156-60-5	trans-1,2-Dichloroethylene	25	28.1	112	76-127
78-87-5	1,2-Dichloropropane	25	27.0	108	76-124
10061-01-5	cis-1,3-Dichloropropene	25	26.2	105	75-118
10061-02-6	trans-1,3-Dichloropropene	25	25.5	102	80-120
100-41-4	Ethylbenzene	25	25.7	103	81-121
76-13-1	Freon 113	25	26.9	108	72-134
591-78-6	2-Hexanone	125	129	103	61-129
98-82-8	Isopropylbenzene	25	26.1	104	83-132
79-20-9	Methyl Acetate	125	120	96	65-126
74-83-9	Methyl Bromide	25	23.5	94	59-143
74-87-3	Methyl Chloride	25	27.0	108	50-159
75-09-2	Methylene Chloride	25	20.0	80	69-135
108-10-1	4-Methyl-2-pentanone (MIBK)	125	130	104	66-122

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA91890
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2P3359-BS	2P84076.D	1	12/26/21	CV	n/a	n/a	V2P3359

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91890-1, FA91890-14, FA91890-15, FA91890-16, FA91890-17

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
1634-04-4	Methyl Tert Butyl Ether	25	23.7	95	72-117
100-42-5	Styrene	25	25.6	102	78-119
630-20-6	1,1,1,2-Tetrachloroethane	25	26.1	104	77-122
79-34-5	1,1,2,2-Tetrachloroethane	25	25.7	103	72-120
127-18-4	Tetrachloroethylene	25	25.2	101	76-135
108-88-3	Toluene	25	25.7	103	80-120
87-61-6	1,2,3-Trichlorobenzene	25	25.4	102	68-131
120-82-1	1,2,4-Trichlorobenzene	25	25.4	102	73-129
71-55-6	1,1,1-Trichloroethane	25	25.0	100	75-130
79-00-5	1,1,2-Trichloroethane	25	25.8	103	76-119
75-69-4	Trichlorofluoromethane	25	26.1	104	71-156
75-01-4	Vinyl Chloride	25	26.3	105	69-159
1330-20-7	Xylene (total)	75	77.5	103	80-126

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	101%	83-118%
17060-07-0	1,2-Dichloroethane-D4	98%	79-125%
2037-26-5	Toluene-D8	99%	85-112%
460-00-4	4-Bromofluorobenzene	101%	83-118%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA91890
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI2417-BS	I73029.D	1	12/28/21	LR	n/a	n/a	VI2417

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91890-42, FA91890-43, FA91890-44, FA91890-45, FA91890-46

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	145	116	50-147
71-43-2	Benzene	25	25.5	102	81-122
74-97-5	Bromochloromethane	25	20.6	82	76-123
75-27-4	Bromodichloromethane	25	23.2	93	79-123
75-25-2	Bromoform	25	20.2	81	66-123
78-93-3	2-Butanone (MEK)	125	133	106	56-143
75-15-0	Carbon Disulfide	25	22.7	91	66-148
56-23-5	Carbon Tetrachloride	25	24.1	96	76-136
108-90-7	Chlorobenzene	25	23.2	93	82-124
75-00-3	Chloroethane	25	29.9	120	62-144
67-66-3	Chloroform	25	23.7	95	80-124
110-82-7	Cyclohexane	25	23.9	96	73-138
124-48-1	Dibromochloromethane	25	20.8	83	78-122
96-12-8	1,2-Dibromo-3-chloropropane	25	22.1	88	64-123
106-93-4	1,2-Dibromoethane	25	21.3	85	75-120
75-71-8	Dichlorodifluoromethane	25	21.2	85	42-167
95-50-1	1,2-Dichlorobenzene	25	22.7	91	82-124
541-73-1	1,3-Dichlorobenzene	25	23.2	93	84-125
106-46-7	1,4-Dichlorobenzene	25	22.2	89	78-120
75-34-3	1,1-Dichloroethane	25	25.8	103	81-122
107-06-2	1,2-Dichloroethane	25	26.0	104	75-125
75-35-4	1,1-Dichloroethylene	25	25.7	103	78-137
156-59-2	cis-1,2-Dichloroethylene	25	23.8	95	78-120
156-60-5	trans-1,2-Dichloroethylene	25	25.7	103	76-127
78-87-5	1,2-Dichloropropane	25	24.7	99	76-124
10061-01-5	cis-1,3-Dichloropropene	25	23.0	92	75-118
10061-02-6	trans-1,3-Dichloropropene	25	22.8	91	80-120
100-41-4	Ethylbenzene	25	24.1	96	81-121
76-13-1	Freon 113	25	24.6	98	72-134
591-78-6	2-Hexanone	125	131	105	61-129
98-82-8	Isopropylbenzene	25	23.7	95	83-132
79-20-9	Methyl Acetate	125	118	94	65-126
74-83-9	Methyl Bromide	25	19.4	78	59-143
74-87-3	Methyl Chloride	25	25.1	100	50-159
75-09-2	Methylene Chloride	25	24.0	96	69-135
108-10-1	4-Methyl-2-pentanone (MIBK)	125	130	104	66-122

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA91890
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI2417-BS	I73029.D	1	12/28/21	LR	n/a	n/a	VI2417

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91890-42, FA91890-43, FA91890-44, FA91890-45, FA91890-46

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
1634-04-4	Methyl Tert Butyl Ether	25	21.9	88	72-117
100-42-5	Styrene	25	22.1	88	78-119
630-20-6	1,1,1,2-Tetrachloroethane	25	23.1	92	77-122
79-34-5	1,1,2,2-Tetrachloroethane	25	23.2	93	72-120
127-18-4	Tetrachloroethylene	25	23.7	95	76-135
108-88-3	Toluene	25	23.3	93	80-120
87-61-6	1,2,3-Trichlorobenzene	25	21.7	87	68-131
120-82-1	1,2,4-Trichlorobenzene	25	21.0	84	73-129
71-55-6	1,1,1-Trichloroethane	25	24.4	98	75-130
79-00-5	1,1,2-Trichloroethane	25	23.4	94	76-119
79-01-6	Trichloroethylene	25	24.2	97	81-126
75-69-4	Trichlorofluoromethane	25	29.6	118	71-156
75-01-4	Vinyl Chloride	25	26.6	106	69-159
1330-20-7	Xylene (total)	75	70.9	95	80-126

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	103%	83-118%
17060-07-0	1,2-Dichloroethane-D4	107%	79-125%
2037-26-5	Toluene-D8	97%	85-112%
460-00-4	4-Bromofluorobenzene	97%	83-118%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA91890
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1P3366-BS	1P84215.D	1	12/28/21	CF	n/a	n/a	V1P3366

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91890-2, FA91890-3, FA91890-4, FA91890-5, FA91890-6, FA91890-7, FA91890-8, FA91890-9, FA91890-10, FA91890-11, FA91890-12, FA91890-13, FA91890-18, FA91890-19, FA91890-20, FA91890-21, FA91890-22, FA91890-23

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	130	104	50-147
71-43-2	Benzene	25	26.8	107	81-122
74-97-5	Bromochloromethane	25	23.3	93	76-123
75-27-4	Bromodichloromethane	25	27.2	109	79-123
75-25-2	Bromoform	25	22.6	90	66-123
78-93-3	2-Butanone (MEK)	125	124	99	56-143
75-15-0	Carbon Disulfide	25	22.2	89	66-148
56-23-5	Carbon Tetrachloride	25	27.0	108	76-136
108-90-7	Chlorobenzene	25	24.4	98	82-124
75-00-3	Chloroethane	25	31.3	125	62-144
67-66-3	Chloroform	25	25.8	103	80-124
110-82-7	Cyclohexane	25	25.0	100	73-138
124-48-1	Dibromochloromethane	25	24.2	97	78-122
96-12-8	1,2-Dibromo-3-chloropropane	25	22.9	92	64-123
106-93-4	1,2-Dibromoethane	25	24.7	99	75-120
75-71-8	Dichlorodifluoromethane	25	23.6	94	42-167
95-50-1	1,2-Dichlorobenzene	25	23.4	94	82-124
541-73-1	1,3-Dichlorobenzene	25	23.4	94	84-125
106-46-7	1,4-Dichlorobenzene	25	22.5	90	78-120
75-34-3	1,1-Dichloroethane	25	26.5	106	81-122
107-06-2	1,2-Dichloroethane	25	28.2	113	75-125
75-35-4	1,1-Dichloroethylene	25	26.7	107	78-137
156-59-2	cis-1,2-Dichloroethylene	25	26.1	104	78-120
156-60-5	trans-1,2-Dichloroethylene	25	26.9	108	76-127
78-87-5	1,2-Dichloropropane	25	26.0	104	76-124
10061-01-5	cis-1,3-Dichloropropene	25	26.6	106	75-118
10061-02-6	trans-1,3-Dichloropropene	25	25.4	102	80-120
100-41-4	Ethylbenzene	25	25.1	100	81-121
76-13-1	Freon 113	25	26.7	107	72-134
591-78-6	2-Hexanone	125	117	94	61-129
98-82-8	Isopropylbenzene	25	26.1	104	83-132
79-20-9	Methyl Acetate	125	112	90	65-126
74-83-9	Methyl Bromide	25	43.4	174*	59-143
74-87-3	Methyl Chloride	25	20.3	81	50-159
75-09-2	Methylene Chloride	25	22.0	88	69-135
108-10-1	4-Methyl-2-pentanone (MIBK)	125	117	94	66-122

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA91890
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1P3366-BS	1P84215.D	1	12/28/21	CF	n/a	n/a	V1P3366

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91890-2, FA91890-3, FA91890-4, FA91890-5, FA91890-6, FA91890-7, FA91890-8, FA91890-9, FA91890-10, FA91890-11, FA91890-12, FA91890-13, FA91890-18, FA91890-19, FA91890-20, FA91890-21, FA91890-22, FA91890-23

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
1634-04-4	Methyl Tert Butyl Ether	25	24.9	100	72-117
100-42-5	Styrene	25	26.4	106	78-119
630-20-6	1,1,1,2-Tetrachloroethane	25	25.4	102	77-122
79-34-5	1,1,2,2-Tetrachloroethane	25	23.0	92	72-120
127-18-4	Tetrachloroethylene	25	24.7	99	76-135
108-88-3	Toluene	25	24.9	100	80-120
87-61-6	1,2,3-Trichlorobenzene	25	23.7	95	68-131
120-82-1	1,2,4-Trichlorobenzene	25	23.2	93	73-129
71-55-6	1,1,1-Trichloroethane	25	26.8	107	75-130
79-00-5	1,1,2-Trichloroethane	25	24.3	97	76-119
79-01-6	Trichloroethylene	25	30.2	121	81-126
75-69-4	Trichlorofluoromethane	25	35.4	142	71-156
75-01-4	Vinyl Chloride	25	26.6	106	69-159
1330-20-7	Xylene (total)	75	76.7	102	80-126

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	106%	83-118%
17060-07-0	1,2-Dichloroethane-D4	113%	79-125%
2037-26-5	Toluene-D8	95%	85-112%
460-00-4	4-Bromofluorobenzene	99%	83-118%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA91890
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2P3361-BS	2P84216.D	1	12/28/21	CF	n/a	n/a	V2P3361

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91890-24, FA91890-25, FA91890-26, FA91890-27, FA91890-28, FA91890-29, FA91890-30, FA91890-31, FA91890-32, FA91890-33, FA91890-34, FA91890-35, FA91890-36, FA91890-37, FA91890-38, FA91890-39, FA91890-40, FA91890-41

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	119	95	50-147
71-43-2	Benzene	25	26.5	106	81-122
74-97-5	Bromochloromethane	25	24.0	96	76-123
75-27-4	Bromodichloromethane	25	25.2	101	79-123
75-25-2	Bromoform	25	22.3	89	66-123
78-93-3	2-Butanone (MEK)	125	116	93	56-143
75-15-0	Carbon Disulfide	25	22.7	91	66-148
56-23-5	Carbon Tetrachloride	25	27.6	110	76-136
108-90-7	Chlorobenzene	25	24.0	96	82-124
75-00-3	Chloroethane	25	30.9	124	62-144
67-66-3	Chloroform	25	25.6	102	80-124
110-82-7	Cyclohexane	25	23.7	95	73-138
124-48-1	Dibromochloromethane	25	22.5	90	78-122
96-12-8	1,2-Dibromo-3-chloropropane	25	20.7	83	64-123
106-93-4	1,2-Dibromoethane	25	23.4	94	75-120
75-71-8	Dichlorodifluoromethane	25	22.3	89	42-167
95-50-1	1,2-Dichlorobenzene	25	23.1	92	82-124
541-73-1	1,3-Dichlorobenzene	25	23.8	95	84-125
106-46-7	1,4-Dichlorobenzene	25	23.0	92	78-120
75-34-3	1,1-Dichloroethane	25	25.2	101	81-122
107-06-2	1,2-Dichloroethane	25	25.0	100	75-125
75-35-4	1,1-Dichloroethylene	25	25.6	102	78-137
156-59-2	cis-1,2-Dichloroethylene	25	25.7	103	78-120
156-60-5	trans-1,2-Dichloroethylene	25	24.8	99	76-127
78-87-5	1,2-Dichloropropane	25	24.3	97	76-124
10061-01-5	cis-1,3-Dichloropropene	25	24.1	96	75-118
10061-02-6	trans-1,3-Dichloropropene	25	21.9	88	80-120
100-41-4	Ethylbenzene	25	24.5	98	81-121
76-13-1	Freon 113	25	26.9	108	72-134
591-78-6	2-Hexanone	125	108	86	61-129
98-82-8	Isopropylbenzene	25	24.9	100	83-132
79-20-9	Methyl Acetate	125	101	81	65-126
74-83-9	Methyl Bromide	25	21.5	86	59-143
74-87-3	Methyl Chloride	25	21.6	86	50-159
75-09-2	Methylene Chloride	25	19.0	76	69-135
108-10-1	4-Methyl-2-pentanone (MIBK)	125	108	86	66-122

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA91890
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2P3361-BS	2P84216.D	1	12/28/21	CF	n/a	n/a	V2P3361

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91890-24, FA91890-25, FA91890-26, FA91890-27, FA91890-28, FA91890-29, FA91890-30, FA91890-31, FA91890-32, FA91890-33, FA91890-34, FA91890-35, FA91890-36, FA91890-37, FA91890-38, FA91890-39, FA91890-40, FA91890-41

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
1634-04-4	Methyl Tert Butyl Ether	25	23.2	93	72-117
100-42-5	Styrene	25	24.2	97	78-119
630-20-6	1,1,1,2-Tetrachloroethane	25	24.8	99	77-122
79-34-5	1,1,2,2-Tetrachloroethane	25	20.9	84	72-120
127-18-4	Tetrachloroethylene	25	26.6	106	76-135
108-88-3	Toluene	25	24.3	97	80-120
87-61-6	1,2,3-Trichlorobenzene	25	23.6	94	68-131
120-82-1	1,2,4-Trichlorobenzene	25	23.7	95	73-129
71-55-6	1,1,1-Trichloroethane	25	25.9	104	75-130
79-00-5	1,1,2-Trichloroethane	25	22.8	91	76-119
79-01-6	Trichloroethylene	25	28.0	112	81-126
75-69-4	Trichlorofluoromethane	25	31.9	128	71-156
75-01-4	Vinyl Chloride	25	23.6	94	69-159
1330-20-7	Xylene (total)	75	73.9	99	80-126

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	104%	83-118%
17060-07-0	1,2-Dichloroethane-D4	98%	79-125%
2037-26-5	Toluene-D8	94%	85-112%
460-00-4	4-Bromofluorobenzene	102%	83-118%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA91890
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1668-BS	1A41096.D	1	01/04/22	CF	n/a	n/a	V1A1668

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91890-47, FA91890-48, FA91890-49, FA91890-50, FA91890-51, FA91890-52, FA91890-53, FA91890-54, FA91890-55, FA91890-56

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	110	88	50-147
71-43-2	Benzene	25	28.0	112	81-122
74-97-5	Bromochloromethane	25	24.7	99	76-123
75-27-4	Bromodichloromethane	25	25.9	104	79-123
75-25-2	Bromoform	25	23.1	92	66-123
78-93-3	2-Butanone (MEK)	125	107	86	56-143
75-15-0	Carbon Disulfide	25	27.9	112	66-148
56-23-5	Carbon Tetrachloride	25	27.4	110	76-136
108-90-7	Chlorobenzene	25	23.3	93	82-124
75-00-3	Chloroethane	25	21.9	88	62-144
67-66-3	Chloroform	25	25.4	102	80-124
110-82-7	Cyclohexane	25	27.9	112	73-138
124-48-1	Dibromochloromethane	25	23.0	92	78-122
96-12-8	1,2-Dibromo-3-chloropropane	25	22.8	91	64-123
106-93-4	1,2-Dibromoethane	25	23.6	94	75-120
75-71-8	Dichlorodifluoromethane	25	19.6	78	42-167
95-50-1	1,2-Dichlorobenzene	25	22.3	89	82-124
541-73-1	1,3-Dichlorobenzene	25	23.1	92	84-125
106-46-7	1,4-Dichlorobenzene	25	22.2	89	78-120
75-34-3	1,1-Dichloroethane	25	27.6	110	81-122
107-06-2	1,2-Dichloroethane	25	25.7	103	75-125
75-35-4	1,1-Dichloroethylene	25	29.3	117	78-137
156-59-2	cis-1,2-Dichloroethylene	25	26.0	104	78-120
156-60-5	trans-1,2-Dichloroethylene	25	27.4	110	76-127
78-87-5	1,2-Dichloropropane	25	26.0	104	76-124
10061-01-5	cis-1,3-Dichloropropene	25	27.4	110	75-118
10061-02-6	trans-1,3-Dichloropropene	25	25.8	103	80-120
100-41-4	Ethylbenzene	25	24.3	97	81-121
76-13-1	Freon 113	25	29.6	118	72-134
591-78-6	2-Hexanone	125	106	85	61-129
98-82-8	Isopropylbenzene	25	25.0	100	83-132
79-20-9	Methyl Acetate	125	113	90	65-126
74-83-9	Methyl Bromide	25	24.4	98	59-143
74-87-3	Methyl Chloride	25	20.1	80	50-159
75-09-2	Methylene Chloride	25	22.2	89	69-135
108-10-1	4-Methyl-2-pentanone (MIBK)	125	102	82	66-122

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA91890
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1668-BS	1A41096.D	1	01/04/22	CF	n/a	n/a	V1A1668

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91890-47, FA91890-48, FA91890-49, FA91890-50, FA91890-51, FA91890-52, FA91890-53, FA91890-54, FA91890-55, FA91890-56

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
1634-04-4	Methyl Tert Butyl Ether	25	24.8	99	72-117
100-42-5	Styrene	25	24.8	99	78-119
630-20-6	1,1,1,2-Tetrachloroethane	25	25.5	102	77-122
79-34-5	1,1,2,2-Tetrachloroethane	25	22.6	90	72-120
127-18-4	Tetrachloroethylene	25	23.9	96	76-135
108-88-3	Toluene	25	24.3	97	80-120
87-61-6	1,2,3-Trichlorobenzene	25	23.2	93	68-131
120-82-1	1,2,4-Trichlorobenzene	25	23.3	93	73-129
71-55-6	1,1,1-Trichloroethane	25	26.7	107	75-130
79-00-5	1,1,2-Trichloroethane	25	23.1	92	76-119
79-01-6	Trichloroethylene	25	25.7	103	81-126
75-69-4	Trichlorofluoromethane	25	25.7	103	71-156
75-01-4	Vinyl Chloride	25	25.3	101	69-159
1330-20-7	Xylene (total)	75	73.5	98	80-126

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	102%	83-118%
17060-07-0	1,2-Dichloroethane-D4	105%	79-125%
2037-26-5	Toluene-D8	96%	85-112%
460-00-4	4-Bromofluorobenzene	100%	83-118%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA91890
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1P3372-BS	1P84425.D	1	01/05/22	CF	n/a	n/a	V1P3372

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91890-57, FA91890-58, FA91890-59

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	116	93	50-147
71-43-2	Benzene	25	23.7	95	81-122
74-97-5	Bromochloromethane	25	21.4	86	76-123
75-27-4	Bromodichloromethane	25	23.9	96	79-123
75-25-2	Bromoform	25	24.8	99	66-123
78-93-3	2-Butanone (MEK)	125	109	87	56-143
75-15-0	Carbon Disulfide	25	21.0	84	66-148
56-23-5	Carbon Tetrachloride	25	24.9	100	76-136
108-90-7	Chlorobenzene	25	24.6	98	82-124
75-00-3	Chloroethane	25	25.5	102	62-144
67-66-3	Chloroform	25	22.7	91	80-124
110-82-7	Cyclohexane	25	21.7	87	73-138
124-48-1	Dibromochloromethane	25	25.1	100	78-122
96-12-8	1,2-Dibromo-3-chloropropane	25	24.0	96	64-123
106-93-4	1,2-Dibromoethane	25	24.4	98	75-120
75-71-8	Dichlorodifluoromethane	25	18.0	72	42-167
95-50-1	1,2-Dichlorobenzene	25	24.5	98	82-124
541-73-1	1,3-Dichlorobenzene	25	25.7	103	84-125
106-46-7	1,4-Dichlorobenzene	25	24.5	98	78-120
75-34-3	1,1-Dichloroethane	25	23.0	92	81-122
107-06-2	1,2-Dichloroethane	25	23.4	94	75-125
75-35-4	1,1-Dichloroethylene	25	23.5	94	78-137
156-59-2	cis-1,2-Dichloroethylene	25	23.0	92	78-120
156-60-5	trans-1,2-Dichloroethylene	25	22.8	91	76-127
78-87-5	1,2-Dichloropropane	25	21.8	87	76-124
10061-01-5	cis-1,3-Dichloropropene	25	24.1	96	75-118
10061-02-6	trans-1,3-Dichloropropene	25	24.9	100	80-120
100-41-4	Ethylbenzene	25	25.1	100	81-121
76-13-1	Freon 113	25	23.6	94	72-134
591-78-6	2-Hexanone	125	118	94	61-129
98-82-8	Isopropylbenzene	25	25.7	103	83-132
79-20-9	Methyl Acetate	125	97.6	78	65-126
74-83-9	Methyl Bromide	25	42.2	169*	59-143
74-87-3	Methyl Chloride	25	14.2	57	50-159
75-09-2	Methylene Chloride	25	18.4	74	69-135
108-10-1	4-Methyl-2-pentanone (MIBK)	125	116	93	66-122

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA91890
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1P3372-BS	1P84425.D	1	01/05/22	CF	n/a	n/a	V1P3372

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91890-57, FA91890-58, FA91890-59

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
1634-04-4	Methyl Tert Butyl Ether	25	21.7	87	72-117
100-42-5	Styrene	25	26.0	104	78-119
630-20-6	1,1,1,2-Tetrachloroethane	25	26.1	104	77-122
79-34-5	1,1,2,2-Tetrachloroethane	25	23.3	93	72-120
127-18-4	Tetrachloroethylene	25	25.1	100	76-135
108-88-3	Toluene	25	24.5	98	80-120
87-61-6	1,2,3-Trichlorobenzene	25	26.8	107	68-131
120-82-1	1,2,4-Trichlorobenzene	25	25.3	101	73-129
71-55-6	1,1,1-Trichloroethane	25	23.6	94	75-130
79-00-5	1,1,2-Trichloroethane	25	23.6	94	76-119
79-01-6	Trichloroethylene	25	23.7	95	81-126
75-69-4	Trichlorofluoromethane	25	27.8	111	71-156
75-01-4	Vinyl Chloride	25	22.2	89	69-159
1330-20-7	Xylene (total)	75	75.3	100	80-126

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	101%	83-118%
17060-07-0	1,2-Dichloroethane-D4	103%	79-125%
2037-26-5	Toluene-D8	101%	85-112%
460-00-4	4-Bromofluorobenzene	102%	83-118%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA91890
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1P3376-BS	1P84509.D	1	01/07/22	CF	n/a	n/a	V1P3376

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91890-2, FA91890-3, FA91890-4, FA91890-5, FA91890-6, FA91890-7, FA91890-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
156-59-2	cis-1,2-Dichloroethylene	25	21.3	85	78-120
156-60-5	trans-1,2-Dichloroethylene	25	20.2	81	76-127
79-01-6	Trichloroethylene	25	22.6	90	81-126
75-01-4	Vinyl Chloride	25	20.6	82	69-159

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	103%	83-118%
17060-07-0	1,2-Dichloroethane-D4	100%	79-125%
2037-26-5	Toluene-D8	98%	85-112%
460-00-4	4-Bromofluorobenzene	103%	83-118%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA91890
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2P3369-BS	2P84510.D	1	01/07/22	CF	n/a	n/a	V2P3369

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91890-9, FA91890-10, FA91890-12, FA91890-13, FA91890-19, FA91890-20, FA91890-42, FA91890-44, FA91890-45, FA91890-46

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
156-59-2	cis-1,2-Dichloroethylene	25	22.9	92	78-120
156-60-5	trans-1,2-Dichloroethylene	25	21.4	86	76-127
79-01-6	Trichloroethylene	25	22.8	91	81-126
75-01-4	Vinyl Chloride	25	22.1	88	69-159

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	102%	83-118%
17060-07-0	1,2-Dichloroethane-D4	101%	79-125%
2037-26-5	Toluene-D8	98%	85-112%
460-00-4	4-Bromofluorobenzene	100%	83-118%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA91890
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1673-BS	1A41246.D	1	01/12/22	CV	n/a	n/a	V1A1673

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91890-1, FA91890-14, FA91890-15, FA91890-17

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
156-59-2	cis-1,2-Dichloroethylene	25	21.7	87	78-120
79-01-6	Trichloroethylene	25	22.5	90	81-126
75-01-4	Vinyl Chloride	25	25.8	103	69-159

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	99%	83-118%
17060-07-0	1,2-Dichloroethane-D4	95%	79-125%
2037-26-5	Toluene-D8	100%	85-112%
460-00-4	4-Bromofluorobenzene	101%	83-118%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA91890
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI2437-BS	I73429.D	1	01/12/22	LR	n/a	n/a	VI2437

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91890-56

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
79-01-6	Trichloroethylene	25	24.4	98	81-126

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	98%	83-118%
17060-07-0	1,2-Dichloroethane-D4	99%	79-125%
2037-26-5	Toluene-D8	103%	85-112%
460-00-4	4-Bromofluorobenzene	101%	83-118%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA91890
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VC6187-BS	C0153300.D	1	01/12/22	LV	n/a	n/a	VC6187

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91890-21, FA91890-22, FA91890-23

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
79-01-6	Trichloroethylene	25	23.9	96	81-126

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	92%	83-118%
17060-07-0	1,2-Dichloroethane-D4	96%	79-125%
2037-26-5	Toluene-D8	103%	85-112%
460-00-4	4-Bromofluorobenzene	107%	83-118%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA91890
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI2440-BS	I73483.D	1	01/13/22	LR	n/a	n/a	VI2440

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91890-16

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
156-59-2	cis-1,2-Dichloroethylene	25	23.5	94	78-120
79-01-6	Trichloroethylene	25	23.4	94	81-126

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	96%	83-118%
17060-07-0	1,2-Dichloroethane-D4	98%	79-125%
2037-26-5	Toluene-D8	104%	85-112%
460-00-4	4-Bromofluorobenzene	103%	83-118%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA91890
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VC6189-BS	C0153360.D	1	01/13/22	LV	n/a	n/a	VC6189

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91890-27, FA91890-29, FA91890-30, FA91890-31, FA91890-32, FA91890-34, FA91890-35, FA91890-36, FA91890-37, FA91890-38

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
156-59-2	cis-1,2-Dichloroethylene	25	25.2	101	78-120
156-60-5	trans-1,2-Dichloroethylene	25	25.5	102	76-127
79-01-6	Trichloroethylene	25	26.2	105	81-126
75-01-4	Vinyl Chloride	25	28.0	112	69-159

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	96%	83-118%
17060-07-0	1,2-Dichloroethane-D4	97%	79-125%
2037-26-5	Toluene-D8	103%	85-112%
460-00-4	4-Bromofluorobenzene	108%	83-118%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA91890
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI2443-BS	I73539.D	1	01/14/22	LR	n/a	n/a	VI2443

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91890-52

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
156-59-2	cis-1,2-Dichloroethylene	25	24.3	97	78-120

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	98%	83-118%
17060-07-0	1,2-Dichloroethane-D4	99%	79-125%
2037-26-5	Toluene-D8	102%	85-112%
460-00-4	4-Bromofluorobenzene	99%	83-118%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA91890
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA91689-1MS	2P84114.D	5	12/27/21	CV	n/a	n/a	V2P3359
FA91689-1MSD	2P84116.D	5	12/27/21	CV	n/a	n/a	V2P3359
FA91689-1	2P84092.D	1	12/26/21	CV	n/a	n/a	V2P3359

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91890-1, FA91890-14, FA91890-15, FA91890-16, FA91890-17

CAS No.	Compound	FA91689-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	25	U	625	619	99	625	634	101	2	50-147/21
71-43-2	Benzene	1.0	U	125	131	105	125	132	106	1	81-122/14
74-97-5	Bromochloromethane	1.0	U	125	113	90	125	119	95	5	76-123/14
75-27-4	Bromodichloromethane	1.0	U	125	122	98	125	125	100	2	79-123/19
75-25-2	Bromoform	1.0	U	125	105	84	125	108	86	3	66-123/21
78-93-3	2-Butanone (MEK)	5.0	U	625	616	99	625	630	101	2	56-143/18
75-15-0	Carbon Disulfide	2.0	U	125	113	90	125	118	94	4	66-148/23
56-23-5	Carbon Tetrachloride	1.0	U	125	133	106	125	134	107	1	76-136/23
108-90-7	Chlorobenzene	1.0	U	125	120	96	125	120	96	0	82-124/14
75-00-3	Chloroethane	2.0	U	125	149	119	125	147	118	1	62-144/20
67-66-3	Chloroform	1.0	U	125	124	99	125	124	99	0	80-124/15
110-82-7	Cyclohexane	1.0	U	125	123	98	125	127	102	3	73-138/18
124-48-1	Dibromochloromethane	1.0	U	125	109	87	125	111	89	2	78-122/19
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U	125	111	89	125	109	87	2	64-123/18
106-93-4	1,2-Dibromoethane	2.0	U	125	116	93	125	120	96	3	75-120/13
75-71-8	Dichlorodifluoromethane	2.0	U	125	115	92	125	122	98	6	42-167/19
95-50-1	1,2-Dichlorobenzene	1.0	U	125	117	94	125	119	95	2	82-124/14
541-73-1	1,3-Dichlorobenzene	1.0	U	125	122	98	125	121	97	1	84-125/14
106-46-7	1,4-Dichlorobenzene	1.0	U	125	115	92	125	117	94	2	78-120/15
75-34-3	1,1-Dichloroethane	1.0	U	125	128	102	125	127	102	1	81-122/15
107-06-2	1,2-Dichloroethane	1.0	U	125	126	101	125	122	98	3	75-125/14
75-35-4	1,1-Dichloroethylene	1.0	U	125	132	106	125	130	104	2	78-137/18
156-59-2	cis-1,2-Dichloroethylene	2.2		125	128	101	125	128	101	0	78-120/15
156-60-5	trans-1,2-Dichloroethylene	1.0	U	125	128	102	125	127	102	1	76-127/17
78-87-5	1,2-Dichloropropane	1.0	U	125	122	98	125	127	102	4	76-124/14
10061-01-5	cis-1,3-Dichloropropene	1.0	U	125	115	92	125	117	94	2	75-118/23
10061-02-6	trans-1,3-Dichloropropene	1.0	U	125	111	89	125	113	90	2	80-120/22
100-41-4	Ethylbenzene	1.0	U	125	121	97	125	120	96	1	81-121/14
76-13-1	Freon 113	1.0	U	125	133	106	125	129	103	3	72-134/20
591-78-6	2-Hexanone	10	U	625	587	94	625	596	95	2	61-129/18
98-82-8	Isopropylbenzene	1.0	U	125	122	98	125	121	97	1	83-132/15
79-20-9	Methyl Acetate	20	U	625	528	84	625	539	86	2	65-126/18
74-83-9	Methyl Bromide	5.0	U	125	97.4	78	125	114	91	16	59-143/19
74-87-3	Methyl Chloride	2.0	U	125	119	95	125	121	97	2	50-159/19
75-09-2	Methylene Chloride	5.0	U	125	98.5	79	125	98.4	79	0	69-135/16
108-10-1	4-Methyl-2-pentanone (MIBK)	5.0	U	625	576	92	625	582	93	1	66-122/16

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA91890
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA91689-1MS	2P84114.D	5	12/27/21	CV	n/a	n/a	V2P3359
FA91689-1MSD	2P84116.D	5	12/27/21	CV	n/a	n/a	V2P3359
FA91689-1	2P84092.D	1	12/26/21	CV	n/a	n/a	V2P3359

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91890-1, FA91890-14, FA91890-15, FA91890-16, FA91890-17

CAS No.	Compound	FA91689-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
1634-04-4	Methyl Tert Butyl Ether	1.0 U		125	116	93	125	118	94	2	72-117/14
100-42-5	Styrene	1.0 U		125	118	94	125	120	96	2	78-119/23
630-20-6	1,1,1,2-Tetrachloroethane	1.0 U		125	127	102	125	126	101	1	77-122/19
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U		125	116	93	125	115	92	1	72-120/14
127-18-4	Tetrachloroethylene	1.0 U		125	116	93	125	120	96	3	76-135/16
108-88-3	Toluene	1.0 U		125	121	97	125	121	97	0	80-120/14
87-61-6	1,2,3-Trichlorobenzene	2.0 U		125	117	94	125	118	94	1	68-131/25
120-82-1	1,2,4-Trichlorobenzene	2.0 U		125	117	94	125	116	93	1	73-129/20
71-55-6	1,1,1-Trichloroethane	1.0 U		125	129	103	125	129	103	0	75-130/16
79-00-5	1,1,2-Trichloroethane	1.0 U		125	117	94	125	118	94	1	76-119/14
75-69-4	Trichlorofluoromethane	2.0 U		125	138	110	125	139	111	1	71-156/21
75-01-4	Vinyl Chloride	1.0 U		125	118	94	125	125	100	6	69-159/18
1330-20-7	Xylene (total)	3.0 U		375	367	98	375	365	97	1	80-126/15

CAS No.	Surrogate Recoveries	MS	MSD	FA91689-1	Limits
1868-53-7	Dibromofluoromethane	103%	103%	101%	83-118%
17060-07-0	1,2-Dichloroethane-D4	101%	99%	100%	79-125%
2037-26-5	Toluene-D8	96%	95%	97%	85-112%
460-00-4	4-Bromofluorobenzene	101%	101%	100%	83-118%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA91890
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA91974-15MS	I73052.D	50000	12/28/21	LR	n/a	n/a	VI2417
FA91974-15MSD	I73053.D	50000	12/28/21	LR	n/a	n/a	VI2417
FA91974-15 [a]	I73049.D	50000	12/28/21	LR	n/a	n/a	VI2417

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91890-42, FA91890-43, FA91890-44, FA91890-45, FA91890-46

CAS No.	Compound	FA91974-15 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	1300000 U		6250000	7010000	112	6250000	7280000	116	4	50-147/21
71-43-2	Benzene	50000 U		1250000	1310000	105	1250000	1340000	107	2	81-122/14
74-97-5	Bromochloromethane	50000 U		1250000	1050000	84	1250000	1060000	85	1	76-123/14
75-27-4	Bromodichloromethane	50000 U		1250000	1150000	92	1250000	1190000	95	3	79-123/19
75-25-2	Bromoform	50000 U		1250000	953000	76	1250000	981000	78	3	66-123/21
78-93-3	2-Butanone (MEK)	250000 U		6250000	6570000	105	6250000	6640000	106	1	56-143/18
75-15-0	Carbon Disulfide	100000 U		1250000	1020000	82	1250000	1090000	87	7	66-148/23
56-23-5	Carbon Tetrachloride	50000 U		1250000	1180000	94	1250000	1250000	100	6	76-136/23
108-90-7	Chlorobenzene	50000 U		1250000	1140000	91	1250000	1160000	93	2	82-124/14
75-00-3	Chloroethane	100000 U		1250000	1610000	129	1250000	1710000	137	6	62-144/20
67-66-3	Chloroform	50000 U		1250000	1200000	96	1250000	1280000	102	6	80-124/15
110-82-7	Cyclohexane	50000 U		1250000	1120000	90	1250000	1180000	94	5	73-138/18
124-48-1	Dibromochloromethane	50000 U		1250000	1000000	80	1250000	1030000	82	3	78-122/19
96-12-8	1,2-Dibromo-3-chloropropane	250000 U		1250000	995000	80	1250000	1010000	81	1	64-123/18
106-93-4	1,2-Dibromoethane	100000 U		1250000	1010000	81	1250000	1040000	83	3	75-120/13
75-71-8	Dichlorodifluoromethane	100000 U		1250000	1010000	81	1250000	1080000	86	7	42-167/19
95-50-1	1,2-Dichlorobenzene	50000 U		1250000	1090000	87	1250000	1110000	89	2	82-124/14
541-73-1	1,3-Dichlorobenzene	50000 U		1250000	1110000	89	1250000	1140000	91	3	84-125/14
106-46-7	1,4-Dichlorobenzene	50000 U		1250000	1100000	88	1250000	1120000	90	2	78-120/15
75-34-3	1,1-Dichloroethane	50000 U		1250000	1290000	103	1250000	1320000	106	2	81-122/15
107-06-2	1,2-Dichloroethane	50000 U		1250000	1340000	107	1250000	1360000	109	1	75-125/14
75-35-4	1,1-Dichloroethylene	50000 U		1250000	1210000	97	1250000	1280000	102	6	78-137/18
156-59-2	cis-1,2-Dichloroethylene	255000		1250000	1450000	96	1250000	1500000	100	3	78-120/15
156-60-5	trans-1,2-Dichloroethylene	50000 U		1250000	1250000	100	1250000	1290000	103	3	76-127/17
78-87-5	1,2-Dichloropropane	50000 U		1250000	1200000	96	1250000	1250000	100	4	76-124/14
10061-01-5	cis-1,3-Dichloropropene	50000 U		1250000	1100000	88	1250000	1140000	91	4	75-118/23
10061-02-6	trans-1,3-Dichloropropene	50000 U		1250000	1050000	84	1250000	1100000	88	5	80-120/22
100-41-4	Ethylbenzene	50000 U		1250000	1160000	93	1250000	1190000	95	3	81-121/14
76-13-1	Freon 113	50000 U		1250000	1220000	98	1250000	1250000	100	2	72-134/20
591-78-6	2-Hexanone	500000 U		6250000	6260000	100	6250000	6430000	103	3	61-129/18
98-82-8	Isopropylbenzene	50000 U		1250000	1080000	86	1250000	1130000	90	5	83-132/15
79-20-9	Methyl Acetate	1000000 U		6250000	5820000	93	6250000	5960000	95	2	65-126/18
74-83-9	Methyl Bromide	250000 UJ	J	1250000	628000	50*	1250000	854000	68	30*	59-143/19
74-87-3	Methyl Chloride	100000 U		1250000	1240000	99	1250000	1320000	106	6	50-159/19
75-09-2	Methylene Chloride	250000 U		1250000	1250000	100	1250000	1270000	102	2	69-135/16
108-10-1	4-Methyl-2-pentanone (MIBK)	250000 U		6250000	6290000	101	6250000	6470000	104	3	66-122/16

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA91890
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA91974-15MS	I73052.D	50000	12/28/21	LR	n/a	n/a	VI2417
FA91974-15MSD	I73053.D	50000	12/28/21	LR	n/a	n/a	VI2417
FA91974-15 [a]	I73049.D	50000	12/28/21	LR	n/a	n/a	VI2417

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91890-42, FA91890-43, FA91890-44, FA91890-45, FA91890-46

CAS No.	Compound	FA91974-15 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
1634-04-4	Methyl Tert Butyl Ether	50000 U		1250000	1030000	82	1250000	1080000	86	5	72-117/14
100-42-5	Styrene	50000 U		1250000	1030000	82	1250000	1070000	86	4	78-119/23
630-20-6	1,1,1,2-Tetrachloroethane	50000 U		1250000	1110000	89	1250000	1150000	92	4	77-122/19
79-34-5	1,1,2,2-Tetrachloroethane	50000 U		1250000	1130000	90	1250000	1150000	92	2	72-120/14
127-18-4	Tetrachloroethylene	50000 U		1250000	1200000	96	1250000	1250000	100	4	76-135/16
108-88-3	Toluene	50000 U		1250000	1100000	88	1250000	1150000	92	4	80-120/14
87-61-6	1,2,3-Trichlorobenzene	100000 U		1250000	992000	79	1250000	1030000	82	4	68-131/25
120-82-1	1,2,4-Trichlorobenzene	100000 U		1250000	932000	75	1250000	984000	79	5	73-129/20
71-55-6	1,1,1-Trichloroethane	50000 U		1250000	1210000	97	1250000	1260000	101	4	75-130/16
79-00-5	1,1,2-Trichloroethane	50000 U		1250000	1140000	91	1250000	1190000	95	4	76-119/14
79-01-6	Trichloroethylene	2030000		1250000	3100000	86	1250000	3160000	90	2	81-126/15
75-69-4	Trichlorofluoromethane	100000 U		1250000	1510000	121	1250000	1560000	125	3	71-156/21
75-01-4	Vinyl Chloride	26800	I	1250000	1250000	98	1250000	1360000	107	8	69-159/18
1330-20-7	Xylene (total)	150000 U		3750000	3370000	90	3750000	3470000	93	3	80-126/15

CAS No.	Surrogate Recoveries	MS	MSD	FA91974-15	Limits
1868-53-7	Dibromofluoromethane	106%	106%	104%	83-118%
17060-07-0	1,2-Dichloroethane-D4	114%	111%	118%	79-125%
2037-26-5	Toluene-D8	93%	94%	94%	85-112%
460-00-4	4-Bromofluorobenzene	92%	93%	92%	83-118%

(a) Sample was not preserved to a pH < 2.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA91890
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA91890-23MS	1P84217.D	200	12/28/21	CF	n/a	n/a	V1P3366
FA91890-23MSD	1P84219.D	200	12/28/21	CF	n/a	n/a	V1P3366
FA91890-23 [a]	1P84213.D	200	12/28/21	CF	n/a	n/a	V1P3366

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91890-2, FA91890-3, FA91890-4, FA91890-5, FA91890-6, FA91890-7, FA91890-8, FA91890-9, FA91890-10, FA91890-11, FA91890-12, FA91890-13, FA91890-18, FA91890-19, FA91890-20, FA91890-21, FA91890-22, FA91890-23

CAS No.	Compound	FA91890-23 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	5000 U		25000	24900	100	25000	27800	111	11	50-147/21
71-43-2	Benzene	200 U		5000	5610	112	5000	5270	105	6	81-122/14
74-97-5	Bromochloromethane	200 U		5000	4930	99	5000	4490	90	9	76-123/14
75-27-4	Bromodichloromethane	200 U		5000	5610	112	5000	5290	106	6	79-123/19
75-25-2	Bromoform	200 U		5000	4940	99	5000	4500	90	9	66-123/21
78-93-3	2-Butanone (MEK)	1000 U		25000	24300	97	25000	27000	108	11	56-143/18
75-15-0	Carbon Disulfide	400 U		5000	4850	97	5000	4450	89	9	66-148/23
56-23-5	Carbon Tetrachloride	200 U		5000	5710	114	5000	4790	96	18	76-136/23
108-90-7	Chlorobenzene	200 U		5000	5100	102	5000	4690	94	8	82-124/14
75-00-3	Chloroethane	400 U		5000	5560	111	5000	5890	118	6	62-144/20
67-66-3	Chloroform	200 U		5000	5350	107	5000	4930	99	8	80-124/15
110-82-7	Cyclohexane	200 U		5000	5170	103	5000	5150	103	0	73-138/18
124-48-1	Dibromochloromethane	200 U		5000	5200	104	5000	4620	92	12	78-122/19
96-12-8	1,2-Dibromo-3-chloropropane	1000 U		5000	4740	95	5000	4540	91	4	64-123/18
106-93-4	1,2-Dibromoethane	400 U		5000	5170	103	5000	4760	95	8	75-120/13
75-71-8	Dichlorodifluoromethane	400 U		5000	4280	86	5000	4560	91	6	42-167/19
95-50-1	1,2-Dichlorobenzene	200 U		5000	4790	96	5000	4530	91	6	82-124/14
541-73-1	1,3-Dichlorobenzene	200 U		5000	5040	101	5000	4650	93	8	84-125/14
106-46-7	1,4-Dichlorobenzene	200 U		5000	4790	96	5000	4380	88	9	78-120/15
75-34-3	1,1-Dichloroethane	200 U		5000	5470	109	5000	5350	107	2	81-122/15
107-06-2	1,2-Dichloroethane	200 U		5000	5730	115	5000	5490	110	4	75-125/14
75-35-4	1,1-Dichloroethylene	200 U		5000	5570	111	5000	5420	108	3	78-137/18
156-59-2	cis-1,2-Dichloroethylene	18100		5000	23400	106	5000	22600	90	3	78-120/15
156-60-5	trans-1,2-Dichloroethylene	175	I	5000	5620	109	5000	5510	107	2	76-127/17
78-87-5	1,2-Dichloropropane	200 U		5000	5360	107	5000	5230	105	2	76-124/14
10061-01-5	cis-1,3-Dichloropropene	200 U		5000	5530	111	5000	5220	104	6	75-118/23
10061-02-6	trans-1,3-Dichloropropene	200 U		5000	5180	104	5000	5060	101	2	80-120/22
100-41-4	Ethylbenzene	200 U		5000	5080	102	5000	4840	97	5	81-121/14
76-13-1	Freon 113	200 U		5000	5550	111	5000	5140	103	8	72-134/20
591-78-6	2-Hexanone	2000 U		25000	22500	90	25000	25500	102	13	61-129/18
98-82-8	Isopropylbenzene	200 U		5000	5390	108	5000	5040	101	7	83-132/15
79-20-9	Methyl Acetate	4000 U		25000	23400	94	25000	23600	94	1	65-126/18
74-83-9	Methyl Bromide	1000 U		5000	8880	178*	5000	9720	194*	9	59-143/19
74-87-3	Methyl Chloride	400 U		5000	3630	73	5000	4140	83	13	50-159/19
75-09-2	Methylene Chloride	1000 U		5000	4380	88	5000	4360	87	0	69-135/16
108-10-1	4-Methyl-2-pentanone (MIBK)	1000 U		25000	22300	89	25000	25400	102	13	66-122/16

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA91890
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA91890-23MS	1P84217.D	200	12/28/21	CF	n/a	n/a	V1P3366
FA91890-23MSD	1P84219.D	200	12/28/21	CF	n/a	n/a	V1P3366
FA91890-23 [a]	1P84213.D	200	12/28/21	CF	n/a	n/a	V1P3366

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91890-2, FA91890-3, FA91890-4, FA91890-5, FA91890-6, FA91890-7, FA91890-8, FA91890-9, FA91890-10, FA91890-11, FA91890-12, FA91890-13, FA91890-18, FA91890-19, FA91890-20, FA91890-21, FA91890-22, FA91890-23

CAS No.	Compound	FA91890-23 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
1634-04-4	Methyl Tert Butyl Ether	200 U		5000	5240	105	5000	4960	99	5	72-117/14
100-42-5	Styrene	200 U		5000	5480	110	5000	5070	101	8	78-119/23
630-20-6	1,1,1,2-Tetrachloroethane	200 U		5000	5400	108	5000	4990	100	8	77-122/19
79-34-5	1,1,2,2-Tetrachloroethane	200 U		5000	4680	94	5000	4720	94	1	72-120/14
127-18-4	Tetrachloroethylene	200 U		5000	5240	105	5000	4770	95	9	76-135/16
108-88-3	Toluene	200 U		5000	5090	102	5000	4880	98	4	80-120/14
87-61-6	1,2,3-Trichlorobenzene	400 U		5000	5120	102	5000	4640	93	10	68-131/25
120-82-1	1,2,4-Trichlorobenzene	400 U		5000	5010	100	5000	4570	91	9	73-129/20
71-55-6	1,1,1-Trichloroethane	200 U		5000	5540	111	5000	5040	101	9	75-130/16
79-00-5	1,1,2-Trichloroethane	200 U		5000	5100	102	5000	4980	100	2	76-119/14
79-01-6	Trichloroethylene	730		5000	6220	110	5000	5680	99	9	81-126/15
75-69-4	Trichlorofluoromethane	400 U		5000	6190	124	5000	6260	125	1	71-156/21
75-01-4	Vinyl Chloride	2450		5000	7360	98	5000	8150	114	10	69-159/18
1330-20-7	Xylene (total)	600 U		15000	15500	103	15000	14800	99	5	80-126/15

CAS No.	Surrogate Recoveries	MS	MSD	FA91890-23	Limits
1868-53-7	Dibromofluoromethane	106%	104%	103%	83-118%
17060-07-0	1,2-Dichloroethane-D4	105%	112%	107%	79-125%
2037-26-5	Toluene-D8	94%	95%	93%	85-112%
460-00-4	4-Bromofluorobenzene	98%	97%	101%	83-118%

(a) Sample was not preserved to a pH < 2.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA91890
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA91890-41MS	2P84218.D	10000	12/28/21	CF	n/a	n/a	V2P3361
FA91890-41MSD	2P84220.D	10000	12/28/21	CF	n/a	n/a	V2P3361
FA91890-41 [a]	2P84214.D	10000	12/28/21	CF	n/a	n/a	V2P3361

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91890-24, FA91890-25, FA91890-26, FA91890-27, FA91890-28, FA91890-29, FA91890-30, FA91890-31, FA91890-32, FA91890-33, FA91890-34, FA91890-35, FA91890-36, FA91890-37, FA91890-38, FA91890-39, FA91890-40, FA91890-41

CAS No.	Compound	FA91890-41 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	250000 U		1250000	1240000	99	1250000	1280000	102	3	50-147/21
71-43-2	Benzene	10000 U		250000	266000	106	250000	273000	109	3	81-122/14
74-97-5	Bromochloromethane	10000 U		250000	234000	94	250000	237000	95	1	76-123/14
75-27-4	Bromodichloromethane	10000 U		250000	250000	100	250000	262000	105	5	79-123/19
75-25-2	Bromoform	10000 U		250000	215000	86	250000	222000	89	3	66-123/21
78-93-3	2-Butanone (MEK)	50000 U		1250000	1240000	99	1250000	1250000	100	1	56-143/18
75-15-0	Carbon Disulfide	20000 U		250000	235000	94	250000	243000	97	3	66-148/23
56-23-5	Carbon Tetrachloride	10000 U		250000	275000	110	250000	276000	110	0	76-136/23
108-90-7	Chlorobenzene	10000 U		250000	239000	96	250000	246000	98	3	82-124/14
75-00-3	Chloroethane	20000 U		250000	302000	121	250000	326000	130	8	62-144/20
67-66-3	Chloroform	10000 U		250000	259000	104	250000	253000	101	2	80-124/15
110-82-7	Cyclohexane	10000 U		250000	255000	102	250000	256000	102	0	73-138/18
124-48-1	Dibromochloromethane	10000 U		250000	225000	90	250000	228000	91	1	78-122/19
96-12-8	1,2-Dibromo-3-chloropropane	50000 U		250000	217000	87	250000	220000	88	1	64-123/18
106-93-4	1,2-Dibromoethane	20000 U		250000	240000	96	250000	242000	97	1	75-120/13
75-71-8	Dichlorodifluoromethane	20000 U		250000	221000	88	250000	240000	96	8	42-167/19
95-50-1	1,2-Dichlorobenzene	10000 U		250000	235000	94	250000	245000	98	4	82-124/14
541-73-1	1,3-Dichlorobenzene	10000 U		250000	241000	96	250000	243000	97	1	84-125/14
106-46-7	1,4-Dichlorobenzene	10000 U		250000	233000	93	250000	237000	95	2	78-120/15
75-34-3	1,1-Dichloroethane	10000 U		250000	256000	102	250000	261000	104	2	81-122/15
107-06-2	1,2-Dichloroethane	10000 U		250000	262000	105	250000	265000	106	1	75-125/14
75-35-4	1,1-Dichloroethylene	10000 U		250000	270000	108	250000	271000	108	0	78-137/18
156-59-2	cis-1,2-Dichloroethylene	9330	I	250000	270000	104	250000	269000	104	0	78-120/15
156-60-5	trans-1,2-Dichloroethylene	10000 U		250000	259000	104	250000	264000	106	2	76-127/17
78-87-5	1,2-Dichloropropane	10000 U		250000	250000	100	250000	255000	102	2	76-124/14
10061-01-5	cis-1,3-Dichloropropene	10000 U		250000	246000	98	250000	248000	99	1	75-118/23
10061-02-6	trans-1,3-Dichloropropene	10000 U		250000	223000	89	250000	228000	91	2	80-120/22
100-41-4	Ethylbenzene	10000 U		250000	243000	97	250000	252000	101	4	81-121/14
76-13-1	Freon 113	10000 U		250000	278000	111	250000	282000	113	1	72-134/20
591-78-6	2-Hexanone	100000 U		1250000	1190000	95	1250000	1180000	94	1	61-129/18
98-82-8	Isopropylbenzene	10000 UQ	Q	250000	246000	98	250000	256000	102	4	83-132/15
79-20-9	Methyl Acetate	200000 U		1250000	1070000	86	1250000	1110000	89	4	65-126/18
74-83-9	Methyl Bromide	50000 U		250000	229000	92	250000	263000	105	14	59-143/19
74-87-3	Methyl Chloride	20000 U		250000	223000	89	250000	240000	96	7	50-159/19
75-09-2	Methylene Chloride	50000 UJ	J	250000	208000	83	250000	214000	86	3	69-135/16
108-10-1	4-Methyl-2-pentanone (MIBK)	50000 U		1250000	1150000	92	1250000	1170000	94	2	66-122/16

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA91890
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA91890-41MS	2P84218.D	10000	12/28/21	CF	n/a	n/a	V2P3361
FA91890-41MSD	2P84220.D	10000	12/28/21	CF	n/a	n/a	V2P3361
FA91890-41 [a]	2P84214.D	10000	12/28/21	CF	n/a	n/a	V2P3361

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91890-24, FA91890-25, FA91890-26, FA91890-27, FA91890-28, FA91890-29, FA91890-30, FA91890-31, FA91890-32, FA91890-33, FA91890-34, FA91890-35, FA91890-36, FA91890-37, FA91890-38, FA91890-39, FA91890-40, FA91890-41

CAS No.	Compound	FA91890-41 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
1634-04-4	Methyl Tert Butyl Ether	10000	U	250000	234000	94	250000	243000	97	4	72-117/14
100-42-5	Styrene	10000	U	250000	244000	98	250000	246000	98	1	78-119/23
630-20-6	1,1,1,2-Tetrachloroethane	10000	U	250000	254000	102	250000	254000	102	0	77-122/19
79-34-5	1,1,2,2-Tetrachloroethane	10000	U	250000	221000	88	250000	227000	91	3	72-120/14
127-18-4	Tetrachloroethylene	10000	U	250000	258000	103	250000	267000	107	3	76-135/16
108-88-3	Toluene	10000	U	250000	244000	98	250000	252000	101	3	80-120/14
87-61-6	1,2,3-Trichlorobenzene	20000	U	250000	244000	98	250000	247000	99	1	68-131/25
120-82-1	1,2,4-Trichlorobenzene	20000	U	250000	244000	98	250000	241000	96	1	73-129/20
71-55-6	1,1,1-Trichloroethane	10000	U	250000	266000	106	250000	271000	108	2	75-130/16
79-00-5	1,1,2-Trichloroethane	10000	U	250000	231000	92	250000	233000	93	1	76-119/14
79-01-6	Trichloroethylene	830000		250000	1020000	76* [b]	250000	994000	66* [b]	3	81-126/15
75-69-4	Trichlorofluoromethane	20000	U	250000	308000	123	250000	330000	132	7	71-156/21
75-01-4	Vinyl Chloride	10000	U	250000	244000	98	250000	262000	105	7	69-159/18
1330-20-7	Xylene (total)	30000	U	750000	746000	99	750000	762000	102	2	80-126/15

CAS No.	Surrogate Recoveries	MS	MSD	FA91890-41	Limits
1868-53-7	Dibromofluoromethane	104%	104%	100%	83-118%
17060-07-0	1,2-Dichloroethane-D4	99%	99%	101%	79-125%
2037-26-5	Toluene-D8	94%	95%	96%	85-112%
460-00-4	4-Bromofluorobenzene	100%	99%	101%	83-118%

(a) Sample was not preserved to a pH < 2.
(b) Outside control limits due to high level in sample relative to spike amount.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA91890
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA91823-20MS	1A41119.D	1	01/04/22	CF	n/a	n/a	V1A1668
FA91823-20MSD	1A41120.D	1	01/04/22	CF	n/a	n/a	V1A1668
FA91823-20 [a]	1A41104.D	1	01/04/22	CF	n/a	n/a	V1A1668

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91890-47, FA91890-48, FA91890-49, FA91890-50, FA91890-51, FA91890-52, FA91890-53, FA91890-54, FA91890-55, FA91890-56

CAS No.	Compound	FA91823-20 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		125	134	107	125	128	102	5	50-147/21
71-43-2	Benzene	ND		25	28.6	114	25	28.4	114	1	81-122/14
74-97-5	Bromochloromethane	ND		25	25.4	102	25	25.2	101	1	76-123/14
75-27-4	Bromodichloromethane	ND		25	26.0	104	25	25.7	103	1	79-123/19
75-25-2	Bromoform	ND		25	21.9	88	25	20.9	84	5	66-123/21
78-93-3	2-Butanone (MEK)	ND		125	129	103	125	123	98	5	56-143/18
75-15-0	Carbon Disulfide	ND		25	27.0	108	25	26.7	107	1	66-148/23
56-23-5	Carbon Tetrachloride	ND		25	29.9	120	25	30.0	120	0	76-136/23
108-90-7	Chlorobenzene	ND		25	23.6	94	25	23.5	94	0	82-124/14
75-00-3	Chloroethane	ND		25	24.0	96	25	27.6	110	14	62-144/20
67-66-3	Chloroform	ND		25	27.4	110	25	27.0	108	1	80-124/15
110-82-7	Cyclohexane	ND		25	29.1	116	25	28.7	115	1	73-138/18
124-48-1	Dibromochloromethane	ND		25	21.9	88	25	21.9	88	0	78-122/19
96-12-8	1,2-Dibromo-3-chloropropane	ND		25	21.8	87	25	21.1	84	3	64-123/18
106-93-4	1,2-Dibromoethane	ND		25	23.5	94	25	23.7	95	1	75-120/13
75-71-8	Dichlorodifluoromethane	ND		25	21.7	87	25	22.7	91	5	42-167/19
95-50-1	1,2-Dichlorobenzene	ND		25	22.5	90	25	22.5	90	0	82-124/14
541-73-1	1,3-Dichlorobenzene	ND		25	23.0	92	25	23.0	92	0	84-125/14
106-46-7	1,4-Dichlorobenzene	ND		25	22.4	90	25	22.0	88	2	78-120/15
75-34-3	1,1-Dichloroethane	0.63	J	25	29.9	117	25	29.4	115	2	81-122/15
107-06-2	1,2-Dichloroethane	ND		25	28.7	115	25	28.1	112	2	75-125/14
75-35-4	1,1-Dichloroethylene	ND		25	33.0	132	25	32.7	131	1	78-137/18
156-59-2	cis-1,2-Dichloroethylene	0.70	J	25	27.0	105	25	27.2	106	1	78-120/15
156-60-5	trans-1,2-Dichloroethylene	ND		25	29.3	117	25	28.7	115	2	76-127/17
78-87-5	1,2-Dichloropropane	ND		25	26.7	107	25	26.3	105	2	76-124/14
10061-01-5	cis-1,3-Dichloropropene	ND		25	26.0	104	25	26.1	104	0	75-118/23
10061-02-6	trans-1,3-Dichloropropene	ND		25	25.2	101	25	24.9	100	1	80-120/22
100-41-4	Ethylbenzene	ND		25	24.4	98	25	24.1	96	1	81-121/14
76-13-1	Freon 113	ND		25	31.7	127	25	30.8	123	3	72-134/20
591-78-6	2-Hexanone	ND		125	119	95	125	113	90	5	61-129/18
98-82-8	Isopropylbenzene	ND		25	24.7	99	25	25.0	100	1	83-132/15
79-20-9	Methyl Acetate	ND		125	116	93	125	111	89	4	65-126/18
74-83-9	Methyl Bromide	ND		25	24.9	100	25	27.1	108	8	59-143/19
74-87-3	Methyl Chloride	ND		25	21.7	87	25	23.2	93	7	50-159/19
75-09-2	Methylene Chloride	ND		25	24.7	99	25	24.2	97	2	69-135/16
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		125	117	94	125	114	91	3	66-122/16

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA91890
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA91823-20MS	1A41119.D	1	01/04/22	CF	n/a	n/a	V1A1668
FA91823-20MSD	1A41120.D	1	01/04/22	CF	n/a	n/a	V1A1668
FA91823-20 [a]	1A41104.D	1	01/04/22	CF	n/a	n/a	V1A1668

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91890-47, FA91890-48, FA91890-49, FA91890-50, FA91890-51, FA91890-52, FA91890-53, FA91890-54, FA91890-55, FA91890-56

CAS No.	Compound	FA91823-20 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
1634-04-4	Methyl Tert Butyl Ether	ND		25	25.6	102	25	25.4	102	1	72-117/14
100-42-5	Styrene	ND		25	24.6	98	25	24.3	97	1	78-119/23
630-20-6	1,1,1,2-Tetrachloroethane	ND		25	26.0	104	25	25.6	102	2	77-122/19
79-34-5	1,1,2,2-Tetrachloroethane	ND		25	23.0	92	25	22.1	88	4	72-120/14
127-18-4	Tetrachloroethylene	2.1		25	25.8	95	25	25.2	92	2	76-135/16
108-88-3	Toluene	ND		25	24.0	96	25	24.1	96	0	80-120/14
87-61-6	1,2,3-Trichlorobenzene	ND		25	22.4	90	25	22.3	89	0	68-131/25
120-82-1	1,2,4-Trichlorobenzene	ND		25	21.9	88	25	21.9	88	0	73-129/20
71-55-6	1,1,1-Trichloroethane	ND		25	29.0	116	25	28.8	115	1	75-130/16
79-00-5	1,1,2-Trichloroethane	ND		25	23.2	93	25	23.1	92	0	76-119/14
79-01-6	Trichloroethylene	4.1		25	30.6	106	25	30.6	106	0	81-126/15
75-69-4	Trichlorofluoromethane	ND		25	30.2	121	25	32.3	129	7	71-156/21
75-01-4	Vinyl Chloride	ND		25	25.5	102	25	27.6	110	8	69-159/18
1330-20-7	Xylene (total)	ND		75	73.5	98	75	73.1	97	1	80-126/15

CAS No.	Surrogate Recoveries	MS	MSD	FA91823-20	Limits
1868-53-7	Dibromofluoromethane	106%	107%	102%	83-118%
17060-07-0	1,2-Dichloroethane-D4	104%	103%	100%	79-125%
2037-26-5	Toluene-D8	94%	95%	95%	85-112%
460-00-4	4-Bromofluorobenzene	98%	98%	101%	83-118%

(a) Sample analyzed beyond hold time; reported results are considered minimum values.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA91890
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA91933-14MS	1P84465.D	10	01/05/22	CF	n/a	n/a	V1P3372
FA91933-14MSD	1P84467.D	10	01/05/22	CF	n/a	n/a	V1P3372
FA91933-14	1P84459.D	10	01/05/22	CF	n/a	n/a	V1P3372

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91890-57, FA91890-58, FA91890-59

CAS No.	Compound	FA91933-14 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		1250	1030	82	1250	1040	83	1	50-147/21
71-43-2	Benzene	ND		250	233	93	250	229	92	2	81-122/14
74-97-5	Bromochloromethane	ND		250	224	90	250	215	86	4	76-123/14
75-27-4	Bromodichloromethane	ND		250	237	95	250	234	94	1	79-123/19
75-25-2	Bromoform	ND		250	244	98	250	246	98	1	66-123/21
78-93-3	2-Butanone (MEK)	ND		1250	960	77	1250	1020	82	6	56-143/18
75-15-0	Carbon Disulfide	ND		250	211	84	250	197	79	7	66-148/23
56-23-5	Carbon Tetrachloride	ND		250	251	100	250	246	98	2	76-136/23
108-90-7	Chlorobenzene	ND		250	246	98	250	242	97	2	82-124/14
75-00-3	Chloroethane	ND		250	284	114	250	295	118	4	62-144/20
67-66-3	Chloroform	ND		250	227	91	250	219	88	4	80-124/15
110-82-7	Cyclohexane	ND		250	203	81	250	201	80	1	73-138/18
124-48-1	Dibromochloromethane	ND		250	249	100	250	241	96	3	78-122/19
96-12-8	1,2-Dibromo-3-chloropropane	ND		250	241	96	250	235	94	3	64-123/18
106-93-4	1,2-Dibromoethane	ND		250	239	96	250	238	95	0	75-120/13
75-71-8	Dichlorodifluoromethane	ND		250	181	72	250	190	76	5	42-167/19
95-50-1	1,2-Dichlorobenzene	ND		250	243	97	250	241	96	1	82-124/14
541-73-1	1,3-Dichlorobenzene	ND		250	252	101	250	250	100	1	84-125/14
106-46-7	1,4-Dichlorobenzene	ND		250	238	95	250	239	96	0	78-120/15
75-34-3	1,1-Dichloroethane	ND		250	223	89	250	222	89	0	81-122/15
107-06-2	1,2-Dichloroethane	ND		250	235	94	250	225	90	4	75-125/14
75-35-4	1,1-Dichloroethylene	ND		250	234	94	250	231	92	1	78-137/18
156-59-2	cis-1,2-Dichloroethylene	ND		250	230	92	250	225	90	2	78-120/15
156-60-5	trans-1,2-Dichloroethylene	ND		250	227	91	250	218	87	4	76-127/17
78-87-5	1,2-Dichloropropane	ND		250	215	86	250	211	84	2	76-124/14
10061-01-5	cis-1,3-Dichloropropene	ND		250	230	92	250	226	90	2	75-118/23
10061-02-6	trans-1,3-Dichloropropene	ND		250	240	96	250	232	93	3	80-120/22
100-41-4	Ethylbenzene	ND		250	242	97	250	239	96	1	81-121/14
76-13-1	Freon 113	ND		250	239	96	250	236	94	1	72-134/20
591-78-6	2-Hexanone	ND		1250	1030	82	1250	1060	85	3	61-129/18
98-82-8	Isopropylbenzene	11.2		250	269	103	250	265	102	1	83-132/15
79-20-9	Methyl Acetate	ND		1250	932	75	1250	912	73	2	65-126/18
74-83-9	Methyl Bromide	ND		250	468	187*	250	476	190*	2	59-143/19
74-87-3	Methyl Chloride	ND		250	133	53	250	145	58	9	50-159/19
75-09-2	Methylene Chloride	ND		250	169	68*	250	163	65*	4	69-135/16
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1250	1030	82	1250	1030	82	0	66-122/16

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA91890
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA91933-14MS	1P84465.D	10	01/05/22	CF	n/a	n/a	V1P3372
FA91933-14MSD	1P84467.D	10	01/05/22	CF	n/a	n/a	V1P3372
FA91933-14	1P84459.D	10	01/05/22	CF	n/a	n/a	V1P3372

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91890-57, FA91890-58, FA91890-59

CAS No.	Compound	FA91933-14 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
1634-04-4	Methyl Tert Butyl Ether	ND		250	213	85	250	209	84	2	72-117/14
100-42-5	Styrene	ND		250	254	102	250	252	101	1	78-119/23
630-20-6	1,1,1,2-Tetrachloroethane	ND		250	260	104	250	256	102	2	77-122/19
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	231	92	250	225	90	3	72-120/14
127-18-4	Tetrachloroethylene	ND		250	244	98	250	247	99	1	76-135/16
108-88-3	Toluene	ND		250	241	96	250	234	94	3	80-120/14
87-61-6	1,2,3-Trichlorobenzene	ND		250	258	103	250	258	103	0	68-131/25
120-82-1	1,2,4-Trichlorobenzene	ND		250	256	102	250	256	102	0	73-129/20
71-55-6	1,1,1-Trichloroethane	ND		250	240	96	250	238	95	1	75-130/16
79-00-5	1,1,2-Trichloroethane	ND		250	237	95	250	230	92	3	76-119/14
79-01-6	Trichloroethylene	ND		250	238	95	250	230	92	3	81-126/15
75-69-4	Trichlorofluoromethane	ND		250	303	121	250	314	126	4	71-156/21
75-01-4	Vinyl Chloride	ND		250	209	84	250	225	90	7	69-159/18
1330-20-7	Xylene (total)	51.9		750	786	98	750	778	97	1	80-126/15

CAS No.	Surrogate Recoveries	MS	MSD	FA91933-14	Limits
1868-53-7	Dibromofluoromethane	102%	103%	103%	83-118%
17060-07-0	1,2-Dichloroethane-D4	104%	101%	111%	79-125%
2037-26-5	Toluene-D8	100%	99%	99%	85-112%
460-00-4	4-Bromofluorobenzene	103%	104%	102%	83-118%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA91890
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA91890-8MS	1P84551.D	10000	01/07/22	CF	n/a	n/a	V1P3376
FA91890-8MSD	1P84553.D	10000	01/07/22	CF	n/a	n/a	V1P3376
FA91890-8 [a]	1P84545.D	10000	01/07/22	CF	n/a	n/a	V1P3376

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91890-2, FA91890-3, FA91890-4, FA91890-5, FA91890-6, FA91890-7, FA91890-8

CAS No.	Compound	FA91890-8 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
156-59-2	cis-1,2-Dichloroethylene	20300		250000	232000	85	250000	244000	89	5	78-120/15
156-60-5	trans-1,2-Dichloroethylene	10000 U		250000	202000	81	250000	220000	88	9	76-127/17
79-01-6	Trichloroethylene	1260000	LQ	250000	1410000	60* [b]	250000	1410000	60* [b]	0	81-126/15
75-01-4	Vinyl Chloride	10000 U		250000	217000	87	250000	201000	80	8	69-159/18

CAS No.	Surrogate Recoveries	MS	MSD	FA91890-8	Limits
1868-53-7	Dibromofluoromethane	106%	104%	105%	83-118%
17060-07-0	1,2-Dichloroethane-D4	112%	103%	112%	79-125%
2037-26-5	Toluene-D8	97%	100%	99%	85-112%
460-00-4	4-Bromofluorobenzene	98%	102%	103%	83-118%

(a) Sample was not preserved to pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(b) Outside control limits due to high level in sample relative to spike amount.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA91890
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA91890-20MS	2P84552.D	100	01/07/22	CF	n/a	n/a	V2P3369
FA91890-20MSD	2P84554.D	100	01/07/22	CF	n/a	n/a	V2P3369
FA91890-20 [a]	2P84550.D	100	01/07/22	CF	n/a	n/a	V2P3369

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91890-9, FA91890-10, FA91890-12, FA91890-13, FA91890-19, FA91890-20, FA91890-42, FA91890-44, FA91890-45, FA91890-46

CAS No.	Compound	FA91890-20 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
156-59-2	cis-1,2-Dichloroethylene	7480	Q	2500	9340	74* [b]	2500	9780	92	5	78-120/15
156-60-5	trans-1,2-Dichloroethylene	73.5	IQ	2500	2200	85	2500	2240	87	2	76-127/17
79-01-6	Trichloroethylene	54000	LQ	2500	53800	-8* [b]	2500	55900	76* [b]	4	81-126/15
75-01-4	Vinyl Chloride	242	Q	2500	2170	77	2500	2330	84	7	69-159/18

CAS No.	Surrogate Recoveries	MS	MSD	FA91890-20	Limits
1868-53-7	Dibromofluoromethane	104%	106%	103%	83-118%
17060-07-0	1,2-Dichloroethane-D4	108%	105%	108%	79-125%
2037-26-5	Toluene-D8	100%	100%	101%	85-112%
460-00-4	4-Bromofluorobenzene	102%	103%	104%	83-118%

(a) Sample was not preserved to pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(b) Outside control limits due to high level in sample relative to spike amount.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA91890
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA91890-1MS	1A41292.D	50	01/12/22	CV	n/a	n/a	V1A1673
FA91890-1MSD	1A41293.D	50	01/12/22	CV	n/a	n/a	V1A1673
FA91890-1 [a]	1A41260.D	50	01/12/22	CV	n/a	n/a	V1A1673

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91890-1, FA91890-14, FA91890-15, FA91890-17

CAS No.	Compound	FA91890-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
156-59-2	cis-1,2-Dichloroethylene	83.2		1250	1280	96	1250	1320	99	3	78-120/15
79-01-6	Trichloroethylene	5200	LQ	1250	6060	69* [b]	1250	6640	115	9	81-126/15
75-01-4	Vinyl Chloride	50 U		1250	1260	101	1250	1370	110	8	69-159/18

CAS No.	Surrogate Recoveries	MS	MSD	FA91890-1	Limits
1868-53-7	Dibromofluoromethane	94%	93%	96%	83-118%
17060-07-0	1,2-Dichloroethane-D4	81%	83%	96%	79-125%
2037-26-5	Toluene-D8	102%	103%	100%	85-112%
460-00-4	4-Bromofluorobenzene	98%	99%	97%	83-118%

(a) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(b) Outside control limits due to high level in sample relative to spike amount.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA91890
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA91823-5MS	I73450.D	1	01/13/22	LR	n/a	n/a	VI2437
FA91823-5MSD	I73451.D	1	01/13/22	LR	n/a	n/a	VI2437
FA91823-5 [a]	I73440.D	1	01/13/22	LR	n/a	n/a	VI2437

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91890-56

CAS No.	Compound	FA91823-5 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
79-01-6	Trichloroethylene	11.6		25	36.8	101	25	36.1	98	2	81-126/15

CAS No.	Surrogate Recoveries	MS	MSD	FA91823-5	Limits
1868-53-7	Dibromofluoromethane	98%	99%	98%	83-118%
17060-07-0	1,2-Dichloroethane-D4	104%	102%	104%	79-125%
2037-26-5	Toluene-D8	95%	97%	102%	85-112%
460-00-4	4-Bromofluorobenzene	94%	96%	99%	83-118%

(a) Confirmation run beyond holdtime.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA91890
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA91699-3MS	C0153324.D	1	01/13/22	LV	n/a	n/a	VC6187
FA91699-3MSD	C0153325.D	1	01/13/22	LV	n/a	n/a	VC6187
FA91699-3 [a]	C0153307.D	1	01/13/22	LV	n/a	n/a	VC6187

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91890-21, FA91890-22, FA91890-23

CAS No.	Compound	FA91699-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
79-01-6	Trichloroethylene	1.0 U		25	23.0	92	25	23.2	93	1	81-126/15

CAS No.	Surrogate Recoveries	MS	MSD	FA91699-3	Limits
1868-53-7	Dibromofluoromethane	97%	96%	96%	83-118%
17060-07-0	1,2-Dichloroethane-D4	100%	98%	95%	79-125%
2037-26-5	Toluene-D8	103%	106%	102%	85-112%
460-00-4	4-Bromofluorobenzene	106%	107%	104%	83-118%

(a) Confirmation run beyond holdtime.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA91890
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA91859-28MS	I73506.D	10000	01/14/22	LR	n/a	n/a	VI2440
FA91859-28MSD	I73507.D	10000	01/14/22	LR	n/a	n/a	VI2440
FA91859-28 [a]	I73501.D	10000	01/14/22	LR	n/a	n/a	VI2440

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91890-16

CAS No.	Compound	FA91859-28 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
156-59-2	cis-1,2-Dichloroethylene	11000	Q	250000	242000	92	250000	244000	93	1	78-120/15
79-01-6	Trichloroethylene	1620000	LQ	250000	1710000	36* [b]	250000	1600000	-8* [b]	7	81-126/15

CAS No.	Surrogate Recoveries	MS	MSD	FA91859-28	Limits
1868-53-7	Dibromofluoromethane	99%	98%	97%Q	83-118%
17060-07-0	1,2-Dichloroethane-D4	103%	102%	105%Q	79-125%
2037-26-5	Toluene-D8	99%	100%	102%Q	85-112%
460-00-4	4-Bromofluorobenzene	96%	97%	97%Q	83-118%

(a) Sample was not preserved to a pH < 2. Sample analyzed beyond hold time; reported results are considered minimum values.
(b) Outside control limits due to high level in sample relative to spike amount.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA91890
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA91890-24MS	C0153384.D	10	01/14/22	LV	n/a	n/a	VC6189
FA91890-24MSD	C0153385.D	10	01/14/22	LV	n/a	n/a	VC6189
FA91890-24 [a]	C0153366.D	10	01/14/22	LV	n/a	n/a	VC6189

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91890-27, FA91890-29, FA91890-30, FA91890-31, FA91890-32, FA91890-34, FA91890-35, FA91890-36, FA91890-37, FA91890-38

CAS No.	Compound	FA91890-24 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
156-59-2	cis-1,2-Dichloroethylene	464		250	745	112	250	734	108	1	78-120/15
156-60-5	trans-1,2-Dichloroethylene	6.4	I	250	287	112	250	292	114	2	76-127/17
79-01-6	Trichloroethylene	434	Q	250	729	118	250	735	120	1	81-126/15
75-01-4	Vinyl Chloride	306		250	547	96	250	543	95	1	69-159/18

CAS No.	Surrogate Recoveries	MS	MSD	FA91890-24	Limits
1868-53-7	Dibromofluoromethane	92%	98%	92%	83-118%
17060-07-0	1,2-Dichloroethane-D4	89%	93%	92%	79-125%
2037-26-5	Toluene-D8	105%	104%	103%	85-112%
460-00-4	4-Bromofluorobenzene	110%	104%	108%	83-118%

(a) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA91890
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA91890-54MS	I73562.D	20000	01/15/22	LR	n/a	n/a	VI2443
FA91890-54MSD	I73563.D	20000	01/15/22	LR	n/a	n/a	VI2443
FA91890-54 [a]	I73561.D	20000	01/15/22	LR	n/a	n/a	VI2443

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91890-52

CAS No.	Compound	FA91890-54 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
156-59-2	cis-1,2-Dichloroethylene	35800		500000	532000	99	500000	536000	100	1	78-120/15

CAS No.	Surrogate Recoveries	MS	MSD	FA91890-54	Limits
1868-53-7	Dibromofluoromethane	101%	99%	102%	83-118%
17060-07-0	1,2-Dichloroethane-D4	106%	104%	110%	79-125%
2037-26-5	Toluene-D8	99%	99%	103%	85-112%
460-00-4	4-Bromofluorobenzene	95%	95%	96%	83-118%

(a) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

* = Outside of Control Limits.

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

Tetra Tech NUS

NASA-LC 34, Freedom Rd, CCAFS, FL

112G08985

SGS Job Number: FA91974

Sampling Dates: 12/21/21 - 12/22/21

Report to:

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Total number of pages in report: **175**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Norm Farmer
Technical Director

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SGS North America Inc.

Sample Summary

Tetra Tech NUS

Job No: FA91974

NASA-LC 34, Freedom Rd, CCAFS, FL
Project No: 112G08985

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
FA91974-1	12/21/21	16:05	DF	12/22/21	AQ	Ground Water	LC34-DPT0599-078.0-20211221
FA91974-2	12/21/21	16:25	DF	12/22/21	AQ	Ground Water	LC34-DPT0599-083.0-20211221
FA91974-3	12/21/21	16:45	DF	12/22/21	AQ	Ground Water	LC34-DPT0599-088.0-20211221
FA91974-4	12/21/21	17:10	DF	12/22/21	AQ	Ground Water	LC34-DPT0599-093.0-20211221
FA91974-5	12/22/21	07:30	DF	12/22/21	AQ	Ground Water	LC34-DPT0599-098.0-20211222
FA91974-6	12/22/21	08:25	DF	12/22/21	AQ	Ground Water	LC34-DPT0595-008.0-20211222
FA91974-7	12/22/21	08:35	DF	12/22/21	AQ	Ground Water	LC34-DPT0595-013.0-20211222
FA91974-8	12/22/21	08:45	DF	12/22/21	AQ	Ground Water	LC34-DPT0595-018.0-20211222
FA91974-9	12/22/21	08:55	DF	12/22/21	AQ	Ground Water	LC34-DPT0595-023.0-20211222
FA91974-10	12/22/21	09:05	DF	12/22/21	AQ	Ground Water	LC34-DPT0595-028.0-20211222
FA91974-11	12/22/21	09:15	DF	12/22/21	AQ	Ground Water	LC34-DPT0595-033.0-20211222
FA91974-12	12/22/21	09:25	DF	12/22/21	AQ	Ground Water	LC34-DPT0595-038.0-20211222
FA91974-13	12/22/21	09:35	DF	12/22/21	AQ	Ground Water	LC34-DPT0595-043.0-20211222

SGS North America Inc.

Sample Summary
(continued)

Tetra Tech NUS

Job No: FA91974

NASA-LC 34, Freedom Rd, CCAFS, FL
Project No: 112G08985

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
FA91974-14	12/21/21	16:10	DF	12/22/21	AQ	Ground Water	LC34-DPT0596-043.0-20211221
FA91974-15	12/21/21	16:30	DF	12/22/21	AQ	Ground Water	LC34-DPT0596-048.0-20211221
FA91974-16	12/21/21	16:50	DF	12/22/21	AQ	Ground Water	LC34-DPT0596-053.0-20211221
FA91974-17	12/21/21	17:05	DF	12/22/21	AQ	Ground Water	LC34-DPT0596-058.0-20211221
FA91974-18	12/22/21	07:25	DF	12/22/21	AQ	Ground Water	LC34-DPT0596-063.0-20211222
FA91974-19	12/22/21	07:55	DF	12/22/21	AQ	Ground Water	LC34-DPT0596-068.0-20211222
FA91974-20	12/22/21	08:30	DF	12/22/21	AQ	Ground Water	LC34-DPT0596-073.0-20211222
FA91974-21	12/22/21	09:00	DF	12/22/21	AQ	Ground Water	LC34-DPT0596-078.0-20211222
FA91974-22	12/22/21	09:30	DF	12/22/21	AQ	Ground Water	LC34-DPT0596-083.0-20211222
FA91974-23	12/22/21	10:00	DF	12/22/21	AQ	Ground Water	LC34-DPT0596-088.0-20211222
FA91974-24	12/22/21	10:30	DF	12/22/21	AQ	Ground Water	LC34-DPT0596-093.0-20211222
FA91974-25	12/22/21	11:00	DF	12/22/21	AQ	Ground Water	LC34-DPT0596-098.0-20211222
FA91974-26	12/22/21	09:45	DF	12/22/21	AQ	Ground Water	LC34-DPT0595-048.0-20211222

SGS North America Inc.

Sample Summary
(continued)

Tetra Tech NUS

Job No: FA91974

NASA-LC 34, Freedom Rd, CCAFS, FL
Project No: 112G08985

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
FA91974-27	12/22/21	10:05	DF	12/22/21	AQ	Ground Water	LC34-DPT0595-053.0-20211222
FA91974-28	12/22/21	10:15	DF	12/22/21	AQ	Ground Water	LC34-DPT0595-058.0-20211222
FA91974-29	12/22/21	10:35	DF	12/22/21	AQ	Ground Water	LC34-DPT0595-063.0-20211222
FA91974-30	12/22/21	10:55	DF	12/22/21	AQ	Ground Water	LC34-DPT0595-068.0-20211222
FA91974-31	12/22/21	11:25	DF	12/22/21	AQ	Ground Water	LC34-DPT0595-073.0-20211222
FA91974-32	12/22/21	12:15	DF	12/22/21	AQ	Ground Water	LC34-DPT0595-078.0-20211222
FA91974-33	12/22/21	12:35	DF	12/22/21	AQ	Ground Water	LC34-DPT0595-083.0-20211222
FA91974-34	12/22/21	13:05	DF	12/22/21	AQ	Ground Water	LC34-DPT0595-088.0-20211222
FA91974-35	12/22/21	13:35	DF	12/22/21	AQ	Ground Water	LC34-DPT0595-093.0-20211222
FA91974-36	12/22/21	13:55	DF	12/22/21	AQ	Ground Water	LC34-DPT0595-098.0-20211222
FA91974-37	12/22/21	14:35	DF	12/22/21	AQ	Ground Water	LC34-DPT0594-008.0-20211222
FA91974-38	12/22/21	14:45	DF	12/22/21	AQ	Ground Water	LC34-DPT0594-013.0-20211222
FA91974-39	12/22/21	14:55	DF	12/22/21	AQ	Ground Water	LC34-DPT0594-018.0-20211222

SGS North America Inc.

Sample Summary
(continued)

Tetra Tech NUS

Job No: FA91974

NASA-LC 34, Freedom Rd, CCAFS, FL
Project No: 112G08985

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
FA91974-40	12/22/21	15:05	DF	12/22/21	AQ	Ground Water	LC34-DPT0594-023.0-20211222
FA91974-41	12/22/21	15:10	DF	12/22/21	AQ	Ground Water	LC34-DPT0594-028.0-20211222
FA91974-42	12/22/21	15:20	DF	12/22/21	AQ	Ground Water	LC34-DPT0594-033.0-20211222
FA91974-43	12/22/21	15:30	DF	12/22/21	AQ	Ground Water	LC34-DPT0594-038.0-20211222
FA91974-44	12/22/21	15:40	DF	12/22/21	AQ	Ground Water	LC34-DPT0594-043.0-20211222
FA91974-45	12/22/21	15:50	DF	12/22/21	AQ	Ground Water	LC34-DPT0594-048.0-20211222
FA91974-46	12/22/21	12:50	DF	12/22/21	AQ	Ground Water	LC34-DPT0593-008.0-20211222
FA91974-47	12/22/21	13:00	DF	12/22/21	AQ	Ground Water	LC34-DPT0593-013.0-20211222
FA91974-48	12/22/21	13:10	DF	12/22/21	AQ	Ground Water	LC34-DPT0593-018.0-20211222
FA91974-49	12/22/21	13:15	DF	12/22/21	AQ	Ground Water	LC34-DPT0593-023.0-20211222
FA91974-50	12/22/21	13:30	DF	12/22/21	AQ	Ground Water	LC34-DPT0593-028.0-20211222
FA91974-51	12/22/21	13:40	DF	12/22/21	AQ	Ground Water	LC34-DPT0593-033.0-20211222
FA91974-52	12/22/21	13:55	DF	12/22/21	AQ	Ground Water	LC34-DPT0593-038.0-20211222

SGS North America Inc.

Sample Summary
(continued)

Tetra Tech NUS

Job No: FA91974

NASA-LC 34, Freedom Rd, CCAFS, FL
Project No: 112G08985

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
FA91974-53	12/22/21	14:20	DF	12/22/21	AQ	Ground Water	LC34-DPT0593-043.0-20211222
FA91974-54	12/22/21	14:50	DF	12/22/21	AQ	Ground Water	LC34-DPT0593-048.0-20211222
FA91974-55	12/22/21	15:15	DF	12/22/21	AQ	Ground Water	LC34-DPT0593-053.0-20211222
FA91974-56	12/22/21	15:35	DF	12/22/21	AQ	Ground Water	LC34-DPT0593-058.0-20211222

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Tetra Tech NUS **Job No:** FA91974

Site: NASA-LC 34, Freedom Rd, CCAFS, FL **Report Date:** 1/19/2022 11:21:29

On 12/22/2021, 56 Sample(s), 0 Trip Blank(s) were received at SGS North America Inc. at a maximum corrected temperature of 4.6 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. Job Number of FA91974 was Assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

MS Volatiles By Method SW846 8260B

Matrix: AQ **Batch ID:** V1A1665

Sample(s) FA91974-37MS, FA91974-37MSD were used as the QC samples indicated.

FA91974-18: Sample was not preserved to a pH < 2.

FA91974-19: Sample was not preserved to a pH < 2.

FA91974-20: Sample was not preserved to a pH < 2.

FA91974-21: Sample was not preserved to a pH < 2.

FA91974-22: Sample was not preserved to a pH < 2.

FA91974-23: Sample was not preserved to a pH < 2.

FA91974-24: Sample was not preserved to a pH < 2.

FA91974-25: Sample was not preserved to a pH < 2.

FA91974-26: Sample was not preserved to a pH < 2.

FA91974-27: Sample was not preserved to a pH < 2.

FA91974-28: Sample was not preserved to a pH < 2.

FA91974-29: Sample was not preserved to a pH < 2.

FA91974-30: Sample was not preserved to a pH < 2.

FA91974-31: Sample was not preserved to a pH < 2.

FA91974-32: Sample was not preserved to a pH < 2. Results from different vials are not consistent; higher results were not consistent; higher results were reported.

FA91974-33: Sample was not preserved to a pH < 2.

FA91974-34: Sample was not preserved to a pH < 2.

FA91974-35: Sample was not preserved to a pH < 2. Results from different vials are not consistent; higher results were not consistent; higher results were reported.

FA91974-36: Sample was not preserved to a pH < 2.

FA91974-37: Sample was not preserved to a pH < 2.

Matrix: AQ **Batch ID:** V2A1660

Sample(s) FA91974-56MS, FA91974-56MSD were used as the QC samples indicated.

FA91974-38 for Carbon Disulfide: Associated CCV outside of control limits high, sample was ND.

FA91974-38: Sample was not preserved to a pH < 2.

FA91974-39 for Carbon Disulfide: Associated CCV outside of control limits high, sample was ND.

FA91974-39: Sample was not preserved to a pH < 2.

FA91974-40 for Carbon Disulfide: Associated CCV outside of control limits high, sample was ND.

FA91974-40: Sample was not preserved to a pH < 2.

FA91974-41 for Carbon Disulfide: Associated CCV outside of control limits high, sample was ND.

FA91974-41: Sample was not preserved to a pH < 2.

FA91974-42 for Carbon Disulfide: Associated CCV outside of control limits high, sample was ND.

FA91974-42: Sample was not preserved to a pH < 2.

FA91974-43 for Carbon Disulfide: Associated CCV outside of control limits high, sample was ND.

FA91974-43: Sample was not preserved to a pH < 2.

FA91974-44 for Carbon Disulfide: Associated CCV outside of control limits high, sample was ND.

FA91974-44: Sample was not preserved to a pH < 2.

FA91974-45 for Carbon Disulfide: Associated CCV outside of control limits high, sample was ND.

FA91974-45: Sample was not preserved to a pH < 2.

FA91974-46 for Carbon Disulfide: Associated CCV outside of control limits high, sample was ND.

MS Volatiles By Method SW846 8260B

Matrix: AQ **Batch ID:** V2A1660

FA91974-46: Sample was not preserved to a pH < 2.

FA91974-47 for Carbon Disulfide: Associated CCV outside of control limits high, sample was ND.

FA91974-47: Sample was not preserved to a pH < 2.

FA91974-48 for Carbon Disulfide: Associated CCV outside of control limits high, sample was ND.

FA91974-48: Sample was not preserved to a pH < 2.

FA91974-49 for Carbon Disulfide: Associated CCV outside of control limits high, sample was ND.

FA91974-49: Sample was not preserved to a pH < 2.

FA91974-50 for Carbon Disulfide: Associated CCV outside of control limits high, sample was ND.

FA91974-50: Sample was not preserved to a pH < 2.

FA91974-51 for Carbon Disulfide: Associated CCV outside of control limits high, sample was ND.

FA91974-51: Sample was not preserved to a pH < 2.

FA91974-52 for Carbon Disulfide: Associated CCV outside of control limits high, sample was ND.

FA91974-52: Sample was not preserved to a pH < 2.

FA91974-53 for Carbon Disulfide: Associated CCV outside of control limits high, sample was ND.

FA91974-53: Sample was not preserved to a pH < 2.

FA91974-54 for Carbon Disulfide: Associated CCV outside of control limits high, sample was ND.

FA91974-54: Sample was not preserved to a pH < 2.

FA91974-55 for Carbon Disulfide: Associated CCV outside of control limits high, sample was ND.

FA91974-55: Sample was not preserved to a pH < 2.

FA91974-56 for Carbon Disulfide: Associated CCV outside of control limits high, sample was ND.

FA91974-56: Sample was not preserved to a pH < 2.

Matrix: AQ **Batch ID:** V2P3362

Sample(s) FA91974-13MS, FA91974-13MSD were used as the QC samples indicated.

Matrix Spike Recovery(s) for 1,1,1,2-Tetrachloroethane, 1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethylene, 1,2,4-Trichlorobenzene, 1,2-Dibromoethane, 1,2-Dichlorobenzene, 1,2-Dichloroethane, 1,2-Dichloropropane, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, Benzene, Bromochloromethane, Bromodichloromethane, Bromoform, Carbon Disulfide, Carbon Tetrachloride, Chlorobenzene, Chloroform, cis-1,3-Dichloropropene, Cyclohexane, Dibromochloromethane, Ethylbenzene, Freon 113, Isopropylbenzene, Methylene Chloride, Styrene, Tetrachloroethylene, Toluene, trans-1,2-Dichloroethylene, trans-1,3-Dichloropropene, Trichloroethylene, Xylene (total) are outside control limits. Probable cause is due to matrix interference.

Matrix Spike Duplicate Recovery(s) for 1,1,1,2-Tetrachloroethane, 1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethylene, 1,2-Dibromo-3-chloropropane, 1,2-Dibromoethane, 1,2-Dichlorobenzene, 1,2-Dichloroethane, 1,2-Dichloropropane, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, Benzene, Bromochloromethane, Bromodichloromethane, Bromoform, Carbon Disulfide, Carbon Tetrachloride, Chlorobenzene, Chloroform, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Cyclohexane, Dibromochloromethane, Ethylbenzene, Freon 113, Isopropylbenzene, Methyl Tert Butyl Ether, Methylene Chloride, Styrene, Tetrachloroethylene, Toluene, trans-1,2-Dichloroethylene, trans-1,3-Dichloropropene, Trichloroethylene, Xylene (total) are outside control limits. Probable cause is due to matrix interference.
Matrix Spike/Matrix Spike Duplicate Recovery(s) for cis-1,2-Dichloroethylene are outside control limits. Outside control limits due to high level in sample relative to spike amount.

For Sample(s) FA91974-10, FA91974-11, FA91974-12, FA91974-13, FA91974-5, FA91974-6, FA91974-7, FA91974-8, FA91974-9 are associated with an CCV that has a recovery for Carbon Disulfide, Methylene Chloride outside low control limit.

FA91974-1: Sample was not preserved to a pH < 2. Confirmation run beyond holdtime.

FA91974-5 for Carbon Disulfide: Associated CCV outside of control limits low.

FA91974-5 for Trichlorofluoromethane: Associated CCV outside of control limits high, sample was ND.

FA91974-5: Sample was not preserved to a pH < 2.

FA91974-6 for Carbon Disulfide: Associated CCV outside of control limits low.

FA91974-6 for Trichlorofluoromethane: Associated CCV outside of control limits high, sample was ND.

FA91974-6: Sample was not preserved to a pH < 2.

FA91974-7 for Carbon Disulfide: Associated CCV outside of control limits low.

FA91974-7 for Trichlorofluoromethane: Associated CCV outside of control limits high, sample was ND.

FA91974-7: Sample was not preserved to a pH < 2.

FA91974-8 for Carbon Disulfide: Associated CCV outside of control limits low.

FA91974-8 for Trichlorofluoromethane: Associated CCV outside of control limits high, sample was ND.

FA91974-8: Sample was not preserved to a pH < 2.

FA91974-9 for Carbon Disulfide: Associated CCV outside of control limits low.

MS Volatiles By Method SW846 8260B

Matrix: AQ **Batch ID:** V2P3362

FA91974-9 for Trichlorofluoromethane: Associated CCV outside of control limits high, sample was ND.

FA91974-9: Sample was not preserved to a pH < 2. Sample vial(s) contained bubbles greater than 6mm.

FA91974-10 for Carbon Disulfide: Associated CCV outside of control limits low.

FA91974-10 for Trichlorofluoromethane: Associated CCV outside of control limits high, sample was ND.

FA91974-10: Sample was not preserved to a pH < 2.

FA91974-11 for Carbon Disulfide: Associated CCV outside of control limits low.

FA91974-11 for Trichlorofluoromethane: Associated CCV outside of control limits high, sample was ND.

FA91974-11: Sample was not preserved to a pH < 2.

FA91974-12 for Carbon Disulfide: Associated CCV outside of control limits low.

FA91974-12 for Trichlorofluoromethane: Associated CCV outside of control limits high, sample was ND.

FA91974-12: Sample was not preserved to a pH < 2.

FA91974-13 for Carbon Disulfide: Associated CCV outside of control limits low.

FA91974-13 for Trichlorofluoromethane: Associated CCV outside of control limits high, sample was ND.

FA91974-13: Sample was not preserved to a pH < 2.

Matrix: AQ **Batch ID:** V2P3369

Sample(s) FA91890-20MS, FA91890-20MSD were used as the QC samples indicated.

The following samples were run outside of holding time for method SW846 8260B: FA91974-17

Matrix Spike/Matrix Spike Duplicate Recovery(s) for Trichloroethylene are outside control limits. Outside control limits due to high level in sample relative to spike amount.

FA91974-4: Sample was not preserved to pH < 2. Confirmation run beyond holdtime. Results from different vials are not consistent; higher results were reported.

FA91974-17: Sample was not preserved to pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

Matrix: AQ **Batch ID:** V2P3374

FA91974-5: Sample was not preserved to a pH < 2. Confirmation run.

FA91974-7: Sample was not preserved to a pH < 2. Confirmation run.

FA91974-8: Sample was not preserved to a pH < 2. Confirmation run.

FA91974-9: Sample was not preserved to a pH < 2. Sample vial(s) contained bubbles greater than 6mm. Confirmation run.

FA91974-10: Sample was not preserved to a pH < 2. Confirmation run.

FA91974-11: Sample was not preserved to a pH < 2. Confirmation run.

FA91974-12: Sample was not preserved to a pH < 2. Confirmation run.

Matrix: AQ **Batch ID:** VC6188

Sample(s) FA91974-28MS, FA91974-28MSD were used as the QC samples indicated.

The following samples were run outside of holding time for method SW846 8260B: FA91974-18, FA91974-20, FA91974-21, FA91974-26, FA91974-28, FA91974-29, FA91974-30, FA91974-31, FA91974-33, FA91974-34, FA91974-35, FA91974-36

FA91974-18: Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA91974-19: Sample was not preserved to a pH < 2. Confirmation run beyond holdtime.

FA91974-20: Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA91974-21: Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA91974-22: Sample was not preserved to a pH < 2. Confirmation run beyond holdtime.

FA91974-23: Sample was not preserved to a pH < 2. Confirmation run beyond holdtime.

FA91974-24: Sample was not preserved to a pH < 2. Confirmation run beyond holdtime.

FA91974-25: Sample was not preserved to a pH < 2. Confirmation run beyond holdtime.

FA91974-26: Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA91974-27: Sample was not preserved to a pH < 2. Confirmation run beyond holdtime.

FA91974-28: Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA91974-29: Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

MS Volatiles By Method SW846 8260B

Matrix: AQ **Batch ID:** VC6188

FA91974-30: Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA91974-31: Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA91974-32: Sample was not preserved to a pH < 2. Confirmation run beyond holdtime. Results from different vials are not consistent; higher results were reported.

FA91974-33: Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA91974-34: Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA91974-35: Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values. Results from different vials are not consistent; higher results were reported.

FA91974-36: Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA91974-37: Sample was not preserved to a pH < 2. Confirmation run beyond holdtime.

Matrix: AQ **Batch ID:** VI2417

Sample(s) FA91974-15MS, FA91974-15MSD were used as the QC samples indicated.

Matrix Spike Recovery(s) for Methyl Bromide are outside control limits. Probable cause is due to matrix interference.

RPD(s) for MSD for Methyl Bromide are outside control limits for sample FA91974-15MSD. Probable cause is due to sample non-homogeneity.

For Sample(s) FA91974-1, FA91974-14, FA91974-15, FA91974-16, FA91974-17, FA91974-2, FA91974-3, FA91974-4 are associated with an CCV that has a recovery for Methyl Bromide outside low control limit.

VI2417-MB: Sample was treated with an anti-foaming agent.

FA91974-1 for Chloroethane: Associated CCV outside of control limits high, sample was ND.

FA91974-1 for Methyl Bromide: Associated CCV outside of control limits low.

FA91974-1: Sample was not preserved to a pH < 2.

FA91974-14 for Chloroethane: Associated CCV outside of control limits high, sample was ND.

FA91974-14 for Methyl Bromide: Associated CCV outside of control limits low.

FA91974-14: Sample was not preserved to a pH < 2.

FA91974-15 for Chloroethane: Associated CCV outside of control limits high, sample was ND.

FA91974-15 for Methyl Bromide: Associated CCV outside of control limits low.

FA91974-15: Sample was not preserved to a pH < 2.

FA91974-16 for Chloroethane: Associated CCV outside of control limits high, sample was ND.

FA91974-16 for Methyl Bromide: Associated CCV outside of control limits low.

FA91974-16: Sample was not preserved to a pH < 2.

FA91974-17 for Chloroethane: Associated CCV outside of control limits high, sample was ND.

FA91974-17 for Methyl Bromide: Associated CCV outside of control limits low.

FA91974-17: Sample was not preserved to pH < 2.

FA91974-2 for Chloroethane: Associated CCV outside of control limits high, sample was ND.

FA91974-2 for Methyl Bromide: Associated CCV outside of control limits low.

FA91974-2: Sample was not preserved to a pH < 2.

FA91974-3 for Chloroethane: Associated CCV outside of control limits high, sample was ND.

FA91974-3 for Methyl Bromide: Associated CCV outside of control limits low.

FA91974-3: Sample was not preserved to a pH < 2.

FA91974-4 for Chloroethane: Associated CCV outside of control limits high, sample was ND.

FA91974-4 for Methyl Bromide: Associated CCV outside of control limits low.

FA91974-4 for Trichloroethylene: Results from different vials are not consistent; higher results were reported.

FA91974-4: Sample was not preserved to pH < 2.

Matrix: AQ **Batch ID:** VI2443

Sample(s) FA91890-54MS, FA91890-54MSD were used as the QC samples indicated.

The following samples were run outside of holding time for method SW846 8260B: FA91974-38, FA91974-39, FA91974-40, FA91974-41, FA91974-42, FA91974-47, FA91974-48, FA91974-51, FA91974-52, FA91974-53.

Matrix Spike/Matrix Spike Duplicate Recovery(s) for Trichloroethylene are outside control limits. Outside control limits due to high level in sample relative to spike amount.

MS Volatiles By Method SW846 8260B

Matrix: AQ **Batch ID:** VI2443

FA91974-41: Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA91974-51: Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA91974-52: Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA91974-49: Sample was not preserved to a pH < 2. Confirmation run beyond holdtime.

FA91974-48: Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA91974-43: Sample was not preserved to a pH < 2. Confirmation run beyond holdtime.

FA91974-40: Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA91974-50: Sample was not preserved to a pH < 2. Confirmation run beyond holdtime.

FA91974-56: Sample was not preserved to a pH < 2. Confirmation run beyond holdtime.

FA91974-42: Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA91974-55: Sample was not preserved to a pH < 2. Confirmation run beyond holdtime.

FA91974-54: Sample was not preserved to a pH < 2. Confirmation run beyond holdtime.

FA91974-39: Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA91974-38: Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA91974-47: Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA91974-45: Sample was not preserved to a pH < 2. Confirmation run beyond holdtime.

FA91974-44: Sample was not preserved to a pH < 2. Confirmation run beyond holdtime.

FA91974-53: Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

SGS North America Inc. certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted. Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria. SGS North America Inc. is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety.

Narrative prepared by:

_____

Kim Benham, Client Services *(Signature on File)*

Summary of Hits

Job Number: FA91974
Account: Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL
Collected: 12/21/21 thru 12/22/21

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	PQL	MDL	Units	Method
FA91974-1	**LC34-DPT0599-078.0-20211221**					
cis-1,2-Dichloroethylene [a]		636	10	2.8	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [a]		16.6	10	2.2	ug/l	SW846 8260B
Trichloroethylene [a]		238	10	3.5	ug/l	SW846 8260B
Vinyl Chloride [a]		35.8	10	4.1	ug/l	SW846 8260B
FA91974-2	**LC34-DPT0599-083.0-20211221**					
cis-1,2-Dichloroethylene [a]		254	50	14	ug/l	SW846 8260B
Trichloroethylene [a]		2830	50	17	ug/l	SW846 8260B
FA91974-3	**LC34-DPT0599-088.0-20211221**					
cis-1,2-Dichloroethylene [a]		4360	200	55	ug/l	SW846 8260B
Trichloroethylene [a]		14400	200	69	ug/l	SW846 8260B
Vinyl Chloride [a]		169 I	200	82	ug/l	SW846 8260B
FA91974-4	**LC34-DPT0599-093.0-20211221**					
cis-1,2-Dichloroethylene [b]		381	50	14	ug/l	SW846 8260B
Trichloroethylene [c]		6090 L	50	17	ug/l	SW846 8260B
FA91974-5	**LC34-DPT0599-098.0-20211222**					
No hits reported in this sample.						
FA91974-6	**LC34-DPT0595-008.0-20211222**					
cis-1,2-Dichloroethylene [a]		295	100	28	ug/l	SW846 8260B
Trichloroethylene [a]		4380	100	100	ug/l	SW846 8260B
FA91974-7	**LC34-DPT0595-013.0-20211222**					
cis-1,2-Dichloroethylene [a]		219	100	28	ug/l	SW846 8260B
Trichloroethylene [a]		965	100	100	ug/l	SW846 8260B
FA91974-8	**LC34-DPT0595-018.0-20211222**					
cis-1,2-Dichloroethylene [a]		55.2 I	100	28	ug/l	SW846 8260B
FA91974-9	**LC34-DPT0595-023.0-20211222**					
No hits reported in this sample.						

Summary of Hits

Job Number: FA91974
Account: Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL
Collected: 12/21/21 thru 12/22/21

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	PQL	MDL	Units	Method
FA91974-10	**LC34-DPT0595-028.0-20211222**					
No hits reported in this sample.						
FA91974-11	**LC34-DPT0595-033.0-20211222**					
No hits reported in this sample.						
FA91974-12	**LC34-DPT0595-038.0-20211222**					
cis-1,2-Dichloroethylene [a]		23300	20000	5500	ug/l	SW846 8260B
Vinyl Chloride [a]		22700	20000	8200	ug/l	SW846 8260B
FA91974-13	**LC34-DPT0595-043.0-20211222**					
cis-1,2-Dichloroethylene [a]		65200	1000	280	ug/l	SW846 8260B
Vinyl Chloride [a]		33100	1000	410	ug/l	SW846 8260B
FA91974-14	**LC34-DPT0596-043.0-20211221**					
cis-1,2-Dichloroethylene [a]		71200	2000	550	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [a]		2610	2000	440	ug/l	SW846 8260B
Trichloroethylene [a]		52200	2000	690	ug/l	SW846 8260B
Vinyl Chloride [a]		4250	2000	820	ug/l	SW846 8260B
FA91974-15	**LC34-DPT0596-048.0-20211221**					
cis-1,2-Dichloroethylene [a]		255000	50000	14000	ug/l	SW846 8260B
Trichloroethylene [a]		2030000	50000	17000	ug/l	SW846 8260B
Vinyl Chloride [a]		26800 I	50000	20000	ug/l	SW846 8260B
FA91974-16	**LC34-DPT0596-053.0-20211221**					
cis-1,2-Dichloroethylene [a]		58300	5000	1400	ug/l	SW846 8260B
Trichloroethylene [a]		458000	5000	1700	ug/l	SW846 8260B
Vinyl Chloride [a]		4690 I	5000	2000	ug/l	SW846 8260B
FA91974-17	**LC34-DPT0596-058.0-20211221**					
cis-1,2-Dichloroethylene [b]		41600	500	140	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [b]		236 I	500	110	ug/l	SW846 8260B
Trichloroethylene [d]		70200 Q	1000	350	ug/l	SW846 8260B
Vinyl Chloride [b]		309 I	500	200	ug/l	SW846 8260B

Summary of Hits

Job Number: FA91974
Account: Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL
Collected: 12/21/21 thru 12/22/21

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	PQL	MDL	Units	Method
FA91974-18	**LC34-DPT0596-063.0-20211222**					
cis-1,2-Dichloroethylene [a]		672	100	28	ug/l	SW846 8260B
Trichloroethylene [a]		684	100	35	ug/l	SW846 8260B
Vinyl Chloride [e]		16.7 Q	10	4.1	ug/l	SW846 8260B
FA91974-19	**LC34-DPT0596-068.0-20211222**					
cis-1,2-Dichloroethylene [a]		213	100	28	ug/l	SW846 8260B
Trichloroethylene [a]		1190	100	35	ug/l	SW846 8260B
FA91974-20	**LC34-DPT0596-073.0-20211222**					
cis-1,2-Dichloroethylene [e]		24.5 Q	20	5.5	ug/l	SW846 8260B
Trichloroethylene [a]		1090	200	69	ug/l	SW846 8260B
FA91974-21	**LC34-DPT0596-078.0-20211222**					
cis-1,2-Dichloroethylene [a]		191	50	14	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [a]		45.3 I	50	11	ug/l	SW846 8260B
Trichloroethylene [a]		831	50	17	ug/l	SW846 8260B
Vinyl Chloride [e]		18.7 Q	10	4.1	ug/l	SW846 8260B
FA91974-22	**LC34-DPT0596-083.0-20211222**					
cis-1,2-Dichloroethylene [a]		156	100	28	ug/l	SW846 8260B
Trichloroethylene [a]		1590	100	35	ug/l	SW846 8260B
FA91974-23	**LC34-DPT0596-088.0-20211222**					
cis-1,2-Dichloroethylene [a]		59.3	50	14	ug/l	SW846 8260B
Trichloroethylene [a]		1190	50	17	ug/l	SW846 8260B
FA91974-24	**LC34-DPT0596-093.0-20211222**					
cis-1,2-Dichloroethylene [a]		1120	1000	280	ug/l	SW846 8260B
Trichloroethylene [a]		14100	1000	350	ug/l	SW846 8260B
FA91974-25	**LC34-DPT0596-098.0-20211222**					
cis-1,2-Dichloroethylene [a]		78.0 I	100	28	ug/l	SW846 8260B
Trichloroethylene [a]		1060	100	35	ug/l	SW846 8260B

Summary of Hits

Job Number: FA91974
Account: Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL
Collected: 12/21/21 thru 12/22/21

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	PQL	MDL	Units	Method
FA91974-26	**LC34-DPT0595-048.0-20211222**					
cis-1,2-Dichloroethylene [e]		339 Q	5.0	1.4	ug/l	SW846 8260B
Vinyl Chloride [e]		317 Q	5.0	2.0	ug/l	SW846 8260B
FA91974-27	**LC34-DPT0595-053.0-20211222**					
cis-1,2-Dichloroethylene [a]		2340	500	140	ug/l	SW846 8260B
Trichloroethylene [a]		251 I	500	170	ug/l	SW846 8260B
Vinyl Chloride [a]		1710	500	200	ug/l	SW846 8260B
FA91974-28	**LC34-DPT0595-058.0-20211222**					
cis-1,2-Dichloroethylene [e]		16.5 Q	1.0	0.28	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [e]		1.5 Q	1.0	0.22	ug/l	SW846 8260B
Trichloroethylene [e]		2.9 Q	1.0	0.35	ug/l	SW846 8260B
Vinyl Chloride [e]		9.9 Q	1.0	0.41	ug/l	SW846 8260B
FA91974-29	**LC34-DPT0595-063.0-20211222**					
cis-1,2-Dichloroethylene [e]		10.1 Q	5.0	1.4	ug/l	SW846 8260B
Trichloroethylene [a]		282	100	35	ug/l	SW846 8260B
FA91974-30	**LC34-DPT0595-068.0-20211222**					
cis-1,2-Dichloroethylene [e]		3.2 Q	1.0	0.28	ug/l	SW846 8260B
Trichloroethylene [e]		6.0 Q	1.0	0.35	ug/l	SW846 8260B
Vinyl Chloride [e]		1.0 Q	1.0	0.41	ug/l	SW846 8260B
FA91974-31	**LC34-DPT0595-073.0-20211222**					
cis-1,2-Dichloroethylene [e]		53.5 Q	2.0	0.55	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [e]		4.2 Q	2.0	0.44	ug/l	SW846 8260B
Trichloroethylene [a]		160	100	35	ug/l	SW846 8260B
Vinyl Chloride [e]		6.9 Q	2.0	0.82	ug/l	SW846 8260B
FA91974-32	**LC34-DPT0595-078.0-20211222**					
cis-1,2-Dichloroethylene [f]		1590 I	2000	550	ug/l	SW846 8260B
Trichloroethylene [f]		2310	2000	690	ug/l	SW846 8260B
FA91974-33	**LC34-DPT0595-083.0-20211222**					
cis-1,2-Dichloroethylene [e]		22.6 Q	1.0	0.28	ug/l	SW846 8260B
Trichloroethylene [e]		61.4 Q	1.0	0.35	ug/l	SW846 8260B

Summary of Hits

Job Number: FA91974
Account: Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL
Collected: 12/21/21 thru 12/22/21

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	PQL	MDL	Units	Method
Vinyl Chloride [e]		4.1 Q	1.0	0.41	ug/l	SW846 8260B
FA91974-34	**LC34-DPT0595-088.0-20211222**					
cis-1,2-Dichloroethylene [e]		10.9 Q	1.0	0.28	ug/l	SW846 8260B
Trichloroethylene [e]		5.7 Q	1.0	0.35	ug/l	SW846 8260B
Vinyl Chloride [e]		2.4 Q	1.0	0.41	ug/l	SW846 8260B
FA91974-35	**LC34-DPT0595-093.0-20211222**					
cis-1,2-Dichloroethylene [f]		120	100	28	ug/l	SW846 8260B
Trichloroethylene [f]		43.2 I	100	35	ug/l	SW846 8260B
Vinyl Chloride [g]		5.4 Q	2.0	0.82	ug/l	SW846 8260B
FA91974-36	**LC34-DPT0595-098.0-20211222**					
cis-1,2-Dichloroethylene [e]		80.0 Q	1.0	0.28	ug/l	SW846 8260B
Trichloroethylene [e]		13.9 Q	1.0	0.35	ug/l	SW846 8260B
Vinyl Chloride [e]		18.6 Q	1.0	0.41	ug/l	SW846 8260B
FA91974-37	**LC34-DPT0594-008.0-20211222**					
cis-1,2-Dichloroethylene [a]		57.5 I	100	28	ug/l	SW846 8260B
Trichloroethylene [a]		1160	100	35	ug/l	SW846 8260B
FA91974-38	**LC34-DPT0594-013.0-20211222**					
cis-1,2-Dichloroethylene [a]		6700	100	28	ug/l	SW846 8260B
Trichloroethylene [e]		21200 Q	500	170	ug/l	SW846 8260B
Vinyl Chloride [a]		257	100	41	ug/l	SW846 8260B
FA91974-39	**LC34-DPT0594-018.0-20211222**					
cis-1,2-Dichloroethylene [a]		5430	100	28	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [a]		75.0 I	100	22	ug/l	SW846 8260B
Trichloroethylene [e]		61100 Q	2000	690	ug/l	SW846 8260B
Vinyl Chloride [a]		484	100	41	ug/l	SW846 8260B
FA91974-40	**LC34-DPT0594-023.0-20211222**					
1,1-Dichloroethylene [a]		66.5	50	16	ug/l	SW846 8260B
cis-1,2-Dichloroethylene [a]		4040	50	14	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [a]		94.3	50	11	ug/l	SW846 8260B
Freon 113 [a]		33.0 I	50	24	ug/l	SW846 8260B
Trichloroethylene [e]		89800 Q	1000	350	ug/l	SW846 8260B

Summary of Hits

Job Number: FA91974
Account: Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL
Collected: 12/21/21 thru 12/22/21

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	PQL	MDL	Units	Method
Vinyl Chloride [a]		826	50	20	ug/l	SW846 8260B
FA91974-41	**LC34-DPT0594-028.0-20211222**					
cis-1,2-Dichloroethylene [a]		7260	100	28	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [a]		123	100	22	ug/l	SW846 8260B
Trichloroethylene [e]		36700 Q	1000	350	ug/l	SW846 8260B
Vinyl Chloride [a]		582	100	41	ug/l	SW846 8260B
FA91974-42	**LC34-DPT0594-033.0-20211222**					
cis-1,2-Dichloroethylene [a]		377	50	14	ug/l	SW846 8260B
Trichloroethylene [e]		78.3 Q	5.0	1.7	ug/l	SW846 8260B
Vinyl Chloride [a]		73.3	50	20	ug/l	SW846 8260B
FA91974-43	**LC34-DPT0594-038.0-20211222**					
cis-1,2-Dichloroethylene [a]		4640 I	5000	1400	ug/l	SW846 8260B
Trichloroethylene [a]		20300	5000	1700	ug/l	SW846 8260B
FA91974-44	**LC34-DPT0594-043.0-20211222**					
cis-1,2-Dichloroethylene [a]		150000	100000	28000	ug/l	SW846 8260B
Trichloroethylene [a]		1900000	100000	35000	ug/l	SW846 8260B
FA91974-45	**LC34-DPT0594-048.0-20211222**					
Trichloroethylene [a]		637000	200000	69000	ug/l	SW846 8260B
FA91974-46	**LC34-DPT0593-008.0-20211222**					
cis-1,2-Dichloroethylene [a]		1390	100	28	ug/l	SW846 8260B
Trichloroethylene [a]		7360	100	35	ug/l	SW846 8260B
FA91974-47	**LC34-DPT0593-013.0-20211222**					
cis-1,2-Dichloroethylene [a]		1600	50	14	ug/l	SW846 8260B
Trichloroethylene [e]		21600 Q	500	170	ug/l	SW846 8260B
Vinyl Chloride [a]		222	50	20	ug/l	SW846 8260B
FA91974-48	**LC34-DPT0593-018.0-20211222**					
cis-1,2-Dichloroethylene [a]		1500	50	14	ug/l	SW846 8260B
Trichloroethylene [e]		254 Q	20	6.9	ug/l	SW846 8260B
Vinyl Chloride [a]		111	50	20	ug/l	SW846 8260B

Summary of Hits

Job Number: FA91974
Account: Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL
Collected: 12/21/21 thru 12/22/21

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	PQL	MDL	Units	Method
FA91974-49	**LC34-DPT0593-023.0-20211222**					
cis-1,2-Dichloroethylene [a]		706	100	28	ug/l	SW846 8260B
Trichloroethylene [a]		625	100	35	ug/l	SW846 8260B
Vinyl Chloride [a]		437	100	41	ug/l	SW846 8260B
FA91974-50	**LC34-DPT0593-028.0-20211222**					
Trichloroethylene [a]		1860	100	35	ug/l	SW846 8260B
Vinyl Chloride [a]		138	100	41	ug/l	SW846 8260B
FA91974-51	**LC34-DPT0593-033.0-20211222**					
cis-1,2-Dichloroethylene [a]		252	100	28	ug/l	SW846 8260B
Trichloroethylene [e]		32700 Q	1000	350	ug/l	SW846 8260B
Vinyl Chloride [a]		456	100	41	ug/l	SW846 8260B
FA91974-52	**LC34-DPT0593-038.0-20211222**					
cis-1,2-Dichloroethylene [a]		3200	1000	280	ug/l	SW846 8260B
Trichloroethylene [e]		24100 Q	500	170	ug/l	SW846 8260B
Vinyl Chloride [a]		1160	1000	410	ug/l	SW846 8260B
FA91974-53	**LC34-DPT0593-043.0-20211222**					
cis-1,2-Dichloroethylene [a]		48900	5000	1400	ug/l	SW846 8260B
Trichloroethylene [e]		61700 Q	2000	690	ug/l	SW846 8260B
Vinyl Chloride [a]		64600	5000	2000	ug/l	SW846 8260B
FA91974-54	**LC34-DPT0593-048.0-20211222**					
Trichloroethylene [a]		719000	100000	35000	ug/l	SW846 8260B
FA91974-55	**LC34-DPT0593-053.0-20211222**					
cis-1,2-Dichloroethylene [a]		222000	100000	28000	ug/l	SW846 8260B
Trichloroethylene [a]		170000	100000	35000	ug/l	SW846 8260B
FA91974-56	**LC34-DPT0593-058.0-20211222**					
cis-1,2-Dichloroethylene [a]		105000	5000	1400	ug/l	SW846 8260B
Trichloroethylene [a]		15700	5000	1700	ug/l	SW846 8260B
Vinyl Chloride [a]		5520	5000	2000	ug/l	SW846 8260B

Summary of Hits

Job Number: FA91974
Account: Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL
Collected: 12/21/21 thru 12/22/21

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	PQL	MDL	Units	Method

(a) Sample was not preserved to a pH < 2.
(b) Sample was not preserved to pH < 2.
(c) Sample was not preserved to pH < 2. Results from different vials are not consistent; higher results were reported.
(d) Sample was not preserved to pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(e) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(f) Sample was not preserved to a pH < 2. Results from different vials are not consistent; higher results were reported.
(g) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values. Results from different vials are not consistent; higher results were reported.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	LC34-DPT0599-078.0-20211221		
Lab Sample ID:	FA91974-1	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	I73044.D	10	12/28/21 19:23	LR	n/a	n/a	VI2417
Run #2 [b]	2P84489.D	10	01/06/22 15:30	CF	n/a	n/a	V2P3368

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	100 U	250	100	ug/l	
71-43-2	Benzene	3.1 U	10	3.1	ug/l	
74-97-5	Bromochloromethane	4.5 U	10	4.5	ug/l	
75-27-4	Bromodichloromethane	2.4 U	10	2.4	ug/l	
75-25-2	Bromoform	4.1 U	10	4.1	ug/l	
78-93-3	2-Butanone (MEK)	20 U	50	20	ug/l	
75-15-0	Carbon Disulfide	5.3 U	20	5.3	ug/l	
56-23-5	Carbon Tetrachloride	3.6 U	10	3.6	ug/l	
108-90-7	Chlorobenzene	2.0 U	10	2.0	ug/l	
75-00-3	Chloroethane [c]	6.7 U	20	6.7	ug/l	
67-66-3	Chloroform	3.0 U	10	3.0	ug/l	
110-82-7	Cyclohexane	3.9 U	10	3.9	ug/l	
124-48-1	Dibromochloromethane	2.8 U	10	2.8	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	10 U	50	10	ug/l	
106-93-4	1,2-Dibromoethane	2.8 U	20	2.8	ug/l	
75-71-8	Dichlorodifluoromethane	5.0 U	20	5.0	ug/l	
95-50-1	1,2-Dichlorobenzene	3.2 U	10	3.2	ug/l	
541-73-1	1,3-Dichlorobenzene	2.2 U	10	2.2	ug/l	
106-46-7	1,4-Dichlorobenzene	2.6 U	10	2.6	ug/l	
75-34-3	1,1-Dichloroethane	3.4 U	10	3.4	ug/l	
107-06-2	1,2-Dichloroethane	3.1 U	10	3.1	ug/l	
75-35-4	1,1-Dichloroethylene	3.2 U	10	3.2	ug/l	
156-59-2	cis-1,2-Dichloroethylene	636	10	2.8	ug/l	
156-60-5	trans-1,2-Dichloroethylene	16.6	10	2.2	ug/l	
78-87-5	1,2-Dichloropropane	4.3 U	10	4.3	ug/l	
10061-01-5	cis-1,3-Dichloropropene	2.9 U	10	2.9	ug/l	
10061-02-6	trans-1,3-Dichloropropene	2.1 U	10	2.1	ug/l	
100-41-4	Ethylbenzene	3.6 U	10	3.6	ug/l	
76-13-1	Freon 113	4.8 U	10	4.8	ug/l	
591-78-6	2-Hexanone	20 U	100	20	ug/l	
98-82-8	Isopropylbenzene	2.2 U	10	2.2	ug/l	
79-20-9	Methyl Acetate	50 U	200	50	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0599-078.0-20211221		
Lab Sample ID:	FA91974-1	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide [d]	20 UJ	50	20	ug/l	J
74-87-3	Methyl Chloride	5.0 U	20	5.0	ug/l	
75-09-2	Methylene Chloride	20 U	50	20	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	10 U	50	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	2.3 U	10	2.3	ug/l	
100-42-5	Styrene	2.2 U	10	2.2	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	2.8 U	10	2.8	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	3.0 U	10	3.0	ug/l	
127-18-4	Tetrachloroethylene	2.2 U	10	2.2	ug/l	
108-88-3	Toluene	3.0 U	10	3.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	6.1 U	20	6.1	ug/l	
120-82-1	1,2,4-Trichlorobenzene	5.0 U	20	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	2.5 U	10	2.5	ug/l	
79-00-5	1,1,2-Trichloroethane	4.7 U	10	4.7	ug/l	
79-01-6	Trichloroethylene	238	10	3.5	ug/l	
75-69-4	Trichlorofluoromethane	5.0 U	20	5.0	ug/l	
75-01-4	Vinyl Chloride	35.8	10	4.1	ug/l	
1330-20-7	Xylene (total)	7.2 U	30	7.2	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%	103%	83-118%
17060-07-0	1,2-Dichloroethane-D4	115%	101%	79-125%
2037-26-5	Toluene-D8	94%	100%	85-112%
460-00-4	4-Bromofluorobenzene	93%	104%	83-118%

(a) Sample was not preserved to a pH < 2.
(b) Sample was not preserved to a pH < 2. Confirmation run beyond holdtime.
(c) Associated CCV outside of control limits high, sample was ND.
(d) Associated CCV outside of control limits low.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0599-083.0-20211221		
Lab Sample ID:	FA91974-2	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	I73045.D	50	12/28/21 19:47	LR	n/a	n/a	VI2417
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	500 U	1300	500	ug/l	
71-43-2	Benzene	16 U	50	16	ug/l	
74-97-5	Bromochloromethane	23 U	50	23	ug/l	
75-27-4	Bromodichloromethane	12 U	50	12	ug/l	
75-25-2	Bromoform	20 U	50	20	ug/l	
78-93-3	2-Butanone (MEK)	100 U	250	100	ug/l	
75-15-0	Carbon Disulfide	27 U	100	27	ug/l	
56-23-5	Carbon Tetrachloride	18 U	50	18	ug/l	
108-90-7	Chlorobenzene	10 U	50	10	ug/l	
75-00-3	Chloroethane [b]	33 U	100	33	ug/l	
67-66-3	Chloroform	15 U	50	15	ug/l	
110-82-7	Cyclohexane	20 U	50	20	ug/l	
124-48-1	Dibromochloromethane	14 U	50	14	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	52 U	250	52	ug/l	
106-93-4	1,2-Dibromoethane	14 U	100	14	ug/l	
75-71-8	Dichlorodifluoromethane	25 U	100	25	ug/l	
95-50-1	1,2-Dichlorobenzene	16 U	50	16	ug/l	
541-73-1	1,3-Dichlorobenzene	11 U	50	11	ug/l	
106-46-7	1,4-Dichlorobenzene	13 U	50	13	ug/l	
75-34-3	1,1-Dichloroethane	17 U	50	17	ug/l	
107-06-2	1,2-Dichloroethane	16 U	50	16	ug/l	
75-35-4	1,1-Dichloroethylene	16 U	50	16	ug/l	
156-59-2	cis-1,2-Dichloroethylene	254	50	14	ug/l	
156-60-5	trans-1,2-Dichloroethylene	11 U	50	11	ug/l	
78-87-5	1,2-Dichloropropane	21 U	50	21	ug/l	
10061-01-5	cis-1,3-Dichloropropene	15 U	50	15	ug/l	
10061-02-6	trans-1,3-Dichloropropene	11 U	50	11	ug/l	
100-41-4	Ethylbenzene	18 U	50	18	ug/l	
76-13-1	Freon 113	24 U	50	24	ug/l	
591-78-6	2-Hexanone	100 U	500	100	ug/l	
98-82-8	Isopropylbenzene	11 U	50	11	ug/l	
79-20-9	Methyl Acetate	250 U	1000	250	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0599-083.0-20211221		
Lab Sample ID:	FA91974-2	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide [c]	100 UJ	250	100	ug/l	J
74-87-3	Methyl Chloride	25 U	100	25	ug/l	
75-09-2	Methylene Chloride	100 U	250	100	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	50 U	250	50	ug/l	
1634-04-4	Methyl Tert Butyl Ether	11 U	50	11	ug/l	
100-42-5	Styrene	11 U	50	11	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	14 U	50	14	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	15 U	50	15	ug/l	
127-18-4	Tetrachloroethylene	11 U	50	11	ug/l	
108-88-3	Toluene	15 U	50	15	ug/l	
87-61-6	1,2,3-Trichlorobenzene	31 U	100	31	ug/l	
120-82-1	1,2,4-Trichlorobenzene	25 U	100	25	ug/l	
71-55-6	1,1,1-Trichloroethane	12 U	50	12	ug/l	
79-00-5	1,1,2-Trichloroethane	23 U	50	23	ug/l	
79-01-6	Trichloroethylene	2830	50	17	ug/l	
75-69-4	Trichlorofluoromethane	25 U	100	25	ug/l	
75-01-4	Vinyl Chloride	20 U	50	20	ug/l	
1330-20-7	Xylene (total)	36 U	150	36	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		83-118%
17060-07-0	1,2-Dichloroethane-D4	116%		79-125%
2037-26-5	Toluene-D8	95%		85-112%
460-00-4	4-Bromofluorobenzene	94%		83-118%

(a) Sample was not preserved to a pH < 2.
(b) Associated CCV outside of control limits high, sample was ND.
(c) Associated CCV outside of control limits low.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0599-088.0-20211221		
Lab Sample ID:	FA91974-3	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	I73046.D	200	12/28/21 20:11	LR	n/a	n/a	VI2417
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	2000 U	5000	2000	ug/l	
71-43-2	Benzene	62 U	200	62	ug/l	
74-97-5	Bromochloromethane	90 U	200	90	ug/l	
75-27-4	Bromodichloromethane	48 U	200	48	ug/l	
75-25-2	Bromoform	81 U	200	81	ug/l	
78-93-3	2-Butanone (MEK)	400 U	1000	400	ug/l	
75-15-0	Carbon Disulfide	110 U	400	110	ug/l	
56-23-5	Carbon Tetrachloride	71 U	200	71	ug/l	
108-90-7	Chlorobenzene	40 U	200	40	ug/l	
75-00-3	Chloroethane [b]	130 U	400	130	ug/l	
67-66-3	Chloroform	60 U	200	60	ug/l	
110-82-7	Cyclohexane	78 U	200	78	ug/l	
124-48-1	Dibromochloromethane	55 U	200	55	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	210 U	1000	210	ug/l	
106-93-4	1,2-Dibromoethane	55 U	400	55	ug/l	
75-71-8	Dichlorodifluoromethane	100 U	400	100	ug/l	
95-50-1	1,2-Dichlorobenzene	65 U	200	65	ug/l	
541-73-1	1,3-Dichlorobenzene	43 U	200	43	ug/l	
106-46-7	1,4-Dichlorobenzene	51 U	200	51	ug/l	
75-34-3	1,1-Dichloroethane	68 U	200	68	ug/l	
107-06-2	1,2-Dichloroethane	62 U	200	62	ug/l	
75-35-4	1,1-Dichloroethylene	64 U	200	64	ug/l	
156-59-2	cis-1,2-Dichloroethylene	4360	200	55	ug/l	
156-60-5	trans-1,2-Dichloroethylene	44 U	200	44	ug/l	
78-87-5	1,2-Dichloropropane	85 U	200	85	ug/l	
10061-01-5	cis-1,3-Dichloropropene	58 U	200	58	ug/l	
10061-02-6	trans-1,3-Dichloropropene	43 U	200	43	ug/l	
100-41-4	Ethylbenzene	71 U	200	71	ug/l	
76-13-1	Freon 113	96 U	200	96	ug/l	
591-78-6	2-Hexanone	400 U	2000	400	ug/l	
98-82-8	Isopropylbenzene	44 U	200	44	ug/l	
79-20-9	Methyl Acetate	1000 U	4000	1000	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0599-088.0-20211221		
Lab Sample ID:	FA91974-3	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide [c]	400 UJ	1000	400	ug/l	J
74-87-3	Methyl Chloride	100 U	400	100	ug/l	
75-09-2	Methylene Chloride	400 U	1000	400	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	200 U	1000	200	ug/l	
1634-04-4	Methyl Tert Butyl Ether	46 U	200	46	ug/l	
100-42-5	Styrene	44 U	200	44	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	55 U	200	55	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	60 U	200	60	ug/l	
127-18-4	Tetrachloroethylene	43 U	200	43	ug/l	
108-88-3	Toluene	60 U	200	60	ug/l	
87-61-6	1,2,3-Trichlorobenzene	120 U	400	120	ug/l	
120-82-1	1,2,4-Trichlorobenzene	100 U	400	100	ug/l	
71-55-6	1,1,1-Trichloroethane	50 U	200	50	ug/l	
79-00-5	1,1,2-Trichloroethane	93 U	200	93	ug/l	
79-01-6	Trichloroethylene	14400	200	69	ug/l	
75-69-4	Trichlorofluoromethane	100 U	400	100	ug/l	
75-01-4	Vinyl Chloride	169	200	82	ug/l	I
1330-20-7	Xylene (total)	140 U	600	140	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		83-118%
17060-07-0	1,2-Dichloroethane-D4	115%		79-125%
2037-26-5	Toluene-D8	95%		85-112%
460-00-4	4-Bromofluorobenzene	95%		83-118%

(a) Sample was not preserved to a pH < 2.
(b) Associated CCV outside of control limits high, sample was ND.
(c) Associated CCV outside of control limits low.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0599-093.0-20211221		
Lab Sample ID:	FA91974-4	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	I73047.D	50	12/28/21 20:36	LR	n/a	n/a	VI2417
Run #2 [b]	2P84526.D	100	01/07/22 16:11	CF	n/a	n/a	V2P3369

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	500 U	1300	500	ug/l	
71-43-2	Benzene	16 U	50	16	ug/l	
74-97-5	Bromochloromethane	23 U	50	23	ug/l	
75-27-4	Bromodichloromethane	12 U	50	12	ug/l	
75-25-2	Bromoform	20 U	50	20	ug/l	
78-93-3	2-Butanone (MEK)	100 U	250	100	ug/l	
75-15-0	Carbon Disulfide	27 U	100	27	ug/l	
56-23-5	Carbon Tetrachloride	18 U	50	18	ug/l	
108-90-7	Chlorobenzene	10 U	50	10	ug/l	
75-00-3	Chloroethane [c]	33 U	100	33	ug/l	
67-66-3	Chloroform	15 U	50	15	ug/l	
110-82-7	Cyclohexane	20 U	50	20	ug/l	
124-48-1	Dibromochloromethane	14 U	50	14	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	52 U	250	52	ug/l	
106-93-4	1,2-Dibromoethane	14 U	100	14	ug/l	
75-71-8	Dichlorodifluoromethane	25 U	100	25	ug/l	
95-50-1	1,2-Dichlorobenzene	16 U	50	16	ug/l	
541-73-1	1,3-Dichlorobenzene	11 U	50	11	ug/l	
106-46-7	1,4-Dichlorobenzene	13 U	50	13	ug/l	
75-34-3	1,1-Dichloroethane	17 U	50	17	ug/l	
107-06-2	1,2-Dichloroethane	16 U	50	16	ug/l	
75-35-4	1,1-Dichloroethylene	16 U	50	16	ug/l	
156-59-2	cis-1,2-Dichloroethylene	381	50	14	ug/l	
156-60-5	trans-1,2-Dichloroethylene	11 U	50	11	ug/l	
78-87-5	1,2-Dichloropropane	21 U	50	21	ug/l	
10061-01-5	cis-1,3-Dichloropropene	15 U	50	15	ug/l	
10061-02-6	trans-1,3-Dichloropropene	11 U	50	11	ug/l	
100-41-4	Ethylbenzene	18 U	50	18	ug/l	
76-13-1	Freon 113	24 U	50	24	ug/l	
591-78-6	2-Hexanone	100 U	500	100	ug/l	
98-82-8	Isopropylbenzene	11 U	50	11	ug/l	
79-20-9	Methyl Acetate	250 U	1000	250	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0599-093.0-20211221		
Lab Sample ID:	FA91974-4	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide [d]	100 UJ	250	100	ug/l	J
74-87-3	Methyl Chloride	25 U	100	25	ug/l	
75-09-2	Methylene Chloride	100 U	250	100	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	50 U	250	50	ug/l	
1634-04-4	Methyl Tert Butyl Ether	11 U	50	11	ug/l	
100-42-5	Styrene	11 U	50	11	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	14 U	50	14	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	15 U	50	15	ug/l	
127-18-4	Tetrachloroethylene	11 U	50	11	ug/l	
108-88-3	Toluene	15 U	50	15	ug/l	
87-61-6	1,2,3-Trichlorobenzene	31 U	100	31	ug/l	
120-82-1	1,2,4-Trichlorobenzene	25 U	100	25	ug/l	
71-55-6	1,1,1-Trichloroethane	12 U	50	12	ug/l	
79-00-5	1,1,2-Trichloroethane	23 U	50	23	ug/l	
79-01-6	Trichloroethylene [e]	6090	50	17	ug/l	L
75-69-4	Trichlorofluoromethane	25 U	100	25	ug/l	
75-01-4	Vinyl Chloride	20 U	50	20	ug/l	
1330-20-7	Xylene (total)	36 U	150	36	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%	104%	83-118%
17060-07-0	1,2-Dichloroethane-D4	116%	103%	79-125%
2037-26-5	Toluene-D8	95%	100%	85-112%
460-00-4	4-Bromofluorobenzene	92%	106%	83-118%

(a) Sample was not preserved to pH < 2.
(b) Sample was not preserved to pH < 2. Confirmation run beyond holdtime. Results from different vials are not consistent; higher results were reported.
(c) Associated CCV outside of control limits high, sample was ND.
(d) Associated CCV outside of control limits low.
(e) Results from different vials are not consistent; higher results were reported.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0599-098.0-20211222		
Lab Sample ID:	FA91974-5	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	2P84744.D	2	01/12/22 20:11	CF	n/a	n/a	V2P3374
Run #2 [b]	2P84254.D	200	12/29/21 18:14	CF	n/a	n/a	V2P3362

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	2000 U [c]	5000	2000	ug/l	
71-43-2	Benzene	62 U [c]	200	62	ug/l	
74-97-5	Bromochloromethane	90 U [c]	200	90	ug/l	
75-27-4	Bromodichloromethane	48 U [c]	200	48	ug/l	
75-25-2	Bromoform	81 U [c]	200	81	ug/l	
78-93-3	2-Butanone (MEK)	400 U [c]	1000	400	ug/l	
75-15-0	Carbon Disulfide [d]	110 UJ [c]	400	110	ug/l	J
56-23-5	Carbon Tetrachloride	71 U [c]	200	71	ug/l	
108-90-7	Chlorobenzene	40 U [c]	200	40	ug/l	
75-00-3	Chloroethane	130 U [c]	400	130	ug/l	
67-66-3	Chloroform	60 U [c]	200	60	ug/l	
110-82-7	Cyclohexane	78 U [c]	200	78	ug/l	
124-48-1	Dibromochloromethane	55 U [c]	200	55	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	210 U [c]	1000	210	ug/l	
106-93-4	1,2-Dibromoethane	55 U [c]	400	55	ug/l	
75-71-8	Dichlorodifluoromethane	100 U [c]	400	100	ug/l	
95-50-1	1,2-Dichlorobenzene	65 U [c]	200	65	ug/l	
541-73-1	1,3-Dichlorobenzene	43 U [c]	200	43	ug/l	
106-46-7	1,4-Dichlorobenzene	51 U [c]	200	51	ug/l	
75-34-3	1,1-Dichloroethane	68 U [c]	200	68	ug/l	
107-06-2	1,2-Dichloroethane	62 U [c]	200	62	ug/l	
75-35-4	1,1-Dichloroethylene	64 U [c]	200	64	ug/l	
156-59-2	cis-1,2-Dichloroethylene	55 U [c]	200	55	ug/l	
156-60-5	trans-1,2-Dichloroethylene	44 U [c]	200	44	ug/l	
78-87-5	1,2-Dichloropropane	85 U [c]	200	85	ug/l	
10061-01-5	cis-1,3-Dichloropropene	58 U [c]	200	58	ug/l	
10061-02-6	trans-1,3-Dichloropropene	43 U [c]	200	43	ug/l	
100-41-4	Ethylbenzene	71 U [c]	200	71	ug/l	
76-13-1	Freon 113	96 U [c]	200	96	ug/l	
591-78-6	2-Hexanone	400 U [c]	2000	400	ug/l	
98-82-8	Isopropylbenzene	44 U [c]	200	44	ug/l	
79-20-9	Methyl Acetate	1000 U [c]	4000	1000	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0599-098.0-20211222		
Lab Sample ID:	FA91974-5	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	400 U [c]	1000	400	ug/l	
74-87-3	Methyl Chloride	100 U [c]	400	100	ug/l	
75-09-2	Methylene Chloride [d]	400 UJ [c]	1000	400	ug/l	J
108-10-1	4-Methyl-2-pentanone (MIBK)	200 U [c]	1000	200	ug/l	
1634-04-4	Methyl Tert Butyl Ether	46 U [c]	200	46	ug/l	
100-42-5	Styrene	44 U [c]	200	44	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	55 U [c]	200	55	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	60 U [c]	200	60	ug/l	
127-18-4	Tetrachloroethylene	43 U [c]	200	43	ug/l	
108-88-3	Toluene	60 U [c]	200	60	ug/l	
87-61-6	1,2,3-Trichlorobenzene	120 U [c]	400	120	ug/l	
120-82-1	1,2,4-Trichlorobenzene	100 U [c]	400	100	ug/l	
71-55-6	1,1,1-Trichloroethane	50 U [c]	200	50	ug/l	
79-00-5	1,1,2-Trichloroethane	93 U [c]	200	93	ug/l	
79-01-6	Trichloroethylene	200 U [c]	200	200	ug/l	
75-69-4	Trichlorofluoromethane [e]	100 U [c]	400	100	ug/l	
75-01-4	Vinyl Chloride	82 U [c]	200	82	ug/l	
1330-20-7	Xylene (total)	140 U [c]	600	140	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%	100%	83-118%
17060-07-0	1,2-Dichloroethane-D4	94%	97%	79-125%
2037-26-5	Toluene-D8	98%	95%	85-112%
460-00-4	4-Bromofluorobenzene	104%	101%	83-118%

(a) Sample was not preserved to a pH < 2. Confirmation run.
(b) Sample was not preserved to a pH < 2.
(c) Result is from Run# 2
(d) Associated CCV outside of control limits low.
(e) Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range
I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0595-008.0-20211222		
Lab Sample ID:	FA91974-6	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	2P84256.D	100	12/29/21 18:45	CF	n/a	n/a	V2P3362
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	1000 U	2500	1000	ug/l	
71-43-2	Benzene	31 U	100	31	ug/l	
74-97-5	Bromochloromethane	45 U	100	45	ug/l	
75-27-4	Bromodichloromethane	24 U	100	24	ug/l	
75-25-2	Bromoform	41 U	100	41	ug/l	
78-93-3	2-Butanone (MEK)	200 U	500	200	ug/l	
75-15-0	Carbon Disulfide [b]	53 UJ	200	53	ug/l	J
56-23-5	Carbon Tetrachloride	36 U	100	36	ug/l	
108-90-7	Chlorobenzene	20 U	100	20	ug/l	
75-00-3	Chloroethane	67 U	200	67	ug/l	
67-66-3	Chloroform	30 U	100	30	ug/l	
110-82-7	Cyclohexane	39 U	100	39	ug/l	
124-48-1	Dibromochloromethane	28 U	100	28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	100 U	500	100	ug/l	
106-93-4	1,2-Dibromoethane	28 U	200	28	ug/l	
75-71-8	Dichlorodifluoromethane	50 U	200	50	ug/l	
95-50-1	1,2-Dichlorobenzene	32 U	100	32	ug/l	
541-73-1	1,3-Dichlorobenzene	22 U	100	22	ug/l	
106-46-7	1,4-Dichlorobenzene	26 U	100	26	ug/l	
75-34-3	1,1-Dichloroethane	34 U	100	34	ug/l	
107-06-2	1,2-Dichloroethane	31 U	100	31	ug/l	
75-35-4	1,1-Dichloroethylene	32 U	100	32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	295	100	28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	22 U	100	22	ug/l	
78-87-5	1,2-Dichloropropane	43 U	100	43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	29 U	100	29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	21 U	100	21	ug/l	
100-41-4	Ethylbenzene	36 U	100	36	ug/l	
76-13-1	Freon 113	48 U	100	48	ug/l	
591-78-6	2-Hexanone	200 U	1000	200	ug/l	
98-82-8	Isopropylbenzene	22 U	100	22	ug/l	
79-20-9	Methyl Acetate	500 U	2000	500	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0595-008.0-20211222		
Lab Sample ID:	FA91974-6	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	200 U	500	200	ug/l	
74-87-3	Methyl Chloride	50 U	200	50	ug/l	
75-09-2	Methylene Chloride [b]	200 UJ	500	200	ug/l	J
108-10-1	4-Methyl-2-pentanone (MIBK)	100 U	500	100	ug/l	
1634-04-4	Methyl Tert Butyl Ether	23 U	100	23	ug/l	
100-42-5	Styrene	22 U	100	22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	28 U	100	28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	30 U	100	30	ug/l	
127-18-4	Tetrachloroethylene	22 U	100	22	ug/l	
108-88-3	Toluene	30 U	100	30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	61 U	200	61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	50 U	200	50	ug/l	
71-55-6	1,1,1-Trichloroethane	25 U	100	25	ug/l	
79-00-5	1,1,2-Trichloroethane	47 U	100	47	ug/l	
79-01-6	Trichloroethylene	4380	100	100	ug/l	
75-69-4	Trichlorofluoromethane [c]	50 U	200	50	ug/l	
75-01-4	Vinyl Chloride	41 U	100	41	ug/l	
1330-20-7	Xylene (total)	72 U	300	72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		83-118%
17060-07-0	1,2-Dichloroethane-D4	95%		79-125%
2037-26-5	Toluene-D8	95%		85-112%
460-00-4	4-Bromofluorobenzene	103%		83-118%

(a) Sample was not preserved to a pH < 2.
(b) Associated CCV outside of control limits low.
(c) Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: LC34-DPT0595-013.0-20211222
Lab Sample ID: FA91974-7
Matrix: AQ - Ground Water
Method: SW846 8260B
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Date Sampled: 12/22/21
Date Received: 12/22/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	2P84746.D	10	01/12/22 20:42	CF	n/a	n/a	V2P3374
Run #2 [b]	2P84258.D	100	12/29/21 19:17	CF	n/a	n/a	V2P3362

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	1000 U [c]	2500	1000	ug/l	
71-43-2	Benzene	31 U [c]	100	31	ug/l	
74-97-5	Bromochloromethane	45 U [c]	100	45	ug/l	
75-27-4	Bromodichloromethane	24 U [c]	100	24	ug/l	
75-25-2	Bromoform	41 U [c]	100	41	ug/l	
78-93-3	2-Butanone (MEK)	200 U [c]	500	200	ug/l	
75-15-0	Carbon Disulfide [d]	53 UJ [c]	200	53	ug/l	J
56-23-5	Carbon Tetrachloride	36 U [c]	100	36	ug/l	
108-90-7	Chlorobenzene	20 U [c]	100	20	ug/l	
75-00-3	Chloroethane	67 U [c]	200	67	ug/l	
67-66-3	Chloroform	30 U [c]	100	30	ug/l	
110-82-7	Cyclohexane	39 U [c]	100	39	ug/l	
124-48-1	Dibromochloromethane	28 U [c]	100	28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	100 U [c]	500	100	ug/l	
106-93-4	1,2-Dibromoethane	28 U [c]	200	28	ug/l	
75-71-8	Dichlorodifluoromethane	50 U [c]	200	50	ug/l	
95-50-1	1,2-Dichlorobenzene	32 U [c]	100	32	ug/l	
541-73-1	1,3-Dichlorobenzene	22 U [c]	100	22	ug/l	
106-46-7	1,4-Dichlorobenzene	26 U [c]	100	26	ug/l	
75-34-3	1,1-Dichloroethane	34 U [c]	100	34	ug/l	
107-06-2	1,2-Dichloroethane	31 U [c]	100	31	ug/l	
75-35-4	1,1-Dichloroethylene	32 U [c]	100	32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	219 [c]	100	28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	22 U [c]	100	22	ug/l	
78-87-5	1,2-Dichloropropane	43 U [c]	100	43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	29 U [c]	100	29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	21 U [c]	100	21	ug/l	
100-41-4	Ethylbenzene	36 U [c]	100	36	ug/l	
76-13-1	Freon 113	48 U [c]	100	48	ug/l	
591-78-6	2-Hexanone	200 U [c]	1000	200	ug/l	
98-82-8	Isopropylbenzene	22 U [c]	100	22	ug/l	
79-20-9	Methyl Acetate	500 U [c]	2000	500	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0595-013.0-20211222		
Lab Sample ID:	FA91974-7	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	200 U [c]	500	200	ug/l	
74-87-3	Methyl Chloride	50 U [c]	200	50	ug/l	
75-09-2	Methylene Chloride [d]	200 UJ [c]	500	200	ug/l	J
108-10-1	4-Methyl-2-pentanone (MIBK)	100 U [c]	500	100	ug/l	
1634-04-4	Methyl Tert Butyl Ether	23 U [c]	100	23	ug/l	
100-42-5	Styrene	22 U [c]	100	22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	28 U [c]	100	28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	30 U [c]	100	30	ug/l	
127-18-4	Tetrachloroethylene	22 U [c]	100	22	ug/l	
108-88-3	Toluene	30 U [c]	100	30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	61 U [c]	200	61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	50 U [c]	200	50	ug/l	
71-55-6	1,1,1-Trichloroethane	25 U [c]	100	25	ug/l	
79-00-5	1,1,2-Trichloroethane	47 U [c]	100	47	ug/l	
79-01-6	Trichloroethylene	965 [c]	100	100	ug/l	
75-69-4	Trichlorofluoromethane [e]	50 U [c]	200	50	ug/l	
75-01-4	Vinyl Chloride	41 U [c]	100	41	ug/l	
1330-20-7	Xylene (total)	72 U [c]	300	72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%	100%	83-118%
17060-07-0	1,2-Dichloroethane-D4	97%	99%	79-125%
2037-26-5	Toluene-D8	97%	94%	85-112%
460-00-4	4-Bromofluorobenzene	105%	103%	83-118%

(a) Sample was not preserved to a pH < 2. Confirmation run.
(b) Sample was not preserved to a pH < 2.
(c) Result is from Run# 2
(d) Associated CCV outside of control limits low.
(e) Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: LC34-DPT0595-018.0-20211222
Lab Sample ID: FA91974-8
Matrix: AQ - Ground Water
Method: SW846 8260B
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Date Sampled: 12/22/21
Date Received: 12/22/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	2P84726.D	1	01/12/22 15:27	CF	n/a	n/a	V2P3374
Run #2 [b]	2P84260.D	100	12/29/21 19:49	CF	n/a	n/a	V2P3362

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	1000 U [c]	2500	1000	ug/l	
71-43-2	Benzene	31 U [c]	100	31	ug/l	
74-97-5	Bromochloromethane	45 U [c]	100	45	ug/l	
75-27-4	Bromodichloromethane	24 U [c]	100	24	ug/l	
75-25-2	Bromoform	41 U [c]	100	41	ug/l	
78-93-3	2-Butanone (MEK)	200 U [c]	500	200	ug/l	
75-15-0	Carbon Disulfide [d]	53 UJ [c]	200	53	ug/l	J
56-23-5	Carbon Tetrachloride	36 U [c]	100	36	ug/l	
108-90-7	Chlorobenzene	20 U [c]	100	20	ug/l	
75-00-3	Chloroethane	67 U [c]	200	67	ug/l	
67-66-3	Chloroform	30 U [c]	100	30	ug/l	
110-82-7	Cyclohexane	39 U [c]	100	39	ug/l	
124-48-1	Dibromochloromethane	28 U [c]	100	28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	100 U [c]	500	100	ug/l	
106-93-4	1,2-Dibromoethane	28 U [c]	200	28	ug/l	
75-71-8	Dichlorodifluoromethane	50 U [c]	200	50	ug/l	
95-50-1	1,2-Dichlorobenzene	32 U [c]	100	32	ug/l	
541-73-1	1,3-Dichlorobenzene	22 U [c]	100	22	ug/l	
106-46-7	1,4-Dichlorobenzene	26 U [c]	100	26	ug/l	
75-34-3	1,1-Dichloroethane	34 U [c]	100	34	ug/l	
107-06-2	1,2-Dichloroethane	31 U [c]	100	31	ug/l	
75-35-4	1,1-Dichloroethylene	32 U [c]	100	32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	55.2 [c]	100	28	ug/l	I
156-60-5	trans-1,2-Dichloroethylene	22 U [c]	100	22	ug/l	
78-87-5	1,2-Dichloropropane	43 U [c]	100	43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	29 U [c]	100	29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	21 U [c]	100	21	ug/l	
100-41-4	Ethylbenzene	36 U [c]	100	36	ug/l	
76-13-1	Freon 113	48 U [c]	100	48	ug/l	
591-78-6	2-Hexanone	200 U [c]	1000	200	ug/l	
98-82-8	Isopropylbenzene	22 U [c]	100	22	ug/l	
79-20-9	Methyl Acetate	500 U [c]	2000	500	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0595-018.0-20211222		
Lab Sample ID:	FA91974-8	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	200 U [c]	500	200	ug/l	
74-87-3	Methyl Chloride	50 U [c]	200	50	ug/l	
75-09-2	Methylene Chloride [d]	200 UJ [c]	500	200	ug/l	J
108-10-1	4-Methyl-2-pentanone (MIBK)	100 U [c]	500	100	ug/l	
1634-04-4	Methyl Tert Butyl Ether	23 U [c]	100	23	ug/l	
100-42-5	Styrene	22 U [c]	100	22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	28 U [c]	100	28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	30 U [c]	100	30	ug/l	
127-18-4	Tetrachloroethylene	22 U [c]	100	22	ug/l	
108-88-3	Toluene	30 U [c]	100	30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	61 U [c]	200	61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	50 U [c]	200	50	ug/l	
71-55-6	1,1,1-Trichloroethane	25 U [c]	100	25	ug/l	
79-00-5	1,1,2-Trichloroethane	47 U [c]	100	47	ug/l	
79-01-6	Trichloroethylene	100 U [c]	100	100	ug/l	
75-69-4	Trichlorofluoromethane [e]	50 U [c]	200	50	ug/l	
75-01-4	Vinyl Chloride	41 U [c]	100	41	ug/l	
1330-20-7	Xylene (total)	72 U [c]	300	72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%	98%	83-118%
17060-07-0	1,2-Dichloroethane-D4	94%	100%	79-125%
2037-26-5	Toluene-D8	97%	95%	85-112%
460-00-4	4-Bromofluorobenzene	105%	101%	83-118%

(a) Sample was not preserved to a pH < 2. Confirmation run.
(b) Sample was not preserved to a pH < 2.
(c) Result is from Run# 2
(d) Associated CCV outside of control limits low.
(e) Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: LC34-DPT0595-023.0-20211222
Lab Sample ID: FA91974-9
Matrix: AQ - Ground Water
Method: SW846 8260B
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Date Sampled: 12/22/21
Date Received: 12/22/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	2P84728.D	1	01/12/22 15:59	CF	n/a	n/a	V2P3374
Run #2 [b]	2P84262.D	100	12/29/21 20:20	CF	n/a	n/a	V2P3362

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	1000 U [c]	2500	1000	ug/l	
71-43-2	Benzene	31 U [c]	100	31	ug/l	
74-97-5	Bromochloromethane	45 U [c]	100	45	ug/l	
75-27-4	Bromodichloromethane	24 U [c]	100	24	ug/l	
75-25-2	Bromoform	41 U [c]	100	41	ug/l	
78-93-3	2-Butanone (MEK)	200 U [c]	500	200	ug/l	
75-15-0	Carbon Disulfide [d]	53 UJ [c]	200	53	ug/l	J
56-23-5	Carbon Tetrachloride	36 U [c]	100	36	ug/l	
108-90-7	Chlorobenzene	20 U [c]	100	20	ug/l	
75-00-3	Chloroethane	67 U [c]	200	67	ug/l	
67-66-3	Chloroform	30 U [c]	100	30	ug/l	
110-82-7	Cyclohexane	39 U [c]	100	39	ug/l	
124-48-1	Dibromochloromethane	28 U [c]	100	28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	100 U [c]	500	100	ug/l	
106-93-4	1,2-Dibromoethane	28 U [c]	200	28	ug/l	
75-71-8	Dichlorodifluoromethane	50 U [c]	200	50	ug/l	
95-50-1	1,2-Dichlorobenzene	32 U [c]	100	32	ug/l	
541-73-1	1,3-Dichlorobenzene	22 U [c]	100	22	ug/l	
106-46-7	1,4-Dichlorobenzene	26 U [c]	100	26	ug/l	
75-34-3	1,1-Dichloroethane	34 U [c]	100	34	ug/l	
107-06-2	1,2-Dichloroethane	31 U [c]	100	31	ug/l	
75-35-4	1,1-Dichloroethylene	32 U [c]	100	32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	28 U [c]	100	28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	22 U [c]	100	22	ug/l	
78-87-5	1,2-Dichloropropane	43 U [c]	100	43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	29 U [c]	100	29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	21 U [c]	100	21	ug/l	
100-41-4	Ethylbenzene	36 U [c]	100	36	ug/l	
76-13-1	Freon 113	48 U [c]	100	48	ug/l	
591-78-6	2-Hexanone	200 U [c]	1000	200	ug/l	
98-82-8	Isopropylbenzene	22 U [c]	100	22	ug/l	
79-20-9	Methyl Acetate	500 U [c]	2000	500	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0595-023.0-20211222		
Lab Sample ID:	FA91974-9	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	200 U [c]	500	200	ug/l	
74-87-3	Methyl Chloride	50 U [c]	200	50	ug/l	
75-09-2	Methylene Chloride [d]	200 UJ [c]	500	200	ug/l	J
108-10-1	4-Methyl-2-pentanone (MIBK)	100 U [c]	500	100	ug/l	
1634-04-4	Methyl Tert Butyl Ether	23 U [c]	100	23	ug/l	
100-42-5	Styrene	22 U [c]	100	22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	28 U [c]	100	28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	30 U [c]	100	30	ug/l	
127-18-4	Tetrachloroethylene	22 U [c]	100	22	ug/l	
108-88-3	Toluene	30 U [c]	100	30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	61 U [c]	200	61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	50 U [c]	200	50	ug/l	
71-55-6	1,1,1-Trichloroethane	25 U [c]	100	25	ug/l	
79-00-5	1,1,2-Trichloroethane	47 U [c]	100	47	ug/l	
79-01-6	Trichloroethylene	100 U [c]	100	100	ug/l	
75-69-4	Trichlorofluoromethane [e]	50 U [c]	200	50	ug/l	
75-01-4	Vinyl Chloride	41 U [c]	100	41	ug/l	
1330-20-7	Xylene (total)	72 U [c]	300	72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%	101%	83-118%
17060-07-0	1,2-Dichloroethane-D4	95%	95%	79-125%
2037-26-5	Toluene-D8	97%	95%	85-112%
460-00-4	4-Bromofluorobenzene	104%	102%	83-118%

(a) Sample was not preserved to a pH < 2. Sample vial(s) contained bubbles greater than 6mm. Confirmation run.
(b) Sample was not preserved to a pH < 2. Sample vial(s) contained bubbles greater than 6mm.
(c) Result is from Run# 2
(d) Associated CCV outside of control limits low.
(e) Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range
I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0595-028.0-20211222		
Lab Sample ID:	FA91974-10	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	2P84730.D	1	01/12/22 16:31	CF	n/a	n/a	V2P3374
Run #2 [b]	2P84264.D	100	12/29/21 20:52	CF	n/a	n/a	V2P3362

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	1000 U [c]	2500	1000	ug/l	
71-43-2	Benzene	31 U [c]	100	31	ug/l	
74-97-5	Bromochloromethane	45 U [c]	100	45	ug/l	
75-27-4	Bromodichloromethane	24 U [c]	100	24	ug/l	
75-25-2	Bromoform	41 U [c]	100	41	ug/l	
78-93-3	2-Butanone (MEK)	200 U [c]	500	200	ug/l	
75-15-0	Carbon Disulfide [d]	53 UJ [c]	200	53	ug/l	J
56-23-5	Carbon Tetrachloride	36 U [c]	100	36	ug/l	
108-90-7	Chlorobenzene	20 U [c]	100	20	ug/l	
75-00-3	Chloroethane	67 U [c]	200	67	ug/l	
67-66-3	Chloroform	30 U [c]	100	30	ug/l	
110-82-7	Cyclohexane	39 U [c]	100	39	ug/l	
124-48-1	Dibromochloromethane	28 U [c]	100	28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	100 U [c]	500	100	ug/l	
106-93-4	1,2-Dibromoethane	28 U [c]	200	28	ug/l	
75-71-8	Dichlorodifluoromethane	50 U [c]	200	50	ug/l	
95-50-1	1,2-Dichlorobenzene	32 U [c]	100	32	ug/l	
541-73-1	1,3-Dichlorobenzene	22 U [c]	100	22	ug/l	
106-46-7	1,4-Dichlorobenzene	26 U [c]	100	26	ug/l	
75-34-3	1,1-Dichloroethane	34 U [c]	100	34	ug/l	
107-06-2	1,2-Dichloroethane	31 U [c]	100	31	ug/l	
75-35-4	1,1-Dichloroethylene	32 U [c]	100	32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	28 U [c]	100	28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	22 U [c]	100	22	ug/l	
78-87-5	1,2-Dichloropropane	43 U [c]	100	43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	29 U [c]	100	29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	21 U [c]	100	21	ug/l	
100-41-4	Ethylbenzene	36 U [c]	100	36	ug/l	
76-13-1	Freon 113	48 U [c]	100	48	ug/l	
591-78-6	2-Hexanone	200 U [c]	1000	200	ug/l	
98-82-8	Isopropylbenzene	22 U [c]	100	22	ug/l	
79-20-9	Methyl Acetate	500 U [c]	2000	500	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0595-028.0-20211222		
Lab Sample ID:	FA91974-10	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	200 U [c]	500	200	ug/l	
74-87-3	Methyl Chloride	50 U [c]	200	50	ug/l	
75-09-2	Methylene Chloride [d]	200 UJ [c]	500	200	ug/l	J
108-10-1	4-Methyl-2-pentanone (MIBK)	100 U [c]	500	100	ug/l	
1634-04-4	Methyl Tert Butyl Ether	23 U [c]	100	23	ug/l	
100-42-5	Styrene	22 U [c]	100	22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	28 U [c]	100	28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	30 U [c]	100	30	ug/l	
127-18-4	Tetrachloroethylene	22 U [c]	100	22	ug/l	
108-88-3	Toluene	30 U [c]	100	30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	61 U [c]	200	61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	50 U [c]	200	50	ug/l	
71-55-6	1,1,1-Trichloroethane	25 U [c]	100	25	ug/l	
79-00-5	1,1,2-Trichloroethane	47 U [c]	100	47	ug/l	
79-01-6	Trichloroethylene	100 U [c]	100	100	ug/l	
75-69-4	Trichlorofluoromethane [e]	50 U [c]	200	50	ug/l	
75-01-4	Vinyl Chloride	41 U [c]	100	41	ug/l	
1330-20-7	Xylene (total)	72 U [c]	300	72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%	100%	83-118%
17060-07-0	1,2-Dichloroethane-D4	96%	103%	79-125%
2037-26-5	Toluene-D8	97%	96%	85-112%
460-00-4	4-Bromofluorobenzene	104%	101%	83-118%

(a) Sample was not preserved to a pH < 2. Confirmation run.
(b) Sample was not preserved to a pH < 2.
(c) Result is from Run# 2
(d) Associated CCV outside of control limits low.
(e) Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0595-033.0-20211222		
Lab Sample ID:	FA91974-11	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	2P84748.D	10	01/12/22 21:13	CF	n/a	n/a	V2P3374
Run #2 [b]	2P84266.D	2000	12/29/21 21:24	CF	n/a	n/a	V2P3362

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	20000 U [c]	50000	20000	ug/l	
71-43-2	Benzene	620 U [c]	2000	620	ug/l	
74-97-5	Bromochloromethane	900 U [c]	2000	900	ug/l	
75-27-4	Bromodichloromethane	480 U [c]	2000	480	ug/l	
75-25-2	Bromoform	810 U [c]	2000	810	ug/l	
78-93-3	2-Butanone (MEK)	4000 U [c]	10000	4000	ug/l	
75-15-0	Carbon Disulfide [d]	1100 UJ [c]	4000	1100	ug/l	J
56-23-5	Carbon Tetrachloride	710 U [c]	2000	710	ug/l	
108-90-7	Chlorobenzene	400 U [c]	2000	400	ug/l	
75-00-3	Chloroethane	1300 U [c]	4000	1300	ug/l	
67-66-3	Chloroform	600 U [c]	2000	600	ug/l	
110-82-7	Cyclohexane	780 U [c]	2000	780	ug/l	
124-48-1	Dibromochloromethane	550 U [c]	2000	550	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	2100 U [c]	10000	2100	ug/l	
106-93-4	1,2-Dibromoethane	550 U [c]	4000	550	ug/l	
75-71-8	Dichlorodifluoromethane	1000 U [c]	4000	1000	ug/l	
95-50-1	1,2-Dichlorobenzene	650 U [c]	2000	650	ug/l	
541-73-1	1,3-Dichlorobenzene	430 U [c]	2000	430	ug/l	
106-46-7	1,4-Dichlorobenzene	510 U [c]	2000	510	ug/l	
75-34-3	1,1-Dichloroethane	680 U [c]	2000	680	ug/l	
107-06-2	1,2-Dichloroethane	620 U [c]	2000	620	ug/l	
75-35-4	1,1-Dichloroethylene	640 U [c]	2000	640	ug/l	
156-59-2	cis-1,2-Dichloroethylene	550 U [c]	2000	550	ug/l	
156-60-5	trans-1,2-Dichloroethylene	440 U [c]	2000	440	ug/l	
78-87-5	1,2-Dichloropropane	850 U [c]	2000	850	ug/l	
10061-01-5	cis-1,3-Dichloropropene	580 U [c]	2000	580	ug/l	
10061-02-6	trans-1,3-Dichloropropene	430 U [c]	2000	430	ug/l	
100-41-4	Ethylbenzene	710 U [c]	2000	710	ug/l	
76-13-1	Freon 113	960 U [c]	2000	960	ug/l	
591-78-6	2-Hexanone	4000 U [c]	20000	4000	ug/l	
98-82-8	Isopropylbenzene	440 U [c]	2000	440	ug/l	
79-20-9	Methyl Acetate	10000 U [c]	40000	10000	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0595-033.0-20211222		
Lab Sample ID:	FA91974-11	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	4000 U [c]	10000	4000	ug/l	
74-87-3	Methyl Chloride	1000 U [c]	4000	1000	ug/l	
75-09-2	Methylene Chloride [d]	4000 UJ [c]	10000	4000	ug/l	J
108-10-1	4-Methyl-2-pentanone (MIBK)	2000 U [c]	10000	2000	ug/l	
1634-04-4	Methyl Tert Butyl Ether	460 U [c]	2000	460	ug/l	
100-42-5	Styrene	440 U [c]	2000	440	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	550 U [c]	2000	550	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	600 U [c]	2000	600	ug/l	
127-18-4	Tetrachloroethylene	430 U [c]	2000	430	ug/l	
108-88-3	Toluene	600 U [c]	2000	600	ug/l	
87-61-6	1,2,3-Trichlorobenzene	1200 U [c]	4000	1200	ug/l	
120-82-1	1,2,4-Trichlorobenzene	1000 U [c]	4000	1000	ug/l	
71-55-6	1,1,1-Trichloroethane	500 U [c]	2000	500	ug/l	
79-00-5	1,1,2-Trichloroethane	930 U [c]	2000	930	ug/l	
79-01-6	Trichloroethylene	1000 U [c]	2000	1000	ug/l	
75-69-4	Trichlorofluoromethane [e]	1000 U [c]	4000	1000	ug/l	
75-01-4	Vinyl Chloride	820 U [c]	2000	820	ug/l	
1330-20-7	Xylene (total)	1400 U [c]	6000	1400	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%	100%	83-118%
17060-07-0	1,2-Dichloroethane-D4	96%	98%	79-125%
2037-26-5	Toluene-D8	97%	94%	85-112%
460-00-4	4-Bromofluorobenzene	106%	102%	83-118%

(a) Sample was not preserved to a pH < 2. Confirmation run.
(b) Sample was not preserved to a pH < 2.
(c) Result is from Run# 2
(d) Associated CCV outside of control limits low.
(e) Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0595-038.0-20211222		
Lab Sample ID:	FA91974-12	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	2P84750.D	250	01/12/22 21:45	CF	n/a	n/a	V2P3374
Run #2 [b]	2P84268.D	20000	12/29/21 21:55	CF	n/a	n/a	V2P3362

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	200000 U [c]	500000	200000	ug/l	
71-43-2	Benzene	6200 U [c]	20000	6200	ug/l	
74-97-5	Bromochloromethane	9000 U [c]	20000	9000	ug/l	
75-27-4	Bromodichloromethane	4800 U [c]	20000	4800	ug/l	
75-25-2	Bromoform	8100 U [c]	20000	8100	ug/l	
78-93-3	2-Butanone (MEK)	40000 U [c]	100000	40000	ug/l	
75-15-0	Carbon Disulfide [d]	11000 UJ [c]	40000	11000	ug/l	J
56-23-5	Carbon Tetrachloride	7100 U [c]	20000	7100	ug/l	
108-90-7	Chlorobenzene	4000 U [c]	20000	4000	ug/l	
75-00-3	Chloroethane	13000 U [c]	40000	13000	ug/l	
67-66-3	Chloroform	6000 U [c]	20000	6000	ug/l	
110-82-7	Cyclohexane	7800 U [c]	20000	7800	ug/l	
124-48-1	Dibromochloromethane	5500 U [c]	20000	5500	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	21000 U [c]	100000	21000	ug/l	
106-93-4	1,2-Dibromoethane	5500 U [c]	40000	5500	ug/l	
75-71-8	Dichlorodifluoromethane	10000 U [c]	40000	10000	ug/l	
95-50-1	1,2-Dichlorobenzene	6500 U [c]	20000	6500	ug/l	
541-73-1	1,3-Dichlorobenzene	4300 U [c]	20000	4300	ug/l	
106-46-7	1,4-Dichlorobenzene	5100 U [c]	20000	5100	ug/l	
75-34-3	1,1-Dichloroethane	6800 U [c]	20000	6800	ug/l	
107-06-2	1,2-Dichloroethane	6200 U [c]	20000	6200	ug/l	
75-35-4	1,1-Dichloroethylene	6400 U [c]	20000	6400	ug/l	
156-59-2	cis-1,2-Dichloroethylene	23300 [c]	20000	5500	ug/l	
156-60-5	trans-1,2-Dichloroethylene	4400 U [c]	20000	4400	ug/l	
78-87-5	1,2-Dichloropropane	8500 U [c]	20000	8500	ug/l	
10061-01-5	cis-1,3-Dichloropropene	5800 U [c]	20000	5800	ug/l	
10061-02-6	trans-1,3-Dichloropropene	4300 U [c]	20000	4300	ug/l	
100-41-4	Ethylbenzene	7100 U [c]	20000	7100	ug/l	
76-13-1	Freon 113	9600 U [c]	20000	9600	ug/l	
591-78-6	2-Hexanone	40000 U [c]	200000	40000	ug/l	
98-82-8	Isopropylbenzene	4400 U [c]	20000	4400	ug/l	
79-20-9	Methyl Acetate	100000 U [c]	400000	100000	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0595-038.0-20211222		
Lab Sample ID:	FA91974-12	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	40000 U [c]	100000	40000	ug/l	
74-87-3	Methyl Chloride	10000 U [c]	40000	10000	ug/l	
75-09-2	Methylene Chloride [d]	40000 UJ [c]	100000	40000	ug/l	J
108-10-1	4-Methyl-2-pentanone (MIBK)	20000 U [c]	100000	20000	ug/l	
1634-04-4	Methyl Tert Butyl Ether	4600 U [c]	20000	4600	ug/l	
100-42-5	Styrene	4400 U [c]	20000	4400	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	5500 U [c]	20000	5500	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	6000 U [c]	20000	6000	ug/l	
127-18-4	Tetrachloroethylene	4300 U [c]	20000	4300	ug/l	
108-88-3	Toluene	6000 U [c]	20000	6000	ug/l	
87-61-6	1,2,3-Trichlorobenzene	12000 U [c]	40000	12000	ug/l	
120-82-1	1,2,4-Trichlorobenzene	10000 U [c]	40000	10000	ug/l	
71-55-6	1,1,1-Trichloroethane	5000 U [c]	20000	5000	ug/l	
79-00-5	1,1,2-Trichloroethane	9300 U [c]	20000	9300	ug/l	
79-01-6	Trichloroethylene	10000 U [c]	20000	10000	ug/l	
75-69-4	Trichlorofluoromethane [e]	10000 U [c]	40000	10000	ug/l	
75-01-4	Vinyl Chloride	22700 [c]	20000	8200	ug/l	
1330-20-7	Xylene (total)	14000 U [c]	60000	14000	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%	99%	83-118%
17060-07-0	1,2-Dichloroethane-D4	94%	98%	79-125%
2037-26-5	Toluene-D8	96%	95%	85-112%
460-00-4	4-Bromofluorobenzene	105%	101%	83-118%

(a) Sample was not preserved to a pH < 2. Confirmation run.
(b) Sample was not preserved to a pH < 2.
(c) Result is from Run# 2
(d) Associated CCV outside of control limits low.
(e) Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0595-043.0-20211222		
Lab Sample ID:	FA91974-13	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	2P84270.D	1000	12/29/21 22:27	CF	n/a	n/a	V2P3362
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	10000 U	25000	10000	ug/l	
71-43-2	Benzene	310 U	1000	310	ug/l	
74-97-5	Bromochloromethane	450 U	1000	450	ug/l	
75-27-4	Bromodichloromethane	240 U	1000	240	ug/l	
75-25-2	Bromoform	410 U	1000	410	ug/l	
78-93-3	2-Butanone (MEK)	2000 U	5000	2000	ug/l	
75-15-0	Carbon Disulfide [b]	530 UJ	2000	530	ug/l	J
56-23-5	Carbon Tetrachloride	360 U	1000	360	ug/l	
108-90-7	Chlorobenzene	200 U	1000	200	ug/l	
75-00-3	Chloroethane	670 U	2000	670	ug/l	
67-66-3	Chloroform	300 U	1000	300	ug/l	
110-82-7	Cyclohexane	390 U	1000	390	ug/l	
124-48-1	Dibromochloromethane	280 U	1000	280	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1000 U	5000	1000	ug/l	
106-93-4	1,2-Dibromoethane	280 U	2000	280	ug/l	
75-71-8	Dichlorodifluoromethane	500 U	2000	500	ug/l	
95-50-1	1,2-Dichlorobenzene	320 U	1000	320	ug/l	
541-73-1	1,3-Dichlorobenzene	220 U	1000	220	ug/l	
106-46-7	1,4-Dichlorobenzene	260 U	1000	260	ug/l	
75-34-3	1,1-Dichloroethane	340 U	1000	340	ug/l	
107-06-2	1,2-Dichloroethane	310 U	1000	310	ug/l	
75-35-4	1,1-Dichloroethylene	320 U	1000	320	ug/l	
156-59-2	cis-1,2-Dichloroethylene	65200	1000	280	ug/l	
156-60-5	trans-1,2-Dichloroethylene	220 U	1000	220	ug/l	
78-87-5	1,2-Dichloropropane	430 U	1000	430	ug/l	
10061-01-5	cis-1,3-Dichloropropene	290 U	1000	290	ug/l	
10061-02-6	trans-1,3-Dichloropropene	210 U	1000	210	ug/l	
100-41-4	Ethylbenzene	360 U	1000	360	ug/l	
76-13-1	Freon 113	480 U	1000	480	ug/l	
591-78-6	2-Hexanone	2000 U	10000	2000	ug/l	
98-82-8	Isopropylbenzene	220 U	1000	220	ug/l	
79-20-9	Methyl Acetate	5000 U	20000	5000	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0595-043.0-20211222		
Lab Sample ID:	FA91974-13	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	2000 U	5000	2000	ug/l	
74-87-3	Methyl Chloride	500 U	2000	500	ug/l	
75-09-2	Methylene Chloride [b]	2000 UJ	5000	2000	ug/l	J
108-10-1	4-Methyl-2-pentanone (MIBK)	1000 U	5000	1000	ug/l	
1634-04-4	Methyl Tert Butyl Ether	230 U	1000	230	ug/l	
100-42-5	Styrene	220 U	1000	220	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	280 U	1000	280	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	300 U	1000	300	ug/l	
127-18-4	Tetrachloroethylene	220 U	1000	220	ug/l	
108-88-3	Toluene	300 U	1000	300	ug/l	
87-61-6	1,2,3-Trichlorobenzene	610 U	2000	610	ug/l	
120-82-1	1,2,4-Trichlorobenzene	500 U	2000	500	ug/l	
71-55-6	1,1,1-Trichloroethane	250 U	1000	250	ug/l	
79-00-5	1,1,2-Trichloroethane	470 U	1000	470	ug/l	
79-01-6	Trichloroethylene	500 U	1000	500	ug/l	
75-69-4	Trichlorofluoromethane [c]	500 U	2000	500	ug/l	
75-01-4	Vinyl Chloride	33100	1000	410	ug/l	
1330-20-7	Xylene (total)	720 U	3000	720	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		83-118%
17060-07-0	1,2-Dichloroethane-D4	98%		79-125%
2037-26-5	Toluene-D8	94%		85-112%
460-00-4	4-Bromofluorobenzene	99%		83-118%

(a) Sample was not preserved to a pH < 2.
(b) Associated CCV outside of control limits low.
(c) Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0596-043.0-20211221		
Lab Sample ID:	FA91974-14	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	I73048.D	2000	12/28/21 21:00	LR	n/a	n/a	VI2417
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	20000 U	50000	20000	ug/l	
71-43-2	Benzene	620 U	2000	620	ug/l	
74-97-5	Bromochloromethane	900 U	2000	900	ug/l	
75-27-4	Bromodichloromethane	480 U	2000	480	ug/l	
75-25-2	Bromoform	810 U	2000	810	ug/l	
78-93-3	2-Butanone (MEK)	4000 U	10000	4000	ug/l	
75-15-0	Carbon Disulfide	1100 U	4000	1100	ug/l	
56-23-5	Carbon Tetrachloride	710 U	2000	710	ug/l	
108-90-7	Chlorobenzene	400 U	2000	400	ug/l	
75-00-3	Chloroethane [b]	1300 U	4000	1300	ug/l	
67-66-3	Chloroform	600 U	2000	600	ug/l	
110-82-7	Cyclohexane	780 U	2000	780	ug/l	
124-48-1	Dibromochloromethane	550 U	2000	550	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	2100 U	10000	2100	ug/l	
106-93-4	1,2-Dibromoethane	550 U	4000	550	ug/l	
75-71-8	Dichlorodifluoromethane	1000 U	4000	1000	ug/l	
95-50-1	1,2-Dichlorobenzene	650 U	2000	650	ug/l	
541-73-1	1,3-Dichlorobenzene	430 U	2000	430	ug/l	
106-46-7	1,4-Dichlorobenzene	510 U	2000	510	ug/l	
75-34-3	1,1-Dichloroethane	680 U	2000	680	ug/l	
107-06-2	1,2-Dichloroethane	620 U	2000	620	ug/l	
75-35-4	1,1-Dichloroethylene	640 U	2000	640	ug/l	
156-59-2	cis-1,2-Dichloroethylene	71200	2000	550	ug/l	
156-60-5	trans-1,2-Dichloroethylene	2610	2000	440	ug/l	
78-87-5	1,2-Dichloropropane	850 U	2000	850	ug/l	
10061-01-5	cis-1,3-Dichloropropene	580 U	2000	580	ug/l	
10061-02-6	trans-1,3-Dichloropropene	430 U	2000	430	ug/l	
100-41-4	Ethylbenzene	710 U	2000	710	ug/l	
76-13-1	Freon 113	960 U	2000	960	ug/l	
591-78-6	2-Hexanone	4000 U	20000	4000	ug/l	
98-82-8	Isopropylbenzene	440 U	2000	440	ug/l	
79-20-9	Methyl Acetate	10000 U	40000	10000	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0596-043.0-20211221		
Lab Sample ID:	FA91974-14	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide [c]	4000 UJ	10000	4000	ug/l	J
74-87-3	Methyl Chloride	1000 U	4000	1000	ug/l	
75-09-2	Methylene Chloride	4000 U	10000	4000	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	2000 U	10000	2000	ug/l	
1634-04-4	Methyl Tert Butyl Ether	460 U	2000	460	ug/l	
100-42-5	Styrene	440 U	2000	440	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	550 U	2000	550	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	600 U	2000	600	ug/l	
127-18-4	Tetrachloroethylene	430 U	2000	430	ug/l	
108-88-3	Toluene	600 U	2000	600	ug/l	
87-61-6	1,2,3-Trichlorobenzene	1200 U	4000	1200	ug/l	
120-82-1	1,2,4-Trichlorobenzene	1000 U	4000	1000	ug/l	
71-55-6	1,1,1-Trichloroethane	500 U	2000	500	ug/l	
79-00-5	1,1,2-Trichloroethane	930 U	2000	930	ug/l	
79-01-6	Trichloroethylene	52200	2000	690	ug/l	
75-69-4	Trichlorofluoromethane	1000 U	4000	1000	ug/l	
75-01-4	Vinyl Chloride	4250	2000	820	ug/l	
1330-20-7	Xylene (total)	1400 U	6000	1400	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		83-118%
17060-07-0	1,2-Dichloroethane-D4	117%		79-125%
2037-26-5	Toluene-D8	94%		85-112%
460-00-4	4-Bromofluorobenzene	93%		83-118%

(a) Sample was not preserved to a pH < 2.
(b) Associated CCV outside of control limits high, sample was ND.
(c) Associated CCV outside of control limits low.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0596-048.0-20211221		
Lab Sample ID:	FA91974-15	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	I73049.D	50000	12/28/21 21:24	LR	n/a	n/a	VI2417
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	500000 U	1300000	500000	ug/l	
71-43-2	Benzene	16000 U	50000	16000	ug/l	
74-97-5	Bromochloromethane	23000 U	50000	23000	ug/l	
75-27-4	Bromodichloromethane	12000 U	50000	12000	ug/l	
75-25-2	Bromoform	20000 U	50000	20000	ug/l	
78-93-3	2-Butanone (MEK)	100000 U	250000	100000	ug/l	
75-15-0	Carbon Disulfide	27000 U	100000	27000	ug/l	
56-23-5	Carbon Tetrachloride	18000 U	50000	18000	ug/l	
108-90-7	Chlorobenzene	10000 U	50000	10000	ug/l	
75-00-3	Chloroethane [b]	33000 U	100000	33000	ug/l	
67-66-3	Chloroform	15000 U	50000	15000	ug/l	
110-82-7	Cyclohexane	20000 U	50000	20000	ug/l	
124-48-1	Dibromochloromethane	14000 U	50000	14000	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	52000 U	250000	52000	ug/l	
106-93-4	1,2-Dibromoethane	14000 U	100000	14000	ug/l	
75-71-8	Dichlorodifluoromethane	25000 U	100000	25000	ug/l	
95-50-1	1,2-Dichlorobenzene	16000 U	50000	16000	ug/l	
541-73-1	1,3-Dichlorobenzene	11000 U	50000	11000	ug/l	
106-46-7	1,4-Dichlorobenzene	13000 U	50000	13000	ug/l	
75-34-3	1,1-Dichloroethane	17000 U	50000	17000	ug/l	
107-06-2	1,2-Dichloroethane	16000 U	50000	16000	ug/l	
75-35-4	1,1-Dichloroethylene	16000 U	50000	16000	ug/l	
156-59-2	cis-1,2-Dichloroethylene	255000	50000	14000	ug/l	
156-60-5	trans-1,2-Dichloroethylene	11000 U	50000	11000	ug/l	
78-87-5	1,2-Dichloropropane	21000 U	50000	21000	ug/l	
10061-01-5	cis-1,3-Dichloropropene	15000 U	50000	15000	ug/l	
10061-02-6	trans-1,3-Dichloropropene	11000 U	50000	11000	ug/l	
100-41-4	Ethylbenzene	18000 U	50000	18000	ug/l	
76-13-1	Freon 113	24000 U	50000	24000	ug/l	
591-78-6	2-Hexanone	100000 U	500000	100000	ug/l	
98-82-8	Isopropylbenzene	11000 U	50000	11000	ug/l	
79-20-9	Methyl Acetate	250000 U	1000000	250000	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0596-048.0-20211221		
Lab Sample ID:	FA91974-15	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide [c]	100000 UJ	250000	100000	ug/l	J
74-87-3	Methyl Chloride	25000 U	100000	25000	ug/l	
75-09-2	Methylene Chloride	100000 U	250000	100000	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	50000 U	250000	50000	ug/l	
1634-04-4	Methyl Tert Butyl Ether	11000 U	50000	11000	ug/l	
100-42-5	Styrene	11000 U	50000	11000	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	14000 U	50000	14000	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	15000 U	50000	15000	ug/l	
127-18-4	Tetrachloroethylene	11000 U	50000	11000	ug/l	
108-88-3	Toluene	15000 U	50000	15000	ug/l	
87-61-6	1,2,3-Trichlorobenzene	31000 U	100000	31000	ug/l	
120-82-1	1,2,4-Trichlorobenzene	25000 U	100000	25000	ug/l	
71-55-6	1,1,1-Trichloroethane	12000 U	50000	12000	ug/l	
79-00-5	1,1,2-Trichloroethane	23000 U	50000	23000	ug/l	
79-01-6	Trichloroethylene	2030000	50000	17000	ug/l	
75-69-4	Trichlorofluoromethane	25000 U	100000	25000	ug/l	
75-01-4	Vinyl Chloride	26800	50000	20000	ug/l	I
1330-20-7	Xylene (total)	36000 U	150000	36000	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		83-118%
17060-07-0	1,2-Dichloroethane-D4	118%		79-125%
2037-26-5	Toluene-D8	94%		85-112%
460-00-4	4-Bromofluorobenzene	92%		83-118%

(a) Sample was not preserved to a pH < 2.
(b) Associated CCV outside of control limits high, sample was ND.
(c) Associated CCV outside of control limits low.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0596-053.0-20211221		
Lab Sample ID:	FA91974-16	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	I73050.D	5000	12/28/21 21:48	LR	n/a	n/a	VI2417
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	50000 U	130000	50000	ug/l	
71-43-2	Benzene	1600 U	5000	1600	ug/l	
74-97-5	Bromochloromethane	2300 U	5000	2300	ug/l	
75-27-4	Bromodichloromethane	1200 U	5000	1200	ug/l	
75-25-2	Bromoform	2000 U	5000	2000	ug/l	
78-93-3	2-Butanone (MEK)	10000 U	25000	10000	ug/l	
75-15-0	Carbon Disulfide	2700 U	10000	2700	ug/l	
56-23-5	Carbon Tetrachloride	1800 U	5000	1800	ug/l	
108-90-7	Chlorobenzene	1000 U	5000	1000	ug/l	
75-00-3	Chloroethane [b]	3300 U	10000	3300	ug/l	
67-66-3	Chloroform	1500 U	5000	1500	ug/l	
110-82-7	Cyclohexane	2000 U	5000	2000	ug/l	
124-48-1	Dibromochloromethane	1400 U	5000	1400	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	5200 U	25000	5200	ug/l	
106-93-4	1,2-Dibromoethane	1400 U	10000	1400	ug/l	
75-71-8	Dichlorodifluoromethane	2500 U	10000	2500	ug/l	
95-50-1	1,2-Dichlorobenzene	1600 U	5000	1600	ug/l	
541-73-1	1,3-Dichlorobenzene	1100 U	5000	1100	ug/l	
106-46-7	1,4-Dichlorobenzene	1300 U	5000	1300	ug/l	
75-34-3	1,1-Dichloroethane	1700 U	5000	1700	ug/l	
107-06-2	1,2-Dichloroethane	1600 U	5000	1600	ug/l	
75-35-4	1,1-Dichloroethylene	1600 U	5000	1600	ug/l	
156-59-2	cis-1,2-Dichloroethylene	58300	5000	1400	ug/l	
156-60-5	trans-1,2-Dichloroethylene	1100 U	5000	1100	ug/l	
78-87-5	1,2-Dichloropropane	2100 U	5000	2100	ug/l	
10061-01-5	cis-1,3-Dichloropropene	1500 U	5000	1500	ug/l	
10061-02-6	trans-1,3-Dichloropropene	1100 U	5000	1100	ug/l	
100-41-4	Ethylbenzene	1800 U	5000	1800	ug/l	
76-13-1	Freon 113	2400 U	5000	2400	ug/l	
591-78-6	2-Hexanone	10000 U	50000	10000	ug/l	
98-82-8	Isopropylbenzene	1100 U	5000	1100	ug/l	
79-20-9	Methyl Acetate	25000 U	100000	25000	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0596-053.0-20211221		
Lab Sample ID:	FA91974-16	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide [c]	10000 UJ	25000	10000	ug/l	J
74-87-3	Methyl Chloride	2500 U	10000	2500	ug/l	
75-09-2	Methylene Chloride	10000 U	25000	10000	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	5000 U	25000	5000	ug/l	
1634-04-4	Methyl Tert Butyl Ether	1100 U	5000	1100	ug/l	
100-42-5	Styrene	1100 U	5000	1100	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	1400 U	5000	1400	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	1500 U	5000	1500	ug/l	
127-18-4	Tetrachloroethylene	1100 U	5000	1100	ug/l	
108-88-3	Toluene	1500 U	5000	1500	ug/l	
87-61-6	1,2,3-Trichlorobenzene	3100 U	10000	3100	ug/l	
120-82-1	1,2,4-Trichlorobenzene	2500 U	10000	2500	ug/l	
71-55-6	1,1,1-Trichloroethane	1200 U	5000	1200	ug/l	
79-00-5	1,1,2-Trichloroethane	2300 U	5000	2300	ug/l	
79-01-6	Trichloroethylene	458000	5000	1700	ug/l	
75-69-4	Trichlorofluoromethane	2500 U	10000	2500	ug/l	
75-01-4	Vinyl Chloride	4690	5000	2000	ug/l	I
1330-20-7	Xylene (total)	3600 U	15000	3600	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		83-118%
17060-07-0	1,2-Dichloroethane-D4	118%		79-125%
2037-26-5	Toluene-D8	94%		85-112%
460-00-4	4-Bromofluorobenzene	93%		83-118%

(a) Sample was not preserved to a pH < 2.
(b) Associated CCV outside of control limits high, sample was ND.
(c) Associated CCV outside of control limits low.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0596-058.0-20211221		
Lab Sample ID:	FA91974-17	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	I73051.D	500	12/28/21 22:12	LR	n/a	n/a	VI2417
Run #2 [b]	2P84528.D	1000	01/07/22 16:42	CF	n/a	n/a	V2P3369

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	5000 U	13000	5000	ug/l	
71-43-2	Benzene	160 U	500	160	ug/l	
74-97-5	Bromochloromethane	230 U	500	230	ug/l	
75-27-4	Bromodichloromethane	120 U	500	120	ug/l	
75-25-2	Bromoform	200 U	500	200	ug/l	
78-93-3	2-Butanone (MEK)	1000 U	2500	1000	ug/l	
75-15-0	Carbon Disulfide	270 U	1000	270	ug/l	
56-23-5	Carbon Tetrachloride	180 U	500	180	ug/l	
108-90-7	Chlorobenzene	100 U	500	100	ug/l	
75-00-3	Chloroethane [c]	330 U	1000	330	ug/l	
67-66-3	Chloroform	150 U	500	150	ug/l	
110-82-7	Cyclohexane	200 U	500	200	ug/l	
124-48-1	Dibromochloromethane	140 U	500	140	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	520 U	2500	520	ug/l	
106-93-4	1,2-Dibromoethane	140 U	1000	140	ug/l	
75-71-8	Dichlorodifluoromethane	250 U	1000	250	ug/l	
95-50-1	1,2-Dichlorobenzene	160 U	500	160	ug/l	
541-73-1	1,3-Dichlorobenzene	110 U	500	110	ug/l	
106-46-7	1,4-Dichlorobenzene	130 U	500	130	ug/l	
75-34-3	1,1-Dichloroethane	170 U	500	170	ug/l	
107-06-2	1,2-Dichloroethane	160 U	500	160	ug/l	
75-35-4	1,1-Dichloroethylene	160 U	500	160	ug/l	
156-59-2	cis-1,2-Dichloroethylene	41600	500	140	ug/l	
156-60-5	trans-1,2-Dichloroethylene	236	500	110	ug/l	I
78-87-5	1,2-Dichloropropane	210 U	500	210	ug/l	
10061-01-5	cis-1,3-Dichloropropene	150 U	500	150	ug/l	
10061-02-6	trans-1,3-Dichloropropene	110 U	500	110	ug/l	
100-41-4	Ethylbenzene	180 U	500	180	ug/l	
76-13-1	Freon 113	240 U	500	240	ug/l	
591-78-6	2-Hexanone	1000 U	5000	1000	ug/l	
98-82-8	Isopropylbenzene	110 U	500	110	ug/l	
79-20-9	Methyl Acetate	2500 U	10000	2500	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0596-058.0-20211221		
Lab Sample ID:	FA91974-17	**Date Sampled:**	12/21/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide [d]	1000 UJ	2500	1000	ug/l	J
74-87-3	Methyl Chloride	250 U	1000	250	ug/l	
75-09-2	Methylene Chloride	1000 U	2500	1000	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	500 U	2500	500	ug/l	
1634-04-4	Methyl Tert Butyl Ether	110 U	500	110	ug/l	
100-42-5	Styrene	110 U	500	110	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	140 U	500	140	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	150 U	500	150	ug/l	
127-18-4	Tetrachloroethylene	110 U	500	110	ug/l	
108-88-3	Toluene	150 U	500	150	ug/l	
87-61-6	1,2,3-Trichlorobenzene	310 U	1000	310	ug/l	
120-82-1	1,2,4-Trichlorobenzene	250 U	1000	250	ug/l	
71-55-6	1,1,1-Trichloroethane	120 U	500	120	ug/l	
79-00-5	1,1,2-Trichloroethane	230 U	500	230	ug/l	
79-01-6	Trichloroethylene	70200 [e]	1000	350	ug/l	Q
75-69-4	Trichlorofluoromethane	250 U	1000	250	ug/l	
75-01-4	Vinyl Chloride	309	500	200	ug/l	I
1330-20-7	Xylene (total)	360 U	1500	360	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%	102%	83-118%
17060-07-0	1,2-Dichloroethane-D4	117%	106%	79-125%
2037-26-5	Toluene-D8	95%	102%	85-112%
460-00-4	4-Bromofluorobenzene	93%	105%	83-118%

(a) Sample was not preserved to pH < 2.
(b) Sample was not preserved to pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(c) Associated CCV outside of control limits high, sample was ND.
(d) Associated CCV outside of control limits low.
(e) Result is from Run# 2

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0596-063.0-20211222		
Lab Sample ID:	FA91974-18	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	C0153339.D	10	01/13/22 15:30	LV	n/a	n/a	VC6188
Run #2 [b]	1A40934.D	100	12/29/21 16:10	CF	n/a	n/a	V1A1665

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	1000 U [c]	2500	1000	ug/l	
71-43-2	Benzene	31 U [c]	100	31	ug/l	
74-97-5	Bromochloromethane	45 U [c]	100	45	ug/l	
75-27-4	Bromodichloromethane	24 U [c]	100	24	ug/l	
75-25-2	Bromoform	41 U [c]	100	41	ug/l	
78-93-3	2-Butanone (MEK)	200 U [c]	500	200	ug/l	
75-15-0	Carbon Disulfide	53 U [c]	200	53	ug/l	
56-23-5	Carbon Tetrachloride	36 U [c]	100	36	ug/l	
108-90-7	Chlorobenzene	20 U [c]	100	20	ug/l	
75-00-3	Chloroethane	67 U [c]	200	67	ug/l	
67-66-3	Chloroform	30 U [c]	100	30	ug/l	
110-82-7	Cyclohexane	39 U [c]	100	39	ug/l	
124-48-1	Dibromochloromethane	28 U [c]	100	28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	100 U [c]	500	100	ug/l	
106-93-4	1,2-Dibromoethane	28 U [c]	200	28	ug/l	
75-71-8	Dichlorodifluoromethane	50 U [c]	200	50	ug/l	
95-50-1	1,2-Dichlorobenzene	32 U [c]	100	32	ug/l	
541-73-1	1,3-Dichlorobenzene	22 U [c]	100	22	ug/l	
106-46-7	1,4-Dichlorobenzene	26 U [c]	100	26	ug/l	
75-34-3	1,1-Dichloroethane	34 U [c]	100	34	ug/l	
107-06-2	1,2-Dichloroethane	31 U [c]	100	31	ug/l	
75-35-4	1,1-Dichloroethylene	32 U [c]	100	32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	672 [c]	100	28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	22 U [c]	100	22	ug/l	
78-87-5	1,2-Dichloropropane	43 U [c]	100	43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	29 U [c]	100	29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	21 U [c]	100	21	ug/l	
100-41-4	Ethylbenzene	36 U [c]	100	36	ug/l	
76-13-1	Freon 113	48 U [c]	100	48	ug/l	
591-78-6	2-Hexanone	200 U [c]	1000	200	ug/l	
98-82-8	Isopropylbenzene	22 U [c]	100	22	ug/l	
79-20-9	Methyl Acetate	500 U [c]	2000	500	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0596-063.0-20211222		
Lab Sample ID:	FA91974-18	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	200 U [c]	500	200	ug/l	
74-87-3	Methyl Chloride	50 U [c]	200	50	ug/l	
75-09-2	Methylene Chloride	200 U [c]	500	200	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	100 U [c]	500	100	ug/l	
1634-04-4	Methyl Tert Butyl Ether	23 U [c]	100	23	ug/l	
100-42-5	Styrene	22 U [c]	100	22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	28 U [c]	100	28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	30 U [c]	100	30	ug/l	
127-18-4	Tetrachloroethylene	22 U [c]	100	22	ug/l	
108-88-3	Toluene	30 U [c]	100	30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	61 U [c]	200	61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	50 U [c]	200	50	ug/l	
71-55-6	1,1,1-Trichloroethane	25 U [c]	100	25	ug/l	
79-00-5	1,1,2-Trichloroethane	47 U [c]	100	47	ug/l	
79-01-6	Trichloroethylene	684 [c]	100	35	ug/l	
75-69-4	Trichlorofluoromethane	50 U [c]	200	50	ug/l	
75-01-4	Vinyl Chloride	16.7	10	4.1	ug/l	Q
1330-20-7	Xylene (total)	72 U [c]	300	72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%	99%	83-118%
17060-07-0	1,2-Dichloroethane-D4	94%	102%	79-125%
2037-26-5	Toluene-D8	103%	96%	85-112%
460-00-4	4-Bromofluorobenzene	110%	96%	83-118%

(a) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(b) Sample was not preserved to a pH < 2.
(c) Result is from Run# 2

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0596-068.0-20211222		
Lab Sample ID:	FA91974-19	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	C0153340.D	20	01/13/22 15:54	LV	n/a	n/a	VC6188
Run #2 [b]	1A40936.D	100	12/29/21 16:39	CF	n/a	n/a	V1A1665

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	1000 U [c]	2500	1000	ug/l	
71-43-2	Benzene	31 U [c]	100	31	ug/l	
74-97-5	Bromochloromethane	45 U [c]	100	45	ug/l	
75-27-4	Bromodichloromethane	24 U [c]	100	24	ug/l	
75-25-2	Bromoform	41 U [c]	100	41	ug/l	
78-93-3	2-Butanone (MEK)	200 U [c]	500	200	ug/l	
75-15-0	Carbon Disulfide	53 U [c]	200	53	ug/l	
56-23-5	Carbon Tetrachloride	36 U [c]	100	36	ug/l	
108-90-7	Chlorobenzene	20 U [c]	100	20	ug/l	
75-00-3	Chloroethane	67 U [c]	200	67	ug/l	
67-66-3	Chloroform	30 U [c]	100	30	ug/l	
110-82-7	Cyclohexane	39 U [c]	100	39	ug/l	
124-48-1	Dibromochloromethane	28 U [c]	100	28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	100 U [c]	500	100	ug/l	
106-93-4	1,2-Dibromoethane	28 U [c]	200	28	ug/l	
75-71-8	Dichlorodifluoromethane	50 U [c]	200	50	ug/l	
95-50-1	1,2-Dichlorobenzene	32 U [c]	100	32	ug/l	
541-73-1	1,3-Dichlorobenzene	22 U [c]	100	22	ug/l	
106-46-7	1,4-Dichlorobenzene	26 U [c]	100	26	ug/l	
75-34-3	1,1-Dichloroethane	34 U [c]	100	34	ug/l	
107-06-2	1,2-Dichloroethane	31 U [c]	100	31	ug/l	
75-35-4	1,1-Dichloroethylene	32 U [c]	100	32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	213 [c]	100	28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	22 U [c]	100	22	ug/l	
78-87-5	1,2-Dichloropropane	43 U [c]	100	43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	29 U [c]	100	29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	21 U [c]	100	21	ug/l	
100-41-4	Ethylbenzene	36 U [c]	100	36	ug/l	
76-13-1	Freon 113	48 U [c]	100	48	ug/l	
591-78-6	2-Hexanone	200 U [c]	1000	200	ug/l	
98-82-8	Isopropylbenzene	22 U [c]	100	22	ug/l	
79-20-9	Methyl Acetate	500 U [c]	2000	500	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0596-068.0-20211222		
Lab Sample ID:	FA91974-19	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	200 U [c]	500	200	ug/l	
74-87-3	Methyl Chloride	50 U [c]	200	50	ug/l	
75-09-2	Methylene Chloride	200 U [c]	500	200	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	100 U [c]	500	100	ug/l	
1634-04-4	Methyl Tert Butyl Ether	23 U [c]	100	23	ug/l	
100-42-5	Styrene	22 U [c]	100	22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	28 U [c]	100	28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	30 U [c]	100	30	ug/l	
127-18-4	Tetrachloroethylene	22 U [c]	100	22	ug/l	
108-88-3	Toluene	30 U [c]	100	30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	61 U [c]	200	61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	50 U [c]	200	50	ug/l	
71-55-6	1,1,1-Trichloroethane	25 U [c]	100	25	ug/l	
79-00-5	1,1,2-Trichloroethane	47 U [c]	100	47	ug/l	
79-01-6	Trichloroethylene	1190 [c]	100	35	ug/l	
75-69-4	Trichlorofluoromethane	50 U [c]	200	50	ug/l	
75-01-4	Vinyl Chloride	41 U [c]	100	41	ug/l	
1330-20-7	Xylene (total)	72 U [c]	300	72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	93%	98%	83-118%
17060-07-0	1,2-Dichloroethane-D4	97%	99%	79-125%
2037-26-5	Toluene-D8	104%	97%	85-112%
460-00-4	4-Bromofluorobenzene	109%	97%	83-118%

(a) Sample was not preserved to a pH < 2. Confirmation run beyond holdtime.
(b) Sample was not preserved to a pH < 2.
(c) Result is from Run# 2

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0596-073.0-20211222		
Lab Sample ID:	FA91974-20	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	C0153341.D	20	01/13/22 16:18	LV	n/a	n/a	VC6188
Run #2 [b]	1A40938.D	200	12/29/21 17:08	CF	n/a	n/a	V1A1665

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	2000 U [c]	5000	2000	ug/l	
71-43-2	Benzene	62 U [c]	200	62	ug/l	
74-97-5	Bromochloromethane	90 U [c]	200	90	ug/l	
75-27-4	Bromodichloromethane	48 U [c]	200	48	ug/l	
75-25-2	Bromoform	81 U [c]	200	81	ug/l	
78-93-3	2-Butanone (MEK)	400 U [c]	1000	400	ug/l	
75-15-0	Carbon Disulfide	110 U [c]	400	110	ug/l	
56-23-5	Carbon Tetrachloride	71 U [c]	200	71	ug/l	
108-90-7	Chlorobenzene	40 U [c]	200	40	ug/l	
75-00-3	Chloroethane	130 U [c]	400	130	ug/l	
67-66-3	Chloroform	60 U [c]	200	60	ug/l	
110-82-7	Cyclohexane	78 U [c]	200	78	ug/l	
124-48-1	Dibromochloromethane	55 U [c]	200	55	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	210 U [c]	1000	210	ug/l	
106-93-4	1,2-Dibromoethane	55 U [c]	400	55	ug/l	
75-71-8	Dichlorodifluoromethane	100 U [c]	400	100	ug/l	
95-50-1	1,2-Dichlorobenzene	65 U [c]	200	65	ug/l	
541-73-1	1,3-Dichlorobenzene	43 U [c]	200	43	ug/l	
106-46-7	1,4-Dichlorobenzene	51 U [c]	200	51	ug/l	
75-34-3	1,1-Dichloroethane	68 U [c]	200	68	ug/l	
107-06-2	1,2-Dichloroethane	62 U [c]	200	62	ug/l	
75-35-4	1,1-Dichloroethylene	64 U [c]	200	64	ug/l	
156-59-2	cis-1,2-Dichloroethylene	24.5	20	5.5	ug/l	Q
156-60-5	trans-1,2-Dichloroethylene	44 U [c]	200	44	ug/l	
78-87-5	1,2-Dichloropropane	85 U [c]	200	85	ug/l	
10061-01-5	cis-1,3-Dichloropropene	58 U [c]	200	58	ug/l	
10061-02-6	trans-1,3-Dichloropropene	43 U [c]	200	43	ug/l	
100-41-4	Ethylbenzene	71 U [c]	200	71	ug/l	
76-13-1	Freon 113	96 U [c]	200	96	ug/l	
591-78-6	2-Hexanone	400 U [c]	2000	400	ug/l	
98-82-8	Isopropylbenzene	44 U [c]	200	44	ug/l	
79-20-9	Methyl Acetate	1000 U [c]	4000	1000	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0596-073.0-20211222		
Lab Sample ID:	FA91974-20	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	400 U [c]	1000	400	ug/l	
74-87-3	Methyl Chloride	100 U [c]	400	100	ug/l	
75-09-2	Methylene Chloride	400 U [c]	1000	400	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	200 U [c]	1000	200	ug/l	
1634-04-4	Methyl Tert Butyl Ether	46 U [c]	200	46	ug/l	
100-42-5	Styrene	44 U [c]	200	44	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	55 U [c]	200	55	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	60 U [c]	200	60	ug/l	
127-18-4	Tetrachloroethylene	43 U [c]	200	43	ug/l	
108-88-3	Toluene	60 U [c]	200	60	ug/l	
87-61-6	1,2,3-Trichlorobenzene	120 U [c]	400	120	ug/l	
120-82-1	1,2,4-Trichlorobenzene	100 U [c]	400	100	ug/l	
71-55-6	1,1,1-Trichloroethane	50 U [c]	200	50	ug/l	
79-00-5	1,1,2-Trichloroethane	93 U [c]	200	93	ug/l	
79-01-6	Trichloroethylene	1090 [c]	200	69	ug/l	
75-69-4	Trichlorofluoromethane	100 U [c]	400	100	ug/l	
75-01-4	Vinyl Chloride	82 U [c]	200	82	ug/l	
1330-20-7	Xylene (total)	140 U [c]	600	140	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	89%	101%	83-118%
17060-07-0	1,2-Dichloroethane-D4	97%	103%	79-125%
2037-26-5	Toluene-D8	105%	96%	85-112%
460-00-4	4-Bromofluorobenzene	107%	95%	83-118%

(a) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(b) Sample was not preserved to a pH < 2.
(c) Result is from Run# 2

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0596-078.0-20211222		
Lab Sample ID:	FA91974-21	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	C0153342.D	10	01/13/22 16:41	LV	n/a	n/a	VC6188
Run #2 [b]	1A40940.D	50	12/29/21 17:36	CF	n/a	n/a	V1A1665

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	500 U [c]	1300	500	ug/l	
71-43-2	Benzene	16 U [c]	50	16	ug/l	
74-97-5	Bromochloromethane	23 U [c]	50	23	ug/l	
75-27-4	Bromodichloromethane	12 U [c]	50	12	ug/l	
75-25-2	Bromoform	20 U [c]	50	20	ug/l	
78-93-3	2-Butanone (MEK)	100 U [c]	250	100	ug/l	
75-15-0	Carbon Disulfide	27 U [c]	100	27	ug/l	
56-23-5	Carbon Tetrachloride	18 U [c]	50	18	ug/l	
108-90-7	Chlorobenzene	10 U [c]	50	10	ug/l	
75-00-3	Chloroethane	33 U [c]	100	33	ug/l	
67-66-3	Chloroform	15 U [c]	50	15	ug/l	
110-82-7	Cyclohexane	20 U [c]	50	20	ug/l	
124-48-1	Dibromochloromethane	14 U [c]	50	14	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	52 U [c]	250	52	ug/l	
106-93-4	1,2-Dibromoethane	14 U [c]	100	14	ug/l	
75-71-8	Dichlorodifluoromethane	25 U [c]	100	25	ug/l	
95-50-1	1,2-Dichlorobenzene	16 U [c]	50	16	ug/l	
541-73-1	1,3-Dichlorobenzene	11 U [c]	50	11	ug/l	
106-46-7	1,4-Dichlorobenzene	13 U [c]	50	13	ug/l	
75-34-3	1,1-Dichloroethane	17 U [c]	50	17	ug/l	
107-06-2	1,2-Dichloroethane	16 U [c]	50	16	ug/l	
75-35-4	1,1-Dichloroethylene	16 U [c]	50	16	ug/l	
156-59-2	cis-1,2-Dichloroethylene	191 [c]	50	14	ug/l	
156-60-5	trans-1,2-Dichloroethylene	45.3 [c]	50	11	ug/l	I
78-87-5	1,2-Dichloropropane	21 U [c]	50	21	ug/l	
10061-01-5	cis-1,3-Dichloropropene	15 U [c]	50	15	ug/l	
10061-02-6	trans-1,3-Dichloropropene	11 U [c]	50	11	ug/l	
100-41-4	Ethylbenzene	18 U [c]	50	18	ug/l	
76-13-1	Freon 113	24 U [c]	50	24	ug/l	
591-78-6	2-Hexanone	100 U [c]	500	100	ug/l	
98-82-8	Isopropylbenzene	11 U [c]	50	11	ug/l	
79-20-9	Methyl Acetate	250 U [c]	1000	250	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0596-078.0-20211222		
Lab Sample ID:	FA91974-21	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	100 U [c]	250	100	ug/l	
74-87-3	Methyl Chloride	25 U [c]	100	25	ug/l	
75-09-2	Methylene Chloride	100 U [c]	250	100	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	50 U [c]	250	50	ug/l	
1634-04-4	Methyl Tert Butyl Ether	11 U [c]	50	11	ug/l	
100-42-5	Styrene	11 U [c]	50	11	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	14 U [c]	50	14	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	15 U [c]	50	15	ug/l	
127-18-4	Tetrachloroethylene	11 U [c]	50	11	ug/l	
108-88-3	Toluene	15 U [c]	50	15	ug/l	
87-61-6	1,2,3-Trichlorobenzene	31 U [c]	100	31	ug/l	
120-82-1	1,2,4-Trichlorobenzene	25 U [c]	100	25	ug/l	
71-55-6	1,1,1-Trichloroethane	12 U [c]	50	12	ug/l	
79-00-5	1,1,2-Trichloroethane	23 U [c]	50	23	ug/l	
79-01-6	Trichloroethylene	831 [c]	50	17	ug/l	
75-69-4	Trichlorofluoromethane	25 U [c]	100	25	ug/l	
75-01-4	Vinyl Chloride	18.7	10	4.1	ug/l	Q
1330-20-7	Xylene (total)	36 U [c]	150	36	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%	99%	83-118%
17060-07-0	1,2-Dichloroethane-D4	97%	103%	79-125%
2037-26-5	Toluene-D8	100%	97%	85-112%
460-00-4	4-Bromofluorobenzene	108%	96%	83-118%

(a) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(b) Sample was not preserved to a pH < 2.
(c) Result is from Run# 2

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: LC34-DPT0596-083.0-20211222
Lab Sample ID: FA91974-22
Matrix: AQ - Ground Water
Method: SW846 8260B
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Date Sampled: 12/22/21
Date Received: 12/22/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	C0153343.D	20	01/13/22 17:04	LV	n/a	n/a	VC6188
Run #2 [b]	1A40942.D	100	12/29/21 18:05	CF	n/a	n/a	V1A1665

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	1000 U [c]	2500	1000	ug/l	
71-43-2	Benzene	31 U [c]	100	31	ug/l	
74-97-5	Bromochloromethane	45 U [c]	100	45	ug/l	
75-27-4	Bromodichloromethane	24 U [c]	100	24	ug/l	
75-25-2	Bromoform	41 U [c]	100	41	ug/l	
78-93-3	2-Butanone (MEK)	200 U [c]	500	200	ug/l	
75-15-0	Carbon Disulfide	53 U [c]	200	53	ug/l	
56-23-5	Carbon Tetrachloride	36 U [c]	100	36	ug/l	
108-90-7	Chlorobenzene	20 U [c]	100	20	ug/l	
75-00-3	Chloroethane	67 U [c]	200	67	ug/l	
67-66-3	Chloroform	30 U [c]	100	30	ug/l	
110-82-7	Cyclohexane	39 U [c]	100	39	ug/l	
124-48-1	Dibromochloromethane	28 U [c]	100	28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	100 U [c]	500	100	ug/l	
106-93-4	1,2-Dibromoethane	28 U [c]	200	28	ug/l	
75-71-8	Dichlorodifluoromethane	50 U [c]	200	50	ug/l	
95-50-1	1,2-Dichlorobenzene	32 U [c]	100	32	ug/l	
541-73-1	1,3-Dichlorobenzene	22 U [c]	100	22	ug/l	
106-46-7	1,4-Dichlorobenzene	26 U [c]	100	26	ug/l	
75-34-3	1,1-Dichloroethane	34 U [c]	100	34	ug/l	
107-06-2	1,2-Dichloroethane	31 U [c]	100	31	ug/l	
75-35-4	1,1-Dichloroethylene	32 U [c]	100	32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	156 [c]	100	28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	22 U [c]	100	22	ug/l	
78-87-5	1,2-Dichloropropane	43 U [c]	100	43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	29 U [c]	100	29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	21 U [c]	100	21	ug/l	
100-41-4	Ethylbenzene	36 U [c]	100	36	ug/l	
76-13-1	Freon 113	48 U [c]	100	48	ug/l	
591-78-6	2-Hexanone	200 U [c]	1000	200	ug/l	
98-82-8	Isopropylbenzene	22 U [c]	100	22	ug/l	
79-20-9	Methyl Acetate	500 U [c]	2000	500	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0596-083.0-20211222		
Lab Sample ID:	FA91974-22	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	200 U [c]	500	200	ug/l	
74-87-3	Methyl Chloride	50 U [c]	200	50	ug/l	
75-09-2	Methylene Chloride	200 U [c]	500	200	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	100 U [c]	500	100	ug/l	
1634-04-4	Methyl Tert Butyl Ether	23 U [c]	100	23	ug/l	
100-42-5	Styrene	22 U [c]	100	22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	28 U [c]	100	28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	30 U [c]	100	30	ug/l	
127-18-4	Tetrachloroethylene	22 U [c]	100	22	ug/l	
108-88-3	Toluene	30 U [c]	100	30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	61 U [c]	200	61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	50 U [c]	200	50	ug/l	
71-55-6	1,1,1-Trichloroethane	25 U [c]	100	25	ug/l	
79-00-5	1,1,2-Trichloroethane	47 U [c]	100	47	ug/l	
79-01-6	Trichloroethylene	1590 [c]	100	35	ug/l	
75-69-4	Trichlorofluoromethane	50 U [c]	200	50	ug/l	
75-01-4	Vinyl Chloride	41 U [c]	100	41	ug/l	
1330-20-7	Xylene (total)	72 U [c]	300	72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	91%	101%	83-118%
17060-07-0	1,2-Dichloroethane-D4	93%	107%	79-125%
2037-26-5	Toluene-D8	101%	96%	85-112%
460-00-4	4-Bromofluorobenzene	108%	94%	83-118%

(a) Sample was not preserved to a pH < 2. Confirmation run beyond holdtime.
(b) Sample was not preserved to a pH < 2.
(c) Result is from Run# 2

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: LC34-DPT0596-088.0-20211222
Lab Sample ID: FA91974-23
Matrix: AQ - Ground Water
Method: SW846 8260B
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Date Sampled: 12/22/21
Date Received: 12/22/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	C0153344.D	20	01/13/22 17:28	LV	n/a	n/a	VC6188
Run #2 [b]	1A40944.D	50	12/29/21 18:34	CF	n/a	n/a	V1A1665

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	500 U [c]	1300	500	ug/l	
71-43-2	Benzene	16 U [c]	50	16	ug/l	
74-97-5	Bromochloromethane	23 U [c]	50	23	ug/l	
75-27-4	Bromodichloromethane	12 U [c]	50	12	ug/l	
75-25-2	Bromoform	20 U [c]	50	20	ug/l	
78-93-3	2-Butanone (MEK)	100 U [c]	250	100	ug/l	
75-15-0	Carbon Disulfide	27 U [c]	100	27	ug/l	
56-23-5	Carbon Tetrachloride	18 U [c]	50	18	ug/l	
108-90-7	Chlorobenzene	10 U [c]	50	10	ug/l	
75-00-3	Chloroethane	33 U [c]	100	33	ug/l	
67-66-3	Chloroform	15 U [c]	50	15	ug/l	
110-82-7	Cyclohexane	20 U [c]	50	20	ug/l	
124-48-1	Dibromochloromethane	14 U [c]	50	14	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	52 U [c]	250	52	ug/l	
106-93-4	1,2-Dibromoethane	14 U [c]	100	14	ug/l	
75-71-8	Dichlorodifluoromethane	25 U [c]	100	25	ug/l	
95-50-1	1,2-Dichlorobenzene	16 U [c]	50	16	ug/l	
541-73-1	1,3-Dichlorobenzene	11 U [c]	50	11	ug/l	
106-46-7	1,4-Dichlorobenzene	13 U [c]	50	13	ug/l	
75-34-3	1,1-Dichloroethane	17 U [c]	50	17	ug/l	
107-06-2	1,2-Dichloroethane	16 U [c]	50	16	ug/l	
75-35-4	1,1-Dichloroethylene	16 U [c]	50	16	ug/l	
156-59-2	cis-1,2-Dichloroethylene	59.3 [c]	50	14	ug/l	
156-60-5	trans-1,2-Dichloroethylene	11 U [c]	50	11	ug/l	
78-87-5	1,2-Dichloropropane	21 U [c]	50	21	ug/l	
10061-01-5	cis-1,3-Dichloropropene	15 U [c]	50	15	ug/l	
10061-02-6	trans-1,3-Dichloropropene	11 U [c]	50	11	ug/l	
100-41-4	Ethylbenzene	18 U [c]	50	18	ug/l	
76-13-1	Freon 113	24 U [c]	50	24	ug/l	
591-78-6	2-Hexanone	100 U [c]	500	100	ug/l	
98-82-8	Isopropylbenzene	11 U [c]	50	11	ug/l	
79-20-9	Methyl Acetate	250 U [c]	1000	250	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0596-088.0-20211222		
Lab Sample ID:	FA91974-23	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	100 U [c]	250	100	ug/l	
74-87-3	Methyl Chloride	25 U [c]	100	25	ug/l	
75-09-2	Methylene Chloride	100 U [c]	250	100	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	50 U [c]	250	50	ug/l	
1634-04-4	Methyl Tert Butyl Ether	11 U [c]	50	11	ug/l	
100-42-5	Styrene	11 U [c]	50	11	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	14 U [c]	50	14	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	15 U [c]	50	15	ug/l	
127-18-4	Tetrachloroethylene	11 U [c]	50	11	ug/l	
108-88-3	Toluene	15 U [c]	50	15	ug/l	
87-61-6	1,2,3-Trichlorobenzene	31 U [c]	100	31	ug/l	
120-82-1	1,2,4-Trichlorobenzene	25 U [c]	100	25	ug/l	
71-55-6	1,1,1-Trichloroethane	12 U [c]	50	12	ug/l	
79-00-5	1,1,2-Trichloroethane	23 U [c]	50	23	ug/l	
79-01-6	Trichloroethylene	1190 [c]	50	17	ug/l	
75-69-4	Trichlorofluoromethane	25 U [c]	100	25	ug/l	
75-01-4	Vinyl Chloride	20 U [c]	50	20	ug/l	
1330-20-7	Xylene (total)	36 U [c]	150	36	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	93%	100%	83-118%
17060-07-0	1,2-Dichloroethane-D4	94%	102%	79-125%
2037-26-5	Toluene-D8	102%	96%	85-112%
460-00-4	4-Bromofluorobenzene	105%	94%	83-118%

(a) Sample was not preserved to a pH < 2. Confirmation run beyond holdtime.
(b) Sample was not preserved to a pH < 2.
(c) Result is from Run# 2

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0596-093.0-20211222		
Lab Sample ID:	FA91974-24	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	C0153345.D	200	01/13/22 17:51	LV	n/a	n/a	VC6188
Run #2 [b]	1A40946.D	1000	12/29/21 19:03	CF	n/a	n/a	V1A1665

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	10000 U [c]	25000	10000	ug/l	
71-43-2	Benzene	310 U [c]	1000	310	ug/l	
74-97-5	Bromochloromethane	450 U [c]	1000	450	ug/l	
75-27-4	Bromodichloromethane	240 U [c]	1000	240	ug/l	
75-25-2	Bromoform	410 U [c]	1000	410	ug/l	
78-93-3	2-Butanone (MEK)	2000 U [c]	5000	2000	ug/l	
75-15-0	Carbon Disulfide	530 U [c]	2000	530	ug/l	
56-23-5	Carbon Tetrachloride	360 U [c]	1000	360	ug/l	
108-90-7	Chlorobenzene	200 U [c]	1000	200	ug/l	
75-00-3	Chloroethane	670 U [c]	2000	670	ug/l	
67-66-3	Chloroform	300 U [c]	1000	300	ug/l	
110-82-7	Cyclohexane	390 U [c]	1000	390	ug/l	
124-48-1	Dibromochloromethane	280 U [c]	1000	280	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1000 U [c]	5000	1000	ug/l	
106-93-4	1,2-Dibromoethane	280 U [c]	2000	280	ug/l	
75-71-8	Dichlorodifluoromethane	500 U [c]	2000	500	ug/l	
95-50-1	1,2-Dichlorobenzene	320 U [c]	1000	320	ug/l	
541-73-1	1,3-Dichlorobenzene	220 U [c]	1000	220	ug/l	
106-46-7	1,4-Dichlorobenzene	260 U [c]	1000	260	ug/l	
75-34-3	1,1-Dichloroethane	340 U [c]	1000	340	ug/l	
107-06-2	1,2-Dichloroethane	310 U [c]	1000	310	ug/l	
75-35-4	1,1-Dichloroethylene	320 U [c]	1000	320	ug/l	
156-59-2	cis-1,2-Dichloroethylene	1120 [c]	1000	280	ug/l	
156-60-5	trans-1,2-Dichloroethylene	220 U [c]	1000	220	ug/l	
78-87-5	1,2-Dichloropropane	430 U [c]	1000	430	ug/l	
10061-01-5	cis-1,3-Dichloropropene	290 U [c]	1000	290	ug/l	
10061-02-6	trans-1,3-Dichloropropene	210 U [c]	1000	210	ug/l	
100-41-4	Ethylbenzene	360 U [c]	1000	360	ug/l	
76-13-1	Freon 113	480 U [c]	1000	480	ug/l	
591-78-6	2-Hexanone	2000 U [c]	10000	2000	ug/l	
98-82-8	Isopropylbenzene	220 U [c]	1000	220	ug/l	
79-20-9	Methyl Acetate	5000 U [c]	20000	5000	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0596-093.0-20211222		
Lab Sample ID:	FA91974-24	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	2000 U [c]	5000	2000	ug/l	
74-87-3	Methyl Chloride	500 U [c]	2000	500	ug/l	
75-09-2	Methylene Chloride	2000 U [c]	5000	2000	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1000 U [c]	5000	1000	ug/l	
1634-04-4	Methyl Tert Butyl Ether	230 U [c]	1000	230	ug/l	
100-42-5	Styrene	220 U [c]	1000	220	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	280 U [c]	1000	280	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	300 U [c]	1000	300	ug/l	
127-18-4	Tetrachloroethylene	220 U [c]	1000	220	ug/l	
108-88-3	Toluene	300 U [c]	1000	300	ug/l	
87-61-6	1,2,3-Trichlorobenzene	610 U [c]	2000	610	ug/l	
120-82-1	1,2,4-Trichlorobenzene	500 U [c]	2000	500	ug/l	
71-55-6	1,1,1-Trichloroethane	250 U [c]	1000	250	ug/l	
79-00-5	1,1,2-Trichloroethane	470 U [c]	1000	470	ug/l	
79-01-6	Trichloroethylene	14100 [c]	1000	350	ug/l	
75-69-4	Trichlorofluoromethane	500 U [c]	2000	500	ug/l	
75-01-4	Vinyl Chloride	410 U [c]	1000	410	ug/l	
1330-20-7	Xylene (total)	720 U [c]	3000	720	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%	101%	83-118%
17060-07-0	1,2-Dichloroethane-D4	98%	106%	79-125%
2037-26-5	Toluene-D8	102%	94%	85-112%
460-00-4	4-Bromofluorobenzene	108%	94%	83-118%

(a) Sample was not preserved to a pH < 2. Confirmation run beyond holdtime.
(b) Sample was not preserved to a pH < 2.
(c) Result is from Run# 2

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: LC34-DPT0596-098.0-20211222
Lab Sample ID: FA91974-25
Matrix: AQ - Ground Water
Method: SW846 8260B
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Date Sampled: 12/22/21
Date Received: 12/22/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	C0153346.D	20	01/13/22 18:15	LV	n/a	n/a	VC6188
Run #2 [b]	1A40948.D	100	12/29/21 19:32	CF	n/a	n/a	V1A1665

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	1000 U [c]	2500	1000	ug/l	
71-43-2	Benzene	31 U [c]	100	31	ug/l	
74-97-5	Bromochloromethane	45 U [c]	100	45	ug/l	
75-27-4	Bromodichloromethane	24 U [c]	100	24	ug/l	
75-25-2	Bromoform	41 U [c]	100	41	ug/l	
78-93-3	2-Butanone (MEK)	200 U [c]	500	200	ug/l	
75-15-0	Carbon Disulfide	53 U [c]	200	53	ug/l	
56-23-5	Carbon Tetrachloride	36 U [c]	100	36	ug/l	
108-90-7	Chlorobenzene	20 U [c]	100	20	ug/l	
75-00-3	Chloroethane	67 U [c]	200	67	ug/l	
67-66-3	Chloroform	30 U [c]	100	30	ug/l	
110-82-7	Cyclohexane	39 U [c]	100	39	ug/l	
124-48-1	Dibromochloromethane	28 U [c]	100	28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	100 U [c]	500	100	ug/l	
106-93-4	1,2-Dibromoethane	28 U [c]	200	28	ug/l	
75-71-8	Dichlorodifluoromethane	50 U [c]	200	50	ug/l	
95-50-1	1,2-Dichlorobenzene	32 U [c]	100	32	ug/l	
541-73-1	1,3-Dichlorobenzene	22 U [c]	100	22	ug/l	
106-46-7	1,4-Dichlorobenzene	26 U [c]	100	26	ug/l	
75-34-3	1,1-Dichloroethane	34 U [c]	100	34	ug/l	
107-06-2	1,2-Dichloroethane	31 U [c]	100	31	ug/l	
75-35-4	1,1-Dichloroethylene	32 U [c]	100	32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	78.0 [c]	100	28	ug/l	I
156-60-5	trans-1,2-Dichloroethylene	22 U [c]	100	22	ug/l	
78-87-5	1,2-Dichloropropane	43 U [c]	100	43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	29 U [c]	100	29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	21 U [c]	100	21	ug/l	
100-41-4	Ethylbenzene	36 U [c]	100	36	ug/l	
76-13-1	Freon 113	48 U [c]	100	48	ug/l	
591-78-6	2-Hexanone	200 U [c]	1000	200	ug/l	
98-82-8	Isopropylbenzene	22 U [c]	100	22	ug/l	
79-20-9	Methyl Acetate	500 U [c]	2000	500	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0596-098.0-20211222		
Lab Sample ID:	FA91974-25	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	200 U [c]	500	200	ug/l	
74-87-3	Methyl Chloride	50 U [c]	200	50	ug/l	
75-09-2	Methylene Chloride	200 U [c]	500	200	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	100 U [c]	500	100	ug/l	
1634-04-4	Methyl Tert Butyl Ether	23 U [c]	100	23	ug/l	
100-42-5	Styrene	22 U [c]	100	22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	28 U [c]	100	28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	30 U [c]	100	30	ug/l	
127-18-4	Tetrachloroethylene	22 U [c]	100	22	ug/l	
108-88-3	Toluene	30 U [c]	100	30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	61 U [c]	200	61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	50 U [c]	200	50	ug/l	
71-55-6	1,1,1-Trichloroethane	25 U [c]	100	25	ug/l	
79-00-5	1,1,2-Trichloroethane	47 U [c]	100	47	ug/l	
79-01-6	Trichloroethylene	1060 [c]	100	35	ug/l	
75-69-4	Trichlorofluoromethane	50 U [c]	200	50	ug/l	
75-01-4	Vinyl Chloride	41 U [c]	100	41	ug/l	
1330-20-7	Xylene (total)	72 U [c]	300	72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	88%	103%	83-118%
17060-07-0	1,2-Dichloroethane-D4	94%	109%	79-125%
2037-26-5	Toluene-D8	102%	95%	85-112%
460-00-4	4-Bromofluorobenzene	111%	94%	83-118%

(a) Sample was not preserved to a pH < 2. Confirmation run beyond holdtime.
(b) Sample was not preserved to a pH < 2.
(c) Result is from Run# 2

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0595-048.0-20211222		
Lab Sample ID:	FA91974-26	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	C0153347.D	5	01/13/22 18:39	LV	n/a	n/a	VC6188
Run #2 [b]	1A40950.D	500	12/29/21 20:01	CF	n/a	n/a	V1A1665

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	5000 U [c]	13000	5000	ug/l	
71-43-2	Benzene	160 U [c]	500	160	ug/l	
74-97-5	Bromochloromethane	230 U [c]	500	230	ug/l	
75-27-4	Bromodichloromethane	120 U [c]	500	120	ug/l	
75-25-2	Bromoform	200 U [c]	500	200	ug/l	
78-93-3	2-Butanone (MEK)	1000 U [c]	2500	1000	ug/l	
75-15-0	Carbon Disulfide	270 U [c]	1000	270	ug/l	
56-23-5	Carbon Tetrachloride	180 U [c]	500	180	ug/l	
108-90-7	Chlorobenzene	100 U [c]	500	100	ug/l	
75-00-3	Chloroethane	330 U [c]	1000	330	ug/l	
67-66-3	Chloroform	150 U [c]	500	150	ug/l	
110-82-7	Cyclohexane	200 U [c]	500	200	ug/l	
124-48-1	Dibromochloromethane	140 U [c]	500	140	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	520 U [c]	2500	520	ug/l	
106-93-4	1,2-Dibromoethane	140 U [c]	1000	140	ug/l	
75-71-8	Dichlorodifluoromethane	250 U [c]	1000	250	ug/l	
95-50-1	1,2-Dichlorobenzene	160 U [c]	500	160	ug/l	
541-73-1	1,3-Dichlorobenzene	110 U [c]	500	110	ug/l	
106-46-7	1,4-Dichlorobenzene	130 U [c]	500	130	ug/l	
75-34-3	1,1-Dichloroethane	170 U [c]	500	170	ug/l	
107-06-2	1,2-Dichloroethane	160 U [c]	500	160	ug/l	
75-35-4	1,1-Dichloroethylene	160 U [c]	500	160	ug/l	
156-59-2	cis-1,2-Dichloroethylene	339	5.0	1.4	ug/l	Q
156-60-5	trans-1,2-Dichloroethylene	110 U [c]	500	110	ug/l	
78-87-5	1,2-Dichloropropane	210 U [c]	500	210	ug/l	
10061-01-5	cis-1,3-Dichloropropene	150 U [c]	500	150	ug/l	
10061-02-6	trans-1,3-Dichloropropene	110 U [c]	500	110	ug/l	
100-41-4	Ethylbenzene	180 U [c]	500	180	ug/l	
76-13-1	Freon 113	240 U [c]	500	240	ug/l	
591-78-6	2-Hexanone	1000 U [c]	5000	1000	ug/l	
98-82-8	Isopropylbenzene	110 U [c]	500	110	ug/l	
79-20-9	Methyl Acetate	2500 U [c]	10000	2500	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0595-048.0-20211222		
Lab Sample ID:	FA91974-26	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	1000 U [c]	2500	1000	ug/l	
74-87-3	Methyl Chloride	250 U [c]	1000	250	ug/l	
75-09-2	Methylene Chloride	1000 U [c]	2500	1000	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	500 U [c]	2500	500	ug/l	
1634-04-4	Methyl Tert Butyl Ether	110 U [c]	500	110	ug/l	
100-42-5	Styrene	110 U [c]	500	110	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	140 U [c]	500	140	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	150 U [c]	500	150	ug/l	
127-18-4	Tetrachloroethylene	110 U [c]	500	110	ug/l	
108-88-3	Toluene	150 U [c]	500	150	ug/l	
87-61-6	1,2,3-Trichlorobenzene	310 U [c]	1000	310	ug/l	
120-82-1	1,2,4-Trichlorobenzene	250 U [c]	1000	250	ug/l	
71-55-6	1,1,1-Trichloroethane	120 U [c]	500	120	ug/l	
79-00-5	1,1,2-Trichloroethane	230 U [c]	500	230	ug/l	
79-01-6	Trichloroethylene	170 U [c]	500	170	ug/l	
75-69-4	Trichlorofluoromethane	250 U [c]	1000	250	ug/l	
75-01-4	Vinyl Chloride	317	5.0	2.0	ug/l	Q
1330-20-7	Xylene (total)	360 U [c]	1500	360	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%	102%	83-118%
17060-07-0	1,2-Dichloroethane-D4	97%	107%	79-125%
2037-26-5	Toluene-D8	101%	95%	85-112%
460-00-4	4-Bromofluorobenzene	108%	95%	83-118%

(a) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(b) Sample was not preserved to a pH < 2.
(c) Result is from Run# 2

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: LC34-DPT0595-053.0-20211222
Lab Sample ID: FA91974-27
Matrix: AQ - Ground Water
Method: SW846 8260B
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Date Sampled: 12/22/21
Date Received: 12/22/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	C0153348.D	25	01/13/22 19:02	LV	n/a	n/a	VC6188
Run #2 [b]	1A40952.D	500	12/29/21 20:30	CF	n/a	n/a	V1A1665

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	5000 U [c]	13000	5000	ug/l	
71-43-2	Benzene	160 U [c]	500	160	ug/l	
74-97-5	Bromochloromethane	230 U [c]	500	230	ug/l	
75-27-4	Bromodichloromethane	120 U [c]	500	120	ug/l	
75-25-2	Bromoform	200 U [c]	500	200	ug/l	
78-93-3	2-Butanone (MEK)	1000 U [c]	2500	1000	ug/l	
75-15-0	Carbon Disulfide	270 U [c]	1000	270	ug/l	
56-23-5	Carbon Tetrachloride	180 U [c]	500	180	ug/l	
108-90-7	Chlorobenzene	100 U [c]	500	100	ug/l	
75-00-3	Chloroethane	330 U [c]	1000	330	ug/l	
67-66-3	Chloroform	150 U [c]	500	150	ug/l	
110-82-7	Cyclohexane	200 U [c]	500	200	ug/l	
124-48-1	Dibromochloromethane	140 U [c]	500	140	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	520 U [c]	2500	520	ug/l	
106-93-4	1,2-Dibromoethane	140 U [c]	1000	140	ug/l	
75-71-8	Dichlorodifluoromethane	250 U [c]	1000	250	ug/l	
95-50-1	1,2-Dichlorobenzene	160 U [c]	500	160	ug/l	
541-73-1	1,3-Dichlorobenzene	110 U [c]	500	110	ug/l	
106-46-7	1,4-Dichlorobenzene	130 U [c]	500	130	ug/l	
75-34-3	1,1-Dichloroethane	170 U [c]	500	170	ug/l	
107-06-2	1,2-Dichloroethane	160 U [c]	500	160	ug/l	
75-35-4	1,1-Dichloroethylene	160 U [c]	500	160	ug/l	
156-59-2	cis-1,2-Dichloroethylene	2340 [c]	500	140	ug/l	
156-60-5	trans-1,2-Dichloroethylene	110 U [c]	500	110	ug/l	
78-87-5	1,2-Dichloropropane	210 U [c]	500	210	ug/l	
10061-01-5	cis-1,3-Dichloropropene	150 U [c]	500	150	ug/l	
10061-02-6	trans-1,3-Dichloropropene	110 U [c]	500	110	ug/l	
100-41-4	Ethylbenzene	180 U [c]	500	180	ug/l	
76-13-1	Freon 113	240 U [c]	500	240	ug/l	
591-78-6	2-Hexanone	1000 U [c]	5000	1000	ug/l	
98-82-8	Isopropylbenzene	110 U [c]	500	110	ug/l	
79-20-9	Methyl Acetate	2500 U [c]	10000	2500	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0595-053.0-20211222		
Lab Sample ID:	FA91974-27	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	1000 U [c]	2500	1000	ug/l	
74-87-3	Methyl Chloride	250 U [c]	1000	250	ug/l	
75-09-2	Methylene Chloride	1000 U [c]	2500	1000	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	500 U [c]	2500	500	ug/l	
1634-04-4	Methyl Tert Butyl Ether	110 U [c]	500	110	ug/l	
100-42-5	Styrene	110 U [c]	500	110	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	140 U [c]	500	140	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	150 U [c]	500	150	ug/l	
127-18-4	Tetrachloroethylene	110 U [c]	500	110	ug/l	
108-88-3	Toluene	150 U [c]	500	150	ug/l	
87-61-6	1,2,3-Trichlorobenzene	310 U [c]	1000	310	ug/l	
120-82-1	1,2,4-Trichlorobenzene	250 U [c]	1000	250	ug/l	
71-55-6	1,1,1-Trichloroethane	120 U [c]	500	120	ug/l	
79-00-5	1,1,2-Trichloroethane	230 U [c]	500	230	ug/l	
79-01-6	Trichloroethylene	251 [c]	500	170	ug/l	I
75-69-4	Trichlorofluoromethane	250 U [c]	1000	250	ug/l	
75-01-4	Vinyl Chloride	1710 [c]	500	200	ug/l	
1330-20-7	Xylene (total)	360 U [c]	1500	360	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	91%	101%	83-118%
17060-07-0	1,2-Dichloroethane-D4	95%	104%	79-125%
2037-26-5	Toluene-D8	101%	96%	85-112%
460-00-4	4-Bromofluorobenzene	110%	95%	83-118%

(a) Sample was not preserved to a pH < 2. Confirmation run beyond holdtime.
(b) Sample was not preserved to a pH < 2.
(c) Result is from Run# 2

U = Not detected MDL = Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range
I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: LC34-DPT0595-058.0-20211222
Lab Sample ID: FA91974-28
Matrix: AQ - Ground Water
Method: SW846 8260B
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Date Sampled: 12/22/21
Date Received: 12/22/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	C0153334.D	1	01/13/22 13:31	LV	n/a	n/a	VC6188
Run #2 [b]	1A40954.D	200	12/29/21 20:59	CF	n/a	n/a	V1A1665

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	2000 U [c]	5000	2000	ug/l	
71-43-2	Benzene	62 U [c]	200	62	ug/l	
74-97-5	Bromochloromethane	90 U [c]	200	90	ug/l	
75-27-4	Bromodichloromethane	48 U [c]	200	48	ug/l	
75-25-2	Bromoform	81 U [c]	200	81	ug/l	
78-93-3	2-Butanone (MEK)	400 U [c]	1000	400	ug/l	
75-15-0	Carbon Disulfide	110 U [c]	400	110	ug/l	
56-23-5	Carbon Tetrachloride	71 U [c]	200	71	ug/l	
108-90-7	Chlorobenzene	40 U [c]	200	40	ug/l	
75-00-3	Chloroethane	130 U [c]	400	130	ug/l	
67-66-3	Chloroform	60 U [c]	200	60	ug/l	
110-82-7	Cyclohexane	78 U [c]	200	78	ug/l	
124-48-1	Dibromochloromethane	55 U [c]	200	55	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	210 U [c]	1000	210	ug/l	
106-93-4	1,2-Dibromoethane	55 U [c]	400	55	ug/l	
75-71-8	Dichlorodifluoromethane	100 U [c]	400	100	ug/l	
95-50-1	1,2-Dichlorobenzene	65 U [c]	200	65	ug/l	
541-73-1	1,3-Dichlorobenzene	43 U [c]	200	43	ug/l	
106-46-7	1,4-Dichlorobenzene	51 U [c]	200	51	ug/l	
75-34-3	1,1-Dichloroethane	68 U [c]	200	68	ug/l	
107-06-2	1,2-Dichloroethane	62 U [c]	200	62	ug/l	
75-35-4	1,1-Dichloroethylene	64 U [c]	200	64	ug/l	
156-59-2	cis-1,2-Dichloroethylene	16.5	1.0	0.28	ug/l	Q
156-60-5	trans-1,2-Dichloroethylene	1.5	1.0	0.22	ug/l	Q
78-87-5	1,2-Dichloropropane	85 U [c]	200	85	ug/l	
10061-01-5	cis-1,3-Dichloropropene	58 U [c]	200	58	ug/l	
10061-02-6	trans-1,3-Dichloropropene	43 U [c]	200	43	ug/l	
100-41-4	Ethylbenzene	71 U [c]	200	71	ug/l	
76-13-1	Freon 113	96 U [c]	200	96	ug/l	
591-78-6	2-Hexanone	400 U [c]	2000	400	ug/l	
98-82-8	Isopropylbenzene	44 U [c]	200	44	ug/l	
79-20-9	Methyl Acetate	1000 U [c]	4000	1000	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0595-058.0-20211222		
Lab Sample ID:	FA91974-28	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	400 U [c]	1000	400	ug/l	
74-87-3	Methyl Chloride	100 U [c]	400	100	ug/l	
75-09-2	Methylene Chloride	400 U [c]	1000	400	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	200 U [c]	1000	200	ug/l	
1634-04-4	Methyl Tert Butyl Ether	46 U [c]	200	46	ug/l	
100-42-5	Styrene	44 U [c]	200	44	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	55 U [c]	200	55	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	60 U [c]	200	60	ug/l	
127-18-4	Tetrachloroethylene	43 U [c]	200	43	ug/l	
108-88-3	Toluene	60 U [c]	200	60	ug/l	
87-61-6	1,2,3-Trichlorobenzene	120 U [c]	400	120	ug/l	
120-82-1	1,2,4-Trichlorobenzene	100 U [c]	400	100	ug/l	
71-55-6	1,1,1-Trichloroethane	50 U [c]	200	50	ug/l	
79-00-5	1,1,2-Trichloroethane	93 U [c]	200	93	ug/l	
79-01-6	Trichloroethylene	2.9	1.0	0.35	ug/l	Q
75-69-4	Trichlorofluoromethane	100 U [c]	400	100	ug/l	
75-01-4	Vinyl Chloride	9.9	1.0	0.41	ug/l	Q
1330-20-7	Xylene (total)	140 U [c]	600	140	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	90%	102%	83-118%
17060-07-0	1,2-Dichloroethane-D4	95%	108%	79-125%
2037-26-5	Toluene-D8	103%	96%	85-112%
460-00-4	4-Bromofluorobenzene	109%	95%	83-118%

(a) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(b) Sample was not preserved to a pH < 2.
(c) Result is from Run# 2

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0595-063.0-20211222		
Lab Sample ID:	FA91974-29	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	C0153349.D	5	01/13/22 19:25	LV	n/a	n/a	VC6188
Run #2 [b]	1A40956.D	100	12/29/21 21:28	CF	n/a	n/a	V1A1665

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	1000 U [c]	2500	1000	ug/l	
71-43-2	Benzene	31 U [c]	100	31	ug/l	
74-97-5	Bromochloromethane	45 U [c]	100	45	ug/l	
75-27-4	Bromodichloromethane	24 U [c]	100	24	ug/l	
75-25-2	Bromoform	41 U [c]	100	41	ug/l	
78-93-3	2-Butanone (MEK)	200 U [c]	500	200	ug/l	
75-15-0	Carbon Disulfide	53 U [c]	200	53	ug/l	
56-23-5	Carbon Tetrachloride	36 U [c]	100	36	ug/l	
108-90-7	Chlorobenzene	20 U [c]	100	20	ug/l	
75-00-3	Chloroethane	67 U [c]	200	67	ug/l	
67-66-3	Chloroform	30 U [c]	100	30	ug/l	
110-82-7	Cyclohexane	39 U [c]	100	39	ug/l	
124-48-1	Dibromochloromethane	28 U [c]	100	28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	100 U [c]	500	100	ug/l	
106-93-4	1,2-Dibromoethane	28 U [c]	200	28	ug/l	
75-71-8	Dichlorodifluoromethane	50 U [c]	200	50	ug/l	
95-50-1	1,2-Dichlorobenzene	32 U [c]	100	32	ug/l	
541-73-1	1,3-Dichlorobenzene	22 U [c]	100	22	ug/l	
106-46-7	1,4-Dichlorobenzene	26 U [c]	100	26	ug/l	
75-34-3	1,1-Dichloroethane	34 U [c]	100	34	ug/l	
107-06-2	1,2-Dichloroethane	31 U [c]	100	31	ug/l	
75-35-4	1,1-Dichloroethylene	32 U [c]	100	32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	10.1	5.0	1.4	ug/l	Q
156-60-5	trans-1,2-Dichloroethylene	22 U [c]	100	22	ug/l	
78-87-5	1,2-Dichloropropane	43 U [c]	100	43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	29 U [c]	100	29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	21 U [c]	100	21	ug/l	
100-41-4	Ethylbenzene	36 U [c]	100	36	ug/l	
76-13-1	Freon 113	48 U [c]	100	48	ug/l	
591-78-6	2-Hexanone	200 U [c]	1000	200	ug/l	
98-82-8	Isopropylbenzene	22 U [c]	100	22	ug/l	
79-20-9	Methyl Acetate	500 U [c]	2000	500	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0595-063.0-20211222		
Lab Sample ID:	FA91974-29	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	200 U [c]	500	200	ug/l	
74-87-3	Methyl Chloride	50 U [c]	200	50	ug/l	
75-09-2	Methylene Chloride	200 U [c]	500	200	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	100 U [c]	500	100	ug/l	
1634-04-4	Methyl Tert Butyl Ether	23 U [c]	100	23	ug/l	
100-42-5	Styrene	22 U [c]	100	22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	28 U [c]	100	28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	30 U [c]	100	30	ug/l	
127-18-4	Tetrachloroethylene	22 U [c]	100	22	ug/l	
108-88-3	Toluene	30 U [c]	100	30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	61 U [c]	200	61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	50 U [c]	200	50	ug/l	
71-55-6	1,1,1-Trichloroethane	25 U [c]	100	25	ug/l	
79-00-5	1,1,2-Trichloroethane	47 U [c]	100	47	ug/l	
79-01-6	Trichloroethylene	282 [c]	100	35	ug/l	
75-69-4	Trichlorofluoromethane	50 U [c]	200	50	ug/l	
75-01-4	Vinyl Chloride	41 U [c]	100	41	ug/l	
1330-20-7	Xylene (total)	72 U [c]	300	72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	91%	102%	83-118%
17060-07-0	1,2-Dichloroethane-D4	94%	109%	79-125%
2037-26-5	Toluene-D8	105%	95%	85-112%
460-00-4	4-Bromofluorobenzene	107%	96%	83-118%

(a) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(b) Sample was not preserved to a pH < 2.
(c) Result is from Run# 2

U = Not detected MDL = Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range
I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: LC34-DPT0595-068.0-20211222
Lab Sample ID: FA91974-30
Matrix: AQ - Ground Water
Method: SW846 8260B
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Date Sampled: 12/22/21
Date Received: 12/22/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	C0153335.D	1	01/13/22 13:54	LV	n/a	n/a	VC6188
Run #2 [b]	1A40958.D	100	12/29/21 21:57	CF	n/a	n/a	V1A1665

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	1000 U [c]	2500	1000	ug/l	
71-43-2	Benzene	31 U [c]	100	31	ug/l	
74-97-5	Bromochloromethane	45 U [c]	100	45	ug/l	
75-27-4	Bromodichloromethane	24 U [c]	100	24	ug/l	
75-25-2	Bromoform	41 U [c]	100	41	ug/l	
78-93-3	2-Butanone (MEK)	200 U [c]	500	200	ug/l	
75-15-0	Carbon Disulfide	53 U [c]	200	53	ug/l	
56-23-5	Carbon Tetrachloride	36 U [c]	100	36	ug/l	
108-90-7	Chlorobenzene	20 U [c]	100	20	ug/l	
75-00-3	Chloroethane	67 U [c]	200	67	ug/l	
67-66-3	Chloroform	30 U [c]	100	30	ug/l	
110-82-7	Cyclohexane	39 U [c]	100	39	ug/l	
124-48-1	Dibromochloromethane	28 U [c]	100	28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	100 U [c]	500	100	ug/l	
106-93-4	1,2-Dibromoethane	28 U [c]	200	28	ug/l	
75-71-8	Dichlorodifluoromethane	50 U [c]	200	50	ug/l	
95-50-1	1,2-Dichlorobenzene	32 U [c]	100	32	ug/l	
541-73-1	1,3-Dichlorobenzene	22 U [c]	100	22	ug/l	
106-46-7	1,4-Dichlorobenzene	26 U [c]	100	26	ug/l	
75-34-3	1,1-Dichloroethane	34 U [c]	100	34	ug/l	
107-06-2	1,2-Dichloroethane	31 U [c]	100	31	ug/l	
75-35-4	1,1-Dichloroethylene	32 U [c]	100	32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	3.2	1.0	0.28	ug/l	Q
156-60-5	trans-1,2-Dichloroethylene	22 U [c]	100	22	ug/l	
78-87-5	1,2-Dichloropropane	43 U [c]	100	43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	29 U [c]	100	29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	21 U [c]	100	21	ug/l	
100-41-4	Ethylbenzene	36 U [c]	100	36	ug/l	
76-13-1	Freon 113	48 U [c]	100	48	ug/l	
591-78-6	2-Hexanone	200 U [c]	1000	200	ug/l	
98-82-8	Isopropylbenzene	22 U [c]	100	22	ug/l	
79-20-9	Methyl Acetate	500 U [c]	2000	500	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0595-068.0-20211222		
Lab Sample ID:	FA91974-30	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	200 U [c]	500	200	ug/l	
74-87-3	Methyl Chloride	50 U [c]	200	50	ug/l	
75-09-2	Methylene Chloride	200 U [c]	500	200	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	100 U [c]	500	100	ug/l	
1634-04-4	Methyl Tert Butyl Ether	23 U [c]	100	23	ug/l	
100-42-5	Styrene	22 U [c]	100	22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	28 U [c]	100	28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	30 U [c]	100	30	ug/l	
127-18-4	Tetrachloroethylene	22 U [c]	100	22	ug/l	
108-88-3	Toluene	30 U [c]	100	30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	61 U [c]	200	61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	50 U [c]	200	50	ug/l	
71-55-6	1,1,1-Trichloroethane	25 U [c]	100	25	ug/l	
79-00-5	1,1,2-Trichloroethane	47 U [c]	100	47	ug/l	
79-01-6	Trichloroethylene	6.0	1.0	0.35	ug/l	Q
75-69-4	Trichlorofluoromethane	50 U [c]	200	50	ug/l	
75-01-4	Vinyl Chloride	1.0	1.0	0.41	ug/l	Q
1330-20-7	Xylene (total)	72 U [c]	300	72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	93%	103%	83-118%
17060-07-0	1,2-Dichloroethane-D4	97%	111%	79-125%
2037-26-5	Toluene-D8	103%	96%	85-112%
460-00-4	4-Bromofluorobenzene	113%	94%	83-118%

(a) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(b) Sample was not preserved to a pH < 2.
(c) Result is from Run# 2

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0595-073.0-20211222		
Lab Sample ID:	FA91974-31	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	C0153350.D	2	01/13/22 19:49	LV	n/a	n/a	VC6188
Run #2 [b]	1A40960.D	100	12/29/21 22:26	CF	n/a	n/a	V1A1665

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	1000 U [c]	2500	1000	ug/l	
71-43-2	Benzene	31 U [c]	100	31	ug/l	
74-97-5	Bromochloromethane	45 U [c]	100	45	ug/l	
75-27-4	Bromodichloromethane	24 U [c]	100	24	ug/l	
75-25-2	Bromoform	41 U [c]	100	41	ug/l	
78-93-3	2-Butanone (MEK)	200 U [c]	500	200	ug/l	
75-15-0	Carbon Disulfide	53 U [c]	200	53	ug/l	
56-23-5	Carbon Tetrachloride	36 U [c]	100	36	ug/l	
108-90-7	Chlorobenzene	20 U [c]	100	20	ug/l	
75-00-3	Chloroethane	67 U [c]	200	67	ug/l	
67-66-3	Chloroform	30 U [c]	100	30	ug/l	
110-82-7	Cyclohexane	39 U [c]	100	39	ug/l	
124-48-1	Dibromochloromethane	28 U [c]	100	28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	100 U [c]	500	100	ug/l	
106-93-4	1,2-Dibromoethane	28 U [c]	200	28	ug/l	
75-71-8	Dichlorodifluoromethane	50 U [c]	200	50	ug/l	
95-50-1	1,2-Dichlorobenzene	32 U [c]	100	32	ug/l	
541-73-1	1,3-Dichlorobenzene	22 U [c]	100	22	ug/l	
106-46-7	1,4-Dichlorobenzene	26 U [c]	100	26	ug/l	
75-34-3	1,1-Dichloroethane	34 U [c]	100	34	ug/l	
107-06-2	1,2-Dichloroethane	31 U [c]	100	31	ug/l	
75-35-4	1,1-Dichloroethylene	32 U [c]	100	32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	53.5	2.0	0.55	ug/l	Q
156-60-5	trans-1,2-Dichloroethylene	4.2	2.0	0.44	ug/l	Q
78-87-5	1,2-Dichloropropane	43 U [c]	100	43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	29 U [c]	100	29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	21 U [c]	100	21	ug/l	
100-41-4	Ethylbenzene	36 U [c]	100	36	ug/l	
76-13-1	Freon 113	48 U [c]	100	48	ug/l	
591-78-6	2-Hexanone	200 U [c]	1000	200	ug/l	
98-82-8	Isopropylbenzene	22 U [c]	100	22	ug/l	
79-20-9	Methyl Acetate	500 U [c]	2000	500	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0595-073.0-20211222		
Lab Sample ID:	FA91974-31	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	200 U [c]	500	200	ug/l	
74-87-3	Methyl Chloride	50 U [c]	200	50	ug/l	
75-09-2	Methylene Chloride	200 U [c]	500	200	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	100 U [c]	500	100	ug/l	
1634-04-4	Methyl Tert Butyl Ether	23 U [c]	100	23	ug/l	
100-42-5	Styrene	22 U [c]	100	22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	28 U [c]	100	28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	30 U [c]	100	30	ug/l	
127-18-4	Tetrachloroethylene	22 U [c]	100	22	ug/l	
108-88-3	Toluene	30 U [c]	100	30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	61 U [c]	200	61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	50 U [c]	200	50	ug/l	
71-55-6	1,1,1-Trichloroethane	25 U [c]	100	25	ug/l	
79-00-5	1,1,2-Trichloroethane	47 U [c]	100	47	ug/l	
79-01-6	Trichloroethylene	160 [c]	100	35	ug/l	
75-69-4	Trichlorofluoromethane	50 U [c]	200	50	ug/l	
75-01-4	Vinyl Chloride	6.9	2.0	0.82	ug/l	Q
1330-20-7	Xylene (total)	72 U [c]	300	72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%	103%	83-118%
17060-07-0	1,2-Dichloroethane-D4	99%	112%	79-125%
2037-26-5	Toluene-D8	104%	95%	85-112%
460-00-4	4-Bromofluorobenzene	108%	94%	83-118%

(a) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(b) Sample was not preserved to a pH < 2.
(c) Result is from Run# 2

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0595-078.0-20211222		
Lab Sample ID:	FA91974-32	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	C0153351.D	25	01/13/22 20:12	LV	n/a	n/a	VC6188
Run #2 [b]	1A40962.D	2000	12/29/21 22:55	CF	n/a	n/a	V1A1665

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	20000 U [c]	50000	20000	ug/l	
71-43-2	Benzene	620 U [c]	2000	620	ug/l	
74-97-5	Bromochloromethane	900 U [c]	2000	900	ug/l	
75-27-4	Bromodichloromethane	480 U [c]	2000	480	ug/l	
75-25-2	Bromoform	810 U [c]	2000	810	ug/l	
78-93-3	2-Butanone (MEK)	4000 U [c]	10000	4000	ug/l	
75-15-0	Carbon Disulfide	1100 U [c]	4000	1100	ug/l	
56-23-5	Carbon Tetrachloride	710 U [c]	2000	710	ug/l	
108-90-7	Chlorobenzene	400 U [c]	2000	400	ug/l	
75-00-3	Chloroethane	1300 U [c]	4000	1300	ug/l	
67-66-3	Chloroform	600 U [c]	2000	600	ug/l	
110-82-7	Cyclohexane	780 U [c]	2000	780	ug/l	
124-48-1	Dibromochloromethane	550 U [c]	2000	550	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	2100 U [c]	10000	2100	ug/l	
106-93-4	1,2-Dibromoethane	550 U [c]	4000	550	ug/l	
75-71-8	Dichlorodifluoromethane	1000 U [c]	4000	1000	ug/l	
95-50-1	1,2-Dichlorobenzene	650 U [c]	2000	650	ug/l	
541-73-1	1,3-Dichlorobenzene	430 U [c]	2000	430	ug/l	
106-46-7	1,4-Dichlorobenzene	510 U [c]	2000	510	ug/l	
75-34-3	1,1-Dichloroethane	680 U [c]	2000	680	ug/l	
107-06-2	1,2-Dichloroethane	620 U [c]	2000	620	ug/l	
75-35-4	1,1-Dichloroethylene	640 U [c]	2000	640	ug/l	
156-59-2	cis-1,2-Dichloroethylene	1590 [c]	2000	550	ug/l	I
156-60-5	trans-1,2-Dichloroethylene	440 U [c]	2000	440	ug/l	
78-87-5	1,2-Dichloropropane	850 U [c]	2000	850	ug/l	
10061-01-5	cis-1,3-Dichloropropene	580 U [c]	2000	580	ug/l	
10061-02-6	trans-1,3-Dichloropropene	430 U [c]	2000	430	ug/l	
100-41-4	Ethylbenzene	710 U [c]	2000	710	ug/l	
76-13-1	Freon 113	960 U [c]	2000	960	ug/l	
591-78-6	2-Hexanone	4000 U [c]	20000	4000	ug/l	
98-82-8	Isopropylbenzene	440 U [c]	2000	440	ug/l	
79-20-9	Methyl Acetate	10000 U [c]	40000	10000	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0595-078.0-20211222		
Lab Sample ID:	FA91974-32	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	4000 U [c]	10000	4000	ug/l	
74-87-3	Methyl Chloride	1000 U [c]	4000	1000	ug/l	
75-09-2	Methylene Chloride	4000 U [c]	10000	4000	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	2000 U [c]	10000	2000	ug/l	
1634-04-4	Methyl Tert Butyl Ether	460 U [c]	2000	460	ug/l	
100-42-5	Styrene	440 U [c]	2000	440	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	550 U [c]	2000	550	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	600 U [c]	2000	600	ug/l	
127-18-4	Tetrachloroethylene	430 U [c]	2000	430	ug/l	
108-88-3	Toluene	600 U [c]	2000	600	ug/l	
87-61-6	1,2,3-Trichlorobenzene	1200 U [c]	4000	1200	ug/l	
120-82-1	1,2,4-Trichlorobenzene	1000 U [c]	4000	1000	ug/l	
71-55-6	1,1,1-Trichloroethane	500 U [c]	2000	500	ug/l	
79-00-5	1,1,2-Trichloroethane	930 U [c]	2000	930	ug/l	
79-01-6	Trichloroethylene	2310 [c]	2000	690	ug/l	
75-69-4	Trichlorofluoromethane	1000 U [c]	4000	1000	ug/l	
75-01-4	Vinyl Chloride	820 U [c]	2000	820	ug/l	
1330-20-7	Xylene (total)	1400 U [c]	6000	1400	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	92%	103%	83-118%
17060-07-0	1,2-Dichloroethane-D4	96%	109%	79-125%
2037-26-5	Toluene-D8	101%	95%	85-112%
460-00-4	4-Bromofluorobenzene	109%	93%	83-118%

(a) Sample was not preserved to a pH < 2. Confirmation run beyond holdtime. Results from different vials are not consistent; higher results were reported.
(b) Sample was not preserved to a pH < 2. Results from different vials are not consistent; higher results were reported.
(c) Result is from Run# 2

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0595-083.0-20211222		
Lab Sample ID:	FA91974-33	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	C0153336.D	1	01/13/22 14:18	LV	n/a	n/a	VC6188
Run #2 [b]	1A40964.D	100	12/29/21 23:24	CF	n/a	n/a	V1A1665

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	1000 U [c]	2500	1000	ug/l	
71-43-2	Benzene	31 U [c]	100	31	ug/l	
74-97-5	Bromochloromethane	45 U [c]	100	45	ug/l	
75-27-4	Bromodichloromethane	24 U [c]	100	24	ug/l	
75-25-2	Bromoform	41 U [c]	100	41	ug/l	
78-93-3	2-Butanone (MEK)	200 U [c]	500	200	ug/l	
75-15-0	Carbon Disulfide	53 U [c]	200	53	ug/l	
56-23-5	Carbon Tetrachloride	36 U [c]	100	36	ug/l	
108-90-7	Chlorobenzene	20 U [c]	100	20	ug/l	
75-00-3	Chloroethane	67 U [c]	200	67	ug/l	
67-66-3	Chloroform	30 U [c]	100	30	ug/l	
110-82-7	Cyclohexane	39 U [c]	100	39	ug/l	
124-48-1	Dibromochloromethane	28 U [c]	100	28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	100 U [c]	500	100	ug/l	
106-93-4	1,2-Dibromoethane	28 U [c]	200	28	ug/l	
75-71-8	Dichlorodifluoromethane	50 U [c]	200	50	ug/l	
95-50-1	1,2-Dichlorobenzene	32 U [c]	100	32	ug/l	
541-73-1	1,3-Dichlorobenzene	22 U [c]	100	22	ug/l	
106-46-7	1,4-Dichlorobenzene	26 U [c]	100	26	ug/l	
75-34-3	1,1-Dichloroethane	34 U [c]	100	34	ug/l	
107-06-2	1,2-Dichloroethane	31 U [c]	100	31	ug/l	
75-35-4	1,1-Dichloroethylene	32 U [c]	100	32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	22.6	1.0	0.28	ug/l	Q
156-60-5	trans-1,2-Dichloroethylene	22 U [c]	100	22	ug/l	
78-87-5	1,2-Dichloropropane	43 U [c]	100	43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	29 U [c]	100	29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	21 U [c]	100	21	ug/l	
100-41-4	Ethylbenzene	36 U [c]	100	36	ug/l	
76-13-1	Freon 113	48 U [c]	100	48	ug/l	
591-78-6	2-Hexanone	200 U [c]	1000	200	ug/l	
98-82-8	Isopropylbenzene	22 U [c]	100	22	ug/l	
79-20-9	Methyl Acetate	500 U [c]	2000	500	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0595-083.0-20211222		
Lab Sample ID:	FA91974-33	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	200 U [c]	500	200	ug/l	
74-87-3	Methyl Chloride	50 U [c]	200	50	ug/l	
75-09-2	Methylene Chloride	200 U [c]	500	200	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	100 U [c]	500	100	ug/l	
1634-04-4	Methyl Tert Butyl Ether	23 U [c]	100	23	ug/l	
100-42-5	Styrene	22 U [c]	100	22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	28 U [c]	100	28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	30 U [c]	100	30	ug/l	
127-18-4	Tetrachloroethylene	22 U [c]	100	22	ug/l	
108-88-3	Toluene	30 U [c]	100	30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	61 U [c]	200	61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	50 U [c]	200	50	ug/l	
71-55-6	1,1,1-Trichloroethane	25 U [c]	100	25	ug/l	
79-00-5	1,1,2-Trichloroethane	47 U [c]	100	47	ug/l	
79-01-6	Trichloroethylene	61.4	1.0	0.35	ug/l	Q
75-69-4	Trichlorofluoromethane	50 U [c]	200	50	ug/l	
75-01-4	Vinyl Chloride	4.1	1.0	0.41	ug/l	Q
1330-20-7	Xylene (total)	72 U [c]	300	72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%	106%	83-118%
17060-07-0	1,2-Dichloroethane-D4	98%	116%	79-125%
2037-26-5	Toluene-D8	103%	96%	85-112%
460-00-4	4-Bromofluorobenzene	111%	94%	83-118%

(a) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(b) Sample was not preserved to a pH < 2.
(c) Result is from Run# 2

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0595-088.0-20211222		
Lab Sample ID:	FA91974-34	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	C0153337.D	1	01/13/22 14:42	LV	n/a	n/a	VC6188
Run #2 [b]	1A40966.D	100	12/29/21 23:54	CF	n/a	n/a	V1A1665

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	1000 U [c]	2500	1000	ug/l	
71-43-2	Benzene	31 U [c]	100	31	ug/l	
74-97-5	Bromochloromethane	45 U [c]	100	45	ug/l	
75-27-4	Bromodichloromethane	24 U [c]	100	24	ug/l	
75-25-2	Bromoform	41 U [c]	100	41	ug/l	
78-93-3	2-Butanone (MEK)	200 U [c]	500	200	ug/l	
75-15-0	Carbon Disulfide	53 U [c]	200	53	ug/l	
56-23-5	Carbon Tetrachloride	36 U [c]	100	36	ug/l	
108-90-7	Chlorobenzene	20 U [c]	100	20	ug/l	
75-00-3	Chloroethane	67 U [c]	200	67	ug/l	
67-66-3	Chloroform	30 U [c]	100	30	ug/l	
110-82-7	Cyclohexane	39 U [c]	100	39	ug/l	
124-48-1	Dibromochloromethane	28 U [c]	100	28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	100 U [c]	500	100	ug/l	
106-93-4	1,2-Dibromoethane	28 U [c]	200	28	ug/l	
75-71-8	Dichlorodifluoromethane	50 U [c]	200	50	ug/l	
95-50-1	1,2-Dichlorobenzene	32 U [c]	100	32	ug/l	
541-73-1	1,3-Dichlorobenzene	22 U [c]	100	22	ug/l	
106-46-7	1,4-Dichlorobenzene	26 U [c]	100	26	ug/l	
75-34-3	1,1-Dichloroethane	34 U [c]	100	34	ug/l	
107-06-2	1,2-Dichloroethane	31 U [c]	100	31	ug/l	
75-35-4	1,1-Dichloroethylene	32 U [c]	100	32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	10.9	1.0	0.28	ug/l	Q
156-60-5	trans-1,2-Dichloroethylene	22 U [c]	100	22	ug/l	
78-87-5	1,2-Dichloropropane	43 U [c]	100	43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	29 U [c]	100	29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	21 U [c]	100	21	ug/l	
100-41-4	Ethylbenzene	36 U [c]	100	36	ug/l	
76-13-1	Freon 113	48 U [c]	100	48	ug/l	
591-78-6	2-Hexanone	200 U [c]	1000	200	ug/l	
98-82-8	Isopropylbenzene	22 U [c]	100	22	ug/l	
79-20-9	Methyl Acetate	500 U [c]	2000	500	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0595-088.0-20211222		
Lab Sample ID:	FA91974-34	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	200 U [c]	500	200	ug/l	
74-87-3	Methyl Chloride	50 U [c]	200	50	ug/l	
75-09-2	Methylene Chloride	200 U [c]	500	200	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	100 U [c]	500	100	ug/l	
1634-04-4	Methyl Tert Butyl Ether	23 U [c]	100	23	ug/l	
100-42-5	Styrene	22 U [c]	100	22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	28 U [c]	100	28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	30 U [c]	100	30	ug/l	
127-18-4	Tetrachloroethylene	22 U [c]	100	22	ug/l	
108-88-3	Toluene	30 U [c]	100	30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	61 U [c]	200	61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	50 U [c]	200	50	ug/l	
71-55-6	1,1,1-Trichloroethane	25 U [c]	100	25	ug/l	
79-00-5	1,1,2-Trichloroethane	47 U [c]	100	47	ug/l	
79-01-6	Trichloroethylene	5.7	1.0	0.35	ug/l	Q
75-69-4	Trichlorofluoromethane	50 U [c]	200	50	ug/l	
75-01-4	Vinyl Chloride	2.4	1.0	0.41	ug/l	Q
1330-20-7	Xylene (total)	72 U [c]	300	72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	90%	104%	83-118%
17060-07-0	1,2-Dichloroethane-D4	94%	114%	79-125%
2037-26-5	Toluene-D8	104%	96%	85-112%
460-00-4	4-Bromofluorobenzene	109%	93%	83-118%

(a) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(b) Sample was not preserved to a pH < 2.
(c) Result is from Run# 2

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0595-093.0-20211222		
Lab Sample ID:	FA91974-35	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	C0153352.D	2	01/13/22 20:36	LV	n/a	n/a	VC6188
Run #2 [b]	1A40968.D	100	12/30/21 00:23	CF	n/a	n/a	V1A1665

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	1000 U [c]	2500	1000	ug/l	
71-43-2	Benzene	31 U [c]	100	31	ug/l	
74-97-5	Bromochloromethane	45 U [c]	100	45	ug/l	
75-27-4	Bromodichloromethane	24 U [c]	100	24	ug/l	
75-25-2	Bromoform	41 U [c]	100	41	ug/l	
78-93-3	2-Butanone (MEK)	200 U [c]	500	200	ug/l	
75-15-0	Carbon Disulfide	53 U [c]	200	53	ug/l	
56-23-5	Carbon Tetrachloride	36 U [c]	100	36	ug/l	
108-90-7	Chlorobenzene	20 U [c]	100	20	ug/l	
75-00-3	Chloroethane	67 U [c]	200	67	ug/l	
67-66-3	Chloroform	30 U [c]	100	30	ug/l	
110-82-7	Cyclohexane	39 U [c]	100	39	ug/l	
124-48-1	Dibromochloromethane	28 U [c]	100	28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	100 U [c]	500	100	ug/l	
106-93-4	1,2-Dibromoethane	28 U [c]	200	28	ug/l	
75-71-8	Dichlorodifluoromethane	50 U [c]	200	50	ug/l	
95-50-1	1,2-Dichlorobenzene	32 U [c]	100	32	ug/l	
541-73-1	1,3-Dichlorobenzene	22 U [c]	100	22	ug/l	
106-46-7	1,4-Dichlorobenzene	26 U [c]	100	26	ug/l	
75-34-3	1,1-Dichloroethane	34 U [c]	100	34	ug/l	
107-06-2	1,2-Dichloroethane	31 U [c]	100	31	ug/l	
75-35-4	1,1-Dichloroethylene	32 U [c]	100	32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	120 [c]	100	28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	22 U [c]	100	22	ug/l	
78-87-5	1,2-Dichloropropane	43 U [c]	100	43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	29 U [c]	100	29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	21 U [c]	100	21	ug/l	
100-41-4	Ethylbenzene	36 U [c]	100	36	ug/l	
76-13-1	Freon 113	48 U [c]	100	48	ug/l	
591-78-6	2-Hexanone	200 U [c]	1000	200	ug/l	
98-82-8	Isopropylbenzene	22 U [c]	100	22	ug/l	
79-20-9	Methyl Acetate	500 U [c]	2000	500	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0595-093.0-20211222		
Lab Sample ID:	FA91974-35	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	200 U [c]	500	200	ug/l	
74-87-3	Methyl Chloride	50 U [c]	200	50	ug/l	
75-09-2	Methylene Chloride	200 U [c]	500	200	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	100 U [c]	500	100	ug/l	
1634-04-4	Methyl Tert Butyl Ether	23 U [c]	100	23	ug/l	
100-42-5	Styrene	22 U [c]	100	22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	28 U [c]	100	28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	30 U [c]	100	30	ug/l	
127-18-4	Tetrachloroethylene	22 U [c]	100	22	ug/l	
108-88-3	Toluene	30 U [c]	100	30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	61 U [c]	200	61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	50 U [c]	200	50	ug/l	
71-55-6	1,1,1-Trichloroethane	25 U [c]	100	25	ug/l	
79-00-5	1,1,2-Trichloroethane	47 U [c]	100	47	ug/l	
79-01-6	Trichloroethylene	43.2 [c]	100	35	ug/l	I
75-69-4	Trichlorofluoromethane	50 U [c]	200	50	ug/l	
75-01-4	Vinyl Chloride	5.4	2.0	0.82	ug/l	Q
1330-20-7	Xylene (total)	72 U [c]	300	72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	93%	103%	83-118%
17060-07-0	1,2-Dichloroethane-D4	93%	111%	79-125%
2037-26-5	Toluene-D8	104%	96%	85-112%
460-00-4	4-Bromofluorobenzene	107%	93%	83-118%

(a) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values. Results from different vials are not consistent; higher results were reported.
(b) Sample was not preserved to a pH < 2. Results from different vials are not consistent; higher results were reported.
(c) Result is from Run# 2

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0595-098.0-20211222		
Lab Sample ID:	FA91974-36	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	C0153338.D	1	01/13/22 15:06	LV	n/a	n/a	VC6188
Run #2 [b]	1A40970.D	100	12/30/21 00:52	CF	n/a	n/a	V1A1665

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	1000 U [c]	2500	1000	ug/l	
71-43-2	Benzene	31 U [c]	100	31	ug/l	
74-97-5	Bromochloromethane	45 U [c]	100	45	ug/l	
75-27-4	Bromodichloromethane	24 U [c]	100	24	ug/l	
75-25-2	Bromoform	41 U [c]	100	41	ug/l	
78-93-3	2-Butanone (MEK)	200 U [c]	500	200	ug/l	
75-15-0	Carbon Disulfide	53 U [c]	200	53	ug/l	
56-23-5	Carbon Tetrachloride	36 U [c]	100	36	ug/l	
108-90-7	Chlorobenzene	20 U [c]	100	20	ug/l	
75-00-3	Chloroethane	67 U [c]	200	67	ug/l	
67-66-3	Chloroform	30 U [c]	100	30	ug/l	
110-82-7	Cyclohexane	39 U [c]	100	39	ug/l	
124-48-1	Dibromochloromethane	28 U [c]	100	28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	100 U [c]	500	100	ug/l	
106-93-4	1,2-Dibromoethane	28 U [c]	200	28	ug/l	
75-71-8	Dichlorodifluoromethane	50 U [c]	200	50	ug/l	
95-50-1	1,2-Dichlorobenzene	32 U [c]	100	32	ug/l	
541-73-1	1,3-Dichlorobenzene	22 U [c]	100	22	ug/l	
106-46-7	1,4-Dichlorobenzene	26 U [c]	100	26	ug/l	
75-34-3	1,1-Dichloroethane	34 U [c]	100	34	ug/l	
107-06-2	1,2-Dichloroethane	31 U [c]	100	31	ug/l	
75-35-4	1,1-Dichloroethylene	32 U [c]	100	32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	80.0	1.0	0.28	ug/l	Q
156-60-5	trans-1,2-Dichloroethylene	22 U [c]	100	22	ug/l	
78-87-5	1,2-Dichloropropane	43 U [c]	100	43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	29 U [c]	100	29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	21 U [c]	100	21	ug/l	
100-41-4	Ethylbenzene	36 U [c]	100	36	ug/l	
76-13-1	Freon 113	48 U [c]	100	48	ug/l	
591-78-6	2-Hexanone	200 U [c]	1000	200	ug/l	
98-82-8	Isopropylbenzene	22 U [c]	100	22	ug/l	
79-20-9	Methyl Acetate	500 U [c]	2000	500	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0595-098.0-20211222		
Lab Sample ID:	FA91974-36	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	200 U [c]	500	200	ug/l	
74-87-3	Methyl Chloride	50 U [c]	200	50	ug/l	
75-09-2	Methylene Chloride	200 U [c]	500	200	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	100 U [c]	500	100	ug/l	
1634-04-4	Methyl Tert Butyl Ether	23 U [c]	100	23	ug/l	
100-42-5	Styrene	22 U [c]	100	22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	28 U [c]	100	28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	30 U [c]	100	30	ug/l	
127-18-4	Tetrachloroethylene	22 U [c]	100	22	ug/l	
108-88-3	Toluene	30 U [c]	100	30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	61 U [c]	200	61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	50 U [c]	200	50	ug/l	
71-55-6	1,1,1-Trichloroethane	25 U [c]	100	25	ug/l	
79-00-5	1,1,2-Trichloroethane	47 U [c]	100	47	ug/l	
79-01-6	Trichloroethylene	13.9	1.0	0.35	ug/l	Q
75-69-4	Trichlorofluoromethane	50 U [c]	200	50	ug/l	
75-01-4	Vinyl Chloride	18.6	1.0	0.41	ug/l	Q
1330-20-7	Xylene (total)	72 U [c]	300	72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	92%	106%	83-118%
17060-07-0	1,2-Dichloroethane-D4	94%	116%	79-125%
2037-26-5	Toluene-D8	104%	94%	85-112%
460-00-4	4-Bromofluorobenzene	109%	94%	83-118%

(a) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(b) Sample was not preserved to a pH < 2.
(c) Result is from Run# 2

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: LC34-DPT0594-008.0-20211222
Lab Sample ID: FA91974-37
Matrix: AQ - Ground Water
Method: SW846 8260B
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Date Sampled: 12/22/21
Date Received: 12/22/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	C0153353.D	20	01/13/22 20:59	LV	n/a	n/a	VC6188
Run #2 [b]	1A40972.D	100	12/30/21 01:21	CF	n/a	n/a	V1A1665

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	1000 U [c]	2500	1000	ug/l	
71-43-2	Benzene	31 U [c]	100	31	ug/l	
74-97-5	Bromochloromethane	45 U [c]	100	45	ug/l	
75-27-4	Bromodichloromethane	24 U [c]	100	24	ug/l	
75-25-2	Bromoform	41 U [c]	100	41	ug/l	
78-93-3	2-Butanone (MEK)	200 U [c]	500	200	ug/l	
75-15-0	Carbon Disulfide	53 U [c]	200	53	ug/l	
56-23-5	Carbon Tetrachloride	36 U [c]	100	36	ug/l	
108-90-7	Chlorobenzene	20 U [c]	100	20	ug/l	
75-00-3	Chloroethane	67 U [c]	200	67	ug/l	
67-66-3	Chloroform	30 U [c]	100	30	ug/l	
110-82-7	Cyclohexane	39 U [c]	100	39	ug/l	
124-48-1	Dibromochloromethane	28 U [c]	100	28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	100 U [c]	500	100	ug/l	
106-93-4	1,2-Dibromoethane	28 U [c]	200	28	ug/l	
75-71-8	Dichlorodifluoromethane	50 U [c]	200	50	ug/l	
95-50-1	1,2-Dichlorobenzene	32 U [c]	100	32	ug/l	
541-73-1	1,3-Dichlorobenzene	22 U [c]	100	22	ug/l	
106-46-7	1,4-Dichlorobenzene	26 U [c]	100	26	ug/l	
75-34-3	1,1-Dichloroethane	34 U [c]	100	34	ug/l	
107-06-2	1,2-Dichloroethane	31 U [c]	100	31	ug/l	
75-35-4	1,1-Dichloroethylene	32 U [c]	100	32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	57.5 [c]	100	28	ug/l	I
156-60-5	trans-1,2-Dichloroethylene	22 U [c]	100	22	ug/l	
78-87-5	1,2-Dichloropropane	43 U [c]	100	43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	29 U [c]	100	29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	21 U [c]	100	21	ug/l	
100-41-4	Ethylbenzene	36 U [c]	100	36	ug/l	
76-13-1	Freon 113	48 U [c]	100	48	ug/l	
591-78-6	2-Hexanone	200 U [c]	1000	200	ug/l	
98-82-8	Isopropylbenzene	22 U [c]	100	22	ug/l	
79-20-9	Methyl Acetate	500 U [c]	2000	500	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0594-008.0-20211222		
Lab Sample ID:	FA91974-37	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	200 U [c]	500	200	ug/l	
74-87-3	Methyl Chloride	50 U [c]	200	50	ug/l	
75-09-2	Methylene Chloride	200 U [c]	500	200	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	100 U [c]	500	100	ug/l	
1634-04-4	Methyl Tert Butyl Ether	23 U [c]	100	23	ug/l	
100-42-5	Styrene	22 U [c]	100	22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	28 U [c]	100	28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	30 U [c]	100	30	ug/l	
127-18-4	Tetrachloroethylene	22 U [c]	100	22	ug/l	
108-88-3	Toluene	30 U [c]	100	30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	61 U [c]	200	61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	50 U [c]	200	50	ug/l	
71-55-6	1,1,1-Trichloroethane	25 U [c]	100	25	ug/l	
79-00-5	1,1,2-Trichloroethane	47 U [c]	100	47	ug/l	
79-01-6	Trichloroethylene	1160 [c]	100	35	ug/l	
75-69-4	Trichlorofluoromethane	50 U [c]	200	50	ug/l	
75-01-4	Vinyl Chloride	41 U [c]	100	41	ug/l	
1330-20-7	Xylene (total)	72 U [c]	300	72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	92%	106%	83-118%
17060-07-0	1,2-Dichloroethane-D4	92%	113%	79-125%
2037-26-5	Toluene-D8	105%	95%	85-112%
460-00-4	4-Bromofluorobenzene	110%	94%	83-118%

(a) Sample was not preserved to a pH < 2. Confirmation run beyond holdtime.
(b) Sample was not preserved to a pH < 2.
(c) Result is from Run# 2

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0594-013.0-20211222		
Lab Sample ID:	FA91974-38	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	2A40935.D	100	12/29/21 16:24	CF	n/a	n/a	V2A1660
Run #2 [b]	I73542.D	500	01/14/22 23:51	LR	n/a	n/a	VI2443

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	1000 U	2500	1000	ug/l	
71-43-2	Benzene	31 U	100	31	ug/l	
74-97-5	Bromochloromethane	45 U	100	45	ug/l	
75-27-4	Bromodichloromethane	24 U	100	24	ug/l	
75-25-2	Bromoform	41 U	100	41	ug/l	
78-93-3	2-Butanone (MEK)	200 U	500	200	ug/l	
75-15-0	Carbon Disulfide [c]	53 U	200	53	ug/l	
56-23-5	Carbon Tetrachloride	36 U	100	36	ug/l	
108-90-7	Chlorobenzene	20 U	100	20	ug/l	
75-00-3	Chloroethane	67 U	200	67	ug/l	
67-66-3	Chloroform	30 U	100	30	ug/l	
110-82-7	Cyclohexane	39 U	100	39	ug/l	
124-48-1	Dibromochloromethane	28 U	100	28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	100 U	500	100	ug/l	
106-93-4	1,2-Dibromoethane	28 U	200	28	ug/l	
75-71-8	Dichlorodifluoromethane	50 U	200	50	ug/l	
95-50-1	1,2-Dichlorobenzene	32 U	100	32	ug/l	
541-73-1	1,3-Dichlorobenzene	22 U	100	22	ug/l	
106-46-7	1,4-Dichlorobenzene	26 U	100	26	ug/l	
75-34-3	1,1-Dichloroethane	34 U	100	34	ug/l	
107-06-2	1,2-Dichloroethane	31 U	100	31	ug/l	
75-35-4	1,1-Dichloroethylene	32 U	100	32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	6700	100	28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	22 U	100	22	ug/l	
78-87-5	1,2-Dichloropropane	43 U	100	43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	29 U	100	29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	21 U	100	21	ug/l	
100-41-4	Ethylbenzene	36 U	100	36	ug/l	
76-13-1	Freon 113	48 U	100	48	ug/l	
591-78-6	2-Hexanone	200 U	1000	200	ug/l	
98-82-8	Isopropylbenzene	22 U	100	22	ug/l	
79-20-9	Methyl Acetate	500 U	2000	500	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0594-013.0-20211222		
Lab Sample ID:	FA91974-38	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	200 U	500	200	ug/l	
74-87-3	Methyl Chloride	50 U	200	50	ug/l	
75-09-2	Methylene Chloride	200 U	500	200	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	100 U	500	100	ug/l	
1634-04-4	Methyl Tert Butyl Ether	23 U	100	23	ug/l	
100-42-5	Styrene	22 U	100	22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	28 U	100	28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	30 U	100	30	ug/l	
127-18-4	Tetrachloroethylene	22 U	100	22	ug/l	
108-88-3	Toluene	30 U	100	30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	61 U	200	61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	50 U	200	50	ug/l	
71-55-6	1,1,1-Trichloroethane	25 U	100	25	ug/l	
79-00-5	1,1,2-Trichloroethane	47 U	100	47	ug/l	
79-01-6	Trichloroethylene	21200 [d]	500	170	ug/l	Q
75-69-4	Trichlorofluoromethane	50 U	200	50	ug/l	
75-01-4	Vinyl Chloride	257	100	41	ug/l	
1330-20-7	Xylene (total)	72 U	300	72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%	94%	83-118%
17060-07-0	1,2-Dichloroethane-D4	100%	102%	79-125%
2037-26-5	Toluene-D8	98%	103%	85-112%
460-00-4	4-Bromofluorobenzene	100%	98%	83-118%

(a) Sample was not preserved to a pH < 2.
(b) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(c) Associated CCV outside of control limits high, sample was ND.
(d) Result is from Run# 2

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0594-018.0-20211222		
Lab Sample ID:	FA91974-39	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	2A40937.D	100	12/29/21 16:53	CF	n/a	n/a	V2A1660
Run #2 [b]	I73543.D	2000	01/15/22 00:16	LR	n/a	n/a	VI2443

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	1000 U	2500	1000	ug/l	
71-43-2	Benzene	31 U	100	31	ug/l	
74-97-5	Bromochloromethane	45 U	100	45	ug/l	
75-27-4	Bromodichloromethane	24 U	100	24	ug/l	
75-25-2	Bromoform	41 U	100	41	ug/l	
78-93-3	2-Butanone (MEK)	200 U	500	200	ug/l	
75-15-0	Carbon Disulfide [c]	53 U	200	53	ug/l	
56-23-5	Carbon Tetrachloride	36 U	100	36	ug/l	
108-90-7	Chlorobenzene	20 U	100	20	ug/l	
75-00-3	Chloroethane	67 U	200	67	ug/l	
67-66-3	Chloroform	30 U	100	30	ug/l	
110-82-7	Cyclohexane	39 U	100	39	ug/l	
124-48-1	Dibromochloromethane	28 U	100	28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	100 U	500	100	ug/l	
106-93-4	1,2-Dibromoethane	28 U	200	28	ug/l	
75-71-8	Dichlorodifluoromethane	50 U	200	50	ug/l	
95-50-1	1,2-Dichlorobenzene	32 U	100	32	ug/l	
541-73-1	1,3-Dichlorobenzene	22 U	100	22	ug/l	
106-46-7	1,4-Dichlorobenzene	26 U	100	26	ug/l	
75-34-3	1,1-Dichloroethane	34 U	100	34	ug/l	
107-06-2	1,2-Dichloroethane	31 U	100	31	ug/l	
75-35-4	1,1-Dichloroethylene	32 U	100	32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	5430	100	28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	75.0	100	22	ug/l	I
78-87-5	1,2-Dichloropropane	43 U	100	43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	29 U	100	29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	21 U	100	21	ug/l	
100-41-4	Ethylbenzene	36 U	100	36	ug/l	
76-13-1	Freon 113	48 U	100	48	ug/l	
591-78-6	2-Hexanone	200 U	1000	200	ug/l	
98-82-8	Isopropylbenzene	22 U	100	22	ug/l	
79-20-9	Methyl Acetate	500 U	2000	500	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0594-018.0-20211222		
Lab Sample ID:	FA91974-39	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	200 U	500	200	ug/l	
74-87-3	Methyl Chloride	50 U	200	50	ug/l	
75-09-2	Methylene Chloride	200 U	500	200	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	100 U	500	100	ug/l	
1634-04-4	Methyl Tert Butyl Ether	23 U	100	23	ug/l	
100-42-5	Styrene	22 U	100	22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	28 U	100	28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	30 U	100	30	ug/l	
127-18-4	Tetrachloroethylene	22 U	100	22	ug/l	
108-88-3	Toluene	30 U	100	30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	61 U	200	61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	50 U	200	50	ug/l	
71-55-6	1,1,1-Trichloroethane	25 U	100	25	ug/l	
79-00-5	1,1,2-Trichloroethane	47 U	100	47	ug/l	
79-01-6	Trichloroethylene	61100 [d]	2000	690	ug/l	Q
75-69-4	Trichlorofluoromethane	50 U	200	50	ug/l	
75-01-4	Vinyl Chloride	484	100	41	ug/l	
1330-20-7	Xylene (total)	72 U	300	72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%	95%	83-118%
17060-07-0	1,2-Dichloroethane-D4	101%	103%	79-125%
2037-26-5	Toluene-D8	97%	102%	85-112%
460-00-4	4-Bromofluorobenzene	99%	97%	83-118%

(a) Sample was not preserved to a pH < 2.
(b) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(c) Associated CCV outside of control limits high, sample was ND.
(d) Result is from Run# 2

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: LC34-DPT0594-023.0-20211222
Lab Sample ID: FA91974-40
Matrix: AQ - Ground Water
Method: SW846 8260B
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Date Sampled: 12/22/21
Date Received: 12/22/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	2A40939.D	50	12/29/21 17:22	CF	n/a	n/a	V2A1660
Run #2 [b]	I73544.D	1000	01/15/22 00:40	LR	n/a	n/a	VI2443

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	500 U	1300	500	ug/l	
71-43-2	Benzene	16 U	50	16	ug/l	
74-97-5	Bromochloromethane	23 U	50	23	ug/l	
75-27-4	Bromodichloromethane	12 U	50	12	ug/l	
75-25-2	Bromoform	20 U	50	20	ug/l	
78-93-3	2-Butanone (MEK)	100 U	250	100	ug/l	
75-15-0	Carbon Disulfide [c]	27 U	100	27	ug/l	
56-23-5	Carbon Tetrachloride	18 U	50	18	ug/l	
108-90-7	Chlorobenzene	10 U	50	10	ug/l	
75-00-3	Chloroethane	33 U	100	33	ug/l	
67-66-3	Chloroform	15 U	50	15	ug/l	
110-82-7	Cyclohexane	20 U	50	20	ug/l	
124-48-1	Dibromochloromethane	14 U	50	14	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	52 U	250	52	ug/l	
106-93-4	1,2-Dibromoethane	14 U	100	14	ug/l	
75-71-8	Dichlorodifluoromethane	25 U	100	25	ug/l	
95-50-1	1,2-Dichlorobenzene	16 U	50	16	ug/l	
541-73-1	1,3-Dichlorobenzene	11 U	50	11	ug/l	
106-46-7	1,4-Dichlorobenzene	13 U	50	13	ug/l	
75-34-3	1,1-Dichloroethane	17 U	50	17	ug/l	
107-06-2	1,2-Dichloroethane	16 U	50	16	ug/l	
75-35-4	1,1-Dichloroethylene	66.5	50	16	ug/l	
156-59-2	cis-1,2-Dichloroethylene	4040	50	14	ug/l	
156-60-5	trans-1,2-Dichloroethylene	94.3	50	11	ug/l	
78-87-5	1,2-Dichloropropane	21 U	50	21	ug/l	
10061-01-5	cis-1,3-Dichloropropene	15 U	50	15	ug/l	
10061-02-6	trans-1,3-Dichloropropene	11 U	50	11	ug/l	
100-41-4	Ethylbenzene	18 U	50	18	ug/l	
76-13-1	Freon 113	33.0	50	24	ug/l	I
591-78-6	2-Hexanone	100 U	500	100	ug/l	
98-82-8	Isopropylbenzene	11 U	50	11	ug/l	
79-20-9	Methyl Acetate	250 U	1000	250	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0594-023.0-20211222		
Lab Sample ID:	FA91974-40	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	100 U	250	100	ug/l	
74-87-3	Methyl Chloride	25 U	100	25	ug/l	
75-09-2	Methylene Chloride	100 U	250	100	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	50 U	250	50	ug/l	
1634-04-4	Methyl Tert Butyl Ether	11 U	50	11	ug/l	
100-42-5	Styrene	11 U	50	11	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	14 U	50	14	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	15 U	50	15	ug/l	
127-18-4	Tetrachloroethylene	11 U	50	11	ug/l	
108-88-3	Toluene	15 U	50	15	ug/l	
87-61-6	1,2,3-Trichlorobenzene	31 U	100	31	ug/l	
120-82-1	1,2,4-Trichlorobenzene	25 U	100	25	ug/l	
71-55-6	1,1,1-Trichloroethane	12 U	50	12	ug/l	
79-00-5	1,1,2-Trichloroethane	23 U	50	23	ug/l	
79-01-6	Trichloroethylene	89800 [d]	1000	350	ug/l	Q
75-69-4	Trichlorofluoromethane	25 U	100	25	ug/l	
75-01-4	Vinyl Chloride	826	50	20	ug/l	
1330-20-7	Xylene (total)	36 U	150	36	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%	96%	83-118%
17060-07-0	1,2-Dichloroethane-D4	102%	103%	79-125%
2037-26-5	Toluene-D8	98%	102%	85-112%
460-00-4	4-Bromofluorobenzene	98%	98%	83-118%

(a) Sample was not preserved to a pH < 2.
(b) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(c) Associated CCV outside of control limits high, sample was ND.
(d) Result is from Run# 2

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0594-028.0-20211222		
Lab Sample ID:	FA91974-41	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	2A40941.D	100	12/29/21 17:51	CF	n/a	n/a	V2A1660
Run #2 [b]	I73545.D	1000	01/15/22 01:05	LR	n/a	n/a	VI2443

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	1000 U	2500	1000	ug/l	
71-43-2	Benzene	31 U	100	31	ug/l	
74-97-5	Bromochloromethane	45 U	100	45	ug/l	
75-27-4	Bromodichloromethane	24 U	100	24	ug/l	
75-25-2	Bromoform	41 U	100	41	ug/l	
78-93-3	2-Butanone (MEK)	200 U	500	200	ug/l	
75-15-0	Carbon Disulfide [c]	53 U	200	53	ug/l	
56-23-5	Carbon Tetrachloride	36 U	100	36	ug/l	
108-90-7	Chlorobenzene	20 U	100	20	ug/l	
75-00-3	Chloroethane	67 U	200	67	ug/l	
67-66-3	Chloroform	30 U	100	30	ug/l	
110-82-7	Cyclohexane	39 U	100	39	ug/l	
124-48-1	Dibromochloromethane	28 U	100	28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	100 U	500	100	ug/l	
106-93-4	1,2-Dibromoethane	28 U	200	28	ug/l	
75-71-8	Dichlorodifluoromethane	50 U	200	50	ug/l	
95-50-1	1,2-Dichlorobenzene	32 U	100	32	ug/l	
541-73-1	1,3-Dichlorobenzene	22 U	100	22	ug/l	
106-46-7	1,4-Dichlorobenzene	26 U	100	26	ug/l	
75-34-3	1,1-Dichloroethane	34 U	100	34	ug/l	
107-06-2	1,2-Dichloroethane	31 U	100	31	ug/l	
75-35-4	1,1-Dichloroethylene	32 U	100	32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	7260	100	28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	123	100	22	ug/l	
78-87-5	1,2-Dichloropropane	43 U	100	43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	29 U	100	29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	21 U	100	21	ug/l	
100-41-4	Ethylbenzene	36 U	100	36	ug/l	
76-13-1	Freon 113	48 U	100	48	ug/l	
591-78-6	2-Hexanone	200 U	1000	200	ug/l	
98-82-8	Isopropylbenzene	22 U	100	22	ug/l	
79-20-9	Methyl Acetate	500 U	2000	500	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0594-028.0-20211222		
Lab Sample ID:	FA91974-41	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	200 U	500	200	ug/l	
74-87-3	Methyl Chloride	50 U	200	50	ug/l	
75-09-2	Methylene Chloride	200 U	500	200	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	100 U	500	100	ug/l	
1634-04-4	Methyl Tert Butyl Ether	23 U	100	23	ug/l	
100-42-5	Styrene	22 U	100	22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	28 U	100	28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	30 U	100	30	ug/l	
127-18-4	Tetrachloroethylene	22 U	100	22	ug/l	
108-88-3	Toluene	30 U	100	30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	61 U	200	61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	50 U	200	50	ug/l	
71-55-6	1,1,1-Trichloroethane	25 U	100	25	ug/l	
79-00-5	1,1,2-Trichloroethane	47 U	100	47	ug/l	
79-01-6	Trichloroethylene	36700 [d]	1000	350	ug/l	Q
75-69-4	Trichlorofluoromethane	50 U	200	50	ug/l	
75-01-4	Vinyl Chloride	582	100	41	ug/l	
1330-20-7	Xylene (total)	72 U	300	72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%	97%	83-118%
17060-07-0	1,2-Dichloroethane-D4	99%	103%	79-125%
2037-26-5	Toluene-D8	97%	102%	85-112%
460-00-4	4-Bromofluorobenzene	98%	99%	83-118%

(a) Sample was not preserved to a pH < 2.
(b) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(c) Associated CCV outside of control limits high, sample was ND.
(d) Result is from Run# 2

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0594-033.0-20211222		
Lab Sample ID:	FA91974-42	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	I73546.D	5	01/15/22 01:29	LR	n/a	n/a	VI2443
Run #2 [b]	2A40943.D	50	12/29/21 18:20	CF	n/a	n/a	V2A1660

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	500 U [c]	1300	500	ug/l	
71-43-2	Benzene	16 U [c]	50	16	ug/l	
74-97-5	Bromochloromethane	23 U [c]	50	23	ug/l	
75-27-4	Bromodichloromethane	12 U [c]	50	12	ug/l	
75-25-2	Bromoform	20 U [c]	50	20	ug/l	
78-93-3	2-Butanone (MEK)	100 U [c]	250	100	ug/l	
75-15-0	Carbon Disulfide [d]	27 U [c]	100	27	ug/l	
56-23-5	Carbon Tetrachloride	18 U [c]	50	18	ug/l	
108-90-7	Chlorobenzene	10 U [c]	50	10	ug/l	
75-00-3	Chloroethane	33 U [c]	100	33	ug/l	
67-66-3	Chloroform	15 U [c]	50	15	ug/l	
110-82-7	Cyclohexane	20 U [c]	50	20	ug/l	
124-48-1	Dibromochloromethane	14 U [c]	50	14	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	52 U [c]	250	52	ug/l	
106-93-4	1,2-Dibromoethane	14 U [c]	100	14	ug/l	
75-71-8	Dichlorodifluoromethane	25 U [c]	100	25	ug/l	
95-50-1	1,2-Dichlorobenzene	16 U [c]	50	16	ug/l	
541-73-1	1,3-Dichlorobenzene	11 U [c]	50	11	ug/l	
106-46-7	1,4-Dichlorobenzene	13 U [c]	50	13	ug/l	
75-34-3	1,1-Dichloroethane	17 U [c]	50	17	ug/l	
107-06-2	1,2-Dichloroethane	16 U [c]	50	16	ug/l	
75-35-4	1,1-Dichloroethylene	16 U [c]	50	16	ug/l	
156-59-2	cis-1,2-Dichloroethylene	377 [c]	50	14	ug/l	
156-60-5	trans-1,2-Dichloroethylene	11 U [c]	50	11	ug/l	
78-87-5	1,2-Dichloropropane	21 U [c]	50	21	ug/l	
10061-01-5	cis-1,3-Dichloropropene	15 U [c]	50	15	ug/l	
10061-02-6	trans-1,3-Dichloropropene	11 U [c]	50	11	ug/l	
100-41-4	Ethylbenzene	18 U [c]	50	18	ug/l	
76-13-1	Freon 113	24 U [c]	50	24	ug/l	
591-78-6	2-Hexanone	100 U [c]	500	100	ug/l	
98-82-8	Isopropylbenzene	11 U [c]	50	11	ug/l	
79-20-9	Methyl Acetate	250 U [c]	1000	250	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0594-033.0-20211222		
Lab Sample ID:	FA91974-42	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	100 U [c]	250	100	ug/l	
74-87-3	Methyl Chloride	25 U [c]	100	25	ug/l	
75-09-2	Methylene Chloride	100 U [c]	250	100	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	50 U [c]	250	50	ug/l	
1634-04-4	Methyl Tert Butyl Ether	11 U [c]	50	11	ug/l	
100-42-5	Styrene	11 U [c]	50	11	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	14 U [c]	50	14	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	15 U [c]	50	15	ug/l	
127-18-4	Tetrachloroethylene	11 U [c]	50	11	ug/l	
108-88-3	Toluene	15 U [c]	50	15	ug/l	
87-61-6	1,2,3-Trichlorobenzene	31 U [c]	100	31	ug/l	
120-82-1	1,2,4-Trichlorobenzene	25 U [c]	100	25	ug/l	
71-55-6	1,1,1-Trichloroethane	12 U [c]	50	12	ug/l	
79-00-5	1,1,2-Trichloroethane	23 U [c]	50	23	ug/l	
79-01-6	Trichloroethylene	78.3	5.0	1.7	ug/l	Q
75-69-4	Trichlorofluoromethane	25 U [c]	100	25	ug/l	
75-01-4	Vinyl Chloride	73.3 [c]	50	20	ug/l	
1330-20-7	Xylene (total)	36 U [c]	150	36	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%	101%	83-118%
17060-07-0	1,2-Dichloroethane-D4	104%	105%	79-125%
2037-26-5	Toluene-D8	101%	97%	85-112%
460-00-4	4-Bromofluorobenzene	98%	96%	83-118%

(a) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(b) Sample was not preserved to a pH < 2.
(c) Result is from Run# 2
(d) Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: LC34-DPT0594-038.0-20211222
Lab Sample ID: FA91974-43
Matrix: AQ - Ground Water
Method: SW846 8260B
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Date Sampled: 12/22/21
Date Received: 12/22/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	I73547.D	250	01/15/22 01:54	LR	n/a	n/a	VI2443
Run #2 [b]	2A40945.D	5000	12/29/21 18:49	CF	n/a	n/a	V2A1660

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	50000 U [c]	130000	50000	ug/l	
71-43-2	Benzene	1600 U [c]	5000	1600	ug/l	
74-97-5	Bromochloromethane	2300 U [c]	5000	2300	ug/l	
75-27-4	Bromodichloromethane	1200 U [c]	5000	1200	ug/l	
75-25-2	Bromoform	2000 U [c]	5000	2000	ug/l	
78-93-3	2-Butanone (MEK)	10000 U [c]	25000	10000	ug/l	
75-15-0	Carbon Disulfide [d]	2700 U [c]	10000	2700	ug/l	
56-23-5	Carbon Tetrachloride	1800 U [c]	5000	1800	ug/l	
108-90-7	Chlorobenzene	1000 U [c]	5000	1000	ug/l	
75-00-3	Chloroethane	3300 U [c]	10000	3300	ug/l	
67-66-3	Chloroform	1500 U [c]	5000	1500	ug/l	
110-82-7	Cyclohexane	2000 U [c]	5000	2000	ug/l	
124-48-1	Dibromochloromethane	1400 U [c]	5000	1400	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	5200 U [c]	25000	5200	ug/l	
106-93-4	1,2-Dibromoethane	1400 U [c]	10000	1400	ug/l	
75-71-8	Dichlorodifluoromethane	2500 U [c]	10000	2500	ug/l	
95-50-1	1,2-Dichlorobenzene	1600 U [c]	5000	1600	ug/l	
541-73-1	1,3-Dichlorobenzene	1100 U [c]	5000	1100	ug/l	
106-46-7	1,4-Dichlorobenzene	1300 U [c]	5000	1300	ug/l	
75-34-3	1,1-Dichloroethane	1700 U [c]	5000	1700	ug/l	
107-06-2	1,2-Dichloroethane	1600 U [c]	5000	1600	ug/l	
75-35-4	1,1-Dichloroethylene	1600 U [c]	5000	1600	ug/l	
156-59-2	cis-1,2-Dichloroethylene	4640 [c]	5000	1400	ug/l	I
156-60-5	trans-1,2-Dichloroethylene	1100 U [c]	5000	1100	ug/l	
78-87-5	1,2-Dichloropropane	2100 U [c]	5000	2100	ug/l	
10061-01-5	cis-1,3-Dichloropropene	1500 U [c]	5000	1500	ug/l	
10061-02-6	trans-1,3-Dichloropropene	1100 U [c]	5000	1100	ug/l	
100-41-4	Ethylbenzene	1800 U [c]	5000	1800	ug/l	
76-13-1	Freon 113	2400 U [c]	5000	2400	ug/l	
591-78-6	2-Hexanone	10000 U [c]	50000	10000	ug/l	
98-82-8	Isopropylbenzene	1100 U [c]	5000	1100	ug/l	
79-20-9	Methyl Acetate	25000 U [c]	100000	25000	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0594-038.0-20211222		
Lab Sample ID:	FA91974-43	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	10000 U [c]	25000	10000	ug/l	
74-87-3	Methyl Chloride	2500 U [c]	10000	2500	ug/l	
75-09-2	Methylene Chloride	10000 U [c]	25000	10000	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	5000 U [c]	25000	5000	ug/l	
1634-04-4	Methyl Tert Butyl Ether	1100 U [c]	5000	1100	ug/l	
100-42-5	Styrene	1100 U [c]	5000	1100	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	1400 U [c]	5000	1400	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	1500 U [c]	5000	1500	ug/l	
127-18-4	Tetrachloroethylene	1100 U [c]	5000	1100	ug/l	
108-88-3	Toluene	1500 U [c]	5000	1500	ug/l	
87-61-6	1,2,3-Trichlorobenzene	3100 U [c]	10000	3100	ug/l	
120-82-1	1,2,4-Trichlorobenzene	2500 U [c]	10000	2500	ug/l	
71-55-6	1,1,1-Trichloroethane	1200 U [c]	5000	1200	ug/l	
79-00-5	1,1,2-Trichloroethane	2300 U [c]	5000	2300	ug/l	
79-01-6	Trichloroethylene	20300 [c]	5000	1700	ug/l	
75-69-4	Trichlorofluoromethane	2500 U [c]	10000	2500	ug/l	
75-01-4	Vinyl Chloride	2000 U [c]	5000	2000	ug/l	
1330-20-7	Xylene (total)	3600 U [c]	15000	3600	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%	103%	83-118%
17060-07-0	1,2-Dichloroethane-D4	105%	106%	79-125%
2037-26-5	Toluene-D8	103%	97%	85-112%
460-00-4	4-Bromofluorobenzene	99%	97%	83-118%

(a) Sample was not preserved to a pH < 2. Confirmation run beyond holdtime.
(b) Sample was not preserved to a pH < 2.
(c) Result is from Run# 2
(d) Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range
I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0594-043.0-20211222		
Lab Sample ID:	FA91974-44	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	I73548.D	25000	01/15/22 02:19	LR	n/a	n/a	VI2443
Run #2 [b]	2A40947.D	100000	12/29/21 19:18	CF	n/a	n/a	V2A1660

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	1000000 U [c]	2500000	1000000	ug/l	
71-43-2	Benzene	31000 U [c]	100000	31000	ug/l	
74-97-5	Bromochloromethane	45000 U [c]	100000	45000	ug/l	
75-27-4	Bromodichloromethane	24000 U [c]	100000	24000	ug/l	
75-25-2	Bromoform	41000 U [c]	100000	41000	ug/l	
78-93-3	2-Butanone (MEK)	200000 U [c]	500000	200000	ug/l	
75-15-0	Carbon Disulfide [d]	53000 U [c]	200000	53000	ug/l	
56-23-5	Carbon Tetrachloride	36000 U [c]	100000	36000	ug/l	
108-90-7	Chlorobenzene	20000 U [c]	100000	20000	ug/l	
75-00-3	Chloroethane	67000 U [c]	200000	67000	ug/l	
67-66-3	Chloroform	30000 U [c]	100000	30000	ug/l	
110-82-7	Cyclohexane	39000 U [c]	100000	39000	ug/l	
124-48-1	Dibromochloromethane	28000 U [c]	100000	28000	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	100000 U [c]	500000	100000	ug/l	
106-93-4	1,2-Dibromoethane	28000 U [c]	200000	28000	ug/l	
75-71-8	Dichlorodifluoromethane	50000 U [c]	200000	50000	ug/l	
95-50-1	1,2-Dichlorobenzene	32000 U [c]	100000	32000	ug/l	
541-73-1	1,3-Dichlorobenzene	22000 U [c]	100000	22000	ug/l	
106-46-7	1,4-Dichlorobenzene	26000 U [c]	100000	26000	ug/l	
75-34-3	1,1-Dichloroethane	34000 U [c]	100000	34000	ug/l	
107-06-2	1,2-Dichloroethane	31000 U [c]	100000	31000	ug/l	
75-35-4	1,1-Dichloroethylene	32000 U [c]	100000	32000	ug/l	
156-59-2	cis-1,2-Dichloroethylene	150000 [c]	100000	28000	ug/l	
156-60-5	trans-1,2-Dichloroethylene	22000 U [c]	100000	22000	ug/l	
78-87-5	1,2-Dichloropropane	43000 U [c]	100000	43000	ug/l	
10061-01-5	cis-1,3-Dichloropropene	29000 U [c]	100000	29000	ug/l	
10061-02-6	trans-1,3-Dichloropropene	21000 U [c]	100000	21000	ug/l	
100-41-4	Ethylbenzene	36000 U [c]	100000	36000	ug/l	
76-13-1	Freon 113	48000 U [c]	100000	48000	ug/l	
591-78-6	2-Hexanone	200000 U [c]	1000000	200000	ug/l	
98-82-8	Isopropylbenzene	22000 U [c]	100000	22000	ug/l	
79-20-9	Methyl Acetate	500000 U [c]	2000000	500000	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0594-043.0-20211222		
Lab Sample ID:	FA91974-44	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	200000 U [c]	500000	200000	ug/l	
74-87-3	Methyl Chloride	50000 U [c]	200000	50000	ug/l	
75-09-2	Methylene Chloride	200000 U [c]	500000	200000	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	100000 U [c]	500000	100000	ug/l	
1634-04-4	Methyl Tert Butyl Ether	23000 U [c]	100000	23000	ug/l	
100-42-5	Styrene	22000 U [c]	100000	22000	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	28000 U [c]	100000	28000	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	30000 U [c]	100000	30000	ug/l	
127-18-4	Tetrachloroethylene	22000 U [c]	100000	22000	ug/l	
108-88-3	Toluene	30000 U [c]	100000	30000	ug/l	
87-61-6	1,2,3-Trichlorobenzene	61000 U [c]	200000	61000	ug/l	
120-82-1	1,2,4-Trichlorobenzene	50000 U [c]	200000	50000	ug/l	
71-55-6	1,1,1-Trichloroethane	25000 U [c]	100000	25000	ug/l	
79-00-5	1,1,2-Trichloroethane	47000 U [c]	100000	47000	ug/l	
79-01-6	Trichloroethylene	1900000 [c]	100000	35000	ug/l	
75-69-4	Trichlorofluoromethane	50000 U [c]	200000	50000	ug/l	
75-01-4	Vinyl Chloride	41000 U [c]	100000	41000	ug/l	
1330-20-7	Xylene (total)	72000 U [c]	300000	72000	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%	101%	83-118%
17060-07-0	1,2-Dichloroethane-D4	105%	105%	79-125%
2037-26-5	Toluene-D8	103%	97%	85-112%
460-00-4	4-Bromofluorobenzene	97%	97%	83-118%

(a) Sample was not preserved to a pH < 2. Confirmation run beyond holdtime.
(b) Sample was not preserved to a pH < 2.
(c) Result is from Run# 2
(d) Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0594-048.0-20211222		
Lab Sample ID:	FA91974-45	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	I73549.D	10000	01/15/22 02:43	LR	n/a	n/a	VI2443
Run #2 [b]	2A40949.D	200000	12/29/21 19:47	CF	n/a	n/a	V2A1660

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	2000000 U [c]	5000000	2000000	ug/l	
71-43-2	Benzene	62000 U [c]	200000	62000	ug/l	
74-97-5	Bromochloromethane	90000 U [c]	200000	90000	ug/l	
75-27-4	Bromodichloromethane	48000 U [c]	200000	48000	ug/l	
75-25-2	Bromoform	81000 U [c]	200000	81000	ug/l	
78-93-3	2-Butanone (MEK)	400000 U [c]	1000000	400000	ug/l	
75-15-0	Carbon Disulfide [d]	110000 U [c]	400000	110000	ug/l	
56-23-5	Carbon Tetrachloride	71000 U [c]	200000	71000	ug/l	
108-90-7	Chlorobenzene	40000 U [c]	200000	40000	ug/l	
75-00-3	Chloroethane	130000 U [c]	400000	130000	ug/l	
67-66-3	Chloroform	60000 U [c]	200000	60000	ug/l	
110-82-7	Cyclohexane	78000 U [c]	200000	78000	ug/l	
124-48-1	Dibromochloromethane	55000 U [c]	200000	55000	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	210000 U [c]	1000000	210000	ug/l	
106-93-4	1,2-Dibromoethane	55000 U [c]	400000	55000	ug/l	
75-71-8	Dichlorodifluoromethane	100000 U [c]	400000	100000	ug/l	
95-50-1	1,2-Dichlorobenzene	65000 U [c]	200000	65000	ug/l	
541-73-1	1,3-Dichlorobenzene	43000 U [c]	200000	43000	ug/l	
106-46-7	1,4-Dichlorobenzene	51000 U [c]	200000	51000	ug/l	
75-34-3	1,1-Dichloroethane	68000 U [c]	200000	68000	ug/l	
107-06-2	1,2-Dichloroethane	62000 U [c]	200000	62000	ug/l	
75-35-4	1,1-Dichloroethylene	64000 U [c]	200000	64000	ug/l	
156-59-2	cis-1,2-Dichloroethylene	55000 U [c]	200000	55000	ug/l	
156-60-5	trans-1,2-Dichloroethylene	44000 U [c]	200000	44000	ug/l	
78-87-5	1,2-Dichloropropane	85000 U [c]	200000	85000	ug/l	
10061-01-5	cis-1,3-Dichloropropene	58000 U [c]	200000	58000	ug/l	
10061-02-6	trans-1,3-Dichloropropene	43000 U [c]	200000	43000	ug/l	
100-41-4	Ethylbenzene	71000 U [c]	200000	71000	ug/l	
76-13-1	Freon 113	96000 U [c]	200000	96000	ug/l	
591-78-6	2-Hexanone	400000 U [c]	2000000	400000	ug/l	
98-82-8	Isopropylbenzene	44000 U [c]	200000	44000	ug/l	
79-20-9	Methyl Acetate	1000000 U [c]	4000000	1000000	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0594-048.0-20211222		
Lab Sample ID:	FA91974-45	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	400000 U [c]	1000000	400000	ug/l	
74-87-3	Methyl Chloride	100000 U [c]	400000	100000	ug/l	
75-09-2	Methylene Chloride	400000 U [c]	1000000	400000	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	200000 U [c]	1000000	200000	ug/l	
1634-04-4	Methyl Tert Butyl Ether	46000 U [c]	200000	46000	ug/l	
100-42-5	Styrene	44000 U [c]	200000	44000	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	55000 U [c]	200000	55000	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	60000 U [c]	200000	60000	ug/l	
127-18-4	Tetrachloroethylene	43000 U [c]	200000	43000	ug/l	
108-88-3	Toluene	60000 U [c]	200000	60000	ug/l	
87-61-6	1,2,3-Trichlorobenzene	120000 U [c]	400000	120000	ug/l	
120-82-1	1,2,4-Trichlorobenzene	100000 U [c]	400000	100000	ug/l	
71-55-6	1,1,1-Trichloroethane	50000 U [c]	200000	50000	ug/l	
79-00-5	1,1,2-Trichloroethane	93000 U [c]	200000	93000	ug/l	
79-01-6	Trichloroethylene	637000 [c]	200000	69000	ug/l	
75-69-4	Trichlorofluoromethane	100000 U [c]	400000	100000	ug/l	
75-01-4	Vinyl Chloride	82000 U [c]	200000	82000	ug/l	
1330-20-7	Xylene (total)	140000 U [c]	600000	140000	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%	102%	83-118%
17060-07-0	1,2-Dichloroethane-D4	105%	108%	79-125%
2037-26-5	Toluene-D8	102%	98%	85-112%
460-00-4	4-Bromofluorobenzene	97%	97%	83-118%

(a) Sample was not preserved to a pH < 2. Confirmation run beyond holdtime.
(b) Sample was not preserved to a pH < 2.
(c) Result is from Run# 2
(d) Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range
I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0593-008.0-20211222		
Lab Sample ID:	FA91974-46	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	2A40951.D	100	12/29/21 20:16	CF	n/a	n/a	V2A1660
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	1000 U	2500	1000	ug/l	
71-43-2	Benzene	31 U	100	31	ug/l	
74-97-5	Bromochloromethane	45 U	100	45	ug/l	
75-27-4	Bromodichloromethane	24 U	100	24	ug/l	
75-25-2	Bromoform	41 U	100	41	ug/l	
78-93-3	2-Butanone (MEK)	200 U	500	200	ug/l	
75-15-0	Carbon Disulfide [b]	53 U	200	53	ug/l	
56-23-5	Carbon Tetrachloride	36 U	100	36	ug/l	
108-90-7	Chlorobenzene	20 U	100	20	ug/l	
75-00-3	Chloroethane	67 U	200	67	ug/l	
67-66-3	Chloroform	30 U	100	30	ug/l	
110-82-7	Cyclohexane	39 U	100	39	ug/l	
124-48-1	Dibromochloromethane	28 U	100	28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	100 U	500	100	ug/l	
106-93-4	1,2-Dibromoethane	28 U	200	28	ug/l	
75-71-8	Dichlorodifluoromethane	50 U	200	50	ug/l	
95-50-1	1,2-Dichlorobenzene	32 U	100	32	ug/l	
541-73-1	1,3-Dichlorobenzene	22 U	100	22	ug/l	
106-46-7	1,4-Dichlorobenzene	26 U	100	26	ug/l	
75-34-3	1,1-Dichloroethane	34 U	100	34	ug/l	
107-06-2	1,2-Dichloroethane	31 U	100	31	ug/l	
75-35-4	1,1-Dichloroethylene	32 U	100	32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	1390	100	28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	22 U	100	22	ug/l	
78-87-5	1,2-Dichloropropane	43 U	100	43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	29 U	100	29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	21 U	100	21	ug/l	
100-41-4	Ethylbenzene	36 U	100	36	ug/l	
76-13-1	Freon 113	48 U	100	48	ug/l	
591-78-6	2-Hexanone	200 U	1000	200	ug/l	
98-82-8	Isopropylbenzene	22 U	100	22	ug/l	
79-20-9	Methyl Acetate	500 U	2000	500	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0593-008.0-20211222		
Lab Sample ID:	FA91974-46	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	200 U	500	200	ug/l	
74-87-3	Methyl Chloride	50 U	200	50	ug/l	
75-09-2	Methylene Chloride	200 U	500	200	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	100 U	500	100	ug/l	
1634-04-4	Methyl Tert Butyl Ether	23 U	100	23	ug/l	
100-42-5	Styrene	22 U	100	22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	28 U	100	28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	30 U	100	30	ug/l	
127-18-4	Tetrachloroethylene	22 U	100	22	ug/l	
108-88-3	Toluene	30 U	100	30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	61 U	200	61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	50 U	200	50	ug/l	
71-55-6	1,1,1-Trichloroethane	25 U	100	25	ug/l	
79-00-5	1,1,2-Trichloroethane	47 U	100	47	ug/l	
79-01-6	Trichloroethylene	7360	100	35	ug/l	
75-69-4	Trichlorofluoromethane	50 U	200	50	ug/l	
75-01-4	Vinyl Chloride	41 U	100	41	ug/l	
1330-20-7	Xylene (total)	72 U	300	72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		83-118%
17060-07-0	1,2-Dichloroethane-D4	105%		79-125%
2037-26-5	Toluene-D8	98%		85-112%
460-00-4	4-Bromofluorobenzene	97%		83-118%

(a) Sample was not preserved to a pH < 2.
(b) Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0593-013.0-20211222		
Lab Sample ID:	FA91974-47	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	2A40953.D	50	12/29/21 20:45	CF	n/a	n/a	V2A1660
Run #2 [b]	I73550.D	500	01/15/22 03:08	LR	n/a	n/a	VI2443

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	500 U	1300	500	ug/l	
71-43-2	Benzene	16 U	50	16	ug/l	
74-97-5	Bromochloromethane	23 U	50	23	ug/l	
75-27-4	Bromodichloromethane	12 U	50	12	ug/l	
75-25-2	Bromoform	20 U	50	20	ug/l	
78-93-3	2-Butanone (MEK)	100 U	250	100	ug/l	
75-15-0	Carbon Disulfide [c]	27 U	100	27	ug/l	
56-23-5	Carbon Tetrachloride	18 U	50	18	ug/l	
108-90-7	Chlorobenzene	10 U	50	10	ug/l	
75-00-3	Chloroethane	33 U	100	33	ug/l	
67-66-3	Chloroform	15 U	50	15	ug/l	
110-82-7	Cyclohexane	20 U	50	20	ug/l	
124-48-1	Dibromochloromethane	14 U	50	14	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	52 U	250	52	ug/l	
106-93-4	1,2-Dibromoethane	14 U	100	14	ug/l	
75-71-8	Dichlorodifluoromethane	25 U	100	25	ug/l	
95-50-1	1,2-Dichlorobenzene	16 U	50	16	ug/l	
541-73-1	1,3-Dichlorobenzene	11 U	50	11	ug/l	
106-46-7	1,4-Dichlorobenzene	13 U	50	13	ug/l	
75-34-3	1,1-Dichloroethane	17 U	50	17	ug/l	
107-06-2	1,2-Dichloroethane	16 U	50	16	ug/l	
75-35-4	1,1-Dichloroethylene	16 U	50	16	ug/l	
156-59-2	cis-1,2-Dichloroethylene	1600	50	14	ug/l	
156-60-5	trans-1,2-Dichloroethylene	11 U	50	11	ug/l	
78-87-5	1,2-Dichloropropane	21 U	50	21	ug/l	
10061-01-5	cis-1,3-Dichloropropene	15 U	50	15	ug/l	
10061-02-6	trans-1,3-Dichloropropene	11 U	50	11	ug/l	
100-41-4	Ethylbenzene	18 U	50	18	ug/l	
76-13-1	Freon 113	24 U	50	24	ug/l	
591-78-6	2-Hexanone	100 U	500	100	ug/l	
98-82-8	Isopropylbenzene	11 U	50	11	ug/l	
79-20-9	Methyl Acetate	250 U	1000	250	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0593-013.0-20211222		
Lab Sample ID:	FA91974-47	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	100 U	250	100	ug/l	
74-87-3	Methyl Chloride	25 U	100	25	ug/l	
75-09-2	Methylene Chloride	100 U	250	100	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	50 U	250	50	ug/l	
1634-04-4	Methyl Tert Butyl Ether	11 U	50	11	ug/l	
100-42-5	Styrene	11 U	50	11	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	14 U	50	14	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	15 U	50	15	ug/l	
127-18-4	Tetrachloroethylene	11 U	50	11	ug/l	
108-88-3	Toluene	15 U	50	15	ug/l	
87-61-6	1,2,3-Trichlorobenzene	31 U	100	31	ug/l	
120-82-1	1,2,4-Trichlorobenzene	25 U	100	25	ug/l	
71-55-6	1,1,1-Trichloroethane	12 U	50	12	ug/l	
79-00-5	1,1,2-Trichloroethane	23 U	50	23	ug/l	
79-01-6	Trichloroethylene	21600 [d]	500	170	ug/l	Q
75-69-4	Trichlorofluoromethane	25 U	100	25	ug/l	
75-01-4	Vinyl Chloride	222	50	20	ug/l	
1330-20-7	Xylene (total)	36 U	150	36	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%	99%	83-118%
17060-07-0	1,2-Dichloroethane-D4	108%	107%	79-125%
2037-26-5	Toluene-D8	97%	103%	85-112%
460-00-4	4-Bromofluorobenzene	96%	96%	83-118%

(a) Sample was not preserved to a pH < 2.
(b) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(c) Associated CCV outside of control limits high, sample was ND.
(d) Result is from Run# 2

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0593-018.0-20211222		
Lab Sample ID:	FA91974-48	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	I73551.D	20	01/15/22 03:32	LR	n/a	n/a	VI2443
Run #2 [b]	2A40955.D	50	12/29/21 21:14	CF	n/a	n/a	V2A1660

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	500 U [c]	1300	500	ug/l	
71-43-2	Benzene	16 U [c]	50	16	ug/l	
74-97-5	Bromochloromethane	23 U [c]	50	23	ug/l	
75-27-4	Bromodichloromethane	12 U [c]	50	12	ug/l	
75-25-2	Bromoform	20 U [c]	50	20	ug/l	
78-93-3	2-Butanone (MEK)	100 U [c]	250	100	ug/l	
75-15-0	Carbon Disulfide [d]	27 U [c]	100	27	ug/l	
56-23-5	Carbon Tetrachloride	18 U [c]	50	18	ug/l	
108-90-7	Chlorobenzene	10 U [c]	50	10	ug/l	
75-00-3	Chloroethane	33 U [c]	100	33	ug/l	
67-66-3	Chloroform	15 U [c]	50	15	ug/l	
110-82-7	Cyclohexane	20 U [c]	50	20	ug/l	
124-48-1	Dibromochloromethane	14 U [c]	50	14	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	52 U [c]	250	52	ug/l	
106-93-4	1,2-Dibromoethane	14 U [c]	100	14	ug/l	
75-71-8	Dichlorodifluoromethane	25 U [c]	100	25	ug/l	
95-50-1	1,2-Dichlorobenzene	16 U [c]	50	16	ug/l	
541-73-1	1,3-Dichlorobenzene	11 U [c]	50	11	ug/l	
106-46-7	1,4-Dichlorobenzene	13 U [c]	50	13	ug/l	
75-34-3	1,1-Dichloroethane	17 U [c]	50	17	ug/l	
107-06-2	1,2-Dichloroethane	16 U [c]	50	16	ug/l	
75-35-4	1,1-Dichloroethylene	16 U [c]	50	16	ug/l	
156-59-2	cis-1,2-Dichloroethylene	1500 [c]	50	14	ug/l	
156-60-5	trans-1,2-Dichloroethylene	11 U [c]	50	11	ug/l	
78-87-5	1,2-Dichloropropane	21 U [c]	50	21	ug/l	
10061-01-5	cis-1,3-Dichloropropene	15 U [c]	50	15	ug/l	
10061-02-6	trans-1,3-Dichloropropene	11 U [c]	50	11	ug/l	
100-41-4	Ethylbenzene	18 U [c]	50	18	ug/l	
76-13-1	Freon 113	24 U [c]	50	24	ug/l	
591-78-6	2-Hexanone	100 U [c]	500	100	ug/l	
98-82-8	Isopropylbenzene	11 U [c]	50	11	ug/l	
79-20-9	Methyl Acetate	250 U [c]	1000	250	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0593-018.0-20211222		
Lab Sample ID:	FA91974-48	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	100 U [c]	250	100	ug/l	
74-87-3	Methyl Chloride	25 U [c]	100	25	ug/l	
75-09-2	Methylene Chloride	100 U [c]	250	100	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	50 U [c]	250	50	ug/l	
1634-04-4	Methyl Tert Butyl Ether	11 U [c]	50	11	ug/l	
100-42-5	Styrene	11 U [c]	50	11	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	14 U [c]	50	14	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	15 U [c]	50	15	ug/l	
127-18-4	Tetrachloroethylene	11 U [c]	50	11	ug/l	
108-88-3	Toluene	15 U [c]	50	15	ug/l	
87-61-6	1,2,3-Trichlorobenzene	31 U [c]	100	31	ug/l	
120-82-1	1,2,4-Trichlorobenzene	25 U [c]	100	25	ug/l	
71-55-6	1,1,1-Trichloroethane	12 U [c]	50	12	ug/l	
79-00-5	1,1,2-Trichloroethane	23 U [c]	50	23	ug/l	
79-01-6	Trichloroethylene	254	20	6.9	ug/l	Q
75-69-4	Trichlorofluoromethane	25 U [c]	100	25	ug/l	
75-01-4	Vinyl Chloride	111 [c]	50	20	ug/l	
1330-20-7	Xylene (total)	36 U [c]	150	36	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%	104%	83-118%
17060-07-0	1,2-Dichloroethane-D4	106%	109%	79-125%
2037-26-5	Toluene-D8	102%	97%	85-112%
460-00-4	4-Bromofluorobenzene	97%	97%	83-118%

(a) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(b) Sample was not preserved to a pH < 2.
(c) Result is from Run# 2
(d) Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0593-023.0-20211222		
Lab Sample ID:	FA91974-49	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	I73552.D	10	01/15/22 03:57	LR	n/a	n/a	VI2443
Run #2 [b]	2A40957.D	100	12/29/21 21:43	CF	n/a	n/a	V2A1660

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	1000 U [c]	2500	1000	ug/l	
71-43-2	Benzene	31 U [c]	100	31	ug/l	
74-97-5	Bromochloromethane	45 U [c]	100	45	ug/l	
75-27-4	Bromodichloromethane	24 U [c]	100	24	ug/l	
75-25-2	Bromoform	41 U [c]	100	41	ug/l	
78-93-3	2-Butanone (MEK)	200 U [c]	500	200	ug/l	
75-15-0	Carbon Disulfide [d]	53 U [c]	200	53	ug/l	
56-23-5	Carbon Tetrachloride	36 U [c]	100	36	ug/l	
108-90-7	Chlorobenzene	20 U [c]	100	20	ug/l	
75-00-3	Chloroethane	67 U [c]	200	67	ug/l	
67-66-3	Chloroform	30 U [c]	100	30	ug/l	
110-82-7	Cyclohexane	39 U [c]	100	39	ug/l	
124-48-1	Dibromochloromethane	28 U [c]	100	28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	100 U [c]	500	100	ug/l	
106-93-4	1,2-Dibromoethane	28 U [c]	200	28	ug/l	
75-71-8	Dichlorodifluoromethane	50 U [c]	200	50	ug/l	
95-50-1	1,2-Dichlorobenzene	32 U [c]	100	32	ug/l	
541-73-1	1,3-Dichlorobenzene	22 U [c]	100	22	ug/l	
106-46-7	1,4-Dichlorobenzene	26 U [c]	100	26	ug/l	
75-34-3	1,1-Dichloroethane	34 U [c]	100	34	ug/l	
107-06-2	1,2-Dichloroethane	31 U [c]	100	31	ug/l	
75-35-4	1,1-Dichloroethylene	32 U [c]	100	32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	706 [c]	100	28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	22 U [c]	100	22	ug/l	
78-87-5	1,2-Dichloropropane	43 U [c]	100	43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	29 U [c]	100	29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	21 U [c]	100	21	ug/l	
100-41-4	Ethylbenzene	36 U [c]	100	36	ug/l	
76-13-1	Freon 113	48 U [c]	100	48	ug/l	
591-78-6	2-Hexanone	200 U [c]	1000	200	ug/l	
98-82-8	Isopropylbenzene	22 U [c]	100	22	ug/l	
79-20-9	Methyl Acetate	500 U [c]	2000	500	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0593-023.0-20211222		
Lab Sample ID:	FA91974-49	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	200 U [c]	500	200	ug/l	
74-87-3	Methyl Chloride	50 U [c]	200	50	ug/l	
75-09-2	Methylene Chloride	200 U [c]	500	200	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	100 U [c]	500	100	ug/l	
1634-04-4	Methyl Tert Butyl Ether	23 U [c]	100	23	ug/l	
100-42-5	Styrene	22 U [c]	100	22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	28 U [c]	100	28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	30 U [c]	100	30	ug/l	
127-18-4	Tetrachloroethylene	22 U [c]	100	22	ug/l	
108-88-3	Toluene	30 U [c]	100	30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	61 U [c]	200	61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	50 U [c]	200	50	ug/l	
71-55-6	1,1,1-Trichloroethane	25 U [c]	100	25	ug/l	
79-00-5	1,1,2-Trichloroethane	47 U [c]	100	47	ug/l	
79-01-6	Trichloroethylene	625 [c]	100	35	ug/l	
75-69-4	Trichlorofluoromethane	50 U [c]	200	50	ug/l	
75-01-4	Vinyl Chloride	437 [c]	100	41	ug/l	
1330-20-7	Xylene (total)	72 U [c]	300	72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%	103%	83-118%
17060-07-0	1,2-Dichloroethane-D4	107%	110%	79-125%
2037-26-5	Toluene-D8	103%	96%	85-112%
460-00-4	4-Bromofluorobenzene	96%	96%	83-118%

(a) Sample was not preserved to a pH < 2. Confirmation run beyond holdtime.
(b) Sample was not preserved to a pH < 2.
(c) Result is from Run# 2
(d) Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: LC34-DPT0593-028.0-20211222
Lab Sample ID: FA91974-50
Matrix: AQ - Ground Water
Method: SW846 8260B
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Date Sampled: 12/22/21
Date Received: 12/22/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	I73553.D	25	01/15/22 04:21	LR	n/a	n/a	VI2443
Run #2 [b]	2A40959.D	100	12/29/21 22:12	CF	n/a	n/a	V2A1660

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	1000 U [c]	2500	1000	ug/l	
71-43-2	Benzene	31 U [c]	100	31	ug/l	
74-97-5	Bromochloromethane	45 U [c]	100	45	ug/l	
75-27-4	Bromodichloromethane	24 U [c]	100	24	ug/l	
75-25-2	Bromoform	41 U [c]	100	41	ug/l	
78-93-3	2-Butanone (MEK)	200 U [c]	500	200	ug/l	
75-15-0	Carbon Disulfide [d]	53 U [c]	200	53	ug/l	
56-23-5	Carbon Tetrachloride	36 U [c]	100	36	ug/l	
108-90-7	Chlorobenzene	20 U [c]	100	20	ug/l	
75-00-3	Chloroethane	67 U [c]	200	67	ug/l	
67-66-3	Chloroform	30 U [c]	100	30	ug/l	
110-82-7	Cyclohexane	39 U [c]	100	39	ug/l	
124-48-1	Dibromochloromethane	28 U [c]	100	28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	100 U [c]	500	100	ug/l	
106-93-4	1,2-Dibromoethane	28 U [c]	200	28	ug/l	
75-71-8	Dichlorodifluoromethane	50 U [c]	200	50	ug/l	
95-50-1	1,2-Dichlorobenzene	32 U [c]	100	32	ug/l	
541-73-1	1,3-Dichlorobenzene	22 U [c]	100	22	ug/l	
106-46-7	1,4-Dichlorobenzene	26 U [c]	100	26	ug/l	
75-34-3	1,1-Dichloroethane	34 U [c]	100	34	ug/l	
107-06-2	1,2-Dichloroethane	31 U [c]	100	31	ug/l	
75-35-4	1,1-Dichloroethylene	32 U [c]	100	32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	28 U [c]	100	28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	22 U [c]	100	22	ug/l	
78-87-5	1,2-Dichloropropane	43 U [c]	100	43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	29 U [c]	100	29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	21 U [c]	100	21	ug/l	
100-41-4	Ethylbenzene	36 U [c]	100	36	ug/l	
76-13-1	Freon 113	48 U [c]	100	48	ug/l	
591-78-6	2-Hexanone	200 U [c]	1000	200	ug/l	
98-82-8	Isopropylbenzene	22 U [c]	100	22	ug/l	
79-20-9	Methyl Acetate	500 U [c]	2000	500	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0593-028.0-20211222		
Lab Sample ID:	FA91974-50	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	200 U [c]	500	200	ug/l	
74-87-3	Methyl Chloride	50 U [c]	200	50	ug/l	
75-09-2	Methylene Chloride	200 U [c]	500	200	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	100 U [c]	500	100	ug/l	
1634-04-4	Methyl Tert Butyl Ether	23 U [c]	100	23	ug/l	
100-42-5	Styrene	22 U [c]	100	22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	28 U [c]	100	28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	30 U [c]	100	30	ug/l	
127-18-4	Tetrachloroethylene	22 U [c]	100	22	ug/l	
108-88-3	Toluene	30 U [c]	100	30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	61 U [c]	200	61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	50 U [c]	200	50	ug/l	
71-55-6	1,1,1-Trichloroethane	25 U [c]	100	25	ug/l	
79-00-5	1,1,2-Trichloroethane	47 U [c]	100	47	ug/l	
79-01-6	Trichloroethylene	1860 [c]	100	35	ug/l	
75-69-4	Trichlorofluoromethane	50 U [c]	200	50	ug/l	
75-01-4	Vinyl Chloride	138 [c]	100	41	ug/l	
1330-20-7	Xylene (total)	72 U [c]	300	72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%	102%	83-118%
17060-07-0	1,2-Dichloroethane-D4	108%	109%	79-125%
2037-26-5	Toluene-D8	104%	97%	85-112%
460-00-4	4-Bromofluorobenzene	96%	96%	83-118%

(a) Sample was not preserved to a pH < 2. Confirmation run beyond holdtime.
(b) Sample was not preserved to a pH < 2.
(c) Result is from Run# 2
(d) Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0593-033.0-20211222		
Lab Sample ID:	FA91974-51	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	2A40961.D	100	12/29/21 22:41	CF	n/a	n/a	V2A1660
Run #2 [b]	I73554.D	1000	01/15/22 04:46	LR	n/a	n/a	VI2443

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	1000 U	2500	1000	ug/l	
71-43-2	Benzene	31 U	100	31	ug/l	
74-97-5	Bromochloromethane	45 U	100	45	ug/l	
75-27-4	Bromodichloromethane	24 U	100	24	ug/l	
75-25-2	Bromoform	41 U	100	41	ug/l	
78-93-3	2-Butanone (MEK)	200 U	500	200	ug/l	
75-15-0	Carbon Disulfide [c]	53 U	200	53	ug/l	
56-23-5	Carbon Tetrachloride	36 U	100	36	ug/l	
108-90-7	Chlorobenzene	20 U	100	20	ug/l	
75-00-3	Chloroethane	67 U	200	67	ug/l	
67-66-3	Chloroform	30 U	100	30	ug/l	
110-82-7	Cyclohexane	39 U	100	39	ug/l	
124-48-1	Dibromochloromethane	28 U	100	28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	100 U	500	100	ug/l	
106-93-4	1,2-Dibromoethane	28 U	200	28	ug/l	
75-71-8	Dichlorodifluoromethane	50 U	200	50	ug/l	
95-50-1	1,2-Dichlorobenzene	32 U	100	32	ug/l	
541-73-1	1,3-Dichlorobenzene	22 U	100	22	ug/l	
106-46-7	1,4-Dichlorobenzene	26 U	100	26	ug/l	
75-34-3	1,1-Dichloroethane	34 U	100	34	ug/l	
107-06-2	1,2-Dichloroethane	31 U	100	31	ug/l	
75-35-4	1,1-Dichloroethylene	32 U	100	32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	252	100	28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	22 U	100	22	ug/l	
78-87-5	1,2-Dichloropropane	43 U	100	43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	29 U	100	29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	21 U	100	21	ug/l	
100-41-4	Ethylbenzene	36 U	100	36	ug/l	
76-13-1	Freon 113	48 U	100	48	ug/l	
591-78-6	2-Hexanone	200 U	1000	200	ug/l	
98-82-8	Isopropylbenzene	22 U	100	22	ug/l	
79-20-9	Methyl Acetate	500 U	2000	500	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0593-033.0-20211222		
Lab Sample ID:	FA91974-51	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	200 U	500	200	ug/l	
74-87-3	Methyl Chloride	50 U	200	50	ug/l	
75-09-2	Methylene Chloride	200 U	500	200	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	100 U	500	100	ug/l	
1634-04-4	Methyl Tert Butyl Ether	23 U	100	23	ug/l	
100-42-5	Styrene	22 U	100	22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	28 U	100	28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	30 U	100	30	ug/l	
127-18-4	Tetrachloroethylene	22 U	100	22	ug/l	
108-88-3	Toluene	30 U	100	30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	61 U	200	61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	50 U	200	50	ug/l	
71-55-6	1,1,1-Trichloroethane	25 U	100	25	ug/l	
79-00-5	1,1,2-Trichloroethane	47 U	100	47	ug/l	
79-01-6	Trichloroethylene	32700 [d]	1000	350	ug/l	Q
75-69-4	Trichlorofluoromethane	50 U	200	50	ug/l	
75-01-4	Vinyl Chloride	456	100	41	ug/l	
1330-20-7	Xylene (total)	72 U	300	72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%	101%	83-118%
17060-07-0	1,2-Dichloroethane-D4	110%	108%	79-125%
2037-26-5	Toluene-D8	98%	103%	85-112%
460-00-4	4-Bromofluorobenzene	97%	98%	83-118%

(a) Sample was not preserved to a pH < 2.
(b) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(c) Associated CCV outside of control limits high, sample was ND.
(d) Result is from Run# 2

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0593-038.0-20211222		
Lab Sample ID:	FA91974-52	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	I73555.D	500	01/15/22 05:10	LR	n/a	n/a	VI2443
Run #2 [b]	2A40963.D	1000	12/29/21 23:10	CF	n/a	n/a	V2A1660

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	10000 U [c]	25000	10000	ug/l	
71-43-2	Benzene	310 U [c]	1000	310	ug/l	
74-97-5	Bromochloromethane	450 U [c]	1000	450	ug/l	
75-27-4	Bromodichloromethane	240 U [c]	1000	240	ug/l	
75-25-2	Bromoform	410 U [c]	1000	410	ug/l	
78-93-3	2-Butanone (MEK)	2000 U [c]	5000	2000	ug/l	
75-15-0	Carbon Disulfide [d]	530 U [c]	2000	530	ug/l	
56-23-5	Carbon Tetrachloride	360 U [c]	1000	360	ug/l	
108-90-7	Chlorobenzene	200 U [c]	1000	200	ug/l	
75-00-3	Chloroethane	670 U [c]	2000	670	ug/l	
67-66-3	Chloroform	300 U [c]	1000	300	ug/l	
110-82-7	Cyclohexane	390 U [c]	1000	390	ug/l	
124-48-1	Dibromochloromethane	280 U [c]	1000	280	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1000 U [c]	5000	1000	ug/l	
106-93-4	1,2-Dibromoethane	280 U [c]	2000	280	ug/l	
75-71-8	Dichlorodifluoromethane	500 U [c]	2000	500	ug/l	
95-50-1	1,2-Dichlorobenzene	320 U [c]	1000	320	ug/l	
541-73-1	1,3-Dichlorobenzene	220 U [c]	1000	220	ug/l	
106-46-7	1,4-Dichlorobenzene	260 U [c]	1000	260	ug/l	
75-34-3	1,1-Dichloroethane	340 U [c]	1000	340	ug/l	
107-06-2	1,2-Dichloroethane	310 U [c]	1000	310	ug/l	
75-35-4	1,1-Dichloroethylene	320 U [c]	1000	320	ug/l	
156-59-2	cis-1,2-Dichloroethylene	3200 [c]	1000	280	ug/l	
156-60-5	trans-1,2-Dichloroethylene	220 U [c]	1000	220	ug/l	
78-87-5	1,2-Dichloropropane	430 U [c]	1000	430	ug/l	
10061-01-5	cis-1,3-Dichloropropene	290 U [c]	1000	290	ug/l	
10061-02-6	trans-1,3-Dichloropropene	210 U [c]	1000	210	ug/l	
100-41-4	Ethylbenzene	360 U [c]	1000	360	ug/l	
76-13-1	Freon 113	480 U [c]	1000	480	ug/l	
591-78-6	2-Hexanone	2000 U [c]	10000	2000	ug/l	
98-82-8	Isopropylbenzene	220 U [c]	1000	220	ug/l	
79-20-9	Methyl Acetate	5000 U [c]	20000	5000	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0593-038.0-20211222		
Lab Sample ID:	FA91974-52	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	2000 U [c]	5000	2000	ug/l	
74-87-3	Methyl Chloride	500 U [c]	2000	500	ug/l	
75-09-2	Methylene Chloride	2000 U [c]	5000	2000	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1000 U [c]	5000	1000	ug/l	
1634-04-4	Methyl Tert Butyl Ether	230 U [c]	1000	230	ug/l	
100-42-5	Styrene	220 U [c]	1000	220	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	280 U [c]	1000	280	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	300 U [c]	1000	300	ug/l	
127-18-4	Tetrachloroethylene	220 U [c]	1000	220	ug/l	
108-88-3	Toluene	300 U [c]	1000	300	ug/l	
87-61-6	1,2,3-Trichlorobenzene	610 U [c]	2000	610	ug/l	
120-82-1	1,2,4-Trichlorobenzene	500 U [c]	2000	500	ug/l	
71-55-6	1,1,1-Trichloroethane	250 U [c]	1000	250	ug/l	
79-00-5	1,1,2-Trichloroethane	470 U [c]	1000	470	ug/l	
79-01-6	Trichloroethylene	24100	500	170	ug/l	Q
75-69-4	Trichlorofluoromethane	500 U [c]	2000	500	ug/l	
75-01-4	Vinyl Chloride	1160 [c]	1000	410	ug/l	
1330-20-7	Xylene (total)	720 U [c]	3000	720	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%	104%	83-118%
17060-07-0	1,2-Dichloroethane-D4	107%	109%	79-125%
2037-26-5	Toluene-D8	102%	97%	85-112%
460-00-4	4-Bromofluorobenzene	97%	96%	83-118%

(a) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(b) Sample was not preserved to a pH < 2.
(c) Result is from Run# 2
(d) Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0593-043.0-20211222		
Lab Sample ID:	FA91974-53	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	I73556.D	2000	01/15/22 05:35	LR	n/a	n/a	VI2443
Run #2 [b]	2A40965.D	5000	12/29/21 23:39	CF	n/a	n/a	V2A1660

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	50000 U [c]	130000	50000	ug/l	
71-43-2	Benzene	1600 U [c]	5000	1600	ug/l	
74-97-5	Bromochloromethane	2300 U [c]	5000	2300	ug/l	
75-27-4	Bromodichloromethane	1200 U [c]	5000	1200	ug/l	
75-25-2	Bromoform	2000 U [c]	5000	2000	ug/l	
78-93-3	2-Butanone (MEK)	10000 U [c]	25000	10000	ug/l	
75-15-0	Carbon Disulfide [d]	2700 U [c]	10000	2700	ug/l	
56-23-5	Carbon Tetrachloride	1800 U [c]	5000	1800	ug/l	
108-90-7	Chlorobenzene	1000 U [c]	5000	1000	ug/l	
75-00-3	Chloroethane	3300 U [c]	10000	3300	ug/l	
67-66-3	Chloroform	1500 U [c]	5000	1500	ug/l	
110-82-7	Cyclohexane	2000 U [c]	5000	2000	ug/l	
124-48-1	Dibromochloromethane	1400 U [c]	5000	1400	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	5200 U [c]	25000	5200	ug/l	
106-93-4	1,2-Dibromoethane	1400 U [c]	10000	1400	ug/l	
75-71-8	Dichlorodifluoromethane	2500 U [c]	10000	2500	ug/l	
95-50-1	1,2-Dichlorobenzene	1600 U [c]	5000	1600	ug/l	
541-73-1	1,3-Dichlorobenzene	1100 U [c]	5000	1100	ug/l	
106-46-7	1,4-Dichlorobenzene	1300 U [c]	5000	1300	ug/l	
75-34-3	1,1-Dichloroethane	1700 U [c]	5000	1700	ug/l	
107-06-2	1,2-Dichloroethane	1600 U [c]	5000	1600	ug/l	
75-35-4	1,1-Dichloroethylene	1600 U [c]	5000	1600	ug/l	
156-59-2	cis-1,2-Dichloroethylene	48900 [c]	5000	1400	ug/l	
156-60-5	trans-1,2-Dichloroethylene	1100 U [c]	5000	1100	ug/l	
78-87-5	1,2-Dichloropropane	2100 U [c]	5000	2100	ug/l	
10061-01-5	cis-1,3-Dichloropropene	1500 U [c]	5000	1500	ug/l	
10061-02-6	trans-1,3-Dichloropropene	1100 U [c]	5000	1100	ug/l	
100-41-4	Ethylbenzene	1800 U [c]	5000	1800	ug/l	
76-13-1	Freon 113	2400 U [c]	5000	2400	ug/l	
591-78-6	2-Hexanone	10000 U [c]	50000	10000	ug/l	
98-82-8	Isopropylbenzene	1100 U [c]	5000	1100	ug/l	
79-20-9	Methyl Acetate	25000 U [c]	100000	25000	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0593-043.0-20211222		
Lab Sample ID:	FA91974-53	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	10000 U [c]	25000	10000	ug/l	
74-87-3	Methyl Chloride	2500 U [c]	10000	2500	ug/l	
75-09-2	Methylene Chloride	10000 U [c]	25000	10000	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	5000 U [c]	25000	5000	ug/l	
1634-04-4	Methyl Tert Butyl Ether	1100 U [c]	5000	1100	ug/l	
100-42-5	Styrene	1100 U [c]	5000	1100	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	1400 U [c]	5000	1400	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	1500 U [c]	5000	1500	ug/l	
127-18-4	Tetrachloroethylene	1100 U [c]	5000	1100	ug/l	
108-88-3	Toluene	1500 U [c]	5000	1500	ug/l	
87-61-6	1,2,3-Trichlorobenzene	3100 U [c]	10000	3100	ug/l	
120-82-1	1,2,4-Trichlorobenzene	2500 U [c]	10000	2500	ug/l	
71-55-6	1,1,1-Trichloroethane	1200 U [c]	5000	1200	ug/l	
79-00-5	1,1,2-Trichloroethane	2300 U [c]	5000	2300	ug/l	
79-01-6	Trichloroethylene	61700	2000	690	ug/l	Q
75-69-4	Trichlorofluoromethane	2500 U [c]	10000	2500	ug/l	
75-01-4	Vinyl Chloride	64600 [c]	5000	2000	ug/l	
1330-20-7	Xylene (total)	3600 U [c]	15000	3600	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%	103%	83-118%
17060-07-0	1,2-Dichloroethane-D4	108%	109%	79-125%
2037-26-5	Toluene-D8	103%	98%	85-112%
460-00-4	4-Bromofluorobenzene	96%	97%	83-118%

(a) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(b) Sample was not preserved to a pH < 2.
(c) Result is from Run# 2
(d) Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0593-048.0-20211222		
Lab Sample ID:	FA91974-54	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	I73557.D	10000	01/15/22 05:59	LR	n/a	n/a	VI2443
Run #2 [b]	2A40967.D	100000	12/30/21 00:08	CF	n/a	n/a	V2A1660

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	1000000 U [c]	2500000	1000000	ug/l	
71-43-2	Benzene	31000 U [c]	100000	31000	ug/l	
74-97-5	Bromochloromethane	45000 U [c]	100000	45000	ug/l	
75-27-4	Bromodichloromethane	24000 U [c]	100000	24000	ug/l	
75-25-2	Bromoform	41000 U [c]	100000	41000	ug/l	
78-93-3	2-Butanone (MEK)	200000 U [c]	500000	200000	ug/l	
75-15-0	Carbon Disulfide [d]	53000 U [c]	200000	53000	ug/l	
56-23-5	Carbon Tetrachloride	36000 U [c]	100000	36000	ug/l	
108-90-7	Chlorobenzene	20000 U [c]	100000	20000	ug/l	
75-00-3	Chloroethane	67000 U [c]	200000	67000	ug/l	
67-66-3	Chloroform	30000 U [c]	100000	30000	ug/l	
110-82-7	Cyclohexane	39000 U [c]	100000	39000	ug/l	
124-48-1	Dibromochloromethane	28000 U [c]	100000	28000	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	100000 U [c]	500000	100000	ug/l	
106-93-4	1,2-Dibromoethane	28000 U [c]	200000	28000	ug/l	
75-71-8	Dichlorodifluoromethane	50000 U [c]	200000	50000	ug/l	
95-50-1	1,2-Dichlorobenzene	32000 U [c]	100000	32000	ug/l	
541-73-1	1,3-Dichlorobenzene	22000 U [c]	100000	22000	ug/l	
106-46-7	1,4-Dichlorobenzene	26000 U [c]	100000	26000	ug/l	
75-34-3	1,1-Dichloroethane	34000 U [c]	100000	34000	ug/l	
107-06-2	1,2-Dichloroethane	31000 U [c]	100000	31000	ug/l	
75-35-4	1,1-Dichloroethylene	32000 U [c]	100000	32000	ug/l	
156-59-2	cis-1,2-Dichloroethylene	28000 U [c]	100000	28000	ug/l	
156-60-5	trans-1,2-Dichloroethylene	22000 U [c]	100000	22000	ug/l	
78-87-5	1,2-Dichloropropane	43000 U [c]	100000	43000	ug/l	
10061-01-5	cis-1,3-Dichloropropene	29000 U [c]	100000	29000	ug/l	
10061-02-6	trans-1,3-Dichloropropene	21000 U [c]	100000	21000	ug/l	
100-41-4	Ethylbenzene	36000 U [c]	100000	36000	ug/l	
76-13-1	Freon 113	48000 U [c]	100000	48000	ug/l	
591-78-6	2-Hexanone	200000 U [c]	1000000	200000	ug/l	
98-82-8	Isopropylbenzene	22000 U [c]	100000	22000	ug/l	
79-20-9	Methyl Acetate	500000 U [c]	2000000	500000	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0593-048.0-20211222		
Lab Sample ID:	FA91974-54	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	200000 U [c]	500000	200000	ug/l	
74-87-3	Methyl Chloride	50000 U [c]	200000	50000	ug/l	
75-09-2	Methylene Chloride	200000 U [c]	500000	200000	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	100000 U [c]	500000	100000	ug/l	
1634-04-4	Methyl Tert Butyl Ether	23000 U [c]	100000	23000	ug/l	
100-42-5	Styrene	22000 U [c]	100000	22000	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	28000 U [c]	100000	28000	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	30000 U [c]	100000	30000	ug/l	
127-18-4	Tetrachloroethylene	22000 U [c]	100000	22000	ug/l	
108-88-3	Toluene	30000 U [c]	100000	30000	ug/l	
87-61-6	1,2,3-Trichlorobenzene	61000 U [c]	200000	61000	ug/l	
120-82-1	1,2,4-Trichlorobenzene	50000 U [c]	200000	50000	ug/l	
71-55-6	1,1,1-Trichloroethane	25000 U [c]	100000	25000	ug/l	
79-00-5	1,1,2-Trichloroethane	47000 U [c]	100000	47000	ug/l	
79-01-6	Trichloroethylene	719000 [c]	100000	35000	ug/l	
75-69-4	Trichlorofluoromethane	50000 U [c]	200000	50000	ug/l	
75-01-4	Vinyl Chloride	41000 U [c]	100000	41000	ug/l	
1330-20-7	Xylene (total)	72000 U [c]	300000	72000	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%	103%	83-118%
17060-07-0	1,2-Dichloroethane-D4	108%	111%	79-125%
2037-26-5	Toluene-D8	103%	96%	85-112%
460-00-4	4-Bromofluorobenzene	96%	98%	83-118%

(a) Sample was not preserved to a pH < 2. Confirmation run beyond holdtime.
(b) Sample was not preserved to a pH < 2.
(c) Result is from Run# 2
(d) Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range
I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0593-053.0-20211222		
Lab Sample ID:	FA91974-55	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	I73558.D	2500	01/15/22 06:24	LR	n/a	n/a	VI2443
Run #2 [b]	2A40969.D	100000	12/30/21 00:37	CF	n/a	n/a	V2A1660

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	1000000 U [c]	2500000	1000000	ug/l	
71-43-2	Benzene	31000 U [c]	100000	31000	ug/l	
74-97-5	Bromochloromethane	45000 U [c]	100000	45000	ug/l	
75-27-4	Bromodichloromethane	24000 U [c]	100000	24000	ug/l	
75-25-2	Bromoform	41000 U [c]	100000	41000	ug/l	
78-93-3	2-Butanone (MEK)	200000 U [c]	500000	200000	ug/l	
75-15-0	Carbon Disulfide [d]	53000 U [c]	200000	53000	ug/l	
56-23-5	Carbon Tetrachloride	36000 U [c]	100000	36000	ug/l	
108-90-7	Chlorobenzene	20000 U [c]	100000	20000	ug/l	
75-00-3	Chloroethane	67000 U [c]	200000	67000	ug/l	
67-66-3	Chloroform	30000 U [c]	100000	30000	ug/l	
110-82-7	Cyclohexane	39000 U [c]	100000	39000	ug/l	
124-48-1	Dibromochloromethane	28000 U [c]	100000	28000	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	100000 U [c]	500000	100000	ug/l	
106-93-4	1,2-Dibromoethane	28000 U [c]	200000	28000	ug/l	
75-71-8	Dichlorodifluoromethane	50000 U [c]	200000	50000	ug/l	
95-50-1	1,2-Dichlorobenzene	32000 U [c]	100000	32000	ug/l	
541-73-1	1,3-Dichlorobenzene	22000 U [c]	100000	22000	ug/l	
106-46-7	1,4-Dichlorobenzene	26000 U [c]	100000	26000	ug/l	
75-34-3	1,1-Dichloroethane	34000 U [c]	100000	34000	ug/l	
107-06-2	1,2-Dichloroethane	31000 U [c]	100000	31000	ug/l	
75-35-4	1,1-Dichloroethylene	32000 U [c]	100000	32000	ug/l	
156-59-2	cis-1,2-Dichloroethylene	222000 [c]	100000	28000	ug/l	
156-60-5	trans-1,2-Dichloroethylene	22000 U [c]	100000	22000	ug/l	
78-87-5	1,2-Dichloropropane	43000 U [c]	100000	43000	ug/l	
10061-01-5	cis-1,3-Dichloropropene	29000 U [c]	100000	29000	ug/l	
10061-02-6	trans-1,3-Dichloropropene	21000 U [c]	100000	21000	ug/l	
100-41-4	Ethylbenzene	36000 U [c]	100000	36000	ug/l	
76-13-1	Freon 113	48000 U [c]	100000	48000	ug/l	
591-78-6	2-Hexanone	200000 U [c]	1000000	200000	ug/l	
98-82-8	Isopropylbenzene	22000 U [c]	100000	22000	ug/l	
79-20-9	Methyl Acetate	500000 U [c]	2000000	500000	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0593-053.0-20211222		
Lab Sample ID:	FA91974-55	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	200000 U [c]	500000	200000	ug/l	
74-87-3	Methyl Chloride	50000 U [c]	200000	50000	ug/l	
75-09-2	Methylene Chloride	200000 U [c]	500000	200000	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	100000 U [c]	500000	100000	ug/l	
1634-04-4	Methyl Tert Butyl Ether	23000 U [c]	100000	23000	ug/l	
100-42-5	Styrene	22000 U [c]	100000	22000	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	28000 U [c]	100000	28000	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	30000 U [c]	100000	30000	ug/l	
127-18-4	Tetrachloroethylene	22000 U [c]	100000	22000	ug/l	
108-88-3	Toluene	30000 U [c]	100000	30000	ug/l	
87-61-6	1,2,3-Trichlorobenzene	61000 U [c]	200000	61000	ug/l	
120-82-1	1,2,4-Trichlorobenzene	50000 U [c]	200000	50000	ug/l	
71-55-6	1,1,1-Trichloroethane	25000 U [c]	100000	25000	ug/l	
79-00-5	1,1,2-Trichloroethane	47000 U [c]	100000	47000	ug/l	
79-01-6	Trichloroethylene	170000 [c]	100000	35000	ug/l	
75-69-4	Trichlorofluoromethane	50000 U [c]	200000	50000	ug/l	
75-01-4	Vinyl Chloride	41000 U [c]	100000	41000	ug/l	
1330-20-7	Xylene (total)	72000 U [c]	300000	72000	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%	105%	83-118%
17060-07-0	1,2-Dichloroethane-D4	107%	112%	79-125%
2037-26-5	Toluene-D8	103%	97%	85-112%
460-00-4	4-Bromofluorobenzene	98%	97%	83-118%

(a) Sample was not preserved to a pH < 2. Confirmation run beyond holdtime.
(b) Sample was not preserved to a pH < 2.
(c) Result is from Run# 2
(d) Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0593-058.0-20211222		
Lab Sample ID:	FA91974-56	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	I73559.D	2000	01/15/22 06:49	LR	n/a	n/a	VI2443
Run #2 [b]	2A40971.D	5000	12/30/21 01:06	CF	n/a	n/a	V2A1660

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	50000 U [c]	130000	50000	ug/l	
71-43-2	Benzene	1600 U [c]	5000	1600	ug/l	
74-97-5	Bromochloromethane	2300 U [c]	5000	2300	ug/l	
75-27-4	Bromodichloromethane	1200 U [c]	5000	1200	ug/l	
75-25-2	Bromoform	2000 U [c]	5000	2000	ug/l	
78-93-3	2-Butanone (MEK)	10000 U [c]	25000	10000	ug/l	
75-15-0	Carbon Disulfide [d]	2700 U [c]	10000	2700	ug/l	
56-23-5	Carbon Tetrachloride	1800 U [c]	5000	1800	ug/l	
108-90-7	Chlorobenzene	1000 U [c]	5000	1000	ug/l	
75-00-3	Chloroethane	3300 U [c]	10000	3300	ug/l	
67-66-3	Chloroform	1500 U [c]	5000	1500	ug/l	
110-82-7	Cyclohexane	2000 U [c]	5000	2000	ug/l	
124-48-1	Dibromochloromethane	1400 U [c]	5000	1400	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	5200 U [c]	25000	5200	ug/l	
106-93-4	1,2-Dibromoethane	1400 U [c]	10000	1400	ug/l	
75-71-8	Dichlorodifluoromethane	2500 U [c]	10000	2500	ug/l	
95-50-1	1,2-Dichlorobenzene	1600 U [c]	5000	1600	ug/l	
541-73-1	1,3-Dichlorobenzene	1100 U [c]	5000	1100	ug/l	
106-46-7	1,4-Dichlorobenzene	1300 U [c]	5000	1300	ug/l	
75-34-3	1,1-Dichloroethane	1700 U [c]	5000	1700	ug/l	
107-06-2	1,2-Dichloroethane	1600 U [c]	5000	1600	ug/l	
75-35-4	1,1-Dichloroethylene	1600 U [c]	5000	1600	ug/l	
156-59-2	cis-1,2-Dichloroethylene	105000 [c]	5000	1400	ug/l	
156-60-5	trans-1,2-Dichloroethylene	1100 U [c]	5000	1100	ug/l	
78-87-5	1,2-Dichloropropane	2100 U [c]	5000	2100	ug/l	
10061-01-5	cis-1,3-Dichloropropene	1500 U [c]	5000	1500	ug/l	
10061-02-6	trans-1,3-Dichloropropene	1100 U [c]	5000	1100	ug/l	
100-41-4	Ethylbenzene	1800 U [c]	5000	1800	ug/l	
76-13-1	Freon 113	2400 U [c]	5000	2400	ug/l	
591-78-6	2-Hexanone	10000 U [c]	50000	10000	ug/l	
98-82-8	Isopropylbenzene	1100 U [c]	5000	1100	ug/l	
79-20-9	Methyl Acetate	25000 U [c]	100000	25000	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0593-058.0-20211222		
Lab Sample ID:	FA91974-56	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	10000 U [c]	25000	10000	ug/l	
74-87-3	Methyl Chloride	2500 U [c]	10000	2500	ug/l	
75-09-2	Methylene Chloride	10000 U [c]	25000	10000	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	5000 U [c]	25000	5000	ug/l	
1634-04-4	Methyl Tert Butyl Ether	1100 U [c]	5000	1100	ug/l	
100-42-5	Styrene	1100 U [c]	5000	1100	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	1400 U [c]	5000	1400	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	1500 U [c]	5000	1500	ug/l	
127-18-4	Tetrachloroethylene	1100 U [c]	5000	1100	ug/l	
108-88-3	Toluene	1500 U [c]	5000	1500	ug/l	
87-61-6	1,2,3-Trichlorobenzene	3100 U [c]	10000	3100	ug/l	
120-82-1	1,2,4-Trichlorobenzene	2500 U [c]	10000	2500	ug/l	
71-55-6	1,1,1-Trichloroethane	1200 U [c]	5000	1200	ug/l	
79-00-5	1,1,2-Trichloroethane	2300 U [c]	5000	2300	ug/l	
79-01-6	Trichloroethylene	15700 [c]	5000	1700	ug/l	
75-69-4	Trichlorofluoromethane	2500 U [c]	10000	2500	ug/l	
75-01-4	Vinyl Chloride	5520 [c]	5000	2000	ug/l	
1330-20-7	Xylene (total)	3600 U [c]	15000	3600	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%	107%	83-118%
17060-07-0	1,2-Dichloroethane-D4	109%	119%	79-125%
2037-26-5	Toluene-D8	103%	96%	85-112%
460-00-4	4-Bromofluorobenzene	94%	96%	83-118%

(a) Sample was not preserved to a pH < 2. Confirmation run beyond holdtime.
(b) Sample was not preserved to a pH < 2.
(c) Result is from Run# 2
(d) Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

5

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

Tetra Tech, Inc.

CHAIN OF CUSTODY NUMBER No. 1375 FA91974 PAGE 1 OF 5

PROJECT NO: 112G-08985	FACILITY: LC34	PROJECT MANAGER Mark Jonnet	PHONE NUMBER 412-921-8622	LABORATORY NAME AND CONTACT: SGS
SAMPLERS (SIGNATURE) [signature] [signature]		FIELD OPERATIONS LEADER Dan Forester	PHONE NUMBER 304-780-1426	ADDRESS
		CARRIER/WAYBILL NUMBER		CITY, STATE Orlando FL

STANDARD TAT ☒ RUSH TAT ☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G

PRESERVATIVE USED: None

TYPE OF ANALYSIS: VOCs 8260

	DATE YEAR	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS	COMMENTS
1	12/21	1605	LC34-DPT0599-078.0-20211221		76	80	GW	G	3	X	
2		1625	LC34-DPT0599-083.0-20211221		81	85					
3		1645	LC34-DPT0599-088.0-20211221		86	90					
4		1710	LC34-DPT0599-093.0-20211221		91	95					DPT0599-093.0
5	22/DC	0730	LC34-DPT0599-098.0-20211222		96	100					
6		0825	LC34-DPT0595-008.0-20211222		6	10					
7		0835	LC34-DPT0595-013.0-20211222		11	15					
8		0845	LC34-DPT0595-018.0-20211222		16	20					
9		0855	LC34-DPT0595-023.0-20211222		21	25					
10		0905	LC34-DPT0595-028.0-20211222		26	30					
11		0915	LC34-DPT0595-033.0-20211222		31	35					
12		0925	LC34-DPT0595-038.0-20211222		36	40					
17		0935	LC34-DPT0595-043.0-20211222		41	45					

INITIAL ASSESSMENT [signature]

LABEL VERIFICATION SM

4.6, 1.8-1.1

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY [signature]	12/22/21	1633	1. RECEIVED BY [signature]	12/23/21	16:38
2. RELINQUISHED BY [signature]	12/22/21	18:35	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	12/23/21	~~TIME~~	3. RECEIVED BY [signature]	DATE	TIME

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R FORM NO. TtNUS-001

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FA91974: Chain of Custody
Page 1 of 6

FA91974

Tetra Tech, Inc. CHAIN OF CUSTODY | NUMBER No. 1374 | PAGE 2 OF 5

PROJECT NO: 112G-08985	FACILITY: LC34	PROJECT MANAGER MARK Jonnet	PHONE NUMBER 412-921-8622	LABORATORY NAME AND CONTACT: SGS
SAMPLERS (SIGNATURE) Dan Forester		FIELD OPERATIONS LEADER Dan Forester	PHONE NUMBER 304-780-1426	ADDRESS
		CARRIER/WAYBILL NUMBER		CITY, STATE Orlando FL

STANDARD TAT ☒ RUSH TAT ☐ ☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G
PRESERVATIVE USED: None
TYPE OF ANALYSIS: VOCs 8260

	DATE YEAR 2021	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	COMMENTS
14	12/21	1610	LC34-DPT0596-093.0-20211224		41	45	GW	G	3	X
15		1630	LC34-DPT0596-048.0-20211224		46	50				
16		1650	LC34-DPT0596-053.0-20211221		51	55				
17	∞	1705	LC34-DPT0596-058.0-20211221		56	60				
18	12/22	0725	LC34-DPT0596-063.0-20211222		61	65				
19		0765	LC34-DPT0596-068.0-20211222		66	70				
20		0830	LC34-DPT0596-073.0-20211222		71	75				
21		0900	LC34-DPT0596-078.0-20211222		76	80				
22		0930	LC34-DPT0596-083.0-20211222		81	85				
23		1000	LC34-DPT0596-088.0-20211222		86	90				
24		1030	LC34-DPT0596-093.0-20211222		91	95				
25		1100	LC34-DPT0596-098.0-20211222		96	100				
							½	½	½	1

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	12/22/21	1633	1. RECEIVED BY	12/22/21	16:33
2. RELINQUISHED BY	12/23/21	18:35	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE 12/23/21	TIME ~~1830~~	3. RECEIVED BY	DATE	TIME

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY) 4/02R FORM NO. TtNUS-001

5.1 5

FA91974: Chain of Custody
Page 2 of 6

FA91974

Tetra Tech, Inc. CHAIN OF CUSTODY | NUMBER No. 1376 | PAGE 3 OF 5

PROJECT NO: 112G08985	FACILITY: LC34	PROJECT MANAGER MARK JOURNET	PHONE NUMBER 412-921-8622	LABORATORY NAME AND CONTACT: SGS
SAMPLERS (SIGNATURE) DAN FORESTER		FIELD OPERATIONS LEADER DAN FORESTER	PHONE NUMBER 304-780-1426	ADDRESS
		CARRIER/WAYBILL NUMBER COURIER		CITY, STATE ORLANDO, FL

STANDARD TAT ☑
RUSH TAT ☐ ☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G
PRESERVATIVE USED: NA
TYPE OF ANALYSIS: VOCs 8260

	DATE YEAR	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	COMMENTS
26	22Oct	0945	LC34-DPT0595-048.0-20211222		46	50	GW	G	3	
27		1005	LC34-DPT0595-053.0-20211222		51	55				
28		1015	LC34-DPT0595-058.0-20211222		65	60				
29		1035	LC34-DPT0595-063.0-20211222		61	65				
30		1055	LC34-DPT0595-068.0-20211222		66	70				
31		1125	LC34-DPT0595-073.0-20211222		71	75				
32		1215	LC34-DPT0595-078.0-20211222		76	80				
33		1235	LC34-DPT0595-083.0-20211222		81	85				
34		1305	LC34-DPT0595-088.0-20211222		86	90				
35		1335	LC34-DPT0595-093.0-20211222		91	95				
36		1355	LC34-DPT0595-098.0-20211222		96	100				

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	12/22/21	1633	1. RECEIVED BY	12/22/21	16:33
2. RELINQUISHED BY	12/23/21	18:35	2. RECEIVED BY		
3. RELINQUISHED BY	12/23/21		3. RECEIVED BY		

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

FA91974: Chain of Custody
Page 3 of 6

FA91974

Tetra Tech, Inc. CHAIN OF CUSTODY | NUMBER No. 1377 | PAGE 4 OF 5

PROJECT NO: 112G08985	FACILITY: LC34	PROJECT MANAGER MARK Jonnet	PHONE NUMBER 412-921-8622	LABORATORY NAME AND CONTACT: SGS
SAMPLERS (SIGNATURE) DAN FORESTER		FIELD OPERATIONS LEADER Dan Forester	PHONE NUMBER 304-780-1426	ADDRESS
		CARRIER/WAYBILL NUMBER		CITY, STATE ORLANDO, FL

STANDARD TAT ☑ RUSH TAT ☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G
PRESERVATIVE USED: NA
TYPE OF ANALYSIS: VOCs, EDB

	DATE YEAR 2021	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS		COMMENTS
37	22Dec	1435	LC34-DPT0594-008.0-20211222		6	10	GW	G	3	X	
38		1445	LC34-DPT0594-013-20211222		11	15					
39		1455	LC34-DPT0594-018.0-20211222		16	20					
40		1505	LC34-DPT0594-023.0-20211222		21	25					
41		1510	LC34-DPT0594-028.0-20211222		26	30					
42		1520	LC34-DPT0594-033.0-20211222		31	35					
43		1530	LC34-DPT0594-038.0-20211222		36	40					
44		1540	LC34-DPT0594-043.0-20211222		41	45					
45		1550	LC34-DPT0594-048.0-20211222		46	50					
		~~LC34-DPT0594-053.0-202112~~			~~51~~	~~55~~					
		~~LC34-DPT0594-058.0-202112~~			~~56~~	~~60~~					
		~~LC34-DPT0594-063.0-202112~~			~~61~~	~~65~~					
		~~LC34-DPT0594-068.0-202112~~			~~66~~	~~70~~					

1. RELINQUISHED BY	DATE 12/22/21	TIME 1633	1. RECEIVED BY	DATE 12/22/21	TIME 16:33
2. RELINQUISHED BY	DATE 12/22/21	TIME 18:35	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE 12/23/21	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY) 4/02R

FORM NO. TtNUS-001

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FA91974: Chain of Custody
Page 4 of 6

FA91974

Tetra Tech, Inc. CHAIN OF CUSTODY NUMBER No. 1379 PAGE 5 OF 5

PROJECT NO: 112G08985 | FACILITY: LC34 | PROJECT MANAGER: MARK Jonnet | PHONE NUMBER: 412921 8622 | LABORATORY NAME AND CONTACT: SGS

SAMPLERS (SIGNATURE): DAN FORESTER | FIELD OPERATIONS LEADER: Dan Forester | PHONE NUMBER: 304-780-1426 | ADDRESS:

CARRIER/WAYBILL NUMBER: | CITY, STATE: Orlando FL

STANDARD TAT ☒ RUSH TAT ☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G

PRESERVATIVE USED: None

	DATE YEAR	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS: VOCs 8260	COMMENTS
46	22 Dec 2021	1250	LC34-DPT0593-008.0-20211222		6	10	GW	G	3	X	
47		1300	LC34-DPT0593-013.0-20211222		11	15					
48		1310	LC34-DPT0593-018.0-20211222		16	20					
49		1315	LC34-DPT0593-023.0-20211222		21	25					
50		1330	LC34-DPT0593-028.0-20211222		26	30					
51		1340	LC34-DPT0593-033.0-20211222		31	35					
52		1355	LC34-DPT0593-038.0-20211222		36	40					
53		1420	LC34-DPT0593-043.0-20211222		41	45					
54		1450	LC34-DPT0593-048.0-20211222		46	50					
55		1515	LC34-DPT0593-053.0-20211222		51	55					
56		1535	LC34-DPT0593-058.0-20211222		56	60					
			~~LC34-DPT0593-063.0-20211222~~		61	65					
			~~LC34-DPT0593-068.0-20211222~~		66	70					

1. RELINQUISHED BY	DATE 12/22/21	TIME 1633	1. RECEIVED BY	DATE 12/23/21	TIME 1633
2. RELINQUISHED BY	DATE 12/23/21	TIME 8:35	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE 12/23/21	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY) 4/02R FORM NO. TtNUS-001

FA91974: Chain of Custody
Page 5 of 6

SGS Sample Receipt Summary

Job Number: FA91974 **Client:** TETRA TECH **Project:** 112G08985

Date / Time Received: 12/22/2021 6:35:00 PM **Delivery Method:** COURIER **Airbill #'s:**

Therm ID: IR 1; **Therm CF:** 0.2; **# of Coolers:** 2

Cooler Temps (Raw Measured) °C: Cooler 1: (4.4); Cooler 2: (1.6);

Cooler Temps (Corrected) °C: Cooler 1: (4.6); Cooler 2: (1.8);

Cooler Information	Y	or	N
1. Custody Seals Present	☑		☐
2. Custody Seals Intact	☑		☐
3. Temp criteria achieved	☑		☐
4. Cooler temp verification	IR Gun		
5. Cooler media	Ice (Bag)		

Trip Blank Information	Y	or	N	N/A
1. Trip Blank present / cooler	☐		☑	☐
2. Trip Blank listed on COC	☐		☑	☐

	W	or	S	N/A
3. Type Of TB Received	☐		☐	☑

Sample Information	Y	or	N	N/A
1. Sample labels present on bottles	☑		☐	
2. Samples preserved properly	☑		☐	
3. Sufficient volume/containers recvd for analysis:	☑		☐	
4. Condition of sample	Intact			
5. Sample recvd within HT	☑		☐	
6. Dates/Times/IDs on COC match Sample Label	☑		☐	
7. VOCs have headspace	☐		☑	☐
8. Bottles received for unspecified tests	☐		☑	
9. Compositing instructions clear	☐		☐	☑
10. Voa Soil Kits/Jars received past 48hrs?	☐		☐	☑
11. % Solids Jar received?	☐		☐	☑
12. Residual Chlorine Present?	☐		☐	☑

Misc. Information

Number of Encores: 25-Gram _____ 5-Gram _____ Number of 5035 Field Kits: _____ Number of Lab Filtered Metals: _____

Test Strip Lot #s: pH 0-3 230315 pH 10-12 219813A Other: (Specify) _____ _____

Residual Chlorine Test Strip Lot #: _____

Comments

SM001
Rev. Date 05/24/17

Technician: STEPHENP Date: 12/22/2021 6:35:00 P Reviewer: _____ Date: _____

5.1 5

FA91974: Chain of Custody
Page 6 of 6

MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: FA91974
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI2417-MB [a]	I73031.D	1	12/28/21	LR	n/a	n/a	VI2417

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91974-1, FA91974-2, FA91974-3, FA91974-4, FA91974-14, FA91974-15, FA91974-16, FA91974-17

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
71-43-2	Benzene	ND	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.24	ug/l	
75-25-2	Bromoform	ND	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	ND	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.67	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
110-82-7	Cyclohexane	ND	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.36	ug/l	
76-13-1	Freon 113	ND	1.0	0.48	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	ND	20	5.0	ug/l	
74-83-9	Methyl Bromide	ND	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	ND	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	ND	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.0	ug/l	

Method Blank Summary

Job Number: FA91974
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI2417-MB [a]	I73031.D	1	12/28/21	LR	n/a	n/a	VI2417

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91974-1, FA91974-2, FA91974-3, FA91974-4, FA91974-14, FA91974-15, FA91974-16, FA91974-17

CAS No.	Compound	Result	RL	MDL	Units	Q
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.23	ug/l	
100-42-5	Styrene	ND	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	100%	83-118%
17060-07-0	1,2-Dichloroethane-D4	112%	79-125%
2037-26-5	Toluene-D8	95%	85-112%
460-00-4	4-Bromofluorobenzene	99%	83-118%

(a) Sample was treated with an anti-foaming agent.

Method Blank Summary

Job Number: FA91974
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2P3362-MB	2P84234.D	1	12/29/21	CF	n/a	n/a	V2P3362

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91974-5, FA91974-6, FA91974-7, FA91974-8, FA91974-9, FA91974-10, FA91974-11, FA91974-12, FA91974-13

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
71-43-2	Benzene	ND	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.24	ug/l	
75-25-2	Bromoform	ND	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	ND	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.67	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
110-82-7	Cyclohexane	ND	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.36	ug/l	
76-13-1	Freon 113	ND	1.0	0.48	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	ND	20	5.0	ug/l	
74-83-9	Methyl Bromide	ND	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	ND	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	ND	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.0	ug/l	

Method Blank Summary

Job Number: FA91974
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2P3362-MB	2P84234.D	1	12/29/21	CF	n/a	n/a	V2P3362

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91974-5, FA91974-6, FA91974-7, FA91974-8, FA91974-9, FA91974-10, FA91974-11, FA91974-12, FA91974-13

CAS No.	Compound	Result	RL	MDL	Units	Q
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.23	ug/l	
100-42-5	Styrene	ND	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	ND	1.0	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	99%	83-118%
17060-07-0	1,2-Dichloroethane-D4	94%	79-125%
2037-26-5	Toluene-D8	94%	85-112%
460-00-4	4-Bromofluorobenzene	104%	83-118%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
124-38-9	Carbon dioxide	1.04	46	ug/l	JN
	Total TIC, Volatile		0	ug/l	

Method Blank Summary

Job Number: FA91974
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1665-MB	1A40932.D	1	12/29/21	CF	n/a	n/a	V1A1665

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91974-18, FA91974-19, FA91974-20, FA91974-21, FA91974-22, FA91974-23, FA91974-24, FA91974-25, FA91974-26, FA91974-27, FA91974-28, FA91974-29, FA91974-30, FA91974-31, FA91974-32, FA91974-33, FA91974-34, FA91974-35, FA91974-36, FA91974-37

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
71-43-2	Benzene	ND	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.24	ug/l	
75-25-2	Bromoform	ND	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	ND	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.67	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
110-82-7	Cyclohexane	ND	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.36	ug/l	
76-13-1	Freon 113	ND	1.0	0.48	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	ND	20	5.0	ug/l	
74-83-9	Methyl Bromide	ND	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	ND	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	ND	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.0	ug/l	

Method Blank Summary

Job Number: FA91974
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1665-MB	1A40932.D	1	12/29/21	CF	n/a	n/a	V1A1665

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91974-18, FA91974-19, FA91974-20, FA91974-21, FA91974-22, FA91974-23, FA91974-24, FA91974-25, FA91974-26, FA91974-27, FA91974-28, FA91974-29, FA91974-30, FA91974-31, FA91974-32, FA91974-33, FA91974-34, FA91974-35, FA91974-36, FA91974-37

CAS No.	Compound	Result	RL	MDL	Units	Q
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.23	ug/l	
100-42-5	Styrene	ND	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	98%	83-118%
17060-07-0	1,2-Dichloroethane-D4	100%	79-125%
2037-26-5	Toluene-D8	96%	85-112%
460-00-4	4-Bromofluorobenzene	97%	83-118%

Method Blank Summary

Job Number: FA91974
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2A1660-MB	2A40933.D	1	12/29/21	CF	n/a	n/a	V2A1660

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91974-38, FA91974-39, FA91974-40, FA91974-41, FA91974-42, FA91974-43, FA91974-44, FA91974-45, FA91974-46, FA91974-47, FA91974-48, FA91974-49, FA91974-50, FA91974-51, FA91974-52, FA91974-53, FA91974-54, FA91974-55, FA91974-56

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
71-43-2	Benzene	ND	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.24	ug/l	
75-25-2	Bromoform	ND	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	ND	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.67	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
110-82-7	Cyclohexane	ND	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.36	ug/l	
76-13-1	Freon 113	ND	1.0	0.48	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	ND	20	5.0	ug/l	
74-83-9	Methyl Bromide	ND	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	ND	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	ND	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.0	ug/l	

Method Blank Summary

Job Number: FA91974
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2A1660-MB	2A40933.D	1	12/29/21	CF	n/a	n/a	V2A1660

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91974-38, FA91974-39, FA91974-40, FA91974-41, FA91974-42, FA91974-43, FA91974-44, FA91974-45, FA91974-46, FA91974-47, FA91974-48, FA91974-49, FA91974-50, FA91974-51, FA91974-52, FA91974-53, FA91974-54, FA91974-55, FA91974-56

CAS No.	Compound	Result	RL	MDL	Units	Q
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.23	ug/l	
100-42-5	Styrene	ND	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	99%	83-118%
17060-07-0	1,2-Dichloroethane-D4	101%	79-125%
2037-26-5	Toluene-D8	97%	85-112%
460-00-4	4-Bromofluorobenzene	98%	83-118%

Method Blank Summary

Job Number: FA91974
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2P3369-MB	2P84514.D	1	01/07/22	CF	n/a	n/a	V2P3369

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91974-17

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	1.0	0.35	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	102%	83-118%
17060-07-0	1,2-Dichloroethane-D4	99%	79-125%
2037-26-5	Toluene-D8	99%	85-112%
460-00-4	4-Bromofluorobenzene	103%	83-118%

Method Blank Summary

Job Number: FA91974
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VC6188-MB	C0153333.D	1	01/13/22	LV	n/a	n/a	VC6188

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91974-35

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl Chloride	ND	1.0	0.41	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	91%	83-118%
17060-07-0	1,2-Dichloroethane-D4	98%	79-125%
2037-26-5	Toluene-D8	105%	85-112%
460-00-4	4-Bromofluorobenzene	107%	83-118%

Method Blank Summary

Job Number: FA91974
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI2443-MB	I73541.D	1	01/14/22	LR	n/a	n/a	VI2443

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91974-38, FA91974-39, FA91974-41, FA91974-47, FA91974-51

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	1.0	0.35	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	95%	83-118%
17060-07-0	1,2-Dichloroethane-D4	103%	79-125%
2037-26-5	Toluene-D8	102%	85-112%
460-00-4	4-Bromofluorobenzene	98%	83-118%

Blank Spike Summary

Job Number: FA91974
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI2417-BS	I73029.D	1	12/28/21	LR	n/a	n/a	VI2417

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91974-1, FA91974-2, FA91974-3, FA91974-4, FA91974-14, FA91974-15, FA91974-16, FA91974-17

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	145	116	50-147
71-43-2	Benzene	25	25.5	102	81-122
74-97-5	Bromochloromethane	25	20.6	82	76-123
75-27-4	Bromodichloromethane	25	23.2	93	79-123
75-25-2	Bromoform	25	20.2	81	66-123
78-93-3	2-Butanone (MEK)	125	133	106	56-143
75-15-0	Carbon Disulfide	25	22.7	91	66-148
56-23-5	Carbon Tetrachloride	25	24.1	96	76-136
108-90-7	Chlorobenzene	25	23.2	93	82-124
75-00-3	Chloroethane	25	29.9	120	62-144
67-66-3	Chloroform	25	23.7	95	80-124
110-82-7	Cyclohexane	25	23.9	96	73-138
124-48-1	Dibromochloromethane	25	20.8	83	78-122
96-12-8	1,2-Dibromo-3-chloropropane	25	22.1	88	64-123
106-93-4	1,2-Dibromoethane	25	21.3	85	75-120
75-71-8	Dichlorodifluoromethane	25	21.2	85	42-167
95-50-1	1,2-Dichlorobenzene	25	22.7	91	82-124
541-73-1	1,3-Dichlorobenzene	25	23.2	93	84-125
106-46-7	1,4-Dichlorobenzene	25	22.2	89	78-120
75-34-3	1,1-Dichloroethane	25	25.8	103	81-122
107-06-2	1,2-Dichloroethane	25	26.0	104	75-125
75-35-4	1,1-Dichloroethylene	25	25.7	103	78-137
156-59-2	cis-1,2-Dichloroethylene	25	23.8	95	78-120
156-60-5	trans-1,2-Dichloroethylene	25	25.7	103	76-127
78-87-5	1,2-Dichloropropane	25	24.7	99	76-124
10061-01-5	cis-1,3-Dichloropropene	25	23.0	92	75-118
10061-02-6	trans-1,3-Dichloropropene	25	22.8	91	80-120
100-41-4	Ethylbenzene	25	24.1	96	81-121
76-13-1	Freon 113	25	24.6	98	72-134
591-78-6	2-Hexanone	125	131	105	61-129
98-82-8	Isopropylbenzene	25	23.7	95	83-132
79-20-9	Methyl Acetate	125	118	94	65-126
74-83-9	Methyl Bromide	25	19.4	78	59-143
74-87-3	Methyl Chloride	25	25.1	100	50-159
75-09-2	Methylene Chloride	25	24.0	96	69-135
108-10-1	4-Methyl-2-pentanone (MIBK)	125	130	104	66-122

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA91974
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI2417-BS	I73029.D	1	12/28/21	LR	n/a	n/a	VI2417

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91974-1, FA91974-2, FA91974-3, FA91974-4, FA91974-14, FA91974-15, FA91974-16, FA91974-17

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
1634-04-4	Methyl Tert Butyl Ether	25	21.9	88	72-117
100-42-5	Styrene	25	22.1	88	78-119
630-20-6	1,1,1,2-Tetrachloroethane	25	23.1	92	77-122
79-34-5	1,1,2,2-Tetrachloroethane	25	23.2	93	72-120
127-18-4	Tetrachloroethylene	25	23.7	95	76-135
108-88-3	Toluene	25	23.3	93	80-120
87-61-6	1,2,3-Trichlorobenzene	25	21.7	87	68-131
120-82-1	1,2,4-Trichlorobenzene	25	21.0	84	73-129
71-55-6	1,1,1-Trichloroethane	25	24.4	98	75-130
79-00-5	1,1,2-Trichloroethane	25	23.4	94	76-119
79-01-6	Trichloroethylene	25	24.2	97	81-126
75-69-4	Trichlorofluoromethane	25	29.6	118	71-156
75-01-4	Vinyl Chloride	25	26.6	106	69-159
1330-20-7	Xylene (total)	75	70.9	95	80-126

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	103%	83-118%
17060-07-0	1,2-Dichloroethane-D4	107%	79-125%
2037-26-5	Toluene-D8	97%	85-112%
460-00-4	4-Bromofluorobenzene	97%	83-118%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA91974
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2P3362-BS	2P84230.D	1	12/29/21	CF	n/a	n/a	V2P3362

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91974-5, FA91974-6, FA91974-7, FA91974-8, FA91974-9, FA91974-10, FA91974-11, FA91974-12, FA91974-13

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	129	103	50-147
71-43-2	Benzene	25	28.0	112	81-122
74-97-5	Bromochloromethane	25	24.4	98	76-123
75-27-4	Bromodichloromethane	25	26.1	104	79-123
75-25-2	Bromoform	25	21.8	87	66-123
78-93-3	2-Butanone (MEK)	125	131	105	56-143
75-15-0	Carbon Disulfide	25	25.8	103	66-148
56-23-5	Carbon Tetrachloride	25	26.7	107	76-136
108-90-7	Chlorobenzene	25	24.2	97	82-124
75-00-3	Chloroethane	25	31.4	126	62-144
67-66-3	Chloroform	25	25.3	101	80-124
110-82-7	Cyclohexane	25	27.8	111	73-138
124-48-1	Dibromochloromethane	25	23.0	92	78-122
96-12-8	1,2-Dibromo-3-chloropropane	25	21.9	88	64-123
106-93-4	1,2-Dibromoethane	25	24.3	97	75-120
75-71-8	Dichlorodifluoromethane	25	23.6	94	42-167
95-50-1	1,2-Dichlorobenzene	25	24.3	97	82-124
541-73-1	1,3-Dichlorobenzene	25	24.7	99	84-125
106-46-7	1,4-Dichlorobenzene	25	23.8	95	78-120
75-34-3	1,1-Dichloroethane	25	27.2	109	81-122
107-06-2	1,2-Dichloroethane	25	26.8	107	75-125
75-35-4	1,1-Dichloroethylene	25	28.2	113	78-137
156-59-2	cis-1,2-Dichloroethylene	25	26.8	107	78-120
156-60-5	trans-1,2-Dichloroethylene	25	27.0	108	76-127
78-87-5	1,2-Dichloropropane	25	26.9	108	76-124
10061-01-5	cis-1,3-Dichloropropene	25	26.3	105	75-118
10061-02-6	trans-1,3-Dichloropropene	25	24.0	96	80-120
100-41-4	Ethylbenzene	25	25.4	102	81-121
76-13-1	Freon 113	25	27.9	112	72-134
591-78-6	2-Hexanone	125	124	99	61-129
98-82-8	Isopropylbenzene	25	25.1	100	83-132
79-20-9	Methyl Acetate	125	118	94	65-126
74-83-9	Methyl Bromide	25	29.4	118	59-143
74-87-3	Methyl Chloride	25	26.8	107	50-159
75-09-2	Methylene Chloride	25	20.6	82	69-135
108-10-1	4-Methyl-2-pentanone (MIBK)	125	125	100	66-122

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA91974
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2P3362-BS	2P84230.D	1	12/29/21	CF	n/a	n/a	V2P3362

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91974-5, FA91974-6, FA91974-7, FA91974-8, FA91974-9, FA91974-10, FA91974-11, FA91974-12, FA91974-13

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
1634-04-4	Methyl Tert Butyl Ether	25	24.6	98	72-117
100-42-5	Styrene	25	25.1	100	78-119
630-20-6	1,1,1,2-Tetrachloroethane	25	24.6	98	77-122
79-34-5	1,1,2,2-Tetrachloroethane	25	24.1	96	72-120
127-18-4	Tetrachloroethylene	25	24.9	100	76-135
108-88-3	Toluene	25	25.0	100	80-120
87-61-6	1,2,3-Trichlorobenzene	25	23.3	93	68-131
120-82-1	1,2,4-Trichlorobenzene	25	24.0	96	73-129
71-55-6	1,1,1-Trichloroethane	25	26.5	106	75-130
79-00-5	1,1,2-Trichloroethane	25	24.4	98	76-119
79-01-6	Trichloroethylene	25	27.7	111	81-126
75-69-4	Trichlorofluoromethane	25	32.5	130	71-156
75-01-4	Vinyl Chloride	25	28.5	114	69-159
1330-20-7	Xylene (total)	75	76.1	101	80-126

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	103%	83-118%
17060-07-0	1,2-Dichloroethane-D4	103%	79-125%
2037-26-5	Toluene-D8	96%	85-112%
460-00-4	4-Bromofluorobenzene	100%	83-118%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA91974
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1665-BS	1A40928.D	1	12/29/21	CF	n/a	n/a	V1A1665

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91974-18, FA91974-19, FA91974-20, FA91974-21, FA91974-22, FA91974-23, FA91974-24, FA91974-25, FA91974-26, FA91974-27, FA91974-28, FA91974-29, FA91974-30, FA91974-31, FA91974-32, FA91974-33, FA91974-34, FA91974-35, FA91974-36, FA91974-37

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	120	96	50-147
71-43-2	Benzene	25	26.9	108	81-122
74-97-5	Bromochloromethane	25	23.6	94	76-123
75-27-4	Bromodichloromethane	25	25.6	102	79-123
75-25-2	Bromoform	25	23.2	93	66-123
78-93-3	2-Butanone (MEK)	125	117	94	56-143
75-15-0	Carbon Disulfide	25	25.3	101	66-148
56-23-5	Carbon Tetrachloride	25	26.6	106	76-136
108-90-7	Chlorobenzene	25	23.8	95	82-124
75-00-3	Chloroethane	25	21.0	84	62-144
67-66-3	Chloroform	25	24.7	99	80-124
110-82-7	Cyclohexane	25	27.7	111	73-138
124-48-1	Dibromochloromethane	25	24.2	97	78-122
96-12-8	1,2-Dibromo-3-chloropropane	25	23.3	93	64-123
106-93-4	1,2-Dibromoethane	25	24.2	97	75-120
75-71-8	Dichlorodifluoromethane	25	20.5	82	42-167
95-50-1	1,2-Dichlorobenzene	25	23.2	93	82-124
541-73-1	1,3-Dichlorobenzene	25	23.8	95	84-125
106-46-7	1,4-Dichlorobenzene	25	22.7	91	78-120
75-34-3	1,1-Dichloroethane	25	26.5	106	81-122
107-06-2	1,2-Dichloroethane	25	24.6	98	75-125
75-35-4	1,1-Dichloroethylene	25	28.3	113	78-137
156-59-2	cis-1,2-Dichloroethylene	25	24.8	99	78-120
156-60-5	trans-1,2-Dichloroethylene	25	26.6	106	76-127
78-87-5	1,2-Dichloropropane	25	25.7	103	76-124
10061-01-5	cis-1,3-Dichloropropene	25	26.3	105	75-118
10061-02-6	trans-1,3-Dichloropropene	25	26.2	105	80-120
100-41-4	Ethylbenzene	25	24.6	98	81-121
76-13-1	Freon 113	25	29.0	116	72-134
591-78-6	2-Hexanone	125	114	91	61-129
98-82-8	Isopropylbenzene	25	25.7	103	83-132
79-20-9	Methyl Acetate	125	113	90	65-126
74-83-9	Methyl Bromide	25	23.8	95	59-143
74-87-3	Methyl Chloride	25	21.0	84	50-159
75-09-2	Methylene Chloride	25	21.5	86	69-135
108-10-1	4-Methyl-2-pentanone (MIBK)	125	115	92	66-122

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA91974
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1665-BS	1A40928.D	1	12/29/21	CF	n/a	n/a	V1A1665

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91974-18, FA91974-19, FA91974-20, FA91974-21, FA91974-22, FA91974-23, FA91974-24, FA91974-25, FA91974-26, FA91974-27, FA91974-28, FA91974-29, FA91974-30, FA91974-31, FA91974-32, FA91974-33, FA91974-34, FA91974-35, FA91974-36, FA91974-37

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
1634-04-4	Methyl Tert Butyl Ether	25	24.2	97	72-117
100-42-5	Styrene	25	25.7	103	78-119
630-20-6	1,1,1,2-Tetrachloroethane	25	25.9	104	77-122
79-34-5	1,1,2,2-Tetrachloroethane	25	23.1	92	72-120
127-18-4	Tetrachloroethylene	25	24.5	98	76-135
108-88-3	Toluene	25	25.1	100	80-120
87-61-6	1,2,3-Trichlorobenzene	25	23.5	94	68-131
120-82-1	1,2,4-Trichlorobenzene	25	23.6	94	73-129
71-55-6	1,1,1-Trichloroethane	25	26.1	104	75-130
79-00-5	1,1,2-Trichloroethane	25	23.8	95	76-119
79-01-6	Trichloroethylene	25	25.1	100	81-126
75-69-4	Trichlorofluoromethane	25	24.4	98	71-156
75-01-4	Vinyl Chloride	25	25.2	101	69-159
1330-20-7	Xylene (total)	75	75.3	100	80-126

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	100%	83-118%
17060-07-0	1,2-Dichloroethane-D4	100%	79-125%
2037-26-5	Toluene-D8	99%	85-112%
460-00-4	4-Bromofluorobenzene	98%	83-118%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA91974
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2A1660-BS	2A40929.D	1	12/29/21	CF	n/a	n/a	V2A1660

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91974-38, FA91974-39, FA91974-40, FA91974-41, FA91974-42, FA91974-43, FA91974-44, FA91974-45, FA91974-46, FA91974-47, FA91974-48, FA91974-49, FA91974-50, FA91974-51, FA91974-52, FA91974-53, FA91974-54, FA91974-55, FA91974-56

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	119	95	50-147
71-43-2	Benzene	25	25.6	102	81-122
74-97-5	Bromochloromethane	25	21.3	85	76-123
75-27-4	Bromodichloromethane	25	24.0	96	79-123
75-25-2	Bromoform	25	21.0	84	66-123
78-93-3	2-Butanone (MEK)	125	117	94	56-143
75-15-0	Carbon Disulfide	25	26.7	107	66-148
56-23-5	Carbon Tetrachloride	25	25.5	102	76-136
108-90-7	Chlorobenzene	25	22.5	90	82-124
75-00-3	Chloroethane	25	23.6	94	62-144
67-66-3	Chloroform	25	23.3	93	80-124
110-82-7	Cyclohexane	25	26.8	107	73-138
124-48-1	Dibromochloromethane	25	22.0	88	78-122
96-12-8	1,2-Dibromo-3-chloropropane	25	22.8	91	64-123
106-93-4	1,2-Dibromoethane	25	22.6	90	75-120
75-71-8	Dichlorodifluoromethane	25	22.9	92	42-167
95-50-1	1,2-Dichlorobenzene	25	22.3	89	82-124
541-73-1	1,3-Dichlorobenzene	25	22.6	90	84-125
106-46-7	1,4-Dichlorobenzene	25	22.3	89	78-120
75-34-3	1,1-Dichloroethane	25	25.5	102	81-122
107-06-2	1,2-Dichloroethane	25	23.1	92	75-125
75-35-4	1,1-Dichloroethylene	25	27.3	109	78-137
156-59-2	cis-1,2-Dichloroethylene	25	24.2	97	78-120
156-60-5	trans-1,2-Dichloroethylene	25	25.8	103	76-127
78-87-5	1,2-Dichloropropane	25	24.2	97	76-124
10061-01-5	cis-1,3-Dichloropropene	25	24.6	98	75-118
10061-02-6	trans-1,3-Dichloropropene	25	24.1	96	80-120
100-41-4	Ethylbenzene	25	23.8	95	81-121
76-13-1	Freon 113	25	28.9	116	72-134
591-78-6	2-Hexanone	125	113	90	61-129
98-82-8	Isopropylbenzene	25	24.5	98	83-132
79-20-9	Methyl Acetate	125	110	88	65-126
74-83-9	Methyl Bromide	25	27.4	110	59-143
74-87-3	Methyl Chloride	25	24.0	96	50-159
75-09-2	Methylene Chloride	25	22.4	90	69-135
108-10-1	4-Methyl-2-pentanone (MIBK)	125	110	88	66-122

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA91974
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2A1660-BS	2A40929.D	1	12/29/21	CF	n/a	n/a	V2A1660

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91974-38, FA91974-39, FA91974-40, FA91974-41, FA91974-42, FA91974-43, FA91974-44, FA91974-45, FA91974-46, FA91974-47, FA91974-48, FA91974-49, FA91974-50, FA91974-51, FA91974-52, FA91974-53, FA91974-54, FA91974-55, FA91974-56

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
1634-04-4	Methyl Tert Butyl Ether	25	22.8	91	72-117
100-42-5	Styrene	25	24.1	96	78-119
630-20-6	1,1,1,2-Tetrachloroethane	25	23.5	94	77-122
79-34-5	1,1,2,2-Tetrachloroethane	25	22.4	90	72-120
127-18-4	Tetrachloroethylene	25	23.8	95	76-135
108-88-3	Toluene	25	23.9	96	80-120
87-61-6	1,2,3-Trichlorobenzene	25	22.6	90	68-131
120-82-1	1,2,4-Trichlorobenzene	25	22.5	90	73-129
71-55-6	1,1,1-Trichloroethane	25	25.0	100	75-130
79-00-5	1,1,2-Trichloroethane	25	22.5	90	76-119
79-01-6	Trichloroethylene	25	24.8	99	81-126
75-69-4	Trichlorofluoromethane	25	27.0	108	71-156
75-01-4	Vinyl Chloride	25	27.5	110	69-159
1330-20-7	Xylene (total)	75	71.1	95	80-126

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	101%	83-118%
17060-07-0	1,2-Dichloroethane-D4	101%	79-125%
2037-26-5	Toluene-D8	98%	85-112%
460-00-4	4-Bromofluorobenzene	99%	83-118%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA91974
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2P3369-BS	2P84510.D	1	01/07/22	CF	n/a	n/a	V2P3369

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91974-17

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
79-01-6	Trichloroethylene	25	22.8	91	81-126

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	102%	83-118%
17060-07-0	1,2-Dichloroethane-D4	101%	79-125%
2037-26-5	Toluene-D8	98%	85-112%
460-00-4	4-Bromofluorobenzene	100%	83-118%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA91974
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VC6188-BS	C0153330.D	1	01/13/22	LV	n/a	n/a	VC6188

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91974-35

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
75-01-4	Vinyl Chloride	25	23.4	94	69-159

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	90%	83-118%
17060-07-0	1,2-Dichloroethane-D4	96%	79-125%
2037-26-5	Toluene-D8	104%	85-112%
460-00-4	4-Bromofluorobenzene	106%	83-118%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA91974
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI2443-BS	I73539.D	1	01/14/22	LR	n/a	n/a	VI2443

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91974-38, FA91974-39, FA91974-41, FA91974-47, FA91974-51

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
79-01-6	Trichloroethylene	25	24.2	97	81-126

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	98%	83-118%
17060-07-0	1,2-Dichloroethane-D4	99%	79-125%
2037-26-5	Toluene-D8	102%	85-112%
460-00-4	4-Bromofluorobenzene	99%	83-118%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA91974
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA91974-15MS	I73052.D	50000	12/28/21	LR	n/a	n/a	VI2417
FA91974-15MSD	I73053.D	50000	12/28/21	LR	n/a	n/a	VI2417
FA91974-15 [a]	I73049.D	50000	12/28/21	LR	n/a	n/a	VI2417

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91974-1, FA91974-2, FA91974-3, FA91974-4, FA91974-14, FA91974-15, FA91974-16, FA91974-17

CAS No.	Compound	FA91974-15 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	1300000 U		6250000	7010000	112	6250000	7280000	116	4	50-147/21
71-43-2	Benzene	50000 U		1250000	1310000	105	1250000	1340000	107	2	81-122/14
74-97-5	Bromochloromethane	50000 U		1250000	1050000	84	1250000	1060000	85	1	76-123/14
75-27-4	Bromodichloromethane	50000 U		1250000	1150000	92	1250000	1190000	95	3	79-123/19
75-25-2	Bromoform	50000 U		1250000	953000	76	1250000	981000	78	3	66-123/21
78-93-3	2-Butanone (MEK)	250000 U		6250000	6570000	105	6250000	6640000	106	1	56-143/18
75-15-0	Carbon Disulfide	100000 U		1250000	1020000	82	1250000	1090000	87	7	66-148/23
56-23-5	Carbon Tetrachloride	50000 U		1250000	1180000	94	1250000	1250000	100	6	76-136/23
108-90-7	Chlorobenzene	50000 U		1250000	1140000	91	1250000	1160000	93	2	82-124/14
75-00-3	Chloroethane	100000 U		1250000	1610000	129	1250000	1710000	137	6	62-144/20
67-66-3	Chloroform	50000 U		1250000	1200000	96	1250000	1280000	102	6	80-124/15
110-82-7	Cyclohexane	50000 U		1250000	1120000	90	1250000	1180000	94	5	73-138/18
124-48-1	Dibromochloromethane	50000 U		1250000	1000000	80	1250000	1030000	82	3	78-122/19
96-12-8	1,2-Dibromo-3-chloropropane	250000 U		1250000	995000	80	1250000	1010000	81	1	64-123/18
106-93-4	1,2-Dibromoethane	100000 U		1250000	1010000	81	1250000	1040000	83	3	75-120/13
75-71-8	Dichlorodifluoromethane	100000 U		1250000	1010000	81	1250000	1080000	86	7	42-167/19
95-50-1	1,2-Dichlorobenzene	50000 U		1250000	1090000	87	1250000	1110000	89	2	82-124/14
541-73-1	1,3-Dichlorobenzene	50000 U		1250000	1110000	89	1250000	1140000	91	3	84-125/14
106-46-7	1,4-Dichlorobenzene	50000 U		1250000	1100000	88	1250000	1120000	90	2	78-120/15
75-34-3	1,1-Dichloroethane	50000 U		1250000	1290000	103	1250000	1320000	106	2	81-122/15
107-06-2	1,2-Dichloroethane	50000 U		1250000	1340000	107	1250000	1360000	109	1	75-125/14
75-35-4	1,1-Dichloroethylene	50000 U		1250000	1210000	97	1250000	1280000	102	6	78-137/18
156-59-2	cis-1,2-Dichloroethylene	255000		1250000	1450000	96	1250000	1500000	100	3	78-120/15
156-60-5	trans-1,2-Dichloroethylene	50000 U		1250000	1250000	100	1250000	1290000	103	3	76-127/17
78-87-5	1,2-Dichloropropane	50000 U		1250000	1200000	96	1250000	1250000	100	4	76-124/14
10061-01-5	cis-1,3-Dichloropropene	50000 U		1250000	1100000	88	1250000	1140000	91	4	75-118/23
10061-02-6	trans-1,3-Dichloropropene	50000 U		1250000	1050000	84	1250000	1100000	88	5	80-120/22
100-41-4	Ethylbenzene	50000 U		1250000	1160000	93	1250000	1190000	95	3	81-121/14
76-13-1	Freon 113	50000 U		1250000	1220000	98	1250000	1250000	100	2	72-134/20
591-78-6	2-Hexanone	500000 U		6250000	6260000	100	6250000	6430000	103	3	61-129/18
98-82-8	Isopropylbenzene	50000 U		1250000	1080000	86	1250000	1130000	90	5	83-132/15
79-20-9	Methyl Acetate	1000000 U		6250000	5820000	93	6250000	5960000	95	2	65-126/18
74-83-9	Methyl Bromide	250000 UJ	J	1250000	628000	50*	1250000	854000	68	30*	59-143/19
74-87-3	Methyl Chloride	100000 U		1250000	1240000	99	1250000	1320000	106	6	50-159/19
75-09-2	Methylene Chloride	250000 U		1250000	1250000	100	1250000	1270000	102	2	69-135/16
108-10-1	4-Methyl-2-pentanone (MIBK)	250000 U		6250000	6290000	101	6250000	6470000	104	3	66-122/16

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA91974
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA91974-15MS	I73052.D	50000	12/28/21	LR	n/a	n/a	VI2417
FA91974-15MSD	I73053.D	50000	12/28/21	LR	n/a	n/a	VI2417
FA91974-15 [a]	I73049.D	50000	12/28/21	LR	n/a	n/a	VI2417

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91974-1, FA91974-2, FA91974-3, FA91974-4, FA91974-14, FA91974-15, FA91974-16, FA91974-17

CAS No.	Compound	FA91974-15 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
1634-04-4	Methyl Tert Butyl Ether	50000 U		1250000	1030000	82	1250000	1080000	86	5	72-117/14
100-42-5	Styrene	50000 U		1250000	1030000	82	1250000	1070000	86	4	78-119/23
630-20-6	1,1,1,2-Tetrachloroethane	50000 U		1250000	1110000	89	1250000	1150000	92	4	77-122/19
79-34-5	1,1,2,2-Tetrachloroethane	50000 U		1250000	1130000	90	1250000	1150000	92	2	72-120/14
127-18-4	Tetrachloroethylene	50000 U		1250000	1200000	96	1250000	1250000	100	4	76-135/16
108-88-3	Toluene	50000 U		1250000	1100000	88	1250000	1150000	92	4	80-120/14
87-61-6	1,2,3-Trichlorobenzene	100000 U		1250000	992000	79	1250000	1030000	82	4	68-131/25
120-82-1	1,2,4-Trichlorobenzene	100000 U		1250000	932000	75	1250000	984000	79	5	73-129/20
71-55-6	1,1,1-Trichloroethane	50000 U		1250000	1210000	97	1250000	1260000	101	4	75-130/16
79-00-5	1,1,2-Trichloroethane	50000 U		1250000	1140000	91	1250000	1190000	95	4	76-119/14
79-01-6	Trichloroethylene	2030000		1250000	3100000	86	1250000	3160000	90	2	81-126/15
75-69-4	Trichlorofluoromethane	100000 U		1250000	1510000	121	1250000	1560000	125	3	71-156/21
75-01-4	Vinyl Chloride	26800	I	1250000	1250000	98	1250000	1360000	107	8	69-159/18
1330-20-7	Xylene (total)	150000 U		3750000	3370000	90	3750000	3470000	93	3	80-126/15

CAS No.	Surrogate Recoveries	MS	MSD	FA91974-15	Limits
1868-53-7	Dibromofluoromethane	106%	106%	104%	83-118%
17060-07-0	1,2-Dichloroethane-D4	114%	111%	118%	79-125%
2037-26-5	Toluene-D8	93%	94%	94%	85-112%
460-00-4	4-Bromofluorobenzene	92%	93%	92%	83-118%

(a) Sample was not preserved to a pH < 2.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA91974
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA91974-13MS	2P84272.D	1000	12/29/21	CF	n/a	n/a	V2P3362
FA91974-13MSD	2P84274.D	1000	12/29/21	CF	n/a	n/a	V2P3362
FA91974-13 [a]	2P84270.D	1000	12/29/21	CF	n/a	n/a	V2P3362

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91974-5, FA91974-6, FA91974-7, FA91974-8, FA91974-9, FA91974-10, FA91974-11, FA91974-12, FA91974-13

CAS No.	Compound	FA91974-13 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	25000 U		125000	124000	99	125000	123000	98	1	50-147/21
71-43-2	Benzene	1000 U		25000	18100	72*	25000	17800	71*	2	81-122/14
74-97-5	Bromochloromethane	1000 U		25000	17000	68*	25000	17100	68*	1	76-123/14
75-27-4	Bromodichloromethane	1000 U		25000	16400	66*	25000	16600	66*	1	79-123/19
75-25-2	Bromoform	1000 U		25000	15100	60*	25000	15800	63*	5	66-123/21
78-93-3	2-Butanone (MEK)	5000 U		125000	126000	101	125000	124000	99	2	56-143/18
75-15-0	Carbon Disulfide	2000 UJ	J	25000	7860	31*	25000	7660	31*	3	66-148/23
56-23-5	Carbon Tetrachloride	1000 U		25000	15500	62*	25000	15200	61*	2	76-136/23
108-90-7	Chlorobenzene	1000 U		25000	15900	64*	25000	15700	63*	1	82-124/14
75-00-3	Chloroethane	2000 U		25000	32300	129	25000	31400	126	3	62-144/20
67-66-3	Chloroform	1000 U		25000	16800	67*	25000	16900	68*	1	80-124/15
110-82-7	Cyclohexane	1000 U		25000	11700	47*	25000	11000	44*	6	73-138/18
124-48-1	Dibromochloromethane	1000 U		25000	14800	59*	25000	14600	58*	1	78-122/19
96-12-8	1,2-Dibromo-3-chloropropane	5000 U		25000	16100	64	25000	14700	59*	9	64-123/18
106-93-4	1,2-Dibromoethane	2000 U		25000	16100	64*	25000	15600	62*	3	75-120/13
75-71-8	Dichlorodifluoromethane	2000 U		25000	23600	94	25000	23700	95	0	42-167/19
95-50-1	1,2-Dichlorobenzene	1000 U		25000	17200	69*	25000	17200	69*	0	82-124/14
541-73-1	1,3-Dichlorobenzene	1000 U		25000	17000	68*	25000	16600	66*	2	84-125/14
106-46-7	1,4-Dichlorobenzene	1000 U		25000	16400	66*	25000	16200	65*	1	78-120/15
75-34-3	1,1-Dichloroethane	1000 U		25000	16500	66*	25000	16000	64*	3	81-122/15
107-06-2	1,2-Dichloroethane	1000 U		25000	18000	72*	25000	17300	69*	4	75-125/14
75-35-4	1,1-Dichloroethylene	1000 U		25000	11600	46*	25000	11700	47*	1	78-137/18
156-59-2	cis-1,2-Dichloroethylene	65200		25000	78200	52* [b]	25000	77600	50* [b]	1	78-120/15
156-60-5	trans-1,2-Dichloroethylene	1000 U		25000	14800	59*	25000	14600	58*	1	76-127/17
78-87-5	1,2-Dichloropropane	1000 U		25000	17400	70*	25000	17200	69*	1	76-124/14
10061-01-5	cis-1,3-Dichloropropene	1000 U		25000	16600	66*	25000	16400	66*	1	75-118/23
10061-02-6	trans-1,3-Dichloropropene	1000 U		25000	14700	59*	25000	14700	59*	0	80-120/22
100-41-4	Ethylbenzene	1000 U		25000	15800	63*	25000	15800	63*	0	81-121/14
76-13-1	Freon 113	1000 U		25000	9390	38*	25000	9280	37*	1	72-134/20
591-78-6	2-Hexanone	10000 U		125000	116000	93	125000	111000	89	4	61-129/18
98-82-8	Isopropylbenzene	1000 U		25000	15600	62*	25000	15400	62*	1	83-132/15
79-20-9	Methyl Acetate	20000 U		125000	86200	69	125000	84600	68	2	65-126/18
74-83-9	Methyl Bromide	5000 U		25000	24400	98	25000	26600	106	9	59-143/19
74-87-3	Methyl Chloride	2000 U		25000	25400	102	25000	25800	103	2	50-159/19
75-09-2	Methylene Chloride	5000 UJ	J	25000	12900	52*	25000	12800	51*	1	69-135/16
108-10-1	4-Methyl-2-pentanone (MIBK)	5000 U		125000	114000	91	125000	112000	90	2	66-122/16

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA91974
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA91974-13MS	2P84272.D	1000	12/29/21	CF	n/a	n/a	V2P3362
FA91974-13MSD	2P84274.D	1000	12/29/21	CF	n/a	n/a	V2P3362
FA91974-13 [a]	2P84270.D	1000	12/29/21	CF	n/a	n/a	V2P3362

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91974-5, FA91974-6, FA91974-7, FA91974-8, FA91974-9, FA91974-10, FA91974-11, FA91974-12, FA91974-13

CAS No.	Compound	FA91974-13 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
1634-04-4	Methyl Tert Butyl Ether	1000	U	25000	17900	72	25000	17300	69*	3	72-117/14
100-42-5	Styrene	1000	U	25000	16000	64*	25000	16000	64*	0	78-119/23
630-20-6	1,1,1,2-Tetrachloroethane	1000	U	25000	16300	65*	25000	16200	65*	1	77-122/19
79-34-5	1,1,2,2-Tetrachloroethane	1000	U	25000	16400	66*	25000	16200	65*	1	72-120/14
127-18-4	Tetrachloroethylene	1000	U	25000	17400	70*	25000	17600	70*	1	76-135/16
108-88-3	Toluene	1000	U	25000	16200	65*	25000	16100	64*	1	80-120/14
87-61-6	1,2,3-Trichlorobenzene	2000	U	25000	18200	73	25000	18800	75	3	68-131/25
120-82-1	1,2,4-Trichlorobenzene	2000	U	25000	18100	72*	25000	18300	73	1	73-129/20
71-55-6	1,1,1-Trichloroethane	1000	U	25000	15600	62*	25000	16200	65*	4	75-130/16
79-00-5	1,1,2-Trichloroethane	1000	U	25000	15500	62*	25000	15200	61*	2	76-119/14
79-01-6	Trichloroethylene	487		25000	17300	67*	25000	17200	67*	1	81-126/15
75-69-4	Trichlorofluoromethane	2000	U	25000	33100	132	25000	33500	134	1	71-156/21
75-01-4	Vinyl Chloride	33100		25000	54600	86	25000	54500	86	0	69-159/18
1330-20-7	Xylene (total)	3000	U	75000	47400	63*	75000	46500	62*	2	80-126/15

CAS No.	Surrogate Recoveries	MS	MSD	FA91974-13	Limits
1868-53-7	Dibromofluoromethane	103%	103%	101%	83-118%
17060-07-0	1,2-Dichloroethane-D4	98%	94%	98%	79-125%
2037-26-5	Toluene-D8	94%	92%	94%	85-112%
460-00-4	4-Bromofluorobenzene	102%	101%	99%	83-118%

(a) Sample was not preserved to a pH < 2.
(b) Outside control limits due to high level in sample relative to spike amount.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA91974
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA91974-56MS	2A40973.D	5000	12/30/21	CF	n/a	n/a	V2A1660
FA91974-56MSD	2A40975.D	5000	12/30/21	CF	n/a	n/a	V2A1660
FA91974-56 [a]	2A40971.D	5000	12/30/21	CF	n/a	n/a	V2A1660

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91974-38, FA91974-39, FA91974-40, FA91974-41, FA91974-42, FA91974-43, FA91974-44, FA91974-45, FA91974-46, FA91974-47, FA91974-48, FA91974-49, FA91974-50, FA91974-51, FA91974-52, FA91974-53, FA91974-54, FA91974-55, FA91974-56

CAS No.	Compound	FA91974-56 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	130000	U	625000	680000	109	625000	678000	108	0	50-147/21
71-43-2	Benzene	5000	U	125000	137000	110	125000	134000	107	2	81-122/14
74-97-5	Bromochloromethane	5000	U	125000	119000	95	125000	116000	93	3	76-123/14
75-27-4	Bromodichloromethane	5000	U	125000	130000	104	125000	130000	104	0	79-123/19
75-25-2	Bromoform	5000	U	125000	109000	87	125000	109000	87	0	66-123/21
78-93-3	2-Butanone (MEK)	25000	U	625000	644000	103	625000	652000	104	1	56-143/18
75-15-0	Carbon Disulfide	10000	U	125000	125000	100	125000	130000	104	4	66-148/23
56-23-5	Carbon Tetrachloride	5000	U	125000	145000	116	125000	146000	117	1	76-136/23
108-90-7	Chlorobenzene	5000	U	125000	122000	98	125000	119000	95	2	82-124/14
75-00-3	Chloroethane	10000	U	125000	136000	109	125000	137000	110	1	62-144/20
67-66-3	Chloroform	5000	U	125000	134000	107	125000	129000	103	4	80-124/15
110-82-7	Cyclohexane	5000	U	125000	142000	114	125000	140000	112	1	73-138/18
124-48-1	Dibromochloromethane	5000	U	125000	114000	91	125000	113000	90	1	78-122/19
96-12-8	1,2-Dibromo-3-chloropropane	25000	U	125000	117000	94	125000	114000	91	3	64-123/18
106-93-4	1,2-Dibromoethane	10000	U	125000	121000	97	125000	116000	93	4	75-120/13
75-71-8	Dichlorodifluoromethane	10000	U	125000	124000	99	125000	125000	100	1	42-167/19
95-50-1	1,2-Dichlorobenzene	5000	U	125000	118000	94	125000	115000	92	3	82-124/14
541-73-1	1,3-Dichlorobenzene	5000	U	125000	118000	94	125000	114000	91	3	84-125/14
106-46-7	1,4-Dichlorobenzene	5000	U	125000	116000	93	125000	111000	89	4	78-120/15
75-34-3	1,1-Dichloroethane	5000	U	125000	141000	113	125000	138000	110	2	81-122/15
107-06-2	1,2-Dichloroethane	5000	U	125000	142000	114	125000	134000	107	6	75-125/14
75-35-4	1,1-Dichloroethylene	5000	U	125000	153000	122	125000	151000	121	1	78-137/18
156-59-2	cis-1,2-Dichloroethylene	105000		125000	230000	100	125000	231000	101	0	78-120/15
156-60-5	trans-1,2-Dichloroethylene	5000	U	125000	147000	118	125000	143000	114	3	76-127/17
78-87-5	1,2-Dichloropropane	5000	U	125000	128000	102	125000	125000	100	2	76-124/14
10061-01-5	cis-1,3-Dichloropropene	5000	U	125000	128000	102	125000	124000	99	3	75-118/23
10061-02-6	trans-1,3-Dichloropropene	5000	U	125000	126000	101	125000	123000	98	2	80-120/22
100-41-4	Ethylbenzene	5000	U	125000	127000	102	125000	124000	99	2	81-121/14
76-13-1	Freon 113	5000	U	125000	153000	122	125000	155000	124	1	72-134/20
591-78-6	2-Hexanone	50000	U	625000	628000	100	625000	626000	100	0	61-129/18
98-82-8	Isopropylbenzene	5000	U	125000	130000	104	125000	126000	101	3	83-132/15
79-20-9	Methyl Acetate	100000	U	625000	641000	103	625000	621000	99	3	65-126/18
74-83-9	Methyl Bromide	25000	U	125000	127000	102	125000	143000	114	12	59-143/19
74-87-3	Methyl Chloride	10000	U	125000	131000	105	125000	132000	106	1	50-159/19
75-09-2	Methylene Chloride	25000	U	125000	142000	114	125000	135000	108	5	69-135/16
108-10-1	4-Methyl-2-pentanone (MIBK)	25000	U	625000	593000	95	625000	594000	95	0	66-122/16

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA91974
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA91974-56MS	2A40973.D	5000	12/30/21	CF	n/a	n/a	V2A1660
FA91974-56MSD	2A40975.D	5000	12/30/21	CF	n/a	n/a	V2A1660
FA91974-56 [a]	2A40971.D	5000	12/30/21	CF	n/a	n/a	V2A1660

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91974-38, FA91974-39, FA91974-40, FA91974-41, FA91974-42, FA91974-43, FA91974-44, FA91974-45, FA91974-46, FA91974-47, FA91974-48, FA91974-49, FA91974-50, FA91974-51, FA91974-52, FA91974-53, FA91974-54, FA91974-55, FA91974-56

CAS No.	Compound	FA91974-56 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
1634-04-4	Methyl Tert Butyl Ether	5000	U	125000	125000	100	125000	124000	99	1	72-117/14
100-42-5	Styrene	5000	U	125000	127000	102	125000	123000	98	3	78-119/23
630-20-6	1,1,1,2-Tetrachloroethane	5000	U	125000	132000	106	125000	127000	102	4	77-122/19
79-34-5	1,1,2,2-Tetrachloroethane	5000	U	125000	111000	89	125000	110000	88	1	72-120/14
127-18-4	Tetrachloroethylene	5000	U	125000	136000	109	125000	134000	107	1	76-135/16
108-88-3	Toluene	5000	U	125000	125000	100	125000	123000	98	2	80-120/14
87-61-6	1,2,3-Trichlorobenzene	10000	U	125000	117000	94	125000	114000	91	3	68-131/25
120-82-1	1,2,4-Trichlorobenzene	10000	U	125000	116000	93	125000	112000	90	4	73-129/20
71-55-6	1,1,1-Trichloroethane	5000	U	125000	146000	117	125000	141000	113	3	75-130/16
79-00-5	1,1,2-Trichloroethane	5000	U	125000	116000	93	125000	115000	92	1	76-119/14
79-01-6	Trichloroethylene	15700		125000	154000	111	125000	147000	105	5	81-126/15
75-69-4	Trichlorofluoromethane	10000	U	125000	171000	137	125000	166000	133	3	71-156/21
75-01-4	Vinyl Chloride	5520		125000	142000	109	125000	146000	112	3	69-159/18
1330-20-7	Xylene (total)	15000	U	375000	379000	101	375000	374000	100	1	80-126/15

CAS No.	Surrogate Recoveries	MS	MSD	FA91974-56	Limits
1868-53-7	Dibromofluoromethane	106%	105%	107%	83-118%
17060-07-0	1,2-Dichloroethane-D4	114%	111%	119%	79-125%
2037-26-5	Toluene-D8	98%	98%	96%	85-112%
460-00-4	4-Bromofluorobenzene	95%	98%	96%	83-118%

(a) Sample was not preserved to a pH < 2.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA91974
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA91974-37MS	1A40974.D	100	12/30/21	CF	n/a	n/a	V1A1665
FA91974-37MSD	1A40976.D	100	12/30/21	CF	n/a	n/a	V1A1665
FA91974-37 [a]	1A40972.D	100	12/30/21	CF	n/a	n/a	V1A1665

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91974-18, FA91974-19, FA91974-20, FA91974-21, FA91974-22, FA91974-23, FA91974-24, FA91974-25, FA91974-26, FA91974-27, FA91974-28, FA91974-29, FA91974-30, FA91974-31, FA91974-32, FA91974-33, FA91974-34, FA91974-35, FA91974-36, FA91974-37

CAS No.	Compound	FA91974-37 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	2500 U		12500	13000	104	12500	12800	102	2	50-147/21
71-43-2	Benzene	100 U		2500	2760	110	2500	2580	103	7	81-122/14
74-97-5	Bromochloromethane	100 U		2500	2420	97	2500	2190	88	10	76-123/14
75-27-4	Bromodichloromethane	100 U		2500	2690	108	2500	2490	100	8	79-123/19
75-25-2	Bromoform	100 U		2500	2290	92	2500	2120	85	8	66-123/21
78-93-3	2-Butanone (MEK)	500 U		12500	12400	99	12500	12200	98	2	56-143/18
75-15-0	Carbon Disulfide	200 U		2500	2720	109	2500	2440	98	11	66-148/23
56-23-5	Carbon Tetrachloride	100 U		2500	2930	117	2500	2750	110	6	76-136/23
108-90-7	Chlorobenzene	100 U		2500	2400	96	2500	2260	90	6	82-124/14
75-00-3	Chloroethane	200 U		2500	3030	121	2500	3140	126	4	62-144/20
67-66-3	Chloroform	100 U		2500	2660	106	2500	2470	99	7	80-124/15
110-82-7	Cyclohexane	100 U		2500	2790	112	2500	2630	105	6	73-138/18
124-48-1	Dibromochloromethane	100 U		2500	2380	95	2500	2240	90	6	78-122/19
96-12-8	1,2-Dibromo-3-chloropropane	500 U		2500	2460	98	2500	2300	92	7	64-123/18
106-93-4	1,2-Dibromoethane	200 U		2500	2400	96	2500	2270	91	6	75-120/13
75-71-8	Dichlorodifluoromethane	200 U		2500	2350	94	2500	2370	95	1	42-167/19
95-50-1	1,2-Dichlorobenzene	100 U		2500	2320	93	2500	2230	89	4	82-124/14
541-73-1	1,3-Dichlorobenzene	100 U		2500	2300	92	2500	2220	89	4	84-125/14
106-46-7	1,4-Dichlorobenzene	100 U		2500	2270	91	2500	2140	86	6	78-120/15
75-34-3	1,1-Dichloroethane	100 U		2500	2860	114	2500	2640	106	8	81-122/15
107-06-2	1,2-Dichloroethane	100 U		2500	2890	116	2500	2590	104	11	75-125/14
75-35-4	1,1-Dichloroethylene	100 U		2500	3060	122	2500	2820	113	8	78-137/18
156-59-2	cis-1,2-Dichloroethylene	57.5	I	2500	2600	102	2500	2440	95	6	78-120/15
156-60-5	trans-1,2-Dichloroethylene	100 U		2500	2850	114	2500	2650	106	7	76-127/17
78-87-5	1,2-Dichloropropane	100 U		2500	2580	103	2500	2440	98	6	76-124/14
10061-01-5	cis-1,3-Dichloropropene	100 U		2500	2630	105	2500	2470	99	6	75-118/23
10061-02-6	trans-1,3-Dichloropropene	100 U		2500	2560	102	2500	2390	96	7	80-120/22
100-41-4	Ethylbenzene	100 U		2500	2460	98	2500	2330	93	5	81-121/14
76-13-1	Freon 113	100 U		2500	3050	122	2500	2880	115	6	72-134/20
591-78-6	2-Hexanone	1000 U		12500	12000	96	12500	12000	96	0	61-129/18
98-82-8	Isopropylbenzene	100 U		2500	2560	102	2500	2430	97	5	83-132/15
79-20-9	Methyl Acetate	2000 U		12500	12500	100	12500	11400	91	9	65-126/18
74-83-9	Methyl Bromide	500 U		2500	2220	89	2500	2490	100	11	59-143/19
74-87-3	Methyl Chloride	200 U		2500	2400	96	2500	2480	99	3	50-159/19
75-09-2	Methylene Chloride	500 U		2500	2650	106	2500	2400	96	10	69-135/16
108-10-1	4-Methyl-2-pentanone (MIBK)	500 U		12500	11900	95	12500	11800	94	1	66-122/16

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA91974
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA91974-37MS	1A40974.D	100	12/30/21	CF	n/a	n/a	V1A1665
FA91974-37MSD	1A40976.D	100	12/30/21	CF	n/a	n/a	V1A1665
FA91974-37 [a]	1A40972.D	100	12/30/21	CF	n/a	n/a	V1A1665

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91974-18, FA91974-19, FA91974-20, FA91974-21, FA91974-22, FA91974-23, FA91974-24, FA91974-25, FA91974-26, FA91974-27, FA91974-28, FA91974-29, FA91974-30, FA91974-31, FA91974-32, FA91974-33, FA91974-34, FA91974-35, FA91974-36, FA91974-37

CAS No.	Compound	FA91974-37 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
1634-04-4	Methyl Tert Butyl Ether	100	U	2500	2540	102	2500	2360	94	7	72-117/14
100-42-5	Styrene	100	U	2500	2540	102	2500	2400	96	6	78-119/23
630-20-6	1,1,1,2-Tetrachloroethane	100	U	2500	2700	108	2500	2470	99	9	77-122/19
79-34-5	1,1,2,2-Tetrachloroethane	100	U	2500	2160	86	2500	2080	83	4	72-120/14
127-18-4	Tetrachloroethylene	100	U	2500	2660	106	2500	2520	101	5	76-135/16
108-88-3	Toluene	100	U	2500	2440	98	2500	2310	92	5	80-120/14
87-61-6	1,2,3-Trichlorobenzene	200	U	2500	2280	91	2500	2230	89	2	68-131/25
120-82-1	1,2,4-Trichlorobenzene	200	U	2500	2300	92	2500	2260	90	2	73-129/20
71-55-6	1,1,1-Trichloroethane	100	U	2500	2870	115	2500	2600	104	10	75-130/16
79-00-5	1,1,2-Trichloroethane	100	U	2500	2390	96	2500	2230	89	7	76-119/14
79-01-6	Trichloroethylene	1160		2500	3780	105	2500	3580	97	5	81-126/15
75-69-4	Trichlorofluoromethane	200	U	2500	3100	124	2500	3060	122	1	71-156/21
75-01-4	Vinyl Chloride	100	U	2500	2490	100	2500	2560	102	3	69-159/18
1330-20-7	Xylene (total)	300	U	7500	7530	100	7500	7100	95	6	80-126/15

CAS No.	Surrogate Recoveries	MS	MSD	FA91974-37	Limits
1868-53-7	Dibromofluoromethane	107%	106%	106%	83-118%
17060-07-0	1,2-Dichloroethane-D4	115%	112%	113%	79-125%
2037-26-5	Toluene-D8	96%	97%	95%	85-112%
460-00-4	4-Bromofluorobenzene	94%	95%	94%	83-118%

(a) Sample was not preserved to a pH < 2.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA91974
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA91890-20MS	2P84552.D	100	01/07/22	CF	n/a	n/a	V2P3369
FA91890-20MSD	2P84554.D	100	01/07/22	CF	n/a	n/a	V2P3369
FA91890-20 [a]	2P84550.D	100	01/07/22	CF	n/a	n/a	V2P3369

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91974-17

CAS No.	Compound	FA91890-20 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
79-01-6	Trichloroethylene	54000	LQY	2500	53800	-8* [b]	2500	55900	76* [b]	4	81-126/15

CAS No.	Surrogate Recoveries	MS	MSD	FA91890-20	Limits
1868-53-7	Dibromofluoromethane	104%	106%	103%	83-118%
17060-07-0	1,2-Dichloroethane-D4	108%	105%	108%	79-125%
2037-26-5	Toluene-D8	100%	100%	101%	85-112%
460-00-4	4-Bromofluorobenzene	102%	103%	104%	83-118%

(a) Sample was not preserved to pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(b) Outside control limits due to high level in sample relative to spike amount.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA91974
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA91974-28MS	C0153354.D	5	01/13/22	LV	n/a	n/a	VC6188
FA91974-28MSD	C0153355.D	5	01/13/22	LV	n/a	n/a	VC6188
FA91974-28 [a]	C0153334.D	1	01/13/22	LV	n/a	n/a	VC6188

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91974-35

CAS No.	Compound	FA91974-28 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
75-01-4	Vinyl Chloride	9.9	Q	125	124	91	125	136	101	9	69-159/18

CAS No.	Surrogate Recoveries	MS	MSD	FA91974-28	Limits
1868-53-7	Dibromofluoromethane	94%	92%	90%Q	83-118%
17060-07-0	1,2-Dichloroethane-D4	94%	96%	95%Q	79-125%
2037-26-5	Toluene-D8	104%	107%	103%Q	85-112%
460-00-4	4-Bromofluorobenzene	106%	106%	109%Q	83-118%

(a) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA91974
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA91890-54MS	I73562.D	20000	01/15/22	LR	n/a	n/a	VI2443
FA91890-54MSD	I73563.D	20000	01/15/22	LR	n/a	n/a	VI2443
FA91890-54 [a]	I73561.D	20000	01/15/22	LR	n/a	n/a	VI2443

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91974-38, FA91974-39, FA91974-41, FA91974-47, FA91974-51

CAS No.	Compound	FA91890-54 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
79-01-6	Trichloroethylene	1480000	QY	500000	1840000	72* [b]	500000	1780000	60* [b]	3	81-126/15

CAS No.	Surrogate Recoveries	MS	MSD	FA91890-54	Limits
1868-53-7	Dibromofluoromethane	101%	99%	102%	83-118%
17060-07-0	1,2-Dichloroethane-D4	106%	104%	110%	79-125%
2037-26-5	Toluene-D8	99%	99%	103%	85-112%
460-00-4	4-Bromofluorobenzene	95%	95%	96%	83-118%

(a) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

(b) Outside control limits due to high level in sample relative to spike amount.

* = Outside of Control Limits.

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

Tetra Tech NUS

NASA-LC 34, Freedom Rd, CCAFS, FL

112G08985

SGS Job Number: FA91983

Sampling Dates: 12/22/21 - 12/23/21

Report to:

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Total number of pages in report: 72

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Norm Farmer
Technical Director

Client Service contact: Andrea Colby 407-425-6700

Certifications: FL(E83510), LA(03051), KS(E-10327), NC(573), NJ(FL002), NY(12022), SC(96038001) DoD ELAP(ANAB L2229), AZ(AZ0806), CA(2937), TX(T104704404), PA(68-03573), VA(460177), AL, AK, AR, CT, IA, KY, MA, MI. MS, ND, NH, NV, OK, OR, IL, UT, VT, WA, WI, WV

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SGS North America Inc.

Sample Summary

Tetra Tech NUS

Job No: FA91983

NASA-LC 34, Freedom Rd, CCAFS, FL
Project No: 112G08985

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
FA91983-1	12/22/21	16:10	DR	12/23/21	AQ	Ground Water	LC34-DPT0594-053.0-20211222
FA91983-2	12/22/21	16:20	DR	12/23/21	AQ	Ground Water	LC34-DPT0594-058.0-20211222
FA91983-3	12/22/21	16:40	DR	12/23/21	AQ	Ground Water	LC34-DPT0594-063.0-20211222
FA91983-4	12/23/21	07:20	DR	12/23/21	AQ	Ground Water	LC34-DPT0594-068.0-20211223
FA91983-5	12/23/21	07:40	DR	12/23/21	AQ	Ground Water	LC34-DPT0594-073.0-20211223
FA91983-6	12/23/21	08:00	DR	12/23/21	AQ	Ground Water	LC34-DPT0594-078.0-20211223
FA91983-7	12/23/21	08:20	DR	12/23/21	AQ	Ground Water	LC34-DPT0594-083.0-20211223
FA91983-8	12/23/21	08:45	DR	12/23/21	AQ	Ground Water	LC34-DPT0594-088.0-20211223
FA91983-9	12/23/21	09:10	DR	12/23/21	AQ	Ground Water	LC34-DPT0594-093.0-20211223
FA91983-10	12/23/21	09:40	DR	12/23/21	AQ	Ground Water	LC34-DPT0594-098.0-20211223
FA91983-11	12/22/21	16:05	DR	12/23/21	AQ	Ground Water	LC34-DPT0593-063.0-20211222
FA91983-12	12/22/21	16:25	DR	12/23/21	AQ	Ground Water	LC34-DPT0593-068.0-20211222
FA91983-13	12/22/21	16:50	DR	12/23/21	AQ	Ground Water	LC34-DPT0593-073.0-20211222

Sample Summary
(continued)

Tetra Tech NUS

Job No: FA91983

NASA-LC 34, Freedom Rd, CCAFS, FL
Project No: 112G08985

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
FA91983-14	12/23/21	07:25	DR	12/23/21	AQ	Ground Water	LC34-DPT0593-078.0-20211223
FA91983-15	12/23/21	07:55	DR	12/23/21	AQ	Ground Water	LC34-DPT0593-083.0-20211223
FA91983-16	12/23/21	08:25	DR	12/23/21	AQ	Ground Water	LC34-DPT0593-088.0-20211223
FA91983-17	12/23/21	09:00	DR	12/23/21	AQ	Ground Water	LC34-DPT0593-093.0-20211223
FA91983-18	12/23/21	09:30	DR	12/23/21	AQ	Ground Water	LC34-DPT0593-098.0-20211223

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Tetra Tech NUS **Job No:** FA91983

Site: NASA-LC 34, Freedom Rd, CCAFS, FL **Report Date:** 1/19/2022 11:22:13

On 12/23/2021, 18 Sample(s), 0 Trip Blank(s) were received at SGS North America Inc. at a maximum corrected temperature of 1.4 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. Job Number of FA91983 was Assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

MS Volatiles By Method SW846 8260B

Matrix: AQ **Batch ID:** V2P3365

Sample(s) FA91913-3MS, FA91913-3MSD were used as the QC samples indicated.

Matrix Spike Duplicate Recovery(s) for Methylene Chloride are outside control limits. Probable cause is due to matrix interference.

For Sample(s) FA91983-1, FA91983-11, FA91983-12, FA91983-13, FA91983-2, FA91983-3 are associated with an CCV that has a recovery for Methylene Chloride outside low control limit.

For Sample(s) FA91983-1, FA91983-11, FA91983-12, FA91983-13, FA91983-2 are associated with an CCV that has a recovery for Chloroethane, Trichlorofluoromethane, Chloroethane outside high control limit.

FA91983-1 for Chloroethane: Associated CCV outside of control limits high.

FA91983-1 for Methylene Chloride: Associated CCV outside of control limits low.

FA91983-1: Sample was not preserved to a pH < 2; reported results are considered minimum values.

FA91983-2 for Chloroethane: Associated CCV outside of control limits high.

FA91983-2 for Methylene Chloride: Associated CCV outside of control limits low.

FA91983-2: Sample was not preserved to a pH < 2; reported results are considered minimum values.

FA91983-3 for Chloroethane: Associated CCV outside of control limits high, sample was ND.

FA91983-3 for Methylene Chloride: Associated CCV outside of control limits low.

FA91983-3: Sample was not preserved to a pH < 2; reported results are considered minimum values.

FA91983-11 for Chloroethane: Associated CCV outside of control limits high.

FA91983-11 for Methylene Chloride: Associated CCV outside of control limits low.

FA91983-11: Sample was not preserved to a pH < 2; reported results are considered minimum values.

FA91983-12 for Chloroethane: Associated CCV outside of control limits high.

FA91983-12 for Methylene Chloride: Associated CCV outside of control limits low.

FA91983-12: Sample was not preserved to a pH < 2; reported results are considered minimum values.

FA91983-13 for Chloroethane: Associated CCV outside of control limits high.

FA91983-13 for Methylene Chloride: Associated CCV outside of control limits low.

FA91983-13: Sample was not preserved to a pH < 2; reported results are considered minimum values.

Matrix: AQ **Batch ID:** V2P3368

V2P3368-BS: No MS/MSD available for this run.

The following samples were run outside of holding time for method SW846 8260B: FA91983-10, FA91983-15, FA91983-5, FA91983-7, FA91983-9

FA91983-5: Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA91983-7: Sample was not preserved to a pH < 2 and contained bubbles > 6mm. Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA91983-8: Sample was not preserved to a pH < 2 and contained significant headspace. Confirmation run beyond

FA91983-9: Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA91983-10 for Trichloroethylene: No sample available for reanalysis.

FA91983-10: Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA91983-14: Sample was not preserved to a pH < 2. Confirmation run beyond holdtime.

FA91983-15: Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

MS Volatiles By Method SW846 8260B

Matrix: AQ **Batch ID:** V2P3369

Sample(s) FA91890-20MS, FA91890-20MSD were used as the QC samples indicated.

The following samples were run outside of holding time for method SW846 8260B: FA91983-17, FA91983-18

Matrix Spike Recovery(s) for cis-1,2-Dichloroethylene are outside control limits. Outside control limits due to high level in sample relative to spike amount.

Matrix Spike/Matrix Spike Duplicate Recovery(s) for Trichloroethylene are outside control limits. Outside control limits due to high level in sample relative to spike amount.

FA91983-16: Sample vial contained significant headspace and was not preserved to pH < 2. Confirmation run beyond holdtime. Results from different vials are not consistent; higher results were reported.

FA91983-17: Sample was not preserved to pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA91983-18: Sample was not preserved to pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

Matrix: AQ **Batch ID:** VC6189

Sample(s) FA91890-24MS, FA91890-24MSD were used as the QC samples indicated.

The following samples were run outside of holding time for method SW846 8260B: FA91983-1, FA91983-2

FA91983-1: Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA91983-2: Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA91983-3: Sample was not preserved to a pH < 2. Confirmation run beyond holdtime.

FA91983-11: Sample was not preserved to a pH < 2. Confirmation run beyond holdtime.

FA91983-12: Sample was not preserved to a pH < 2. Confirmation run beyond holdtime.

FA91983-13: Sample was not preserved to a pH < 2. Confirmation run beyond holdtime.

Matrix: AQ **Batch ID:** VY2510

Sample(s) FA91983-18MS, FA91983-18MSD were used as the QC samples indicated.

Matrix Spike Recovery(s) for 1,1-Dichloroethane, 1,2-Dichloropropane, Benzene, Bromodichloromethane, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene are outside control limits. Probable cause is due to matrix interference.

Matrix Spike Duplicate Recovery(s) for 1,1-Dichloroethane, 1,2-Dichloropropane, Benzene, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, trans-1,3-Dichloropropene are outside control limits. Probable cause is due to matrix interference.

Matrix Spike/Matrix Spike Duplicate Recovery(s) for Trichloroethylene are outside control limits. Outside control limits due to high level in sample relative to spike amount.

RPD(s) for MSD for Methyl Bromide, trans-1,3-Dichloropropene are outside control limits for sample FA91983-18MSD. Probable cause is due to sample non-homogeneity.

For Sample(s) FA91983-10, FA91983-14, FA91983-15, FA91983-16, FA91983-17, FA91983-18, FA91983-4, FA91983-5, FA91983-6, FA91983-7, FA91983-8, FA91983-9 are associated with an CCV that has a recovery for 1,2-Dibromo-3-chloropropane outside low control limit.

FA91983-4 for 1,1-Dichloroethane: Associated CCV outside of control limits high, sample was ND.

FA91983-4 for 1,2-Dibromo-3-chloropropane: Associated CCV outside of control limits low.

FA91983-4: Sample was not preserved to a pH < 2.

FA91983-5 for 1,1-Dichloroethane: Associated CCV outside of control limits high, sample was ND.

FA91983-5 for 1,2-Dibromo-3-chloropropane: Associated CCV outside of control limits low.

FA91983-5: Sample was not preserved to a pH < 2.

FA91983-6 for 1,1-Dichloroethane: Associated CCV outside of control limits high, sample was ND.

FA91983-6 for 1,2-Dibromo-3-chloropropane: Associated CCV outside of control limits low.

FA91983-6: Sample was not preserved to a pH < 2.

FA91983-7 for 1,1-Dichloroethane: Associated CCV outside of control limits high, sample was ND.

FA91983-7 for 1,2-Dibromo-3-chloropropane: Associated CCV outside of control limits low.

FA91983-7: Sample was not preserved to a pH < 2.

FA91983-8 for 1,1-Dichloroethane: Associated CCV outside of control limits high, sample was ND.

FA91983-8 for 1,2-Dibromo-3-chloropropane: Associated CCV outside of control limits low.

FA91983-8 for Trichloroethylene: No sample available for reanalysis.

FA91983-8: Sample was not preserved to a pH < 2.

FA91983-9 for 1,1-Dichloroethane: Associated CCV outside of control limits high, sample was ND.

FA91983-9 for 1,2-Dibromo-3-chloropropane: Associated CCV outside of control limits low.

MS Volatiles By Method SW846 8260B

Matrix: AQ **Batch ID:** VY2510

FA91983-9: Sample was not preserved to a pH < 2.
FA91983-10 for 1,1-Dichloroethane: Associated CCV outside of control limits high, sample was ND.
FA91983-10 for 1,2-Dibromo-3-chloropropane: Associated CCV outside of control limits low.
FA91983-10: Sample was not preserved to a pH < 2.
FA91983-14 for 1,1-Dichloroethane: Associated CCV outside of control limits high, sample was ND.
FA91983-14 for 1,2-Dibromo-3-chloropropane: Associated CCV outside of control limits low.
FA91983-14: Sample was not preserved to a pH < 2.
FA91983-15 for 1,1-Dichloroethane: Associated CCV outside of control limits high, sample was ND.
FA91983-15 for 1,2-Dibromo-3-chloropropane: Associated CCV outside of control limits low.
FA91983-15: Sample was not preserved to a pH < 2.
FA91983-16 for 1,1-Dichloroethane: Associated CCV outside of control limits high, sample was ND.
FA91983-16 for 1,2-Dibromo-3-chloropropane: Associated CCV outside of control limits low.
FA91983-16 for Trichloroethylene: Results from different vials are not consistent; higher results were reported.
FA91983-16: Sample was not preserved to pH < 2.
FA91983-17 for 1,1-Dichloroethane: Associated CCV outside of control limits high, sample was ND.
FA91983-17 for 1,2-Dibromo-3-chloropropane: Associated CCV outside of control limits low.
FA91983-17: Sample was not preserved to pH < 2.
FA91983-18 for 1,1-Dichloroethane: Associated CCV outside of control limits high, sample was ND.
FA91983-18 for 1,2-Dibromo-3-chloropropane: Associated CCV outside of control limits low.
FA91983-18: Sample was not preserved to pH < 2.

SGS North America Inc. certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted. Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria. SGS North America Inc. is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety.

Narrative prepared by:

_____

Kim Benham, Client Services *(Signature on File)*

Summary of Hits

Job Number: FA91983
Account: Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL
Collected: 12/22/21 thru 12/23/21

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	PQL	MDL	Units	Method
FA91983-1	**LC34-DPT0594-053.0-20211222**					
1,1-Dichloroethylene [a]		186 IQ	500	160	ug/l	SW846 8260B
cis-1,2-Dichloroethylene [a]		38100 Q	500	140	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [a]		442 IQ	500	110	ug/l	SW846 8260B
Freon 113 [a]		706 Q	500	240	ug/l	SW846 8260B
Trichloroethylene [b]		1560000 Q	20000	6900	ug/l	SW846 8260B
Vinyl Chloride [a]		5400 Q	500	200	ug/l	SW846 8260B
FA91983-2	**LC34-DPT0594-058.0-20211222**					
1,1-Dichloroethylene [a]		240 IQ	250	81	ug/l	SW846 8260B
cis-1,2-Dichloroethylene [a]		19000 Q	250	69	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [a]		138 IQ	250	55	ug/l	SW846 8260B
Trichloroethylene [b]		632000 Q	10000	3500	ug/l	SW846 8260B
Vinyl Chloride [a]		2330 Q	250	100	ug/l	SW846 8260B
FA91983-3	**LC34-DPT0594-063.0-20211222**					
cis-1,2-Dichloroethylene [a]		213 IQ	250	69	ug/l	SW846 8260B
Trichloroethylene [a]		24000 Q	250	86	ug/l	SW846 8260B
FA91983-4	**LC34-DPT0594-068.0-20211223**					
cis-1,2-Dichloroethylene [c]		330 I	500	140	ug/l	SW846 8260B
Trichloroethylene [c]		19100	500	170	ug/l	SW846 8260B
FA91983-5	**LC34-DPT0594-073.0-20211223**					
cis-1,2-Dichloroethylene [c]		3810	500	140	ug/l	SW846 8260B
Trichloroethylene [b]		49300 Q	1000	350	ug/l	SW846 8260B
FA91983-6	**LC34-DPT0594-078.0-20211223**					
cis-1,2-Dichloroethylene [c]		17500 I	20000	5500	ug/l	SW846 8260B
Trichloroethylene [c]		1230000	20000	6900	ug/l	SW846 8260B
FA91983-7	**LC34-DPT0594-083.0-20211223**					
1,1-Dichloroethylene [c]		12.0 I	20	6.4	ug/l	SW846 8260B
cis-1,2-Dichloroethylene [c]		605	20	5.5	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [c]		9.6 I	20	4.4	ug/l	SW846 8260B
Freon 113 [c]		21.1	20	9.6	ug/l	SW846 8260B
Trichloroethylene [d]		23400 Q	500	170	ug/l	SW846 8260B
Vinyl Chloride [c]		12.8 I	20	8.2	ug/l	SW846 8260B

Summary of Hits

Job Number: FA91983
Account: Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL
Collected: 12/22/21 thru 12/23/21

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	PQL	MDL	Units	Method
FA91983-8	**LC34-DPT0594-088.0-20211223**					
1,1-Dichloroethylene [c]		88.1 I	200	64	ug/l	SW846 8260B
cis-1,2-Dichloroethylene [c]		4090	200	55	ug/l	SW846 8260B
Trichloroethylene [e]		116000 L	200	69	ug/l	SW846 8260B
Vinyl Chloride [c]		185 I	200	82	ug/l	SW846 8260B
FA91983-9	**LC34-DPT0594-093.0-20211223**					
cis-1,2-Dichloroethylene [c]		8700	500	140	ug/l	SW846 8260B
Freon 113 [c]		382 I	500	240	ug/l	SW846 8260B
Trichloroethylene [b]		229000 Q	5000	1700	ug/l	SW846 8260B
Vinyl Chloride [c]		255 I	500	200	ug/l	SW846 8260B
FA91983-10	**LC34-DPT0594-098.0-20211223**					
1,1-Dichloroethylene [c]		231 I	500	160	ug/l	SW846 8260B
cis-1,2-Dichloroethylene [c]		17100	500	140	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [c]		323 I	500	110	ug/l	SW846 8260B
Freon 113 [c]		4930	500	240	ug/l	SW846 8260B
Trichloroethylene [f]		2630000 LQ	25000	8600	ug/l	SW846 8260B
Vinyl Chloride [c]		627	500	200	ug/l	SW846 8260B
FA91983-11	**LC34-DPT0593-063.0-20211222**					
cis-1,2-Dichloroethylene [a]		262 Q	50	14	ug/l	SW846 8260B
Trichloroethylene [a]		899 Q	50	17	ug/l	SW846 8260B
FA91983-12	**LC34-DPT0593-068.0-20211222**					
cis-1,2-Dichloroethylene [a]		35.3 Q	10	2.8	ug/l	SW846 8260B
Trichloroethylene [a]		129 Q	10	3.5	ug/l	SW846 8260B
FA91983-13	**LC34-DPT0593-073.0-20211222**					
cis-1,2-Dichloroethylene [a]		14.3 Q	10	2.8	ug/l	SW846 8260B
Trichloroethylene [a]		135 Q	10	3.5	ug/l	SW846 8260B
FA91983-14	**LC34-DPT0593-078.0-20211223**					
cis-1,2-Dichloroethylene [c]		15.2	5.0	1.4	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [c]		1.7 I	5.0	1.1	ug/l	SW846 8260B
Trichloroethylene [c]		57.9	5.0	1.7	ug/l	SW846 8260B

Summary of Hits

Job Number: FA91983
Account: Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL
Collected: 12/22/21 thru 12/23/21

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	PQL	MDL	Units	Method
FA91983-15	**LC34-DPT0593-083.0-20211223**					
cis-1,2-Dichloroethylene [c]		59.9	5.0	1.4	ug/l	SW846 8260B
Freon 113 [c]		3.7 I	5.0	2.4	ug/l	SW846 8260B
Trichloroethylene [b]		8860 Q	100	35	ug/l	SW846 8260B
Vinyl Chloride [c]		10.2	5.0	2.0	ug/l	SW846 8260B
FA91983-16	**LC34-DPT0593-088.0-20211223**					
cis-1,2-Dichloroethylene [g]		56.1	5.0	1.4	ug/l	SW846 8260B
Trichloroethylene [h]		961 L	5.0	1.7	ug/l	SW846 8260B
Vinyl Chloride [g]		3.9 I	5.0	2.0	ug/l	SW846 8260B
FA91983-17	**LC34-DPT0593-093.0-20211223**					
cis-1,2-Dichloroethylene [g]		264	5.0	1.4	ug/l	SW846 8260B
trans-1,2-Dichloroethylene [g]		2.0 I	5.0	1.1	ug/l	SW846 8260B
Trichloroethylene [i]		3610 Q	100	35	ug/l	SW846 8260B
Vinyl Chloride [g]		17.2	5.0	2.0	ug/l	SW846 8260B
FA91983-18	**LC34-DPT0593-098.0-20211223**					
cis-1,2-Dichloroethylene [i]		16.6 IQ	25	6.9	ug/l	SW846 8260B
Trichloroethylene [i]		737 Q	25	8.6	ug/l	SW846 8260B
Vinyl Chloride [g]		4.8 I	5.0	2.0	ug/l	SW846 8260B

(a) Sample was not preserved to a pH < 2 and was analyzed beyond hold time; reported results are considered minimum values.
(b) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(c) Sample was not preserved to a pH < 2.
(d) Sample was not preserved to a pH < 2 and contained bubbles > 6mm. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(e) Sample was not preserved to a pH < 2. No sample available for reanalysis.
(f) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values. No sample available for reanalysis.
(g) Sample was not preserved to pH < 2.
(h) Sample was not preserved to pH < 2. Results from different vials are not consistent; higher results were reported.
(i) Sample was not preserved to pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	LC34-DPT0594-053.0-20211222		
Lab Sample ID:	FA91983-1	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/23/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	2P84401.D	500	01/04/22 20:31	CF	n/a	n/a	V2P3365
Run #2 [b]	C0153378.D	20000	01/14/22 06:50	LV	n/a	n/a	VC6189

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	5000 UQ	13000	5000	ug/l	Q
71-43-2	Benzene	160 UQ	500	160	ug/l	Q
74-97-5	Bromochloromethane	230 UQ	500	230	ug/l	Q
75-27-4	Bromodichloromethane	120 UQ	500	120	ug/l	Q
75-25-2	Bromoform	200 UQ	500	200	ug/l	Q
78-93-3	2-Butanone (MEK)	1000 UQ	2500	1000	ug/l	Q
75-15-0	Carbon Disulfide	270 UQ	1000	270	ug/l	Q
56-23-5	Carbon Tetrachloride	180 UQ	500	180	ug/l	Q
108-90-7	Chlorobenzene	100 UQ	500	100	ug/l	Q
75-00-3	Chloroethane [c]	330 UQ	1000	330	ug/l	Q
67-66-3	Chloroform	150 UQ	500	150	ug/l	Q
110-82-7	Cyclohexane	200 UQ	500	200	ug/l	Q
124-48-1	Dibromochloromethane	140 UQ	500	140	ug/l	Q
96-12-8	1,2-Dibromo-3-chloropropane	520 UQ	2500	520	ug/l	Q
106-93-4	1,2-Dibromoethane	140 UQ	1000	140	ug/l	Q
75-71-8	Dichlorodifluoromethane	250 UQ	1000	250	ug/l	Q
95-50-1	1,2-Dichlorobenzene	160 UQ	500	160	ug/l	Q
541-73-1	1,3-Dichlorobenzene	110 UQ	500	110	ug/l	Q
106-46-7	1,4-Dichlorobenzene	130 UQ	500	130	ug/l	Q
75-34-3	1,1-Dichloroethane	170 UQ	500	170	ug/l	Q
107-06-2	1,2-Dichloroethane	160 UQ	500	160	ug/l	Q
75-35-4	1,1-Dichloroethylene	186	500	160	ug/l	IQ
156-59-2	cis-1,2-Dichloroethylene	38100	500	140	ug/l	Q
156-60-5	trans-1,2-Dichloroethylene	442	500	110	ug/l	IQ
78-87-5	1,2-Dichloropropane	210 UQ	500	210	ug/l	Q
10061-01-5	cis-1,3-Dichloropropene	150 UQ	500	150	ug/l	Q
10061-02-6	trans-1,3-Dichloropropene	110 UQ	500	110	ug/l	Q
100-41-4	Ethylbenzene	180 UQ	500	180	ug/l	Q
76-13-1	Freon 113	706	500	240	ug/l	Q
591-78-6	2-Hexanone	1000 UQ	5000	1000	ug/l	Q
98-82-8	Isopropylbenzene	110 UQ	500	110	ug/l	Q
79-20-9	Methyl Acetate	2500 UQ	10000	2500	ug/l	Q

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0594-053.0-20211222		
Lab Sample ID:	FA91983-1	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/23/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	1000 UQ	2500	1000	ug/l	Q
74-87-3	Methyl Chloride	250 UQ	1000	250	ug/l	Q
75-09-2	Methylene Chloride [d]	1000 UQJ	2500	1000	ug/l	QJ
108-10-1	4-Methyl-2-pentanone (MIBK)	500 UQ	2500	500	ug/l	Q
1634-04-4	Methyl Tert Butyl Ether	110 UQ	500	110	ug/l	Q
100-42-5	Styrene	110 UQ	500	110	ug/l	Q
630-20-6	1,1,1,2-Tetrachloroethane	140 UQ	500	140	ug/l	Q
79-34-5	1,1,2,2-Tetrachloroethane	150 UQ	500	150	ug/l	Q
127-18-4	Tetrachloroethylene	110 UQ	500	110	ug/l	Q
108-88-3	Toluene	150 UQ	500	150	ug/l	Q
87-61-6	1,2,3-Trichlorobenzene	310 UQ	1000	310	ug/l	Q
120-82-1	1,2,4-Trichlorobenzene	250 UQ	1000	250	ug/l	Q
71-55-6	1,1,1-Trichloroethane	120 UQ	500	120	ug/l	Q
79-00-5	1,1,2-Trichloroethane	230 UQ	500	230	ug/l	Q
79-01-6	Trichloroethylene	1560000 [e]	20000	6900	ug/l	Q
75-69-4	Trichlorofluoromethane [c]	250 UQ	1000	250	ug/l	Q
75-01-4	Vinyl Chloride	5400	500	200	ug/l	Q
1330-20-7	Xylene (total)	360 UQ	1500	360	ug/l	Q

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%	94%	83-118%
17060-07-0	1,2-Dichloroethane-D4	109%	94%	79-125%
2037-26-5	Toluene-D8	104%	104%	85-112%
460-00-4	4-Bromofluorobenzene	103%	111%	83-118%

(a) Sample was not preserved to a pH < 2 and was analyzed beyond hold time; reported results are considered minimum values.
(b) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(c) Associated CCV outside of control limits high.
(d) Associated CCV outside of control limits low.
(e) Result is from Run# 2

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0594-058.0-20211222		
Lab Sample ID:	FA91983-2	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/23/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	2P84403.D	250	01/04/22 21:02	CF	n/a	n/a	V2P3365
Run #2 [b]	C0153379.D	10000	01/14/22 07:14	LV	n/a	n/a	VC6189

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	2500 UQ	6300	2500	ug/l	Q
71-43-2	Benzene	78 UQ	250	78	ug/l	Q
74-97-5	Bromochloromethane	110 UQ	250	110	ug/l	Q
75-27-4	Bromodichloromethane	61 UQ	250	61	ug/l	Q
75-25-2	Bromoform	100 UQ	250	100	ug/l	Q
78-93-3	2-Butanone (MEK)	500 UQ	1300	500	ug/l	Q
75-15-0	Carbon Disulfide	130 UQ	500	130	ug/l	Q
56-23-5	Carbon Tetrachloride	89 UQ	250	89	ug/l	Q
108-90-7	Chlorobenzene	50 UQ	250	50	ug/l	Q
75-00-3	Chloroethane [c]	170 UQ	500	170	ug/l	Q
67-66-3	Chloroform	75 UQ	250	75	ug/l	Q
110-82-7	Cyclohexane	98 UQ	250	98	ug/l	Q
124-48-1	Dibromochloromethane	69 UQ	250	69	ug/l	Q
96-12-8	1,2-Dibromo-3-chloropropane	260 UQ	1300	260	ug/l	Q
106-93-4	1,2-Dibromoethane	69 UQ	500	69	ug/l	Q
75-71-8	Dichlorodifluoromethane	130 UQ	500	130	ug/l	Q
95-50-1	1,2-Dichlorobenzene	81 UQ	250	81	ug/l	Q
541-73-1	1,3-Dichlorobenzene	54 UQ	250	54	ug/l	Q
106-46-7	1,4-Dichlorobenzene	64 UQ	250	64	ug/l	Q
75-34-3	1,1-Dichloroethane	85 UQ	250	85	ug/l	Q
107-06-2	1,2-Dichloroethane	78 UQ	250	78	ug/l	Q
75-35-4	1,1-Dichloroethylene	240	250	81	ug/l	IQ
156-59-2	cis-1,2-Dichloroethylene	19000	250	69	ug/l	Q
156-60-5	trans-1,2-Dichloroethylene	138	250	55	ug/l	IQ
78-87-5	1,2-Dichloropropane	110 UQ	250	110	ug/l	Q
10061-01-5	cis-1,3-Dichloropropene	73 UQ	250	73	ug/l	Q
10061-02-6	trans-1,3-Dichloropropene	54 UQ	250	54	ug/l	Q
100-41-4	Ethylbenzene	89 UQ	250	89	ug/l	Q
76-13-1	Freon 113	120 UQ	250	120	ug/l	Q
591-78-6	2-Hexanone	500 UQ	2500	500	ug/l	Q
98-82-8	Isopropylbenzene	55 UQ	250	55	ug/l	Q
79-20-9	Methyl Acetate	1300 UQ	5000	1300	ug/l	Q

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0594-058.0-20211222		
Lab Sample ID:	FA91983-2	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/23/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	500 UQ	1300	500	ug/l	Q
74-87-3	Methyl Chloride	130 UQ	500	130	ug/l	Q
75-09-2	Methylene Chloride [d]	500 UQJ	1300	500	ug/l	QJ
108-10-1	4-Methyl-2-pentanone (MIBK)	250 UQ	1300	250	ug/l	Q
1634-04-4	Methyl Tert Butyl Ether	57 UQ	250	57	ug/l	Q
100-42-5	Styrene	56 UQ	250	56	ug/l	Q
630-20-6	1,1,1,2-Tetrachloroethane	69 UQ	250	69	ug/l	Q
79-34-5	1,1,2,2-Tetrachloroethane	75 UQ	250	75	ug/l	Q
127-18-4	Tetrachloroethylene	54 UQ	250	54	ug/l	Q
108-88-3	Toluene	75 UQ	250	75	ug/l	Q
87-61-6	1,2,3-Trichlorobenzene	150 UQ	500	150	ug/l	Q
120-82-1	1,2,4-Trichlorobenzene	130 UQ	500	130	ug/l	Q
71-55-6	1,1,1-Trichloroethane	62 UQ	250	62	ug/l	Q
79-00-5	1,1,2-Trichloroethane	120 UQ	250	120	ug/l	Q
79-01-6	Trichloroethylene	632000 [e]	10000	3500	ug/l	Q
75-69-4	Trichlorofluoromethane [c]	130 UQ	500	130	ug/l	Q
75-01-4	Vinyl Chloride	2330	250	100	ug/l	Q
1330-20-7	Xylene (total)	180 UQ	750	180	ug/l	Q

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%	93%	83-118%
17060-07-0	1,2-Dichloroethane-D4	111%	91%	79-125%
2037-26-5	Toluene-D8	103%	103%	85-112%
460-00-4	4-Bromofluorobenzene	103%	109%	83-118%

(a) Sample was not preserved to a pH < 2 and was analyzed beyond hold time; reported results are considered minimum values.
(b) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(c) Associated CCV outside of control limits high.
(d) Associated CCV outside of control limits low.
(e) Result is from Run# 2

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: LC34-DPT0594-063.0-20211222
Lab Sample ID: FA91983-3
Matrix: AQ - Ground Water
Method: SW846 8260B
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Date Sampled: 12/22/21
Date Received: 12/23/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	2P84405.D	250	01/04/22 21:34	CF	n/a	n/a	V2P3365
Run #2 [b]	C0153380.D	250	01/14/22 07:37	LV	n/a	n/a	VC6189

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	2500 UQ	6300	2500	ug/l	Q
71-43-2	Benzene	78 UQ	250	78	ug/l	Q
74-97-5	Bromochloromethane	110 UQ	250	110	ug/l	Q
75-27-4	Bromodichloromethane	61 UQ	250	61	ug/l	Q
75-25-2	Bromoform	100 UQ	250	100	ug/l	Q
78-93-3	2-Butanone (MEK)	500 UQ	1300	500	ug/l	Q
75-15-0	Carbon Disulfide	130 UQ	500	130	ug/l	Q
56-23-5	Carbon Tetrachloride	89 UQ	250	89	ug/l	Q
108-90-7	Chlorobenzene	50 UQ	250	50	ug/l	Q
75-00-3	Chloroethane [c]	170 UQ	500	170	ug/l	Q
67-66-3	Chloroform	75 UQ	250	75	ug/l	Q
110-82-7	Cyclohexane	98 UQ	250	98	ug/l	Q
124-48-1	Dibromochloromethane	69 UQ	250	69	ug/l	Q
96-12-8	1,2-Dibromo-3-chloropropane	260 UQ	1300	260	ug/l	Q
106-93-4	1,2-Dibromoethane	69 UQ	500	69	ug/l	Q
75-71-8	Dichlorodifluoromethane	130 UQ	500	130	ug/l	Q
95-50-1	1,2-Dichlorobenzene	81 UQ	250	81	ug/l	Q
541-73-1	1,3-Dichlorobenzene	54 UQ	250	54	ug/l	Q
106-46-7	1,4-Dichlorobenzene	64 UQ	250	64	ug/l	Q
75-34-3	1,1-Dichloroethane	85 UQ	250	85	ug/l	Q
107-06-2	1,2-Dichloroethane	78 UQ	250	78	ug/l	Q
75-35-4	1,1-Dichloroethylene	81 UQ	250	81	ug/l	Q
156-59-2	cis-1,2-Dichloroethylene	213	250	69	ug/l	IQ
156-60-5	trans-1,2-Dichloroethylene	55 UQ	250	55	ug/l	Q
78-87-5	1,2-Dichloropropane	110 UQ	250	110	ug/l	Q
10061-01-5	cis-1,3-Dichloropropene	73 UQ	250	73	ug/l	Q
10061-02-6	trans-1,3-Dichloropropene	54 UQ	250	54	ug/l	Q
100-41-4	Ethylbenzene	89 UQ	250	89	ug/l	Q
76-13-1	Freon 113	120 UQ	250	120	ug/l	Q
591-78-6	2-Hexanone	500 UQ	2500	500	ug/l	Q
98-82-8	Isopropylbenzene	55 UQ	250	55	ug/l	Q
79-20-9	Methyl Acetate	1300 UQ	5000	1300	ug/l	Q

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0594-063.0-20211222		
Lab Sample ID:	FA91983-3	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/23/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	500 UQ	1300	500	ug/l	Q
74-87-3	Methyl Chloride	130 UQ	500	130	ug/l	Q
75-09-2	Methylene Chloride [d]	500 UQJ	1300	500	ug/l	QJ
108-10-1	4-Methyl-2-pentanone (MIBK)	250 UQ	1300	250	ug/l	Q
1634-04-4	Methyl Tert Butyl Ether	57 UQ	250	57	ug/l	Q
100-42-5	Styrene	56 UQ	250	56	ug/l	Q
630-20-6	1,1,1,2-Tetrachloroethane	69 UQ	250	69	ug/l	Q
79-34-5	1,1,2,2-Tetrachloroethane	75 UQ	250	75	ug/l	Q
127-18-4	Tetrachloroethylene	54 UQ	250	54	ug/l	Q
108-88-3	Toluene	75 UQ	250	75	ug/l	Q
87-61-6	1,2,3-Trichlorobenzene	150 UQ	500	150	ug/l	Q
120-82-1	1,2,4-Trichlorobenzene	130 UQ	500	130	ug/l	Q
71-55-6	1,1,1-Trichloroethane	62 UQ	250	62	ug/l	Q
79-00-5	1,1,2-Trichloroethane	120 UQ	250	120	ug/l	Q
79-01-6	Trichloroethylene	24000	250	86	ug/l	Q
75-69-4	Trichlorofluoromethane [c]	130 UQ	500	130	ug/l	Q
75-01-4	Vinyl Chloride	100 UQ	250	100	ug/l	Q
1330-20-7	Xylene (total)	180 UQ	750	180	ug/l	Q

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%	90%	83-118%
17060-07-0	1,2-Dichloroethane-D4	105%	90%	79-125%
2037-26-5	Toluene-D8	100%	103%	85-112%
460-00-4	4-Bromofluorobenzene	102%	104%	83-118%

(a) Sample was not preserved to a pH < 2 and was analyzed beyond hold time; reported results are considered minimum values.
(b) Sample was not preserved to a pH < 2. Confirmation run beyond holdtime.
(c) Associated CCV outside of control limits high, sample was ND.
(d) Associated CCV outside of control limits low.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0594-068.0-20211223		
Lab Sample ID:	FA91983-4	**Date Sampled:**	12/23/21
Matrix:	AQ - Ground Water	**Date Received:**	12/23/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	Y60320.D	500	12/30/21 20:27	LV	n/a	n/a	VY2510
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	5000 U	13000	5000	ug/l	
71-43-2	Benzene	160 U	500	160	ug/l	
74-97-5	Bromochloromethane	230 U	500	230	ug/l	
75-27-4	Bromodichloromethane	120 U	500	120	ug/l	
75-25-2	Bromoform	200 U	500	200	ug/l	
78-93-3	2-Butanone (MEK)	1000 U	2500	1000	ug/l	
75-15-0	Carbon Disulfide	270 U	1000	270	ug/l	
56-23-5	Carbon Tetrachloride	180 U	500	180	ug/l	
108-90-7	Chlorobenzene	100 U	500	100	ug/l	
75-00-3	Chloroethane	330 U	1000	330	ug/l	
67-66-3	Chloroform	150 U	500	150	ug/l	
110-82-7	Cyclohexane	200 U	500	200	ug/l	
124-48-1	Dibromochloromethane	140 U	500	140	ug/l	
96-12-8	1,2-Dibromo-3-chloropropan [b]	520 UJ	2500	520	ug/l	J
106-93-4	1,2-Dibromoethane	140 U	1000	140	ug/l	
75-71-8	Dichlorodifluoromethane	250 U	1000	250	ug/l	
95-50-1	1,2-Dichlorobenzene	160 U	500	160	ug/l	
541-73-1	1,3-Dichlorobenzene	110 U	500	110	ug/l	
106-46-7	1,4-Dichlorobenzene	130 U	500	130	ug/l	
75-34-3	1,1-Dichloroethane [c]	170 U	500	170	ug/l	
107-06-2	1,2-Dichloroethane	160 U	500	160	ug/l	
75-35-4	1,1-Dichloroethylene	160 U	500	160	ug/l	
156-59-2	cis-1,2-Dichloroethylene	330	500	140	ug/l	I
156-60-5	trans-1,2-Dichloroethylene	110 U	500	110	ug/l	
78-87-5	1,2-Dichloropropane	210 U	500	210	ug/l	
10061-01-5	cis-1,3-Dichloropropene [c]	150 U	500	150	ug/l	
10061-02-6	trans-1,3-Dichloropropene	110 U	500	110	ug/l	
100-41-4	Ethylbenzene	180 U	500	180	ug/l	
76-13-1	Freon 113	240 U	500	240	ug/l	
591-78-6	2-Hexanone	1000 U	5000	1000	ug/l	
98-82-8	Isopropylbenzene	110 U	500	110	ug/l	
79-20-9	Methyl Acetate	2500 U	10000	2500	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0594-068.0-20211223		
Lab Sample ID:	FA91983-4	**Date Sampled:**	12/23/21
Matrix:	AQ - Ground Water	**Date Received:**	12/23/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	1000 U	2500	1000	ug/l	
74-87-3	Methyl Chloride	250 U	1000	250	ug/l	
75-09-2	Methylene Chloride	1000 U	2500	1000	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	500 U	2500	500	ug/l	
1634-04-4	Methyl Tert Butyl Ether	110 U	500	110	ug/l	
100-42-5	Styrene	110 U	500	110	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	140 U	500	140	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	150 U	500	150	ug/l	
127-18-4	Tetrachloroethylene	110 U	500	110	ug/l	
108-88-3	Toluene	150 U	500	150	ug/l	
87-61-6	1,2,3-Trichlorobenzene	310 U	1000	310	ug/l	
120-82-1	1,2,4-Trichlorobenzene	250 U	1000	250	ug/l	
71-55-6	1,1,1-Trichloroethane	120 U	500	120	ug/l	
79-00-5	1,1,2-Trichloroethane	230 U	500	230	ug/l	
79-01-6	Trichloroethylene	19100	500	170	ug/l	
75-69-4	Trichlorofluoromethane	250 U	1000	250	ug/l	
75-01-4	Vinyl Chloride	200 U	500	200	ug/l	
1330-20-7	Xylene (total)	360 U	1500	360	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		83-118%
17060-07-0	1,2-Dichloroethane-D4	100%		79-125%
2037-26-5	Toluene-D8	92%		85-112%
460-00-4	4-Bromofluorobenzene	94%		83-118%

(a) Sample was not preserved to a pH < 2.
(b) Associated CCV outside of control limits low.
(c) Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0594-073.0-20211223		
Lab Sample ID:	FA91983-5	**Date Sampled:**	12/23/21
Matrix:	AQ - Ground Water	**Date Received:**	12/23/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	Y60321.D	500	12/30/21 20:52	LV	n/a	n/a	VY2510
Run #2 [b]	2P84491.D	1000	01/06/22 16:02	CF	n/a	n/a	V2P3368

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	5000 U	13000	5000	ug/l	
71-43-2	Benzene	160 U	500	160	ug/l	
74-97-5	Bromochloromethane	230 U	500	230	ug/l	
75-27-4	Bromodichloromethane	120 U	500	120	ug/l	
75-25-2	Bromoform	200 U	500	200	ug/l	
78-93-3	2-Butanone (MEK)	1000 U	2500	1000	ug/l	
75-15-0	Carbon Disulfide	270 U	1000	270	ug/l	
56-23-5	Carbon Tetrachloride	180 U	500	180	ug/l	
108-90-7	Chlorobenzene	100 U	500	100	ug/l	
75-00-3	Chloroethane	330 U	1000	330	ug/l	
67-66-3	Chloroform	150 U	500	150	ug/l	
110-82-7	Cyclohexane	200 U	500	200	ug/l	
124-48-1	Dibromochloromethane	140 U	500	140	ug/l	
96-12-8	1,2-Dibromo-3-chloropropan [c]	520 UJ	2500	520	ug/l	J
106-93-4	1,2-Dibromoethane	140 U	1000	140	ug/l	
75-71-8	Dichlorodifluoromethane	250 U	1000	250	ug/l	
95-50-1	1,2-Dichlorobenzene	160 U	500	160	ug/l	
541-73-1	1,3-Dichlorobenzene	110 U	500	110	ug/l	
106-46-7	1,4-Dichlorobenzene	130 U	500	130	ug/l	
75-34-3	1,1-Dichloroethane [d]	170 U	500	170	ug/l	
107-06-2	1,2-Dichloroethane	160 U	500	160	ug/l	
75-35-4	1,1-Dichloroethylene	160 U	500	160	ug/l	
156-59-2	cis-1,2-Dichloroethylene	3810	500	140	ug/l	
156-60-5	trans-1,2-Dichloroethylene	110 U	500	110	ug/l	
78-87-5	1,2-Dichloropropane	210 U	500	210	ug/l	
10061-01-5	cis-1,3-Dichloropropene [d]	150 U	500	150	ug/l	
10061-02-6	trans-1,3-Dichloropropene	110 U	500	110	ug/l	
100-41-4	Ethylbenzene	180 U	500	180	ug/l	
76-13-1	Freon 113	240 U	500	240	ug/l	
591-78-6	2-Hexanone	1000 U	5000	1000	ug/l	
98-82-8	Isopropylbenzene	110 U	500	110	ug/l	
79-20-9	Methyl Acetate	2500 U	10000	2500	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0594-073.0-20211223		
Lab Sample ID:	FA91983-5	**Date Sampled:**	12/23/21
Matrix:	AQ - Ground Water	**Date Received:**	12/23/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	1000 U	2500	1000	ug/l	
74-87-3	Methyl Chloride	250 U	1000	250	ug/l	
75-09-2	Methylene Chloride	1000 U	2500	1000	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	500 U	2500	500	ug/l	
1634-04-4	Methyl Tert Butyl Ether	110 U	500	110	ug/l	
100-42-5	Styrene	110 U	500	110	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	140 U	500	140	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	150 U	500	150	ug/l	
127-18-4	Tetrachloroethylene	110 U	500	110	ug/l	
108-88-3	Toluene	150 U	500	150	ug/l	
87-61-6	1,2,3-Trichlorobenzene	310 U	1000	310	ug/l	
120-82-1	1,2,4-Trichlorobenzene	250 U	1000	250	ug/l	
71-55-6	1,1,1-Trichloroethane	120 U	500	120	ug/l	
79-00-5	1,1,2-Trichloroethane	230 U	500	230	ug/l	
79-01-6	Trichloroethylene	49300 [e]	1000	350	ug/l	Q
75-69-4	Trichlorofluoromethane	250 U	1000	250	ug/l	
75-01-4	Vinyl Chloride	200 U	500	200	ug/l	
1330-20-7	Xylene (total)	360 U	1500	360	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%	101%	83-118%
17060-07-0	1,2-Dichloroethane-D4	99%	105%	79-125%
2037-26-5	Toluene-D8	93%	101%	85-112%
460-00-4	4-Bromofluorobenzene	94%	101%	83-118%

(a) Sample was not preserved to a pH < 2.
(b) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(c) Associated CCV outside of control limits low.
(d) Associated CCV outside of control limits high, sample was ND.
(e) Result is from Run# 2

U = Not detected MDL = Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range
I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0594-078.0-20211223		
Lab Sample ID:	FA91983-6	**Date Sampled:**	12/23/21
Matrix:	AQ - Ground Water	**Date Received:**	12/23/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	Y60322.D	20000	12/30/21 21:17	LV	n/a	n/a	VY2510
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	200000 U	500000	200000	ug/l	
71-43-2	Benzene	6200 U	20000	6200	ug/l	
74-97-5	Bromochloromethane	9000 U	20000	9000	ug/l	
75-27-4	Bromodichloromethane	4800 U	20000	4800	ug/l	
75-25-2	Bromoform	8100 U	20000	8100	ug/l	
78-93-3	2-Butanone (MEK)	40000 U	100000	40000	ug/l	
75-15-0	Carbon Disulfide	11000 U	40000	11000	ug/l	
56-23-5	Carbon Tetrachloride	7100 U	20000	7100	ug/l	
108-90-7	Chlorobenzene	4000 U	20000	4000	ug/l	
75-00-3	Chloroethane	13000 U	40000	13000	ug/l	
67-66-3	Chloroform	6000 U	20000	6000	ug/l	
110-82-7	Cyclohexane	7800 U	20000	7800	ug/l	
124-48-1	Dibromochloromethane	5500 U	20000	5500	ug/l	
96-12-8	1,2-Dibromo-3-chloropropan [b]	21000 UJ	100000	21000	ug/l	J
106-93-4	1,2-Dibromoethane	5500 U	40000	5500	ug/l	
75-71-8	Dichlorodifluoromethane	10000 U	40000	10000	ug/l	
95-50-1	1,2-Dichlorobenzene	6500 U	20000	6500	ug/l	
541-73-1	1,3-Dichlorobenzene	4300 U	20000	4300	ug/l	
106-46-7	1,4-Dichlorobenzene	5100 U	20000	5100	ug/l	
75-34-3	1,1-Dichloroethane [c]	6800 U	20000	6800	ug/l	
107-06-2	1,2-Dichloroethane	6200 U	20000	6200	ug/l	
75-35-4	1,1-Dichloroethylene	6400 U	20000	6400	ug/l	
156-59-2	cis-1,2-Dichloroethylene	17500	20000	5500	ug/l	I
156-60-5	trans-1,2-Dichloroethylene	4400 U	20000	4400	ug/l	
78-87-5	1,2-Dichloropropane	8500 U	20000	8500	ug/l	
10061-01-5	cis-1,3-Dichloropropene [c]	5800 U	20000	5800	ug/l	
10061-02-6	trans-1,3-Dichloropropene	4300 U	20000	4300	ug/l	
100-41-4	Ethylbenzene	7100 U	20000	7100	ug/l	
76-13-1	Freon 113	9600 U	20000	9600	ug/l	
591-78-6	2-Hexanone	40000 U	200000	40000	ug/l	
98-82-8	Isopropylbenzene	4400 U	20000	4400	ug/l	
79-20-9	Methyl Acetate	100000 U	400000	100000	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0594-078.0-20211223		
Lab Sample ID:	FA91983-6	**Date Sampled:**	12/23/21
Matrix:	AQ - Ground Water	**Date Received:**	12/23/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	40000 U	100000	40000	ug/l	
74-87-3	Methyl Chloride	10000 U	40000	10000	ug/l	
75-09-2	Methylene Chloride	40000 U	100000	40000	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	20000 U	100000	20000	ug/l	
1634-04-4	Methyl Tert Butyl Ether	4600 U	20000	4600	ug/l	
100-42-5	Styrene	4400 U	20000	4400	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	5500 U	20000	5500	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	6000 U	20000	6000	ug/l	
127-18-4	Tetrachloroethylene	4300 U	20000	4300	ug/l	
108-88-3	Toluene	6000 U	20000	6000	ug/l	
87-61-6	1,2,3-Trichlorobenzene	12000 U	40000	12000	ug/l	
120-82-1	1,2,4-Trichlorobenzene	10000 U	40000	10000	ug/l	
71-55-6	1,1,1-Trichloroethane	5000 U	20000	5000	ug/l	
79-00-5	1,1,2-Trichloroethane	9300 U	20000	9300	ug/l	
79-01-6	Trichloroethylene	1230000	20000	6900	ug/l	
75-69-4	Trichlorofluoromethane	10000 U	40000	10000	ug/l	
75-01-4	Vinyl Chloride	8200 U	20000	8200	ug/l	
1330-20-7	Xylene (total)	14000 U	60000	14000	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		83-118%
17060-07-0	1,2-Dichloroethane-D4	100%		79-125%
2037-26-5	Toluene-D8	92%		85-112%
460-00-4	4-Bromofluorobenzene	99%		83-118%

(a) Sample was not preserved to a pH < 2.
(b) Associated CCV outside of control limits low.
(c) Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0594-083.0-20211223		
Lab Sample ID:	FA91983-7	**Date Sampled:**	12/23/21
Matrix:	AQ - Ground Water	**Date Received:**	12/23/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	Y60323.D	20	12/30/21 21:41	LV	n/a	n/a	VY2510
Run #2 [b]	2P84493.D	500	01/06/22 16:33	CF	n/a	n/a	V2P3368

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	200 U	500	200	ug/l	
71-43-2	Benzene	6.2 U	20	6.2	ug/l	
74-97-5	Bromochloromethane	9.0 U	20	9.0	ug/l	
75-27-4	Bromodichloromethane	4.8 U	20	4.8	ug/l	
75-25-2	Bromoform	8.1 U	20	8.1	ug/l	
78-93-3	2-Butanone (MEK)	40 U	100	40	ug/l	
75-15-0	Carbon Disulfide	11 U	40	11	ug/l	
56-23-5	Carbon Tetrachloride	7.1 U	20	7.1	ug/l	
108-90-7	Chlorobenzene	4.0 U	20	4.0	ug/l	
75-00-3	Chloroethane	13 U	40	13	ug/l	
67-66-3	Chloroform	6.0 U	20	6.0	ug/l	
110-82-7	Cyclohexane	7.8 U	20	7.8	ug/l	
124-48-1	Dibromochloromethane	5.5 U	20	5.5	ug/l	
96-12-8	1,2-Dibromo-3-chloropropan [c]	21 UJ	100	21	ug/l	J
106-93-4	1,2-Dibromoethane	5.5 U	40	5.5	ug/l	
75-71-8	Dichlorodifluoromethane	10 U	40	10	ug/l	
95-50-1	1,2-Dichlorobenzene	6.5 U	20	6.5	ug/l	
541-73-1	1,3-Dichlorobenzene	4.3 U	20	4.3	ug/l	
106-46-7	1,4-Dichlorobenzene	5.1 U	20	5.1	ug/l	
75-34-3	1,1-Dichloroethane [d]	6.8 U	20	6.8	ug/l	
107-06-2	1,2-Dichloroethane	6.2 U	20	6.2	ug/l	
75-35-4	1,1-Dichloroethylene	12.0	20	6.4	ug/l	I
156-59-2	cis-1,2-Dichloroethylene	605	20	5.5	ug/l	
156-60-5	trans-1,2-Dichloroethylene	9.6	20	4.4	ug/l	I
78-87-5	1,2-Dichloropropane	8.5 U	20	8.5	ug/l	
10061-01-5	cis-1,3-Dichloropropene [d]	5.8 U	20	5.8	ug/l	
10061-02-6	trans-1,3-Dichloropropene	4.3 U	20	4.3	ug/l	
100-41-4	Ethylbenzene	7.1 U	20	7.1	ug/l	
76-13-1	Freon 113	21.1	20	9.6	ug/l	
591-78-6	2-Hexanone	40 U	200	40	ug/l	
98-82-8	Isopropylbenzene	4.4 U	20	4.4	ug/l	
79-20-9	Methyl Acetate	100 U	400	100	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0594-083.0-20211223		
Lab Sample ID:	FA91983-7	**Date Sampled:**	12/23/21
Matrix:	AQ - Ground Water	**Date Received:**	12/23/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	40 U	100	40	ug/l	
74-87-3	Methyl Chloride	10 U	40	10	ug/l	
75-09-2	Methylene Chloride	40 U	100	40	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	20 U	100	20	ug/l	
1634-04-4	Methyl Tert Butyl Ether	4.6 U	20	4.6	ug/l	
100-42-5	Styrene	4.4 U	20	4.4	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	5.5 U	20	5.5	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	6.0 U	20	6.0	ug/l	
127-18-4	Tetrachloroethylene	4.3 U	20	4.3	ug/l	
108-88-3	Toluene	6.0 U	20	6.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	12 U	40	12	ug/l	
120-82-1	1,2,4-Trichlorobenzene	10 U	40	10	ug/l	
71-55-6	1,1,1-Trichloroethane	5.0 U	20	5.0	ug/l	
79-00-5	1,1,2-Trichloroethane	9.3 U	20	9.3	ug/l	
79-01-6	Trichloroethylene	23400 [e]	500	170	ug/l	Q
75-69-4	Trichlorofluoromethane	10 U	40	10	ug/l	
75-01-4	Vinyl Chloride	12.8	20	8.2	ug/l	I
1330-20-7	Xylene (total)	14 U	60	14	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%	100%	83-118%
17060-07-0	1,2-Dichloroethane-D4	101%	101%	79-125%
2037-26-5	Toluene-D8	93%	100%	85-112%
460-00-4	4-Bromofluorobenzene	94%	99%	83-118%

(a) Sample was not preserved to a pH < 2.
(b) Sample was not preserved to a pH < 2 and contained bubbles > 6mm. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(c) Associated CCV outside of control limits low.
(d) Associated CCV outside of control limits high, sample was ND.
(e) Result is from Run# 2

U = Not detected MDL = Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range
I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: LC34-DPT0594-088.0-20211223
Lab Sample ID: FA91983-8
Matrix: AQ - Ground Water
Method: SW846 8260B
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Date Sampled: 12/23/21
Date Received: 12/23/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	Y60324.D	200	12/30/21 22:06	LV	n/a	n/a	VY2510
Run #2 [b]	2P84495.D	2000	01/06/22 17:05	CF	n/a	n/a	V2P3368

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	2000 U	5000	2000	ug/l	
71-43-2	Benzene	62 U	200	62	ug/l	
74-97-5	Bromochloromethane	90 U	200	90	ug/l	
75-27-4	Bromodichloromethane	48 U	200	48	ug/l	
75-25-2	Bromoform	81 U	200	81	ug/l	
78-93-3	2-Butanone (MEK)	400 U	1000	400	ug/l	
75-15-0	Carbon Disulfide	110 U	400	110	ug/l	
56-23-5	Carbon Tetrachloride	71 U	200	71	ug/l	
108-90-7	Chlorobenzene	40 U	200	40	ug/l	
75-00-3	Chloroethane	130 U	400	130	ug/l	
67-66-3	Chloroform	60 U	200	60	ug/l	
110-82-7	Cyclohexane	78 U	200	78	ug/l	
124-48-1	Dibromochloromethane	55 U	200	55	ug/l	
96-12-8	1,2-Dibromo-3-chloropropan [c]	210 UJ	1000	210	ug/l	J
106-93-4	1,2-Dibromoethane	55 U	400	55	ug/l	
75-71-8	Dichlorodifluoromethane	100 U	400	100	ug/l	
95-50-1	1,2-Dichlorobenzene	65 U	200	65	ug/l	
541-73-1	1,3-Dichlorobenzene	43 U	200	43	ug/l	
106-46-7	1,4-Dichlorobenzene	51 U	200	51	ug/l	
75-34-3	1,1-Dichloroethane [d]	68 U	200	68	ug/l	
107-06-2	1,2-Dichloroethane	62 U	200	62	ug/l	
75-35-4	1,1-Dichloroethylene	88.1	200	64	ug/l	I
156-59-2	cis-1,2-Dichloroethylene	4090	200	55	ug/l	
156-60-5	trans-1,2-Dichloroethylene	44 U	200	44	ug/l	
78-87-5	1,2-Dichloropropane	85 U	200	85	ug/l	
10061-01-5	cis-1,3-Dichloropropene [d]	58 U	200	58	ug/l	
10061-02-6	trans-1,3-Dichloropropene	43 U	200	43	ug/l	
100-41-4	Ethylbenzene	71 U	200	71	ug/l	
76-13-1	Freon 113	96 U	200	96	ug/l	
591-78-6	2-Hexanone	400 U	2000	400	ug/l	
98-82-8	Isopropylbenzene	44 U	200	44	ug/l	
79-20-9	Methyl Acetate	1000 U	4000	1000	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0594-088.0-20211223		
Lab Sample ID:	FA91983-8	**Date Sampled:**	12/23/21
Matrix:	AQ - Ground Water	**Date Received:**	12/23/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	400 U	1000	400	ug/l	
74-87-3	Methyl Chloride	100 U	400	100	ug/l	
75-09-2	Methylene Chloride	400 U	1000	400	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	200 U	1000	200	ug/l	
1634-04-4	Methyl Tert Butyl Ether	46 U	200	46	ug/l	
100-42-5	Styrene	44 U	200	44	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	55 U	200	55	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	60 U	200	60	ug/l	
127-18-4	Tetrachloroethylene	43 U	200	43	ug/l	
108-88-3	Toluene	60 U	200	60	ug/l	
87-61-6	1,2,3-Trichlorobenzene	120 U	400	120	ug/l	
120-82-1	1,2,4-Trichlorobenzene	100 U	400	100	ug/l	
71-55-6	1,1,1-Trichloroethane	50 U	200	50	ug/l	
79-00-5	1,1,2-Trichloroethane	93 U	200	93	ug/l	
79-01-6	Trichloroethylene [e]	116000	200	69	ug/l	L
75-69-4	Trichlorofluoromethane	100 U	400	100	ug/l	
75-01-4	Vinyl Chloride	185	200	82	ug/l	I
1330-20-7	Xylene (total)	140 U	600	140	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%	102%	83-118%
17060-07-0	1,2-Dichloroethane-D4	98%	99%	79-125%
2037-26-5	Toluene-D8	90%	101%	85-112%
460-00-4	4-Bromofluorobenzene	95%	105%	83-118%

(a) Sample was not preserved to a pH < 2.
(b) Sample was not preserved to a pH < 2 and contained significant headspace. Confirmation run beyond holdtime.
(c) Associated CCV outside of control limits low.
(d) Associated CCV outside of control limits high, sample was ND.
(e) No sample available for reanalysis.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0594-093.0-20211223		
Lab Sample ID:	FA91983-9	**Date Sampled:**	12/23/21
Matrix:	AQ - Ground Water	**Date Received:**	12/23/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	Y60325.D	500	12/30/21 22:31	LV	n/a	n/a	VY2510
Run #2 [b]	2P84497.D	5000	01/06/22 17:37	CF	n/a	n/a	V2P3368

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	5000 U	13000	5000	ug/l	
71-43-2	Benzene	160 U	500	160	ug/l	
74-97-5	Bromochloromethane	230 U	500	230	ug/l	
75-27-4	Bromodichloromethane	120 U	500	120	ug/l	
75-25-2	Bromoform	200 U	500	200	ug/l	
78-93-3	2-Butanone (MEK)	1000 U	2500	1000	ug/l	
75-15-0	Carbon Disulfide	270 U	1000	270	ug/l	
56-23-5	Carbon Tetrachloride	180 U	500	180	ug/l	
108-90-7	Chlorobenzene	100 U	500	100	ug/l	
75-00-3	Chloroethane	330 U	1000	330	ug/l	
67-66-3	Chloroform	150 U	500	150	ug/l	
110-82-7	Cyclohexane	200 U	500	200	ug/l	
124-48-1	Dibromochloromethane	140 U	500	140	ug/l	
96-12-8	1,2-Dibromo-3-chloropropan [c]	520 UJ	2500	520	ug/l	J
106-93-4	1,2-Dibromoethane	140 U	1000	140	ug/l	
75-71-8	Dichlorodifluoromethane	250 U	1000	250	ug/l	
95-50-1	1,2-Dichlorobenzene	160 U	500	160	ug/l	
541-73-1	1,3-Dichlorobenzene	110 U	500	110	ug/l	
106-46-7	1,4-Dichlorobenzene	130 U	500	130	ug/l	
75-34-3	1,1-Dichloroethane [d]	170 U	500	170	ug/l	
107-06-2	1,2-Dichloroethane	160 U	500	160	ug/l	
75-35-4	1,1-Dichloroethylene	160 U	500	160	ug/l	
156-59-2	cis-1,2-Dichloroethylene	8700	500	140	ug/l	
156-60-5	trans-1,2-Dichloroethylene	110 U	500	110	ug/l	
78-87-5	1,2-Dichloropropane	210 U	500	210	ug/l	
10061-01-5	cis-1,3-Dichloropropene [d]	150 U	500	150	ug/l	
10061-02-6	trans-1,3-Dichloropropene	110 U	500	110	ug/l	
100-41-4	Ethylbenzene	180 U	500	180	ug/l	
76-13-1	Freon 113	382	500	240	ug/l	I
591-78-6	2-Hexanone	1000 U	5000	1000	ug/l	
98-82-8	Isopropylbenzene	110 U	500	110	ug/l	
79-20-9	Methyl Acetate	2500 U	10000	2500	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0594-093.0-20211223		
Lab Sample ID:	FA91983-9	**Date Sampled:**	12/23/21
Matrix:	AQ - Ground Water	**Date Received:**	12/23/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	1000 U	2500	1000	ug/l	
74-87-3	Methyl Chloride	250 U	1000	250	ug/l	
75-09-2	Methylene Chloride	1000 U	2500	1000	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	500 U	2500	500	ug/l	
1634-04-4	Methyl Tert Butyl Ether	110 U	500	110	ug/l	
100-42-5	Styrene	110 U	500	110	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	140 U	500	140	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	150 U	500	150	ug/l	
127-18-4	Tetrachloroethylene	110 U	500	110	ug/l	
108-88-3	Toluene	150 U	500	150	ug/l	
87-61-6	1,2,3-Trichlorobenzene	310 U	1000	310	ug/l	
120-82-1	1,2,4-Trichlorobenzene	250 U	1000	250	ug/l	
71-55-6	1,1,1-Trichloroethane	120 U	500	120	ug/l	
79-00-5	1,1,2-Trichloroethane	230 U	500	230	ug/l	
79-01-6	Trichloroethylene	229000 [e]	5000	1700	ug/l	Q
75-69-4	Trichlorofluoromethane	250 U	1000	250	ug/l	
75-01-4	Vinyl Chloride	255	500	200	ug/l	I
1330-20-7	Xylene (total)	360 U	1500	360	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%	101%	83-118%
17060-07-0	1,2-Dichloroethane-D4	102%	99%	79-125%
2037-26-5	Toluene-D8	91%	100%	85-112%
460-00-4	4-Bromofluorobenzene	95%	103%	83-118%

(a) Sample was not preserved to a pH < 2.
(b) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(c) Associated CCV outside of control limits low.
(d) Associated CCV outside of control limits high, sample was ND.
(e) Result is from Run# 2

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0594-098.0-20211223		
Lab Sample ID:	FA91983-10	**Date Sampled:**	12/23/21
Matrix:	AQ - Ground Water	**Date Received:**	12/23/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	Y60326.D	500	12/30/21 22:55	LV	n/a	n/a	VY2510
Run #2 [b]	2P84499.D	25000	01/06/22 18:08	CF	n/a	n/a	V2P3368

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	5000 U	13000	5000	ug/l	
71-43-2	Benzene	160 U	500	160	ug/l	
74-97-5	Bromochloromethane	230 U	500	230	ug/l	
75-27-4	Bromodichloromethane	120 U	500	120	ug/l	
75-25-2	Bromoform	200 U	500	200	ug/l	
78-93-3	2-Butanone (MEK)	1000 U	2500	1000	ug/l	
75-15-0	Carbon Disulfide	270 U	1000	270	ug/l	
56-23-5	Carbon Tetrachloride	180 U	500	180	ug/l	
108-90-7	Chlorobenzene	100 U	500	100	ug/l	
75-00-3	Chloroethane	330 U	1000	330	ug/l	
67-66-3	Chloroform	150 U	500	150	ug/l	
110-82-7	Cyclohexane	200 U	500	200	ug/l	
124-48-1	Dibromochloromethane	140 U	500	140	ug/l	
96-12-8	1,2-Dibromo-3-chloropropan [c]	520 UJ	2500	520	ug/l	J
106-93-4	1,2-Dibromoethane	140 U	1000	140	ug/l	
75-71-8	Dichlorodifluoromethane	250 U	1000	250	ug/l	
95-50-1	1,2-Dichlorobenzene	160 U	500	160	ug/l	
541-73-1	1,3-Dichlorobenzene	110 U	500	110	ug/l	
106-46-7	1,4-Dichlorobenzene	130 U	500	130	ug/l	
75-34-3	1,1-Dichloroethane [d]	170 U	500	170	ug/l	
107-06-2	1,2-Dichloroethane	160 U	500	160	ug/l	
75-35-4	1,1-Dichloroethylene	231	500	160	ug/l	I
156-59-2	cis-1,2-Dichloroethylene	17100	500	140	ug/l	
156-60-5	trans-1,2-Dichloroethylene	323	500	110	ug/l	I
78-87-5	1,2-Dichloropropane	210 U	500	210	ug/l	
10061-01-5	cis-1,3-Dichloropropene [d]	150 U	500	150	ug/l	
10061-02-6	trans-1,3-Dichloropropene	110 U	500	110	ug/l	
100-41-4	Ethylbenzene	180 U	500	180	ug/l	
76-13-1	Freon 113	4930	500	240	ug/l	
591-78-6	2-Hexanone	1000 U	5000	1000	ug/l	
98-82-8	Isopropylbenzene	110 U	500	110	ug/l	
79-20-9	Methyl Acetate	2500 U	10000	2500	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0594-098.0-20211223		
Lab Sample ID:	FA91983-10	**Date Sampled:**	12/23/21
Matrix:	AQ - Ground Water	**Date Received:**	12/23/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	1000 U	2500	1000	ug/l	
74-87-3	Methyl Chloride	250 U	1000	250	ug/l	
75-09-2	Methylene Chloride	1000 U	2500	1000	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	500 U	2500	500	ug/l	
1634-04-4	Methyl Tert Butyl Ether	110 U	500	110	ug/l	
100-42-5	Styrene	110 U	500	110	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	140 U	500	140	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	150 U	500	150	ug/l	
127-18-4	Tetrachloroethylene	110 U	500	110	ug/l	
108-88-3	Toluene	150 U	500	150	ug/l	
87-61-6	1,2,3-Trichlorobenzene	310 U	1000	310	ug/l	
120-82-1	1,2,4-Trichlorobenzene	250 U	1000	250	ug/l	
71-55-6	1,1,1-Trichloroethane	120 U	500	120	ug/l	
79-00-5	1,1,2-Trichloroethane	230 U	500	230	ug/l	
79-01-6	Trichloroethylene [e]	2630000 [f]	25000	8600	ug/l	LQ
75-69-4	Trichlorofluoromethane	250 U	1000	250	ug/l	
75-01-4	Vinyl Chloride	627	500	200	ug/l	
1330-20-7	Xylene (total)	360 U	1500	360	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%	102%	83-118%
17060-07-0	1,2-Dichloroethane-D4	100%	103%	79-125%
2037-26-5	Toluene-D8	92%	102%	85-112%
460-00-4	4-Bromofluorobenzene	93%	105%	83-118%

(a) Sample was not preserved to a pH < 2.
(b) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(c) Associated CCV outside of control limits low.
(d) Associated CCV outside of control limits high, sample was ND.
(e) No sample available for reanalysis.
(f) Result is from Run# 2

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: LC34-DPT0593-063.0-20211222
Lab Sample ID: FA91983-11
Matrix: AQ - Ground Water
Method: SW846 8260B
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Date Sampled: 12/22/21
Date Received: 12/23/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	C0153381.D	10	01/14/22 08:01	LV	n/a	n/a	VC6189
Run #2 [b]	2P84407.D	50	01/04/22 22:05	CF	n/a	n/a	V2P3365

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	500 UQ [c]	1300	500	ug/l	Q
71-43-2	Benzene	16 UQ [c]	50	16	ug/l	Q
74-97-5	Bromochloromethane	23 UQ [c]	50	23	ug/l	Q
75-27-4	Bromodichloromethane	12 UQ [c]	50	12	ug/l	Q
75-25-2	Bromoform	20 UQ [c]	50	20	ug/l	Q
78-93-3	2-Butanone (MEK)	100 UQ [c]	250	100	ug/l	Q
75-15-0	Carbon Disulfide	27 UQ [c]	100	27	ug/l	Q
56-23-5	Carbon Tetrachloride	18 UQ [c]	50	18	ug/l	Q
108-90-7	Chlorobenzene	10 UQ [c]	50	10	ug/l	Q
75-00-3	Chloroethane [d]	33 UQ [c]	100	33	ug/l	Q
67-66-3	Chloroform	15 UQ [c]	50	15	ug/l	Q
110-82-7	Cyclohexane	20 UQ [c]	50	20	ug/l	Q
124-48-1	Dibromochloromethane	14 UQ [c]	50	14	ug/l	Q
96-12-8	1,2-Dibromo-3-chloropropane	52 UQ [c]	250	52	ug/l	Q
106-93-4	1,2-Dibromoethane	14 UQ [c]	100	14	ug/l	Q
75-71-8	Dichlorodifluoromethane	25 UQ [c]	100	25	ug/l	Q
95-50-1	1,2-Dichlorobenzene	16 UQ [c]	50	16	ug/l	Q
541-73-1	1,3-Dichlorobenzene	11 UQ [c]	50	11	ug/l	Q
106-46-7	1,4-Dichlorobenzene	13 UQ [c]	50	13	ug/l	Q
75-34-3	1,1-Dichloroethane	17 UQ [c]	50	17	ug/l	Q
107-06-2	1,2-Dichloroethane	16 UQ [c]	50	16	ug/l	Q
75-35-4	1,1-Dichloroethylene	16 UQ [c]	50	16	ug/l	Q
156-59-2	cis-1,2-Dichloroethylene	262 [c]	50	14	ug/l	Q
156-60-5	trans-1,2-Dichloroethylene	11 UQ [c]	50	11	ug/l	Q
78-87-5	1,2-Dichloropropane	21 UQ [c]	50	21	ug/l	Q
10061-01-5	cis-1,3-Dichloropropene	15 UQ [c]	50	15	ug/l	Q
10061-02-6	trans-1,3-Dichloropropene	11 UQ [c]	50	11	ug/l	Q
100-41-4	Ethylbenzene	18 UQ [c]	50	18	ug/l	Q
76-13-1	Freon 113	24 UQ [c]	50	24	ug/l	Q
591-78-6	2-Hexanone	100 UQ [c]	500	100	ug/l	Q
98-82-8	Isopropylbenzene	11 UQ [c]	50	11	ug/l	Q
79-20-9	Methyl Acetate	250 UQ [c]	1000	250	ug/l	Q

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0593-063.0-20211222		
Lab Sample ID:	FA91983-11	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/23/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	100 UQ [c]	250	100	ug/l	Q
74-87-3	Methyl Chloride	25 UQ [c]	100	25	ug/l	Q
75-09-2	Methylene Chloride [e]	100 UQJ [c]	250	100	ug/l	QJ
108-10-1	4-Methyl-2-pentanone (MIBK)	50 UQ [c]	250	50	ug/l	Q
1634-04-4	Methyl Tert Butyl Ether	11 UQ [c]	50	11	ug/l	Q
100-42-5	Styrene	11 UQ [c]	50	11	ug/l	Q
630-20-6	1,1,1,2-Tetrachloroethane	14 UQ [c]	50	14	ug/l	Q
79-34-5	1,1,2,2-Tetrachloroethane	15 UQ [c]	50	15	ug/l	Q
127-18-4	Tetrachloroethylene	11 UQ [c]	50	11	ug/l	Q
108-88-3	Toluene	15 UQ [c]	50	15	ug/l	Q
87-61-6	1,2,3-Trichlorobenzene	31 UQ [c]	100	31	ug/l	Q
120-82-1	1,2,4-Trichlorobenzene	25 UQ [c]	100	25	ug/l	Q
71-55-6	1,1,1-Trichloroethane	12 UQ [c]	50	12	ug/l	Q
79-00-5	1,1,2-Trichloroethane	23 UQ [c]	50	23	ug/l	Q
79-01-6	Trichloroethylene	899 [c]	50	17	ug/l	Q
75-69-4	Trichlorofluoromethane [d]	25 UQ [c]	100	25	ug/l	Q
75-01-4	Vinyl Chloride	20 UQ [c]	50	20	ug/l	Q
1330-20-7	Xylene (total)	36 UQ [c]	150	36	ug/l	Q

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	89%	104%	83-118%
17060-07-0	1,2-Dichloroethane-D4	93%	110%	79-125%
2037-26-5	Toluene-D8	99%	101%	85-112%
460-00-4	4-Bromofluorobenzene	106%	101%	83-118%

(a) Sample was not preserved to a pH < 2. Confirmation run beyond holdtime.
(b) Sample was not preserved to a pH < 2 and was analyzed beyond hold time; reported results are considered minimum values.
(c) Result is from Run# 2
(d) Associated CCV outside of control limits high.
(e) Associated CCV outside of control limits low.

Report of Analysis

Client Sample ID:	LC34-DPT0593-068.0-20211222		
Lab Sample ID:	FA91983-12	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/23/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	C0153382.D	2	01/14/22 08:24	LV	n/a	n/a	VC6189
Run #2 [b]	2P84409.D	10	01/04/22 22:37	CF	n/a	n/a	V2P3365

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	100 UQ [c]	250	100	ug/l	Q
71-43-2	Benzene	3.1 UQ [c]	10	3.1	ug/l	Q
74-97-5	Bromochloromethane	4.5 UQ [c]	10	4.5	ug/l	Q
75-27-4	Bromodichloromethane	2.4 UQ [c]	10	2.4	ug/l	Q
75-25-2	Bromoform	4.1 UQ [c]	10	4.1	ug/l	Q
78-93-3	2-Butanone (MEK)	20 UQ [c]	50	20	ug/l	Q
75-15-0	Carbon Disulfide	5.3 UQ [c]	20	5.3	ug/l	Q
56-23-5	Carbon Tetrachloride	3.6 UQ [c]	10	3.6	ug/l	Q
108-90-7	Chlorobenzene	2.0 UQ [c]	10	2.0	ug/l	Q
75-00-3	Chloroethane [d]	6.7 UQ [c]	20	6.7	ug/l	Q
67-66-3	Chloroform	3.0 UQ [c]	10	3.0	ug/l	Q
110-82-7	Cyclohexane	3.9 UQ [c]	10	3.9	ug/l	Q
124-48-1	Dibromochloromethane	2.8 UQ [c]	10	2.8	ug/l	Q
96-12-8	1,2-Dibromo-3-chloropropane	10 UQ [c]	50	10	ug/l	Q
106-93-4	1,2-Dibromoethane	2.8 UQ [c]	20	2.8	ug/l	Q
75-71-8	Dichlorodifluoromethane	5.0 UQ [c]	20	5.0	ug/l	Q
95-50-1	1,2-Dichlorobenzene	3.2 UQ [c]	10	3.2	ug/l	Q
541-73-1	1,3-Dichlorobenzene	2.2 UQ [c]	10	2.2	ug/l	Q
106-46-7	1,4-Dichlorobenzene	2.6 UQ [c]	10	2.6	ug/l	Q
75-34-3	1,1-Dichloroethane	3.4 UQ [c]	10	3.4	ug/l	Q
107-06-2	1,2-Dichloroethane	3.1 UQ [c]	10	3.1	ug/l	Q
75-35-4	1,1-Dichloroethylene	3.2 UQ [c]	10	3.2	ug/l	Q
156-59-2	cis-1,2-Dichloroethylene	35.3 [c]	10	2.8	ug/l	Q
156-60-5	trans-1,2-Dichloroethylene	2.2 UQ [c]	10	2.2	ug/l	Q
78-87-5	1,2-Dichloropropane	4.3 UQ [c]	10	4.3	ug/l	Q
10061-01-5	cis-1,3-Dichloropropene	2.9 UQ [c]	10	2.9	ug/l	Q
10061-02-6	trans-1,3-Dichloropropene	2.1 UQ [c]	10	2.1	ug/l	Q
100-41-4	Ethylbenzene	3.6 UQ [c]	10	3.6	ug/l	Q
76-13-1	Freon 113	4.8 UQ [c]	10	4.8	ug/l	Q
591-78-6	2-Hexanone	20 UQ [c]	100	20	ug/l	Q
98-82-8	Isopropylbenzene	2.2 UQ [c]	10	2.2	ug/l	Q
79-20-9	Methyl Acetate	50 UQ [c]	200	50	ug/l	Q

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0593-068.0-20211222		
Lab Sample ID:	FA91983-12	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/23/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	20 UQ [c]	50	20	ug/l	Q
74-87-3	Methyl Chloride	5.0 UQ [c]	20	5.0	ug/l	Q
75-09-2	Methylene Chloride [e]	20 UQJ [c]	50	20	ug/l	QJ
108-10-1	4-Methyl-2-pentanone (MIBK)	10 UQ [c]	50	10	ug/l	Q
1634-04-4	Methyl Tert Butyl Ether	2.3 UQ [c]	10	2.3	ug/l	Q
100-42-5	Styrene	2.2 UQ [c]	10	2.2	ug/l	Q
630-20-6	1,1,1,2-Tetrachloroethane	2.8 UQ [c]	10	2.8	ug/l	Q
79-34-5	1,1,2,2-Tetrachloroethane	3.0 UQ [c]	10	3.0	ug/l	Q
127-18-4	Tetrachloroethylene	2.2 UQ [c]	10	2.2	ug/l	Q
108-88-3	Toluene	3.0 UQ [c]	10	3.0	ug/l	Q
87-61-6	1,2,3-Trichlorobenzene	6.1 UQ [c]	20	6.1	ug/l	Q
120-82-1	1,2,4-Trichlorobenzene	5.0 UQ [c]	20	5.0	ug/l	Q
71-55-6	1,1,1-Trichloroethane	2.5 UQ [c]	10	2.5	ug/l	Q
79-00-5	1,1,2-Trichloroethane	4.7 UQ [c]	10	4.7	ug/l	Q
79-01-6	Trichloroethylene	129 [c]	10	3.5	ug/l	Q
75-69-4	Trichlorofluoromethane [d]	5.0 UQ [c]	20	5.0	ug/l	Q
75-01-4	Vinyl Chloride	4.1 UQ [c]	10	4.1	ug/l	Q
1330-20-7	Xylene (total)	7.2 UQ [c]	30	7.2	ug/l	Q

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	90%	105%	83-118%
17060-07-0	1,2-Dichloroethane-D4	90%	107%	79-125%
2037-26-5	Toluene-D8	105%	101%	85-112%
460-00-4	4-Bromofluorobenzene	108%	103%	83-118%

(a) Sample was not preserved to a pH < 2. Confirmation run beyond holdtime.
(b) Sample was not preserved to a pH < 2 and was analyzed beyond hold time; reported results are considered minimum values.
(c) Result is from Run# 2
(d) Associated CCV outside of control limits high.
(e) Associated CCV outside of control limits low.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: LC34-DPT0593-073.0-20211222
Lab Sample ID: FA91983-13
Matrix: AQ - Ground Water
Method: SW846 8260B
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Date Sampled: 12/22/21
Date Received: 12/23/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	C0153383.D	2	01/14/22 08:48	LV	n/a	n/a	VC6189
Run #2 [b]	2P84411.D	10	01/04/22 23:09	CF	n/a	n/a	V2P3365

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	100 UQ [c]	250	100	ug/l	Q
71-43-2	Benzene	3.1 UQ [c]	10	3.1	ug/l	Q
74-97-5	Bromochloromethane	4.5 UQ [c]	10	4.5	ug/l	Q
75-27-4	Bromodichloromethane	2.4 UQ [c]	10	2.4	ug/l	Q
75-25-2	Bromoform	4.1 UQ [c]	10	4.1	ug/l	Q
78-93-3	2-Butanone (MEK)	20 UQ [c]	50	20	ug/l	Q
75-15-0	Carbon Disulfide	5.3 UQ [c]	20	5.3	ug/l	Q
56-23-5	Carbon Tetrachloride	3.6 UQ [c]	10	3.6	ug/l	Q
108-90-7	Chlorobenzene	2.0 UQ [c]	10	2.0	ug/l	Q
75-00-3	Chloroethane [d]	6.7 UQ [c]	20	6.7	ug/l	Q
67-66-3	Chloroform	3.0 UQ [c]	10	3.0	ug/l	Q
110-82-7	Cyclohexane	3.9 UQ [c]	10	3.9	ug/l	Q
124-48-1	Dibromochloromethane	2.8 UQ [c]	10	2.8	ug/l	Q
96-12-8	1,2-Dibromo-3-chloropropane	10 UQ [c]	50	10	ug/l	Q
106-93-4	1,2-Dibromoethane	2.8 UQ [c]	20	2.8	ug/l	Q
75-71-8	Dichlorodifluoromethane	5.0 UQ [c]	20	5.0	ug/l	Q
95-50-1	1,2-Dichlorobenzene	3.2 UQ [c]	10	3.2	ug/l	Q
541-73-1	1,3-Dichlorobenzene	2.2 UQ [c]	10	2.2	ug/l	Q
106-46-7	1,4-Dichlorobenzene	2.6 UQ [c]	10	2.6	ug/l	Q
75-34-3	1,1-Dichloroethane	3.4 UQ [c]	10	3.4	ug/l	Q
107-06-2	1,2-Dichloroethane	3.1 UQ [c]	10	3.1	ug/l	Q
75-35-4	1,1-Dichloroethylene	3.2 UQ [c]	10	3.2	ug/l	Q
156-59-2	cis-1,2-Dichloroethylene	14.3 [c]	10	2.8	ug/l	Q
156-60-5	trans-1,2-Dichloroethylene	2.2 UQ [c]	10	2.2	ug/l	Q
78-87-5	1,2-Dichloropropane	4.3 UQ [c]	10	4.3	ug/l	Q
10061-01-5	cis-1,3-Dichloropropene	2.9 UQ [c]	10	2.9	ug/l	Q
10061-02-6	trans-1,3-Dichloropropene	2.1 UQ [c]	10	2.1	ug/l	Q
100-41-4	Ethylbenzene	3.6 UQ [c]	10	3.6	ug/l	Q
76-13-1	Freon 113	4.8 UQ [c]	10	4.8	ug/l	Q
591-78-6	2-Hexanone	20 UQ [c]	100	20	ug/l	Q
98-82-8	Isopropylbenzene	2.2 UQ [c]	10	2.2	ug/l	Q
79-20-9	Methyl Acetate	50 UQ [c]	200	50	ug/l	Q

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0593-073.0-20211222		
Lab Sample ID:	FA91983-13	**Date Sampled:**	12/22/21
Matrix:	AQ - Ground Water	**Date Received:**	12/23/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	20 UQ [c]	50	20	ug/l	Q
74-87-3	Methyl Chloride	5.0 UQ [c]	20	5.0	ug/l	Q
75-09-2	Methylene Chloride [e]	20 UQJ [c]	50	20	ug/l	QJ
108-10-1	4-Methyl-2-pentanone (MIBK)	10 UQ [c]	50	10	ug/l	Q
1634-04-4	Methyl Tert Butyl Ether	2.3 UQ [c]	10	2.3	ug/l	Q
100-42-5	Styrene	2.2 UQ [c]	10	2.2	ug/l	Q
630-20-6	1,1,1,2-Tetrachloroethane	2.8 UQ [c]	10	2.8	ug/l	Q
79-34-5	1,1,2,2-Tetrachloroethane	3.0 UQ [c]	10	3.0	ug/l	Q
127-18-4	Tetrachloroethylene	2.2 UQ [c]	10	2.2	ug/l	Q
108-88-3	Toluene	3.0 UQ [c]	10	3.0	ug/l	Q
87-61-6	1,2,3-Trichlorobenzene	6.1 UQ [c]	20	6.1	ug/l	Q
120-82-1	1,2,4-Trichlorobenzene	5.0 UQ [c]	20	5.0	ug/l	Q
71-55-6	1,1,1-Trichloroethane	2.5 UQ [c]	10	2.5	ug/l	Q
79-00-5	1,1,2-Trichloroethane	4.7 UQ [c]	10	4.7	ug/l	Q
79-01-6	Trichloroethylene	135 [c]	10	3.5	ug/l	Q
75-69-4	Trichlorofluoromethane [d]	5.0 UQ [c]	20	5.0	ug/l	Q
75-01-4	Vinyl Chloride	4.1 UQ [c]	10	4.1	ug/l	Q
1330-20-7	Xylene (total)	7.2 UQ [c]	30	7.2	ug/l	Q

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	91%	103%	83-118%
17060-07-0	1,2-Dichloroethane-D4	85%	106%	79-125%
2037-26-5	Toluene-D8	104%	101%	85-112%
460-00-4	4-Bromofluorobenzene	105%	103%	83-118%

(a) Sample was not preserved to a pH < 2. Confirmation run beyond holdtime.
(b) Sample was not preserved to a pH < 2 and was analyzed beyond hold time; reported results are considered minimum values.
(c) Result is from Run# 2
(d) Associated CCV outside of control limits high.
(e) Associated CCV outside of control limits low.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0593-078.0-20211223		
Lab Sample ID:	FA91983-14	**Date Sampled:**	12/23/21
Matrix:	AQ - Ground Water	**Date Received:**	12/23/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	2P84487.D	1	01/06/22 14:58	CF	n/a	n/a	V2P3368
Run #2 [b]	Y60327.D	5	12/30/21 23:20	LV	n/a	n/a	VY2510

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	50 U [c]	130	50	ug/l	
71-43-2	Benzene	1.6 U [c]	5.0	1.6	ug/l	
74-97-5	Bromochloromethane	2.3 U [c]	5.0	2.3	ug/l	
75-27-4	Bromodichloromethane	1.2 U [c]	5.0	1.2	ug/l	
75-25-2	Bromoform	2.0 U [c]	5.0	2.0	ug/l	
78-93-3	2-Butanone (MEK)	10 U [c]	25	10	ug/l	
75-15-0	Carbon Disulfide	2.7 U [c]	10	2.7	ug/l	
56-23-5	Carbon Tetrachloride	1.8 U [c]	5.0	1.8	ug/l	
108-90-7	Chlorobenzene	1.0 U [c]	5.0	1.0	ug/l	
75-00-3	Chloroethane	3.3 U [c]	10	3.3	ug/l	
67-66-3	Chloroform	1.5 U [c]	5.0	1.5	ug/l	
110-82-7	Cyclohexane	2.0 U [c]	5.0	2.0	ug/l	
124-48-1	Dibromochloromethane	1.4 U [c]	5.0	1.4	ug/l	
96-12-8	1,2-Dibromo-3-chloropropan [d]	5.2 UJ [c]	25	5.2	ug/l	J
106-93-4	1,2-Dibromoethane	1.4 U [c]	10	1.4	ug/l	
75-71-8	Dichlorodifluoromethane	2.5 U [c]	10	2.5	ug/l	
95-50-1	1,2-Dichlorobenzene	1.6 U [c]	5.0	1.6	ug/l	
541-73-1	1,3-Dichlorobenzene	1.1 U [c]	5.0	1.1	ug/l	
106-46-7	1,4-Dichlorobenzene	1.3 U [c]	5.0	1.3	ug/l	
75-34-3	1,1-Dichloroethane [e]	1.7 U [c]	5.0	1.7	ug/l	
107-06-2	1,2-Dichloroethane	1.6 U [c]	5.0	1.6	ug/l	
75-35-4	1,1-Dichloroethylene	1.6 U [c]	5.0	1.6	ug/l	
156-59-2	cis-1,2-Dichloroethylene	15.2 [c]	5.0	1.4	ug/l	
156-60-5	trans-1,2-Dichloroethylene	1.7 [c]	5.0	1.1	ug/l	I
78-87-5	1,2-Dichloropropane	2.1 U [c]	5.0	2.1	ug/l	
10061-01-5	cis-1,3-Dichloropropene [e]	1.5 U [c]	5.0	1.5	ug/l	
10061-02-6	trans-1,3-Dichloropropene	1.1 U [c]	5.0	1.1	ug/l	
100-41-4	Ethylbenzene	1.8 U [c]	5.0	1.8	ug/l	
76-13-1	Freon 113	2.4 U [c]	5.0	2.4	ug/l	
591-78-6	2-Hexanone	10 U [c]	50	10	ug/l	
98-82-8	Isopropylbenzene	1.1 U [c]	5.0	1.1	ug/l	
79-20-9	Methyl Acetate	25 U [c]	100	25	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0593-078.0-20211223		
Lab Sample ID:	FA91983-14	**Date Sampled:**	12/23/21
Matrix:	AQ - Ground Water	**Date Received:**	12/23/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	10 U [c]	25	10	ug/l	
74-87-3	Methyl Chloride	2.5 U [c]	10	2.5	ug/l	
75-09-2	Methylene Chloride	10 U [c]	25	10	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	5.0 U [c]	25	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	1.1 U [c]	5.0	1.1	ug/l	
100-42-5	Styrene	1.1 U [c]	5.0	1.1	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	1.4 U [c]	5.0	1.4	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	1.5 U [c]	5.0	1.5	ug/l	
127-18-4	Tetrachloroethylene	1.1 U [c]	5.0	1.1	ug/l	
108-88-3	Toluene	1.5 U [c]	5.0	1.5	ug/l	
87-61-6	1,2,3-Trichlorobenzene	3.1 U [c]	10	3.1	ug/l	
120-82-1	1,2,4-Trichlorobenzene	2.5 U [c]	10	2.5	ug/l	
71-55-6	1,1,1-Trichloroethane	1.2 U [c]	5.0	1.2	ug/l	
79-00-5	1,1,2-Trichloroethane	2.3 U [c]	5.0	2.3	ug/l	
79-01-6	Trichloroethylene	57.9 [c]	5.0	1.7	ug/l	
75-69-4	Trichlorofluoromethane	2.5 U [c]	10	2.5	ug/l	
75-01-4	Vinyl Chloride	2.0 U [c]	5.0	2.0	ug/l	
1330-20-7	Xylene (total)	3.6 U [c]	15	3.6	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%	100%	83-118%
17060-07-0	1,2-Dichloroethane-D4	99%	103%	79-125%
2037-26-5	Toluene-D8	100%	92%	85-112%
460-00-4	4-Bromofluorobenzene	102%	95%	83-118%

(a) Sample was not preserved to a pH < 2. Confirmation run beyond holdtime.
(b) Sample was not preserved to a pH < 2.
(c) Result is from Run# 2
(d) Associated CCV outside of control limits low.
(e) Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range
I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0593-083.0-20211223		
Lab Sample ID:	FA91983-15	**Date Sampled:**	12/23/21
Matrix:	AQ - Ground Water	**Date Received:**	12/23/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	Y60328.D	5	12/30/21 23:44	LV	n/a	n/a	VY2510
Run #2 [b]	2P84501.D	100	01/06/22 18:40	CF	n/a	n/a	V2P3368

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	50 U	130	50	ug/l	
71-43-2	Benzene	1.6 U	5.0	1.6	ug/l	
74-97-5	Bromochloromethane	2.3 U	5.0	2.3	ug/l	
75-27-4	Bromodichloromethane	1.2 U	5.0	1.2	ug/l	
75-25-2	Bromoform	2.0 U	5.0	2.0	ug/l	
78-93-3	2-Butanone (MEK)	10 U	25	10	ug/l	
75-15-0	Carbon Disulfide	2.7 U	10	2.7	ug/l	
56-23-5	Carbon Tetrachloride	1.8 U	5.0	1.8	ug/l	
108-90-7	Chlorobenzene	1.0 U	5.0	1.0	ug/l	
75-00-3	Chloroethane	3.3 U	10	3.3	ug/l	
67-66-3	Chloroform	1.5 U	5.0	1.5	ug/l	
110-82-7	Cyclohexane	2.0 U	5.0	2.0	ug/l	
124-48-1	Dibromochloromethane	1.4 U	5.0	1.4	ug/l	
96-12-8	1,2-Dibromo-3-chloropropan [c]	5.2 UJ	25	5.2	ug/l	J
106-93-4	1,2-Dibromoethane	1.4 U	10	1.4	ug/l	
75-71-8	Dichlorodifluoromethane	2.5 U	10	2.5	ug/l	
95-50-1	1,2-Dichlorobenzene	1.6 U	5.0	1.6	ug/l	
541-73-1	1,3-Dichlorobenzene	1.1 U	5.0	1.1	ug/l	
106-46-7	1,4-Dichlorobenzene	1.3 U	5.0	1.3	ug/l	
75-34-3	1,1-Dichloroethane [d]	1.7 U	5.0	1.7	ug/l	
107-06-2	1,2-Dichloroethane	1.6 U	5.0	1.6	ug/l	
75-35-4	1,1-Dichloroethylene	1.6 U	5.0	1.6	ug/l	
156-59-2	cis-1,2-Dichloroethylene	59.9	5.0	1.4	ug/l	
156-60-5	trans-1,2-Dichloroethylene	1.1 U	5.0	1.1	ug/l	
78-87-5	1,2-Dichloropropane	2.1 U	5.0	2.1	ug/l	
10061-01-5	cis-1,3-Dichloropropene [d]	1.5 U	5.0	1.5	ug/l	
10061-02-6	trans-1,3-Dichloropropene	1.1 U	5.0	1.1	ug/l	
100-41-4	Ethylbenzene	1.8 U	5.0	1.8	ug/l	
76-13-1	Freon 113	3.7	5.0	2.4	ug/l	I
591-78-6	2-Hexanone	10 U	50	10	ug/l	
98-82-8	Isopropylbenzene	1.1 U	5.0	1.1	ug/l	
79-20-9	Methyl Acetate	25 U	100	25	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0593-083.0-20211223		
Lab Sample ID:	FA91983-15	**Date Sampled:**	12/23/21
Matrix:	AQ - Ground Water	**Date Received:**	12/23/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	10 U	25	10	ug/l	
74-87-3	Methyl Chloride	2.5 U	10	2.5	ug/l	
75-09-2	Methylene Chloride	10 U	25	10	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	5.0 U	25	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	1.1 U	5.0	1.1	ug/l	
100-42-5	Styrene	1.1 U	5.0	1.1	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	1.4 U	5.0	1.4	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	1.5 U	5.0	1.5	ug/l	
127-18-4	Tetrachloroethylene	1.1 U	5.0	1.1	ug/l	
108-88-3	Toluene	1.5 U	5.0	1.5	ug/l	
87-61-6	1,2,3-Trichlorobenzene	3.1 U	10	3.1	ug/l	
120-82-1	1,2,4-Trichlorobenzene	2.5 U	10	2.5	ug/l	
71-55-6	1,1,1-Trichloroethane	1.2 U	5.0	1.2	ug/l	
79-00-5	1,1,2-Trichloroethane	2.3 U	5.0	2.3	ug/l	
79-01-6	Trichloroethylene	8860 [e]	100	35	ug/l	Q
75-69-4	Trichlorofluoromethane	2.5 U	10	2.5	ug/l	
75-01-4	Vinyl Chloride	10.2	5.0	2.0	ug/l	
1330-20-7	Xylene (total)	3.6 U	15	3.6	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%	100%	83-118%
17060-07-0	1,2-Dichloroethane-D4	101%	101%	79-125%
2037-26-5	Toluene-D8	92%	101%	85-112%
460-00-4	4-Bromofluorobenzene	93%	102%	83-118%

(a) Sample was not preserved to a pH < 2.
(b) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(c) Associated CCV outside of control limits low.
(d) Associated CCV outside of control limits high, sample was ND.
(e) Result is from Run# 2

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0593-088.0-20211223		
Lab Sample ID:	FA91983-16	**Date Sampled:**	12/23/21
Matrix:	AQ - Ground Water	**Date Received:**	12/23/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	Y60329.D	5	12/31/21 00:09	LV	n/a	n/a	VY2510
Run #2 [b]	2P84530.D	10	01/07/22 17:14	CF	n/a	n/a	V2P3369

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	50 U	130	50	ug/l	
71-43-2	Benzene	1.6 U	5.0	1.6	ug/l	
74-97-5	Bromochloromethane	2.3 U	5.0	2.3	ug/l	
75-27-4	Bromodichloromethane	1.2 U	5.0	1.2	ug/l	
75-25-2	Bromoform	2.0 U	5.0	2.0	ug/l	
78-93-3	2-Butanone (MEK)	10 U	25	10	ug/l	
75-15-0	Carbon Disulfide	2.7 U	10	2.7	ug/l	
56-23-5	Carbon Tetrachloride	1.8 U	5.0	1.8	ug/l	
108-90-7	Chlorobenzene	1.0 U	5.0	1.0	ug/l	
75-00-3	Chloroethane	3.3 U	10	3.3	ug/l	
67-66-3	Chloroform	1.5 U	5.0	1.5	ug/l	
110-82-7	Cyclohexane	2.0 U	5.0	2.0	ug/l	
124-48-1	Dibromochloromethane	1.4 U	5.0	1.4	ug/l	
96-12-8	1,2-Dibromo-3-chloropropan [c]	5.2 UJ	25	5.2	ug/l	J
106-93-4	1,2-Dibromoethane	1.4 U	10	1.4	ug/l	
75-71-8	Dichlorodifluoromethane	2.5 U	10	2.5	ug/l	
95-50-1	1,2-Dichlorobenzene	1.6 U	5.0	1.6	ug/l	
541-73-1	1,3-Dichlorobenzene	1.1 U	5.0	1.1	ug/l	
106-46-7	1,4-Dichlorobenzene	1.3 U	5.0	1.3	ug/l	
75-34-3	1,1-Dichloroethane [d]	1.7 U	5.0	1.7	ug/l	
107-06-2	1,2-Dichloroethane	1.6 U	5.0	1.6	ug/l	
75-35-4	1,1-Dichloroethylene	1.6 U	5.0	1.6	ug/l	
156-59-2	cis-1,2-Dichloroethylene	56.1	5.0	1.4	ug/l	
156-60-5	trans-1,2-Dichloroethylene	1.1 U	5.0	1.1	ug/l	
78-87-5	1,2-Dichloropropane	2.1 U	5.0	2.1	ug/l	
10061-01-5	cis-1,3-Dichloropropene [d]	1.5 U	5.0	1.5	ug/l	
10061-02-6	trans-1,3-Dichloropropene	1.1 U	5.0	1.1	ug/l	
100-41-4	Ethylbenzene	1.8 U	5.0	1.8	ug/l	
76-13-1	Freon 113	2.4 U	5.0	2.4	ug/l	
591-78-6	2-Hexanone	10 U	50	10	ug/l	
98-82-8	Isopropylbenzene	1.1 U	5.0	1.1	ug/l	
79-20-9	Methyl Acetate	25 U	100	25	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0593-088.0-20211223		
Lab Sample ID:	FA91983-16	**Date Sampled:**	12/23/21
Matrix:	AQ - Ground Water	**Date Received:**	12/23/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	10 U	25	10	ug/l	
74-87-3	Methyl Chloride	2.5 U	10	2.5	ug/l	
75-09-2	Methylene Chloride	10 U	25	10	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	5.0 U	25	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	1.1 U	5.0	1.1	ug/l	
100-42-5	Styrene	1.1 U	5.0	1.1	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	1.4 U	5.0	1.4	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	1.5 U	5.0	1.5	ug/l	
127-18-4	Tetrachloroethylene	1.1 U	5.0	1.1	ug/l	
108-88-3	Toluene	1.5 U	5.0	1.5	ug/l	
87-61-6	1,2,3-Trichlorobenzene	3.1 U	10	3.1	ug/l	
120-82-1	1,2,4-Trichlorobenzene	2.5 U	10	2.5	ug/l	
71-55-6	1,1,1-Trichloroethane	1.2 U	5.0	1.2	ug/l	
79-00-5	1,1,2-Trichloroethane	2.3 U	5.0	2.3	ug/l	
79-01-6	Trichloroethylene [e]	961	5.0	1.7	ug/l	L
75-69-4	Trichlorofluoromethane	2.5 U	10	2.5	ug/l	
75-01-4	Vinyl Chloride	3.9	5.0	2.0	ug/l	I
1330-20-7	Xylene (total)	3.6 U	15	3.6	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%	104%	83-118%
17060-07-0	1,2-Dichloroethane-D4	102%	105%	79-125%
2037-26-5	Toluene-D8	90%	99%	85-112%
460-00-4	4-Bromofluorobenzene	93%	104%	83-118%

(a) Sample was not preserved to pH < 2.
(b) Sample vial contained significant headspace and was not preserved to pH < 2. Confirmation run beyond holdtime. Results from different vials are not consistent; higher results were reported.
(c) Associated CCV outside of control limits low.
(d) Associated CCV outside of control limits high, sample was ND.
(e) Results from different vials are not consistent; higher results were reported.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0593-093.0-20211223		
Lab Sample ID:	FA91983-17	**Date Sampled:**	12/23/21
Matrix:	AQ - Ground Water	**Date Received:**	12/23/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	Y60330.D	5	12/31/21 00:33	LV	n/a	n/a	VY2510
Run #2 [b]	2P84532.D	100	01/07/22 17:46	CF	n/a	n/a	V2P3369

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	50 U	130	50	ug/l	
71-43-2	Benzene	1.6 U	5.0	1.6	ug/l	
74-97-5	Bromochloromethane	2.3 U	5.0	2.3	ug/l	
75-27-4	Bromodichloromethane	1.2 U	5.0	1.2	ug/l	
75-25-2	Bromoform	2.0 U	5.0	2.0	ug/l	
78-93-3	2-Butanone (MEK)	10 U	25	10	ug/l	
75-15-0	Carbon Disulfide	2.7 U	10	2.7	ug/l	
56-23-5	Carbon Tetrachloride	1.8 U	5.0	1.8	ug/l	
108-90-7	Chlorobenzene	1.0 U	5.0	1.0	ug/l	
75-00-3	Chloroethane	3.3 U	10	3.3	ug/l	
67-66-3	Chloroform	1.5 U	5.0	1.5	ug/l	
110-82-7	Cyclohexane	2.0 U	5.0	2.0	ug/l	
124-48-1	Dibromochloromethane	1.4 U	5.0	1.4	ug/l	
96-12-8	1,2-Dibromo-3-chloropropan [c]	5.2 UJ	25	5.2	ug/l	J
106-93-4	1,2-Dibromoethane	1.4 U	10	1.4	ug/l	
75-71-8	Dichlorodifluoromethane	2.5 U	10	2.5	ug/l	
95-50-1	1,2-Dichlorobenzene	1.6 U	5.0	1.6	ug/l	
541-73-1	1,3-Dichlorobenzene	1.1 U	5.0	1.1	ug/l	
106-46-7	1,4-Dichlorobenzene	1.3 U	5.0	1.3	ug/l	
75-34-3	1,1-Dichloroethane [d]	1.7 U	5.0	1.7	ug/l	
107-06-2	1,2-Dichloroethane	1.6 U	5.0	1.6	ug/l	
75-35-4	1,1-Dichloroethylene	1.6 U	5.0	1.6	ug/l	
156-59-2	cis-1,2-Dichloroethylene	264	5.0	1.4	ug/l	
156-60-5	trans-1,2-Dichloroethylene	2.0	5.0	1.1	ug/l	I
78-87-5	1,2-Dichloropropane	2.1 U	5.0	2.1	ug/l	
10061-01-5	cis-1,3-Dichloropropene [d]	1.5 U	5.0	1.5	ug/l	
10061-02-6	trans-1,3-Dichloropropene	1.1 U	5.0	1.1	ug/l	
100-41-4	Ethylbenzene	1.8 U	5.0	1.8	ug/l	
76-13-1	Freon 113	2.4 U	5.0	2.4	ug/l	
591-78-6	2-Hexanone	10 U	50	10	ug/l	
98-82-8	Isopropylbenzene	1.1 U	5.0	1.1	ug/l	
79-20-9	Methyl Acetate	25 U	100	25	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0593-093.0-20211223		
Lab Sample ID:	FA91983-17	**Date Sampled:**	12/23/21
Matrix:	AQ - Ground Water	**Date Received:**	12/23/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	10 U	25	10	ug/l	
74-87-3	Methyl Chloride	2.5 U	10	2.5	ug/l	
75-09-2	Methylene Chloride	10 U	25	10	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	5.0 U	25	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	1.1 U	5.0	1.1	ug/l	
100-42-5	Styrene	1.1 U	5.0	1.1	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	1.4 U	5.0	1.4	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	1.5 U	5.0	1.5	ug/l	
127-18-4	Tetrachloroethylene	1.1 U	5.0	1.1	ug/l	
108-88-3	Toluene	1.5 U	5.0	1.5	ug/l	
87-61-6	1,2,3-Trichlorobenzene	3.1 U	10	3.1	ug/l	
120-82-1	1,2,4-Trichlorobenzene	2.5 U	10	2.5	ug/l	
71-55-6	1,1,1-Trichloroethane	1.2 U	5.0	1.2	ug/l	
79-00-5	1,1,2-Trichloroethane	2.3 U	5.0	2.3	ug/l	
79-01-6	Trichloroethylene	3610 [e]	100	35	ug/l	Q
75-69-4	Trichlorofluoromethane	2.5 U	10	2.5	ug/l	
75-01-4	Vinyl Chloride	17.2	5.0	2.0	ug/l	
1330-20-7	Xylene (total)	3.6 U	15	3.6	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%	102%	83-118%
17060-07-0	1,2-Dichloroethane-D4	102%	103%	79-125%
2037-26-5	Toluene-D8	93%	101%	85-112%
460-00-4	4-Bromofluorobenzene	93%	106%	83-118%

(a) Sample was not preserved to pH < 2.
(b) Sample was not preserved to pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(c) Associated CCV outside of control limits low.
(d) Associated CCV outside of control limits high, sample was ND.
(e) Result is from Run# 2

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0593-098.0-20211223		
Lab Sample ID:	FA91983-18	**Date Sampled:**	12/23/21
Matrix:	AQ - Ground Water	**Date Received:**	12/23/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	Y60331.D	5	12/31/21 00:58	LV	n/a	n/a	VY2510
Run #2 [b]	2P84534.D	25	01/07/22 18:18	CF	n/a	n/a	V2P3369

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	50 U	130	50	ug/l	
71-43-2	Benzene	1.6 U	5.0	1.6	ug/l	
74-97-5	Bromochloromethane	2.3 U	5.0	2.3	ug/l	
75-27-4	Bromodichloromethane	1.2 U	5.0	1.2	ug/l	
75-25-2	Bromoform	2.0 U	5.0	2.0	ug/l	
78-93-3	2-Butanone (MEK)	10 U	25	10	ug/l	
75-15-0	Carbon Disulfide	2.7 U	10	2.7	ug/l	
56-23-5	Carbon Tetrachloride	1.8 U	5.0	1.8	ug/l	
108-90-7	Chlorobenzene	1.0 U	5.0	1.0	ug/l	
75-00-3	Chloroethane	3.3 U	10	3.3	ug/l	
67-66-3	Chloroform	1.5 U	5.0	1.5	ug/l	
110-82-7	Cyclohexane	2.0 U	5.0	2.0	ug/l	
124-48-1	Dibromochloromethane	1.4 U	5.0	1.4	ug/l	
96-12-8	1,2-Dibromo-3-chloropropan [c]	5.2 UJ	25	5.2	ug/l	J
106-93-4	1,2-Dibromoethane	1.4 U	10	1.4	ug/l	
75-71-8	Dichlorodifluoromethane	2.5 U	10	2.5	ug/l	
95-50-1	1,2-Dichlorobenzene	1.6 U	5.0	1.6	ug/l	
541-73-1	1,3-Dichlorobenzene	1.1 U	5.0	1.1	ug/l	
106-46-7	1,4-Dichlorobenzene	1.3 U	5.0	1.3	ug/l	
75-34-3	1,1-Dichloroethane [d]	1.7 U	5.0	1.7	ug/l	
107-06-2	1,2-Dichloroethane	1.6 U	5.0	1.6	ug/l	
75-35-4	1,1-Dichloroethylene	1.6 U	5.0	1.6	ug/l	
156-59-2	cis-1,2-Dichloroethylene	16.6 [e]	25	6.9	ug/l	IQ
156-60-5	trans-1,2-Dichloroethylene	1.1 U	5.0	1.1	ug/l	
78-87-5	1,2-Dichloropropane	2.1 U	5.0	2.1	ug/l	
10061-01-5	cis-1,3-Dichloropropene [d]	1.5 U	5.0	1.5	ug/l	
10061-02-6	trans-1,3-Dichloropropene	1.1 U	5.0	1.1	ug/l	
100-41-4	Ethylbenzene	1.8 U	5.0	1.8	ug/l	
76-13-1	Freon 113	2.4 U	5.0	2.4	ug/l	
591-78-6	2-Hexanone	10 U	50	10	ug/l	
98-82-8	Isopropylbenzene	1.1 U	5.0	1.1	ug/l	
79-20-9	Methyl Acetate	25 U	100	25	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-DPT0593-098.0-20211223		
Lab Sample ID:	FA91983-18	**Date Sampled:**	12/23/21
Matrix:	AQ - Ground Water	**Date Received:**	12/23/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	10 U	25	10	ug/l	
74-87-3	Methyl Chloride	2.5 U	10	2.5	ug/l	
75-09-2	Methylene Chloride	10 U	25	10	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	5.0 U	25	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	1.1 U	5.0	1.1	ug/l	
100-42-5	Styrene	1.1 U	5.0	1.1	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	1.4 U	5.0	1.4	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	1.5 U	5.0	1.5	ug/l	
127-18-4	Tetrachloroethylene	1.1 U	5.0	1.1	ug/l	
108-88-3	Toluene	1.5 U	5.0	1.5	ug/l	
87-61-6	1,2,3-Trichlorobenzene	3.1 U	10	3.1	ug/l	
120-82-1	1,2,4-Trichlorobenzene	2.5 U	10	2.5	ug/l	
71-55-6	1,1,1-Trichloroethane	1.2 U	5.0	1.2	ug/l	
79-00-5	1,1,2-Trichloroethane	2.3 U	5.0	2.3	ug/l	
79-01-6	Trichloroethylene	737 [e]	25	8.6	ug/l	Q
75-69-4	Trichlorofluoromethane	2.5 U	10	2.5	ug/l	
75-01-4	Vinyl Chloride	4.8	5.0	2.0	ug/l	I
1330-20-7	Xylene (total)	3.6 U	15	3.6	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%	103%	83-118%
17060-07-0	1,2-Dichloroethane-D4	101%	108%	79-125%
2037-26-5	Toluene-D8	90%	101%	85-112%
460-00-4	4-Bromofluorobenzene	96%	104%	83-118%

(a) Sample was not preserved to pH < 2.
(b) Sample was not preserved to pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(c) Associated CCV outside of control limits low.
(d) Associated CCV outside of control limits high, sample was ND.
(e) Result is from Run# 2

U = Not detected MDL = Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range
I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

5

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

FA91983

Tetra Tech, Inc.

CHAIN OF CUSTODY | NUMBER No. 3163 | PAGE 1 OF 2

PROJECT NO: 112C00985	FACILITY: LC34	PROJECT MANAGER: Mark Jonnet	PHONE NUMBER: 412-921-8622	LABORATORY NAME AND CONTACT: SGS
SAMPLERS (SIGNATURE):		FIELD OPERATIONS LEADER: Dan Forester	PHONE NUMBER: 304-780-1426	ADDRESS:
		CARRIER/WAYBILL NUMBER:		CITY, STATE: Orlando FL

STANDARD TAT ☒
RUSH TAT ☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

	DATE YEAR 2021	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS: VOCs 8260	CONTAINER TYPE PLASTIC (P) or GLASS (G): G	PRESERVATIVE USED: N/A	COMMENTS
1	22 Dec	1610	LC34-DPT0594-053.0-20211222		51	55	GW	G	3	X			
2		1620	LC34-DPT0594-058.0-20211222		56	60							
3	X	1640	LC34-DPT0594-063.0-20211222		61	65							
4	23 Dec	0720	LC34-DPT0594-068.0-20211223		66	70							
5		0740	LC34-DPT0594-073.0-20211223		71	75							
6		0800	LC34-DPT0594-078.0-20211223		76	80							
7		0820	LC34-DPT0594-083.0-20211223		81	85							
8		0845	LC34-DPT0594-088.0-20211223		86	90							
9		0910	LC34-DPT0594-093.0-20211223		91	95							
10	X	0940	LC34-DPT0594-098.0-20211223		96	100	X	C	X	X			

INITIAL ASSESSMENT:

LABEL VERIFICATION: JM 1.4.22

1. RELINQUISHED BY		DATE 12/23/21	TIME 1236	1. RECEIVED BY		DATE	TIME
2. RELINQUISHED BY		DATE	TIME	2. RECEIVED BY		DATE	TIME
3. RELINQUISHED BY		DATE	TIME	3. RECEIVED BY		DATE	TIME

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TINUS-001

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FA91983: Chain of Custody
Page 1 of 3

FA91983

Tetra Tech, Inc. CHAIN OF CUSTODY | NUMBER No. 1364 | PAGE 2 OF 2

PROJECT NO: 112b08985	FACILITY: LC34	PROJECT MANAGER Mark Jonnet	PHONE NUMBER 4129218622	LABORATORY NAME AND CONTACT: SGS
SAMPLERS (SIGNATURE) DAN FOUSTER		FIELD OPERATIONS LEADER Dan Forsley	PHONE NUMBER 304-780-1426	ADDRESS
		CARRIER/WAYBILL NUMBER		CITY, STATE Orlando FL

STANDARD TAT ☒
RUSH TAT ☐ ☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

	DATE YEAR 2021	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	CONTAINER TYPE PLASTIC (P) or GLASS (G)	PRESERVATIVE USED	TYPE OF ANALYSIS VOCs 8260	NA	6	COMMENTS
11 22	Dec	1605	LC34-DPT0593-063.0-20211222		61	65	GW	G	3			X			
12		1625	LC34-DPT0593-068.0-20211222		66	70									
13		1650	LC34-DPT0593-073.0-20211222		71	75									
14 23	Dec	0725	LC34-DPT0593-078.0-20211223		76	80									
15		0755	LC34-DPT0593-083.0-20211223		81	85									
16		0825	LC34-DPT0593-088.0-20211223		86	90									
17		0900	LC34-DPT0593-093.0-20211223		91	95									
18		0930	LC34-DPT0593-098.0-20211223		96	100									

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	12/23/21	1236	1. RECEIVED BY		
2. RELINQUISHED BY			2. RECEIVED BY		
3. RELINQUISHED BY			3. RECEIVED BY		

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY) 4/02R
FORM NO. TtNUS-001

SGS Sample Receipt Summary

Job Number: FA91983 **Client:** TETRA TECH **Project:** 112G08985

Date / Time Received: 12/23/2021 12:36:00 PM **Delivery Method:** DROP OFF **Airbill #'s:**

Therm ID: IR 1; **Therm CF:** 0.2; **# of Coolers:** 1

Cooler Temps (Raw Measured) °C: Cooler 1: (1.2);

Cooler Temps (Corrected) °C: Cooler 1: (1.4);

Cooler Information	Y	or	N
1. Custody Seals Present	☑		☐
2. Custody Seals Intact	☑		☐
3. Temp criteria achieved	☑		☐
4. Cooler temp verification	IR Gun		
5. Cooler media	Ice (Bag)		

Trip Blank Information	Y	or	N	N/A
1. Trip Blank present / cooler	☐		☑	☐
2. Trip Blank listed on COC	☐		☑	☐

	W	or	S	N/A
3. Type Of TB Received	☐		☐	☑

Sample Information	Y	or	N	N/A
1. Sample labels present on bottles	☑		☐	
2. Samples preserved properly	☑		☐	
3. Sufficient volume/containers recvd for analysis:	☑		☐	
4. Condition of sample	Intact			
5. Sample recvd within HT	☑		☐	
6. Dates/Times/IDs on COC match Sample Label	☑		☐	
7. VOCs have headspace	☐		☑	☐
8. Bottles received for unspecified tests	☐		☑	
9. Compositing instructions clear	☐		☐	☑
10. Voa Soil Kits/Jars received past 48hrs?	☐		☐	☑
11. % Solids Jar received?	☐		☐	☑
12. Residual Chlorine Present?	☐		☐	☑

Misc. Information

Number of Encores: 25-Gram _____ 5-Gram _____ Number of 5035 Field Kits: _____ Number of Lab Filtered Metals: _____

Test Strip Lot #s: pH 0-3 230315 pH 10-12 219813A Other: (Specify) _____ _____

Residual Chlorine Test Strip Lot #: _____

Comments

SM001
Rev. Date 05/24/17

Technician: STEPHENP Date: 12/23/2021 12:36:00 Reviewer: _____ Date: _____

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FA91983: Chain of Custody
Page 3 of 3

MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: FA91983
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VY2510-MB	Y60313.D	1	12/30/21	LV	n/a	n/a	VY2510

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91983-4, FA91983-5, FA91983-6, FA91983-7, FA91983-8, FA91983-9, FA91983-10, FA91983-14, FA91983-15, FA91983-16, FA91983-17, FA91983-18

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
71-43-2	Benzene	ND	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.24	ug/l	
75-25-2	Bromoform	ND	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	ND	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.67	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
110-82-7	Cyclohexane	ND	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.36	ug/l	
76-13-1	Freon 113	ND	1.0	0.48	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	ND	20	5.0	ug/l	
74-83-9	Methyl Bromide	ND	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	ND	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	ND	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.0	ug/l	

Method Blank Summary

Job Number: FA91983
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VY2510-MB	Y60313.D	1	12/30/21	LV	n/a	n/a	VY2510

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91983-4, FA91983-5, FA91983-6, FA91983-7, FA91983-8, FA91983-9, FA91983-10, FA91983-14, FA91983-15, FA91983-16, FA91983-17, FA91983-18

CAS No.	Compound	Result	RL	MDL	Units	Q
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.23	ug/l	
100-42-5	Styrene	ND	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	98%	83-118%
17060-07-0	1,2-Dichloroethane-D4	97%	79-125%
2037-26-5	Toluene-D8	91%	85-112%
460-00-4	4-Bromofluorobenzene	94%	83-118%

Method Blank Summary

Job Number: FA91983
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2P3365-MB	2P84379.D	1	01/04/22	CF	n/a	n/a	V2P3365

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91983-1, FA91983-2, FA91983-3, FA91983-11, FA91983-12, FA91983-13

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
71-43-2	Benzene	ND	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.24	ug/l	
75-25-2	Bromoform	ND	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	ND	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.67	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
110-82-7	Cyclohexane	ND	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.36	ug/l	
76-13-1	Freon 113	ND	1.0	0.48	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	ND	20	5.0	ug/l	
74-83-9	Methyl Bromide	ND	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	ND	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	ND	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.0	ug/l	

Method Blank Summary

Job Number: FA91983
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2P3365-MB	2P84379.D	1	01/04/22	CF	n/a	n/a	V2P3365

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91983-1, FA91983-2, FA91983-3, FA91983-11, FA91983-12, FA91983-13

CAS No.	Compound	Result	RL	MDL	Units	Q
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.23	ug/l	
100-42-5	Styrene	ND	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	100%	83-118%
17060-07-0	1,2-Dichloroethane-D4	97%	79-125%
2037-26-5	Toluene-D8	100%	85-112%
460-00-4	4-Bromofluorobenzene	104%	83-118%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
124-38-9	Carbon dioxide	1.03	15	ug/l	JN
75-21-8	Ethylene oxide	1.04	37	ug/l	JN
	Total TIC, Volatile		37	ug/l	J

Method Blank Summary

Job Number: FA91983
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2P3368-MB	2P84485.D	1	01/06/22	CF	n/a	n/a	V2P3368

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91983-5, FA91983-7, FA91983-9, FA91983-10, FA91983-15

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	1.0	0.35	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	101%	83-118%
17060-07-0	1,2-Dichloroethane-D4	100%	79-125%
2037-26-5	Toluene-D8	102%	85-112%
460-00-4	4-Bromofluorobenzene	105%	83-118%

Method Blank Summary

Job Number: FA91983
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2P3369-MB	2P84514.D	1	01/07/22	CF	n/a	n/a	V2P3369

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91983-17, FA91983-18

CAS No.	Compound	Result	RL	MDL	Units	Q
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.28	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.35	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	102%	83-118%
17060-07-0	1,2-Dichloroethane-D4	99%	79-125%
2037-26-5	Toluene-D8	99%	85-112%
460-00-4	4-Bromofluorobenzene	103%	83-118%

Method Blank Summary

Job Number: FA91983
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VC6189-MB	C0153363.D	1	01/14/22	LV	n/a	n/a	VC6189

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91983-1, FA91983-2

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	1.0	0.35	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	93%	83-118%
17060-07-0	1,2-Dichloroethane-D4	92%	79-125%
2037-26-5	Toluene-D8	102%	85-112%
460-00-4	4-Bromofluorobenzene	108%	83-118%

Blank Spike Summary

Job Number: FA91983
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VY2510-BS	Y60310.D	1	12/30/21	LV	n/a	n/a	VY2510

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91983-4, FA91983-5, FA91983-6, FA91983-7, FA91983-8, FA91983-9, FA91983-10, FA91983-14, FA91983-15, FA91983-16, FA91983-17, FA91983-18

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	150	120	50-147
71-43-2	Benzene	25	29.9	120	81-122
74-97-5	Bromochloromethane	25	25.1	100	76-123
75-27-4	Bromodichloromethane	25	28.5	114	79-123
75-25-2	Bromoform	25	22.5	90	66-123
78-93-3	2-Butanone (MEK)	125	145	116	56-143
75-15-0	Carbon Disulfide	25	26.7	107	66-148
56-23-5	Carbon Tetrachloride	25	28.2	113	76-136
108-90-7	Chlorobenzene	25	25.5	102	82-124
75-00-3	Chloroethane	25	25.1	100	62-144
67-66-3	Chloroform	25	28.6	114	80-124
110-82-7	Cyclohexane	25	28.2	113	73-138
124-48-1	Dibromochloromethane	25	22.9	92	78-122
96-12-8	1,2-Dibromo-3-chloropropane	25	19.6	78	64-123
106-93-4	1,2-Dibromoethane	25	23.2	93	75-120
75-71-8	Dichlorodifluoromethane	25	22.0	88	42-167
95-50-1	1,2-Dichlorobenzene	25	22.8	91	82-124
541-73-1	1,3-Dichlorobenzene	25	24.3	97	84-125
106-46-7	1,4-Dichlorobenzene	25	23.4	94	78-120
75-34-3	1,1-Dichloroethane	25	29.5	118	81-122
107-06-2	1,2-Dichloroethane	25	27.7	111	75-125
75-35-4	1,1-Dichloroethylene	25	28.6	114	78-137
156-59-2	cis-1,2-Dichloroethylene	25	28.8	115	78-120
156-60-5	trans-1,2-Dichloroethylene	25	28.9	116	76-127
78-87-5	1,2-Dichloropropane	25	29.6	118	76-124
10061-01-5	cis-1,3-Dichloropropene	25	29.5	118	75-118
10061-02-6	trans-1,3-Dichloropropene	25	24.8	99	80-120
100-41-4	Ethylbenzene	25	27.1	108	81-121
76-13-1	Freon 113	25	27.6	110	72-134
591-78-6	2-Hexanone	125	129	103	61-129
98-82-8	Isopropylbenzene	25	29.5	118	83-132
79-20-9	Methyl Acetate	125	124	99	65-126
74-83-9	Methyl Bromide	25	26.9	108	59-143
74-87-3	Methyl Chloride	25	26.4	106	50-159
75-09-2	Methylene Chloride	25	24.4	98	69-135
108-10-1	4-Methyl-2-pentanone (MIBK)	125	128	102	66-122

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA91983
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VY2510-BS	Y60310.D	1	12/30/21	LV	n/a	n/a	VY2510

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91983-4, FA91983-5, FA91983-6, FA91983-7, FA91983-8, FA91983-9, FA91983-10, FA91983-14, FA91983-15, FA91983-16, FA91983-17, FA91983-18

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
1634-04-4	Methyl Tert Butyl Ether	25	25.2	101	72-117
100-42-5	Styrene	25	25.6	102	78-119
630-20-6	1,1,1,2-Tetrachloroethane	25	25.8	103	77-122
79-34-5	1,1,2,2-Tetrachloroethane	25	21.9	88	72-120
127-18-4	Tetrachloroethylene	25	25.7	103	76-135
108-88-3	Toluene	25	26.4	106	80-120
87-61-6	1,2,3-Trichlorobenzene	25	22.5	90	68-131
120-82-1	1,2,4-Trichlorobenzene	25	23.1	92	73-129
71-55-6	1,1,1-Trichloroethane	25	27.9	112	75-130
79-00-5	1,1,2-Trichloroethane	25	24.0	96	76-119
79-01-6	Trichloroethylene	25	29.0	116	81-126
75-69-4	Trichlorofluoromethane	25	26.9	108	71-156
75-01-4	Vinyl Chloride	25	28.5	114	69-159
1330-20-7	Xylene (total)	75	80.7	108	80-126

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	104%	83-118%
17060-07-0	1,2-Dichloroethane-D4	99%	79-125%
2037-26-5	Toluene-D8	94%	85-112%
460-00-4	4-Bromofluorobenzene	96%	83-118%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA91983
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2P3365-BS	2P84375.D	1	01/04/22	CF	n/a	n/a	V2P3365

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91983-1, FA91983-2, FA91983-3, FA91983-11, FA91983-12, FA91983-13

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	123	98	50-147
71-43-2	Benzene	25	25.4	102	81-122
74-97-5	Bromochloromethane	25	22.5	90	76-123
75-27-4	Bromodichloromethane	25	24.5	98	79-123
75-25-2	Bromoform	25	22.5	90	66-123
78-93-3	2-Butanone (MEK)	125	118	94	56-143
75-15-0	Carbon Disulfide	25	22.7	91	66-148
56-23-5	Carbon Tetrachloride	25	25.3	101	76-136
108-90-7	Chlorobenzene	25	25.6	102	82-124
75-00-3	Chloroethane	25	29.0	116	62-144
67-66-3	Chloroform	25	24.6	98	80-124
110-82-7	Cyclohexane	25	24.3	97	73-138
124-48-1	Dibromochloromethane	25	23.8	95	78-122
96-12-8	1,2-Dibromo-3-chloropropane	25	24.3	97	64-123
106-93-4	1,2-Dibromoethane	25	25.4	102	75-120
75-71-8	Dichlorodifluoromethane	25	19.3	77	42-167
95-50-1	1,2-Dichlorobenzene	25	26.4	106	82-124
541-73-1	1,3-Dichlorobenzene	25	26.9	108	84-125
106-46-7	1,4-Dichlorobenzene	25	25.8	103	78-120
75-34-3	1,1-Dichloroethane	25	25.1	100	81-122
107-06-2	1,2-Dichloroethane	25	25.1	100	75-125
75-35-4	1,1-Dichloroethylene	25	26.1	104	78-137
156-59-2	cis-1,2-Dichloroethylene	25	24.8	99	78-120
156-60-5	trans-1,2-Dichloroethylene	25	25.1	100	76-127
78-87-5	1,2-Dichloropropane	25	23.7	95	76-124
10061-01-5	cis-1,3-Dichloropropene	25	24.2	97	75-118
10061-02-6	trans-1,3-Dichloropropene	25	25.0	100	80-120
100-41-4	Ethylbenzene	25	26.8	107	81-121
76-13-1	Freon 113	25	25.6	102	72-134
591-78-6	2-Hexanone	125	127	102	61-129
98-82-8	Isopropylbenzene	25	26.3	105	83-132
79-20-9	Methyl Acetate	125	105	84	65-126
74-83-9	Methyl Bromide	25	22.6	90	59-143
74-87-3	Methyl Chloride	25	20.2	81	50-159
75-09-2	Methylene Chloride	25	18.4	74	69-135
108-10-1	4-Methyl-2-pentanone (MIBK)	125	124	99	66-122

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA91983
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2P3365-BS	2P84375.D	1	01/04/22	CF	n/a	n/a	V2P3365

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91983-1, FA91983-2, FA91983-3, FA91983-11, FA91983-12, FA91983-13

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
1634-04-4	Methyl Tert Butyl Ether	25	22.6	90	72-117
100-42-5	Styrene	25	25.5	102	78-119
630-20-6	1,1,1,2-Tetrachloroethane	25	26.9	108	77-122
79-34-5	1,1,2,2-Tetrachloroethane	25	24.5	98	72-120
127-18-4	Tetrachloroethylene	25	26.8	107	76-135
108-88-3	Toluene	25	26.1	104	80-120
87-61-6	1,2,3-Trichlorobenzene	25	26.0	104	68-131
120-82-1	1,2,4-Trichlorobenzene	25	26.7	107	73-129
71-55-6	1,1,1-Trichloroethane	25	25.7	103	75-130
79-00-5	1,1,2-Trichloroethane	25	25.3	101	76-119
79-01-6	Trichloroethylene	25	24.9	100	81-126
75-69-4	Trichlorofluoromethane	25	28.7	115	71-156
75-01-4	Vinyl Chloride	25	23.6	94	69-159
1330-20-7	Xylene (total)	75	79.0	105	80-126

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	103%	83-118%
17060-07-0	1,2-Dichloroethane-D4	105%	79-125%
2037-26-5	Toluene-D8	101%	85-112%
460-00-4	4-Bromofluorobenzene	101%	83-118%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA91983
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2P3368-BS [a]	2P84481.D	1	01/06/22	CF	n/a	n/a	V2P3368

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91983-5, FA91983-7, FA91983-9, FA91983-10, FA91983-15

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
79-01-6	Trichloroethylene	25	24.9	100	81-126

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	102%	83-118%
17060-07-0	1,2-Dichloroethane-D4	97%	79-125%
2037-26-5	Toluene-D8	100%	85-112%
460-00-4	4-Bromofluorobenzene	103%	83-118%

(a) No MS/MSD available for this run.

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA91983
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2P3369-BS	2P84510.D	1	01/07/22	CF	n/a	n/a	V2P3369

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91983-17, FA91983-18

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
156-59-2	cis-1,2-Dichloroethylene	25	22.9	92	78-120
79-01-6	Trichloroethylene	25	22.8	91	81-126

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	102%	83-118%
17060-07-0	1,2-Dichloroethane-D4	101%	79-125%
2037-26-5	Toluene-D8	98%	85-112%
460-00-4	4-Bromofluorobenzene	100%	83-118%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA91983
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VC6189-BS	C0153360.D	1	01/13/22	LV	n/a	n/a	VC6189

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91983-1, FA91983-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
79-01-6	Trichloroethylene	25	26.2	105	81-126

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	96%	83-118%
17060-07-0	1,2-Dichloroethane-D4	97%	79-125%
2037-26-5	Toluene-D8	103%	85-112%
460-00-4	4-Bromofluorobenzene	108%	83-118%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA91983
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA91983-18MS	Y60332.D	5	12/31/21	LV	n/a	n/a	VY2510
FA91983-18MSD	Y60333.D	5	12/31/21	LV	n/a	n/a	VY2510
FA91983-18 [a]	Y60331.D	5	12/31/21	LV	n/a	n/a	VY2510

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91983-4, FA91983-5, FA91983-6, FA91983-7, FA91983-8, FA91983-9, FA91983-10, FA91983-14, FA91983-15, FA91983-16, FA91983-17, FA91983-18

CAS No.	Compound	FA91983-18 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	130 U		625	782	125	625	702	112	11	50-147/21
71-43-2	Benzene	5.0 U		125	161	129*	125	159	127*	1	81-122/14
74-97-5	Bromochloromethane	5.0 U		125	137	110	125	130	104	5	76-123/14
75-27-4	Bromodichloromethane	5.0 U		125	156	125*	125	152	122	3	79-123/19
75-25-2	Bromoform	5.0 U		125	114	91	125	113	90	1	66-123/21
78-93-3	2-Butanone (MEK)	25 U		625	736	118	625	675	108	9	56-143/18
75-15-0	Carbon Disulfide	10 U		125	146	117	125	146	117	0	66-148/23
56-23-5	Carbon Tetrachloride	5.0 U		125	158	126	125	157	126	1	76-136/23
108-90-7	Chlorobenzene	5.0 U		125	133	106	125	128	102	4	82-124/14
75-00-3	Chloroethane	10 U		125	129	103	125	128	102	1	62-144/20
67-66-3	Chloroform	5.0 U		125	155	124	125	153	122	1	80-124/15
110-82-7	Cyclohexane	5.0 U		125	152	122	125	153	122	1	73-138/18
124-48-1	Dibromochloromethane	5.0 U		125	119	95	125	119	95	0	78-122/19
96-12-8	1,2-Dibromo-3-chloropropane	25 UJ	J	125	105	84	125	104	83	1	64-123/18
106-93-4	1,2-Dibromoethane	10 U		125	123	98	125	121	97	2	75-120/13
75-71-8	Dichlorodifluoromethane	10 U		125	116	93	125	113	90	3	42-167/19
95-50-1	1,2-Dichlorobenzene	5.0 U		125	117	94	125	118	94	1	82-124/14
541-73-1	1,3-Dichlorobenzene	5.0 U		125	123	98	125	126	101	2	84-125/14
106-46-7	1,4-Dichlorobenzene	5.0 U		125	118	94	125	119	95	1	78-120/15
75-34-3	1,1-Dichloroethane	5.0 U		125	161	129*	125	162	130*	1	81-122/15
107-06-2	1,2-Dichloroethane	5.0 U		125	153	122	125	147	118	4	75-125/14
75-35-4	1,1-Dichloroethylene	5.0 U		125	160	128	125	160	128	0	78-137/18
156-59-2	cis-1,2-Dichloroethylene	50.7		125	208	126*	125	204	123*	2	78-120/15
156-60-5	trans-1,2-Dichloroethylene	5.0 U		125	159	127	125	155	124	3	76-127/17
78-87-5	1,2-Dichloropropane	5.0 U		125	156	125*	125	157	126*	1	76-124/14
10061-01-5	cis-1,3-Dichloropropene	5.0 U		125	155	124*	125	152	122*	2	75-118/23
10061-02-6	trans-1,3-Dichloropropene	5.0 U		125	130	104	125	2.5	2*	192*	80-120/22
100-41-4	Ethylbenzene	5.0 U		125	141	113	125	138	110	2	81-121/14
76-13-1	Freon 113	5.0 U		125	160	128	125	158	126	1	72-134/20
591-78-6	2-Hexanone	50 U		625	636	102	625	592	95	7	61-129/18
98-82-8	Isopropylbenzene	5.0 U		125	156	125	125	149	119	5	83-132/15
79-20-9	Methyl Acetate	100 U		625	705	113	625	669	107	5	65-126/18
74-83-9	Methyl Bromide	25 U		125	97.6	78	125	119	95	20*	59-143/19
74-87-3	Methyl Chloride	10 U		125	143	114	125	134	107	6	50-159/19
75-09-2	Methylene Chloride	25 U		125	138	110	125	135	108	2	69-135/16
108-10-1	4-Methyl-2-pentanone (MIBK)	25 U		625	631	101	625	581	93	8	66-122/16

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA91983
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA91983-18MS	Y60332.D	5	12/31/21	LV	n/a	n/a	VY2510
FA91983-18MSD	Y60333.D	5	12/31/21	LV	n/a	n/a	VY2510
FA91983-18 [a]	Y60331.D	5	12/31/21	LV	n/a	n/a	VY2510

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91983-4, FA91983-5, FA91983-6, FA91983-7, FA91983-8, FA91983-9, FA91983-10, FA91983-14, FA91983-15, FA91983-16, FA91983-17, FA91983-18

CAS No.	Compound	FA91983-18 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
1634-04-4	Methyl Tert Butyl Ether	5.0 U		125	136	109	125	133	106	2	72-117/14
100-42-5	Styrene	5.0 U		125	132	106	125	131	105	1	78-119/23
630-20-6	1,1,1,2-Tetrachloroethane	5.0 U		125	138	110	125	134	107	3	77-122/19
79-34-5	1,1,2,2-Tetrachloroethane	5.0 U		125	114	91	125	113	90	1	72-120/14
127-18-4	Tetrachloroethylene	5.0 U		125	141	113	125	138	110	2	76-135/16
108-88-3	Toluene	5.0 U		125	141	113	125	138	110	2	80-120/14
87-61-6	1,2,3-Trichlorobenzene	10 U		125	113	90	125	111	89	2	68-131/25
120-82-1	1,2,4-Trichlorobenzene	10 U		125	113	90	125	112	90	1	73-129/20
71-55-6	1,1,1-Trichloroethane	5.0 U		125	155	124	125	154	123	1	75-130/16
79-00-5	1,1,2-Trichloroethane	5.0 U		125	128	102	125	126	101	2	76-119/14
79-01-6	Trichloroethylene	2350	L	125	2240	-88* [b]	125	2130	-176* [b]	5	81-126/15
75-69-4	Trichlorofluoromethane	10 U		125	139	111	125	135	108	3	71-156/21
75-01-4	Vinyl Chloride	4.8	I	125	155	120	125	149	115	4	69-159/18
1330-20-7	Xylene (total)	15 U		375	423	113	375	415	111	2	80-126/15

CAS No.	Surrogate Recoveries	MS	MSD	FA91983-18	Limits
1868-53-7	Dibromofluoromethane	106%	106%	98%	83-118%
17060-07-0	1,2-Dichloroethane-D4	101%	102%	101%	79-125%
2037-26-5	Toluene-D8	94%	92%	90%	85-112%
460-00-4	4-Bromofluorobenzene	95%	94%	96%	83-118%

(a) Sample was not preserved to pH < 2.
(b) Outside control limits due to high level in sample relative to spike amount.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA91983
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA91913-3MS	2P84413.D	1	01/04/22	CF	n/a	n/a	V2P3365
FA91913-3MSD	2P84415.D	1	01/05/22	CF	n/a	n/a	V2P3365
FA91913-3	2P84397.D	1	01/04/22	CF	n/a	n/a	V2P3365

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91983-1, FA91983-2, FA91983-3, FA91983-11, FA91983-12, FA91983-13

CAS No.	Compound	FA91913-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	25 U		125	115	92	125	109	87	5	50-147/21
71-43-2	Benzene	1.0 U		25	24.6	98	25	24.2	97	2	81-122/14
74-97-5	Bromochloromethane	1.0 U		25	23.1	92	25	22.7	91	2	76-123/14
75-27-4	Bromodichloromethane	1.0 U		25	24.0	96	25	23.7	95	1	79-123/19
75-25-2	Bromoform	1.0 U		25	23.9	96	25	23.2	93	3	66-123/21
78-93-3	2-Butanone (MEK)	5.0 U		125	106	85	125	101	81	5	56-143/18
75-15-0	Carbon Disulfide	2.0 U		25	20.4	82	25	20.3	81	0	66-148/23
56-23-5	Carbon Tetrachloride	1.0 U		25	27.5	110	25	26.1	104	5	76-136/23
108-90-7	Chlorobenzene	1.0 U		25	24.7	99	25	24.8	99	0	82-124/14
75-00-3	Chloroethane	2.0 U		25	31.0	124	25	32.9	132	6	62-144/20
67-66-3	Chloroform	1.0 U		25	24.5	98	25	23.8	95	3	80-124/15
110-82-7	Cyclohexane	1.0 U		25	21.2	85	25	20.7	83	2	73-138/18
124-48-1	Dibromochloromethane	1.0 U		25	24.0	96	25	23.5	94	2	78-122/19
96-12-8	1,2-Dibromo-3-chloropropane	5.0 U		25	24.1	96	25	22.6	90	6	64-123/18
106-93-4	1,2-Dibromoethane	2.0 U		25	24.9	100	25	24.3	97	2	75-120/13
75-71-8	Dichlorodifluoromethane	2.0 U		25	19.6	78	25	20.5	82	4	42-167/19
95-50-1	1,2-Dichlorobenzene	1.0 U		25	25.6	102	25	25.6	102	0	82-124/14
541-73-1	1,3-Dichlorobenzene	1.0 U		25	25.9	104	25	26.2	105	1	84-125/14
106-46-7	1,4-Dichlorobenzene	1.0 U		25	25.2	101	25	24.9	100	1	78-120/15
75-34-3	1,1-Dichloroethane	1.0 U		25	23.7	95	25	23.2	93	2	81-122/15
107-06-2	1,2-Dichloroethane	1.0 U		25	26.1	104	25	24.9	100	5	75-125/14
75-35-4	1,1-Dichloroethylene	1.0 U		25	24.8	99	25	23.7	95	5	78-137/18
156-59-2	cis-1,2-Dichloroethylene	1.0 U		25	24.6	98	25	24.7	99	0	78-120/15
156-60-5	trans-1,2-Dichloroethylene	1.0 U		25	24.4	98	25	23.3	93	5	76-127/17
78-87-5	1,2-Dichloropropane	1.0 U		25	21.5	86	25	21.2	85	1	76-124/14
10061-01-5	cis-1,3-Dichloropropene	1.0 U		25	22.3	89	25	21.8	87	2	75-118/23
10061-02-6	trans-1,3-Dichloropropene	1.0 U		25	23.6	94	25	22.9	92	3	80-120/22
100-41-4	Ethylbenzene	1.0 U		25	25.3	101	25	24.9	100	2	81-121/14
76-13-1	Freon 113	1.0 U		25	26.2	105	25	25.3	101	3	72-134/20
591-78-6	2-Hexanone	10 U		125	111	89	125	105	84	6	61-129/18
98-82-8	Isopropylbenzene	1.0 U		25	25.5	102	25	25.1	100	2	83-132/15
79-20-9	Methyl Acetate	20 U		125	85.8	69	125	82.2	66	4	65-126/18
74-83-9	Methyl Bromide	5.0 U		25	20.5	82	25	23.1	92	12	59-143/19
74-87-3	Methyl Chloride	2.0 U		25	17.1	68	25	18.5	74	8	50-159/19
75-09-2	Methylene Chloride	5.0 U		25	17.4	70	25	16.2	65*	7	69-135/16
108-10-1	4-Methyl-2-pentanone (MIBK)	5.0 U		125	108	86	125	103	82	5	66-122/16

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA91983
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA91913-3MS	2P84413.D	1	01/04/22	CF	n/a	n/a	V2P3365
FA91913-3MSD	2P84415.D	1	01/05/22	CF	n/a	n/a	V2P3365
FA91913-3	2P84397.D	1	01/04/22	CF	n/a	n/a	V2P3365

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91983-1, FA91983-2, FA91983-3, FA91983-11, FA91983-12, FA91983-13

CAS No.	Compound	FA91913-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
1634-04-4	Methyl Tert Butyl Ether	1.0 U		25	21.9	88	25	21.7	87	1	72-117/14
100-42-5	Styrene	1.0 U		25	24.5	98	25	24.0	96	2	78-119/23
630-20-6	1,1,1,2-Tetrachloroethane	1.0 U		25	26.7	107	25	26.2	105	2	77-122/19
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U		25	23.1	92	25	22.6	90	2	72-120/14
127-18-4	Tetrachloroethylene	1.0 U		25	25.8	103	25	25.5	102	1	76-135/16
108-88-3	Toluene	0.43	J	25	25.2	99	25	24.6	97	2	80-120/14
87-61-6	1,2,3-Trichlorobenzene	2.0 U		25	25.7	103	25	25.7	103	0	68-131/25
120-82-1	1,2,4-Trichlorobenzene	2.0 U		25	25.8	103	25	25.5	102	1	73-129/20
71-55-6	1,1,1-Trichloroethane	1.0 U		25	26.4	106	25	25.5	102	3	75-130/16
79-00-5	1,1,2-Trichloroethane	1.0 U		25	24.2	97	25	23.0	92	5	76-119/14
79-01-6	Trichloroethylene	1.0 U		25	24.6	98	25	24.3	97	1	81-126/15
75-69-4	Trichlorofluoromethane	2.0 U		25	31.9	128	25	33.2	133	4	71-156/21
75-01-4	Vinyl Chloride	1.0 U		25	20.1	80	25	21.3	85	6	69-159/18
1330-20-7	Xylene (total)	3.0 U		75	76.5	102	75	75.1	100	2	80-126/15

CAS No.	Surrogate Recoveries	MS	MSD	FA91913-3	Limits
1868-53-7	Dibromofluoromethane	105%	105%	102%	83-118%
17060-07-0	1,2-Dichloroethane-D4	110%	108%	104%	79-125%
2037-26-5	Toluene-D8	99%	98%	101%	85-112%
460-00-4	4-Bromofluorobenzene	103%	103%	102%	83-118%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA91983
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA91890-20MS	2P84552.D	100	01/07/22	CF	n/a	n/a	V2P3369
FA91890-20MSD	2P84554.D	100	01/07/22	CF	n/a	n/a	V2P3369
FA91890-20 [a]	2P84550.D	100	01/07/22	CF	n/a	n/a	V2P3369

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91983-17, FA91983-18

CAS No.	Compound	FA91890-20 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
156-59-2	cis-1,2-Dichloroethylene	7480	QY	2500	9340	74* [b]	2500	9780	92	5	78-120/15
79-01-6	Trichloroethylene	54000	LQY	2500	53800	-8* [b]	2500	55900	76* [b]	4	81-126/15

CAS No.	Surrogate Recoveries	MS	MSD	FA91890-20	Limits
1868-53-7	Dibromofluoromethane	104%	106%	103%	83-118%
17060-07-0	1,2-Dichloroethane-D4	108%	105%	108%	79-125%
2037-26-5	Toluene-D8	100%	100%	101%	85-112%
460-00-4	4-Bromofluorobenzene	102%	103%	104%	83-118%

(a) Sample was not preserved to pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.
(b) Outside control limits due to high level in sample relative to spike amount.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA91983
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA91890-24MS	C0153384.D	10	01/14/22	LV	n/a	n/a	VC6189
FA91890-24MSD	C0153385.D	10	01/14/22	LV	n/a	n/a	VC6189
FA91890-24 [a]	C0153366.D	10	01/14/22	LV	n/a	n/a	VC6189

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA91983-1, FA91983-2

CAS No.	Compound	FA91890-24 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
79-01-6	Trichloroethylene	434	QY	250	729	118	250	735	120	1	81-126/15

CAS No.	Surrogate Recoveries	MS	MSD	FA91890-24	Limits
1868-53-7	Dibromofluoromethane	92%	98%	92%	83-118%
17060-07-0	1,2-Dichloroethane-D4	89%	93%	92%	79-125%
2037-26-5	Toluene-D8	105%	104%	103%	85-112%
460-00-4	4-Bromofluorobenzene	110%	104%	108%	83-118%

(a) Sample was not preserved to a pH < 2. Sample re-analyzed beyond hold time; reported results are considered minimum values.

* = Outside of Control Limits.

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

Tetra Tech NUS

NASA-LC 34, Freedom Rd, CCAFS, FL

112G08985

SGS Job Number: FA84994

Sampling Date: 04/22/21

Report to:

Tetra-Tech, Inc.
661 Andersen Dr Foster Plaza 7
Pittsburgh, PA 15220
mark.jonnet@tetratech.com

ATTN: Mark Jonnet

Total number of pages in report: **40**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Norm Farmer
Technical Director

Client Service contact: Andrea Colby 407-425-6700

Certifications: FL(E83510), LA(03051), KS(E-10327), NC(573), NJ(FL002), NY(12022), SC(96038001) DoD ELAP(ANAB L2229), AZ(AZ0806), CA(2937), TX(T104704404), PA(68-03573), VA(460177), AL, AK, AR, CT, IA, KY, MA, MI. MS, ND, NH, NV, OK, OR, UT, VT, WA, WV

Test results relate only to samples analyzed.

Sections:

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SGS North America Inc.

Sample Summary

Tetra Tech NUS

Job No: FA84994

NASA-LC 34, Freedom Rd, CCAFS, FL
Project No: 112G08985

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
FA84994-1	04/22/21	17:00	DF	04/23/21	AQ	Ground Water	LC34-GAC-20210422
FA84994-2	04/22/21	17:10	DF	04/23/21	AQ	Ground Water	LC34-AS1-20210422
FA84994-3	04/22/21	17:20	DF	04/23/21	AQ	Ground Water	LC34-AS2-20210422
FA84994-4	04/22/21	17:30	DF	04/23/21	AQ	Ground Water	LC34-RW17C-20210422
FA84994-5	04/22/21	17:40	DF	04/23/21	AQ	Ground Water	LC34-RW18C-20210422
FA84994-6	04/22/21	17:50	DF	04/23/21	AQ	Ground Water	LC34-RW19C-20210422
FA84994-7	04/22/21	18:00	DF	04/23/21	AQ	Ground Water	LC34-RW20C-20210422

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Tetra Tech NUS **Job No:** FA84994

Site: NASA-LC 34, Freedom Rd, CCAFS, FL **Report Date** 5/13/2021 11:02:17

7 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were collected on 04/22/2021 and were received at SGS North America Inc - Orlando on 04/23/2021 properly preserved, at 1 Deg. C and intact. These Samples received an SGS Orlando job number of FA84994. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section. Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

MS Volatiles By Method SW846 8260B

Matrix: AQ **Batch ID:** VC5976

All samples were analyzed within the recommended method holding time.

Sample(s) FA84970-16MS, FA84970-16MSD were used as the QC samples indicated.

All method blanks for this batch meet method specific criteria.

Blank Spike Recovery(s) for Methyl Bromide are outside control limits.

Matrix Spike Recovery(s) for 1,1-Dichloroethane are outside control limits. Probable cause is due to matrix interference.

VC5976-MB: Sample was treated with an anti-foaming agent.

FA84994-1 for Methyl Bromide: Associated ICV, CCV, and BS outside control limits high, however sample ND.

FA84994-2 for Methyl Bromide: Associated ICV, CCV, and BS outside control limits high, however sample ND.

FA84994-3 for Methyl Bromide: Associated ICV, CCV, and BS outside control limits high, however sample ND. Associated CCV outside of control limits high, sample was ND.

FA84994-4 for Methyl Bromide: Associated ICV, CCV, and BS outside control limits high, however sample ND. Associated CCV outside of control limits high, sample was ND.

FA84994-6 for Methyl Bromide: Associated ICV, CCV, and BS outside control limits high, however sample ND. Associated CCV outside of control limits high, sample was ND.

FA84994-7 for Methyl Bromide: Associated ICV, CCV, and BS outside control limits high, however sample ND. Associated CCV outside of control limits high, sample was ND.

Matrix: AQ **Batch ID:** VP3215

All method blanks for this batch meet method specific criteria.

Sample(s) FA84970-54MS, FA84970-54MSD were used as the QC samples indicated.

The following samples were run outside of holding time for method SW846 8260B: FA84994-4, FA84994-6, FA84994-7 Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA84994-4: Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA84994-6: Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA84994-7: Sample re-analyzed beyond hold time; reported results are considered minimum values.

Matrix: AQ **Batch ID:** VY2371

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA84780-7MS, FA84780-7MSD were used as the QC samples indicated.

Matrix Spike Recovery(s) for cis-1,2-Dichloroethylene, Vinyl Chloride are outside control limits. Probable cause is due to matrix interference.

Matrix Spike Duplicate Recovery(s) for cis-1,2-Dichloroethylene, Vinyl Chloride are outside control limits. Probable cause is due to matrix interference.

FA84994-5: Sample vial(s) contained bubbles greater than 6mm; reported results are considered minimum values. Sample was not preserved to a pH < 2.

SGS Orlando certifies that this report meets the project requirements for analytical data produced for the samples as received at SGS Orlando and as stated on the COC. SGS Orlando certifies that the data meets the Data Quality Objectives for precision, accuracy and completeness as specified in the SGS Orlando Quality Manual except as noted above. This report is to be used in its entirety. SGS Orlando is not responsible for any assumptions of data quality if partial data packages are used.

Narrative prepared by:

_____

Ariel Hartney, Client Services (signature on file)

Summary of Hits

Job Number: FA84994
Account: Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL
Collected: 04/22/21

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	PQL	MDL	Units	Method
FA84994-1	**LC34-GAC-20210422**					
cis-1,2-Dichloroethylene		1.8	1.0	0.28	ug/l	SW846 8260B
Trichloroethylene		0.41 I	1.0	0.35	ug/l	SW846 8260B
FA84994-2	**LC34-AS1-20210422**					
cis-1,2-Dichloroethylene		1.3	1.0	0.28	ug/l	SW846 8260B
Trichloroethylene		1.1	1.0	0.35	ug/l	SW846 8260B
FA84994-3	**LC34-AS2-20210422**					
cis-1,2-Dichloroethylene		66.6	5.0	1.4	ug/l	SW846 8260B
Trichloroethylene		287	5.0	1.7	ug/l	SW846 8260B
FA84994-4	**LC34-RW17C-20210422**					
cis-1,2-Dichloroethylene		8330	1000	280	ug/l	SW846 8260B
Freon 113		535 I	1000	480	ug/l	SW846 8260B
Trichloroethylene [a]		307000	5000	1700	ug/l	SW846 8260B
FA84994-5	**LC34-RW18C-20210422**					
Trichloroethylene [b]		360000	10000	3500	ug/l	SW846 8260B
FA84994-6	**LC34-RW19C-20210422**					
cis-1,2-Dichloroethylene		18700	1000	280	ug/l	SW846 8260B
Freon 113		7590	1000	480	ug/l	SW846 8260B
Trichloroethylene [a]		791000	10000	3500	ug/l	SW846 8260B
FA84994-7	**LC34-RW20C-20210422**					
cis-1,2-Dichloroethylene		7600	1000	280	ug/l	SW846 8260B
Freon 113		1250	1000	480	ug/l	SW846 8260B
Trichloroethylene [a]		230000	5000	1700	ug/l	SW846 8260B

(a) Sample re-analyzed beyond hold time; reported results are considered minimum values.
(b) Sample vial(s) contained bubbles greater than 6mm; reported results are considered minimum values. Sample was not preserved to a pH < 2.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: LC34-GAC-20210422
Lab Sample ID: FA84994-1
Matrix: AQ - Ground Water
Method: SW846 8260B
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Date Sampled: 04/22/21
Date Received: 04/23/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C0148364.D	1	05/05/21 15:10	SO	n/a	n/a	VC5976
Run #2	P79539.D	1	05/06/21 16:20	LR	n/a	n/a	VP3215

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	10 U	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.67 U	2.0	0.67	ug/l	
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	0.50 U	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.32 U	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	1.8	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.22 U	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113	0.48 U	1.0	0.48	ug/l	
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-GAC-20210422		
Lab Sample ID:	FA84994-1	**Date Sampled:**	04/22/21
Matrix:	AQ - Ground Water	**Date Received:**	04/23/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide [a]	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U [b]	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	2.0 U	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.30 U	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	0.41	1.0	0.35	ug/l	I
75-69-4	Trichlorofluoromethane	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	0.41 U	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%	100%	83-118%
17060-07-0	1,2-Dichloroethane-D4	102%	100%	79-125%
2037-26-5	Toluene-D8	96%	98%	85-112%
460-00-4	4-Bromofluorobenzene	99%	97%	83-118%

(a) Associated ICV, CCV, and BS outside control limits high, however sample ND.
(b) Result is from Run# 2

U = Not detected MDL = Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range
I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-AS1-20210422		
Lab Sample ID:	FA84994-2	**Date Sampled:**	04/22/21
Matrix:	AQ - Ground Water	**Date Received:**	04/23/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C0148365.D	1	05/05/21 15:38	SO	n/a	n/a	VC5976
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	10 U	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.67 U	2.0	0.67	ug/l	
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	0.50 U	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.32 U	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	1.3	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.22 U	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113	0.48 U	1.0	0.48	ug/l	
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-AS1-20210422		
Lab Sample ID:	FA84994-2	**Date Sampled:**	04/22/21
Matrix:	AQ - Ground Water	**Date Received:**	04/23/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide [a]	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	2.0 U	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.30 U	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	1.1	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	0.41 U	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		83-118%
17060-07-0	1,2-Dichloroethane-D4	101%		79-125%
2037-26-5	Toluene-D8	97%		85-112%
460-00-4	4-Bromofluorobenzene	99%		83-118%

(a) Associated ICV, CCV, and BS outside control limits high, however sample ND.

U = Not detected MDL = Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range
I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: LC34-AS2-20210422
Lab Sample ID: FA84994-3
Matrix: AQ - Ground Water
Method: SW846 8260B
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Date Sampled: 04/22/21
Date Received: 04/23/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C0148376.D	5	05/05/21 20:35	SO	n/a	n/a	VC5976
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	50 U	130	50	ug/l	
71-43-2	Benzene	1.6 U	5.0	1.6	ug/l	
74-97-5	Bromochloromethane	2.3 U	5.0	2.3	ug/l	
75-27-4	Bromodichloromethane	1.2 U	5.0	1.2	ug/l	
75-25-2	Bromoform	2.0 U	5.0	2.0	ug/l	
78-93-3	2-Butanone (MEK)	10 U	25	10	ug/l	
75-15-0	Carbon Disulfide	2.7 U	10	2.7	ug/l	
56-23-5	Carbon Tetrachloride	1.8 U	5.0	1.8	ug/l	
108-90-7	Chlorobenzene	1.0 U	5.0	1.0	ug/l	
75-00-3	Chloroethane	3.3 U	10	3.3	ug/l	
67-66-3	Chloroform	1.5 U	5.0	1.5	ug/l	
110-82-7	Cyclohexane	2.0 U	5.0	2.0	ug/l	
124-48-1	Dibromochloromethane	1.4 U	5.0	1.4	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	5.2 U	25	5.2	ug/l	
106-93-4	1,2-Dibromoethane	1.4 U	10	1.4	ug/l	
75-71-8	Dichlorodifluoromethane	2.5 U	10	2.5	ug/l	
95-50-1	1,2-Dichlorobenzene	1.6 U	5.0	1.6	ug/l	
541-73-1	1,3-Dichlorobenzene	1.1 U	5.0	1.1	ug/l	
106-46-7	1,4-Dichlorobenzene	1.3 U	5.0	1.3	ug/l	
75-34-3	1,1-Dichloroethane	1.7 U	5.0	1.7	ug/l	
107-06-2	1,2-Dichloroethane	1.6 U	5.0	1.6	ug/l	
75-35-4	1,1-Dichloroethylene	1.6 U	5.0	1.6	ug/l	
156-59-2	cis-1,2-Dichloroethylene	66.6	5.0	1.4	ug/l	
156-60-5	trans-1,2-Dichloroethylene	1.1 U	5.0	1.1	ug/l	
78-87-5	1,2-Dichloropropane	2.1 U	5.0	2.1	ug/l	
10061-01-5	cis-1,3-Dichloropropene	1.5 U	5.0	1.5	ug/l	
10061-02-6	trans-1,3-Dichloropropene	1.1 U	5.0	1.1	ug/l	
100-41-4	Ethylbenzene	1.8 U	5.0	1.8	ug/l	
76-13-1	Freon 113	2.4 U	5.0	2.4	ug/l	
591-78-6	2-Hexanone	10 U	50	10	ug/l	
98-82-8	Isopropylbenzene	1.1 U	5.0	1.1	ug/l	
79-20-9	Methyl Acetate	25 U	100	25	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-AS2-20210422		
Lab Sample ID:	FA84994-3	**Date Sampled:**	04/22/21
Matrix:	AQ - Ground Water	**Date Received:**	04/23/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide [a]	10 U	25	10	ug/l	
74-87-3	Methyl Chloride	2.5 U	10	2.5	ug/l	
75-09-2	Methylene Chloride	10 U	25	10	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	5.0 U	25	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	1.1 U	5.0	1.1	ug/l	
100-42-5	Styrene	1.1 U	5.0	1.1	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	1.4 U	5.0	1.4	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	1.5 U	5.0	1.5	ug/l	
127-18-4	Tetrachloroethylene	1.1 U	5.0	1.1	ug/l	
108-88-3	Toluene	1.5 U	5.0	1.5	ug/l	
87-61-6	1,2,3-Trichlorobenzene	3.1 U	10	3.1	ug/l	
120-82-1	1,2,4-Trichlorobenzene	2.5 U	10	2.5	ug/l	
71-55-6	1,1,1-Trichloroethane	1.2 U	5.0	1.2	ug/l	
79-00-5	1,1,2-Trichloroethane	2.3 U	5.0	2.3	ug/l	
79-01-6	Trichloroethylene	287	5.0	1.7	ug/l	
75-69-4	Trichlorofluoromethane	2.5 U	10	2.5	ug/l	
75-01-4	Vinyl Chloride	2.0 U	5.0	2.0	ug/l	
1330-20-7	Xylene (total)	3.6 U	15	3.6	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		83-118%
17060-07-0	1,2-Dichloroethane-D4	101%		79-125%
2037-26-5	Toluene-D8	97%		85-112%
460-00-4	4-Bromofluorobenzene	101%		83-118%

(a) Associated ICV, CCV, and BS outside control limits high, however sample ND. Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range
I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: LC34-RW17C-20210422
Lab Sample ID: FA84994-4
Matrix: AQ - Ground Water
Method: SW846 8260B
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Date Sampled: 04/22/21
Date Received: 04/23/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C0148377.D	1000	05/05/21 21:01	SO	n/a	n/a	VC5976
Run #2 [a]	P79548.D	5000	05/06/21 22:13	LR	n/a	n/a	VP3215

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	10000 U	25000	10000	ug/l	
71-43-2	Benzene	310 U	1000	310	ug/l	
74-97-5	Bromochloromethane	450 U	1000	450	ug/l	
75-27-4	Bromodichloromethane	240 U	1000	240	ug/l	
75-25-2	Bromoform	410 U	1000	410	ug/l	
78-93-3	2-Butanone (MEK)	2000 U	5000	2000	ug/l	
75-15-0	Carbon Disulfide	530 U	2000	530	ug/l	
56-23-5	Carbon Tetrachloride	360 U	1000	360	ug/l	
108-90-7	Chlorobenzene	200 U	1000	200	ug/l	
75-00-3	Chloroethane	670 U	2000	670	ug/l	
67-66-3	Chloroform	300 U	1000	300	ug/l	
110-82-7	Cyclohexane	390 U	1000	390	ug/l	
124-48-1	Dibromochloromethane	280 U	1000	280	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1000 U	5000	1000	ug/l	
106-93-4	1,2-Dibromoethane	280 U	2000	280	ug/l	
75-71-8	Dichlorodifluoromethane	500 U	2000	500	ug/l	
95-50-1	1,2-Dichlorobenzene	320 U	1000	320	ug/l	
541-73-1	1,3-Dichlorobenzene	220 U	1000	220	ug/l	
106-46-7	1,4-Dichlorobenzene	260 U	1000	260	ug/l	
75-34-3	1,1-Dichloroethane	340 U	1000	340	ug/l	
107-06-2	1,2-Dichloroethane	310 U	1000	310	ug/l	
75-35-4	1,1-Dichloroethylene	320 U	1000	320	ug/l	
156-59-2	cis-1,2-Dichloroethylene	8330	1000	280	ug/l	
156-60-5	trans-1,2-Dichloroethylene	220 U	1000	220	ug/l	
78-87-5	1,2-Dichloropropane	430 U	1000	430	ug/l	
10061-01-5	cis-1,3-Dichloropropene	290 U	1000	290	ug/l	
10061-02-6	trans-1,3-Dichloropropene	210 U	1000	210	ug/l	
100-41-4	Ethylbenzene	360 U	1000	360	ug/l	
76-13-1	Freon 113	535	1000	480	ug/l	I
591-78-6	2-Hexanone	2000 U	10000	2000	ug/l	
98-82-8	Isopropylbenzene	220 U	1000	220	ug/l	
79-20-9	Methyl Acetate	5000 U	20000	5000	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-RW17C-20210422		
Lab Sample ID:	FA84994-4	**Date Sampled:**	04/22/21
Matrix:	AQ - Ground Water	**Date Received:**	04/23/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide [b]	2000 U	5000	2000	ug/l	
74-87-3	Methyl Chloride	500 U	2000	500	ug/l	
75-09-2	Methylene Chloride	2000 U	5000	2000	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1000 U	5000	1000	ug/l	
1634-04-4	Methyl Tert Butyl Ether	230 U	1000	230	ug/l	
100-42-5	Styrene	220 U	1000	220	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	280 U	1000	280	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	300 U	1000	300	ug/l	
127-18-4	Tetrachloroethylene	220 U	1000	220	ug/l	
108-88-3	Toluene	300 U	1000	300	ug/l	
87-61-6	1,2,3-Trichlorobenzene	610 U	2000	610	ug/l	
120-82-1	1,2,4-Trichlorobenzene	500 U	2000	500	ug/l	
71-55-6	1,1,1-Trichloroethane	250 U	1000	250	ug/l	
79-00-5	1,1,2-Trichloroethane	470 U	1000	470	ug/l	
79-01-6	Trichloroethylene	307000 [c]	5000	1700	ug/l	
75-69-4	Trichlorofluoromethane	500 U	2000	500	ug/l	
75-01-4	Vinyl Chloride	410 U	1000	410	ug/l	
1330-20-7	Xylene (total)	720 U	3000	720	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%	101%	83-118%
17060-07-0	1,2-Dichloroethane-D4	101%	102%	79-125%
2037-26-5	Toluene-D8	97%	97%	85-112%
460-00-4	4-Bromofluorobenzene	101%	100%	83-118%

(a) Sample re-analyzed beyond hold time; reported results are considered minimum values.
(b) Associated ICV, CCV, and BS outside control limits high, however sample ND. Associated CCV outside of control limits high, sample was ND.
(c) Result is from Run# 2

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-RW18C-20210422		
Lab Sample ID:	FA84994-5	**Date Sampled:**	04/22/21
Matrix:	AQ - Ground Water	**Date Received:**	04/23/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	Y57130.D	10000	04/29/21 20:55	CV	n/a	n/a	VY2371
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	100000 U	250000	100000	ug/l	
71-43-2	Benzene	3100 U	10000	3100	ug/l	
74-97-5	Bromochloromethane	4500 U	10000	4500	ug/l	
75-27-4	Bromodichloromethane	2400 U	10000	2400	ug/l	
75-25-2	Bromoform	4100 U	10000	4100	ug/l	
78-93-3	2-Butanone (MEK)	20000 U	50000	20000	ug/l	
75-15-0	Carbon Disulfide	5300 U	20000	5300	ug/l	
56-23-5	Carbon Tetrachloride	3600 U	10000	3600	ug/l	
108-90-7	Chlorobenzene	2000 U	10000	2000	ug/l	
75-00-3	Chloroethane	6700 U	20000	6700	ug/l	
67-66-3	Chloroform	3000 U	10000	3000	ug/l	
110-82-7	Cyclohexane	3900 U	10000	3900	ug/l	
124-48-1	Dibromochloromethane	2800 U	10000	2800	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	10000 U	50000	10000	ug/l	
106-93-4	1,2-Dibromoethane	2800 U	20000	2800	ug/l	
75-71-8	Dichlorodifluoromethane	5000 U	20000	5000	ug/l	
95-50-1	1,2-Dichlorobenzene	3200 U	10000	3200	ug/l	
541-73-1	1,3-Dichlorobenzene	2200 U	10000	2200	ug/l	
106-46-7	1,4-Dichlorobenzene	2600 U	10000	2600	ug/l	
75-34-3	1,1-Dichloroethane	3400 U	10000	3400	ug/l	
107-06-2	1,2-Dichloroethane	3100 U	10000	3100	ug/l	
75-35-4	1,1-Dichloroethylene	3200 U	10000	3200	ug/l	
156-59-2	cis-1,2-Dichloroethylene	2800 U	10000	2800	ug/l	
156-60-5	trans-1,2-Dichloroethylene	2200 U	10000	2200	ug/l	
78-87-5	1,2-Dichloropropane	4300 U	10000	4300	ug/l	
10061-01-5	cis-1,3-Dichloropropene	2900 U	10000	2900	ug/l	
10061-02-6	trans-1,3-Dichloropropene	2100 U	10000	2100	ug/l	
100-41-4	Ethylbenzene	3600 U	10000	3600	ug/l	
76-13-1	Freon 113	4800 U	10000	4800	ug/l	
591-78-6	2-Hexanone	20000 U	100000	20000	ug/l	
98-82-8	Isopropylbenzene	2200 U	10000	2200	ug/l	
79-20-9	Methyl Acetate	50000 U	200000	50000	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-RW18C-20210422		
Lab Sample ID:	FA84994-5	**Date Sampled:**	04/22/21
Matrix:	AQ - Ground Water	**Date Received:**	04/23/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	20000 U	50000	20000	ug/l	
74-87-3	Methyl Chloride	5000 U	20000	5000	ug/l	
75-09-2	Methylene Chloride	20000 U	50000	20000	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	10000 U	50000	10000	ug/l	
1634-04-4	Methyl Tert Butyl Ether	2300 U	10000	2300	ug/l	
100-42-5	Styrene	2200 U	10000	2200	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	2800 U	10000	2800	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	3000 U	10000	3000	ug/l	
127-18-4	Tetrachloroethylene	2200 U	10000	2200	ug/l	
108-88-3	Toluene	3000 U	10000	3000	ug/l	
87-61-6	1,2,3-Trichlorobenzene	6100 U	20000	6100	ug/l	
120-82-1	1,2,4-Trichlorobenzene	5000 U	20000	5000	ug/l	
71-55-6	1,1,1-Trichloroethane	2500 U	10000	2500	ug/l	
79-00-5	1,1,2-Trichloroethane	4700 U	10000	4700	ug/l	
79-01-6	Trichloroethylene	360000	10000	3500	ug/l	
75-69-4	Trichlorofluoromethane	5000 U	20000	5000	ug/l	
75-01-4	Vinyl Chloride	4100 U	10000	4100	ug/l	
1330-20-7	Xylene (total)	7200 U	30000	7200	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		83-118%
17060-07-0	1,2-Dichloroethane-D4	107%		79-125%
2037-26-5	Toluene-D8	102%		85-112%
460-00-4	4-Bromofluorobenzene	103%		83-118%

(a) Sample vial(s) contained bubbles greater than 6mm; reported results are considered minimum values. Sample was not preserved to a pH < 2.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: LC34-RW19C-20210422
Lab Sample ID: FA84994-6
Matrix: AQ - Ground Water
Method: SW846 8260B
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Date Sampled: 04/22/21
Date Received: 04/23/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C0148378.D	1000	05/05/21 21:27	SO	n/a	n/a	VC5976
Run #2 [a]	P79549.D	10000	05/06/21 22:38	LR	n/a	n/a	VP3215

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	10000 U	25000	10000	ug/l	
71-43-2	Benzene	310 U	1000	310	ug/l	
74-97-5	Bromochloromethane	450 U	1000	450	ug/l	
75-27-4	Bromodichloromethane	240 U	1000	240	ug/l	
75-25-2	Bromoform	410 U	1000	410	ug/l	
78-93-3	2-Butanone (MEK)	2000 U	5000	2000	ug/l	
75-15-0	Carbon Disulfide	530 U	2000	530	ug/l	
56-23-5	Carbon Tetrachloride	360 U	1000	360	ug/l	
108-90-7	Chlorobenzene	200 U	1000	200	ug/l	
75-00-3	Chloroethane	670 U	2000	670	ug/l	
67-66-3	Chloroform	300 U	1000	300	ug/l	
110-82-7	Cyclohexane	390 U	1000	390	ug/l	
124-48-1	Dibromochloromethane	280 U	1000	280	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1000 U	5000	1000	ug/l	
106-93-4	1,2-Dibromoethane	280 U	2000	280	ug/l	
75-71-8	Dichlorodifluoromethane	500 U	2000	500	ug/l	
95-50-1	1,2-Dichlorobenzene	320 U	1000	320	ug/l	
541-73-1	1,3-Dichlorobenzene	220 U	1000	220	ug/l	
106-46-7	1,4-Dichlorobenzene	260 U	1000	260	ug/l	
75-34-3	1,1-Dichloroethane	340 U	1000	340	ug/l	
107-06-2	1,2-Dichloroethane	310 U	1000	310	ug/l	
75-35-4	1,1-Dichloroethylene	320 U	1000	320	ug/l	
156-59-2	cis-1,2-Dichloroethylene	18700	1000	280	ug/l	
156-60-5	trans-1,2-Dichloroethylene	220 U	1000	220	ug/l	
78-87-5	1,2-Dichloropropane	430 U	1000	430	ug/l	
10061-01-5	cis-1,3-Dichloropropene	290 U	1000	290	ug/l	
10061-02-6	trans-1,3-Dichloropropene	210 U	1000	210	ug/l	
100-41-4	Ethylbenzene	360 U	1000	360	ug/l	
76-13-1	Freon 113	7590	1000	480	ug/l	
591-78-6	2-Hexanone	2000 U	10000	2000	ug/l	
98-82-8	Isopropylbenzene	220 U	1000	220	ug/l	
79-20-9	Methyl Acetate	5000 U	20000	5000	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-RW19C-20210422		
Lab Sample ID:	FA84994-6	**Date Sampled:**	04/22/21
Matrix:	AQ - Ground Water	**Date Received:**	04/23/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide [b]	2000 U	5000	2000	ug/l	
74-87-3	Methyl Chloride	500 U	2000	500	ug/l	
75-09-2	Methylene Chloride	2000 U	5000	2000	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1000 U	5000	1000	ug/l	
1634-04-4	Methyl Tert Butyl Ether	230 U	1000	230	ug/l	
100-42-5	Styrene	220 U	1000	220	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	280 U	1000	280	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	300 U	1000	300	ug/l	
127-18-4	Tetrachloroethylene	220 U	1000	220	ug/l	
108-88-3	Toluene	300 U	1000	300	ug/l	
87-61-6	1,2,3-Trichlorobenzene	610 U	2000	610	ug/l	
120-82-1	1,2,4-Trichlorobenzene	500 U	2000	500	ug/l	
71-55-6	1,1,1-Trichloroethane	250 U	1000	250	ug/l	
79-00-5	1,1,2-Trichloroethane	470 U	1000	470	ug/l	
79-01-6	Trichloroethylene	791000 [c]	10000	3500	ug/l	
75-69-4	Trichlorofluoromethane	500 U	2000	500	ug/l	
75-01-4	Vinyl Chloride	410 U	1000	410	ug/l	
1330-20-7	Xylene (total)	720 U	3000	720	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%	100%	83-118%
17060-07-0	1,2-Dichloroethane-D4	99%	99%	79-125%
2037-26-5	Toluene-D8	95%	98%	85-112%
460-00-4	4-Bromofluorobenzene	100%	98%	83-118%

(a) Sample re-analyzed beyond hold time; reported results are considered minimum values.
(b) Associated ICV, CCV, and BS outside control limits high, however sample ND. Associated CCV outside of control limits high, sample was ND.
(c) Result is from Run# 2

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: LC34-RW20C-20210422
Lab Sample ID: FA84994-7
Matrix: AQ - Ground Water
Method: SW846 8260B
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Date Sampled: 04/22/21
Date Received: 04/23/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C0148379.D	1000	05/05/21 21:54	SO	n/a	n/a	VC5976
Run #2 [a]	P79550.D	5000	05/06/21 23:03	LR	n/a	n/a	VP3215

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	10000 U	25000	10000	ug/l	
71-43-2	Benzene	310 U	1000	310	ug/l	
74-97-5	Bromochloromethane	450 U	1000	450	ug/l	
75-27-4	Bromodichloromethane	240 U	1000	240	ug/l	
75-25-2	Bromoform	410 U	1000	410	ug/l	
78-93-3	2-Butanone (MEK)	2000 U	5000	2000	ug/l	
75-15-0	Carbon Disulfide	530 U	2000	530	ug/l	
56-23-5	Carbon Tetrachloride	360 U	1000	360	ug/l	
108-90-7	Chlorobenzene	200 U	1000	200	ug/l	
75-00-3	Chloroethane	670 U	2000	670	ug/l	
67-66-3	Chloroform	300 U	1000	300	ug/l	
110-82-7	Cyclohexane	390 U	1000	390	ug/l	
124-48-1	Dibromochloromethane	280 U	1000	280	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1000 U	5000	1000	ug/l	
106-93-4	1,2-Dibromoethane	280 U	2000	280	ug/l	
75-71-8	Dichlorodifluoromethane	500 U	2000	500	ug/l	
95-50-1	1,2-Dichlorobenzene	320 U	1000	320	ug/l	
541-73-1	1,3-Dichlorobenzene	220 U	1000	220	ug/l	
106-46-7	1,4-Dichlorobenzene	260 U	1000	260	ug/l	
75-34-3	1,1-Dichloroethane	340 U	1000	340	ug/l	
107-06-2	1,2-Dichloroethane	310 U	1000	310	ug/l	
75-35-4	1,1-Dichloroethylene	320 U	1000	320	ug/l	
156-59-2	cis-1,2-Dichloroethylene	7600	1000	280	ug/l	
156-60-5	trans-1,2-Dichloroethylene	220 U	1000	220	ug/l	
78-87-5	1,2-Dichloropropane	430 U	1000	430	ug/l	
10061-01-5	cis-1,3-Dichloropropene	290 U	1000	290	ug/l	
10061-02-6	trans-1,3-Dichloropropene	210 U	1000	210	ug/l	
100-41-4	Ethylbenzene	360 U	1000	360	ug/l	
76-13-1	Freon 113	1250	1000	480	ug/l	
591-78-6	2-Hexanone	2000 U	10000	2000	ug/l	
98-82-8	Isopropylbenzene	220 U	1000	220	ug/l	
79-20-9	Methyl Acetate	5000 U	20000	5000	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-RW20C-20210422		
Lab Sample ID:	FA84994-7	**Date Sampled:**	04/22/21
Matrix:	AQ - Ground Water	**Date Received:**	04/23/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide [b]	2000 U	5000	2000	ug/l	
74-87-3	Methyl Chloride	500 U	2000	500	ug/l	
75-09-2	Methylene Chloride	2000 U	5000	2000	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1000 U	5000	1000	ug/l	
1634-04-4	Methyl Tert Butyl Ether	230 U	1000	230	ug/l	
100-42-5	Styrene	220 U	1000	220	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	280 U	1000	280	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	300 U	1000	300	ug/l	
127-18-4	Tetrachloroethylene	220 U	1000	220	ug/l	
108-88-3	Toluene	300 U	1000	300	ug/l	
87-61-6	1,2,3-Trichlorobenzene	610 U	2000	610	ug/l	
120-82-1	1,2,4-Trichlorobenzene	500 U	2000	500	ug/l	
71-55-6	1,1,1-Trichloroethane	250 U	1000	250	ug/l	
79-00-5	1,1,2-Trichloroethane	470 U	1000	470	ug/l	
79-01-6	Trichloroethylene	230000 [c]	5000	1700	ug/l	
75-69-4	Trichlorofluoromethane	500 U	2000	500	ug/l	
75-01-4	Vinyl Chloride	410 U	1000	410	ug/l	
1330-20-7	Xylene (total)	720 U	3000	720	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%	99%	83-118%
17060-07-0	1,2-Dichloroethane-D4	100%	101%	79-125%
2037-26-5	Toluene-D8	98%	97%	85-112%
460-00-4	4-Bromofluorobenzene	99%	98%	83-118%

(a) Sample re-analyzed beyond hold time; reported results are considered minimum values.
(b) Associated ICV, CCV, and BS outside control limits high, however sample ND. Associated CCV outside of control limits high, sample was ND.
(c) Result is from Run# 2

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

5

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

SGS North America Inc - Orlando

FA84994

Chain of Custody

4405 Vineland Road, Suite C-15 Orlando, Fl 32811
TEL. 407-425-6700 FAX: 407-425-0707
www.sgs.com

SGS - ORLANDO JOB # :

PAGE 1 OF 1

SGS - ORLANDO Quote #

SKIFF #

Client / Reporting Information

Company Name: TETRA TECH
Address: 661 ANDERSEN DR FOSTER PLAZA 7
City: PITTSBURGH State: PA Zip: 15220
Project Contact: Email: MARK.JONNET@TETRATECH.COM
Phone #: 412-921-8622
Sampler(s) Name(s) (Printed) Sampler 1: DAN FORESTER Sampler 2:

Project Information

Project Name: LC34
Street: FREEDOM RD
City: CCAFS State: FL
Project #
Fax #
Client Purchase Order #

Analytical Information

VOC'S 8260

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid

SGS Orlando Sample #	Field ID / Point of Collection	COLLECTION DATE	COLLECTION TIME	SAMPLED BY:	MATRIX	TOTAL # OF BOTTLES	CONTAINER INFORMATION: OTHER	NONE	HCl	NaOH	HNO3	H2SO4	NAOH+ZNAC	DI WATER	MEOH	VOC'S 8260	LAB USE ONLY
1	LC34-GAC-20210422	22APR	1700	DF	GW	3			X							X	
2	LC34-AB1-20210422	"	1710	"	"	3			X							X	
3	LC34-AB2-20210422	"	1720	"	"	3			X							X	
4	LC34-RW17C-20210422	"	1730	"	"	3			X							X	
5	LC34-RW18C-20210422	"	1740	"	"	3			X							X	
6	LC34-RW19C-20210422	"	1750	"	"	3			X							X	
7	LC34-RW20C-20210422	X	1800	X	X	3			X							X	

Turnaround Time (Business days)

10 Day (Business) 3
7 Day
5 Day
3 Day *RUSH*
2 Day *RUSH*
1 Day *RUSH*
Other

Approved By: / Date:

Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [ ] COMMERCIAL "B" (RESULTS PLUS QC)
- [ ] REDT1 (EPA LEVEL 3)
- [ ] FULLT1 (EPA LEVEL 4)
- [ ] EDD'S

INITIAL ASSESSMENT
LABEL VERIFICATION

Comments / Remarks

COOLED ON ICE
Temp @ 1749 1°

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler/Affiliation	Date Time:	Received By/Affiliation	Relinquished By/Affiliation	Date Time:	Received By/Affiliation
1		22APR21	2 MELISSA BENNET	3	4-23-21	4 JS 4/23 1620
5	JS 4/23	1748	6	7		8

Lab Use Only : Cooler Temperature (s) Celsius (corrected):

http://www.sgs.com/en/terms-and-conditions

ORLD-SMT-0001-03-FORM-COC (4).xls Rev 031318

5.1 5

FA84994: Chain of Custody
Page 1 of 2

SGS Sample Receipt Summary

Job Number: FA84994 **Client:** TETRA TECH **Project:** CC34

Date / Time Received: 4/23/2021 5:49:00 PM **Delivery Method:** COURIER **Airbill #'s:**

Therm ID: IR 1; **Therm CF:** -1.8; **# of Coolers:** 1

Cooler Temps (Raw Measured) °C: Cooler 1: (2.8);

Cooler Temps (Corrected) °C: Cooler 1: (1.0);

Cooler Information	Y	or	N
1. Custody Seals Present	☑		☐
2. Custody Seals Intact	☑		☐
3. Temp criteria achieved	☑		☐
4. Cooler temp verification	IR Gun		
5. Cooler media	Ice (Bag)		

Trip Blank Information	Y	or	N	N/A
1. Trip Blank present / cooler	☐		☐	☑
2. Trip Blank listed on COC	☐		☐	☑

	W	or	S	N/A
3. Type Of TB Received	☐		☐	☑

Sample Information	Y	or	N	N/A
1. Sample labels present on bottles	☑		☐	
2. Samples preserved properly	☑		☐	
3. Sufficient volume/containers recvd for analysis:	☑		☐	
4. Condition of sample	Intact			
5. Sample recvd within HT	☑		☐	
6. Dates/Times/IDs on COC match Sample Label	☑		☐	
7. VOCs have headspace	☐		☑	☐
8. Bottles received for unspecified tests	☐		☑	
9. Compositing instructions clear	☐		☐	☑
10. Voa Soil Kits/Jars received past 48hrs?	☐		☐	☑
11. % Solids Jar received?	☐		☐	☑
12. Residual Chlorine Present?	☐		☐	☑

Misc. Information

Number of Encores: 25-Gram _____ 5-Gram _____ Number of 5035 Field Kits: _____ Number of Lab Filtered Metals: _____

Test Strip Lot #s: pH 0-3 230315 pH 10-12 219813A Other: (Specify) _____ _____

Residual Chlorine Test Strip Lot #: _____

Comments SAMPLE #5 "CC34-RW18C-20210422"
COC STATES PRESERVED IN HCL
LABEL ON VIALS STATE NONE PRESERVED

SM001
Rev. Date 05/24/17

Technician: NATHANS Date: 4/23/2021 5:49:00 PM Reviewer: _____ Date: _____

FA84994: Chain of Custody
Page 2 of 2

MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: FA84994
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VY2371-MB	Y57110.D	1	04/29/21	CV	n/a	n/a	VY2371

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA84994-5

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
71-43-2	Benzene	ND	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.24	ug/l	
75-25-2	Bromoform	ND	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	ND	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.67	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
110-82-7	Cyclohexane	ND	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.36	ug/l	
76-13-1	Freon 113	ND	1.0	0.48	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	ND	20	5.0	ug/l	
74-83-9	Methyl Bromide	ND	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	ND	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	ND	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.0	ug/l	

Method Blank Summary

Job Number: FA84994
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VY2371-MB	Y57110.D	1	04/29/21	CV	n/a	n/a	VY2371

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA84994-5

CAS No.	Compound	Result	RL	MDL	Units	Q
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.23	ug/l	
100-42-5	Styrene	ND	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	102%	83-118%
17060-07-0	1,2-Dichloroethane-D4	103%	79-125%
2037-26-5	Toluene-D8	101%	85-112%
460-00-4	4-Bromofluorobenzene	106%	83-118%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
124-38-9	Carbon dioxide	2.75	170	ug/l	JN
	Total TIC, Volatile		0	ug/l	

Method Blank Summary

Job Number: FA84994
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VC5976-MB [a]	C0148359.D	1	05/05/21	SO	n/a	n/a	VC5976

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA84994-1, FA84994-2, FA84994-3, FA84994-4, FA84994-6, FA84994-7

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
71-43-2	Benzene	ND	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.24	ug/l	
75-25-2	Bromoform	ND	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	ND	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.67	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
110-82-7	Cyclohexane	ND	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.36	ug/l	
76-13-1	Freon 113	ND	1.0	0.48	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	ND	20	5.0	ug/l	
74-83-9	Methyl Bromide	2.7	5.0	2.0	ug/l	J
74-87-3	Methyl Chloride	0.65	2.0	0.50	ug/l	J
75-09-2	Methylene Chloride	ND	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.0	ug/l	

Method Blank Summary

Job Number: FA84994
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VC5976-MB [a]	C0148359.D	1	05/05/21	SO	n/a	n/a	VC5976

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA84994-1, FA84994-2, FA84994-3, FA84994-4, FA84994-6, FA84994-7

CAS No.	Compound	Result	RL	MDL	Units	Q
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.23	ug/l	
100-42-5	Styrene	ND	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	100%	83-118%
17060-07-0	1,2-Dichloroethane-D4	101%	79-125%
2037-26-5	Toluene-D8	98%	85-112%
460-00-4	4-Bromofluorobenzene	99%	83-118%

(a) Sample was treated with an anti-foaming agent.

Method Blank Summary

Job Number: FA84994
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VP3215-MB	P79533.D	1	05/06/21	LR	n/a	n/a	VP3215

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA84994-1, FA84994-4, FA84994-6, FA84994-7

CAS No.	Compound	Result	RL	MDL	Units	Q
74-87-3	Methyl Chloride	ND	2.0	0.50	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.35	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	98%	83-118%
17060-07-0	1,2-Dichloroethane-D4	99%	79-125%
2037-26-5	Toluene-D8	96%	85-112%
460-00-4	4-Bromofluorobenzene	98%	83-118%

Blank Spike Summary

Job Number: FA84994
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VY2371-BS	Y57108.D	1	04/29/21	CV	n/a	n/a	VY2371

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA84994-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	105	84	50-147
71-43-2	Benzene	25	27.1	108	81-122
74-97-5	Bromochloromethane	25	24.7	99	76-123
75-27-4	Bromodichloromethane	25	27.9	112	79-123
75-25-2	Bromoform	25	21.6	86	66-123
78-93-3	2-Butanone (MEK)	125	97.3	78	56-143
75-15-0	Carbon Disulfide	25	25.6	102	66-148
56-23-5	Carbon Tetrachloride	25	28.2	113	76-136
108-90-7	Chlorobenzene	25	25.2	101	82-124
75-00-3	Chloroethane	25	27.5	110	62-144
67-66-3	Chloroform	25	26.8	107	80-124
110-82-7	Cyclohexane	25	26.9	108	73-138
124-48-1	Dibromochloromethane	25	24.7	99	78-122
96-12-8	1,2-Dibromo-3-chloropropane	25	18.6	74	64-123
106-93-4	1,2-Dibromoethane	25	22.3	89	75-120
75-71-8	Dichlorodifluoromethane	25	22.7	91	42-167
95-50-1	1,2-Dichlorobenzene	25	24.9	100	82-124
541-73-1	1,3-Dichlorobenzene	25	25.9	104	84-125
106-46-7	1,4-Dichlorobenzene	25	24.8	99	78-120
75-34-3	1,1-Dichloroethane	25	29.4	118	81-122
107-06-2	1,2-Dichloroethane	25	24.9	100	75-125
75-35-4	1,1-Dichloroethylene	25	29.0	116	78-137
156-59-2	cis-1,2-Dichloroethylene	25	28.3	113	78-120
156-60-5	trans-1,2-Dichloroethylene	25	28.7	115	76-127
78-87-5	1,2-Dichloropropane	25	26.7	107	76-124
10061-01-5	cis-1,3-Dichloropropene	25	25.1	100	75-118
10061-02-6	trans-1,3-Dichloropropene	25	25.6	102	80-120
100-41-4	Ethylbenzene	25	26.0	104	81-121
76-13-1	Freon 113	25	23.6	94	72-134
591-78-6	2-Hexanone	125	122	98	61-129
98-82-8	Isopropylbenzene	25	26.6	106	83-132
79-20-9	Methyl Acetate	125	106	85	65-126
74-83-9	Methyl Bromide	25	26.6	106	59-143
74-87-3	Methyl Chloride	25	30.3	121	50-159
75-09-2	Methylene Chloride	25	24.9	100	69-135
108-10-1	4-Methyl-2-pentanone (MIBK)	125	101	81	66-122

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA84994
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VY2371-BS	Y57108.D	1	04/29/21	CV	n/a	n/a	VY2371

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA84994-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
1634-04-4	Methyl Tert Butyl Ether	25	22.3	89	72-117
100-42-5	Styrene	25	26.1	104	78-119
630-20-6	1,1,1,2-Tetrachloroethane	25	26.1	104	77-122
79-34-5	1,1,2,2-Tetrachloroethane	25	20.8	83	72-120
127-18-4	Tetrachloroethylene	25	26.8	107	76-135
108-88-3	Toluene	25	25.1	100	80-120
87-61-6	1,2,3-Trichlorobenzene	25	23.7	95	68-131
120-82-1	1,2,4-Trichlorobenzene	25	24.8	99	73-129
71-55-6	1,1,1-Trichloroethane	25	27.3	109	75-130
79-00-5	1,1,2-Trichloroethane	25	23.2	93	76-119
79-01-6	Trichloroethylene	25	26.4	106	81-126
75-69-4	Trichlorofluoromethane	25	28.7	115	71-156
75-01-4	Vinyl Chloride	25	27.9	112	69-159
1330-20-7	Xylene (total)	75	80.8	108	80-126

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	100%	83-118%
17060-07-0	1,2-Dichloroethane-D4	97%	79-125%
2037-26-5	Toluene-D8	99%	85-112%
460-00-4	4-Bromofluorobenzene	100%	83-118%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA84994
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VC5976-BS	C0148356.D	1	05/05/21	SO	n/a	n/a	VC5976

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA84994-1, FA84994-2, FA84994-3, FA84994-4, FA84994-6, FA84994-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	121	97	50-147
71-43-2	Benzene	25	26.1	104	81-122
74-97-5	Bromochloromethane	25	24.4	98	76-123
75-27-4	Bromodichloromethane	25	25.3	101	79-123
75-25-2	Bromoform	25	24.3	97	66-123
78-93-3	2-Butanone (MEK)	125	121	97	56-143
75-15-0	Carbon Disulfide	25	25.5	102	66-148
56-23-5	Carbon Tetrachloride	25	28.2	113	76-136
108-90-7	Chlorobenzene	25	24.4	98	82-124
75-00-3	Chloroethane	25	24.7	99	62-144
67-66-3	Chloroform	25	25.0	100	80-124
110-82-7	Cyclohexane	25	25.3	101	73-138
124-48-1	Dibromochloromethane	25	24.2	97	78-122
96-12-8	1,2-Dibromo-3-chloropropane	25	22.4	90	64-123
106-93-4	1,2-Dibromoethane	25	24.4	98	75-120
75-71-8	Dichlorodifluoromethane	25	22.0	88	42-167
95-50-1	1,2-Dichlorobenzene	25	24.4	98	82-124
541-73-1	1,3-Dichlorobenzene	25	25.1	100	84-125
106-46-7	1,4-Dichlorobenzene	25	24.1	96	78-120
75-34-3	1,1-Dichloroethane	25	28.2	113	81-122
107-06-2	1,2-Dichloroethane	25	24.7	99	75-125
75-35-4	1,1-Dichloroethylene	25	28.0	112	78-137
156-59-2	cis-1,2-Dichloroethylene	25	26.5	106	78-120
156-60-5	trans-1,2-Dichloroethylene	25	27.7	111	76-127
78-87-5	1,2-Dichloropropane	25	25.0	100	76-124
10061-01-5	cis-1,3-Dichloropropene	25	24.1	96	75-118
10061-02-6	trans-1,3-Dichloropropene	25	25.9	104	80-120
100-41-4	Ethylbenzene	25	24.7	99	81-121
76-13-1	Freon 113	25	24.8	99	72-134
591-78-6	2-Hexanone	125	129	103	61-129
98-82-8	Isopropylbenzene	25	25.1	100	83-132
79-20-9	Methyl Acetate	125	123	98	65-126
74-83-9	Methyl Bromide	25	41.2	165*	59-143
74-87-3	Methyl Chloride	25	26.9	108	50-159
75-09-2	Methylene Chloride	25	22.2	89	69-135
108-10-1	4-Methyl-2-pentanone (MIBK)	125	115	92	66-122

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA84994
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VC5976-BS	C0148356.D	1	05/05/21	SO	n/a	n/a	VC5976

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA84994-1, FA84994-2, FA84994-3, FA84994-4, FA84994-6, FA84994-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
1634-04-4	Methyl Tert Butyl Ether	25	23.8	95	72-117
100-42-5	Styrene	25	24.9	100	78-119
630-20-6	1,1,1,2-Tetrachloroethane	25	24.5	98	77-122
79-34-5	1,1,2,2-Tetrachloroethane	25	22.3	89	72-120
127-18-4	Tetrachloroethylene	25	26.7	107	76-135
108-88-3	Toluene	25	24.3	97	80-120
87-61-6	1,2,3-Trichlorobenzene	25	23.7	95	68-131
120-82-1	1,2,4-Trichlorobenzene	25	25.0	100	73-129
71-55-6	1,1,1-Trichloroethane	25	26.2	105	75-130
79-00-5	1,1,2-Trichloroethane	25	23.3	93	76-119
79-01-6	Trichloroethylene	25	25.6	102	81-126
75-69-4	Trichlorofluoromethane	25	28.4	114	71-156
75-01-4	Vinyl Chloride	25	26.5	106	69-159
1330-20-7	Xylene (total)	75	74.7	100	80-126

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	101%	83-118%
17060-07-0	1,2-Dichloroethane-D4	99%	79-125%
2037-26-5	Toluene-D8	100%	85-112%
460-00-4	4-Bromofluorobenzene	101%	83-118%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA84994
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VP3215-BS	P79530.D	1	05/06/21	LR	n/a	n/a	VP3215

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA84994-1, FA84994-4, FA84994-6, FA84994-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
74-87-3	Methyl Chloride	25	24.4	98	50-159
79-01-6	Trichloroethylene	25	25.9	104	81-126

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	100%	83-118%
17060-07-0	1,2-Dichloroethane-D4	102%	79-125%
2037-26-5	Toluene-D8	102%	85-112%
460-00-4	4-Bromofluorobenzene	100%	83-118%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA84994
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA84780-7MS	Y57131.D	200	04/29/21	CV	n/a	n/a	VY2371
FA84780-7MSD	Y57132.D	200	04/29/21	CV	n/a	n/a	VY2371
FA84780-7	Y57125.D	1	04/29/21	CV	n/a	n/a	VY2371

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA84994-5

CAS No.	Compound	FA84780-7 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	25 U		25000	18300	73	25000	18700	75	2	50-147/21
71-43-2	Benzene	1.0 U		5000	5050	101	5000	4920	98	3	81-122/14
74-97-5	Bromochloromethane	1.0 U		5000	4590	92	5000	4470	89	3	76-123/14
75-27-4	Bromodichloromethane	1.0 U		5000	5280	106	5000	5220	104	1	79-123/19
75-25-2	Bromoform	1.0 U		5000	3820	76	5000	3890	78	2	66-123/21
78-93-3	2-Butanone (MEK)	5.0 U		25000	18200	73	25000	19000	76	4	56-143/18
75-15-0	Carbon Disulfide	2.0 U		5000	5040	101	5000	4670	93	8	66-148/23
56-23-5	Carbon Tetrachloride	1.0 U		5000	5290	106	5000	5100	102	4	76-136/23
108-90-7	Chlorobenzene	1.0 U		5000	4700	94	5000	4550	91	3	82-124/14
75-00-3	Chloroethane	2.0 U		5000	5520	110	5000	5020	100	9	62-144/20
67-66-3	Chloroform	1.0 U		5000	5140	103	5000	5000	100	3	80-124/15
110-82-7	Cyclohexane	1.0 U		5000	5000	100	5000	4940	99	1	73-138/18
124-48-1	Dibromochloromethane	1.0 U		5000	4290	86	5000	4370	87	2	78-122/19
96-12-8	1,2-Dibromo-3-chloropropane	5.0 U		5000	3480	70	5000	3530	71	1	64-123/18
106-93-4	1,2-Dibromoethane	2.0 U		5000	3840	77	5000	3910	78	2	75-120/13
75-71-8	Dichlorodifluoromethane	2.0 U		5000	4260	85	5000	4190	84	2	42-167/19
95-50-1	1,2-Dichlorobenzene	1.0 U		5000	4390	88	5000	4540	91	3	82-124/14
541-73-1	1,3-Dichlorobenzene	1.0 U		5000	4560	91	5000	4670	93	2	84-125/14
106-46-7	1,4-Dichlorobenzene	1.0 U		5000	4420	88	5000	4490	90	2	78-120/15
75-34-3	1,1-Dichloroethane	1.0 U		5000	5580	112	5000	5510	110	1	81-122/15
107-06-2	1,2-Dichloroethane	1.3		5000	5080	102	5000	5100	102	0	75-125/14
75-35-4	1,1-Dichloroethylene	1.0 U		5000	5050	101	5000	5030	101	0	78-137/18
156-59-2	cis-1,2-Dichloroethylene	25.2		5000	18600	371*	5000	18200	363*	2	78-120/15
156-60-5	trans-1,2-Dichloroethylene	1.0 U		5000	5190	104	5000	5100	102	2	76-127/17
78-87-5	1,2-Dichloropropane	0.63	J	5000	5160	103	5000	5140	103	0	76-124/14
10061-01-5	cis-1,3-Dichloropropene	1.0 U		5000	3730	75	5000	3840	77	3	75-118/23
10061-02-6	trans-1,3-Dichloropropene	1.0 U		5000	4420	88	5000	4360	87	1	80-120/22
100-41-4	Ethylbenzene	1.0 U		5000	4860	97	5000	4770	95	2	81-121/14
76-13-1	Freon 113	1.0 U		5000	4270	85	5000	4320	86	1	72-134/20
591-78-6	2-Hexanone	10 U		25000	23900	96	25000	24700	99	3	61-129/18
98-82-8	Isopropylbenzene	1.0 U		5000	4700	94	5000	4700	94	0	83-132/15
79-20-9	Methyl Acetate	20 U		25000	18900	76	25000	19500	78	3	65-126/18
74-83-9	Methyl Bromide	5.0 U		5000	3790	76	5000	3810	76	1	59-143/19
74-87-3	Methyl Chloride	2.0 U		5000	5720	114	5000	5420	108	5	50-159/19
75-09-2	Methylene Chloride	5.0 U		5000	4780	96	5000	4780	96	0	69-135/16
108-10-1	4-Methyl-2-pentanone (MIBK)	5.0 U		25000	19600	78	25000	20600	82	5	66-122/16

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA84994
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA84780-7MS	Y57131.D	200	04/29/21	CV	n/a	n/a	VY2371
FA84780-7MSD	Y57132.D	200	04/29/21	CV	n/a	n/a	VY2371
FA84780-7	Y57125.D	1	04/29/21	CV	n/a	n/a	VY2371

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA84994-5

CAS No.	Compound	FA84780-7 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
1634-04-4	Methyl Tert Butyl Ether	1.0	U	5000	3850	77	5000	3860	77	0	72-117/14
100-42-5	Styrene	1.0	U	5000	4650	93	5000	4620	92	1	78-119/23
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	5000	4680	94	5000	4670	93	0	77-122/19
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	5000	4000	80	5000	4040	81	1	72-120/14
127-18-4	Tetrachloroethylene	1.0	U	5000	4780	96	5000	4680	94	2	76-135/16
108-88-3	Toluene	1.0	U	5000	4590	92	5000	4490	90	2	80-120/14
87-61-6	1,2,3-Trichlorobenzene	2.0	U	5000	3660	73	5000	4060	81	10	68-131/25
120-82-1	1,2,4-Trichlorobenzene	2.0	U	5000	3730	75	5000	4130	83	10	73-129/20
71-55-6	1,1,1-Trichloroethane	1.0	U	5000	5150	103	5000	5000	100	3	75-130/16
79-00-5	1,1,2-Trichloroethane	1.0	U	5000	4350	87	5000	4490	90	3	76-119/14
79-01-6	Trichloroethylene	1.0	U	5000	5040	101	5000	4890	98	3	81-126/15
75-69-4	Trichlorofluoromethane	2.0	U	5000	5480	110	5000	5280	106	4	71-156/21
75-01-4	Vinyl Chloride	51.3		5000	13500	269*	5000	13400	267*	1	69-159/18
1330-20-7	Xylene (total)	3.0	U	15000	14600	97	15000	14500	97	1	80-126/15

CAS No.	Surrogate Recoveries	MS	MSD	FA84780-7	Limits
1868-53-7	Dibromofluoromethane	101%	102%	104%	83-118%
17060-07-0	1,2-Dichloroethane-D4	103%	103%	107%	79-125%
2037-26-5	Toluene-D8	97%	98%	103%	85-112%
460-00-4	4-Bromofluorobenzene	94%	96%	104%	83-118%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA84994
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA84970-16MS	C0148380.D	500	05/05/21	SO	n/a	n/a	VC5976
FA84970-16MSD	C0148381.D	500	05/05/21	SO	n/a	n/a	VC5976
FA84970-16	C0148366.D	500	05/05/21	SO	n/a	n/a	VC5976

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA84994-1, FA84994-2, FA84994-3, FA84994-4, FA84994-6, FA84994-7

CAS No.	Compound	FA84970-16 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	13000	U	62500	62100	99	62500	57400	92	8	50-147/21
71-43-2	Benzene	500	U	12500	14600	117	12500	13400	107	9	81-122/14
74-97-5	Bromochloromethane	500	U	12500	13900	111	12500	12800	102	8	76-123/14
75-27-4	Bromodichloromethane	500	U	12500	14200	114	12500	13400	107	6	79-123/19
75-25-2	Bromoform	500	U	12500	13200	106	12500	12700	102	4	66-123/21
78-93-3	2-Butanone (MEK)	2500	U	62500	66600	107	62500	61000	98	9	56-143/18
75-15-0	Carbon Disulfide	1000	U	12500	14300	114	12500	12900	103	10	66-148/23
56-23-5	Carbon Tetrachloride	500	U	12500	15800	126	12500	14500	116	9	76-136/23
108-90-7	Chlorobenzene	500	U	12500	13500	108	12500	13000	104	4	82-124/14
75-00-3	Chloroethane	1000	U	12500	13700	110	12500	13000	104	5	62-144/20
67-66-3	Chloroform	500	U	12500	13700	110	12500	13200	106	4	80-124/15
110-82-7	Cyclohexane	500	U	12500	13700	110	12500	12900	103	6	73-138/18
124-48-1	Dibromochloromethane	500	U	12500	13400	107	12500	13100	105	2	78-122/19
96-12-8	1,2-Dibromo-3-chloropropane	2500	U	12500	12300	98	12500	11800	94	4	64-123/18
106-93-4	1,2-Dibromoethane	1000	U	12500	13100	105	12500	12700	102	3	75-120/13
75-71-8	Dichlorodifluoromethane	1000	U	12500	11900	95	12500	11000	88	8	42-167/19
95-50-1	1,2-Dichlorobenzene	500	U	12500	13100	105	12500	12800	102	2	82-124/14
541-73-1	1,3-Dichlorobenzene	500	U	12500	13400	107	12500	12800	102	5	84-125/14
106-46-7	1,4-Dichlorobenzene	500	U	12500	13100	105	12500	12600	101	4	78-120/15
75-34-3	1,1-Dichloroethane	500	U	12500	15900	127*	12500	14600	117	9	81-122/15
107-06-2	1,2-Dichloroethane	500	U	12500	13700	110	12500	13000	104	5	75-125/14
75-35-4	1,1-Dichloroethylene	527		12500	16300	126	12500	14800	114	10	78-137/18
156-59-2	cis-1,2-Dichloroethylene	4140		12500	19000	119	12500	17500	107	8	78-120/15
156-60-5	trans-1,2-Dichloroethylene	500	U	12500	15300	122	12500	14200	114	7	76-127/17
78-87-5	1,2-Dichloropropane	500	U	12500	13800	110	12500	12700	102	8	76-124/14
10061-01-5	cis-1,3-Dichloropropene	500	U	12500	13100	105	12500	12200	98	7	75-118/23
10061-02-6	trans-1,3-Dichloropropene	500	U	12500	13400	107	12500	12700	102	5	80-120/22
100-41-4	Ethylbenzene	500	U	12500	13700	110	12500	13000	104	5	81-121/14
76-13-1	Freon 113	500	U	12500	13800	110	12500	12500	100	10	72-134/20
591-78-6	2-Hexanone	5000	U	62500	63700	102	62500	67800	108	6	61-129/18
98-82-8	Isopropylbenzene	500	U	12500	13700	110	12500	13100	105	4	83-132/15
79-20-9	Methyl Acetate	10000	U	62500	70000	112	62500	64200	103	9	65-126/18
74-83-9	Methyl Bromide	1120	JB	12500	14300	105	12500	13800	101	4	59-143/19
74-87-3	Methyl Chloride	1000	U	12500	13000	104	12500	13000	104	0	50-159/19
75-09-2	Methylene Chloride	2500	U	12500	12600	101	12500	11800	94	7	69-135/16
108-10-1	4-Methyl-2-pentanone (MIBK)	2500	U	62500	64800	104	62500	60200	96	7	66-122/16

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA84994
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA84970-16MS	C0148380.D	500	05/05/21	SO	n/a	n/a	VC5976
FA84970-16MSD	C0148381.D	500	05/05/21	SO	n/a	n/a	VC5976
FA84970-16	C0148366.D	500	05/05/21	SO	n/a	n/a	VC5976

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA84994-1, FA84994-2, FA84994-3, FA84994-4, FA84994-6, FA84994-7

CAS No.	Compound	FA84970-16 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
1634-04-4	Methyl Tert Butyl Ether	500	U	12500	13200	106	12500	12300	98	7	72-117/14
100-42-5	Styrene	500	U	12500	13700	110	12500	12900	103	6	78-119/23
630-20-6	1,1,1,2-Tetrachloroethane	500	U	12500	13600	109	12500	12700	102	7	77-122/19
79-34-5	1,1,2,2-Tetrachloroethane	500	U	12500	12300	98	12500	11600	93	6	72-120/14
127-18-4	Tetrachloroethylene	3190		12500	18400	122	12500	17500	114	5	76-135/16
108-88-3	Toluene	500	U	12500	13400	107	12500	12700	102	5	80-120/14
87-61-6	1,2,3-Trichlorobenzene	1000	U	12500	13000	104	12500	12900	103	1	68-131/25
120-82-1	1,2,4-Trichlorobenzene	1000	U	12500	13300	106	12500	13200	106	1	73-129/20
71-55-6	1,1,1-Trichloroethane	500	U	12500	15000	120	12500	13900	111	8	75-130/16
79-00-5	1,1,2-Trichloroethane	500	U	12500	13100	105	12500	12100	97	8	76-119/14
79-01-6	Trichloroethylene	36000		12500	51600	125	12500	47600	93	8	81-126/15
75-69-4	Trichlorofluoromethane	1000	U	12500	15500	124	12500	14400	115	7	71-156/21
75-01-4	Vinyl Chloride	500	U	12500	14800	118	12500	13300	106	11	69-159/18
1330-20-7	Xylene (total)	1500	U	37500	41300	110	37500	39000	104	6	80-126/15

CAS No.	Surrogate Recoveries	MS	MSD	FA84970-16	Limits
1868-53-7	Dibromofluoromethane	102%	99%	99%	83-118%
17060-07-0	1,2-Dichloroethane-D4	99%	97%	101%	79-125%
2037-26-5	Toluene-D8	99%	100%	97%	85-112%
460-00-4	4-Bromofluorobenzene	99%	100%	99%	83-118%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA84994
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA84970-54MS	P79551.D	200	05/06/21	LR	n/a	n/a	VP3215
FA84970-54MSD	P79552.D	200	05/06/21	LR	n/a	n/a	VP3215
FA84970-54 [a]	P79546.D	200	05/06/21	LR	n/a	n/a	VP3215

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA84994-1, FA84994-4, FA84994-6, FA84994-7

CAS No.	Compound	FA84970-54 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
74-87-3	Methyl Chloride	400 U		5000	4690	94	5000	4760	95	1	50-159/19
79-01-6	Trichloroethylene	200 U		5000	4990	100	5000	4840	97	3	81-126/15

CAS No.	Surrogate Recoveries	MS	MSD	FA84970-54	Limits
1868-53-7	Dibromofluoromethane	101%	100%	100%	83-118%
17060-07-0	1,2-Dichloroethane-D4	100%	102%	97%	79-125%
2037-26-5	Toluene-D8	101%	100%	97%	85-112%
460-00-4	4-Bromofluorobenzene	100%	99%	99%	83-118%

(a) ECC was analyzed beyond the 12 hour analysis window.

* = Outside of Control Limits.

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

Tetra Tech NUS

NASA-LC 34, Freedom Rd, CCAFS, FL

112G08985

SGS Job Number: FA85719

Sampling Date: 05/19/21

Report to:

Tetra-Tech, Inc.
661 Andersen Dr Foster Plaza 7
Pittsburgh, PA 15220
mark.jonnet@tetratech.com

ATTN: Mark Jonnet

Total number of pages in report: **34**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Norm Farmer
Technical Director

Client Service contact: Andrea Colby 407-425-6700

Certifications: FL(E83510), LA(03051), KS(E-10327), NC(573), NJ(FL002), NY(12022), SC(96038001) DoD ELAP(ANAB L2229), AZ(AZ0806), CA(2937), TX(T104704404), PA(68-03573), VA(460177), AL, AK, AR, CT, IA, KY, MA, MI. MS, ND, NH, NV, OK, OR, UT, VT, WA, WV

Test results relate only to samples analyzed.

Sections: 1 2 3 4 5 6

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SGS North America Inc.

Sample Summary

Tetra Tech NUS

Job No: FA85719

NASA-LC 34, Freedom Rd, CCAFS, FL
Project No: 112G08985

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
FA85719-1	05/19/21	08:00	DF	05/20/21	AQ	Ground Water	LC34-GAC-20210519
FA85719-2	05/19/21	08:10	DF	05/20/21	AQ	Ground Water	LC34-AS1-20210519
FA85719-3	05/19/21	08:20	DF	05/20/21	AQ	Ground Water	LC34-AS2-20210519
FA85719-4	05/19/21	08:30	DF	05/20/21	AQ	Ground Water	LC34-RW17C-20210519
FA85719-5	05/19/21	08:40	DF	05/20/21	AQ	Ground Water	LC34-RW18C-20210519
FA85719-6	05/19/21	08:50	DF	05/20/21	AQ	Ground Water	LC34-RW19C-20210519
FA85719-7	05/19/21	09:00	DF	05/20/21	AQ	Ground Water	LC34-RW20C-20210519
FA85719-8	05/19/21	09:30	DF	05/20/21	AQ	Ground Water	LC34-IW045D1-070.0-20210519
FA85719-9	05/19/21	09:50	DF	05/20/21	AQ	Ground Water	LC34-IW045D2-110.0-20210519

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Tetra Tech NUS **Job No:** FA85719

Site: NASA-LC 34, Freedom Rd, CCAFS, FL **Report Date** 5/31/2021 8:47:51 PM

9 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were collected on 05/19/2021 and were received at SGS North America Inc - Orlando on 05/20/2021 properly preserved, at 1.8 Deg. C and intact. These Samples received an SGS Orlando job number of FA85719. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section. Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

MS Volatiles By Method SW846 8260B

Matrix: AQ **Batch ID:** V5E1307

All samples were analyzed within the recommended method holding time.

Sample(s) FA85654-2MS, FA85654-2MSD were used as the QC samples indicated.

All method blanks for this batch meet method specific criteria.

Matrix Spike Recovery(s) for 2-Hexanone are outside control limits. Probable cause is due to matrix interference.

SGS Orlando certifies that this report meets the project requirements for analytical data produced for the samples as received at SGS Orlando and as stated on the COC. SGS Orlando certifies that the data meets the Data Quality Objectives for precision, accuracy and completeness as specified in the SGS Orlando Quality Manual except as noted above. This report is to be used in its entirety. SGS Orlando is not responsible for any assumptions of data quality if partial data packages are used.

Narrative prepared by:

_____

Ariel Hartney, Client Services (signature on file)

Summary of Hits

Job Number: FA85719
Account: Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL
Collected: 05/19/21

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	PQL	MDL	Units	Method
FA85719-1	**LC34-GAC-20210519**					
No hits reported in this sample.						
FA85719-2	**LC34-AS1-20210519**					
cis-1,2-Dichloroethylene		1.1	1.0	0.28	ug/l	SW846 8260B
Trichloroethylene		1.8	1.0	0.35	ug/l	SW846 8260B
FA85719-3	**LC34-AS2-20210519**					
cis-1,2-Dichloroethylene		80.9	5.0	1.4	ug/l	SW846 8260B
Trichloroethylene		298	5.0	1.7	ug/l	SW846 8260B
FA85719-4	**LC34-RW17C-20210519**					
cis-1,2-Dichloroethylene		5180	5000	1400	ug/l	SW846 8260B
Trichloroethylene		245000	5000	1700	ug/l	SW846 8260B
FA85719-5	**LC34-RW18C-20210519**					
cis-1,2-Dichloroethylene		2870 I	5000	1400	ug/l	SW846 8260B
Trichloroethylene		269000	5000	1700	ug/l	SW846 8260B
FA85719-6	**LC34-RW19C-20210519**					
cis-1,2-Dichloroethylene		11800	10000	2800	ug/l	SW846 8260B
Trichloroethylene		742000	10000	3500	ug/l	SW846 8260B
FA85719-7	**LC34-RW20C-20210519**					
cis-1,2-Dichloroethylene		6220	2500	690	ug/l	SW846 8260B
Trichloroethylene		223000	2500	860	ug/l	SW846 8260B
FA85719-8	**LC34-IW045D1-070.0-20210519**					
cis-1,2-Dichloroethylene		2380	250	69	ug/l	SW846 8260B
trans-1,2-Dichloroethylene		58.0 I	250	55	ug/l	SW846 8260B
Trichloroethylene		15800	250	86	ug/l	SW846 8260B
Vinyl Chloride		413	250	100	ug/l	SW846 8260B
FA85719-9	**LC34-IW045D2-110.0-20210519**					
No hits reported in this sample.						

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	LC34-GAC-20210519		
Lab Sample ID:	FA85719-1	**Date Sampled:**	05/19/21
Matrix:	AQ - Ground Water	**Date Received:**	05/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5E28401.D	1	05/28/21 15:31	SO	n/a	n/a	V5E1307
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	10 U	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.67 U	2.0	0.67	ug/l	
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	0.50 U	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.32 U	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.28 U	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.22 U	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113	0.48 U	1.0	0.48	ug/l	
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-GAC-20210519		
Lab Sample ID:	FA85719-1	**Date Sampled:**	05/19/21
Matrix:	AQ - Ground Water	**Date Received:**	05/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	2.0 U	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.30 U	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	0.35 U	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	0.41 U	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		83-118%
17060-07-0	1,2-Dichloroethane-D4	93%		79-125%
2037-26-5	Toluene-D8	96%		85-112%
460-00-4	4-Bromofluorobenzene	95%		83-118%

U = Not detected MDL = Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range
I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-AS1-20210519		
Lab Sample ID:	FA85719-2	**Date Sampled:**	05/19/21
Matrix:	AQ - Ground Water	**Date Received:**	05/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5E28402.D	1	05/28/21 15:54	SO	n/a	n/a	V5E1307
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	10 U	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.67 U	2.0	0.67	ug/l	
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	0.50 U	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.32 U	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	1.1	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.22 U	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113	0.48 U	1.0	0.48	ug/l	
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-AS1-20210519		
Lab Sample ID:	FA85719-2	**Date Sampled:**	05/19/21
Matrix:	AQ - Ground Water	**Date Received:**	05/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	2.0 U	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.30 U	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	1.8	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	0.41 U	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		83-118%
17060-07-0	1,2-Dichloroethane-D4	91%		79-125%
2037-26-5	Toluene-D8	96%		85-112%
460-00-4	4-Bromofluorobenzene	94%		83-118%

U = Not detected MDL = Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range

I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-AS2-20210519		
Lab Sample ID:	FA85719-3	**Date Sampled:**	05/19/21
Matrix:	AQ - Ground Water	**Date Received:**	05/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5E28403.D	5	05/28/21 16:18	SO	n/a	n/a	V5E1307
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	50 U	130	50	ug/l	
71-43-2	Benzene	1.6 U	5.0	1.6	ug/l	
74-97-5	Bromochloromethane	2.3 U	5.0	2.3	ug/l	
75-27-4	Bromodichloromethane	1.2 U	5.0	1.2	ug/l	
75-25-2	Bromoform	2.0 U	5.0	2.0	ug/l	
78-93-3	2-Butanone (MEK)	10 U	25	10	ug/l	
75-15-0	Carbon Disulfide	2.7 U	10	2.7	ug/l	
56-23-5	Carbon Tetrachloride	1.8 U	5.0	1.8	ug/l	
108-90-7	Chlorobenzene	1.0 U	5.0	1.0	ug/l	
75-00-3	Chloroethane	3.3 U	10	3.3	ug/l	
67-66-3	Chloroform	1.5 U	5.0	1.5	ug/l	
110-82-7	Cyclohexane	2.0 U	5.0	2.0	ug/l	
124-48-1	Dibromochloromethane	1.4 U	5.0	1.4	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	5.2 U	25	5.2	ug/l	
106-93-4	1,2-Dibromoethane	1.4 U	10	1.4	ug/l	
75-71-8	Dichlorodifluoromethane	2.5 U	10	2.5	ug/l	
95-50-1	1,2-Dichlorobenzene	1.6 U	5.0	1.6	ug/l	
541-73-1	1,3-Dichlorobenzene	1.1 U	5.0	1.1	ug/l	
106-46-7	1,4-Dichlorobenzene	1.3 U	5.0	1.3	ug/l	
75-34-3	1,1-Dichloroethane	1.7 U	5.0	1.7	ug/l	
107-06-2	1,2-Dichloroethane	1.6 U	5.0	1.6	ug/l	
75-35-4	1,1-Dichloroethylene	1.6 U	5.0	1.6	ug/l	
156-59-2	cis-1,2-Dichloroethylene	80.9	5.0	1.4	ug/l	
156-60-5	trans-1,2-Dichloroethylene	1.1 U	5.0	1.1	ug/l	
78-87-5	1,2-Dichloropropane	2.1 U	5.0	2.1	ug/l	
10061-01-5	cis-1,3-Dichloropropene	1.5 U	5.0	1.5	ug/l	
10061-02-6	trans-1,3-Dichloropropene	1.1 U	5.0	1.1	ug/l	
100-41-4	Ethylbenzene	1.8 U	5.0	1.8	ug/l	
76-13-1	Freon 113	2.4 U	5.0	2.4	ug/l	
591-78-6	2-Hexanone	10 U	50	10	ug/l	
98-82-8	Isopropylbenzene	1.1 U	5.0	1.1	ug/l	
79-20-9	Methyl Acetate	25 U	100	25	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-AS2-20210519		
Lab Sample ID:	FA85719-3	**Date Sampled:**	05/19/21
Matrix:	AQ - Ground Water	**Date Received:**	05/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	10 U	25	10	ug/l	
74-87-3	Methyl Chloride	2.5 U	10	2.5	ug/l	
75-09-2	Methylene Chloride	10 U	25	10	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	5.0 U	25	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	1.1 U	5.0	1.1	ug/l	
100-42-5	Styrene	1.1 U	5.0	1.1	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	1.4 U	5.0	1.4	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	1.5 U	5.0	1.5	ug/l	
127-18-4	Tetrachloroethylene	1.1 U	5.0	1.1	ug/l	
108-88-3	Toluene	1.5 U	5.0	1.5	ug/l	
87-61-6	1,2,3-Trichlorobenzene	3.1 U	10	3.1	ug/l	
120-82-1	1,2,4-Trichlorobenzene	2.5 U	10	2.5	ug/l	
71-55-6	1,1,1-Trichloroethane	1.2 U	5.0	1.2	ug/l	
79-00-5	1,1,2-Trichloroethane	2.3 U	5.0	2.3	ug/l	
79-01-6	Trichloroethylene	298	5.0	1.7	ug/l	
75-69-4	Trichlorofluoromethane	2.5 U	10	2.5	ug/l	
75-01-4	Vinyl Chloride	2.0 U	5.0	2.0	ug/l	
1330-20-7	Xylene (total)	3.6 U	15	3.6	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		83-118%
17060-07-0	1,2-Dichloroethane-D4	94%		79-125%
2037-26-5	Toluene-D8	97%		85-112%
460-00-4	4-Bromofluorobenzene	92%		83-118%

U = Not detected MDL = Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range

I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: LC34-RW17C-20210519
Lab Sample ID: FA85719-4
Matrix: AQ - Ground Water
Method: SW846 8260B
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Date Sampled: 05/19/21
Date Received: 05/20/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5E28404.D	5000	05/28/21 16:41	SO	n/a	n/a	V5E1307
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	50000 U	130000	50000	ug/l	
71-43-2	Benzene	1600 U	5000	1600	ug/l	
74-97-5	Bromochloromethane	2300 U	5000	2300	ug/l	
75-27-4	Bromodichloromethane	1200 U	5000	1200	ug/l	
75-25-2	Bromoform	2000 U	5000	2000	ug/l	
78-93-3	2-Butanone (MEK)	10000 U	25000	10000	ug/l	
75-15-0	Carbon Disulfide	2700 U	10000	2700	ug/l	
56-23-5	Carbon Tetrachloride	1800 U	5000	1800	ug/l	
108-90-7	Chlorobenzene	1000 U	5000	1000	ug/l	
75-00-3	Chloroethane	3300 U	10000	3300	ug/l	
67-66-3	Chloroform	1500 U	5000	1500	ug/l	
110-82-7	Cyclohexane	2000 U	5000	2000	ug/l	
124-48-1	Dibromochloromethane	1400 U	5000	1400	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	5200 U	25000	5200	ug/l	
106-93-4	1,2-Dibromoethane	1400 U	10000	1400	ug/l	
75-71-8	Dichlorodifluoromethane	2500 U	10000	2500	ug/l	
95-50-1	1,2-Dichlorobenzene	1600 U	5000	1600	ug/l	
541-73-1	1,3-Dichlorobenzene	1100 U	5000	1100	ug/l	
106-46-7	1,4-Dichlorobenzene	1300 U	5000	1300	ug/l	
75-34-3	1,1-Dichloroethane	1700 U	5000	1700	ug/l	
107-06-2	1,2-Dichloroethane	1600 U	5000	1600	ug/l	
75-35-4	1,1-Dichloroethylene	1600 U	5000	1600	ug/l	
156-59-2	cis-1,2-Dichloroethylene	5180	5000	1400	ug/l	
156-60-5	trans-1,2-Dichloroethylene	1100 U	5000	1100	ug/l	
78-87-5	1,2-Dichloropropane	2100 U	5000	2100	ug/l	
10061-01-5	cis-1,3-Dichloropropene	1500 U	5000	1500	ug/l	
10061-02-6	trans-1,3-Dichloropropene	1100 U	5000	1100	ug/l	
100-41-4	Ethylbenzene	1800 U	5000	1800	ug/l	
76-13-1	Freon 113	2400 U	5000	2400	ug/l	
591-78-6	2-Hexanone	10000 U	50000	10000	ug/l	
98-82-8	Isopropylbenzene	1100 U	5000	1100	ug/l	
79-20-9	Methyl Acetate	25000 U	100000	25000	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-RW17C-20210519		
Lab Sample ID:	FA85719-4	**Date Sampled:**	05/19/21
Matrix:	AQ - Ground Water	**Date Received:**	05/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	10000 U	25000	10000	ug/l	
74-87-3	Methyl Chloride	2500 U	10000	2500	ug/l	
75-09-2	Methylene Chloride	10000 U	25000	10000	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	5000 U	25000	5000	ug/l	
1634-04-4	Methyl Tert Butyl Ether	1100 U	5000	1100	ug/l	
100-42-5	Styrene	1100 U	5000	1100	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	1400 U	5000	1400	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	1500 U	5000	1500	ug/l	
127-18-4	Tetrachloroethylene	1100 U	5000	1100	ug/l	
108-88-3	Toluene	1500 U	5000	1500	ug/l	
87-61-6	1,2,3-Trichlorobenzene	3100 U	10000	3100	ug/l	
120-82-1	1,2,4-Trichlorobenzene	2500 U	10000	2500	ug/l	
71-55-6	1,1,1-Trichloroethane	1200 U	5000	1200	ug/l	
79-00-5	1,1,2-Trichloroethane	2300 U	5000	2300	ug/l	
79-01-6	Trichloroethylene	245000	5000	1700	ug/l	
75-69-4	Trichlorofluoromethane	2500 U	10000	2500	ug/l	
75-01-4	Vinyl Chloride	2000 U	5000	2000	ug/l	
1330-20-7	Xylene (total)	3600 U	15000	3600	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		83-118%
17060-07-0	1,2-Dichloroethane-D4	92%		79-125%
2037-26-5	Toluene-D8	94%		85-112%
460-00-4	4-Bromofluorobenzene	96%		83-118%

U = Not detected MDL = Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range

I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-RW18C-20210519		
Lab Sample ID:	FA85719-5	**Date Sampled:**	05/19/21
Matrix:	AQ - Ground Water	**Date Received:**	05/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5E28405.D	5000	05/28/21 17:05	SO	n/a	n/a	V5E1307
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	50000 U	130000	50000	ug/l	
71-43-2	Benzene	1600 U	5000	1600	ug/l	
74-97-5	Bromochloromethane	2300 U	5000	2300	ug/l	
75-27-4	Bromodichloromethane	1200 U	5000	1200	ug/l	
75-25-2	Bromoform	2000 U	5000	2000	ug/l	
78-93-3	2-Butanone (MEK)	10000 U	25000	10000	ug/l	
75-15-0	Carbon Disulfide	2700 U	10000	2700	ug/l	
56-23-5	Carbon Tetrachloride	1800 U	5000	1800	ug/l	
108-90-7	Chlorobenzene	1000 U	5000	1000	ug/l	
75-00-3	Chloroethane	3300 U	10000	3300	ug/l	
67-66-3	Chloroform	1500 U	5000	1500	ug/l	
110-82-7	Cyclohexane	2000 U	5000	2000	ug/l	
124-48-1	Dibromochloromethane	1400 U	5000	1400	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	5200 U	25000	5200	ug/l	
106-93-4	1,2-Dibromoethane	1400 U	10000	1400	ug/l	
75-71-8	Dichlorodifluoromethane	2500 U	10000	2500	ug/l	
95-50-1	1,2-Dichlorobenzene	1600 U	5000	1600	ug/l	
541-73-1	1,3-Dichlorobenzene	1100 U	5000	1100	ug/l	
106-46-7	1,4-Dichlorobenzene	1300 U	5000	1300	ug/l	
75-34-3	1,1-Dichloroethane	1700 U	5000	1700	ug/l	
107-06-2	1,2-Dichloroethane	1600 U	5000	1600	ug/l	
75-35-4	1,1-Dichloroethylene	1600 U	5000	1600	ug/l	
156-59-2	cis-1,2-Dichloroethylene	2870	5000	1400	ug/l	I
156-60-5	trans-1,2-Dichloroethylene	1100 U	5000	1100	ug/l	
78-87-5	1,2-Dichloropropane	2100 U	5000	2100	ug/l	
10061-01-5	cis-1,3-Dichloropropene	1500 U	5000	1500	ug/l	
10061-02-6	trans-1,3-Dichloropropene	1100 U	5000	1100	ug/l	
100-41-4	Ethylbenzene	1800 U	5000	1800	ug/l	
76-13-1	Freon 113	2400 U	5000	2400	ug/l	
591-78-6	2-Hexanone	10000 U	50000	10000	ug/l	
98-82-8	Isopropylbenzene	1100 U	5000	1100	ug/l	
79-20-9	Methyl Acetate	25000 U	100000	25000	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-RW18C-20210519		
Lab Sample ID:	FA85719-5	**Date Sampled:**	05/19/21
Matrix:	AQ - Ground Water	**Date Received:**	05/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	10000 U	25000	10000	ug/l	
74-87-3	Methyl Chloride	2500 U	10000	2500	ug/l	
75-09-2	Methylene Chloride	10000 U	25000	10000	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	5000 U	25000	5000	ug/l	
1634-04-4	Methyl Tert Butyl Ether	1100 U	5000	1100	ug/l	
100-42-5	Styrene	1100 U	5000	1100	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	1400 U	5000	1400	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	1500 U	5000	1500	ug/l	
127-18-4	Tetrachloroethylene	1100 U	5000	1100	ug/l	
108-88-3	Toluene	1500 U	5000	1500	ug/l	
87-61-6	1,2,3-Trichlorobenzene	3100 U	10000	3100	ug/l	
120-82-1	1,2,4-Trichlorobenzene	2500 U	10000	2500	ug/l	
71-55-6	1,1,1-Trichloroethane	1200 U	5000	1200	ug/l	
79-00-5	1,1,2-Trichloroethane	2300 U	5000	2300	ug/l	
79-01-6	Trichloroethylene	269000	5000	1700	ug/l	
75-69-4	Trichlorofluoromethane	2500 U	10000	2500	ug/l	
75-01-4	Vinyl Chloride	2000 U	5000	2000	ug/l	
1330-20-7	Xylene (total)	3600 U	15000	3600	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		83-118%
17060-07-0	1,2-Dichloroethane-D4	92%		79-125%
2037-26-5	Toluene-D8	95%		85-112%
460-00-4	4-Bromofluorobenzene	96%		83-118%

U = Not detected MDL = Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range

I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-RW19C-20210519		
Lab Sample ID:	FA85719-6	**Date Sampled:**	05/19/21
Matrix:	AQ - Ground Water	**Date Received:**	05/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5E28406.D	10000	05/28/21 17:28	SO	n/a	n/a	V5E1307
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	100000 U	250000	100000	ug/l	
71-43-2	Benzene	3100 U	10000	3100	ug/l	
74-97-5	Bromochloromethane	4500 U	10000	4500	ug/l	
75-27-4	Bromodichloromethane	2400 U	10000	2400	ug/l	
75-25-2	Bromoform	4100 U	10000	4100	ug/l	
78-93-3	2-Butanone (MEK)	20000 U	50000	20000	ug/l	
75-15-0	Carbon Disulfide	5300 U	20000	5300	ug/l	
56-23-5	Carbon Tetrachloride	3600 U	10000	3600	ug/l	
108-90-7	Chlorobenzene	2000 U	10000	2000	ug/l	
75-00-3	Chloroethane	6700 U	20000	6700	ug/l	
67-66-3	Chloroform	3000 U	10000	3000	ug/l	
110-82-7	Cyclohexane	3900 U	10000	3900	ug/l	
124-48-1	Dibromochloromethane	2800 U	10000	2800	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	10000 U	50000	10000	ug/l	
106-93-4	1,2-Dibromoethane	2800 U	20000	2800	ug/l	
75-71-8	Dichlorodifluoromethane	5000 U	20000	5000	ug/l	
95-50-1	1,2-Dichlorobenzene	3200 U	10000	3200	ug/l	
541-73-1	1,3-Dichlorobenzene	2200 U	10000	2200	ug/l	
106-46-7	1,4-Dichlorobenzene	2600 U	10000	2600	ug/l	
75-34-3	1,1-Dichloroethane	3400 U	10000	3400	ug/l	
107-06-2	1,2-Dichloroethane	3100 U	10000	3100	ug/l	
75-35-4	1,1-Dichloroethylene	3200 U	10000	3200	ug/l	
156-59-2	cis-1,2-Dichloroethylene	11800	10000	2800	ug/l	
156-60-5	trans-1,2-Dichloroethylene	2200 U	10000	2200	ug/l	
78-87-5	1,2-Dichloropropane	4300 U	10000	4300	ug/l	
10061-01-5	cis-1,3-Dichloropropene	2900 U	10000	2900	ug/l	
10061-02-6	trans-1,3-Dichloropropene	2100 U	10000	2100	ug/l	
100-41-4	Ethylbenzene	3600 U	10000	3600	ug/l	
76-13-1	Freon 113	4800 U	10000	4800	ug/l	
591-78-6	2-Hexanone	20000 U	100000	20000	ug/l	
98-82-8	Isopropylbenzene	2200 U	10000	2200	ug/l	
79-20-9	Methyl Acetate	50000 U	200000	50000	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-RW19C-20210519		
Lab Sample ID:	FA85719-6	**Date Sampled:**	05/19/21
Matrix:	AQ - Ground Water	**Date Received:**	05/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	20000 U	50000	20000	ug/l	
74-87-3	Methyl Chloride	5000 U	20000	5000	ug/l	
75-09-2	Methylene Chloride	20000 U	50000	20000	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	10000 U	50000	10000	ug/l	
1634-04-4	Methyl Tert Butyl Ether	2300 U	10000	2300	ug/l	
100-42-5	Styrene	2200 U	10000	2200	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	2800 U	10000	2800	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	3000 U	10000	3000	ug/l	
127-18-4	Tetrachloroethylene	2200 U	10000	2200	ug/l	
108-88-3	Toluene	3000 U	10000	3000	ug/l	
87-61-6	1,2,3-Trichlorobenzene	6100 U	20000	6100	ug/l	
120-82-1	1,2,4-Trichlorobenzene	5000 U	20000	5000	ug/l	
71-55-6	1,1,1-Trichloroethane	2500 U	10000	2500	ug/l	
79-00-5	1,1,2-Trichloroethane	4700 U	10000	4700	ug/l	
79-01-6	Trichloroethylene	742000	10000	3500	ug/l	
75-69-4	Trichlorofluoromethane	5000 U	20000	5000	ug/l	
75-01-4	Vinyl Chloride	4100 U	10000	4100	ug/l	
1330-20-7	Xylene (total)	7200 U	30000	7200	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		83-118%
17060-07-0	1,2-Dichloroethane-D4	93%		79-125%
2037-26-5	Toluene-D8	96%		85-112%
460-00-4	4-Bromofluorobenzene	96%		83-118%

U = Not detected MDL = Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range
I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-RW20C-20210519		
Lab Sample ID:	FA85719-7	**Date Sampled:**	05/19/21
Matrix:	AQ - Ground Water	**Date Received:**	05/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5E28407.D	2500	05/28/21 17:52	SO	n/a	n/a	V5E1307
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	25000 U	63000	25000	ug/l	
71-43-2	Benzene	780 U	2500	780	ug/l	
74-97-5	Bromochloromethane	1100 U	2500	1100	ug/l	
75-27-4	Bromodichloromethane	610 U	2500	610	ug/l	
75-25-2	Bromoform	1000 U	2500	1000	ug/l	
78-93-3	2-Butanone (MEK)	5000 U	13000	5000	ug/l	
75-15-0	Carbon Disulfide	1300 U	5000	1300	ug/l	
56-23-5	Carbon Tetrachloride	890 U	2500	890	ug/l	
108-90-7	Chlorobenzene	500 U	2500	500	ug/l	
75-00-3	Chloroethane	1700 U	5000	1700	ug/l	
67-66-3	Chloroform	750 U	2500	750	ug/l	
110-82-7	Cyclohexane	980 U	2500	980	ug/l	
124-48-1	Dibromochloromethane	690 U	2500	690	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	2600 U	13000	2600	ug/l	
106-93-4	1,2-Dibromoethane	690 U	5000	690	ug/l	
75-71-8	Dichlorodifluoromethane	1300 U	5000	1300	ug/l	
95-50-1	1,2-Dichlorobenzene	810 U	2500	810	ug/l	
541-73-1	1,3-Dichlorobenzene	540 U	2500	540	ug/l	
106-46-7	1,4-Dichlorobenzene	640 U	2500	640	ug/l	
75-34-3	1,1-Dichloroethane	850 U	2500	850	ug/l	
107-06-2	1,2-Dichloroethane	780 U	2500	780	ug/l	
75-35-4	1,1-Dichloroethylene	810 U	2500	810	ug/l	
156-59-2	cis-1,2-Dichloroethylene	6220	2500	690	ug/l	
156-60-5	trans-1,2-Dichloroethylene	550 U	2500	550	ug/l	
78-87-5	1,2-Dichloropropane	1100 U	2500	1100	ug/l	
10061-01-5	cis-1,3-Dichloropropene	730 U	2500	730	ug/l	
10061-02-6	trans-1,3-Dichloropropene	540 U	2500	540	ug/l	
100-41-4	Ethylbenzene	890 U	2500	890	ug/l	
76-13-1	Freon 113	1200 U	2500	1200	ug/l	
591-78-6	2-Hexanone	5000 U	25000	5000	ug/l	
98-82-8	Isopropylbenzene	550 U	2500	550	ug/l	
79-20-9	Methyl Acetate	13000 U	50000	13000	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-RW20C-20210519		
Lab Sample ID:	FA85719-7	**Date Sampled:**	05/19/21
Matrix:	AQ - Ground Water	**Date Received:**	05/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	5000 U	13000	5000	ug/l	
74-87-3	Methyl Chloride	1300 U	5000	1300	ug/l	
75-09-2	Methylene Chloride	5000 U	13000	5000	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	2500 U	13000	2500	ug/l	
1634-04-4	Methyl Tert Butyl Ether	570 U	2500	570	ug/l	
100-42-5	Styrene	560 U	2500	560	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	690 U	2500	690	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	750 U	2500	750	ug/l	
127-18-4	Tetrachloroethylene	540 U	2500	540	ug/l	
108-88-3	Toluene	750 U	2500	750	ug/l	
87-61-6	1,2,3-Trichlorobenzene	1500 U	5000	1500	ug/l	
120-82-1	1,2,4-Trichlorobenzene	1300 U	5000	1300	ug/l	
71-55-6	1,1,1-Trichloroethane	620 U	2500	620	ug/l	
79-00-5	1,1,2-Trichloroethane	1200 U	2500	1200	ug/l	
79-01-6	Trichloroethylene	223000	2500	860	ug/l	
75-69-4	Trichlorofluoromethane	1300 U	5000	1300	ug/l	
75-01-4	Vinyl Chloride	1000 U	2500	1000	ug/l	
1330-20-7	Xylene (total)	1800 U	7500	1800	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		83-118%
17060-07-0	1,2-Dichloroethane-D4	94%		79-125%
2037-26-5	Toluene-D8	96%		85-112%
460-00-4	4-Bromofluorobenzene	96%		83-118%

U = Not detected MDL = Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range
I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-IW045D1-070.0-20210519		
Lab Sample ID:	FA85719-8	**Date Sampled:**	05/19/21
Matrix:	AQ - Ground Water	**Date Received:**	05/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5E28408.D	250	05/28/21 18:15	SO	n/a	n/a	V5E1307
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	2500 U	6300	2500	ug/l	
71-43-2	Benzene	78 U	250	78	ug/l	
74-97-5	Bromochloromethane	110 U	250	110	ug/l	
75-27-4	Bromodichloromethane	61 U	250	61	ug/l	
75-25-2	Bromoform	100 U	250	100	ug/l	
78-93-3	2-Butanone (MEK)	500 U	1300	500	ug/l	
75-15-0	Carbon Disulfide	130 U	500	130	ug/l	
56-23-5	Carbon Tetrachloride	89 U	250	89	ug/l	
108-90-7	Chlorobenzene	50 U	250	50	ug/l	
75-00-3	Chloroethane	170 U	500	170	ug/l	
67-66-3	Chloroform	75 U	250	75	ug/l	
110-82-7	Cyclohexane	98 U	250	98	ug/l	
124-48-1	Dibromochloromethane	69 U	250	69	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	260 U	1300	260	ug/l	
106-93-4	1,2-Dibromoethane	69 U	500	69	ug/l	
75-71-8	Dichlorodifluoromethane	130 U	500	130	ug/l	
95-50-1	1,2-Dichlorobenzene	81 U	250	81	ug/l	
541-73-1	1,3-Dichlorobenzene	54 U	250	54	ug/l	
106-46-7	1,4-Dichlorobenzene	64 U	250	64	ug/l	
75-34-3	1,1-Dichloroethane	85 U	250	85	ug/l	
107-06-2	1,2-Dichloroethane	78 U	250	78	ug/l	
75-35-4	1,1-Dichloroethylene	81 U	250	81	ug/l	
156-59-2	cis-1,2-Dichloroethylene	2380	250	69	ug/l	
156-60-5	trans-1,2-Dichloroethylene	58.0	250	55	ug/l	I
78-87-5	1,2-Dichloropropane	110 U	250	110	ug/l	
10061-01-5	cis-1,3-Dichloropropene	73 U	250	73	ug/l	
10061-02-6	trans-1,3-Dichloropropene	54 U	250	54	ug/l	
100-41-4	Ethylbenzene	89 U	250	89	ug/l	
76-13-1	Freon 113	120 U	250	120	ug/l	
591-78-6	2-Hexanone	500 U	2500	500	ug/l	
98-82-8	Isopropylbenzene	55 U	250	55	ug/l	
79-20-9	Methyl Acetate	1300 U	5000	1300	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-IW045D1-070.0-20210519		
Lab Sample ID:	FA85719-8	**Date Sampled:**	05/19/21
Matrix:	AQ - Ground Water	**Date Received:**	05/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	500 U	1300	500	ug/l	
74-87-3	Methyl Chloride	130 U	500	130	ug/l	
75-09-2	Methylene Chloride	500 U	1300	500	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	250 U	1300	250	ug/l	
1634-04-4	Methyl Tert Butyl Ether	57 U	250	57	ug/l	
100-42-5	Styrene	56 U	250	56	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	69 U	250	69	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	75 U	250	75	ug/l	
127-18-4	Tetrachloroethylene	54 U	250	54	ug/l	
108-88-3	Toluene	75 U	250	75	ug/l	
87-61-6	1,2,3-Trichlorobenzene	150 U	500	150	ug/l	
120-82-1	1,2,4-Trichlorobenzene	130 U	500	130	ug/l	
71-55-6	1,1,1-Trichloroethane	62 U	250	62	ug/l	
79-00-5	1,1,2-Trichloroethane	120 U	250	120	ug/l	
79-01-6	Trichloroethylene	15800	250	86	ug/l	
75-69-4	Trichlorofluoromethane	130 U	500	130	ug/l	
75-01-4	Vinyl Chloride	413	250	100	ug/l	
1330-20-7	Xylene (total)	180 U	750	180	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		83-118%
17060-07-0	1,2-Dichloroethane-D4	96%		79-125%
2037-26-5	Toluene-D8	97%		85-112%
460-00-4	4-Bromofluorobenzene	96%		83-118%

U = Not detected MDL = Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range
I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-IW045D2-110.0-20210519		
Lab Sample ID:	FA85719-9	**Date Sampled:**	05/19/21
Matrix:	AQ - Ground Water	**Date Received:**	05/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5E28409.D	1	05/28/21 18:39	SO	n/a	n/a	V5E1307
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	10 U	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.67 U	2.0	0.67	ug/l	
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	0.50 U	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.32 U	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.28 U	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.22 U	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113	0.48 U	1.0	0.48	ug/l	
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-IW045D2-110.0-20210519		
Lab Sample ID:	FA85719-9	**Date Sampled:**	05/19/21
Matrix:	AQ - Ground Water	**Date Received:**	05/20/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	2.0 U	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.30 U	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	0.35 U	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	0.41 U	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		83-118%
17060-07-0	1,2-Dichloroethane-D4	97%		79-125%
2037-26-5	Toluene-D8	96%		85-112%
460-00-4	4-Bromofluorobenzene	96%		83-118%

U = Not detected MDL = Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range

I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

5

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

SGS North America Inc - Orlando

Chain of Custody

FA85719

SGS - ORLANDO JOB # : PAGE 1 OF 1

4405 Vineland Road, Suite C-15 Orlando, Fl 32811
TEL. 407-425-6700 FAX: 407-425-0707
www.sgs.com

SGS - ORLANDO Quote # | SKIFF #

Client / Reporting Information

Company Name: TETRA TECH
Address: 661 ANDERSON DR FOSTER PLAZA 7
City: PITTSBURGH State: PA Zip: 15220
Project Contact: MARK.SONNET@TETRATECH.COM Email:
Phone #: 412-921-8622
Sampler(s) Name(s) (Printed) Sampler 1: DAN FORESTER Sampler 2:

Project Information

Project Name: CC34
Street: FREEDOM RD
City: CCSFS State: FL
Project #:
Fax #:
Client Purchase Order #:

Analytical Information

VOC's 8260

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid

SGS Orlando Sample #	Field ID / Point of Collection	COLLECTION DATE	TIME	SAMPLED BY:	MATRIX	TOTAL # OF BOTTLES	OTHER	NONE	HCl	NaOH	HNO3	H2SO4	NaOH+ZNAc	DI WATER	MEOH	LAB USE ONLY
1	CC34-GAC-20210519	20-1 19MAY	0800	VT	GW	3			X							X
2	CC34-AS1-20210519		0810													
3	CC34-AS2-20210519		0820													
4	CC34-RW17C-20210519		0830													
5	CC34-RW18C-20210519		0840													
6	CC34-RW19C-20210519		0850													
7	CC34-RW20C-20210519		0900													
8	CC34-IW045D1-0.0-20210519		0930													
9	CC34-IW045D2-0.0-20210519	X	0950	X	X	X			X							X

Turnaround Time (Business days)

10 Day (Business)
~~7 Day~~
5 Day
3 Day *RUSH*
2 Day *RUSH*
1 Day *RUSH*
Other
Approved By: / Date:
Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [ ] COMMERCIAL "B" (RESULTS PLUS QC)
- [ ] REDT1 (EPA LEVEL 3)
- [ ] FULLT1 (EPA LEVEL 4)
- [ ] EDD'S

INITIAL ASSESSMENT / LABEL VERIFICATION: NB GM

Comments / Remarks

COOLED ON ICE

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler/Affiliation	Date Time:	Received By/Affiliation	Relinquished By/Affiliation	Date Time:	Received By/Affiliation
1		19MAY21 1300	2	3	5/19/21 1443	4 5/19/21 1442
5	Relinquished by/Affiliation	Date Time:	Received By/Affiliation 6	Relinquished By/Affiliation 7	Date Time:	Received By/Affiliation 8

Lab Use Only : Cooler Temperature (s) Celsius (corrected): 1.8

FA85719: Chain of Custody
Page 1 of 2

SGS Sample Receipt Summary

Job Number: FA85719 **Client:** TETRA TECH **Project:** CC34

Date / Time Received: 5/20/2021 2:42:00 PM **Delivery Method:** FX **Airbill #'s:** 7737 7260 7416

Therm ID: IR 1; **Therm CF:** -1.8; **# of Coolers:** 1

Cooler Temps (Raw Measured) °C: Cooler 1: (3.6);

Cooler Temps (Corrected) °C: Cooler 1: (1.8);

Cooler Information	Y	or	N
1. Custody Seals Present	☑		☐
2. Custody Seals Intact	☑		☐
3. Temp criteria achieved	☑		☐
4. Cooler temp verification	IR Gun		
5. Cooler media	Ice (Bag)		

Trip Blank Information	Y	or	N	N/A
1. Trip Blank present / cooler	☐		☑	☐
2. Trip Blank listed on COC	☐		☑	☐

	W	or	S	N/A
3. Type Of TB Received	☐		☐	☑

Sample Information	Y	or	N	N/A
1. Sample labels present on bottles	☑		☐	
2. Samples preserved properly	☑		☐	
3. Sufficient volume/containers recvd for analysis:	☑		☐	
4. Condition of sample	Intact			
5. Sample recvd within HT	☑		☐	
6. Dates/Times/IDs on COC match Sample Label	☑		☐	
7. VOCs have headspace	☐		☑	☐
8. Bottles received for unspecified tests	☐		☑	
9. Compositing instructions clear	☐		☐	☑
10. Voa Soil Kits/Jars received past 48hrs?	☐		☐	☑
11. % Solids Jar received?	☐		☐	☑
12. Residual Chlorine Present?	☐		☐	☑

Misc. Information

Number of Encores: 25-Gram _____ 5-Gram _____ Number of 5035 Field Kits: _____ Number of Lab Filtered Metals: _____

Test Strip Lot #s: pH 0-3 230315 pH 10-12 219813A Other: (Specify) _____ _____

Residual Chlorine Test Strip Lot #: _____

Comments

SM001
Rev. Date 05/24/17

Technician: PETERH Date: 5/20/2021 2:42:00 PM Reviewer: _____ Date: _____

MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: FA85719
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5E1307-MB	5E28393.D	1	05/28/21	SO	n/a	n/a	V5E1307

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA85719-1, FA85719-2, FA85719-3, FA85719-4, FA85719-5, FA85719-6, FA85719-7, FA85719-8, FA85719-9

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
71-43-2	Benzene	ND	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.24	ug/l	
75-25-2	Bromoform	ND	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	ND	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.67	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
110-82-7	Cyclohexane	ND	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.36	ug/l	
76-13-1	Freon 113	ND	1.0	0.48	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	ND	20	5.0	ug/l	
74-83-9	Methyl Bromide	ND	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	ND	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	ND	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.0	ug/l	

Method Blank Summary

Job Number: FA85719
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5E1307-MB	5E28393.D	1	05/28/21	SO	n/a	n/a	V5E1307

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA85719-1, FA85719-2, FA85719-3, FA85719-4, FA85719-5, FA85719-6, FA85719-7, FA85719-8, FA85719-9

CAS No.	Compound	Result	RL	MDL	Units	Q
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.23	ug/l	
100-42-5	Styrene	ND	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	93%	83-118%
17060-07-0	1,2-Dichloroethane-D4	86%	79-125%
2037-26-5	Toluene-D8	95%	85-112%
460-00-4	4-Bromofluorobenzene	96%	83-118%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
124-38-9	Carbon dioxide	2.64	280	ug/l	JN
	Total TIC, Volatile		0	ug/l	

Blank Spike Summary

Job Number: FA85719
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5E1307-BS	5E28390.D	1	05/28/21	SO	n/a	n/a	V5E1307

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA85719-1, FA85719-2, FA85719-3, FA85719-4, FA85719-5, FA85719-6, FA85719-7, FA85719-8, FA85719-9

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	122	98	50-147
71-43-2	Benzene	25	25.3	101	81-122
74-97-5	Bromochloromethane	25	22.9	92	76-123
75-27-4	Bromodichloromethane	25	24.1	96	79-123
75-25-2	Bromoform	25	25.5	102	66-123
78-93-3	2-Butanone (MEK)	125	130	104	56-143
75-15-0	Carbon Disulfide	25	23.2	93	66-148
56-23-5	Carbon Tetrachloride	25	24.6	98	76-136
108-90-7	Chlorobenzene	25	23.7	95	82-124
75-00-3	Chloroethane	25	23.7	95	62-144
67-66-3	Chloroform	25	23.1	92	80-124
110-82-7	Cyclohexane	25	25.1	100	73-138
124-48-1	Dibromochloromethane	25	23.6	94	78-122
96-12-8	1,2-Dibromo-3-chloropropane	25	22.2	89	64-123
106-93-4	1,2-Dibromoethane	25	24.5	98	75-120
75-71-8	Dichlorodifluoromethane	25	17.8	71	42-167
95-50-1	1,2-Dichlorobenzene	25	23.3	93	82-124
541-73-1	1,3-Dichlorobenzene	25	23.9	96	84-125
106-46-7	1,4-Dichlorobenzene	25	23.1	92	78-120
75-34-3	1,1-Dichloroethane	25	26.1	104	81-122
107-06-2	1,2-Dichloroethane	25	21.1	84	75-125
75-35-4	1,1-Dichloroethylene	25	24.7	99	78-137
156-59-2	cis-1,2-Dichloroethylene	25	26.2	105	78-120
156-60-5	trans-1,2-Dichloroethylene	25	25.5	102	76-127
78-87-5	1,2-Dichloropropane	25	24.6	98	76-124
10061-01-5	cis-1,3-Dichloropropene	25	24.1	96	75-118
10061-02-6	trans-1,3-Dichloropropene	25	22.5	90	80-120
100-41-4	Ethylbenzene	25	23.6	94	81-121
76-13-1	Freon 113	25	20.9	84	72-134
591-78-6	2-Hexanone	125	144	115	61-129
98-82-8	Isopropylbenzene	25	23.3	93	83-132
79-20-9	Methyl Acetate	125	122	98	65-126
74-83-9	Methyl Bromide	25	22.4	90	59-143
74-87-3	Methyl Chloride	25	19.7	79	50-159
75-09-2	Methylene Chloride	25	20.3	81	69-135
108-10-1	4-Methyl-2-pentanone (MIBK)	125	130	104	66-122

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA85719
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5E1307-BS	5E28390.D	1	05/28/21	SO	n/a	n/a	V5E1307

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA85719-1, FA85719-2, FA85719-3, FA85719-4, FA85719-5, FA85719-6, FA85719-7, FA85719-8, FA85719-9

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
1634-04-4	Methyl Tert Butyl Ether	25	21.1	84	72-117
100-42-5	Styrene	25	24.5	98	78-119
630-20-6	1,1,1,2-Tetrachloroethane	25	23.4	94	77-122
79-34-5	1,1,2,2-Tetrachloroethane	25	24.0	96	72-120
127-18-4	Tetrachloroethylene	25	26.8	107	76-135
108-88-3	Toluene	25	23.6	94	80-120
87-61-6	1,2,3-Trichlorobenzene	25	21.4	86	68-131
120-82-1	1,2,4-Trichlorobenzene	25	22.1	88	73-129
71-55-6	1,1,1-Trichloroethane	25	23.7	95	75-130
79-00-5	1,1,2-Trichloroethane	25	24.5	98	76-119
79-01-6	Trichloroethylene	25	23.5	94	81-126
75-69-4	Trichlorofluoromethane	25	21.0	84	71-156
75-01-4	Vinyl Chloride	25	21.9	88	69-159
1330-20-7	Xylene (total)	75	71.6	95	80-126

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	96%	83-118%
17060-07-0	1,2-Dichloroethane-D4	86%	79-125%
2037-26-5	Toluene-D8	100%	85-112%
460-00-4	4-Bromofluorobenzene	100%	83-118%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA85719
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA85654-2MS	5E28413.D	50	05/28/21	SO	n/a	n/a	V5E1307
FA85654-2MSD	5E28414.D	50	05/28/21	SO	n/a	n/a	V5E1307
FA85654-2	5E28397.D	50	05/28/21	SO	n/a	n/a	V5E1307

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA85719-1, FA85719-2, FA85719-3, FA85719-4, FA85719-5, FA85719-6, FA85719-7, FA85719-8, FA85719-9

CAS No.	Compound	FA85654-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		6250	6410	103	6250	6180	99	4	50-147/21
71-43-2	Benzene	ND		1250	1390	111	1250	1360	109	2	81-122/14
74-97-5	Bromochloromethane	ND		1250	1260	101	1250	1230	98	2	76-123/14
75-27-4	Bromodichloromethane	ND		1250	1400	112	1250	1370	110	2	79-123/19
75-25-2	Bromoform	ND		1250	1370	110	1250	1330	106	3	66-123/21
78-93-3	2-Butanone (MEK)	ND		6250	7200	115	6250	6810	109	6	56-143/18
75-15-0	Carbon Disulfide	ND		1250	1370	110	1250	1270	102	8	66-148/23
56-23-5	Carbon Tetrachloride	ND		1250	1430	114	1250	1380	110	4	76-136/23
108-90-7	Chlorobenzene	ND		1250	1300	104	1250	1260	101	3	82-124/14
75-00-3	Chloroethane	ND		1250	1440	115	1250	1300	104	10	62-144/20
67-66-3	Chloroform	20.0		1250	1360	107	1250	1310	103	4	80-124/15
110-82-7	Cyclohexane	ND		1250	1370	110	1250	1330	106	3	73-138/18
124-48-1	Dibromochloromethane	ND		1250	1270	102	1250	1260	101	1	78-122/19
96-12-8	1,2-Dibromo-3-chloropropane	ND		1250	1240	99	1250	1240	99	0	64-123/18
106-93-4	1,2-Dibromoethane	ND		1250	1370	110	1250	1340	107	2	75-120/13
75-71-8	Dichlorodifluoromethane	ND		1250	1150	92	1250	1090	87	5	42-167/19
95-50-1	1,2-Dichlorobenzene	ND		1250	1240	99	1250	1230	98	1	82-124/14
541-73-1	1,3-Dichlorobenzene	ND		1250	1270	102	1250	1260	101	1	84-125/14
106-46-7	1,4-Dichlorobenzene	ND		1250	1230	98	1250	1200	96	2	78-120/15
75-34-3	1,1-Dichloroethane	ND		1250	1480	118	1250	1430	114	3	81-122/15
107-06-2	1,2-Dichloroethane	ND		1250	1270	102	1250	1240	99	2	75-125/14
75-35-4	1,1-Dichloroethylene	ND		1250	1450	116	1250	1380	110	5	78-137/18
156-59-2	cis-1,2-Dichloroethylene	148		1250	1600	116	1250	1550	112	3	78-120/15
156-60-5	trans-1,2-Dichloroethylene	ND		1250	1470	118	1250	1390	111	6	76-127/17
78-87-5	1,2-Dichloropropane	ND		1250	1380	110	1250	1350	108	2	76-124/14
10061-01-5	cis-1,3-Dichloropropene	ND		1250	1360	109	1250	1320	106	3	75-118/23
10061-02-6	trans-1,3-Dichloropropene	ND		1250	1190	95	1250	1150	92	3	80-120/22
100-41-4	Ethylbenzene	ND		1250	1300	104	1250	1260	101	3	81-121/14
76-13-1	Freon 113	ND		1250	1220	98	1250	1140	91	7	72-134/20
591-78-6	2-Hexanone	ND		6250	8200	131*	6250	7950	127	3	61-129/18
98-82-8	Isopropylbenzene	ND		1250	1260	101	1250	1210	97	4	83-132/15
79-20-9	Methyl Acetate	ND		6250	6730	108	6250	6640	106	1	65-126/18
74-83-9	Methyl Bromide	ND		1250	1300	104	1250	1240	99	5	59-143/19
74-87-3	Methyl Chloride	ND		1250	1240	99	1250	1200	96	3	50-159/19
75-09-2	Methylene Chloride	ND		1250	1190	95	1250	1120	90	6	69-135/16
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		6250	7340	117	6250	7070	113	4	66-122/16

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA85719
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA85654-2MS	5E28413.D	50	05/28/21	SO	n/a	n/a	V5E1307
FA85654-2MSD	5E28414.D	50	05/28/21	SO	n/a	n/a	V5E1307
FA85654-2	5E28397.D	50	05/28/21	SO	n/a	n/a	V5E1307

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA85719-1, FA85719-2, FA85719-3, FA85719-4, FA85719-5, FA85719-6, FA85719-7, FA85719-8, FA85719-9

CAS No.	Compound	FA85654-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
1634-04-4	Methyl Tert Butyl Ether	ND		1250	1180	94	1250	1130	90	4	72-117/14
100-42-5	Styrene	ND		1250	1330	106	1250	1290	103	3	78-119/23
630-20-6	1,1,1,2-Tetrachloroethane	ND		1250	1280	102	1250	1220	98	5	77-122/19
79-34-5	1,1,2,2-Tetrachloroethane	ND		1250	1320	106	1250	1280	102	3	72-120/14
127-18-4	Tetrachloroethylene	2630		1250	4020	111	1250	4190	125	4	76-135/16
108-88-3	Toluene	ND		1250	1260	101	1250	1230	98	2	80-120/14
87-61-6	1,2,3-Trichlorobenzene	ND		1250	992	79	1250	1110	89	11	68-131/25
120-82-1	1,2,4-Trichlorobenzene	ND		1250	1080	86	1250	1150	92	6	73-129/20
71-55-6	1,1,1-Trichloroethane	ND		1250	1410	113	1250	1350	108	4	75-130/16
79-00-5	1,1,2-Trichloroethane	ND		1250	1350	108	1250	1300	104	4	76-119/14
79-01-6	Trichloroethylene	54.9		1250	1390	107	1250	1350	104	3	81-126/15
75-69-4	Trichlorofluoromethane	ND		1250	1330	106	1250	1290	103	3	71-156/21
75-01-4	Vinyl Chloride	ND		1250	1250	100	1250	1220	98	2	69-159/18
1330-20-7	Xylene (total)	ND		3750	3890	104	3750	3770	101	3	80-126/15

CAS No.	Surrogate Recoveries	MS	MSD	FA85654-2	Limits
1868-53-7	Dibromofluoromethane	100%	98%	93%	83-118%
17060-07-0	1,2-Dichloroethane-D4	96%	94%	90%	79-125%
2037-26-5	Toluene-D8	98%	98%	97%	85-112%
460-00-4	4-Bromofluorobenzene	98%	97%	96%	83-118%

* = Outside of Control Limits.

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

Tetra Tech NUS

NASA-LC 34, Freedom Rd, CCAFS, FL

112G08985

SGS Job Number: FA86691

Sampling Date: 06/23/21

Report to:

Tetra-Tech, Inc.
661 Andersen Dr Foster Plaza 7
Pittsburgh, PA 15220
mark.jonnet@tetratech.com

ATTN: Mark Jonnet

Total number of pages in report: 74

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Norm Farmer
Technical Director

Client Service contact: Andrea Colby 407-425-6700

Certifications: FL(E83510), LA(03051), KS(E-10327), NC(573), NJ(FL002), NY(12022), SC(96038001) DoD ELAP(ANAB L2229), AZ(AZ0806), CA(2937), TX(T104704404), PA(68-03573), VA(460177), AL, AK, AR, CT, IA, KY, MA, MI. MS, ND, NH, NV, OK, OR, UT, VT, WA, WV

Test results relate only to samples analyzed.

Sections: 1 2 3 4 5 6

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SGS North America Inc.

Sample Summary

Tetra Tech NUS

Job No: FA86691

NASA-LC 34, Freedom Rd, CCAFS, FL
Project No: 112G08985

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
FA86691-1	06/23/21	09:00	DF	06/24/21	AQ	Ground Water	LC34-GAC-20210623
FA86691-2	06/23/21	09:10	DF	06/24/21	AQ	Ground Water	LC34-AS1-20210623
FA86691-3	06/23/21	09:20	DF	06/24/21	AQ	Ground Water	LC34-AS2-20210623
FA86691-4	06/23/21	09:30	DF	06/24/21	AQ	Ground Water	LC34-INFLUENT-20210623
FA86691-5	06/23/21	09:40	DF	06/24/21	AQ	Ground Water	LC34-RW1A-20210623
FA86691-6	06/23/21	09:50	DF	06/24/21	AQ	Ground Water	LC34-RW1B-20210623
FA86691-7	06/23/21	10:00	DF	06/24/21	AQ	Ground Water	LC34-RW2A-20210623
FA86691-8	06/23/21	10:10	DF	06/24/21	AQ	Ground Water	LC34-RW2B-20210623
FA86691-9	06/23/21	10:20	DF	06/24/21	AQ	Ground Water	LC34-RW3A-20210623
FA86691-10	06/23/21	10:30	DF	06/24/21	AQ	Ground Water	LC34-RW3B-20210623
FA86691-11	06/23/21	10:40	DF	06/24/21	AQ	Ground Water	LC34-RW5B-20210623
FA86691-12	06/23/21	10:50	DF	06/24/21	AQ	Ground Water	LC34-RW9A-20210623
FA86691-13	06/23/21	11:00	DF	06/24/21	AQ	Ground Water	LC34-RW12A-20210623

Sample Summary
(continued)

Tetra Tech NUS

Job No: FA86691

NASA-LC 34, Freedom Rd, CCAFS, FL
Project No: 112G08985

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
FA86691-14	06/23/21	11:10	DF	06/24/21	AQ	Ground Water	LC34-RW13A-20210623
FA86691-15	06/23/21	11:20	DF	06/24/21	AQ	Ground Water	LC34-RW14A-20210623
FA86691-16	06/23/21	11:30	DF	06/24/21	AQ	Ground Water	LC34-RW15A-20210623
FA86691-17	06/23/21	11:40	DF	06/24/21	AQ	Ground Water	LC34-RW16B-20210623
FA86691-18	06/23/21	11:50	DF	06/24/21	AQ	Ground Water	LC34-RW17C-20210623
FA86691-19	06/23/21	12:00	DF	06/24/21	AQ	Ground Water	LC34-RW18C-20210623
FA86691-20	06/23/21	12:10	DF	06/24/21	AQ	Ground Water	LC34-RW19C-20210623
FA86691-21	06/23/21	12:20	DF	06/24/21	AQ	Surface Water	LC34-RW20C-20210623

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Tetra Tech NUS **Job No:** FA86691

Site: NASA-LC 34, Freedom Rd, CCAFS, FL **Report Date:** 7/14/2021 12:10:00

21 Sample(s) were collected on 06/23/2021 and were received at SGS North America Inc - Orlando on 06/24/2021 properly preserved, at -1 Deg. C and intact. These Samples received an SGS Orlando job number of FA86691. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

MS Volatiles By Method SW846 8260B

Matrix: AQ **Batch ID:** V1A1543

Sample(s) FA86691-15MS, FA86691-15MSD were used as the QC samples indicated.

Matrix: AQ **Batch ID:** V5E1350

Sample(s) FA86966-28MS, FA86966-28MSD were used as the QC samples indicated.

The following samples were run outside of holding time for method SW846 8260B: FA86691-5, FA86691-6, FA86691-20.

Matrix Spike Recovery(s) for Trichloroethylene are outside control limits. Probable cause is due to matrix interference.

V5E1350-MB: Sample was treated with an anti-foaming agent.

FA86691-5: Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA86691-6: Sample re-analyzed beyond hold time; reported results are considered minimum values.

FA86691-20: Sample re-analyzed beyond hold time; reported results are considered minimum values.

Matrix: AQ **Batch ID:** VC6044

Sample(s) FA86691-13MS, FA86691-13MSD were used as the QC samples indicated.

Sample(s) FA86691-1, FA86691-3, FA86691-7, FA86691-2, FA86691-4 have compound(s) reported with a "V" qualifier, indicating analyte is found in the associated method blank.

Matrix Spike Recovery(s) for 1,1,1,2-Tetrachloroethane, 1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethylene, 1,2,3-Trichlorobenzene, 1,2,4-Trichlorobenzene, 1,2-Dibromo-3-chloropropane, 1,2-Dibromoethane, 1,2-Dichlorobenzene, 1,2-Dichloroethane, 1,2-Dichloropropane, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, 2-Butanone (MEK), 2-Hexanone, 4-Methyl-2-pentanone (MIBK), Benzene, Bromochloromethane, Bromodichloromethane, Bromoform, Carbon Disulfide, Carbon Tetrachloride, Chlorobenzene, Chloroform, cis-1,3-Dichloropropene, Cyclohexane, Dibromochloromethane, Ethylbenzene, Freon 113, Isopropylbenzene, Methyl Acetate, Methyl Bromide, Methyl Tert Butyl Ether, Methylene Chloride, Styrene, Tetrachloroethylene, Toluene, trans-1,2-Dichloroethylene, trans-1,3-Dichloropropene, Trichloroethylene, Trichlorofluoromethane, Vinyl Chloride, Xylene (total), cis-1,2-Dichloroethylene are outside control limits. Outside control limits due to high level in sample relative to spike amount.
Matrix Spike Duplicate Recovery(s) for 1,2,3-Trichlorobenzene, 1,2,4-Trichlorobenzene, Isopropylbenzene, Styrene are outside control limits. Probable cause is due to matrix interference.

RPD(s) for MSD for 1,1,1,2-Tetrachloroethane, 1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethylene, 1,2,3-Trichlorobenzene, 1,2,4-Trichlorobenzene, 1,2-Dibromo-3-chloropropane, 1,2-Dibromoethane, 1,2-Dichlorobenzene, 1,2-Dichloroethane, 1,2-Dichloropropane, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, 2-Butanone (MEK), 2-Hexanone, 4-Methyl-2-pentanone (MIBK), Acetone, Benzene, Bromochloromethane, Bromodichloromethane, Bromoform, Carbon Disulfide, Carbon Tetrachloride, Chlorobenzene, Chloroethane, Chloroform, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Cyclohexane, Dibromochloromethane, Dichlorodifluoromethane, Ethylbenzene, Freon 113, Isopropylbenzene, Methyl Acetate, Methyl Bromide, Methyl Chloride, Methyl Tert Butyl Ether, Methylene Chloride, Styrene, Tetrachloroethylene, Toluene, trans-1,2-Dichloroethylene, trans-1,3-Dichloropropene, Trichloroethylene, Trichlorofluoromethane, Vinyl Chloride, Xylene (total) are outside control limits for sample FA86691-13MSD. Probable cause is due to sample non-homogeneity.

FA86691-3 for Methyl Bromide: Suspected instrument contaminant. Associated ICV outside control limits high, however sample ND.

FA86691-1 for 1,2,3-Trichlorobenzene: Associated CCV outside of control limits high, sample was ND.

FA86691-1 for 1,2,4-Trichlorobenzene: Associated CCV outside of control limits high, sample was ND.

FA86691-1 for Bromoform: Associated CCV outside of control limits high, sample was ND.

FA86691-1 for Isopropylbenzene: Associated CCV outside of control limits high, sample was ND.

FA86691-1 for Styrene: Associated CCV outside of control limits high, sample was ND.

FA86691-1 for Tetrachloroethylene: Associated CCV outside of control limits high, sample was ND.

FA86691-1 for Methyl Chloride: Suspected instrument contaminant.

FA86691-1 for Xylene (total): Associated CCV outside of control limits high, sample was ND.

FA86691-1 for Freon 113: Associated ICV outside control limits low.

MS Volatiles By Method SW846 8260B

Matrix: AQ **Batch ID:** VC6044

FA86691-1 for Methyl Bromide: Suspected instrument contaminant. Associated ICV outside control limits high, however sample ND.

FA86691-2 for Bromoform: Associated CCV outside of control limits high, sample was ND.

FA86691-2 for Styrene: Associated CCV outside of control limits high, sample was ND.

FA86691-2 for Tetrachloroethylene: Associated CCV outside of control limits high, sample was ND.

FA86691-2 for Xylene (total): Associated CCV outside of control limits high, sample was ND.

FA86691-2 for Freon 113: Associated ICV outside control limits low.

FA86691-2 for Methyl Bromide: Suspected instrument contaminant. Associated ICV outside control limits high, however sample ND.

FA86691-2 for Isopropylbenzene: Associated CCV outside of control limits high, sample was ND.

FA86691-2 for 1,2,4-Trichlorobenzene: Associated CCV outside of control limits high, sample was ND.

FA86691-2 for 1,2,3-Trichlorobenzene: Associated CCV outside of control limits high, sample was ND.

FA86691-3 for Bromoform: Associated CCV outside of control limits high, sample was ND.

FA86691-3 for 1,2,3-Trichlorobenzene: Associated CCV outside of control limits high, sample was ND.

FA86691-3 for 1,2,4-Trichlorobenzene: Associated CCV outside of control limits high, sample was ND.

FA86691-3 for Methyl Chloride: Suspected instrument contaminant.

FA86691-3 for Xylene (total): Associated CCV outside of control limits high, sample was ND.

FA86691-3 for Isopropylbenzene: Associated CCV outside of control limits high, sample was ND.

FA86691-3 for Tetrachloroethylene: Associated CCV outside of control limits high, sample was ND.

FA86691-3 for Styrene: Associated CCV outside of control limits high, sample was ND.

FA86691-3 for Freon 113: Associated ICV outside control limits low.

FA86691-4 for Isopropylbenzene: Associated CCV outside of control limits high, sample was ND.

FA86691-4 for Styrene: Associated CCV outside of control limits high, sample was ND.

FA86691-4 for Tetrachloroethylene: Associated CCV outside of control limits high, sample was ND.

FA86691-4 for Xylene (total): Associated CCV outside of control limits high, sample was ND.

FA86691-4 for Freon 113: Associated ICV outside control limits low.

FA86691-4 for Bromoform: Associated CCV outside of control limits high, sample was ND.

FA86691-4 for 1,2,4-Trichlorobenzene: Associated CCV outside of control limits high, sample was ND.

FA86691-4 for 1,2,3-Trichlorobenzene: Associated CCV outside of control limits high, sample was ND.

FA86691-4 for Methyl Bromide: Suspected instrument contaminant. Associated ICV outside control limits high, however sample ND.

FA86691-5 for Styrene: Associated CCV outside of control limits high, sample was ND.

FA86691-5 for 1,2,3-Trichlorobenzene: Associated CCV outside of control limits high, sample was ND.

FA86691-5 for 1,2,4-Trichlorobenzene: Associated CCV outside of control limits high, sample was ND.

FA86691-5 for Isopropylbenzene: Associated CCV outside of control limits high, sample was ND.

FA86691-5 for Bromoform: Associated CCV outside of control limits high, sample was ND.

FA86691-5 for Freon 113: Associated ICV outside control limits low.

FA86691-5 for Tetrachloroethylene: Associated CCV outside of control limits high, sample was ND.

FA86691-5 for Xylene (total): Associated CCV outside of control limits high, sample was ND.

FA86691-6 for Freon 113: Associated ICV outside control limits low.

FA86691-6 for Tetrachloroethylene: Associated CCV outside of control limits high, sample was ND.

FA86691-6 for Styrene: Associated CCV outside of control limits high, sample was ND.

FA86691-6 for Isopropylbenzene: Associated CCV outside of control limits high, sample was ND.

FA86691-6 for Bromoform: Associated CCV outside of control limits high, sample was ND.

FA86691-6 for 1,2,4-Trichlorobenzene: Associated CCV outside of control limits high, sample was ND.

FA86691-6 for 1,2,3-Trichlorobenzene: Associated CCV outside of control limits high, sample was ND.

FA86691-6 for Xylene (total): Associated CCV outside of control limits high, sample was ND.

FA86691-7 for Methyl Bromide: Suspected instrument contaminant. Associated ICV outside control limits high, however sample ND.

FA86691-7 for Methyl Chloride: Suspected instrument contaminant.

FA86691-7 for Freon 113: Associated ICV outside control limits low.

FA86691-7 for Styrene: Associated CCV outside of control limits high, sample was ND.

FA86691-7 for Isopropylbenzene: Associated CCV outside of control limits high, sample was ND.

FA86691-7 for Bromoform: Associated CCV outside of control limits high, sample was ND.

MS Volatiles By Method SW846 8260B

Matrix: AQ **Batch ID:** VC6044

FA86691-7 for 1,2,4-Trichlorobenzene: Associated CCV outside of control limits high, sample was ND.
FA86691-7 for 1,2,3-Trichlorobenzene: Associated CCV outside of control limits high, sample was ND.
FA86691-7 for Xylene (total): Associated CCV outside of control limits high, sample was ND.
FA86691-7 for Tetrachloroethylene: Associated CCV outside of control limits high, sample was ND.
FA86691-8 for Styrene: Associated CCV outside of control limits high, sample was ND.
FA86691-8 for Isopropylbenzene: Associated CCV outside of control limits high, sample was ND.
FA86691-8 for Xylene (total): Associated CCV outside of control limits high, sample was ND.
FA86691-8 for Bromoform: Associated CCV outside of control limits high, sample was ND.
FA86691-8 for 1,2,4-Trichlorobenzene: Associated CCV outside of control limits high, sample was ND.
FA86691-8 for 1,2,3-Trichlorobenzene: Associated CCV outside of control limits high, sample was ND.
FA86691-9 for Tetrachloroethylene: Associated CCV outside of control limits high, sample was ND.
FA86691-8 for Tetrachloroethylene: Associated CCV outside of control limits high, sample was ND.
FA86691-9 for Styrene: Associated CCV outside of control limits high, sample was ND.
FA86691-9 for Xylene (total): Associated CCV outside of control limits high, sample was ND.
FA86691-9 for Isopropylbenzene: Associated CCV outside of control limits high, sample was ND.
FA86691-9 for Bromoform: Associated CCV outside of control limits high, sample was ND.
FA86691-9 for 1,2,4-Trichlorobenzene: Associated CCV outside of control limits high, sample was ND.
FA86691-9 for 1,2,3-Trichlorobenzene: Associated CCV outside of control limits high, sample was ND.
FA86691-10 for Methyl Bromide: Associated ICV outside control limits high, however sample ND.
FA86691-10 for Xylene (total): Associated CCV outside of control limits high, sample was ND.
FA86691-10 for Tetrachloroethylene: Associated CCV outside of control limits high, sample was ND.
FA86691-10 for Styrene: Associated CCV outside of control limits high, sample was ND.
FA86691-10 for Isopropylbenzene: Associated CCV outside of control limits high, sample was ND.
FA86691-10 for Bromoform: Associated CCV outside of control limits high, sample was ND.
FA86691-10 for 1,2,4-Trichlorobenzene: Associated CCV outside of control limits high, sample was ND.
FA86691-10 for 1,2,3-Trichlorobenzene: Associated CCV outside of control limits high, sample was ND.
FA86691-10 for Freon 113: Associated ICV outside control limits low.
FA86691-11 for Isopropylbenzene: Associated CCV outside of control limits high, sample was ND.
FA86691-11 for Bromoform: Associated CCV outside of control limits high, sample was ND.
FA86691-11 for 1,2,4-Trichlorobenzene: Associated CCV outside of control limits high, sample was ND.
FA86691-11 for 1,2,3-Trichlorobenzene: Associated CCV outside of control limits high, sample was ND.
FA86691-11 for Styrene: Associated CCV outside of control limits high, sample was ND.
FA86691-11 for Tetrachloroethylene: Associated CCV outside of control limits high, sample was ND.
FA86691-11 for Xylene (total): Associated CCV outside of control limits high, sample was ND.
FA86691-12 for Tetrachloroethylene: Associated CCV outside of control limits high, sample was ND.
FA86691-12 for Styrene: Associated CCV outside of control limits high, sample was ND.
FA86691-12 for Isopropylbenzene: Associated CCV outside of control limits high, sample was ND.
FA86691-12 for 1,2,3-Trichlorobenzene: Associated CCV outside of control limits high, sample was ND.
FA86691-12 for Bromoform: Associated CCV outside of control limits high, sample was ND.
FA86691-12 for 1,2,4-Trichlorobenzene: Associated CCV outside of control limits high, sample was ND.
FA86691-12 for Xylene (total): Associated CCV outside of control limits high, sample was ND.
FA86691-13 for Xylene (total): Associated CCV outside of control limits high, sample was ND.
FA86691-13 for Tetrachloroethylene: Associated CCV outside of control limits high, sample was ND.
FA86691-13 for Styrene: Associated CCV outside of control limits high, sample was ND.
FA86691-13 for Isopropylbenzene: Associated CCV outside of control limits high, sample was ND.
FA86691-13 for Bromoform: Associated CCV outside of control limits high, sample was ND.
FA86691-13 for 1,2,3-Trichlorobenzene: Associated CCV outside of control limits high, sample was ND.
FA86691-13 for 1,2,4-Trichlorobenzene: Associated CCV outside of control limits high, sample was ND.
FA86691-13 for Methyl Bromide: Suspected instrument contaminant.

SGS Orlando certifies that this report meets the project requirements for analytical data produced for the samples as received at SGS Orlando and as stated on the COC. SGS Orlando certifies that the data meets the Data Quality Objectives for precision, accuracy and completeness as specified in the SGS Orlando Quality Manual except as noted above. This report is to be used in its entirety. SGS Orlando is not responsible for any assumptions of data quality if partial data packages are used.

Narrative prepared by:

_____

Kim Benham, Client Services *(Signature on File)*

Summary of Hits

Job Number: FA86691
Account: Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL
Collected: 06/23/21

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	PQL	MDL	Units	Method
FA86691-1	**LC34-GAC-20210623**					
Methyl Bromide [a]		4.9 IVJ	5.0	2.0	ug/l	SW846 8260B
Methyl Chloride [b]		0.96 IVJ	2.0	0.50	ug/l	SW846 8260B
FA86691-2	**LC34-AS1-20210623**					
cis-1,2-Dichloroethylene		1.0	1.0	0.28	ug/l	SW846 8260B
Methyl Bromide [a]		3.0 IVJ	5.0	2.0	ug/l	SW846 8260B
Trichloroethylene		1.6	1.0	0.35	ug/l	SW846 8260B
FA86691-3	**LC34-AS2-20210623**					
cis-1,2-Dichloroethylene		74.5	5.0	1.4	ug/l	SW846 8260B
Methyl Bromide [a]		12.6 IVJ	25	10	ug/l	SW846 8260B
Methyl Chloride [b]		3.1 IVJ	10	2.5	ug/l	SW846 8260B
Trichloroethylene		242	5.0	1.7	ug/l	SW846 8260B
FA86691-4	**LC34-INFLUENT-20210623**					
cis-1,2-Dichloroethylene		2830	250	69	ug/l	SW846 8260B
Methyl Bromide [a]		546 VJ	1300	500	ug/l	SW846 8260B
Trichloroethylene		22500	250	86	ug/l	SW846 8260B
Vinyl Chloride		462	250	100	ug/l	SW846 8260B
FA86691-5	**LC34-RW1A-20210623**					
cis-1,2-Dichloroethylene		6420	250	69	ug/l	SW846 8260B
Trichloroethylene [c]		45900 Q	500	170	ug/l	SW846 8260B
Vinyl Chloride		495	250	100	ug/l	SW846 8260B
FA86691-6	**LC34-RW1B-20210623**					
cis-1,2-Dichloroethylene		3460	250	69	ug/l	SW846 8260B
Trichloroethylene [c]		44300 Q	500	170	ug/l	SW846 8260B
Vinyl Chloride		155 I	250	100	ug/l	SW846 8260B
FA86691-7	**LC34-RW2A-20210623**					
cis-1,2-Dichloroethylene		1220	200	55	ug/l	SW846 8260B
Methyl Bromide [a]		405 VJ	1000	400	ug/l	SW846 8260B
Methyl Chloride [b]		110 VJ	400	100	ug/l	SW846 8260B
Trichloroethylene		12900	200	69	ug/l	SW846 8260B
Vinyl Chloride		816	200	82	ug/l	SW846 8260B

Summary of Hits

Job Number: FA86691
Account: Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL
Collected: 06/23/21

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	PQL	MDL	Units	Method
FA86691-8	**LC34-RW2B-20210623**					
cis-1,2-Dichloroethylene		1250	200	55	ug/l	SW846 8260B
Trichloroethylene		17800	200	69	ug/l	SW846 8260B
Vinyl Chloride		810	200	82	ug/l	SW846 8260B
FA86691-9	**LC34-RW3A-20210623**					
cis-1,2-Dichloroethylene		1740	25	6.9	ug/l	SW846 8260B
trans-1,2-Dichloroethylene		27.2	25	5.5	ug/l	SW846 8260B
Trichloroethylene		105	25	8.6	ug/l	SW846 8260B
Vinyl Chloride		396	25	10	ug/l	SW846 8260B
FA86691-10	**LC34-RW3B-20210623**					
cis-1,2-Dichloroethylene		1510	200	55	ug/l	SW846 8260B
Trichloroethylene		11400	200	69	ug/l	SW846 8260B
Vinyl Chloride		288	200	82	ug/l	SW846 8260B
FA86691-11	**LC34-RW5B-20210623**					
cis-1,2-Dichloroethylene		1370	25	6.9	ug/l	SW846 8260B
trans-1,2-Dichloroethylene		64.7	25	5.5	ug/l	SW846 8260B
Trichloroethylene		50.9	25	8.6	ug/l	SW846 8260B
Vinyl Chloride		183	25	10	ug/l	SW846 8260B
FA86691-12	**LC34-RW9A-20210623**					
cis-1,2-Dichloroethylene		4360	50	14	ug/l	SW846 8260B
trans-1,2-Dichloroethylene		76.8	50	11	ug/l	SW846 8260B
Vinyl Chloride		1570	50	20	ug/l	SW846 8260B
FA86691-13	**LC34-RW12A-20210623**					
cis-1,2-Dichloroethylene		6230	100	28	ug/l	SW846 8260B
trans-1,2-Dichloroethylene		95.5 I	100	22	ug/l	SW846 8260B
Methyl Bromide [b]		228 J	500	200	ug/l	SW846 8260B
Methylene Chloride		271 I	500	200	ug/l	SW846 8260B
Vinyl Chloride		1610	100	41	ug/l	SW846 8260B
FA86691-14	**LC34-RW13A-20210623**					
cis-1,2-Dichloroethylene		7470	200	55	ug/l	SW846 8260B
trans-1,2-Dichloroethylene		104 I	200	44	ug/l	SW846 8260B
Vinyl Chloride		1870	200	82	ug/l	SW846 8260B

Summary of Hits

Job Number: FA86691
Account: Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL
Collected: 06/23/21

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	PQL	MDL	Units	Method
FA86691-15	**LC34-RW14A-20210623**					
cis-1,2-Dichloroethylene		6980	100	28	ug/l	SW846 8260B
trans-1,2-Dichloroethylene		124	100	22	ug/l	SW846 8260B
Methylene Chloride		283 I	500	200	ug/l	SW846 8260B
Vinyl Chloride		1620	100	41	ug/l	SW846 8260B
FA86691-16	**LC34-RW15A-20210623**					
cis-1,2-Dichloroethylene		2510	50	14	ug/l	SW846 8260B
trans-1,2-Dichloroethylene		41.2 I	50	11	ug/l	SW846 8260B
Vinyl Chloride		553	50	20	ug/l	SW846 8260B
FA86691-17	**LC34-RW16B-20210623**					
cis-1,2-Dichloroethylene		355	5.0	1.4	ug/l	SW846 8260B
trans-1,2-Dichloroethylene		10.2	5.0	1.1	ug/l	SW846 8260B
Trichloroethylene		18.1	5.0	1.7	ug/l	SW846 8260B
Vinyl Chloride		105	5.0	2.0	ug/l	SW846 8260B
FA86691-18	**LC34-RW17C-20210623**					
cis-1,2-Dichloroethylene		4790 I	5000	1400	ug/l	SW846 8260B
Trichloroethylene		307000	5000	1700	ug/l	SW846 8260B
FA86691-19	**LC34-RW18C-20210623**					
Trichloroethylene		163000	5000	1700	ug/l	SW846 8260B
FA86691-20	**LC34-RW19C-20210623**					
cis-1,2-Dichloroethylene		6830	1000	280	ug/l	SW846 8260B
Freon 113		1270	1000	480	ug/l	SW846 8260B
Trichloroethylene [c]		827000 Q	10000	3500	ug/l	SW846 8260B
FA86691-21	**LC34-RW20C-20210623**					
cis-1,2-Dichloroethylene		3970	2500	690	ug/l	SW846 8260B
Trichloroethylene		221000	2500	860	ug/l	SW846 8260B

(a) Suspected instrument contaminant. Associated ICV outside control limits high, however sample ND.
(b) Suspected instrument contaminant.
(c) Sample re-analyzed beyond hold time; reported results are considered minimum values.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	LC34-GAC-20210623		
Lab Sample ID:	FA86691-1	**Date Sampled:**	06/23/21
Matrix:	AQ - Ground Water	**Date Received:**	06/24/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C0149806.D	1	07/07/21 01:00	SO	n/a	n/a	VC6044
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	10 U	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform [a]	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.67 U	2.0	0.67	ug/l	
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	0.50 U	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.32 U	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.28 U	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.22 U	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113 [b]	0.48 UJ	1.0	0.48	ug/l	J
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene [a]	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-GAC-20210623		
Lab Sample ID:	FA86691-1	**Date Sampled:**	06/23/21
Matrix:	AQ - Ground Water	**Date Received:**	06/24/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide [c]	4.9	5.0	2.0	ug/l	IVJ
74-87-3	Methyl Chloride [d]	0.96	2.0	0.50	ug/l	IVJ
75-09-2	Methylene Chloride	2.0 U	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene [a]	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene [a]	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.30 U	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene [a]	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene [a]	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	0.35 U	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	0.41 U	1.0	0.41	ug/l	
1330-20-7	Xylene (total) [a]	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		83-118%
17060-07-0	1,2-Dichloroethane-D4	99%		79-125%
2037-26-5	Toluene-D8	101%		85-112%
460-00-4	4-Bromofluorobenzene	103%		83-118%

(a) Associated CCV outside of control limits high, sample was ND.
(b) Associated ICV outside control limits low.
(c) Suspected instrument contaminant. Associated ICV outside control limits high, however sample ND.
(d) Suspected instrument contaminant.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-AS1-20210623		
Lab Sample ID:	FA86691-2	**Date Sampled:**	06/23/21
Matrix:	AQ - Ground Water	**Date Received:**	06/24/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C0149807.D	1	07/07/21 01:25	SO	n/a	n/a	VC6044
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	10 U	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform [a]	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.67 U	2.0	0.67	ug/l	
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	0.50 U	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.32 U	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	1.0	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.22 U	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113 [b]	0.48 UJ	1.0	0.48	ug/l	J
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene [a]	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-AS1-20210623		
Lab Sample ID:	FA86691-2	**Date Sampled:**	06/23/21
Matrix:	AQ - Ground Water	**Date Received:**	06/24/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide [c]	3.0	5.0	2.0	ug/l	IVJ
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	2.0 U	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene [a]	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene [a]	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.30 U	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene [a]	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene [a]	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	1.6	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	0.41 U	1.0	0.41	ug/l	
1330-20-7	Xylene (total) [a]	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		83-118%
17060-07-0	1,2-Dichloroethane-D4	100%		79-125%
2037-26-5	Toluene-D8	102%		85-112%
460-00-4	4-Bromofluorobenzene	102%		83-118%

(a) Associated CCV outside of control limits high, sample was ND.
(b) Associated ICV outside control limits low.
(c) Suspected instrument contaminant. Associated ICV outside control limits high, however sample ND.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-AS2-20210623		
Lab Sample ID:	FA86691-3	**Date Sampled:**	06/23/21
Matrix:	AQ - Ground Water	**Date Received:**	06/24/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C0149808.D	5	07/07/21 01:50	SO	n/a	n/a	VC6044
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	50 U	130	50	ug/l	
71-43-2	Benzene	1.6 U	5.0	1.6	ug/l	
74-97-5	Bromochloromethane	2.3 U	5.0	2.3	ug/l	
75-27-4	Bromodichloromethane	1.2 U	5.0	1.2	ug/l	
75-25-2	Bromoform [a]	2.0 U	5.0	2.0	ug/l	
78-93-3	2-Butanone (MEK)	10 U	25	10	ug/l	
75-15-0	Carbon Disulfide	2.7 U	10	2.7	ug/l	
56-23-5	Carbon Tetrachloride	1.8 U	5.0	1.8	ug/l	
108-90-7	Chlorobenzene	1.0 U	5.0	1.0	ug/l	
75-00-3	Chloroethane	3.3 U	10	3.3	ug/l	
67-66-3	Chloroform	1.5 U	5.0	1.5	ug/l	
110-82-7	Cyclohexane	2.0 U	5.0	2.0	ug/l	
124-48-1	Dibromochloromethane	1.4 U	5.0	1.4	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	5.2 U	25	5.2	ug/l	
106-93-4	1,2-Dibromoethane	1.4 U	10	1.4	ug/l	
75-71-8	Dichlorodifluoromethane	2.5 U	10	2.5	ug/l	
95-50-1	1,2-Dichlorobenzene	1.6 U	5.0	1.6	ug/l	
541-73-1	1,3-Dichlorobenzene	1.1 U	5.0	1.1	ug/l	
106-46-7	1,4-Dichlorobenzene	1.3 U	5.0	1.3	ug/l	
75-34-3	1,1-Dichloroethane	1.7 U	5.0	1.7	ug/l	
107-06-2	1,2-Dichloroethane	1.6 U	5.0	1.6	ug/l	
75-35-4	1,1-Dichloroethylene	1.6 U	5.0	1.6	ug/l	
156-59-2	cis-1,2-Dichloroethylene	74.5	5.0	1.4	ug/l	
156-60-5	trans-1,2-Dichloroethylene	1.1 U	5.0	1.1	ug/l	
78-87-5	1,2-Dichloropropane	2.1 U	5.0	2.1	ug/l	
10061-01-5	cis-1,3-Dichloropropene	1.5 U	5.0	1.5	ug/l	
10061-02-6	trans-1,3-Dichloropropene	1.1 U	5.0	1.1	ug/l	
100-41-4	Ethylbenzene	1.8 U	5.0	1.8	ug/l	
76-13-1	Freon 113 [b]	2.4 UJ	5.0	2.4	ug/l	J
591-78-6	2-Hexanone	10 U	50	10	ug/l	
98-82-8	Isopropylbenzene [a]	1.1 U	5.0	1.1	ug/l	
79-20-9	Methyl Acetate	25 U	100	25	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-AS2-20210623		
Lab Sample ID:	FA86691-3	**Date Sampled:**	06/23/21
Matrix:	AQ - Ground Water	**Date Received:**	06/24/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide [c]	12.6	25	10	ug/l	IVJ
74-87-3	Methyl Chloride [d]	3.1	10	2.5	ug/l	IVJ
75-09-2	Methylene Chloride	10 U	25	10	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	5.0 U	25	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	1.1 U	5.0	1.1	ug/l	
100-42-5	Styrene [a]	1.1 U	5.0	1.1	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	1.4 U	5.0	1.4	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	1.5 U	5.0	1.5	ug/l	
127-18-4	Tetrachloroethylene [a]	1.1 U	5.0	1.1	ug/l	
108-88-3	Toluene	1.5 U	5.0	1.5	ug/l	
87-61-6	1,2,3-Trichlorobenzene [a]	3.1 U	10	3.1	ug/l	
120-82-1	1,2,4-Trichlorobenzene [a]	2.5 U	10	2.5	ug/l	
71-55-6	1,1,1-Trichloroethane	1.2 U	5.0	1.2	ug/l	
79-00-5	1,1,2-Trichloroethane	2.3 U	5.0	2.3	ug/l	
79-01-6	Trichloroethylene	242	5.0	1.7	ug/l	
75-69-4	Trichlorofluoromethane	2.5 U	10	2.5	ug/l	
75-01-4	Vinyl Chloride	2.0 U	5.0	2.0	ug/l	
1330-20-7	Xylene (total) [a]	3.6 U	15	3.6	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		83-118%
17060-07-0	1,2-Dichloroethane-D4	101%		79-125%
2037-26-5	Toluene-D8	100%		85-112%
460-00-4	4-Bromofluorobenzene	104%		83-118%

(a) Associated CCV outside of control limits high, sample was ND.
(b) Associated ICV outside control limits low.
(c) Suspected instrument contaminant. Associated ICV outside control limits high, however sample ND.
(d) Suspected instrument contaminant.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-INFLUENT-20210623		
Lab Sample ID:	FA86691-4	**Date Sampled:**	06/23/21
Matrix:	AQ - Ground Water	**Date Received:**	06/24/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C0149809.D	250	07/07/21 02:15	SO	n/a	n/a	VC6044
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	2500 U	6300	2500	ug/l	
71-43-2	Benzene	78 U	250	78	ug/l	
74-97-5	Bromochloromethane	110 U	250	110	ug/l	
75-27-4	Bromodichloromethane	61 U	250	61	ug/l	
75-25-2	Bromoform [a]	100 U	250	100	ug/l	
78-93-3	2-Butanone (MEK)	500 U	1300	500	ug/l	
75-15-0	Carbon Disulfide	130 U	500	130	ug/l	
56-23-5	Carbon Tetrachloride	89 U	250	89	ug/l	
108-90-7	Chlorobenzene	50 U	250	50	ug/l	
75-00-3	Chloroethane	170 U	500	170	ug/l	
67-66-3	Chloroform	75 U	250	75	ug/l	
110-82-7	Cyclohexane	98 U	250	98	ug/l	
124-48-1	Dibromochloromethane	69 U	250	69	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	260 U	1300	260	ug/l	
106-93-4	1,2-Dibromoethane	69 U	500	69	ug/l	
75-71-8	Dichlorodifluoromethane	130 U	500	130	ug/l	
95-50-1	1,2-Dichlorobenzene	81 U	250	81	ug/l	
541-73-1	1,3-Dichlorobenzene	54 U	250	54	ug/l	
106-46-7	1,4-Dichlorobenzene	64 U	250	64	ug/l	
75-34-3	1,1-Dichloroethane	85 U	250	85	ug/l	
107-06-2	1,2-Dichloroethane	78 U	250	78	ug/l	
75-35-4	1,1-Dichloroethylene	81 U	250	81	ug/l	
156-59-2	cis-1,2-Dichloroethylene	2830	250	69	ug/l	
156-60-5	trans-1,2-Dichloroethylene	55 U	250	55	ug/l	
78-87-5	1,2-Dichloropropane	110 U	250	110	ug/l	
10061-01-5	cis-1,3-Dichloropropene	73 U	250	73	ug/l	
10061-02-6	trans-1,3-Dichloropropene	54 U	250	54	ug/l	
100-41-4	Ethylbenzene	89 U	250	89	ug/l	
76-13-1	Freon 113 [b]	120 UJ	250	120	ug/l	J
591-78-6	2-Hexanone	500 U	2500	500	ug/l	
98-82-8	Isopropylbenzene [a]	55 U	250	55	ug/l	
79-20-9	Methyl Acetate	1300 U	5000	1300	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-INFLUENT-20210623		
Lab Sample ID:	FA86691-4	**Date Sampled:**	06/23/21
Matrix:	AQ - Ground Water	**Date Received:**	06/24/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide [c]	546	1300	500	ug/l	VJ
74-87-3	Methyl Chloride	130 U	500	130	ug/l	
75-09-2	Methylene Chloride	500 U	1300	500	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	250 U	1300	250	ug/l	
1634-04-4	Methyl Tert Butyl Ether	57 U	250	57	ug/l	
100-42-5	Styrene [a]	56 U	250	56	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	69 U	250	69	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	75 U	250	75	ug/l	
127-18-4	Tetrachloroethylene [a]	54 U	250	54	ug/l	
108-88-3	Toluene	75 U	250	75	ug/l	
87-61-6	1,2,3-Trichlorobenzene [a]	150 U	500	150	ug/l	
120-82-1	1,2,4-Trichlorobenzene [a]	130 U	500	130	ug/l	
71-55-6	1,1,1-Trichloroethane	62 U	250	62	ug/l	
79-00-5	1,1,2-Trichloroethane	120 U	250	120	ug/l	
79-01-6	Trichloroethylene	22500	250	86	ug/l	
75-69-4	Trichlorofluoromethane	130 U	500	130	ug/l	
75-01-4	Vinyl Chloride	462	250	100	ug/l	
1330-20-7	Xylene (total) [a]	180 U	750	180	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		83-118%
17060-07-0	1,2-Dichloroethane-D4	96%		79-125%
2037-26-5	Toluene-D8	97%		85-112%
460-00-4	4-Bromofluorobenzene	101%		83-118%

(a) Associated CCV outside of control limits high, sample was ND.
(b) Associated ICV outside control limits low.
(c) Suspected instrument contaminant. Associated ICV outside control limits high, however sample ND.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: LC34-RW1A-20210623
Lab Sample ID: FA86691-5
Matrix: AQ - Ground Water
Method: SW846 8260B
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Date Sampled: 06/23/21
Date Received: 06/24/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C0149810.D	250	07/07/21 02:41	SO	n/a	n/a	VC6044
Run #2 [a]	5E29428.D	500	07/13/21 19:17	SO	n/a	n/a	V5E1350

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	2500 U	6300	2500	ug/l	
71-43-2	Benzene	78 U	250	78	ug/l	
74-97-5	Bromochloromethane	110 U	250	110	ug/l	
75-27-4	Bromodichloromethane	61 U	250	61	ug/l	
75-25-2	Bromoform [b]	100 U	250	100	ug/l	
78-93-3	2-Butanone (MEK)	500 U	1300	500	ug/l	
75-15-0	Carbon Disulfide	130 U	500	130	ug/l	
56-23-5	Carbon Tetrachloride	89 U	250	89	ug/l	
108-90-7	Chlorobenzene	50 U	250	50	ug/l	
75-00-3	Chloroethane	170 U	500	170	ug/l	
67-66-3	Chloroform	75 U	250	75	ug/l	
110-82-7	Cyclohexane	98 U	250	98	ug/l	
124-48-1	Dibromochloromethane	69 U	250	69	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	260 U	1300	260	ug/l	
106-93-4	1,2-Dibromoethane	69 U	500	69	ug/l	
75-71-8	Dichlorodifluoromethane	130 U	500	130	ug/l	
95-50-1	1,2-Dichlorobenzene	81 U	250	81	ug/l	
541-73-1	1,3-Dichlorobenzene	54 U	250	54	ug/l	
106-46-7	1,4-Dichlorobenzene	64 U	250	64	ug/l	
75-34-3	1,1-Dichloroethane	85 U	250	85	ug/l	
107-06-2	1,2-Dichloroethane	78 U	250	78	ug/l	
75-35-4	1,1-Dichloroethylene	81 U	250	81	ug/l	
156-59-2	cis-1,2-Dichloroethylene	6420	250	69	ug/l	
156-60-5	trans-1,2-Dichloroethylene	55 U	250	55	ug/l	
78-87-5	1,2-Dichloropropane	110 U	250	110	ug/l	
10061-01-5	cis-1,3-Dichloropropene	73 U	250	73	ug/l	
10061-02-6	trans-1,3-Dichloropropene	54 U	250	54	ug/l	
100-41-4	Ethylbenzene	89 U	250	89	ug/l	
76-13-1	Freon 113 [c]	120 UJ	250	120	ug/l	J
591-78-6	2-Hexanone	500 U	2500	500	ug/l	
98-82-8	Isopropylbenzene [b]	55 U	250	55	ug/l	
79-20-9	Methyl Acetate	1300 U	5000	1300	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-RW1A-20210623		
Lab Sample ID:	FA86691-5	**Date Sampled:**	06/23/21
Matrix:	AQ - Ground Water	**Date Received:**	06/24/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	1000 UQ [d]	2500	1000	ug/l	Q
74-87-3	Methyl Chloride	250 UQ [d]	1000	250	ug/l	Q
75-09-2	Methylene Chloride	500 U	1300	500	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	250 U	1300	250	ug/l	
1634-04-4	Methyl Tert Butyl Ether	57 U	250	57	ug/l	
100-42-5	Styrene [b]	56 U	250	56	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	69 U	250	69	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	75 U	250	75	ug/l	
127-18-4	Tetrachloroethylene [b]	54 U	250	54	ug/l	
108-88-3	Toluene	75 U	250	75	ug/l	
87-61-6	1,2,3-Trichlorobenzene [b]	150 U	500	150	ug/l	
120-82-1	1,2,4-Trichlorobenzene [b]	130 U	500	130	ug/l	
71-55-6	1,1,1-Trichloroethane	62 U	250	62	ug/l	
79-00-5	1,1,2-Trichloroethane	120 U	250	120	ug/l	
79-01-6	Trichloroethylene	45900 [d]	500	170	ug/l	Q
75-69-4	Trichlorofluoromethane	130 U	500	130	ug/l	
75-01-4	Vinyl Chloride	495	250	100	ug/l	
1330-20-7	Xylene (total) [b]	180 U	750	180	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	91%	110%	83-118%
17060-07-0	1,2-Dichloroethane-D4	100%	109%	79-125%
2037-26-5	Toluene-D8	100%	90%	85-112%
460-00-4	4-Bromofluorobenzene	112%	90%	83-118%

(a) Sample re-analyzed beyond hold time; reported results are considered minimum values.
(b) Associated CCV outside of control limits high, sample was ND.
(c) Associated ICV outside control limits low.
(d) Result is from Run# 2

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: LC34-RW1B-20210623
Lab Sample ID: FA86691-6
Matrix: AQ - Ground Water
Method: SW846 8260B
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Date Sampled: 06/23/21
Date Received: 06/24/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C0149811.D	250	07/07/21 03:06	SO	n/a	n/a	VC6044
Run #2 [a]	5E29429.D	500	07/13/21 19:40	SO	n/a	n/a	V5E1350

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	2500 U	6300	2500	ug/l	
71-43-2	Benzene	78 U	250	78	ug/l	
74-97-5	Bromochloromethane	110 U	250	110	ug/l	
75-27-4	Bromodichloromethane	61 U	250	61	ug/l	
75-25-2	Bromoform [b]	100 U	250	100	ug/l	
78-93-3	2-Butanone (MEK)	500 U	1300	500	ug/l	
75-15-0	Carbon Disulfide	130 U	500	130	ug/l	
56-23-5	Carbon Tetrachloride	89 U	250	89	ug/l	
108-90-7	Chlorobenzene	50 U	250	50	ug/l	
75-00-3	Chloroethane	170 U	500	170	ug/l	
67-66-3	Chloroform	75 U	250	75	ug/l	
110-82-7	Cyclohexane	98 U	250	98	ug/l	
124-48-1	Dibromochloromethane	69 U	250	69	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	260 U	1300	260	ug/l	
106-93-4	1,2-Dibromoethane	69 U	500	69	ug/l	
75-71-8	Dichlorodifluoromethane	130 U	500	130	ug/l	
95-50-1	1,2-Dichlorobenzene	81 U	250	81	ug/l	
541-73-1	1,3-Dichlorobenzene	54 U	250	54	ug/l	
106-46-7	1,4-Dichlorobenzene	64 U	250	64	ug/l	
75-34-3	1,1-Dichloroethane	85 U	250	85	ug/l	
107-06-2	1,2-Dichloroethane	78 U	250	78	ug/l	
75-35-4	1,1-Dichloroethylene	81 U	250	81	ug/l	
156-59-2	cis-1,2-Dichloroethylene	3460	250	69	ug/l	
156-60-5	trans-1,2-Dichloroethylene	55 U	250	55	ug/l	
78-87-5	1,2-Dichloropropane	110 U	250	110	ug/l	
10061-01-5	cis-1,3-Dichloropropene	73 U	250	73	ug/l	
10061-02-6	trans-1,3-Dichloropropene	54 U	250	54	ug/l	
100-41-4	Ethylbenzene	89 U	250	89	ug/l	
76-13-1	Freon 113 [c]	120 UJ	250	120	ug/l	J
591-78-6	2-Hexanone	500 U	2500	500	ug/l	
98-82-8	Isopropylbenzene [b]	55 U	250	55	ug/l	
79-20-9	Methyl Acetate	1300 U	5000	1300	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-RW1B-20210623		
Lab Sample ID:	FA86691-6	**Date Sampled:**	06/23/21
Matrix:	AQ - Ground Water	**Date Received:**	06/24/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	1000 UQ [d]	2500	1000	ug/l	Q
74-87-3	Methyl Chloride	250 UQ [d]	1000	250	ug/l	Q
75-09-2	Methylene Chloride	500 U	1300	500	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	250 U	1300	250	ug/l	
1634-04-4	Methyl Tert Butyl Ether	57 U	250	57	ug/l	
100-42-5	Styrene [b]	56 U	250	56	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	69 U	250	69	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	75 U	250	75	ug/l	
127-18-4	Tetrachloroethylene [b]	54 U	250	54	ug/l	
108-88-3	Toluene	75 U	250	75	ug/l	
87-61-6	1,2,3-Trichlorobenzene [b]	150 U	500	150	ug/l	
120-82-1	1,2,4-Trichlorobenzene [b]	130 U	500	130	ug/l	
71-55-6	1,1,1-Trichloroethane	62 U	250	62	ug/l	
79-00-5	1,1,2-Trichloroethane	120 U	250	120	ug/l	
79-01-6	Trichloroethylene	44300 [d]	500	170	ug/l	Q
75-69-4	Trichlorofluoromethane	130 U	500	130	ug/l	
75-01-4	Vinyl Chloride	155	250	100	ug/l	I
1330-20-7	Xylene (total) [b]	180 U	750	180	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%	112%	83-118%
17060-07-0	1,2-Dichloroethane-D4	99%	110%	79-125%
2037-26-5	Toluene-D8	99%	91%	85-112%
460-00-4	4-Bromofluorobenzene	94%	88%	83-118%

(a) Sample re-analyzed beyond hold time; reported results are considered minimum values.
(b) Associated CCV outside of control limits high, sample was ND.
(c) Associated ICV outside control limits low.
(d) Result is from Run# 2

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-RW2A-20210623		
Lab Sample ID:	FA86691-7	**Date Sampled:**	06/23/21
Matrix:	AQ - Ground Water	**Date Received:**	06/24/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C0149812.D	200	07/07/21 03:31	SO	n/a	n/a	VC6044
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	2000 U	5000	2000	ug/l	
71-43-2	Benzene	62 U	200	62	ug/l	
74-97-5	Bromochloromethane	90 U	200	90	ug/l	
75-27-4	Bromodichloromethane	48 U	200	48	ug/l	
75-25-2	Bromoform [a]	81 U	200	81	ug/l	
78-93-3	2-Butanone (MEK)	400 U	1000	400	ug/l	
75-15-0	Carbon Disulfide	110 U	400	110	ug/l	
56-23-5	Carbon Tetrachloride	71 U	200	71	ug/l	
108-90-7	Chlorobenzene	40 U	200	40	ug/l	
75-00-3	Chloroethane	130 U	400	130	ug/l	
67-66-3	Chloroform	60 U	200	60	ug/l	
110-82-7	Cyclohexane	78 U	200	78	ug/l	
124-48-1	Dibromochloromethane	55 U	200	55	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	210 U	1000	210	ug/l	
106-93-4	1,2-Dibromoethane	55 U	400	55	ug/l	
75-71-8	Dichlorodifluoromethane	100 U	400	100	ug/l	
95-50-1	1,2-Dichlorobenzene	65 U	200	65	ug/l	
541-73-1	1,3-Dichlorobenzene	43 U	200	43	ug/l	
106-46-7	1,4-Dichlorobenzene	51 U	200	51	ug/l	
75-34-3	1,1-Dichloroethane	68 U	200	68	ug/l	
107-06-2	1,2-Dichloroethane	62 U	200	62	ug/l	
75-35-4	1,1-Dichloroethylene	64 U	200	64	ug/l	
156-59-2	cis-1,2-Dichloroethylene	1220	200	55	ug/l	
156-60-5	trans-1,2-Dichloroethylene	44 U	200	44	ug/l	
78-87-5	1,2-Dichloropropane	85 U	200	85	ug/l	
10061-01-5	cis-1,3-Dichloropropene	58 U	200	58	ug/l	
10061-02-6	trans-1,3-Dichloropropene	43 U	200	43	ug/l	
100-41-4	Ethylbenzene	71 U	200	71	ug/l	
76-13-1	Freon 113 [b]	96 UJ	200	96	ug/l	J
591-78-6	2-Hexanone	400 U	2000	400	ug/l	
98-82-8	Isopropylbenzene [a]	44 U	200	44	ug/l	
79-20-9	Methyl Acetate	1000 U	4000	1000	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-RW2A-20210623		
Lab Sample ID:	FA86691-7	**Date Sampled:**	06/23/21
Matrix:	AQ - Ground Water	**Date Received:**	06/24/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide [c]	405	1000	400	ug/l	VJ
74-87-3	Methyl Chloride [d]	110	400	100	ug/l	VJ
75-09-2	Methylene Chloride	400 U	1000	400	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	200 U	1000	200	ug/l	
1634-04-4	Methyl Tert Butyl Ether	46 U	200	46	ug/l	
100-42-5	Styrene [a]	44 U	200	44	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	55 U	200	55	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	60 U	200	60	ug/l	
127-18-4	Tetrachloroethylene [a]	43 U	200	43	ug/l	
108-88-3	Toluene	60 U	200	60	ug/l	
87-61-6	1,2,3-Trichlorobenzene [a]	120 U	400	120	ug/l	
120-82-1	1,2,4-Trichlorobenzene [a]	100 U	400	100	ug/l	
71-55-6	1,1,1-Trichloroethane	50 U	200	50	ug/l	
79-00-5	1,1,2-Trichloroethane	93 U	200	93	ug/l	
79-01-6	Trichloroethylene	12900	200	69	ug/l	
75-69-4	Trichlorofluoromethane	100 U	400	100	ug/l	
75-01-4	Vinyl Chloride	816	200	82	ug/l	
1330-20-7	Xylene (total) [a]	140 U	600	140	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		83-118%
17060-07-0	1,2-Dichloroethane-D4	100%		79-125%
2037-26-5	Toluene-D8	97%		85-112%
460-00-4	4-Bromofluorobenzene	104%		83-118%

(a) Associated CCV outside of control limits high, sample was ND.
(b) Associated ICV outside control limits low.
(c) Suspected instrument contaminant. Associated ICV outside control limits high, however sample ND.
(d) Suspected instrument contaminant.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-RW2B-20210623		
Lab Sample ID:	FA86691-8	**Date Sampled:**	06/23/21
Matrix:	AQ - Ground Water	**Date Received:**	06/24/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C0149813.D	200	07/07/21 03:57	SO	n/a	n/a	VC6044
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	2000 U	5000	2000	ug/l	
71-43-2	Benzene	62 U	200	62	ug/l	
74-97-5	Bromochloromethane	90 U	200	90	ug/l	
75-27-4	Bromodichloromethane	48 U	200	48	ug/l	
75-25-2	Bromoform [a]	81 U	200	81	ug/l	
78-93-3	2-Butanone (MEK)	400 U	1000	400	ug/l	
75-15-0	Carbon Disulfide	110 U	400	110	ug/l	
56-23-5	Carbon Tetrachloride	71 U	200	71	ug/l	
108-90-7	Chlorobenzene	40 U	200	40	ug/l	
75-00-3	Chloroethane	130 U	400	130	ug/l	
67-66-3	Chloroform	60 U	200	60	ug/l	
110-82-7	Cyclohexane	78 U	200	78	ug/l	
124-48-1	Dibromochloromethane	55 U	200	55	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	210 U	1000	210	ug/l	
106-93-4	1,2-Dibromoethane	55 U	400	55	ug/l	
75-71-8	Dichlorodifluoromethane	100 U	400	100	ug/l	
95-50-1	1,2-Dichlorobenzene	65 U	200	65	ug/l	
541-73-1	1,3-Dichlorobenzene	43 U	200	43	ug/l	
106-46-7	1,4-Dichlorobenzene	51 U	200	51	ug/l	
75-34-3	1,1-Dichloroethane	68 U	200	68	ug/l	
107-06-2	1,2-Dichloroethane	62 U	200	62	ug/l	
75-35-4	1,1-Dichloroethylene	64 U	200	64	ug/l	
156-59-2	cis-1,2-Dichloroethylene	1250	200	55	ug/l	
156-60-5	trans-1,2-Dichloroethylene	44 U	200	44	ug/l	
78-87-5	1,2-Dichloropropane	85 U	200	85	ug/l	
10061-01-5	cis-1,3-Dichloropropene	58 U	200	58	ug/l	
10061-02-6	trans-1,3-Dichloropropene	43 U	200	43	ug/l	
100-41-4	Ethylbenzene	71 U	200	71	ug/l	
76-13-1	Freon 113	96 UJ	200	96	ug/l	J
591-78-6	2-Hexanone	400 U	2000	400	ug/l	
98-82-8	Isopropylbenzene [a]	44 U	200	44	ug/l	
79-20-9	Methyl Acetate	1000 U	4000	1000	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-RW2B-20210623		
Lab Sample ID:	FA86691-8	**Date Sampled:**	06/23/21
Matrix:	AQ - Ground Water	**Date Received:**	06/24/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	400 U	1000	400	ug/l	
74-87-3	Methyl Chloride	100 U	400	100	ug/l	
75-09-2	Methylene Chloride	400 U	1000	400	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	200 U	1000	200	ug/l	
1634-04-4	Methyl Tert Butyl Ether	46 U	200	46	ug/l	
100-42-5	Styrene [a]	44 U	200	44	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	55 U	200	55	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	60 U	200	60	ug/l	
127-18-4	Tetrachloroethylene [a]	43 U	200	43	ug/l	
108-88-3	Toluene	60 U	200	60	ug/l	
87-61-6	1,2,3-Trichlorobenzene [a]	120 U	400	120	ug/l	
120-82-1	1,2,4-Trichlorobenzene [a]	100 U	400	100	ug/l	
71-55-6	1,1,1-Trichloroethane	50 U	200	50	ug/l	
79-00-5	1,1,2-Trichloroethane	93 U	200	93	ug/l	
79-01-6	Trichloroethylene	17800	200	69	ug/l	
75-69-4	Trichlorofluoromethane	100 U	400	100	ug/l	
75-01-4	Vinyl Chloride	810	200	82	ug/l	
1330-20-7	Xylene (total) [a]	140 U	600	140	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		83-118%
17060-07-0	1,2-Dichloroethane-D4	102%		79-125%
2037-26-5	Toluene-D8	102%		85-112%
460-00-4	4-Bromofluorobenzene	102%		83-118%

(a) Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-RW3A-20210623		
Lab Sample ID:	FA86691-9	**Date Sampled:**	06/23/21
Matrix:	AQ - Ground Water	**Date Received:**	06/24/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C0149814.D	25	07/07/21 04:22	SO	n/a	n/a	VC6044
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	250 U	630	250	ug/l	
71-43-2	Benzene	7.8 U	25	7.8	ug/l	
74-97-5	Bromochloromethane	11 U	25	11	ug/l	
75-27-4	Bromodichloromethane	6.1 U	25	6.1	ug/l	
75-25-2	Bromoform [a]	10 U	25	10	ug/l	
78-93-3	2-Butanone (MEK)	50 U	130	50	ug/l	
75-15-0	Carbon Disulfide	13 U	50	13	ug/l	
56-23-5	Carbon Tetrachloride	8.9 U	25	8.9	ug/l	
108-90-7	Chlorobenzene	5.0 U	25	5.0	ug/l	
75-00-3	Chloroethane	17 U	50	17	ug/l	
67-66-3	Chloroform	7.5 U	25	7.5	ug/l	
110-82-7	Cyclohexane	9.8 U	25	9.8	ug/l	
124-48-1	Dibromochloromethane	6.9 U	25	6.9	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	26 U	130	26	ug/l	
106-93-4	1,2-Dibromoethane	6.9 U	50	6.9	ug/l	
75-71-8	Dichlorodifluoromethane	13 U	50	13	ug/l	
95-50-1	1,2-Dichlorobenzene	8.1 U	25	8.1	ug/l	
541-73-1	1,3-Dichlorobenzene	5.4 U	25	5.4	ug/l	
106-46-7	1,4-Dichlorobenzene	6.4 U	25	6.4	ug/l	
75-34-3	1,1-Dichloroethane	8.5 U	25	8.5	ug/l	
107-06-2	1,2-Dichloroethane	7.8 U	25	7.8	ug/l	
75-35-4	1,1-Dichloroethylene	8.1 U	25	8.1	ug/l	
156-59-2	cis-1,2-Dichloroethylene	1740	25	6.9	ug/l	
156-60-5	trans-1,2-Dichloroethylene	27.2	25	5.5	ug/l	
78-87-5	1,2-Dichloropropane	11 U	25	11	ug/l	
10061-01-5	cis-1,3-Dichloropropene	7.3 U	25	7.3	ug/l	
10061-02-6	trans-1,3-Dichloropropene	5.4 U	25	5.4	ug/l	
100-41-4	Ethylbenzene	8.9 U	25	8.9	ug/l	
76-13-1	Freon 113	12 UJ	25	12	ug/l	J
591-78-6	2-Hexanone	50 U	250	50	ug/l	
98-82-8	Isopropylbenzene [a]	5.5 U	25	5.5	ug/l	
79-20-9	Methyl Acetate	130 U	500	130	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-RW3A-20210623		
Lab Sample ID:	FA86691-9	**Date Sampled:**	06/23/21
Matrix:	AQ - Ground Water	**Date Received:**	06/24/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	50 U	130	50	ug/l	
74-87-3	Methyl Chloride	13 U	50	13	ug/l	
75-09-2	Methylene Chloride	50 U	130	50	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	25 U	130	25	ug/l	
1634-04-4	Methyl Tert Butyl Ether	5.7 U	25	5.7	ug/l	
100-42-5	Styrene [a]	5.6 U	25	5.6	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	6.9 U	25	6.9	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	7.5 U	25	7.5	ug/l	
127-18-4	Tetrachloroethylene [a]	5.4 U	25	5.4	ug/l	
108-88-3	Toluene	7.5 U	25	7.5	ug/l	
87-61-6	1,2,3-Trichlorobenzene [a]	15 U	50	15	ug/l	
120-82-1	1,2,4-Trichlorobenzene [a]	13 U	50	13	ug/l	
71-55-6	1,1,1-Trichloroethane	6.2 U	25	6.2	ug/l	
79-00-5	1,1,2-Trichloroethane	12 U	25	12	ug/l	
79-01-6	Trichloroethylene	105	25	8.6	ug/l	
75-69-4	Trichlorofluoromethane	13 U	50	13	ug/l	
75-01-4	Vinyl Chloride	396	25	10	ug/l	
1330-20-7	Xylene (total) [a]	18 U	75	18	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		83-118%
17060-07-0	1,2-Dichloroethane-D4	99%		79-125%
2037-26-5	Toluene-D8	100%		85-112%
460-00-4	4-Bromofluorobenzene	103%		83-118%

(a) Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range
I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-RW3B-20210623		
Lab Sample ID:	FA86691-10	**Date Sampled:**	06/23/21
Matrix:	AQ - Ground Water	**Date Received:**	06/24/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C0149815.D	200	07/07/21 04:47	SO	n/a	n/a	VC6044
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	2000 U	5000	2000	ug/l	
71-43-2	Benzene	62 U	200	62	ug/l	
74-97-5	Bromochloromethane	90 U	200	90	ug/l	
75-27-4	Bromodichloromethane	48 U	200	48	ug/l	
75-25-2	Bromoform [a]	81 U	200	81	ug/l	
78-93-3	2-Butanone (MEK)	400 U	1000	400	ug/l	
75-15-0	Carbon Disulfide	110 U	400	110	ug/l	
56-23-5	Carbon Tetrachloride	71 U	200	71	ug/l	
108-90-7	Chlorobenzene	40 U	200	40	ug/l	
75-00-3	Chloroethane	130 U	400	130	ug/l	
67-66-3	Chloroform	60 U	200	60	ug/l	
110-82-7	Cyclohexane	78 U	200	78	ug/l	
124-48-1	Dibromochloromethane	55 U	200	55	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	210 U	1000	210	ug/l	
106-93-4	1,2-Dibromoethane	55 U	400	55	ug/l	
75-71-8	Dichlorodifluoromethane	100 U	400	100	ug/l	
95-50-1	1,2-Dichlorobenzene	65 U	200	65	ug/l	
541-73-1	1,3-Dichlorobenzene	43 U	200	43	ug/l	
106-46-7	1,4-Dichlorobenzene	51 U	200	51	ug/l	
75-34-3	1,1-Dichloroethane	68 U	200	68	ug/l	
107-06-2	1,2-Dichloroethane	62 U	200	62	ug/l	
75-35-4	1,1-Dichloroethylene	64 U	200	64	ug/l	
156-59-2	cis-1,2-Dichloroethylene	1510	200	55	ug/l	
156-60-5	trans-1,2-Dichloroethylene	44 U	200	44	ug/l	
78-87-5	1,2-Dichloropropane	85 U	200	85	ug/l	
10061-01-5	cis-1,3-Dichloropropene	58 U	200	58	ug/l	
10061-02-6	trans-1,3-Dichloropropene	43 U	200	43	ug/l	
100-41-4	Ethylbenzene	71 U	200	71	ug/l	
76-13-1	Freon 113 [b]	96 UJ	200	96	ug/l	J
591-78-6	2-Hexanone	400 U	2000	400	ug/l	
98-82-8	Isopropylbenzene [a]	44 U	200	44	ug/l	
79-20-9	Methyl Acetate	1000 U	4000	1000	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-RW3B-20210623		
Lab Sample ID:	FA86691-10	**Date Sampled:**	06/23/21
Matrix:	AQ - Ground Water	**Date Received:**	06/24/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide [c]	400 U	1000	400	ug/l	
74-87-3	Methyl Chloride	100 U	400	100	ug/l	
75-09-2	Methylene Chloride	400 U	1000	400	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	200 U	1000	200	ug/l	
1634-04-4	Methyl Tert Butyl Ether	46 U	200	46	ug/l	
100-42-5	Styrene [a]	44 U	200	44	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	55 U	200	55	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	60 U	200	60	ug/l	
127-18-4	Tetrachloroethylene [a]	43 U	200	43	ug/l	
108-88-3	Toluene	60 U	200	60	ug/l	
87-61-6	1,2,3-Trichlorobenzene [a]	120 U	400	120	ug/l	
120-82-1	1,2,4-Trichlorobenzene [a]	100 U	400	100	ug/l	
71-55-6	1,1,1-Trichloroethane	50 U	200	50	ug/l	
79-00-5	1,1,2-Trichloroethane	93 U	200	93	ug/l	
79-01-6	Trichloroethylene	11400	200	69	ug/l	
75-69-4	Trichlorofluoromethane	100 U	400	100	ug/l	
75-01-4	Vinyl Chloride	288	200	82	ug/l	
1330-20-7	Xylene (total) [a]	140 U	600	140	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		83-118%
17060-07-0	1,2-Dichloroethane-D4	102%		79-125%
2037-26-5	Toluene-D8	100%		85-112%
460-00-4	4-Bromofluorobenzene	106%		83-118%

(a) Associated CCV outside of control limits high, sample was ND.
(b) Associated ICV outside control limits low.
(c) Associated ICV outside control limits high, however sample ND.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-RW5B-20210623		
Lab Sample ID:	FA86691-11	**Date Sampled:**	06/23/21
Matrix:	AQ - Ground Water	**Date Received:**	06/24/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C0149816.D	25	07/07/21 05:12	SO	n/a	n/a	VC6044
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	250 U	630	250	ug/l	
71-43-2	Benzene	7.8 U	25	7.8	ug/l	
74-97-5	Bromochloromethane	11 U	25	11	ug/l	
75-27-4	Bromodichloromethane	6.1 U	25	6.1	ug/l	
75-25-2	Bromoform [a]	10 U	25	10	ug/l	
78-93-3	2-Butanone (MEK)	50 U	130	50	ug/l	
75-15-0	Carbon Disulfide	13 U	50	13	ug/l	
56-23-5	Carbon Tetrachloride	8.9 U	25	8.9	ug/l	
108-90-7	Chlorobenzene	5.0 U	25	5.0	ug/l	
75-00-3	Chloroethane	17 U	50	17	ug/l	
67-66-3	Chloroform	7.5 U	25	7.5	ug/l	
110-82-7	Cyclohexane	9.8 U	25	9.8	ug/l	
124-48-1	Dibromochloromethane	6.9 U	25	6.9	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	26 U	130	26	ug/l	
106-93-4	1,2-Dibromoethane	6.9 U	50	6.9	ug/l	
75-71-8	Dichlorodifluoromethane	13 U	50	13	ug/l	
95-50-1	1,2-Dichlorobenzene	8.1 U	25	8.1	ug/l	
541-73-1	1,3-Dichlorobenzene	5.4 U	25	5.4	ug/l	
106-46-7	1,4-Dichlorobenzene	6.4 U	25	6.4	ug/l	
75-34-3	1,1-Dichloroethane	8.5 U	25	8.5	ug/l	
107-06-2	1,2-Dichloroethane	7.8 U	25	7.8	ug/l	
75-35-4	1,1-Dichloroethylene	8.1 U	25	8.1	ug/l	
156-59-2	cis-1,2-Dichloroethylene	1370	25	6.9	ug/l	
156-60-5	trans-1,2-Dichloroethylene	64.7	25	5.5	ug/l	
78-87-5	1,2-Dichloropropane	11 U	25	11	ug/l	
10061-01-5	cis-1,3-Dichloropropene	7.3 U	25	7.3	ug/l	
10061-02-6	trans-1,3-Dichloropropene	5.4 U	25	5.4	ug/l	
100-41-4	Ethylbenzene	8.9 U	25	8.9	ug/l	
76-13-1	Freon 113	12 UJ	25	12	ug/l	J
591-78-6	2-Hexanone	50 U	250	50	ug/l	
98-82-8	Isopropylbenzene [a]	5.5 U	25	5.5	ug/l	
79-20-9	Methyl Acetate	130 U	500	130	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-RW5B-20210623		
Lab Sample ID:	FA86691-11	**Date Sampled:**	06/23/21
Matrix:	AQ - Ground Water	**Date Received:**	06/24/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	50 U	130	50	ug/l	
74-87-3	Methyl Chloride	13 U	50	13	ug/l	
75-09-2	Methylene Chloride	50 U	130	50	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	25 U	130	25	ug/l	
1634-04-4	Methyl Tert Butyl Ether	5.7 U	25	5.7	ug/l	
100-42-5	Styrene [a]	5.6 U	25	5.6	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	6.9 U	25	6.9	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	7.5 U	25	7.5	ug/l	
127-18-4	Tetrachloroethylene [a]	5.4 U	25	5.4	ug/l	
108-88-3	Toluene	7.5 U	25	7.5	ug/l	
87-61-6	1,2,3-Trichlorobenzene [a]	15 U	50	15	ug/l	
120-82-1	1,2,4-Trichlorobenzene [a]	13 U	50	13	ug/l	
71-55-6	1,1,1-Trichloroethane	6.2 U	25	6.2	ug/l	
79-00-5	1,1,2-Trichloroethane	12 U	25	12	ug/l	
79-01-6	Trichloroethylene	50.9	25	8.6	ug/l	
75-69-4	Trichlorofluoromethane	13 U	50	13	ug/l	
75-01-4	Vinyl Chloride	183	25	10	ug/l	
1330-20-7	Xylene (total) [a]	18 U	75	18	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		83-118%
17060-07-0	1,2-Dichloroethane-D4	101%		79-125%
2037-26-5	Toluene-D8	101%		85-112%
460-00-4	4-Bromofluorobenzene	101%		83-118%

(a) Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-RW9A-20210623		
Lab Sample ID:	FA86691-12	**Date Sampled:**	06/23/21
Matrix:	AQ - Ground Water	**Date Received:**	06/24/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C0149817.D	50	07/07/21 05:37	SO	n/a	n/a	VC6044
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	500 U	1300	500	ug/l	
71-43-2	Benzene	16 U	50	16	ug/l	
74-97-5	Bromochloromethane	23 U	50	23	ug/l	
75-27-4	Bromodichloromethane	12 U	50	12	ug/l	
75-25-2	Bromoform [a]	20 U	50	20	ug/l	
78-93-3	2-Butanone (MEK)	100 U	250	100	ug/l	
75-15-0	Carbon Disulfide	27 U	100	27	ug/l	
56-23-5	Carbon Tetrachloride	18 U	50	18	ug/l	
108-90-7	Chlorobenzene	10 U	50	10	ug/l	
75-00-3	Chloroethane	33 U	100	33	ug/l	
67-66-3	Chloroform	15 U	50	15	ug/l	
110-82-7	Cyclohexane	20 U	50	20	ug/l	
124-48-1	Dibromochloromethane	14 U	50	14	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	52 U	250	52	ug/l	
106-93-4	1,2-Dibromoethane	14 U	100	14	ug/l	
75-71-8	Dichlorodifluoromethane	25 U	100	25	ug/l	
95-50-1	1,2-Dichlorobenzene	16 U	50	16	ug/l	
541-73-1	1,3-Dichlorobenzene	11 U	50	11	ug/l	
106-46-7	1,4-Dichlorobenzene	13 U	50	13	ug/l	
75-34-3	1,1-Dichloroethane	17 U	50	17	ug/l	
107-06-2	1,2-Dichloroethane	16 U	50	16	ug/l	
75-35-4	1,1-Dichloroethylene	16 U	50	16	ug/l	
156-59-2	cis-1,2-Dichloroethylene	4360	50	14	ug/l	
156-60-5	trans-1,2-Dichloroethylene	76.8	50	11	ug/l	
78-87-5	1,2-Dichloropropane	21 U	50	21	ug/l	
10061-01-5	cis-1,3-Dichloropropene	15 U	50	15	ug/l	
10061-02-6	trans-1,3-Dichloropropene	11 U	50	11	ug/l	
100-41-4	Ethylbenzene	18 U	50	18	ug/l	
76-13-1	Freon 113	24 UJ	50	24	ug/l	J
591-78-6	2-Hexanone	100 U	500	100	ug/l	
98-82-8	Isopropylbenzene [a]	11 U	50	11	ug/l	
79-20-9	Methyl Acetate	250 U	1000	250	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-RW9A-20210623		
Lab Sample ID:	FA86691-12	**Date Sampled:**	06/23/21
Matrix:	AQ - Ground Water	**Date Received:**	06/24/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	100 U	250	100	ug/l	
74-87-3	Methyl Chloride	25 U	100	25	ug/l	
75-09-2	Methylene Chloride	100 U	250	100	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	50 U	250	50	ug/l	
1634-04-4	Methyl Tert Butyl Ether	11 U	50	11	ug/l	
100-42-5	Styrene [a]	11 U	50	11	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	14 U	50	14	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	15 U	50	15	ug/l	
127-18-4	Tetrachloroethylene [a]	11 U	50	11	ug/l	
108-88-3	Toluene	15 U	50	15	ug/l	
87-61-6	1,2,3-Trichlorobenzene [a]	31 U	100	31	ug/l	
120-82-1	1,2,4-Trichlorobenzene [a]	25 U	100	25	ug/l	
71-55-6	1,1,1-Trichloroethane	12 U	50	12	ug/l	
79-00-5	1,1,2-Trichloroethane	23 U	50	23	ug/l	
79-01-6	Trichloroethylene	17 U	50	17	ug/l	
75-69-4	Trichlorofluoromethane	25 U	100	25	ug/l	
75-01-4	Vinyl Chloride	1570	50	20	ug/l	
1330-20-7	Xylene (total) [a]	36 U	150	36	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		83-118%
17060-07-0	1,2-Dichloroethane-D4	100%		79-125%
2037-26-5	Toluene-D8	100%		85-112%
460-00-4	4-Bromofluorobenzene	103%		83-118%

(a) Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-RW12A-20210623		
Lab Sample ID:	FA86691-13	**Date Sampled:**	06/23/21
Matrix:	AQ - Ground Water	**Date Received:**	06/24/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C0149818.D	100	07/07/21 06:02	SO	n/a	n/a	VC6044
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	1000 U	2500	1000	ug/l	
71-43-2	Benzene	31 U	100	31	ug/l	
74-97-5	Bromochloromethane	45 U	100	45	ug/l	
75-27-4	Bromodichloromethane	24 U	100	24	ug/l	
75-25-2	Bromoform [a]	41 U	100	41	ug/l	
78-93-3	2-Butanone (MEK)	200 U	500	200	ug/l	
75-15-0	Carbon Disulfide	53 U	200	53	ug/l	
56-23-5	Carbon Tetrachloride	36 U	100	36	ug/l	
108-90-7	Chlorobenzene	20 U	100	20	ug/l	
75-00-3	Chloroethane	67 U	200	67	ug/l	
67-66-3	Chloroform	30 U	100	30	ug/l	
110-82-7	Cyclohexane	39 U	100	39	ug/l	
124-48-1	Dibromochloromethane	28 U	100	28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	100 U	500	100	ug/l	
106-93-4	1,2-Dibromoethane	28 U	200	28	ug/l	
75-71-8	Dichlorodifluoromethane	50 U	200	50	ug/l	
95-50-1	1,2-Dichlorobenzene	32 U	100	32	ug/l	
541-73-1	1,3-Dichlorobenzene	22 U	100	22	ug/l	
106-46-7	1,4-Dichlorobenzene	26 U	100	26	ug/l	
75-34-3	1,1-Dichloroethane	34 U	100	34	ug/l	
107-06-2	1,2-Dichloroethane	31 U	100	31	ug/l	
75-35-4	1,1-Dichloroethylene	32 U	100	32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	6230	100	28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	95.5	100	22	ug/l	I
78-87-5	1,2-Dichloropropane	43 U	100	43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	29 U	100	29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	21 U	100	21	ug/l	
100-41-4	Ethylbenzene	36 U	100	36	ug/l	
76-13-1	Freon 113	48 UJ	100	48	ug/l	J
591-78-6	2-Hexanone	200 U	1000	200	ug/l	
98-82-8	Isopropylbenzene [a]	22 U	100	22	ug/l	
79-20-9	Methyl Acetate	500 U	2000	500	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-RW12A-20210623		
Lab Sample ID:	FA86691-13	**Date Sampled:**	06/23/21
Matrix:	AQ - Ground Water	**Date Received:**	06/24/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide [b]	228	500	200	ug/l	J
74-87-3	Methyl Chloride	50 U	200	50	ug/l	
75-09-2	Methylene Chloride	271	500	200	ug/l	I
108-10-1	4-Methyl-2-pentanone (MIBK)	100 U	500	100	ug/l	
1634-04-4	Methyl Tert Butyl Ether	23 U	100	23	ug/l	
100-42-5	Styrene [a]	22 U	100	22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	28 U	100	28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	30 U	100	30	ug/l	
127-18-4	Tetrachloroethylene [a]	22 U	100	22	ug/l	
108-88-3	Toluene	30 U	100	30	ug/l	
87-61-6	1,2,3-Trichlorobenzene [a]	61 U	200	61	ug/l	
120-82-1	1,2,4-Trichlorobenzene [a]	50 U	200	50	ug/l	
71-55-6	1,1,1-Trichloroethane	25 U	100	25	ug/l	
79-00-5	1,1,2-Trichloroethane	47 U	100	47	ug/l	
79-01-6	Trichloroethylene	35 U	100	35	ug/l	
75-69-4	Trichlorofluoromethane	50 U	200	50	ug/l	
75-01-4	Vinyl Chloride	1610	100	41	ug/l	
1330-20-7	Xylene (total) [a]	72 U	300	72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	92%		83-118%
17060-07-0	1,2-Dichloroethane-D4	103%		79-125%
2037-26-5	Toluene-D8	99%		85-112%
460-00-4	4-Bromofluorobenzene	100%		83-118%

(a) Associated CCV outside of control limits high, sample was ND.
(b) Suspected instrument contaminant.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-RW13A-20210623		
Lab Sample ID:	FA86691-14	**Date Sampled:**	06/23/21
Matrix:	AQ - Ground Water	**Date Received:**	06/24/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1A36622.D	200	07/07/21 02:52	SO	n/a	n/a	V1A1543
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	2000 U	5000	2000	ug/l	
71-43-2	Benzene	62 U	200	62	ug/l	
74-97-5	Bromochloromethane	90 U	200	90	ug/l	
75-27-4	Bromodichloromethane	48 U	200	48	ug/l	
75-25-2	Bromoform	81 U	200	81	ug/l	
78-93-3	2-Butanone (MEK)	400 U	1000	400	ug/l	
75-15-0	Carbon Disulfide	110 U	400	110	ug/l	
56-23-5	Carbon Tetrachloride	71 U	200	71	ug/l	
108-90-7	Chlorobenzene	40 U	200	40	ug/l	
75-00-3	Chloroethane	130 U	400	130	ug/l	
67-66-3	Chloroform	60 U	200	60	ug/l	
110-82-7	Cyclohexane	78 U	200	78	ug/l	
124-48-1	Dibromochloromethane	55 U	200	55	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	210 U	1000	210	ug/l	
106-93-4	1,2-Dibromoethane	55 U	400	55	ug/l	
75-71-8	Dichlorodifluoromethane	100 U	400	100	ug/l	
95-50-1	1,2-Dichlorobenzene	65 U	200	65	ug/l	
541-73-1	1,3-Dichlorobenzene	43 U	200	43	ug/l	
106-46-7	1,4-Dichlorobenzene	51 U	200	51	ug/l	
75-34-3	1,1-Dichloroethane	68 U	200	68	ug/l	
107-06-2	1,2-Dichloroethane	62 U	200	62	ug/l	
75-35-4	1,1-Dichloroethylene	64 U	200	64	ug/l	
156-59-2	cis-1,2-Dichloroethylene	7470	200	55	ug/l	
156-60-5	trans-1,2-Dichloroethylene	104	200	44	ug/l	I
78-87-5	1,2-Dichloropropane	85 U	200	85	ug/l	
10061-01-5	cis-1,3-Dichloropropene	58 U	200	58	ug/l	
10061-02-6	trans-1,3-Dichloropropene	43 U	200	43	ug/l	
100-41-4	Ethylbenzene	71 U	200	71	ug/l	
76-13-1	Freon 113	96 U	200	96	ug/l	
591-78-6	2-Hexanone	400 U	2000	400	ug/l	
98-82-8	Isopropylbenzene	44 U	200	44	ug/l	
79-20-9	Methyl Acetate	1000 U	4000	1000	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-RW13A-20210623		
Lab Sample ID:	FA86691-14	**Date Sampled:**	06/23/21
Matrix:	AQ - Ground Water	**Date Received:**	06/24/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	400 U	1000	400	ug/l	
74-87-3	Methyl Chloride	100 U	400	100	ug/l	
75-09-2	Methylene Chloride	400 U	1000	400	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	200 U	1000	200	ug/l	
1634-04-4	Methyl Tert Butyl Ether	46 U	200	46	ug/l	
100-42-5	Styrene	44 U	200	44	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	55 U	200	55	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	60 U	200	60	ug/l	
127-18-4	Tetrachloroethylene	43 U	200	43	ug/l	
108-88-3	Toluene	60 U	200	60	ug/l	
87-61-6	1,2,3-Trichlorobenzene	120 U	400	120	ug/l	
120-82-1	1,2,4-Trichlorobenzene	100 U	400	100	ug/l	
71-55-6	1,1,1-Trichloroethane	50 U	200	50	ug/l	
79-00-5	1,1,2-Trichloroethane	93 U	200	93	ug/l	
79-01-6	Trichloroethylene	69 U	200	69	ug/l	
75-69-4	Trichlorofluoromethane	100 U	400	100	ug/l	
75-01-4	Vinyl Chloride	1870	200	82	ug/l	
1330-20-7	Xylene (total)	140 U	600	140	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		83-118%
17060-07-0	1,2-Dichloroethane-D4	99%		79-125%
2037-26-5	Toluene-D8	96%		85-112%
460-00-4	4-Bromofluorobenzene	93%		83-118%

U = Not detected MDL = Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range
I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-RW14A-20210623		
Lab Sample ID:	FA86691-15	**Date Sampled:**	06/23/21
Matrix:	AQ - Ground Water	**Date Received:**	06/24/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1A36623.D	100	07/07/21 03:18	SO	n/a	n/a	V1A1543
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	1000 U	2500	1000	ug/l	
71-43-2	Benzene	31 U	100	31	ug/l	
74-97-5	Bromochloromethane	45 U	100	45	ug/l	
75-27-4	Bromodichloromethane	24 U	100	24	ug/l	
75-25-2	Bromoform	41 U	100	41	ug/l	
78-93-3	2-Butanone (MEK)	200 U	500	200	ug/l	
75-15-0	Carbon Disulfide	53 U	200	53	ug/l	
56-23-5	Carbon Tetrachloride	36 U	100	36	ug/l	
108-90-7	Chlorobenzene	20 U	100	20	ug/l	
75-00-3	Chloroethane	67 U	200	67	ug/l	
67-66-3	Chloroform	30 U	100	30	ug/l	
110-82-7	Cyclohexane	39 U	100	39	ug/l	
124-48-1	Dibromochloromethane	28 U	100	28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	100 U	500	100	ug/l	
106-93-4	1,2-Dibromoethane	28 U	200	28	ug/l	
75-71-8	Dichlorodifluoromethane	50 U	200	50	ug/l	
95-50-1	1,2-Dichlorobenzene	32 U	100	32	ug/l	
541-73-1	1,3-Dichlorobenzene	22 U	100	22	ug/l	
106-46-7	1,4-Dichlorobenzene	26 U	100	26	ug/l	
75-34-3	1,1-Dichloroethane	34 U	100	34	ug/l	
107-06-2	1,2-Dichloroethane	31 U	100	31	ug/l	
75-35-4	1,1-Dichloroethylene	32 U	100	32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	6980	100	28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	124	100	22	ug/l	
78-87-5	1,2-Dichloropropane	43 U	100	43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	29 U	100	29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	21 U	100	21	ug/l	
100-41-4	Ethylbenzene	36 U	100	36	ug/l	
76-13-1	Freon 113	48 U	100	48	ug/l	
591-78-6	2-Hexanone	200 U	1000	200	ug/l	
98-82-8	Isopropylbenzene	22 U	100	22	ug/l	
79-20-9	Methyl Acetate	500 U	2000	500	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-RW14A-20210623		
Lab Sample ID:	FA86691-15	**Date Sampled:**	06/23/21
Matrix:	AQ - Ground Water	**Date Received:**	06/24/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	200 U	500	200	ug/l	
74-87-3	Methyl Chloride	50 U	200	50	ug/l	
75-09-2	Methylene Chloride	283	500	200	ug/l	I
108-10-1	4-Methyl-2-pentanone (MIBK)	100 U	500	100	ug/l	
1634-04-4	Methyl Tert Butyl Ether	23 U	100	23	ug/l	
100-42-5	Styrene	22 U	100	22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	28 U	100	28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	30 U	100	30	ug/l	
127-18-4	Tetrachloroethylene	22 U	100	22	ug/l	
108-88-3	Toluene	30 U	100	30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	61 U	200	61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	50 U	200	50	ug/l	
71-55-6	1,1,1-Trichloroethane	25 U	100	25	ug/l	
79-00-5	1,1,2-Trichloroethane	47 U	100	47	ug/l	
79-01-6	Trichloroethylene	35 U	100	35	ug/l	
75-69-4	Trichlorofluoromethane	50 U	200	50	ug/l	
75-01-4	Vinyl Chloride	1620	100	41	ug/l	
1330-20-7	Xylene (total)	72 U	300	72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		83-118%
17060-07-0	1,2-Dichloroethane-D4	99%		79-125%
2037-26-5	Toluene-D8	97%		85-112%
460-00-4	4-Bromofluorobenzene	94%		83-118%

U = Not detected MDL = Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range
I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-RW15A-20210623		
Lab Sample ID:	FA86691-16	**Date Sampled:**	06/23/21
Matrix:	AQ - Ground Water	**Date Received:**	06/24/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1A36624.D	50	07/07/21 03:44	SO	n/a	n/a	V1A1543
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	500 U	1300	500	ug/l	
71-43-2	Benzene	16 U	50	16	ug/l	
74-97-5	Bromochloromethane	23 U	50	23	ug/l	
75-27-4	Bromodichloromethane	12 U	50	12	ug/l	
75-25-2	Bromoform	20 U	50	20	ug/l	
78-93-3	2-Butanone (MEK)	100 U	250	100	ug/l	
75-15-0	Carbon Disulfide	27 U	100	27	ug/l	
56-23-5	Carbon Tetrachloride	18 U	50	18	ug/l	
108-90-7	Chlorobenzene	10 U	50	10	ug/l	
75-00-3	Chloroethane	33 U	100	33	ug/l	
67-66-3	Chloroform	15 U	50	15	ug/l	
110-82-7	Cyclohexane	20 U	50	20	ug/l	
124-48-1	Dibromochloromethane	14 U	50	14	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	52 U	250	52	ug/l	
106-93-4	1,2-Dibromoethane	14 U	100	14	ug/l	
75-71-8	Dichlorodifluoromethane	25 U	100	25	ug/l	
95-50-1	1,2-Dichlorobenzene	16 U	50	16	ug/l	
541-73-1	1,3-Dichlorobenzene	11 U	50	11	ug/l	
106-46-7	1,4-Dichlorobenzene	13 U	50	13	ug/l	
75-34-3	1,1-Dichloroethane	17 U	50	17	ug/l	
107-06-2	1,2-Dichloroethane	16 U	50	16	ug/l	
75-35-4	1,1-Dichloroethylene	16 U	50	16	ug/l	
156-59-2	cis-1,2-Dichloroethylene	2510	50	14	ug/l	
156-60-5	trans-1,2-Dichloroethylene	41.2	50	11	ug/l	I
78-87-5	1,2-Dichloropropane	21 U	50	21	ug/l	
10061-01-5	cis-1,3-Dichloropropene	15 U	50	15	ug/l	
10061-02-6	trans-1,3-Dichloropropene	11 U	50	11	ug/l	
100-41-4	Ethylbenzene	18 U	50	18	ug/l	
76-13-1	Freon 113	24 U	50	24	ug/l	
591-78-6	2-Hexanone	100 U	500	100	ug/l	
98-82-8	Isopropylbenzene	11 U	50	11	ug/l	
79-20-9	Methyl Acetate	250 U	1000	250	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-RW15A-20210623		
Lab Sample ID:	FA86691-16	**Date Sampled:**	06/23/21
Matrix:	AQ - Ground Water	**Date Received:**	06/24/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	100 U	250	100	ug/l	
74-87-3	Methyl Chloride	25 U	100	25	ug/l	
75-09-2	Methylene Chloride	100 U	250	100	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	50 U	250	50	ug/l	
1634-04-4	Methyl Tert Butyl Ether	11 U	50	11	ug/l	
100-42-5	Styrene	11 U	50	11	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	14 U	50	14	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	15 U	50	15	ug/l	
127-18-4	Tetrachloroethylene	11 U	50	11	ug/l	
108-88-3	Toluene	15 U	50	15	ug/l	
87-61-6	1,2,3-Trichlorobenzene	31 U	100	31	ug/l	
120-82-1	1,2,4-Trichlorobenzene	25 U	100	25	ug/l	
71-55-6	1,1,1-Trichloroethane	12 U	50	12	ug/l	
79-00-5	1,1,2-Trichloroethane	23 U	50	23	ug/l	
79-01-6	Trichloroethylene	17 U	50	17	ug/l	
75-69-4	Trichlorofluoromethane	25 U	100	25	ug/l	
75-01-4	Vinyl Chloride	553	50	20	ug/l	
1330-20-7	Xylene (total)	36 U	150	36	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		83-118%
17060-07-0	1,2-Dichloroethane-D4	100%		79-125%
2037-26-5	Toluene-D8	96%		85-112%
460-00-4	4-Bromofluorobenzene	94%		83-118%

U = Not detected MDL = Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range

I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: LC34-RW16B-20210623
Lab Sample ID: FA86691-17
Matrix: AQ - Ground Water
Method: SW846 8260B
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Date Sampled: 06/23/21
Date Received: 06/24/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1A36625.D	5	07/07/21 04:09	SO	n/a	n/a	V1A1543
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	50 U	130	50	ug/l	
71-43-2	Benzene	1.6 U	5.0	1.6	ug/l	
74-97-5	Bromochloromethane	2.3 U	5.0	2.3	ug/l	
75-27-4	Bromodichloromethane	1.2 U	5.0	1.2	ug/l	
75-25-2	Bromoform	2.0 U	5.0	2.0	ug/l	
78-93-3	2-Butanone (MEK)	10 U	25	10	ug/l	
75-15-0	Carbon Disulfide	2.7 U	10	2.7	ug/l	
56-23-5	Carbon Tetrachloride	1.8 U	5.0	1.8	ug/l	
108-90-7	Chlorobenzene	1.0 U	5.0	1.0	ug/l	
75-00-3	Chloroethane	3.3 U	10	3.3	ug/l	
67-66-3	Chloroform	1.5 U	5.0	1.5	ug/l	
110-82-7	Cyclohexane	2.0 U	5.0	2.0	ug/l	
124-48-1	Dibromochloromethane	1.4 U	5.0	1.4	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	5.2 U	25	5.2	ug/l	
106-93-4	1,2-Dibromoethane	1.4 U	10	1.4	ug/l	
75-71-8	Dichlorodifluoromethane	2.5 U	10	2.5	ug/l	
95-50-1	1,2-Dichlorobenzene	1.6 U	5.0	1.6	ug/l	
541-73-1	1,3-Dichlorobenzene	1.1 U	5.0	1.1	ug/l	
106-46-7	1,4-Dichlorobenzene	1.3 U	5.0	1.3	ug/l	
75-34-3	1,1-Dichloroethane	1.7 U	5.0	1.7	ug/l	
107-06-2	1,2-Dichloroethane	1.6 U	5.0	1.6	ug/l	
75-35-4	1,1-Dichloroethylene	1.6 U	5.0	1.6	ug/l	
156-59-2	cis-1,2-Dichloroethylene	355	5.0	1.4	ug/l	
156-60-5	trans-1,2-Dichloroethylene	10.2	5.0	1.1	ug/l	
78-87-5	1,2-Dichloropropane	2.1 U	5.0	2.1	ug/l	
10061-01-5	cis-1,3-Dichloropropene	1.5 U	5.0	1.5	ug/l	
10061-02-6	trans-1,3-Dichloropropene	1.1 U	5.0	1.1	ug/l	
100-41-4	Ethylbenzene	1.8 U	5.0	1.8	ug/l	
76-13-1	Freon 113	2.4 U	5.0	2.4	ug/l	
591-78-6	2-Hexanone	10 U	50	10	ug/l	
98-82-8	Isopropylbenzene	1.1 U	5.0	1.1	ug/l	
79-20-9	Methyl Acetate	25 U	100	25	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-RW16B-20210623		
Lab Sample ID:	FA86691-17	**Date Sampled:**	06/23/21
Matrix:	AQ - Ground Water	**Date Received:**	06/24/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	10 U	25	10	ug/l	
74-87-3	Methyl Chloride	2.5 U	10	2.5	ug/l	
75-09-2	Methylene Chloride	10 U	25	10	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	5.0 U	25	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	1.1 U	5.0	1.1	ug/l	
100-42-5	Styrene	1.1 U	5.0	1.1	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	1.4 U	5.0	1.4	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	1.5 U	5.0	1.5	ug/l	
127-18-4	Tetrachloroethylene	1.1 U	5.0	1.1	ug/l	
108-88-3	Toluene	1.5 U	5.0	1.5	ug/l	
87-61-6	1,2,3-Trichlorobenzene	3.1 U	10	3.1	ug/l	
120-82-1	1,2,4-Trichlorobenzene	2.5 U	10	2.5	ug/l	
71-55-6	1,1,1-Trichloroethane	1.2 U	5.0	1.2	ug/l	
79-00-5	1,1,2-Trichloroethane	2.3 U	5.0	2.3	ug/l	
79-01-6	Trichloroethylene	18.1	5.0	1.7	ug/l	
75-69-4	Trichlorofluoromethane	2.5 U	10	2.5	ug/l	
75-01-4	Vinyl Chloride	105	5.0	2.0	ug/l	
1330-20-7	Xylene (total)	3.6 U	15	3.6	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		83-118%
17060-07-0	1,2-Dichloroethane-D4	99%		79-125%
2037-26-5	Toluene-D8	96%		85-112%
460-00-4	4-Bromofluorobenzene	94%		83-118%

U = Not detected MDL = Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range
I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-RW17C-20210623		
Lab Sample ID:	FA86691-18	**Date Sampled:**	06/23/21
Matrix:	AQ - Ground Water	**Date Received:**	06/24/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1A36626.D	5000	07/07/21 04:35	SO	n/a	n/a	V1A1543
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	50000 U	130000	50000	ug/l	
71-43-2	Benzene	1600 U	5000	1600	ug/l	
74-97-5	Bromochloromethane	2300 U	5000	2300	ug/l	
75-27-4	Bromodichloromethane	1200 U	5000	1200	ug/l	
75-25-2	Bromoform	2000 U	5000	2000	ug/l	
78-93-3	2-Butanone (MEK)	10000 U	25000	10000	ug/l	
75-15-0	Carbon Disulfide	2700 U	10000	2700	ug/l	
56-23-5	Carbon Tetrachloride	1800 U	5000	1800	ug/l	
108-90-7	Chlorobenzene	1000 U	5000	1000	ug/l	
75-00-3	Chloroethane	3300 U	10000	3300	ug/l	
67-66-3	Chloroform	1500 U	5000	1500	ug/l	
110-82-7	Cyclohexane	2000 U	5000	2000	ug/l	
124-48-1	Dibromochloromethane	1400 U	5000	1400	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	5200 U	25000	5200	ug/l	
106-93-4	1,2-Dibromoethane	1400 U	10000	1400	ug/l	
75-71-8	Dichlorodifluoromethane	2500 U	10000	2500	ug/l	
95-50-1	1,2-Dichlorobenzene	1600 U	5000	1600	ug/l	
541-73-1	1,3-Dichlorobenzene	1100 U	5000	1100	ug/l	
106-46-7	1,4-Dichlorobenzene	1300 U	5000	1300	ug/l	
75-34-3	1,1-Dichloroethane	1700 U	5000	1700	ug/l	
107-06-2	1,2-Dichloroethane	1600 U	5000	1600	ug/l	
75-35-4	1,1-Dichloroethylene	1600 U	5000	1600	ug/l	
156-59-2	cis-1,2-Dichloroethylene	4790	5000	1400	ug/l	I
156-60-5	trans-1,2-Dichloroethylene	1100 U	5000	1100	ug/l	
78-87-5	1,2-Dichloropropane	2100 U	5000	2100	ug/l	
10061-01-5	cis-1,3-Dichloropropene	1500 U	5000	1500	ug/l	
10061-02-6	trans-1,3-Dichloropropene	1100 U	5000	1100	ug/l	
100-41-4	Ethylbenzene	1800 U	5000	1800	ug/l	
76-13-1	Freon 113	2400 U	5000	2400	ug/l	
591-78-6	2-Hexanone	10000 U	50000	10000	ug/l	
98-82-8	Isopropylbenzene	1100 U	5000	1100	ug/l	
79-20-9	Methyl Acetate	25000 U	100000	25000	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-RW17C-20210623		
Lab Sample ID:	FA86691-18	**Date Sampled:**	06/23/21
Matrix:	AQ - Ground Water	**Date Received:**	06/24/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	10000 U	25000	10000	ug/l	
74-87-3	Methyl Chloride	2500 U	10000	2500	ug/l	
75-09-2	Methylene Chloride	10000 U	25000	10000	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	5000 U	25000	5000	ug/l	
1634-04-4	Methyl Tert Butyl Ether	1100 U	5000	1100	ug/l	
100-42-5	Styrene	1100 U	5000	1100	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	1400 U	5000	1400	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	1500 U	5000	1500	ug/l	
127-18-4	Tetrachloroethylene	1100 U	5000	1100	ug/l	
108-88-3	Toluene	1500 U	5000	1500	ug/l	
87-61-6	1,2,3-Trichlorobenzene	3100 U	10000	3100	ug/l	
120-82-1	1,2,4-Trichlorobenzene	2500 U	10000	2500	ug/l	
71-55-6	1,1,1-Trichloroethane	1200 U	5000	1200	ug/l	
79-00-5	1,1,2-Trichloroethane	2300 U	5000	2300	ug/l	
79-01-6	Trichloroethylene	307000	5000	1700	ug/l	
75-69-4	Trichlorofluoromethane	2500 U	10000	2500	ug/l	
75-01-4	Vinyl Chloride	2000 U	5000	2000	ug/l	
1330-20-7	Xylene (total)	3600 U	15000	3600	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		83-118%
17060-07-0	1,2-Dichloroethane-D4	97%		79-125%
2037-26-5	Toluene-D8	96%		85-112%
460-00-4	4-Bromofluorobenzene	94%		83-118%

U = Not detected MDL = Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range

I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-RW18C-20210623		
Lab Sample ID:	FA86691-19	**Date Sampled:**	06/23/21
Matrix:	AQ - Ground Water	**Date Received:**	06/24/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1A36627.D	5000	07/07/21 05:01	SO	n/a	n/a	V1A1543
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	50000 U	130000	50000	ug/l	
71-43-2	Benzene	1600 U	5000	1600	ug/l	
74-97-5	Bromochloromethane	2300 U	5000	2300	ug/l	
75-27-4	Bromodichloromethane	1200 U	5000	1200	ug/l	
75-25-2	Bromoform	2000 U	5000	2000	ug/l	
78-93-3	2-Butanone (MEK)	10000 U	25000	10000	ug/l	
75-15-0	Carbon Disulfide	2700 U	10000	2700	ug/l	
56-23-5	Carbon Tetrachloride	1800 U	5000	1800	ug/l	
108-90-7	Chlorobenzene	1000 U	5000	1000	ug/l	
75-00-3	Chloroethane	3300 U	10000	3300	ug/l	
67-66-3	Chloroform	1500 U	5000	1500	ug/l	
110-82-7	Cyclohexane	2000 U	5000	2000	ug/l	
124-48-1	Dibromochloromethane	1400 U	5000	1400	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	5200 U	25000	5200	ug/l	
106-93-4	1,2-Dibromoethane	1400 U	10000	1400	ug/l	
75-71-8	Dichlorodifluoromethane	2500 U	10000	2500	ug/l	
95-50-1	1,2-Dichlorobenzene	1600 U	5000	1600	ug/l	
541-73-1	1,3-Dichlorobenzene	1100 U	5000	1100	ug/l	
106-46-7	1,4-Dichlorobenzene	1300 U	5000	1300	ug/l	
75-34-3	1,1-Dichloroethane	1700 U	5000	1700	ug/l	
107-06-2	1,2-Dichloroethane	1600 U	5000	1600	ug/l	
75-35-4	1,1-Dichloroethylene	1600 U	5000	1600	ug/l	
156-59-2	cis-1,2-Dichloroethylene	1400 U	5000	1400	ug/l	
156-60-5	trans-1,2-Dichloroethylene	1100 U	5000	1100	ug/l	
78-87-5	1,2-Dichloropropane	2100 U	5000	2100	ug/l	
10061-01-5	cis-1,3-Dichloropropene	1500 U	5000	1500	ug/l	
10061-02-6	trans-1,3-Dichloropropene	1100 U	5000	1100	ug/l	
100-41-4	Ethylbenzene	1800 U	5000	1800	ug/l	
76-13-1	Freon 113	2400 U	5000	2400	ug/l	
591-78-6	2-Hexanone	10000 U	50000	10000	ug/l	
98-82-8	Isopropylbenzene	1100 U	5000	1100	ug/l	
79-20-9	Methyl Acetate	25000 U	100000	25000	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-RW18C-20210623		
Lab Sample ID:	FA86691-19	**Date Sampled:**	06/23/21
Matrix:	AQ - Ground Water	**Date Received:**	06/24/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	10000 U	25000	10000	ug/l	
74-87-3	Methyl Chloride	2500 U	10000	2500	ug/l	
75-09-2	Methylene Chloride	10000 U	25000	10000	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	5000 U	25000	5000	ug/l	
1634-04-4	Methyl Tert Butyl Ether	1100 U	5000	1100	ug/l	
100-42-5	Styrene	1100 U	5000	1100	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	1400 U	5000	1400	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	1500 U	5000	1500	ug/l	
127-18-4	Tetrachloroethylene	1100 U	5000	1100	ug/l	
108-88-3	Toluene	1500 U	5000	1500	ug/l	
87-61-6	1,2,3-Trichlorobenzene	3100 U	10000	3100	ug/l	
120-82-1	1,2,4-Trichlorobenzene	2500 U	10000	2500	ug/l	
71-55-6	1,1,1-Trichloroethane	1200 U	5000	1200	ug/l	
79-00-5	1,1,2-Trichloroethane	2300 U	5000	2300	ug/l	
79-01-6	Trichloroethylene	163000	5000	1700	ug/l	
75-69-4	Trichlorofluoromethane	2500 U	10000	2500	ug/l	
75-01-4	Vinyl Chloride	2000 U	5000	2000	ug/l	
1330-20-7	Xylene (total)	3600 U	15000	3600	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		83-118%
17060-07-0	1,2-Dichloroethane-D4	99%		79-125%
2037-26-5	Toluene-D8	96%		85-112%
460-00-4	4-Bromofluorobenzene	94%		83-118%

U = Not detected MDL = Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range

I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-RW19C-20210623		
Lab Sample ID:	FA86691-20	**Date Sampled:**	06/23/21
Matrix:	AQ - Ground Water	**Date Received:**	06/24/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1A36628.D	1000	07/07/21 05:27	SO	n/a	n/a	V1A1543
Run #2 [a]	5E29430.D	10000	07/13/21 20:02	SO	n/a	n/a	V5E1350

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	10000 U	25000	10000	ug/l	
71-43-2	Benzene	310 U	1000	310	ug/l	
74-97-5	Bromochloromethane	450 U	1000	450	ug/l	
75-27-4	Bromodichloromethane	240 U	1000	240	ug/l	
75-25-2	Bromoform	410 U	1000	410	ug/l	
78-93-3	2-Butanone (MEK)	2000 U	5000	2000	ug/l	
75-15-0	Carbon Disulfide	530 U	2000	530	ug/l	
56-23-5	Carbon Tetrachloride	360 U	1000	360	ug/l	
108-90-7	Chlorobenzene	200 U	1000	200	ug/l	
75-00-3	Chloroethane	670 U	2000	670	ug/l	
67-66-3	Chloroform	300 U	1000	300	ug/l	
110-82-7	Cyclohexane	390 U	1000	390	ug/l	
124-48-1	Dibromochloromethane	280 U	1000	280	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1000 U	5000	1000	ug/l	
106-93-4	1,2-Dibromoethane	280 U	2000	280	ug/l	
75-71-8	Dichlorodifluoromethane	500 U	2000	500	ug/l	
95-50-1	1,2-Dichlorobenzene	320 U	1000	320	ug/l	
541-73-1	1,3-Dichlorobenzene	220 U	1000	220	ug/l	
106-46-7	1,4-Dichlorobenzene	260 U	1000	260	ug/l	
75-34-3	1,1-Dichloroethane	340 U	1000	340	ug/l	
107-06-2	1,2-Dichloroethane	310 U	1000	310	ug/l	
75-35-4	1,1-Dichloroethylene	320 U	1000	320	ug/l	
156-59-2	cis-1,2-Dichloroethylene	6830	1000	280	ug/l	
156-60-5	trans-1,2-Dichloroethylene	220 U	1000	220	ug/l	
78-87-5	1,2-Dichloropropane	430 U	1000	430	ug/l	
10061-01-5	cis-1,3-Dichloropropene	290 U	1000	290	ug/l	
10061-02-6	trans-1,3-Dichloropropene	210 U	1000	210	ug/l	
100-41-4	Ethylbenzene	360 U	1000	360	ug/l	
76-13-1	Freon 113	1270	1000	480	ug/l	
591-78-6	2-Hexanone	2000 U	10000	2000	ug/l	
98-82-8	Isopropylbenzene	220 U	1000	220	ug/l	
79-20-9	Methyl Acetate	5000 U	20000	5000	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-RW19C-20210623		
Lab Sample ID:	FA86691-20	**Date Sampled:**	06/23/21
Matrix:	AQ - Ground Water	**Date Received:**	06/24/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	2000 U	5000	2000	ug/l	
74-87-3	Methyl Chloride	500 U	2000	500	ug/l	
75-09-2	Methylene Chloride	2000 U	5000	2000	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1000 U	5000	1000	ug/l	
1634-04-4	Methyl Tert Butyl Ether	230 U	1000	230	ug/l	
100-42-5	Styrene	220 U	1000	220	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	280 U	1000	280	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	300 U	1000	300	ug/l	
127-18-4	Tetrachloroethylene	220 U	1000	220	ug/l	
108-88-3	Toluene	300 U	1000	300	ug/l	
87-61-6	1,2,3-Trichlorobenzene	610 U	2000	610	ug/l	
120-82-1	1,2,4-Trichlorobenzene	500 U	2000	500	ug/l	
71-55-6	1,1,1-Trichloroethane	250 U	1000	250	ug/l	
79-00-5	1,1,2-Trichloroethane	470 U	1000	470	ug/l	
79-01-6	Trichloroethylene	827000 [b]	10000	3500	ug/l	Q
75-69-4	Trichlorofluoromethane	500 U	2000	500	ug/l	
75-01-4	Vinyl Chloride	410 U	1000	410	ug/l	
1330-20-7	Xylene (total)	720 U	3000	720	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%	109%	83-118%
17060-07-0	1,2-Dichloroethane-D4	97%	111%	79-125%
2037-26-5	Toluene-D8	97%	92%	85-112%
460-00-4	4-Bromofluorobenzene	93%	88%	83-118%

(a) Sample re-analyzed beyond hold time; reported results are considered minimum values.
(b) Result is from Run# 2

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-RW20C-20210623		
Lab Sample ID:	FA86691-21	**Date Sampled:**	06/23/21
Matrix:	AQ - Surface Water	**Date Received:**	06/24/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1A36629.D	2500	07/07/21 05:53	SO	n/a	n/a	V1A1543
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	25000 U	63000	25000	ug/l	
71-43-2	Benzene	780 U	2500	780	ug/l	
74-97-5	Bromochloromethane	1100 U	2500	1100	ug/l	
75-27-4	Bromodichloromethane	610 U	2500	610	ug/l	
75-25-2	Bromoform	1000 U	2500	1000	ug/l	
78-93-3	2-Butanone (MEK)	5000 U	13000	5000	ug/l	
75-15-0	Carbon Disulfide	1300 U	5000	1300	ug/l	
56-23-5	Carbon Tetrachloride	890 U	2500	890	ug/l	
108-90-7	Chlorobenzene	500 U	2500	500	ug/l	
75-00-3	Chloroethane	1700 U	5000	1700	ug/l	
67-66-3	Chloroform	750 U	2500	750	ug/l	
110-82-7	Cyclohexane	980 U	2500	980	ug/l	
124-48-1	Dibromochloromethane	690 U	2500	690	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	2600 U	13000	2600	ug/l	
106-93-4	1,2-Dibromoethane	690 U	5000	690	ug/l	
75-71-8	Dichlorodifluoromethane	1300 U	5000	1300	ug/l	
95-50-1	1,2-Dichlorobenzene	810 U	2500	810	ug/l	
541-73-1	1,3-Dichlorobenzene	540 U	2500	540	ug/l	
106-46-7	1,4-Dichlorobenzene	640 U	2500	640	ug/l	
75-34-3	1,1-Dichloroethane	850 U	2500	850	ug/l	
107-06-2	1,2-Dichloroethane	780 U	2500	780	ug/l	
75-35-4	1,1-Dichloroethylene	810 U	2500	810	ug/l	
156-59-2	cis-1,2-Dichloroethylene	3970	2500	690	ug/l	
156-60-5	trans-1,2-Dichloroethylene	550 U	2500	550	ug/l	
78-87-5	1,2-Dichloropropane	1100 U	2500	1100	ug/l	
10061-01-5	cis-1,3-Dichloropropene	730 U	2500	730	ug/l	
10061-02-6	trans-1,3-Dichloropropene	540 U	2500	540	ug/l	
100-41-4	Ethylbenzene	890 U	2500	890	ug/l	
76-13-1	Freon 113	1200 U	2500	1200	ug/l	
591-78-6	2-Hexanone	5000 U	25000	5000	ug/l	
98-82-8	Isopropylbenzene	550 U	2500	550	ug/l	
79-20-9	Methyl Acetate	13000 U	50000	13000	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-RW20C-20210623		
Lab Sample ID:	FA86691-21	**Date Sampled:**	06/23/21
Matrix:	AQ - Surface Water	**Date Received:**	06/24/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	5000 U	13000	5000	ug/l	
74-87-3	Methyl Chloride	1300 U	5000	1300	ug/l	
75-09-2	Methylene Chloride	5000 U	13000	5000	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	2500 U	13000	2500	ug/l	
1634-04-4	Methyl Tert Butyl Ether	570 U	2500	570	ug/l	
100-42-5	Styrene	560 U	2500	560	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	690 U	2500	690	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	750 U	2500	750	ug/l	
127-18-4	Tetrachloroethylene	540 U	2500	540	ug/l	
108-88-3	Toluene	750 U	2500	750	ug/l	
87-61-6	1,2,3-Trichlorobenzene	1500 U	5000	1500	ug/l	
120-82-1	1,2,4-Trichlorobenzene	1300 U	5000	1300	ug/l	
71-55-6	1,1,1-Trichloroethane	620 U	2500	620	ug/l	
79-00-5	1,1,2-Trichloroethane	1200 U	2500	1200	ug/l	
79-01-6	Trichloroethylene	221000	2500	860	ug/l	
75-69-4	Trichlorofluoromethane	1300 U	5000	1300	ug/l	
75-01-4	Vinyl Chloride	1000 U	2500	1000	ug/l	
1330-20-7	Xylene (total)	1800 U	7500	1800	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		83-118%
17060-07-0	1,2-Dichloroethane-D4	98%		79-125%
2037-26-5	Toluene-D8	96%		85-112%
460-00-4	4-Bromofluorobenzene	94%		83-118%

U = Not detected MDL = Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range
I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

5

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

SGS North America Inc - Orlando
Chain of Custody

4405 Vineland Road, Suite C-15 Orlando, Fl 32811
TEL: 407-425-6700 FAX: 407-425-0707
www.sgs.com

SGS - ORLANDO JOB # : FA86691

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SGS - ORLANDO Quote # | SKIFF #

Client / Reporting Information	Project Information	Analytical Information	Matrix Codes
Company Name: TETRA TECH	Project Name: LC34		DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL- Sludge; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid
Address: 661 ANDERSEN DR FOSTER PLAZA 7	Street: FREEDOM RD		
City: PITTSBURGH State: PA Zip: 15220	City: CCAFS State: FL		
Project Contact: MARC.JONNET@TETRATECH.COM Email:	Project #:		
Phone #: 419-921-8622	Fax #:		
Sampler(s) Name(s) (Printed) Sampler 1: DAN FORESTER Sampler 2:	Client Purchase Order #:		

SGS Orlando Sample #	Field ID / Point of Collection	COLLECTION DATE	COLLECTION TIME	SAMPLED BY:	CONTAINER INFORMATION MATRIX	TOTAL # OF BOTTLES	OTHER	NONE	HCl	NaOH	HNO3	H2SO4	NAOH+ZNAA	DI WATER	MEOH	8260 VOC'S	LAB USE ONLY
1	LC34 - GAC - 20210623		0900	DF	GW	3			X							X	
2	LC34 - AS1 - 20210623		0910														
3	LC34 - AS2 - 20210623		0920														
4	LC34 - INFLUENT - 20210623		0930														
5	LC34 - RW1A - 20210623		0940														
6	LC34 - RW1B - 20210623		0950														
7	LC34 - RW2A - 20210623		1000														
8	LC34 - RW2B - 20210623		1010														
9	LC34 - RW3A - 20210623		1020														
10	LC34 - RW3B - 20210623		1030														
11	LC34 - RW5B - 20210623		1040														
12	LC34 - RW9A - 20210623	X	1050	X	X	X			X							X	

Turnaround Time (Business days)	Data Deliverable Information	Comments / Remarks
~~10 Day (Business)~~ Approved By: / Date:	COMMERCIAL "A" (RESULTS ONLY)	COOLED ON ICE
7 Day	COMMERCIAL "B" (RESULTS PLUS QC)	
5 Day	REDT1 (EPA LEVEL 3)	
3 Day *RUSH*	FULLT1 (EPA LEVEL 4)	INITIAL ASSESSMENT PM
2 Day *RUSH*	EDD'S	LABEL VERIFICATION DMZ
1 Day *RUSH*		
Other		
Rush T/A Data Available VIA Email or Lablink		

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler/Affiliation	Date Time:	Received By/Affiliation	Relinquished By/Affiliation	Date Time:	Received By/Affiliation
1		23JUN21 1440	2	3	6/23/21	4 930 6/24/21
5	Relinquished by/Affiliation	Date Time:	6 Received By/Affiliation	7 Relinquished By/Affiliation	Date Time:	8 Received By/Affiliation

Lab Use Only : Cooler Temperature (s) Celsius (corrected): 0.8 IR

http://www.sgs.com/en/terms-and-conditions

ORLD-SMT-0001-03-FORM-COC (1) Rev 031318

5.1 5

FA86691: Chain of Custody
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SGS North America Inc - Orlando

Chain of Custody

4405 Vineland Road, Suite C-15 Orlando, Fl 32811
TEL: 407-425-6700 FAX: 407-425-0707
www.sgs.com

FA86691

SGS - ORLANDO JOB # :

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SGS - ORLANDO Quote # | SKIFF #

Client / Reporting Information

Company Name: TETRATECH
Address: 661 ANDERSEN DR FOSTER PLAZA 7
City: PITTSBURGH State: PA Zip: 15220
Project Contact: MARK.SONNETO@TETRATECH.COM Email:
Phone #: 412-921-8622
Sampler(s) Name(s) (Printed)
Sampler 1: [illegible] Sampler 2:

Project Information

Project Name: LC34
Street: FREEDOM RD
City: CCSFS State: FL
Project #
Fax #
Client Purchase Order #

Analytical Information

8260 COC's

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid

SGS Orlando Sample #	Field ID / Point of Collection	COLLECTION DATE	COLLECTION TIME	SAMPLED BY:	CONTAINER INFORMATION MATRIX	TOTAL # OF BOTTLES	OTHER	NONE	HCl	NaOH	HNO3	H2SO4	NAOH+ZNAC	DI WATER	MEOH	LAB USE ONLY
13	LC34 - RW12A - 20210623	23JUN	1100	[illegible]	GW	3			X							
14	LC34 - RW13A - 20210623		1110													
15	LC34 - RW14A - 20210623		1120													
16	LC34 - RW15A - 20210623		1130													
17	LC34 - RW16B - 20210623		1140													
18	LC34 - RW17C - 20210623		1150													
19	LC34 - RW18C - 20210623		1200													
20	LC34 - RW19C - 20210623		1210													
21	LC34 - RW20C - 20210623	X	1220	X	X	X			X							X

Turnaround Time (Business days)

10 Day (Business) Approved By: / Date:
7 Day
5 Day
3 Day *RUSH*
2 Day *RUSH*
1 Day *RUSH*
Other
Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [ ] COMMERCIAL "B" (RESULTS PLUS QC)
- [ ] REDT1 (EPA LEVEL 3)
- [ ] FULLT1 (EPA LEVEL 4)
- [ ] EDD'S

Comments / Remarks

COOLED ON ICE

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler/Affiliation	Date Time:	Received By/Affiliation	Relinquished By/Affiliation	Date Time:	Received By/Affiliation
1	[illegible]	1440 23JUN21	2 [illegible]	3 [illegible]	6/23/21 1600	4 [illegible] 6/24/21 930
5			6	7		8

Lab Use Only : Cooler Temperature (s) Celsius (corrected):

http://www.sgs.com/en/terms-and-conditions

ORLD-SMT-0001-03-FORM-COC (1) Rev 031318

FA86691: Chain of Custody
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SGS Sample Receipt Summary

Job Number: FA86691 **Client:** TETRA TECH **Project:** LC34

Date / Time Received: 6/24/2021 9:30:00 AM **Delivery Method:** COURIER **Airbill #'s:**

Therm ID: IR 1; **Therm CF:** -1.8; **# of Coolers:** 1

Cooler Temps (Raw Measured) °C: Cooler 1: (0.8);

Cooler Temps (Corrected) °C: Cooler 1: (-1.0);

Cooler Information	Y	or	N
1. Custody Seals Present	☑		☐
2. Custody Seals Intact	☑		☐
3. Temp criteria achieved	☑		☐
4. Cooler temp verification	IR Gun		
5. Cooler media	Ice (Bag)		

Trip Blank Information	Y	or	N	N/A
1. Trip Blank present / cooler	☐		☐	☑
2. Trip Blank listed on COC	☐		☐	☑

	W	or	S	N/A
3. Type Of TB Received	☐		☐	☑

Sample Information	Y	or	N	N/A
1. Sample labels present on bottles	☑		☐	
2. Samples preserved properly	☑		☐	
3. Sufficient volume/containers recvd for analysis:	☑		☐	
4. Condition of sample	Intact			
5. Sample recvd within HT	☑		☐	
6. Dates/Times/IDs on COC match Sample Label	☑		☐	
7. VOCs have headspace	☑		☐	☐
8. Bottles received for unspecified tests	☐		☑	
9. Compositing instructions clear	☐		☐	☑
10. Voa Soil Kits/Jars received past 48hrs?	☐		☐	☑
11. % Solids Jar received?	☐		☐	☑
12. Residual Chlorine Present?	☐		☐	☑

Misc. Information

Number of Encores: 25-Gram _____ 5-Gram _____ Number of 5035 Field Kits: _____ Number of Lab Filtered Metals: _____

Test Strip Lot #s: pH 0-3 230315 pH 10-12 219813A Other: (Specify) _____ _____

Residual Chlorine Test Strip Lot #: _____

Comments SAMPLE 10 RECEIVED 1 VIAL WITH HEADSPACE.

SM001
Rev. Date 05/24/17

Technician: BRYANG Date: 6/24/2021 9:30:00 AM Reviewer: _____ Date: _____

MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: FA86691
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VC6044-MB	C0149805.D	1	07/07/21	SO	n/a	n/a	VC6044

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA86691-1, FA86691-2, FA86691-3, FA86691-4, FA86691-5, FA86691-6, FA86691-7, FA86691-8, FA86691-9, FA86691-10, FA86691-11, FA86691-12, FA86691-13

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
71-43-2	Benzene	ND	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.24	ug/l	
75-25-2	Bromoform	ND	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	ND	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.67	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
110-82-7	Cyclohexane	ND	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.36	ug/l	
76-13-1	Freon 113	ND	1.0	0.48	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	ND	20	5.0	ug/l	
74-83-9	Methyl Bromide	5.4	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	1.1	2.0	0.50	ug/l	J
75-09-2	Methylene Chloride	ND	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.0	ug/l	

Method Blank Summary

Job Number: FA86691
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VC6044-MB	C0149805.D	1	07/07/21	SO	n/a	n/a	VC6044

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA86691-1, FA86691-2, FA86691-3, FA86691-4, FA86691-5, FA86691-6, FA86691-7, FA86691-8, FA86691-9, FA86691-10, FA86691-11, FA86691-12, FA86691-13

CAS No.	Compound	Result	RL	MDL	Units	Q
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.23	ug/l	
100-42-5	Styrene	ND	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	96%	83-118%
17060-07-0	1,2-Dichloroethane-D4	100%	79-125%
2037-26-5	Toluene-D8	101%	85-112%
460-00-4	4-Bromofluorobenzene	103%	83-118%

Method Blank Summary

Job Number: FA86691
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1543-MB	1A36621.D	1	07/07/21	SO	n/a	n/a	V1A1543

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA86691-14, FA86691-15, FA86691-16, FA86691-17, FA86691-18, FA86691-19, FA86691-20, FA86691-21

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
71-43-2	Benzene	ND	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.24	ug/l	
75-25-2	Bromoform	ND	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	ND	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.67	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
110-82-7	Cyclohexane	ND	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.36	ug/l	
76-13-1	Freon 113	ND	1.0	0.48	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	ND	20	5.0	ug/l	
74-83-9	Methyl Bromide	ND	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	ND	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	ND	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.0	ug/l	

Method Blank Summary

Job Number: FA86691
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1543-MB	1A36621.D	1	07/07/21	SO	n/a	n/a	V1A1543

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA86691-14, FA86691-15, FA86691-16, FA86691-17, FA86691-18, FA86691-19, FA86691-20, FA86691-21

CAS No.	Compound	Result	RL	MDL	Units	Q
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.23	ug/l	
100-42-5	Styrene	ND	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	97%	83-118%
17060-07-0	1,2-Dichloroethane-D4	98%	79-125%
2037-26-5	Toluene-D8	97%	85-112%
460-00-4	4-Bromofluorobenzene	94%	83-118%

Method Blank Summary

Job Number: FA86691
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5E1350-MB [a]	5E29410.D	1	07/13/21	SO	n/a	n/a	V5E1350

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA86691-5, FA86691-6, FA86691-20

CAS No.	Compound	Result	RL	MDL	Units	Q
74-83-9	Methyl Bromide	ND	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	ND	2.0	0.50	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.35	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	109%	83-118%
17060-07-0	1,2-Dichloroethane-D4	106%	79-125%
2037-26-5	Toluene-D8	91%	85-112%
460-00-4	4-Bromofluorobenzene	93%	83-118%

(a) Sample was treated with an anti-foaming agent.

Blank Spike Summary

Job Number: FA86691
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VC6044-BS	C0149802.D	1	07/06/21	SO	n/a	n/a	VC6044

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA86691-1, FA86691-2, FA86691-3, FA86691-4, FA86691-5, FA86691-6, FA86691-7, FA86691-8, FA86691-9, FA86691-10, FA86691-11, FA86691-12, FA86691-13

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	124	99	50-147
71-43-2	Benzene	25	26.0	104	81-122
74-97-5	Bromochloromethane	25	23.2	93	76-123
75-27-4	Bromodichloromethane	25	23.6	94	79-123
75-25-2	Bromoform	25	24.1	96	66-123
78-93-3	2-Butanone (MEK)	125	140	112	56-143
75-15-0	Carbon Disulfide	25	26.3	105	66-148
56-23-5	Carbon Tetrachloride	25	22.2	89	76-136
108-90-7	Chlorobenzene	25	27.0	108	82-124
75-00-3	Chloroethane	25	21.5	86	62-144
67-66-3	Chloroform	25	24.1	96	80-124
110-82-7	Cyclohexane	25	31.9	128	73-138
124-48-1	Dibromochloromethane	25	26.2	105	78-122
96-12-8	1,2-Dibromo-3-chloropropane	25	23.8	95	64-123
106-93-4	1,2-Dibromoethane	25	27.2	109	75-120
75-71-8	Dichlorodifluoromethane	25	19.1	76	42-167
95-50-1	1,2-Dichlorobenzene	25	26.8	107	82-124
541-73-1	1,3-Dichlorobenzene	25	26.7	107	84-125
106-46-7	1,4-Dichlorobenzene	25	26.8	107	78-120
75-34-3	1,1-Dichloroethane	25	25.6	102	81-122
107-06-2	1,2-Dichloroethane	25	21.7	87	75-125
75-35-4	1,1-Dichloroethylene	25	27.2	109	78-137
156-59-2	cis-1,2-Dichloroethylene	25	25.5	102	78-120
156-60-5	trans-1,2-Dichloroethylene	25	26.9	108	76-127
78-87-5	1,2-Dichloropropane	25	27.7	111	76-124
10061-01-5	cis-1,3-Dichloropropene	25	24.3	97	75-118
10061-02-6	trans-1,3-Dichloropropene	25	24.5	98	80-120
100-41-4	Ethylbenzene	25	26.4	106	81-121
76-13-1	Freon 113	25	24.6	98	72-134
591-78-6	2-Hexanone	125	148	118	61-129
98-82-8	Isopropylbenzene	25	26.2	105	83-132
79-20-9	Methyl Acetate	125	143	114	65-126
74-83-9	Methyl Bromide	25	28.2	113	59-143
74-87-3	Methyl Chloride	25	22.7	91	50-159
75-09-2	Methylene Chloride	25	26.8	107	69-135
108-10-1	4-Methyl-2-pentanone (MIBK)	125	152	122	66-122

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA86691
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VC6044-BS	C0149802.D	1	07/06/21	SO	n/a	n/a	VC6044

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA86691-1, FA86691-2, FA86691-3, FA86691-4, FA86691-5, FA86691-6, FA86691-7, FA86691-8, FA86691-9, FA86691-10, FA86691-11, FA86691-12, FA86691-13

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
1634-04-4	Methyl Tert Butyl Ether	25	22.6	90	72-117
100-42-5	Styrene	25	26.6	106	78-119
630-20-6	1,1,1,2-Tetrachloroethane	25	25.5	102	77-122
79-34-5	1,1,2,2-Tetrachloroethane	25	29.2	117	72-120
127-18-4	Tetrachloroethylene	25	30.9	124	76-135
108-88-3	Toluene	25	27.1	108	80-120
87-61-6	1,2,3-Trichlorobenzene	25	20.6	82	68-131
120-82-1	1,2,4-Trichlorobenzene	25	20.6	82	73-129
71-55-6	1,1,1-Trichloroethane	25	21.9	88	75-130
79-00-5	1,1,2-Trichloroethane	25	28.1	112	76-119
79-01-6	Trichloroethylene	25	24.4	98	81-126
75-69-4	Trichlorofluoromethane	25	24.4	98	71-156
75-01-4	Vinyl Chloride	25	19.8	79	69-159
1330-20-7	Xylene (total)	75	78.3	104	80-126

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	100%	83-118%
17060-07-0	1,2-Dichloroethane-D4	85%	79-125%
2037-26-5	Toluene-D8	103%	85-112%
460-00-4	4-Bromofluorobenzene	100%	83-118%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA86691
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1543-BS	1A36618.D	1	07/07/21	SO	n/a	n/a	V1A1543

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA86691-14, FA86691-15, FA86691-16, FA86691-17, FA86691-18, FA86691-19, FA86691-20, FA86691-21

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	126	101	50-147
71-43-2	Benzene	25	26.6	106	81-122
74-97-5	Bromochloromethane	25	26.0	104	76-123
75-27-4	Bromodichloromethane	25	25.9	104	79-123
75-25-2	Bromoform	25	26.2	105	66-123
78-93-3	2-Butanone (MEK)	125	130	104	56-143
75-15-0	Carbon Disulfide	25	26.8	107	66-148
56-23-5	Carbon Tetrachloride	25	27.1	108	76-136
108-90-7	Chlorobenzene	25	26.1	104	82-124
75-00-3	Chloroethane	25	23.0	92	62-144
67-66-3	Chloroform	25	25.7	103	80-124
110-82-7	Cyclohexane	25	28.0	112	73-138
124-48-1	Dibromochloromethane	25	25.9	104	78-122
96-12-8	1,2-Dibromo-3-chloropropane	25	24.8	99	64-123
106-93-4	1,2-Dibromoethane	25	25.4	102	75-120
75-71-8	Dichlorodifluoromethane	25	23.0	92	42-167
95-50-1	1,2-Dichlorobenzene	25	25.5	102	82-124
541-73-1	1,3-Dichlorobenzene	25	25.5	102	84-125
106-46-7	1,4-Dichlorobenzene	25	24.6	98	78-120
75-34-3	1,1-Dichloroethane	25	26.8	107	81-122
107-06-2	1,2-Dichloroethane	25	25.6	102	75-125
75-35-4	1,1-Dichloroethylene	25	27.1	108	78-137
156-59-2	cis-1,2-Dichloroethylene	25	26.2	105	78-120
156-60-5	trans-1,2-Dichloroethylene	25	26.8	107	76-127
78-87-5	1,2-Dichloropropane	25	27.0	108	76-124
10061-01-5	cis-1,3-Dichloropropene	25	25.2	101	75-118
10061-02-6	trans-1,3-Dichloropropene	25	24.7	99	80-120
100-41-4	Ethylbenzene	25	26.6	106	81-121
76-13-1	Freon 113	25	28.5	114	72-134
591-78-6	2-Hexanone	125	118	94	61-129
98-82-8	Isopropylbenzene	25	26.7	107	83-132
79-20-9	Methyl Acetate	125	135	108	65-126
74-83-9	Methyl Bromide	25	28.9	116	59-143
74-87-3	Methyl Chloride	25	24.0	96	50-159
75-09-2	Methylene Chloride	25	23.0	92	69-135
108-10-1	4-Methyl-2-pentanone (MIBK)	125	138	110	66-122

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA86691
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1543-BS	1A36618.D	1	07/07/21	SO	n/a	n/a	V1A1543

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA86691-14, FA86691-15, FA86691-16, FA86691-17, FA86691-18, FA86691-19, FA86691-20, FA86691-21

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
1634-04-4	Methyl Tert Butyl Ether	25	25.1	100	72-117
100-42-5	Styrene	25	25.7	103	78-119
630-20-6	1,1,1,2-Tetrachloroethane	25	26.0	104	77-122
79-34-5	1,1,2,2-Tetrachloroethane	25	24.2	97	72-120
127-18-4	Tetrachloroethylene	25	31.4	126	76-135
108-88-3	Toluene	25	25.3	101	80-120
87-61-6	1,2,3-Trichlorobenzene	25	25.9	104	68-131
120-82-1	1,2,4-Trichlorobenzene	25	25.3	101	73-129
71-55-6	1,1,1-Trichloroethane	25	27.0	108	75-130
79-00-5	1,1,2-Trichloroethane	25	26.1	104	76-119
79-01-6	Trichloroethylene	25	26.5	106	81-126
75-69-4	Trichlorofluoromethane	25	29.1	116	71-156
75-01-4	Vinyl Chloride	25	25.6	102	69-159
1330-20-7	Xylene (total)	75	79.6	106	80-126

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	102%	83-118%
17060-07-0	1,2-Dichloroethane-D4	100%	79-125%
2037-26-5	Toluene-D8	99%	85-112%
460-00-4	4-Bromofluorobenzene	96%	83-118%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA86691
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5E1350-BS	5E29407.D	1	07/13/21	SO	n/a	n/a	V5E1350

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA86691-5, FA86691-6, FA86691-20

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
74-83-9	Methyl Bromide	25	32.8	131	59-143
74-87-3	Methyl Chloride	25	23.0	92	50-159
79-01-6	Trichloroethylene	25	29.0	116	81-126

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	108%	83-118%
17060-07-0	1,2-Dichloroethane-D4	106%	79-125%
2037-26-5	Toluene-D8	95%	85-112%
460-00-4	4-Bromofluorobenzene	93%	83-118%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA86691
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA86691-13MS	C0149819.D	100	07/07/21	SO	n/a	n/a	VC6044
FA86691-13MSD	C0149820.D	100	07/07/21	SO	n/a	n/a	VC6044
FA86691-13	C0149818.D	100	07/07/21	SO	n/a	n/a	VC6044

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA86691-1, FA86691-2, FA86691-3, FA86691-4, FA86691-5, FA86691-6, FA86691-7, FA86691-8, FA86691-9, FA86691-10, FA86691-11, FA86691-12, FA86691-13

CAS No.	Compound	FA86691-13 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	2500 U		12500	6940	56	12500	11300	90	48*	50-147/21
71-43-2	Benzene	100 U		2500	1390	56*	2500	2340	94	51*	81-122/14
74-97-5	Bromochloromethane	100 U		2500	1410	56*	2500	2290	92	48*	76-123/14
75-27-4	Bromodichloromethane	100 U		2500	1440	58*	2500	2370	95	49*	79-123/19
75-25-2	Bromoform	100 U		2500	1470	59*	2500	2900	116	65*	66-123/21
78-93-3	2-Butanone (MEK)	500 U		12500	6280	50*	12500	10500	84	50*	56-143/18
75-15-0	Carbon Disulfide	200 U		2500	1440	58*	2500	2330	93	47*	66-148/23
56-23-5	Carbon Tetrachloride	100 U		2500	1540	62*	2500	2480	99	47*	76-136/23
108-90-7	Chlorobenzene	100 U		2500	1520	61*	2500	2520	101	50*	82-124/14
75-00-3	Chloroethane	200 U		2500	1570	63	2500	2570	103	48*	62-144/20
67-66-3	Chloroform	100 U		2500	1420	57*	2500	2360	94	50*	80-124/15
110-82-7	Cyclohexane	100 U		2500	1480	59*	2500	2460	98	50*	73-138/18
124-48-1	Dibromochloromethane	100 U		2500	1550	62*	2500	2560	102	49*	78-122/19
96-12-8	1,2-Dibromo-3-chloropropane	500 U		2500	1450	58*	2500	2710	108	61*	64-123/18
106-93-4	1,2-Dibromoethane	200 U		2500	1410	56*	2500	2480	99	55*	75-120/13
75-71-8	Dichlorodifluoromethane	200 U		2500	1610	64	2500	2610	104	47*	42-167/19
95-50-1	1,2-Dichlorobenzene	100 U		2500	1530	61*	2500	2570	103	51*	82-124/14
541-73-1	1,3-Dichlorobenzene	100 U		2500	1460	58*	2500	2510	100	53*	84-125/14
106-46-7	1,4-Dichlorobenzene	100 U		2500	1460	58*	2500	2560	102	55*	78-120/15
75-34-3	1,1-Dichloroethane	100 U		2500	1320	53*	2500	2280	91	53*	81-122/15
107-06-2	1,2-Dichloroethane	100 U		2500	1390	56*	2500	2330	93	51*	75-125/14
75-35-4	1,1-Dichloroethylene	100 U		2500	1480	59*	2500	2410	96	48*	78-137/18
156-59-2	cis-1,2-Dichloroethylene	6230		2500	5030	-48* [a]	2500	8500	91	51*	78-120/15
156-60-5	trans-1,2-Dichloroethylene	95.5	I	2500	1490	56*	2500	2500	96	51*	76-127/17
78-87-5	1,2-Dichloropropane	100 U		2500	1300	52*	2500	2210	88	52*	76-124/14
10061-01-5	cis-1,3-Dichloropropene	100 U		2500	1320	53*	2500	2250	90	52*	75-118/23
10061-02-6	trans-1,3-Dichloropropene	100 U		2500	1480	59*	2500	2290	92	43*	80-120/22
100-41-4	Ethylbenzene	100 U		2500	1470	59*	2500	2520	101	53*	81-121/14
76-13-1	Freon 113	100 UJ	J	2500	1460	58*	2500	2350	94	47*	72-134/20
591-78-6	2-Hexanone	1000 U		12500	7050	56*	12500	11800	94	50*	61-129/18
98-82-8	Isopropylbenzene	100 U		2500	1500	60*	2500	3440	138*	79*	83-132/15
79-20-9	Methyl Acetate	2000 U		12500	6460	52*	12500	11000	88	52*	65-126/18
74-83-9	Methyl Bromide	228	J	2500	1340	44*	2500	2700	99	67*	59-143/19
74-87-3	Methyl Chloride	200 U		2500	1580	63	2500	2550	102	47*	50-159/19
75-09-2	Methylene Chloride	271	I	2500	1320	42*	2500	2170	76	49*	69-135/16
108-10-1	4-Methyl-2-pentanone (MIBK)	500 U		12500	7350	59*	12500	12500	100	52*	66-122/16

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA86691
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA86691-13MS	C0149819.D	100	07/07/21	SO	n/a	n/a	VC6044
FA86691-13MSD	C0149820.D	100	07/07/21	SO	n/a	n/a	VC6044
FA86691-13	C0149818.D	100	07/07/21	SO	n/a	n/a	VC6044

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA86691-1, FA86691-2, FA86691-3, FA86691-4, FA86691-5, FA86691-6, FA86691-7, FA86691-8, FA86691-9, FA86691-10, FA86691-11, FA86691-12, FA86691-13

CAS No.	Compound	FA86691-13 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
1634-04-4	Methyl Tert Butyl Ether	100	U	2500	1300	52*	2500	2300	92	56*	72-117/14
100-42-5	Styrene	100	U	2500	1550	62*	2500	3180	127*	69*	78-119/23
630-20-6	1,1,1,2-Tetrachloroethane	100	U	2500	1490	60*	2500	2540	102	52*	77-122/19
79-34-5	1,1,2,2-Tetrachloroethane	100	U	2500	1410	56*	2500	2440	98	54*	72-120/14
127-18-4	Tetrachloroethylene	100	U	2500	1690	68*	2500	2860	114	51*	76-135/16
108-88-3	Toluene	100	U	2500	1460	58*	2500	2530	101	54*	80-120/14
87-61-6	1,2,3-Trichlorobenzene	200	U	2500	1550	62*	2500	3330	133*	73*	68-131/25
120-82-1	1,2,4-Trichlorobenzene	200	U	2500	1550	62*	2500	3330	133*	73*	73-129/20
71-55-6	1,1,1-Trichloroethane	100	U	2500	1430	57*	2500	2410	96	51*	75-130/16
79-00-5	1,1,2-Trichloroethane	100	U	2500	1470	59*	2500	2510	100	52*	76-119/14
79-01-6	Trichloroethylene	100	U	2500	1450	58*	2500	2300	92	45*	81-126/15
75-69-4	Trichlorofluoromethane	200	U	2500	1700	68*	2500	2780	111	48*	71-156/21
75-01-4	Vinyl Chloride	1610		2500	2470	34*	2500	4050	98	48*	69-159/18
1330-20-7	Xylene (total)	300	U	7500	4500	60*	7500	7860	105	54*	80-126/15

CAS No.	Surrogate Recoveries	MS	MSD	FA86691-13	Limits
1868-53-7	Dibromofluoromethane	101%	99%	92%	83-118%
17060-07-0	1,2-Dichloroethane-D4	104%	101%	103%	79-125%
2037-26-5	Toluene-D8	104%	103%	99%	85-112%
460-00-4	4-Bromofluorobenzene	102%	108%	100%	83-118%

(a) Outside control limits due to high level in sample relative to spike amount.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA86691
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA86691-15MS	1A36634.D	100	07/07/21	SO	n/a	n/a	V1A1543
FA86691-15MSD	1A36635.D	100	07/07/21	SO	n/a	n/a	V1A1543
FA86691-15	1A36623.D	100	07/07/21	SO	n/a	n/a	V1A1543

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA86691-14, FA86691-15, FA86691-16, FA86691-17, FA86691-18, FA86691-19, FA86691-20, FA86691-21

CAS No.	Compound	FA86691-15 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	2500 U		12500	12700	102	12500	11900	95	7	50-147/21
71-43-2	Benzene	100 U		2500	2840	114	2500	2590	104	9	81-122/14
74-97-5	Bromochloromethane	100 U		2500	2740	110	2500	2520	101	8	76-123/14
75-27-4	Bromodichloromethane	100 U		2500	2720	109	2500	2520	101	8	79-123/19
75-25-2	Bromoform	100 U		2500	2680	107	2500	2550	102	5	66-123/21
78-93-3	2-Butanone (MEK)	500 U		12500	13700	110	12500	12700	102	8	56-143/18
75-15-0	Carbon Disulfide	200 U		2500	2870	115	2500	2540	102	12	66-148/23
56-23-5	Carbon Tetrachloride	100 U		2500	2840	114	2500	2600	104	9	76-136/23
108-90-7	Chlorobenzene	100 U		2500	2780	111	2500	2550	102	9	82-124/14
75-00-3	Chloroethane	200 U		2500	2560	102	2500	2350	94	9	62-144/20
67-66-3	Chloroform	100 U		2500	2720	109	2500	2500	100	8	80-124/15
110-82-7	Cyclohexane	100 U		2500	2930	117	2500	2670	107	9	73-138/18
124-48-1	Dibromochloromethane	100 U		2500	2660	106	2500	2510	100	6	78-122/19
96-12-8	1,2-Dibromo-3-chloropropane	500 U		2500	2450	98	2500	2350	94	4	64-123/18
106-93-4	1,2-Dibromoethane	200 U		2500	2620	105	2500	2490	100	5	75-120/13
75-71-8	Dichlorodifluoromethane	200 U		2500	2450	98	2500	2230	89	9	42-167/19
95-50-1	1,2-Dichlorobenzene	100 U		2500	2630	105	2500	2460	98	7	82-124/14
541-73-1	1,3-Dichlorobenzene	100 U		2500	2600	104	2500	2430	97	7	84-125/14
106-46-7	1,4-Dichlorobenzene	100 U		2500	2550	102	2500	2390	96	6	78-120/15
75-34-3	1,1-Dichloroethane	100 U		2500	2860	114	2500	2610	104	9	81-122/15
107-06-2	1,2-Dichloroethane	100 U		2500	2740	110	2500	2530	101	8	75-125/14
75-35-4	1,1-Dichloroethylene	100 U		2500	2850	114	2500	2600	104	9	78-137/18
156-59-2	cis-1,2-Dichloroethylene	6980		2500	9740	110	2500	9030	82	8	78-120/15
156-60-5	trans-1,2-Dichloroethylene	124		2500	2970	114	2500	2710	103	9	76-127/17
78-87-5	1,2-Dichloropropane	100 U		2500	2810	112	2500	2620	105	7	76-124/14
10061-01-5	cis-1,3-Dichloropropene	100 U		2500	2540	102	2500	2370	95	7	75-118/23
10061-02-6	trans-1,3-Dichloropropene	100 U		2500	2480	99	2500	2340	94	6	80-120/22
100-41-4	Ethylbenzene	100 U		2500	2810	112	2500	2560	102	9	81-121/14
76-13-1	Freon 113	100 U		2500	2970	119	2500	2700	108	10	72-134/20
591-78-6	2-Hexanone	1000 U		12500	14200	114	12500	12900	103	10	61-129/18
98-82-8	Isopropylbenzene	100 U		2500	2790	112	2500	2570	103	8	83-132/15
79-20-9	Methyl Acetate	2000 U		12500	14400	115	12500	13300	106	8	65-126/18
74-83-9	Methyl Bromide	500 U		2500	2560	102	2500	2800	112	9	59-143/19
74-87-3	Methyl Chloride	200 U		2500	2760	110	2500	2470	99	11	50-159/19
75-09-2	Methylene Chloride	283	I	2500	2540	90	2500	2300	81	10	69-135/16
108-10-1	4-Methyl-2-pentanone (MIBK)	500 U		12500	15200	122	12500	14000	112	8	66-122/16

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA86691
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA86691-15MS	1A36634.D	100	07/07/21	SO	n/a	n/a	V1A1543
FA86691-15MSD	1A36635.D	100	07/07/21	SO	n/a	n/a	V1A1543
FA86691-15	1A36623.D	100	07/07/21	SO	n/a	n/a	V1A1543

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA86691-14, FA86691-15, FA86691-16, FA86691-17, FA86691-18, FA86691-19, FA86691-20, FA86691-21

CAS No.	Compound	FA86691-15 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
1634-04-4	Methyl Tert Butyl Ether	100	U	2500	2520	101	2500	2380	95	6	72-117/14
100-42-5	Styrene	100	U	2500	2700	108	2500	2490	100	8	78-119/23
630-20-6	1,1,1,2-Tetrachloroethane	100	U	2500	2730	109	2500	2530	101	8	77-122/19
79-34-5	1,1,2,2-Tetrachloroethane	100	U	2500	2560	102	2500	2390	96	7	72-120/14
127-18-4	Tetrachloroethylene	100	U	2500	3040	122	2500	2760	110	10	76-135/16
108-88-3	Toluene	100	U	2500	2670	107	2500	2430	97	9	80-120/14
87-61-6	1,2,3-Trichlorobenzene	200	U	2500	2510	100	2500	2460	98	2	68-131/25
120-82-1	1,2,4-Trichlorobenzene	200	U	2500	2450	98	2500	2350	94	4	73-129/20
71-55-6	1,1,1-Trichloroethane	100	U	2500	2860	114	2500	2600	104	10	75-130/16
79-00-5	1,1,2-Trichloroethane	100	U	2500	2790	112	2500	2590	104	7	76-119/14
79-01-6	Trichloroethylene	100	U	2500	2780	111	2500	2550	102	9	81-126/15
75-69-4	Trichlorofluoromethane	200	U	2500	3120	125	2500	2850	114	9	71-156/21
75-01-4	Vinyl Chloride	1620		2500	4430	112	2500	4120	100	7	69-159/18
1330-20-7	Xylene (total)	300	U	7500	8380	112	7500	7680	102	9	80-126/15

CAS No.	Surrogate Recoveries	MS	MSD	FA86691-15	Limits
1868-53-7	Dibromofluoromethane	102%	101%	99%	83-118%
17060-07-0	1,2-Dichloroethane-D4	101%	101%	99%	79-125%
2037-26-5	Toluene-D8	99%	99%	97%	85-112%
460-00-4	4-Bromofluorobenzene	94%	95%	94%	83-118%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA86691
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA86966-28MS	5E29431.D	5	07/13/21	SO	n/a	n/a	V5E1350
FA86966-28MSD	5E29432.D	5	07/13/21	SO	n/a	n/a	V5E1350
FA86966-28	5E29421.D	1	07/13/21	SO	n/a	n/a	V5E1350

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA86691-5, FA86691-6, FA86691-20

CAS No.	Compound	FA86966-28 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
74-83-9	Methyl Bromide	ND		125	159	127	125	161	129	1	59-143/19
74-87-3	Methyl Chloride	ND		125	106	85	125	116	93	9	50-159/19
79-01-6	Trichloroethylene	5.1		125	164	127*	125	150	116	9	81-126/15

CAS No.	Surrogate Recoveries	MS	MSD	FA86966-28	Limits
1868-53-7	Dibromofluoromethane	111%	116%	100%	83-118%
17060-07-0	1,2-Dichloroethane-D4	112%	111%	102%	79-125%
2037-26-5	Toluene-D8	90%	91%	96%	85-112%
460-00-4	4-Bromofluorobenzene	92%	93%	93%	83-118%

* = Outside of Control Limits.

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

Tetra Tech NUS

NASA-LC 34, Freedom Rd, CCAFS, FL

112G08985

SGS Job Number: FA87472

Sampling Date: 07/22/21

Report to:

Tetra-Tech, Inc.
661 Andersen Dr Foster Plaza 7
Pittsburgh, PA 15220
mark.jonnet@tetratech.com

ATTN: Mark Jonnet

Total number of pages in report: **34**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Norm Farmer
Technical Director

Client Service contact: Andrea Colby 407-425-6700

Certifications: FL(E83510), LA(03051), KS(E-10327), NC(573), NJ(FL002), NY(12022), SC(96038001) DoD ELAP(ANAB L2229), AZ(AZ0806), CA(2937), TX(T104704404), PA(68-03573), VA(460177), AL, AK, AR, CT, IA, KY, MA, MI. MS, ND, NH, NV, OK, OR, UT, VT, WA, WV

Test results relate only to samples analyzed.

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SGS North America Inc.

Sample Summary

Tetra Tech NUS

Job No: FA87472

NASA-LC 34, Freedom Rd, CCAFS, FL
Project No: 112G08985

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
FA87472-1	07/22/21	11:00	DP	07/22/21	AQ	Ground Water	LC34-AS1-20210722
FA87472-2	07/22/21	11:05	DP	07/22/21	AQ	Ground Water	LC34-AS2-20210722
FA87472-3	07/22/21	11:10	DP	07/22/21	AQ	Ground Water	LC34-GAC-20210722
FA87472-4	07/22/21	11:15	DP	07/22/21	AQ	Ground Water	LC34-RW17C-20210722
FA87472-5	07/22/21	11:20	DP	07/22/21	AQ	Ground Water	LC34-RW18C-20210722
FA87472-6	07/22/21	11:25	DP	07/22/21	AQ	Ground Water	LC34-RW19C-20210722
FA87472-7	07/22/21	11:30	DP	07/22/21	AQ	Ground Water	LC34-RW20C-20210722

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Tetra Tech NUS **Job No:** FA87472

Site: NASA-LC 34, Freedom Rd, CCAFS, FL **Report Date** 8/4/2021 10:01:36 PM

7 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were collected on 07/22/2021 and were received at SGS North America Inc - Orlando on 07/22/2021 properly preserved, at 2.6 Deg. C and intact. These Samples received an SGS Orlando job number of FA87472. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section. Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

MS Volatiles By Method SW846 8260B

Matrix: AQ **Batch ID:** VC6056

FA87472-7: Sample vial(s) contained significant headspace; reported results are considered minimum values. Confirmation run.

Matrix: AQ **Batch ID:** VI2265

Sample(s) FA87472-4MS, FA87472-4MSD were used as the QC samples indicated.

Matrix Spike Recovery(s) for cis-1,2-Dichloroethylene, Trichloroethylene are outside control limits. Outside control limits due to high level in sample relative to spike amount.

Matrix Spike Duplicate Recovery(s) for cis-1,2-Dichloroethylene, Trichloroethylene are outside control limits. Probable cause is due to matrix interference.

Matrix: AQ **Batch ID:** VP3264

Sample(s) FA87301-4MS, FA87301-4MSD were used as the QC samples indicated.

Blank Spike Recovery(s) for Dibromochloromethane are outside control limits.

Matrix Spike Duplicate Recovery(s) for cis-1,2-Dichloroethylene are outside control limits. Probable cause is due to matrix interference.

RPD(s) for MSD for Chloroethane are outside control limits for sample FA87301-4MSD. Probable cause is due to sample non-homogeneity.

Sample(s) FA87472-1, FA87472-2, FA87472-3, FA87472-4, FA87472-5, FA87472-6, FA87472-7 are associated with an CCV that has a recovery for Bromoform outside low control limit.

VP3264-MB: Sample was treated with an anti-foaming agent.

FA87472-1 for Bromoform: Associated CCV outside of control limits low.

FA87472-1 for Dibromochloromethane: Associated BS recovery outside control limits low.

FA87472-1 for Trichlorofluoromethane: Associated Initial Calibration outside control limits (%RSD > 15%).

FA87472-2 for Bromoform: Associated CCV outside of control limits low.

FA87472-2 for Dibromochloromethane: Associated BS recovery outside control limits low.

FA87472-2 for Trichlorofluoromethane: Associated Initial Calibration outside control limits (%RSD > 15%).

FA87472-3 for Bromoform: Associated CCV outside of control limits low.

FA87472-3 for Dibromochloromethane: Associated BS recovery outside control limits low.

FA87472-3 for Trichlorofluoromethane: Associated Initial Calibration outside control limits (%RSD > 15%).

FA87472-4 for Bromoform: Associated CCV outside of control limits low.

FA87472-4 for Dibromochloromethane: Associated BS recovery outside control limits low.

FA87472-4 for Trichlorofluoromethane: Associated Initial Calibration outside control limits (%RSD > 15%).

FA87472-5 for Bromoform: Associated CCV outside of control limits low.

FA87472-5 for Dibromochloromethane: Associated BS recovery outside control limits low.

FA87472-5 for Trichlorofluoromethane: Associated Initial Calibration outside control limits (%RSD > 15%).

FA87472-6 for Bromoform: Associated CCV outside of control limits low.

FA87472-6 for Dibromochloromethane: Associated BS recovery outside control limits low.

FA87472-7 for Bromoform: Associated CCV outside of control limits low.

FA87472-7 for Dibromochloromethane: Associated BS recovery outside control limits low.

SGS Orlando certifies that this report meets the project requirements for analytical data produced for the samples as received at SGS Orlando and as stated on the COC. SGS Orlando certifies that the data meets the Data Quality Objectives for precision, accuracy and completeness as specified in the SGS Orlando Quality Manual except as noted above. This report is to be used in its entirety. SGS Orlando is not responsible for any assumptions of data quality if partial data packages are used.

Narrative prepared by:

_____

Ariel Hartney, Client Services (signature on file)

Summary of Hits

Job Number: FA87472
Account: Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL
Collected: 07/22/21

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	PQL	MDL	Units	Method
FA87472-1	**LC34-AS1-20210722**					
cis-1,2-Dichloroethylene		3.6	1.0	0.28	ug/l	SW846 8260B
Trichloroethylene		0.97 I	1.0	0.35	ug/l	SW846 8260B
FA87472-2	**LC34-AS2-20210722**					
cis-1,2-Dichloroethylene		75.2	2.0	0.55	ug/l	SW846 8260B
Trichloroethylene		61.1	1.0	0.35	ug/l	SW846 8260B
Vinyl Chloride		4.4	1.0	0.41	ug/l	SW846 8260B
FA87472-3	**LC34-GAC-20210722**					
No hits reported in this sample.						
FA87472-4	**LC34-RW17C-20210722**					
cis-1,2-Dichloroethylene		5850	200	55	ug/l	SW846 8260B
Freon 113		191 I	200	96	ug/l	SW846 8260B
Trichloroethylene		228000	2500	860	ug/l	SW846 8260B
FA87472-5	**LC34-RW18C-20210722**					
cis-1,2-Dichloroethylene		2850	200	55	ug/l	SW846 8260B
Freon 113		2260	200	96	ug/l	SW846 8260B
Trichloroethylene		239000	2500	860	ug/l	SW846 8260B
FA87472-6	**LC34-RW19C-20210722**					
1,1-Dichloroethylene		48.3 I	100	32	ug/l	SW846 8260B
cis-1,2-Dichloroethylene		5660	100	28	ug/l	SW846 8260B
trans-1,2-Dichloroethylene		42.6 I	100	22	ug/l	SW846 8260B
Freon 113		257	100	48	ug/l	SW846 8260B
Trichloroethylene		243000	2500	860	ug/l	SW846 8260B
Vinyl Chloride		80.7 I	100	41	ug/l	SW846 8260B
FA87472-7	**LC34-RW20C-20210722**					
1,1-Dichloroethylene		35.6 I	50	16	ug/l	SW846 8260B
cis-1,2-Dichloroethylene		4320	50	14	ug/l	SW846 8260B
trans-1,2-Dichloroethylene		39.2 I	50	11	ug/l	SW846 8260B
Freon 113		2220	50	24	ug/l	SW846 8260B
Trichloroethylene		273000 L	2000	690	ug/l	SW846 8260B
Vinyl Chloride		114	50	20	ug/l	SW846 8260B

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	LC34-AS1-20210722		
Lab Sample ID:	FA87472-1	**Date Sampled:**	07/22/21
Matrix:	AQ - Ground Water	**Date Received:**	07/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	P80328.D	1	07/29/21 14:55	SO	n/a	n/a	VP3264
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	10 U	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform [a]	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.67 U	2.0	0.67	ug/l	
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane [b]	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	0.50 U	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.32 U	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	3.6	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.22 U	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113	0.48 U	1.0	0.48	ug/l	
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-AS1-20210722		
Lab Sample ID:	FA87472-1	**Date Sampled:**	07/22/21
Matrix:	AQ - Ground Water	**Date Received:**	07/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	2.0 U	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.30 U	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	0.97	1.0	0.35	ug/l	I
75-69-4	Trichlorofluoromethane [c]	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	0.41 U	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		83-118%
17060-07-0	1,2-Dichloroethane-D4	104%		79-125%
2037-26-5	Toluene-D8	98%		85-112%
460-00-4	4-Bromofluorobenzene	100%		83-118%

(a) Associated CCV outside of control limits low.
(b) Associated BS recovery outside control limits low.
(c) Associated Initial Calibration outside control limits (%RSD > 15%).

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: LC34-AS2-20210722
Lab Sample ID: FA87472-2
Matrix: AQ - Ground Water
Method: SW846 8260B
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Date Sampled: 07/22/21
Date Received: 07/22/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	P80329.D	1	07/29/21 15:19	SO	n/a	n/a	VP3264
Run #2	I70048.D	2	07/30/21 11:39	SO	n/a	n/a	VI2265

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	10 U	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform [a]	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.67 U	2.0	0.67	ug/l	
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane [b]	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	0.50 U	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.32 U	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	75.2 [c]	2.0	0.55	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.22 U	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113	0.48 U	1.0	0.48	ug/l	
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-AS2-20210722		
Lab Sample ID:	FA87472-2	**Date Sampled:**	07/22/21
Matrix:	AQ - Ground Water	**Date Received:**	07/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	2.0 U	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.30 U	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	61.1	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane [d]	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	4.4	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%	96%	83-118%
17060-07-0	1,2-Dichloroethane-D4	105%	104%	79-125%
2037-26-5	Toluene-D8	97%	98%	85-112%
460-00-4	4-Bromofluorobenzene	101%	97%	83-118%

(a) Associated CCV outside of control limits low.
(b) Associated BS recovery outside control limits low.
(c) Result is from Run# 2
(d) Associated Initial Calibration outside control limits (%RSD > 15%).

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-GAC-20210722		
Lab Sample ID:	FA87472-3	**Date Sampled:**	07/22/21
Matrix:	AQ - Ground Water	**Date Received:**	07/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	P80330.D	1	07/29/21 15:42	SO	n/a	n/a	VP3264
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	10 U	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform [a]	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.67 U	2.0	0.67	ug/l	
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane [b]	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	0.50 U	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.32 U	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.28 U	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.22 U	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113	0.48 U	1.0	0.48	ug/l	
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-GAC-20210722		
Lab Sample ID:	FA87472-3	**Date Sampled:**	07/22/21
Matrix:	AQ - Ground Water	**Date Received:**	07/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	2.0 U	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.30 U	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	0.35 U	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane [c]	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	0.41 U	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		83-118%
17060-07-0	1,2-Dichloroethane-D4	103%		79-125%
2037-26-5	Toluene-D8	98%		85-112%
460-00-4	4-Bromofluorobenzene	101%		83-118%

(a) Associated CCV outside of control limits low.
(b) Associated BS recovery outside control limits low.
(c) Associated Initial Calibration outside control limits (%RSD > 15%).

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-RW17C-20210722		
Lab Sample ID:	FA87472-4	**Date Sampled:**	07/22/21
Matrix:	AQ - Ground Water	**Date Received:**	07/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	P80333.D	200	07/29/21 16:54	SO	n/a	n/a	VP3264
Run #2	I70049.D	2500	07/30/21 12:03	SO	n/a	n/a	VI2265

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	2000 U	5000	2000	ug/l	
71-43-2	Benzene	62 U	200	62	ug/l	
74-97-5	Bromochloromethane	90 U	200	90	ug/l	
75-27-4	Bromodichloromethane	48 U	200	48	ug/l	
75-25-2	Bromoform [a]	81 U	200	81	ug/l	
78-93-3	2-Butanone (MEK)	400 U	1000	400	ug/l	
75-15-0	Carbon Disulfide	110 U	400	110	ug/l	
56-23-5	Carbon Tetrachloride	71 U	200	71	ug/l	
108-90-7	Chlorobenzene	40 U	200	40	ug/l	
75-00-3	Chloroethane	130 U	400	130	ug/l	
67-66-3	Chloroform	60 U	200	60	ug/l	
110-82-7	Cyclohexane	78 U	200	78	ug/l	
124-48-1	Dibromochloromethane [b]	55 U	200	55	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	210 U	1000	210	ug/l	
106-93-4	1,2-Dibromoethane	55 U	400	55	ug/l	
75-71-8	Dichlorodifluoromethane	100 U	400	100	ug/l	
95-50-1	1,2-Dichlorobenzene	65 U	200	65	ug/l	
541-73-1	1,3-Dichlorobenzene	43 U	200	43	ug/l	
106-46-7	1,4-Dichlorobenzene	51 U	200	51	ug/l	
75-34-3	1,1-Dichloroethane	68 U	200	68	ug/l	
107-06-2	1,2-Dichloroethane	62 U	200	62	ug/l	
75-35-4	1,1-Dichloroethylene	64 U	200	64	ug/l	
156-59-2	cis-1,2-Dichloroethylene	5850	200	55	ug/l	
156-60-5	trans-1,2-Dichloroethylene	44 U	200	44	ug/l	
78-87-5	1,2-Dichloropropane	85 U	200	85	ug/l	
10061-01-5	cis-1,3-Dichloropropene	58 U	200	58	ug/l	
10061-02-6	trans-1,3-Dichloropropene	43 U	200	43	ug/l	
100-41-4	Ethylbenzene	71 U	200	71	ug/l	
76-13-1	Freon 113	191	200	96	ug/l	I
591-78-6	2-Hexanone	400 U	2000	400	ug/l	
98-82-8	Isopropylbenzene	44 U	200	44	ug/l	
79-20-9	Methyl Acetate	1000 U	4000	1000	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-RW17C-20210722		
Lab Sample ID:	FA87472-4	**Date Sampled:**	07/22/21
Matrix:	AQ - Ground Water	**Date Received:**	07/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	400 U	1000	400	ug/l	
74-87-3	Methyl Chloride	100 U	400	100	ug/l	
75-09-2	Methylene Chloride	400 U	1000	400	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	200 U	1000	200	ug/l	
1634-04-4	Methyl Tert Butyl Ether	46 U	200	46	ug/l	
100-42-5	Styrene	44 U	200	44	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	55 U	200	55	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	60 U	200	60	ug/l	
127-18-4	Tetrachloroethylene	43 U	200	43	ug/l	
108-88-3	Toluene	60 U	200	60	ug/l	
87-61-6	1,2,3-Trichlorobenzene	120 U	400	120	ug/l	
120-82-1	1,2,4-Trichlorobenzene	100 U	400	100	ug/l	
71-55-6	1,1,1-Trichloroethane	50 U	200	50	ug/l	
79-00-5	1,1,2-Trichloroethane	93 U	200	93	ug/l	
79-01-6	Trichloroethylene	228000 [c]	2500	860	ug/l	
75-69-4	Trichlorofluoromethane [d]	100 U	400	100	ug/l	
75-01-4	Vinyl Chloride	82 U	200	82	ug/l	
1330-20-7	Xylene (total)	140 U	600	140	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%	95%	83-118%
17060-07-0	1,2-Dichloroethane-D4	103%	104%	79-125%
2037-26-5	Toluene-D8	99%	98%	85-112%
460-00-4	4-Bromofluorobenzene	101%	98%	83-118%

(a) Associated CCV outside of control limits low.
(b) Associated BS recovery outside control limits low.
(c) Result is from Run# 2
(d) Associated Initial Calibration outside control limits (%RSD > 15%).

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: LC34-RW18C-20210722
Lab Sample ID: FA87472-5
Matrix: AQ - Ground Water
Method: SW846 8260B
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Date Sampled: 07/22/21
Date Received: 07/22/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	P80334.D	200	07/29/21 17:18	SO	n/a	n/a	VP3264
Run #2	I70050.D	2500	07/30/21 12:27	SO	n/a	n/a	VI2265

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	2000 U	5000	2000	ug/l	
71-43-2	Benzene	62 U	200	62	ug/l	
74-97-5	Bromochloromethane	90 U	200	90	ug/l	
75-27-4	Bromodichloromethane	48 U	200	48	ug/l	
75-25-2	Bromoform [a]	81 U	200	81	ug/l	
78-93-3	2-Butanone (MEK)	400 U	1000	400	ug/l	
75-15-0	Carbon Disulfide	110 U	400	110	ug/l	
56-23-5	Carbon Tetrachloride	71 U	200	71	ug/l	
108-90-7	Chlorobenzene	40 U	200	40	ug/l	
75-00-3	Chloroethane	130 U	400	130	ug/l	
67-66-3	Chloroform	60 U	200	60	ug/l	
110-82-7	Cyclohexane	78 U	200	78	ug/l	
124-48-1	Dibromochloromethane [b]	55 U	200	55	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	210 U	1000	210	ug/l	
106-93-4	1,2-Dibromoethane	55 U	400	55	ug/l	
75-71-8	Dichlorodifluoromethane	100 U	400	100	ug/l	
95-50-1	1,2-Dichlorobenzene	65 U	200	65	ug/l	
541-73-1	1,3-Dichlorobenzene	43 U	200	43	ug/l	
106-46-7	1,4-Dichlorobenzene	51 U	200	51	ug/l	
75-34-3	1,1-Dichloroethane	68 U	200	68	ug/l	
107-06-2	1,2-Dichloroethane	62 U	200	62	ug/l	
75-35-4	1,1-Dichloroethylene	64 U	200	64	ug/l	
156-59-2	cis-1,2-Dichloroethylene	2850	200	55	ug/l	
156-60-5	trans-1,2-Dichloroethylene	44 U	200	44	ug/l	
78-87-5	1,2-Dichloropropane	85 U	200	85	ug/l	
10061-01-5	cis-1,3-Dichloropropene	58 U	200	58	ug/l	
10061-02-6	trans-1,3-Dichloropropene	43 U	200	43	ug/l	
100-41-4	Ethylbenzene	71 U	200	71	ug/l	
76-13-1	Freon 113	2260	200	96	ug/l	
591-78-6	2-Hexanone	400 U	2000	400	ug/l	
98-82-8	Isopropylbenzene	44 U	200	44	ug/l	
79-20-9	Methyl Acetate	1000 U	4000	1000	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-RW18C-20210722		
Lab Sample ID:	FA87472-5	**Date Sampled:**	07/22/21
Matrix:	AQ - Ground Water	**Date Received:**	07/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	400 U	1000	400	ug/l	
74-87-3	Methyl Chloride	100 U	400	100	ug/l	
75-09-2	Methylene Chloride	400 U	1000	400	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	200 U	1000	200	ug/l	
1634-04-4	Methyl Tert Butyl Ether	46 U	200	46	ug/l	
100-42-5	Styrene	44 U	200	44	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	55 U	200	55	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	60 U	200	60	ug/l	
127-18-4	Tetrachloroethylene	43 U	200	43	ug/l	
108-88-3	Toluene	60 U	200	60	ug/l	
87-61-6	1,2,3-Trichlorobenzene	120 U	400	120	ug/l	
120-82-1	1,2,4-Trichlorobenzene	100 U	400	100	ug/l	
71-55-6	1,1,1-Trichloroethane	50 U	200	50	ug/l	
79-00-5	1,1,2-Trichloroethane	93 U	200	93	ug/l	
79-01-6	Trichloroethylene	239000 [c]	2500	860	ug/l	
75-69-4	Trichlorofluoromethane [d]	100 U	400	100	ug/l	
75-01-4	Vinyl Chloride	82 U	200	82	ug/l	
1330-20-7	Xylene (total)	140 U	600	140	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%	96%	83-118%
17060-07-0	1,2-Dichloroethane-D4	101%	104%	79-125%
2037-26-5	Toluene-D8	98%	98%	85-112%
460-00-4	4-Bromofluorobenzene	100%	97%	83-118%

(a) Associated CCV outside of control limits low.
(b) Associated BS recovery outside control limits low.
(c) Result is from Run# 2
(d) Associated Initial Calibration outside control limits (%RSD > 15%).

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: LC34-RW19C-20210722
Lab Sample ID: FA87472-6
Matrix: AQ - Ground Water
Method: SW846 8260B
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Date Sampled: 07/22/21
Date Received: 07/22/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	P80335.D	100	07/29/21 17:42	SO	n/a	n/a	VP3264
Run #2	I70051.D	2500	07/30/21 12:50	SO	n/a	n/a	VI2265

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	1000 U	2500	1000	ug/l	
71-43-2	Benzene	31 U	100	31	ug/l	
74-97-5	Bromochloromethane	45 U	100	45	ug/l	
75-27-4	Bromodichloromethane	24 U	100	24	ug/l	
75-25-2	Bromoform [a]	41 U	100	41	ug/l	
78-93-3	2-Butanone (MEK)	200 U	500	200	ug/l	
75-15-0	Carbon Disulfide	53 U	200	53	ug/l	
56-23-5	Carbon Tetrachloride	36 U	100	36	ug/l	
108-90-7	Chlorobenzene	20 U	100	20	ug/l	
75-00-3	Chloroethane	67 U	200	67	ug/l	
67-66-3	Chloroform	30 U	100	30	ug/l	
110-82-7	Cyclohexane	39 U	100	39	ug/l	
124-48-1	Dibromochloromethane [b]	28 U	100	28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	100 U	500	100	ug/l	
106-93-4	1,2-Dibromoethane	28 U	200	28	ug/l	
75-71-8	Dichlorodifluoromethane	50 U	200	50	ug/l	
95-50-1	1,2-Dichlorobenzene	32 U	100	32	ug/l	
541-73-1	1,3-Dichlorobenzene	22 U	100	22	ug/l	
106-46-7	1,4-Dichlorobenzene	26 U	100	26	ug/l	
75-34-3	1,1-Dichloroethane	34 U	100	34	ug/l	
107-06-2	1,2-Dichloroethane	31 U	100	31	ug/l	
75-35-4	1,1-Dichloroethylene	48.3	100	32	ug/l	I
156-59-2	cis-1,2-Dichloroethylene	5660	100	28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	42.6	100	22	ug/l	I
78-87-5	1,2-Dichloropropane	43 U	100	43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	29 U	100	29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	21 U	100	21	ug/l	
100-41-4	Ethylbenzene	36 U	100	36	ug/l	
76-13-1	Freon 113	257	100	48	ug/l	
591-78-6	2-Hexanone	200 U	1000	200	ug/l	
98-82-8	Isopropylbenzene	22 U	100	22	ug/l	
79-20-9	Methyl Acetate	500 U	2000	500	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-RW19C-20210722		
Lab Sample ID:	FA87472-6	**Date Sampled:**	07/22/21
Matrix:	AQ - Ground Water	**Date Received:**	07/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	200 U	500	200	ug/l	
74-87-3	Methyl Chloride	50 U	200	50	ug/l	
75-09-2	Methylene Chloride	200 U	500	200	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	100 U	500	100	ug/l	
1634-04-4	Methyl Tert Butyl Ether	23 U	100	23	ug/l	
100-42-5	Styrene	22 U	100	22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	28 U	100	28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	30 U	100	30	ug/l	
127-18-4	Tetrachloroethylene	22 U	100	22	ug/l	
108-88-3	Toluene	30 U	100	30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	61 U	200	61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	50 U	200	50	ug/l	
71-55-6	1,1,1-Trichloroethane	25 U	100	25	ug/l	
79-00-5	1,1,2-Trichloroethane	47 U	100	47	ug/l	
79-01-6	Trichloroethylene	243000 [c]	2500	860	ug/l	
75-69-4	Trichlorofluoromethane	50 U	200	50	ug/l	
75-01-4	Vinyl Chloride	80.7	100	41	ug/l	I
1330-20-7	Xylene (total)	72 U	300	72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%	95%	83-118%
17060-07-0	1,2-Dichloroethane-D4	100%	104%	79-125%
2037-26-5	Toluene-D8	98%	99%	85-112%
460-00-4	4-Bromofluorobenzene	100%	97%	83-118%

(a) Associated CCV outside of control limits low.
(b) Associated BS recovery outside control limits low.
(c) Result is from Run# 2

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: LC34-RW20C-20210722
Lab Sample ID: FA87472-7
Matrix: AQ - Ground Water
Method: SW846 8260B
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Date Sampled: 07/22/21
Date Received: 07/22/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	P80336.D	50	07/29/21 18:06	SO	n/a	n/a	VP3264
Run #2	I70053.D	2000	07/30/21 16:05	SO	n/a	n/a	VI2265
Run #3 [a]	C0150123.D	5000	08/03/21 12:16	SO	n/a	n/a	VC6056

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml
Run #3	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	500 U	1300	500	ug/l	
71-43-2	Benzene	16 U	50	16	ug/l	
74-97-5	Bromochloromethane	23 U	50	23	ug/l	
75-27-4	Bromodichloromethane	12 U	50	12	ug/l	
75-25-2	Bromoform [b]	20 U	50	20	ug/l	
78-93-3	2-Butanone (MEK)	100 U	250	100	ug/l	
75-15-0	Carbon Disulfide	27 U	100	27	ug/l	
56-23-5	Carbon Tetrachloride	18 U	50	18	ug/l	
108-90-7	Chlorobenzene	10 U	50	10	ug/l	
75-00-3	Chloroethane	33 U	100	33	ug/l	
67-66-3	Chloroform	15 U	50	15	ug/l	
110-82-7	Cyclohexane	20 U	50	20	ug/l	
124-48-1	Dibromochloromethane [c]	14 U	50	14	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	52 U	250	52	ug/l	
106-93-4	1,2-Dibromoethane	14 U	100	14	ug/l	
75-71-8	Dichlorodifluoromethane	25 U	100	25	ug/l	
95-50-1	1,2-Dichlorobenzene	16 U	50	16	ug/l	
541-73-1	1,3-Dichlorobenzene	11 U	50	11	ug/l	
106-46-7	1,4-Dichlorobenzene	13 U	50	13	ug/l	
75-34-3	1,1-Dichloroethane	17 U	50	17	ug/l	
107-06-2	1,2-Dichloroethane	16 U	50	16	ug/l	
75-35-4	1,1-Dichloroethylene	35.6	50	16	ug/l	I
156-59-2	cis-1,2-Dichloroethylene	4320	50	14	ug/l	
156-60-5	trans-1,2-Dichloroethylene	39.2	50	11	ug/l	I
78-87-5	1,2-Dichloropropane	21 U	50	21	ug/l	
10061-01-5	cis-1,3-Dichloropropene	15 U	50	15	ug/l	
10061-02-6	trans-1,3-Dichloropropene	11 U	50	11	ug/l	
100-41-4	Ethylbenzene	18 U	50	18	ug/l	
76-13-1	Freon 113	2220	50	24	ug/l	
591-78-6	2-Hexanone	100 U	500	100	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-RW20C-20210722		
Lab Sample ID:	FA87472-7	**Date Sampled:**	07/22/21
Matrix:	AQ - Ground Water	**Date Received:**	07/22/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
98-82-8	Isopropylbenzene	11 U	50	11	ug/l	
79-20-9	Methyl Acetate	250 U	1000	250	ug/l	
74-83-9	Methyl Bromide	100 U	250	100	ug/l	
74-87-3	Methyl Chloride	25 U	100	25	ug/l	
75-09-2	Methylene Chloride	100 U	250	100	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	50 U	250	50	ug/l	
1634-04-4	Methyl Tert Butyl Ether	11 U	50	11	ug/l	
100-42-5	Styrene	11 U	50	11	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	14 U	50	14	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	15 U	50	15	ug/l	
127-18-4	Tetrachloroethylene	11 U	50	11	ug/l	
108-88-3	Toluene	15 U	50	15	ug/l	
87-61-6	1,2,3-Trichlorobenzene	31 U	100	31	ug/l	
120-82-1	1,2,4-Trichlorobenzene	25 U	100	25	ug/l	
71-55-6	1,1,1-Trichloroethane	12 U	50	12	ug/l	
79-00-5	1,1,2-Trichloroethane	23 U	50	23	ug/l	
79-01-6	Trichloroethylene	273000 [d]	2000	690	ug/l	L
75-69-4	Trichlorofluoromethane	25 U	100	25	ug/l	
75-01-4	Vinyl Chloride	114	50	20	ug/l	
1330-20-7	Xylene (total)	36 U	150	36	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Run# 3	Limits
1868-53-7	Dibromofluoromethane	97%	97%	97%	83-118%
17060-07-0	1,2-Dichloroethane-D4	103%	112%	93%	79-125%
2037-26-5	Toluene-D8	97%	98%	99%	85-112%
460-00-4	4-Bromofluorobenzene	101%	90%	103%	83-118%

(a) Sample vial(s) contained significant headspace; reported results are considered minimum values. Confirmation run.
(b) Associated CCV outside of control limits low.
(c) Associated BS recovery outside control limits low.
(d) Result is from Run# 2

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

5

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

SGS North America Inc - Orlando
Chain of Custody

FA87472

SGS - ORLANDO JOB # : PAGE 1 OF 1

4405 Vineland Road, Suite C-15 Orlando, Fl 32811
TEL. 407-425-6700 FAX: 407-425-0707
www.sgs.com

SGS - ORLANDO Quote # | SKIFF #

Client / Reporting Information

Company Name: TETRA TECH
Address: 661 ANDERSON DR FOSTER PLAZA 7
City: PITTSBURGH State: PA Zip: 15220
Project Contact: MARK.JOHNET@TETRATECH.COM Email:
Phone #: 412 921 8622
Sampler(s) Name(s) (Printed): DAN FORSTER
Sampler 1: Sampler 2:

Project Information

Project Name: CC 34
Street: FREEDOM RD
City: CCBFS State: FL
Project #:
Fax #:
Client Purchase Order #:

Analytical Information

8260 VOC's

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid

SGS Orlando Sample #	Field ID / Point of Collection	COLLECTION DATE	COLLECTION TIME	SAMPLED BY:	CONTAINER INFORMATION MATRIX	TOTAL # OF BOTTLES	OTHER	NONE	HCl	NaOH	HNO3	H2SO4	NAOH+ZNAC	DI WATER	MEOH	LAB USE ONLY
1	CC34 - AS1 - 20210722	22JUL	1100	DF	GW	3			X							
2	CC34 - AS2 - 20210722		1105													
3	CC34 - GAC - 20210722		1110													
4	CC34 - TW17C - 20210722		1115													
5	CC34 - TW18C - 20210722		1120													
6	CC34 - TW19C - 20210722		1125													
7	CC34 - TW20C - 20210722	X	1130	X	X	X			X							

SP

INITIAL ASSESSMENT

LABEL VERIFICATION CM

Turnaround Time (Business days)

10 Day (Business) Approved By: / Date:
7 Day
5 Day
3 Day *RUSH*
2 Day *RUSH*
1 Day *RUSH*
Other
Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [ ] COMMERCIAL "B" (RESULTS PLUS QC)
- [ ] REDT1 (EPA LEVEL 3)
- [ ] FULLT1 (EPA LEVEL 4)
- [ ] EDD'S

Comments / Remarks

COOLED ON ICE

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler/Affiliation	Date Time:	Received By/Affiliation	Relinquished By/Affiliation	Date Time:	Received By/Affiliation
1		22JUL 1400	2 JS 7/22 1354	3 JS 7/22	1530	4 7/22/21 1530
5	Relinquished by/Affiliation	Date Time:	6 Received By/Affiliation	7 Relinquished By/Affiliation	Date Time:	8 Received By/Affiliation

Lab Use Only : Cooler Temperature (s) Celsius (corrected): 2.1 + 0.1

http://www.sgs.com/en/terms-and-conditions

ORLD-SMT-0001-03-FORM-COC (1) Rev 031318

FA87472: Chain of Custody
Page 1 of 2

SGS Sample Receipt Summary

Job Number: FA87472 **Client:** TETRA TECH **Project:** LC 34

Date / Time Received: 7/22/2021 3:30:00 PM **Delivery Method:** ALSE **Airbill #'s:**

Therm ID: IR 1; **Therm CF:** 0.2; **# of Coolers:** 1

Cooler Temps (Raw Measured) °C: Cooler 1: (2.4);

Cooler Temps (Corrected) °C: Cooler 1: (2.6);

Cooler Information	Y	or	N
1. Custody Seals Present	☑		☐
2. Custody Seals Intact	☑		☐
3. Temp criteria achieved	☑		☐
4. Cooler temp verification	IR Gun		
5. Cooler media	Ice (Bag)		

Trip Blank Information	Y	or	N	N/A
1. Trip Blank present / cooler	☐		☑	☐
2. Trip Blank listed on COC	☐		☑	☐

	W	or	S	N/A
3. Type Of TB Received	☐		☐	☑

Sample Information	Y	or	N	N/A
1. Sample labels present on bottles	☑		☐	
2. Samples preserved properly	☑		☐	
3. Sufficient volume/containers recvd for analysis:	☑		☐	
4. Condition of sample	Intact			
5. Sample recvd within HT	☑		☐	
6. Dates/Times/IDs on COC match Sample Label	☑		☐	
7. VOCs have headspace	☐		☑	☐
8. Bottles received for unspecified tests	☐		☑	
9. Compositing instructions clear	☐		☐	☑
10. Voa Soil Kits/Jars received past 48hrs?	☐		☐	☑
11. % Solids Jar received?	☐		☐	☑
12. Residual Chlorine Present?	☐		☐	☑

Misc. Information

Number of Encores: 25-Gram _____ 5-Gram _____ Number of 5035 Field Kits: _____ Number of Lab Filtered Metals: _____

Test Strip Lot #s: pH 0-3 230315 pH 10-12 219813A Other: (Specify) _____ _____

Residual Chlorine Test Strip Lot #: _____

Comments

SM001
Rev. Date 05/24/17

Technician: PETERH Date: 7/22/2021 3:30:00 PM Reviewer: _____ Date: _____

5.1 5

FA87472: Chain of Custody
Page 2 of 2

MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: FA87472
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VP3264-MB [a]	P80323.D	1	07/29/21	SO	n/a	n/a	VP3264

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA87472-1, FA87472-2, FA87472-3, FA87472-4, FA87472-5, FA87472-6, FA87472-7

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
71-43-2	Benzene	ND	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.24	ug/l	
75-25-2	Bromoform	ND	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	ND	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.67	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
110-82-7	Cyclohexane	ND	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.36	ug/l	
76-13-1	Freon 113	ND	1.0	0.48	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	ND	20	5.0	ug/l	
74-83-9	Methyl Bromide	ND	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	ND	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	ND	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.0	ug/l	

Method Blank Summary

Job Number: FA87472
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VP3264-MB [a]	P80323.D	1	07/29/21	SO	n/a	n/a	VP3264

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA87472-1, FA87472-2, FA87472-3, FA87472-4, FA87472-5, FA87472-6, FA87472-7

CAS No.	Compound	Result	RL	MDL	Units	Q
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.23	ug/l	
100-42-5	Styrene	ND	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	95%	83-118%
17060-07-0	1,2-Dichloroethane-D4	101%	79-125%
2037-26-5	Toluene-D8	98%	85-112%
460-00-4	4-Bromofluorobenzene	100%	83-118%

(a) Sample was treated with an anti-foaming agent.

Method Blank Summary

Job Number: FA87472
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI2265-MB	I70046.D	1	07/30/21	SO	n/a	n/a	VI2265

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA87472-2, FA87472-4, FA87472-5, FA87472-6, FA87472-7

CAS No.	Compound	Result	RL	MDL	Units	Q
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.28	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.35	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	95%	83-118%
17060-07-0	1,2-Dichloroethane-D4	105%	79-125%
2037-26-5	Toluene-D8	98%	85-112%
460-00-4	4-Bromofluorobenzene	97%	83-118%

Blank Spike Summary

Job Number: FA87472
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VP3264-BS	P80320.D	1	07/29/21	SO	n/a	n/a	VP3264

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA87472-1, FA87472-2, FA87472-3, FA87472-4, FA87472-5, FA87472-6, FA87472-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	105	84	50-147
71-43-2	Benzene	25	24.6	98	81-122
74-97-5	Bromochloromethane	25	19.7	79	76-123
75-27-4	Bromodichloromethane	25	20.5	82	79-123
75-25-2	Bromoform	25	17.2	69	66-123
78-93-3	2-Butanone (MEK)	125	104	83	56-143
75-15-0	Carbon Disulfide	25	16.7	67	66-148
56-23-5	Carbon Tetrachloride	25	23.2	93	76-136
108-90-7	Chlorobenzene	25	22.4	90	82-124
75-00-3	Chloroethane	25	21.8	87	62-144
67-66-3	Chloroform	25	22.6	90	80-124
110-82-7	Cyclohexane	25	20.5	82	73-138
124-48-1	Dibromochloromethane	25	18.9	76*	78-122
96-12-8	1,2-Dibromo-3-chloropropane	25	18.8	75	64-123
106-93-4	1,2-Dibromoethane	25	21.3	85	75-120
75-71-8	Dichlorodifluoromethane	25	17.6	70	42-167
95-50-1	1,2-Dichlorobenzene	25	22.0	88	82-124
541-73-1	1,3-Dichlorobenzene	25	22.5	90	84-125
106-46-7	1,4-Dichlorobenzene	25	22.3	89	78-120
75-34-3	1,1-Dichloroethane	25	24.7	99	81-122
107-06-2	1,2-Dichloroethane	25	22.7	91	75-125
75-35-4	1,1-Dichloroethylene	25	25.6	102	78-137
156-59-2	cis-1,2-Dichloroethylene	25	22.9	92	78-120
156-60-5	trans-1,2-Dichloroethylene	25	24.1	96	76-127
78-87-5	1,2-Dichloropropane	25	22.6	90	76-124
10061-01-5	cis-1,3-Dichloropropene	25	20.9	84	75-118
10061-02-6	trans-1,3-Dichloropropene	25	21.2	85	80-120
100-41-4	Ethylbenzene	25	22.1	88	81-121
76-13-1	Freon 113	25	21.3	85	72-134
591-78-6	2-Hexanone	125	109	87	61-129
98-82-8	Isopropylbenzene	25	22.9	92	83-132
79-20-9	Methyl Acetate	125	106	85	65-126
74-83-9	Methyl Bromide	25	20.9	84	59-143
74-87-3	Methyl Chloride	25	20.1	80	50-159
75-09-2	Methylene Chloride	25	18.7	75	69-135
108-10-1	4-Methyl-2-pentanone (MIBK)	125	104	83	66-122

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA87472
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VP3264-BS	P80320.D	1	07/29/21	SO	n/a	n/a	VP3264

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA87472-1, FA87472-2, FA87472-3, FA87472-4, FA87472-5, FA87472-6, FA87472-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
1634-04-4	Methyl Tert Butyl Ether	25	20.4	82	72-117
100-42-5	Styrene	25	21.5	86	78-119
630-20-6	1,1,1,2-Tetrachloroethane	25	21.3	85	77-122
79-34-5	1,1,2,2-Tetrachloroethane	25	20.7	83	72-120
127-18-4	Tetrachloroethylene	25	22.9	92	76-135
108-88-3	Toluene	25	21.5	86	80-120
87-61-6	1,2,3-Trichlorobenzene	25	21.1	84	68-131
120-82-1	1,2,4-Trichlorobenzene	25	21.1	84	73-129
71-55-6	1,1,1-Trichloroethane	25	23.4	94	75-130
79-00-5	1,1,2-Trichloroethane	25	21.4	86	76-119
79-01-6	Trichloroethylene	25	22.8	91	81-126
75-69-4	Trichlorofluoromethane	25	26.9	108	71-156
75-01-4	Vinyl Chloride	25	22.3	89	69-159
1330-20-7	Xylene (total)	75	67.9	91	80-126

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	100%	83-118%
17060-07-0	1,2-Dichloroethane-D4	99%	79-125%
2037-26-5	Toluene-D8	99%	85-112%
460-00-4	4-Bromofluorobenzene	101%	83-118%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA87472
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI2265-BS	I70045.D	1	07/30/21	SO	n/a	n/a	VI2265

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA87472-2, FA87472-4, FA87472-5, FA87472-6, FA87472-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
156-59-2	cis-1,2-Dichloroethylene	25	23.8	95	78-120
79-01-6	Trichloroethylene	25	23.6	94	81-126

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	101%	83-118%
17060-07-0	1,2-Dichloroethane-D4	101%	79-125%
2037-26-5	Toluene-D8	101%	85-112%
460-00-4	4-Bromofluorobenzene	97%	83-118%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA87472
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA87301-4MS	P80342.D	1	07/29/21	SO	n/a	n/a	VP3264
FA87301-4MSD	P80343.D	1	07/29/21	SO	n/a	n/a	VP3264
FA87301-4	P80326.D	1	07/29/21	SO	n/a	n/a	VP3264

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA87472-1, FA87472-2, FA87472-3, FA87472-4, FA87472-5, FA87472-6, FA87472-7

CAS No.	Compound	FA87301-4 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	11.4	J	125	120	87	125	121	88	1	50-147/21
71-43-2	Benzene	1.0 U		25	26.6	106	25	26.8	107	1	81-122/14
74-97-5	Bromochloromethane	1.0 U		25	21.1	84	25	21.6	86	2	76-123/14
75-27-4	Bromodichloromethane	1.0 U		25	22.0	88	25	22.3	89	1	79-123/19
75-25-2	Bromoform	1.0 U		25	17.9	72	25	18.3	73	2	66-123/21
78-93-3	2-Butanone (MEK)	2.7	J	125	117	91	125	117	91	0	56-143/18
75-15-0	Carbon Disulfide	2.0 U		25	19.7	79	25	19.8	79	1	66-148/23
56-23-5	Carbon Tetrachloride	1.0 U		25	23.8	95	25	24.5	98	3	76-136/23
108-90-7	Chlorobenzene	1.0 U		25	24.2	97	25	24.3	97	0	82-124/14
75-00-3	Chloroethane	2.0 U		25	23.8	95	25	17.9	72	28*	62-144/20
67-66-3	Chloroform	1.0 U		25	24.4	98	25	24.5	98	0	80-124/15
110-82-7	Cyclohexane	1.0 U		25	21.4	86	25	22.0	88	3	73-138/18
124-48-1	Dibromochloromethane	1.0 U		25	19.9	80	25	19.7	79	1	78-122/19
96-12-8	1,2-Dibromo-3-chloropropane	5.0 U		25	19.9	80	25	19.9	80	0	64-123/18
106-93-4	1,2-Dibromoethane	2.0 U		25	22.6	90	25	22.7	91	0	75-120/13
75-71-8	Dichlorodifluoromethane	2.0 U		25	16.9	68	25	17.4	70	3	42-167/19
95-50-1	1,2-Dichlorobenzene	1.0 U		25	23.3	93	25	23.9	96	3	82-124/14
541-73-1	1,3-Dichlorobenzene	1.0 U		25	24.2	97	25	24.6	98	2	84-125/14
106-46-7	1,4-Dichlorobenzene	1.0 U		25	23.1	92	25	24.0	96	4	78-120/15
75-34-3	1,1-Dichloroethane	1.0 U		25	26.6	106	25	26.8	107	1	81-122/15
107-06-2	1,2-Dichloroethane	1.0 U		25	24.8	99	25	24.8	99	0	75-125/14
75-35-4	1,1-Dichloroethylene	1.0 U		25	29.4	118	25	29.0	116	1	78-137/18
156-59-2	cis-1,2-Dichloroethylene	10.7		25	38.3	110	25	42.6	128*	11	78-120/15
156-60-5	trans-1,2-Dichloroethylene	1.0 U		25	26.1	104	25	26.6	106	2	76-127/17
78-87-5	1,2-Dichloropropane	1.0 U		25	24.6	98	25	24.7	99	0	76-124/14
10061-01-5	cis-1,3-Dichloropropene	1.0 U		25	21.6	86	25	21.3	85	1	75-118/23
10061-02-6	trans-1,3-Dichloropropene	1.0 U		25	22.2	89	25	22.4	90	1	80-120/22
100-41-4	Ethylbenzene	1.0 U		25	23.5	94	25	23.3	93	1	81-121/14
76-13-1	Freon 113	1.0 U		25	23.7	95	25	24.6	98	4	72-134/20
591-78-6	2-Hexanone	10 U		125	123	98	125	121	97	2	61-129/18
98-82-8	Isopropylbenzene	1.0 U		25	24.2	97	25	24.3	97	0	83-132/15
79-20-9	Methyl Acetate	20 U		125	115	92	125	117	94	2	65-126/18
74-83-9	Methyl Bromide	5.0 U		25	17.3	69	25	17.1	68	1	59-143/19
74-87-3	Methyl Chloride	2.0 U		25	20.0	80	25	20.3	81	1	50-159/19
75-09-2	Methylene Chloride	5.0 U		25	21.1	84	25	21.1	84	0	69-135/16
108-10-1	4-Methyl-2-pentanone (MIBK)	5.0 U		125	112	90	125	113	90	1	66-122/16

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA87472
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA87301-4MS	P80342.D	1	07/29/21	SO	n/a	n/a	VP3264
FA87301-4MSD	P80343.D	1	07/29/21	SO	n/a	n/a	VP3264
FA87301-4	P80326.D	1	07/29/21	SO	n/a	n/a	VP3264

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA87472-1, FA87472-2, FA87472-3, FA87472-4, FA87472-5, FA87472-6, FA87472-7

CAS No.	Compound	FA87301-4 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
1634-04-4	Methyl Tert Butyl Ether	1.0	U	25	21.5	86	25	22.1	88	3	72-117/14
100-42-5	Styrene	1.0	U	25	22.1	88	25	22.4	90	1	78-119/23
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	25	22.6	90	25	22.7	91	0	77-122/19
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	25	22.8	91	25	23.1	92	1	72-120/14
127-18-4	Tetrachloroethylene	1.0	U	25	22.7	91	25	22.6	90	0	76-135/16
108-88-3	Toluene	1.0		25	23.5	90	25	23.6	90	0	80-120/14
87-61-6	1,2,3-Trichlorobenzene	2.0	U	25	21.6	86	25	22.9	92	6	68-131/25
120-82-1	1,2,4-Trichlorobenzene	2.0	U	25	22.0	88	25	22.4	90	2	73-129/20
71-55-6	1,1,1-Trichloroethane	1.0	U	25	25.5	102	25	25.5	102	0	75-130/16
79-00-5	1,1,2-Trichloroethane	1.0	U	25	22.8	91	25	22.8	91	0	76-119/14
79-01-6	Trichloroethylene	1.0	U	25	24.7	99	25	24.7	99	0	81-126/15
75-69-4	Trichlorofluoromethane	2.0	U	25	31.8	127	25	32.0	128	1	71-156/21
75-01-4	Vinyl Chloride	6.6		25	29.5	92	25	29.8	93	1	69-159/18
1330-20-7	Xylene (total)	3.0	U	75	72.1	96	75	71.6	95	1	80-126/15

CAS No.	Surrogate Recoveries	MS	MSD	FA87301-4	Limits
1868-53-7	Dibromofluoromethane	102%	101%	97%	83-118%
17060-07-0	1,2-Dichloroethane-D4	102%	102%	104%	79-125%
2037-26-5	Toluene-D8	97%	96%	98%	85-112%
460-00-4	4-Bromofluorobenzene	99%	103%	101%	83-118%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA87472
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA87472-4MS	I70066.D	10	07/30/21	SO	n/a	n/a	VI2265
FA87472-4MSD	I70067.D	10	07/30/21	SO	n/a	n/a	VI2265
FA87472-4	I70049.D	2500	07/30/21	SO	n/a	n/a	VI2265

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA87472-2, FA87472-4, FA87472-5, FA87472-6, FA87472-7

CAS No.	Compound	FA87472-4 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
156-59-2	cis-1,2-Dichloroethylene	3910		250	275	-1454* [a]	250	253	-1463* [a]	8	78-120/15
79-01-6	Trichloroethylene	228000		250	1260	-90696* [a]	250	1140	-90744* [a]	10	81-126/15

CAS No.	Surrogate Recoveries	MS	MSD	FA87472-4	Limits
1868-53-7	Dibromofluoromethane	102%	101%	95%	83-118%
17060-07-0	1,2-Dichloroethane-D4	104%	103%	104%	79-125%
2037-26-5	Toluene-D8	100%	101%	98%	85-112%
460-00-4	4-Bromofluorobenzene	96%	96%	98%	83-118%

(a) Outside control limits due to high level in sample relative to spike amount.

* = Outside of Control Limits.

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

Tetra Tech NUS

NASA-LC 34, Freedom Rd, CCAFS, FL

112G08985

SGS Job Number: FA88388

Sampling Date: 08/24/21

Report to:

Tetra-Tech, Inc.
661 Andersen Dr Foster Plaza 7
Pittsburgh, PA 15220
mark.jonnet@tetratech.com

ATTN: Mark Jonnet

Total number of pages in report: **39**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Norm Farmer
Technical Director

Client Service contact: Andrea Colby 407-425-6700

Certifications: FL(E83510), LA(03051), KS(E-10327), NC(573), NJ(FL002), NY(12022), SC(96038001) DoD ELAP(ANAB L2229), AZ(AZ0806), CA(2937), TX(T104704404), PA(68-03573), VA(460177), AL, AK, AR, CT, IA, KY, MA, MI. MS, ND, NH, NV, OK, OR, UT, VT, WA, WV

Test results relate only to samples analyzed.

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SGS North America Inc.

Sample Summary

Tetra Tech NUS

Job No: FA88388

NASA-LC 34, Freedom Rd, CCAFS, FL
Project No: 112G08985

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
FA88388-1	08/24/21	16:10	CS	08/26/21	AQ	Ground Water	LC34-AS1-20210824
FA88388-2	08/24/21	16:15	CS	08/26/21	AQ	Ground Water	LC34-AS2-20210824
FA88388-3	08/24/21	16:20	CS	08/26/21	AQ	Ground Water	LC34-GAC-20210824
FA88388-4	08/24/21	16:25	CS	08/26/21	AQ	Ground Water	LC34-RW17C-20210824
FA88388-5	08/24/21	16:30	CS	08/26/21	AQ	Ground Water	LC34-RW18C-20210824
FA88388-6	08/24/21	16:35	CS	08/26/21	AQ	Ground Water	LC34-RW19C-20210824
FA88388-7	08/24/21	16:40	CS	08/26/21	AQ	Ground Water	LC34-RW20C-20210824

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Tetra Tech NUS **Job No:** FA88388

Site: NASA-LC 34, Freedom Rd, CCAFS, FL **Report Date:** 9/3/2021 3:41:26 PM

On 08/26/2021, 7 Sample(s), 0 Trip Blank(s) were received at SGS North America Inc. at a maximum corrected temperature of 2.4 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. Job Number of FA88388 was Assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

MS Volatiles By Method SW846 8260B

Matrix: AQ **Batch ID:** V1P3288

Sample(s) FA88211-2MS, FA88211-2MSD were used as the QC samples indicated.

Sample(s) FA88388-2, FA88388-4 have compound(s) reported with a "V" qualifier, indicating analyte is found in the associated method blank.

Matrix Spike Recovery(s) for 1,4-Dichlorobenzene, Chloroethane, Methylene Chloride are outside control limits. Probable cause is due to matrix interference.

Matrix Spike Duplicate Recovery(s) for 1,4-Dichlorobenzene, Chloroethane, Methylene Chloride are outside control limits. Probable cause is due to matrix interference.

Matrix Spike /Matrix Spike Duplicate Recovery(s) for Benzene, Chlorobenzene are outside control limits. Outside control limits due to high level in sample relative to spike amount.

FA88388-1 for Carbon Disulfide: Associated CCV outside of control limits high, sample was ND.

FA88388-2 for Carbon Disulfide: Associated CCV outside of control limits high, sample was ND.

FA88388-2 for Methylene Chloride: Suspected laboratory contaminant.

FA88388-3 for Carbon Disulfide: Associated CCV outside of control limits high, sample was ND.

FA88388-4 for Carbon Disulfide: Associated CCV outside of control limits high, sample was ND.

FA88388-4 for Methylene Chloride: Suspected laboratory contaminant.

Matrix: AQ **Batch ID:** V2P3290

Sample(s) FA88418-1MS, FA88418-1MSD were used as the QC samples indicated.

Matrix: AQ **Batch ID:** VC6082

Sample(s) FA88207-4MS, FA88207-4MSD were used as the QC samples indicated.

VC6082-MB: Sample was treated with an anti-foaming agent.

SGS North America Inc. certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted. Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria. SGS North America Inc. is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety.

Narrative prepared by:

_____

Kim Benham, Client Services *(Signature on File)*

Summary of Hits

Job Number: FA88388
Account: Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL
Collected: 08/24/21

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	PQL	MDL	Units	Method
FA88388-1	**LC34-AS1-20210824**					
cis-1,2-Dichloroethylene		1.8	1.0	0.28	ug/l	SW846 8260B
Trichloroethylene		2.2	1.0	0.35	ug/l	SW846 8260B
FA88388-2	**LC34-AS2-20210824**					
cis-1,2-Dichloroethylene		69.9	1.0	0.28	ug/l	SW846 8260B
trans-1,2-Dichloroethylene		0.54 I	1.0	0.22	ug/l	SW846 8260B
Methylene Chloride [a]		4.5 IV	5.0	2.0	ug/l	SW846 8260B
Trichloroethylene		364	5.0	1.7	ug/l	SW846 8260B
Vinyl Chloride		2.3	1.0	0.41	ug/l	SW846 8260B
FA88388-3	**LC34-GAC-20210824**					
No hits reported in this sample.						
FA88388-4	**LC34-RW17C-20210824**					
cis-1,2-Dichloroethylene		6300	250	69	ug/l	SW846 8260B
Freon 113		398	250	120	ug/l	SW846 8260B
Methylene Chloride [a]		1120 IV	1300	500	ug/l	SW846 8260B
Trichloroethylene		293000	5000	1700	ug/l	SW846 8260B
FA88388-5	**LC34-RW18C-20210824**					
cis-1,2-Dichloroethylene		2110	2000	550	ug/l	SW846 8260B
Methyl Bromide		5210 I	10000	4000	ug/l	SW846 8260B
Trichloroethylene		90300	2000	690	ug/l	SW846 8260B
FA88388-6	**LC34-RW19C-20210824**					
cis-1,2-Dichloroethylene		5260 I	10000	2800	ug/l	SW846 8260B
Trichloroethylene		545000	10000	3500	ug/l	SW846 8260B
FA88388-7	**LC34-RW20C-20210824**					
cis-1,2-Dichloroethylene		7370	2500	690	ug/l	SW846 8260B
Freon 113		4730	2500	1200	ug/l	SW846 8260B
Trichloroethylene		126000	2500	860	ug/l	SW846 8260B

(a) Suspected laboratory contaminant.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	LC34-AS1-20210824		
Lab Sample ID:	FA88388-1	**Date Sampled:**	08/24/21
Matrix:	AQ - Ground Water	**Date Received:**	08/26/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1P80886.D	1	08/27/21 15:50	CV	n/a	n/a	V1P3288
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	10 U	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide [a]	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.67 U	2.0	0.67	ug/l	
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	0.50 U	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.32 U	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	1.8	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.22 U	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113	0.48 U	1.0	0.48	ug/l	
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-AS1-20210824		
Lab Sample ID:	FA88388-1	**Date Sampled:**	08/24/21
Matrix:	AQ - Ground Water	**Date Received:**	08/26/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	2.0 U	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.30 U	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	2.2	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	0.41 U	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		83-118%
17060-07-0	1,2-Dichloroethane-D4	102%		79-125%
2037-26-5	Toluene-D8	101%		85-112%
460-00-4	4-Bromofluorobenzene	101%		83-118%

(a) Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-AS2-20210824		
Lab Sample ID:	FA88388-2	**Date Sampled:**	08/24/21
Matrix:	AQ - Ground Water	**Date Received:**	08/26/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1P80888.D	1	08/27/21 16:27	CV	n/a	n/a	V1P3288
Run #2	2P80988.D	5	08/31/21 15:57	CV	n/a	n/a	V2P3290

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	10 U	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide [a]	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.67 U	2.0	0.67	ug/l	
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	0.50 U	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.32 U	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	69.9	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.54	1.0	0.22	ug/l	I
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113	0.48 U	1.0	0.48	ug/l	
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-AS2-20210824		
Lab Sample ID:	FA88388-2	**Date Sampled:**	08/24/21
Matrix:	AQ - Ground Water	**Date Received:**	08/26/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride [b]	4.5	5.0	2.0	ug/l	IV
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.30 U	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	364 [c]	5.0	1.7	ug/l	
75-69-4	Trichlorofluoromethane	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	2.3	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%	97%	83-118%
17060-07-0	1,2-Dichloroethane-D4	99%	95%	79-125%
2037-26-5	Toluene-D8	101%	100%	85-112%
460-00-4	4-Bromofluorobenzene	101%	99%	83-118%

(a) Associated CCV outside of control limits high, sample was ND.
(b) Suspected laboratory contaminant.
(c) Result is from Run# 2

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-GAC-20210824		
Lab Sample ID:	FA88388-3	**Date Sampled:**	08/24/21
Matrix:	AQ - Ground Water	**Date Received:**	08/26/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1P80890.D	1	08/27/21 17:03	CV	n/a	n/a	V1P3288
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	10 U	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide [a]	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.67 U	2.0	0.67	ug/l	
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	0.50 U	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.32 U	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.28 U	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.22 U	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113	0.48 U	1.0	0.48	ug/l	
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-GAC-20210824		
Lab Sample ID:	FA88388-3	**Date Sampled:**	08/24/21
Matrix:	AQ - Ground Water	**Date Received:**	08/26/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	2.0 U	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.30 U	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	0.35 U	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	0.41 U	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		83-118%
17060-07-0	1,2-Dichloroethane-D4	102%		79-125%
2037-26-5	Toluene-D8	101%		85-112%
460-00-4	4-Bromofluorobenzene	99%		83-118%

(a) Associated CCV outside of control limits high, sample was ND.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: LC34-RW17C-20210824
Lab Sample ID: FA88388-4
Matrix: AQ - Ground Water
Method: SW846 8260B
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Date Sampled: 08/24/21
Date Received: 08/26/21
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1P80892.D	250	08/27/21 17:40	CV	n/a	n/a	V1P3288
Run #2	2P80990.D	5000	08/31/21 16:35	CV	n/a	n/a	V2P3290

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	2500 U	6300	2500	ug/l	
71-43-2	Benzene	78 U	250	78	ug/l	
74-97-5	Bromochloromethane	110 U	250	110	ug/l	
75-27-4	Bromodichloromethane	61 U	250	61	ug/l	
75-25-2	Bromoform	100 U	250	100	ug/l	
78-93-3	2-Butanone (MEK)	500 U	1300	500	ug/l	
75-15-0	Carbon Disulfide [a]	130 U	500	130	ug/l	
56-23-5	Carbon Tetrachloride	89 U	250	89	ug/l	
108-90-7	Chlorobenzene	50 U	250	50	ug/l	
75-00-3	Chloroethane	170 U	500	170	ug/l	
67-66-3	Chloroform	75 U	250	75	ug/l	
110-82-7	Cyclohexane	98 U	250	98	ug/l	
124-48-1	Dibromochloromethane	69 U	250	69	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	260 U	1300	260	ug/l	
106-93-4	1,2-Dibromoethane	69 U	500	69	ug/l	
75-71-8	Dichlorodifluoromethane	130 U	500	130	ug/l	
95-50-1	1,2-Dichlorobenzene	81 U	250	81	ug/l	
541-73-1	1,3-Dichlorobenzene	54 U	250	54	ug/l	
106-46-7	1,4-Dichlorobenzene	64 U	250	64	ug/l	
75-34-3	1,1-Dichloroethane	85 U	250	85	ug/l	
107-06-2	1,2-Dichloroethane	78 U	250	78	ug/l	
75-35-4	1,1-Dichloroethylene	81 U	250	81	ug/l	
156-59-2	cis-1,2-Dichloroethylene	6300	250	69	ug/l	
156-60-5	trans-1,2-Dichloroethylene	55 U	250	55	ug/l	
78-87-5	1,2-Dichloropropane	110 U	250	110	ug/l	
10061-01-5	cis-1,3-Dichloropropene	73 U	250	73	ug/l	
10061-02-6	trans-1,3-Dichloropropene	54 U	250	54	ug/l	
100-41-4	Ethylbenzene	89 U	250	89	ug/l	
76-13-1	Freon 113	398	250	120	ug/l	
591-78-6	2-Hexanone	500 U	2500	500	ug/l	
98-82-8	Isopropylbenzene	55 U	250	55	ug/l	
79-20-9	Methyl Acetate	1300 U	5000	1300	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-RW17C-20210824		
Lab Sample ID:	FA88388-4	**Date Sampled:**	08/24/21
Matrix:	AQ - Ground Water	**Date Received:**	08/26/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	500 U	1300	500	ug/l	
74-87-3	Methyl Chloride	130 U	500	130	ug/l	
75-09-2	Methylene Chloride [b]	1120	1300	500	ug/l	IV
108-10-1	4-Methyl-2-pentanone (MIBK)	250 U	1300	250	ug/l	
1634-04-4	Methyl Tert Butyl Ether	57 U	250	57	ug/l	
100-42-5	Styrene	56 U	250	56	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	69 U	250	69	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	75 U	250	75	ug/l	
127-18-4	Tetrachloroethylene	54 U	250	54	ug/l	
108-88-3	Toluene	75 U	250	75	ug/l	
87-61-6	1,2,3-Trichlorobenzene	150 U	500	150	ug/l	
120-82-1	1,2,4-Trichlorobenzene	130 U	500	130	ug/l	
71-55-6	1,1,1-Trichloroethane	62 U	250	62	ug/l	
79-00-5	1,1,2-Trichloroethane	120 U	250	120	ug/l	
79-01-6	Trichloroethylene	293000 [c]	5000	1700	ug/l	
75-69-4	Trichlorofluoromethane	130 U	500	130	ug/l	
75-01-4	Vinyl Chloride	100 U	250	100	ug/l	
1330-20-7	Xylene (total)	180 U	750	180	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%	97%	83-118%
17060-07-0	1,2-Dichloroethane-D4	101%	93%	79-125%
2037-26-5	Toluene-D8	101%	104%	85-112%
460-00-4	4-Bromofluorobenzene	102%	102%	83-118%

(a) Associated CCV outside of control limits high, sample was ND.
(b) Suspected laboratory contaminant.
(c) Result is from Run# 2

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-RW18C-20210824		
Lab Sample ID:	FA88388-5	**Date Sampled:**	08/24/21
Matrix:	AQ - Ground Water	**Date Received:**	08/26/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C0150686.D	2000	08/30/21 15:22	SO	n/a	n/a	VC6082
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	20000 U	50000	20000	ug/l	
71-43-2	Benzene	620 U	2000	620	ug/l	
74-97-5	Bromochloromethane	900 U	2000	900	ug/l	
75-27-4	Bromodichloromethane	480 U	2000	480	ug/l	
75-25-2	Bromoform	810 U	2000	810	ug/l	
78-93-3	2-Butanone (MEK)	4000 U	10000	4000	ug/l	
75-15-0	Carbon Disulfide	1100 U	4000	1100	ug/l	
56-23-5	Carbon Tetrachloride	710 U	2000	710	ug/l	
108-90-7	Chlorobenzene	400 U	2000	400	ug/l	
75-00-3	Chloroethane	1300 U	4000	1300	ug/l	
67-66-3	Chloroform	600 U	2000	600	ug/l	
110-82-7	Cyclohexane	780 U	2000	780	ug/l	
124-48-1	Dibromochloromethane	550 U	2000	550	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	2100 U	10000	2100	ug/l	
106-93-4	1,2-Dibromoethane	550 U	4000	550	ug/l	
75-71-8	Dichlorodifluoromethane	1000 U	4000	1000	ug/l	
95-50-1	1,2-Dichlorobenzene	650 U	2000	650	ug/l	
541-73-1	1,3-Dichlorobenzene	430 U	2000	430	ug/l	
106-46-7	1,4-Dichlorobenzene	510 U	2000	510	ug/l	
75-34-3	1,1-Dichloroethane	680 U	2000	680	ug/l	
107-06-2	1,2-Dichloroethane	620 U	2000	620	ug/l	
75-35-4	1,1-Dichloroethylene	640 U	2000	640	ug/l	
156-59-2	cis-1,2-Dichloroethylene	2110	2000	550	ug/l	
156-60-5	trans-1,2-Dichloroethylene	440 U	2000	440	ug/l	
78-87-5	1,2-Dichloropropane	850 U	2000	850	ug/l	
10061-01-5	cis-1,3-Dichloropropene	580 U	2000	580	ug/l	
10061-02-6	trans-1,3-Dichloropropene	430 U	2000	430	ug/l	
100-41-4	Ethylbenzene	710 U	2000	710	ug/l	
76-13-1	Freon 113	960 U	2000	960	ug/l	
591-78-6	2-Hexanone	4000 U	20000	4000	ug/l	
98-82-8	Isopropylbenzene	440 U	2000	440	ug/l	
79-20-9	Methyl Acetate	10000 U	40000	10000	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: LC34-RW18C-20210824
Lab Sample ID: FA88388-5
Matrix: AQ - Ground Water
Method: SW846 8260B
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Date Sampled: 08/24/21
Date Received: 08/26/21
Percent Solids: n/a

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	5210	10000	4000	ug/l	I
74-87-3	Methyl Chloride	1000 U	4000	1000	ug/l	
75-09-2	Methylene Chloride	4000 U	10000	4000	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	2000 U	10000	2000	ug/l	
1634-04-4	Methyl Tert Butyl Ether	460 U	2000	460	ug/l	
100-42-5	Styrene	440 U	2000	440	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	550 U	2000	550	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	600 U	2000	600	ug/l	
127-18-4	Tetrachloroethylene	430 U	2000	430	ug/l	
108-88-3	Toluene	600 U	2000	600	ug/l	
87-61-6	1,2,3-Trichlorobenzene	1200 U	4000	1200	ug/l	
120-82-1	1,2,4-Trichlorobenzene	1000 U	4000	1000	ug/l	
71-55-6	1,1,1-Trichloroethane	500 U	2000	500	ug/l	
79-00-5	1,1,2-Trichloroethane	930 U	2000	930	ug/l	
79-01-6	Trichloroethylene	90300	2000	690	ug/l	
75-69-4	Trichlorofluoromethane	1000 U	4000	1000	ug/l	
75-01-4	Vinyl Chloride	820 U	2000	820	ug/l	
1330-20-7	Xylene (total)	1400 U	6000	1400	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		83-118%
17060-07-0	1,2-Dichloroethane-D4	102%		79-125%
2037-26-5	Toluene-D8	101%		85-112%
460-00-4	4-Bromofluorobenzene	101%		83-118%

U = Not detected MDL = Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range

I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-RW19C-20210824		
Lab Sample ID:	FA88388-6	**Date Sampled:**	08/24/21
Matrix:	AQ - Ground Water	**Date Received:**	08/26/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C0150687.D	10000	08/30/21 15:47	SO	n/a	n/a	VC6082
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	100000 U	250000	100000	ug/l	
71-43-2	Benzene	3100 U	10000	3100	ug/l	
74-97-5	Bromochloromethane	4500 U	10000	4500	ug/l	
75-27-4	Bromodichloromethane	2400 U	10000	2400	ug/l	
75-25-2	Bromoform	4100 U	10000	4100	ug/l	
78-93-3	2-Butanone (MEK)	20000 U	50000	20000	ug/l	
75-15-0	Carbon Disulfide	5300 U	20000	5300	ug/l	
56-23-5	Carbon Tetrachloride	3600 U	10000	3600	ug/l	
108-90-7	Chlorobenzene	2000 U	10000	2000	ug/l	
75-00-3	Chloroethane	6700 U	20000	6700	ug/l	
67-66-3	Chloroform	3000 U	10000	3000	ug/l	
110-82-7	Cyclohexane	3900 U	10000	3900	ug/l	
124-48-1	Dibromochloromethane	2800 U	10000	2800	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	10000 U	50000	10000	ug/l	
106-93-4	1,2-Dibromoethane	2800 U	20000	2800	ug/l	
75-71-8	Dichlorodifluoromethane	5000 U	20000	5000	ug/l	
95-50-1	1,2-Dichlorobenzene	3200 U	10000	3200	ug/l	
541-73-1	1,3-Dichlorobenzene	2200 U	10000	2200	ug/l	
106-46-7	1,4-Dichlorobenzene	2600 U	10000	2600	ug/l	
75-34-3	1,1-Dichloroethane	3400 U	10000	3400	ug/l	
107-06-2	1,2-Dichloroethane	3100 U	10000	3100	ug/l	
75-35-4	1,1-Dichloroethylene	3200 U	10000	3200	ug/l	
156-59-2	cis-1,2-Dichloroethylene	5260	10000	2800	ug/l	I
156-60-5	trans-1,2-Dichloroethylene	2200 U	10000	2200	ug/l	
78-87-5	1,2-Dichloropropane	4300 U	10000	4300	ug/l	
10061-01-5	cis-1,3-Dichloropropene	2900 U	10000	2900	ug/l	
10061-02-6	trans-1,3-Dichloropropene	2100 U	10000	2100	ug/l	
100-41-4	Ethylbenzene	3600 U	10000	3600	ug/l	
76-13-1	Freon 113	4800 U	10000	4800	ug/l	
591-78-6	2-Hexanone	20000 U	100000	20000	ug/l	
98-82-8	Isopropylbenzene	2200 U	10000	2200	ug/l	
79-20-9	Methyl Acetate	50000 U	200000	50000	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-RW19C-20210824		
Lab Sample ID:	FA88388-6	**Date Sampled:**	08/24/21
Matrix:	AQ - Ground Water	**Date Received:**	08/26/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	20000 U	50000	20000	ug/l	
74-87-3	Methyl Chloride	5000 U	20000	5000	ug/l	
75-09-2	Methylene Chloride	20000 U	50000	20000	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	10000 U	50000	10000	ug/l	
1634-04-4	Methyl Tert Butyl Ether	2300 U	10000	2300	ug/l	
100-42-5	Styrene	2200 U	10000	2200	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	2800 U	10000	2800	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	3000 U	10000	3000	ug/l	
127-18-4	Tetrachloroethylene	2200 U	10000	2200	ug/l	
108-88-3	Toluene	3000 U	10000	3000	ug/l	
87-61-6	1,2,3-Trichlorobenzene	6100 U	20000	6100	ug/l	
120-82-1	1,2,4-Trichlorobenzene	5000 U	20000	5000	ug/l	
71-55-6	1,1,1-Trichloroethane	2500 U	10000	2500	ug/l	
79-00-5	1,1,2-Trichloroethane	4700 U	10000	4700	ug/l	
79-01-6	Trichloroethylene	545000	10000	3500	ug/l	
75-69-4	Trichlorofluoromethane	5000 U	20000	5000	ug/l	
75-01-4	Vinyl Chloride	4100 U	10000	4100	ug/l	
1330-20-7	Xylene (total)	7200 U	30000	7200	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		83-118%
17060-07-0	1,2-Dichloroethane-D4	99%		79-125%
2037-26-5	Toluene-D8	101%		85-112%
460-00-4	4-Bromofluorobenzene	105%		83-118%

U = Not detected MDL = Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range
I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-RW20C-20210824		
Lab Sample ID:	FA88388-7	**Date Sampled:**	08/24/21
Matrix:	AQ - Ground Water	**Date Received:**	08/26/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C0150688.D	2500	08/30/21 16:11	SO	n/a	n/a	VC6082
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	25000 U	63000	25000	ug/l	
71-43-2	Benzene	780 U	2500	780	ug/l	
74-97-5	Bromochloromethane	1100 U	2500	1100	ug/l	
75-27-4	Bromodichloromethane	610 U	2500	610	ug/l	
75-25-2	Bromoform	1000 U	2500	1000	ug/l	
78-93-3	2-Butanone (MEK)	5000 U	13000	5000	ug/l	
75-15-0	Carbon Disulfide	1300 U	5000	1300	ug/l	
56-23-5	Carbon Tetrachloride	890 U	2500	890	ug/l	
108-90-7	Chlorobenzene	500 U	2500	500	ug/l	
75-00-3	Chloroethane	1700 U	5000	1700	ug/l	
67-66-3	Chloroform	750 U	2500	750	ug/l	
110-82-7	Cyclohexane	980 U	2500	980	ug/l	
124-48-1	Dibromochloromethane	690 U	2500	690	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	2600 U	13000	2600	ug/l	
106-93-4	1,2-Dibromoethane	690 U	5000	690	ug/l	
75-71-8	Dichlorodifluoromethane	1300 U	5000	1300	ug/l	
95-50-1	1,2-Dichlorobenzene	810 U	2500	810	ug/l	
541-73-1	1,3-Dichlorobenzene	540 U	2500	540	ug/l	
106-46-7	1,4-Dichlorobenzene	640 U	2500	640	ug/l	
75-34-3	1,1-Dichloroethane	850 U	2500	850	ug/l	
107-06-2	1,2-Dichloroethane	780 U	2500	780	ug/l	
75-35-4	1,1-Dichloroethylene	810 U	2500	810	ug/l	
156-59-2	cis-1,2-Dichloroethylene	7370	2500	690	ug/l	
156-60-5	trans-1,2-Dichloroethylene	550 U	2500	550	ug/l	
78-87-5	1,2-Dichloropropane	1100 U	2500	1100	ug/l	
10061-01-5	cis-1,3-Dichloropropene	730 U	2500	730	ug/l	
10061-02-6	trans-1,3-Dichloropropene	540 U	2500	540	ug/l	
100-41-4	Ethylbenzene	890 U	2500	890	ug/l	
76-13-1	Freon 113	4730	2500	1200	ug/l	
591-78-6	2-Hexanone	5000 U	25000	5000	ug/l	
98-82-8	Isopropylbenzene	550 U	2500	550	ug/l	
79-20-9	Methyl Acetate	13000 U	50000	13000	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-RW20C-20210824		
Lab Sample ID:	FA88388-7	**Date Sampled:**	08/24/21
Matrix:	AQ - Ground Water	**Date Received:**	08/26/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	5000 U	13000	5000	ug/l	
74-87-3	Methyl Chloride	1300 U	5000	1300	ug/l	
75-09-2	Methylene Chloride	5000 U	13000	5000	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	2500 U	13000	2500	ug/l	
1634-04-4	Methyl Tert Butyl Ether	570 U	2500	570	ug/l	
100-42-5	Styrene	560 U	2500	560	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	690 U	2500	690	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	750 U	2500	750	ug/l	
127-18-4	Tetrachloroethylene	540 U	2500	540	ug/l	
108-88-3	Toluene	750 U	2500	750	ug/l	
87-61-6	1,2,3-Trichlorobenzene	1500 U	5000	1500	ug/l	
120-82-1	1,2,4-Trichlorobenzene	1300 U	5000	1300	ug/l	
71-55-6	1,1,1-Trichloroethane	620 U	2500	620	ug/l	
79-00-5	1,1,2-Trichloroethane	1200 U	2500	1200	ug/l	
79-01-6	Trichloroethylene	126000	2500	860	ug/l	
75-69-4	Trichlorofluoromethane	1300 U	5000	1300	ug/l	
75-01-4	Vinyl Chloride	1000 U	2500	1000	ug/l	
1330-20-7	Xylene (total)	1800 U	7500	1800	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		83-118%
17060-07-0	1,2-Dichloroethane-D4	99%		79-125%
2037-26-5	Toluene-D8	100%		85-112%
460-00-4	4-Bromofluorobenzene	104%		83-118%

U = Not detected MDL = Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range
I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

5

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

Tetra Tech, Inc.

CHAIN OF CUSTODY | NUMBER No. 2479 FA88388 | PAGE 1 OF 1

PROJECT NO: 112G08985	FACILITY: KSC-LC34	PROJECT MANAGER Mark Jonnet	PHONE NUMBER (412) 921-8622	LABORATORY NAME AND CONTACT: SGS — Andrea Colby
SAMPLERS (SIGNATURE) Chuck Serden		FIELD OPERATIONS LEADER Chuck Serden	PHONE NUMBER (321) 591-7580	ADDRESS 4405 Vineland Rd. Ste. C-15
		CARRIER/WAYBILL NUMBER		CITY, STATE Orlando, FL

STANDARD TAT ☒
RUSH TAT ☐ ☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

	DATE YEAR 2021	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	CONTAINER TYPE PLASTIC (P) or GLASS (G): G; PRESERVATIVE USED: HCl; TYPE OF ANALYSIS: U8260 SL	COMMENTS
1	08/24	1610	LC34-A$1-20210824	A$1	—	—	GW	G	3	X	
2	"	1615	LC34-A$2-20210824	A$2	—	—	"	"	"	"	
3		1620	LC34-GAC-20210824	GAC	—	—					
4		1625	LC34-RW17C-20210824	RW17C	—	—					
5		1630	LC34-RW18C-20210824	RW18C	—	—					
6		1635	LC34-RW19C-20210824	RW19C	—	—	"	"	"	"	
7	08/24	1640	LC34-RW20C-20210824	RW20C	—	—	GW	G	3	X	

INITIAL ASSESSMENT SP
LABEL VERIFICATION SP

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	08/25/21	1310	1. RECEIVED BY	08/25/21	1310
2. RELINQUISHED BY	8/25/21	1955	2. RECEIVED BY	8/25/21	1855
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS 2.4 IR #1

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY) 4/02R FORM NO. TtNUS-001

5.1 5

FA88388: Chain of Custody
Page 1 of 2

SGS Sample Receipt Summary

Job Number: FA88388 **Client:** TETRA TECH **Project:** 112G08985

Date / Time Received: 8/26/2021 6:55:00 PM **Delivery Method:** ALSE **Airbill #'s:**

Therm ID: IR 1; **Therm CF:** 0.2; **# of Coolers:** 1

Cooler Temps (Raw Measured) °C: Cooler 1: (2.2);

Cooler Temps (Corrected) °C: Cooler 1: (2.4);

Cooler Information	Y	or	N
1. Custody Seals Present	☑		☐
2. Custody Seals Intact	☑		☐
3. Temp criteria achieved	☑		☐
4. Cooler temp verification	IR Gun		
5. Cooler media	Ice (Bag)		

Trip Blank Information	Y	or	N	N/A
1. Trip Blank present / cooler	☐		☑	☐
2. Trip Blank listed on COC	☐		☑	☐

	W	or	S	N/A
3. Type Of TB Received	☐		☐	☑

Sample Information	Y	or	N	N/A
1. Sample labels present on bottles	☑		☐	
2. Samples preserved properly	☑		☐	
3. Sufficient volume/containers recvd for analysis:	☑		☐	
4. Condition of sample	Intact			
5. Sample recvd within HT	☑		☐	
6. Dates/Times/IDs on COC match Sample Label	☑		☐	
7. VOCs have headspace	☐		☑	☐
8. Bottles received for unspecified tests	☐		☑	
9. Compositing instructions clear	☐		☐	☑
10. Voa Soil Kits/Jars received past 48hrs?	☐		☐	☑
11. % Solids Jar received?	☐		☐	☑
12. Residual Chlorine Present?	☐		☐	☑

Misc. Information

Number of Encores: 25-Gram _____ 5-Gram _____ Number of 5035 Field Kits: _____ Number of Lab Filtered Metals: _____

Test Strip Lot #s: pH 0-3 230315 pH 10-12 219813A Other: (Specify) _____ _____

Residual Chlorine Test Strip Lot #: _____

Comments

SM001
Rev. Date 05/24/17

Technician: PETERH Date: 8/26/2021 6:55:00 PM Reviewer: _____ Date: _____

FA88388: Chain of Custody
Page 2 of 2

MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: FA88388
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1P3288-MB	1P80876.D	1	08/27/21	CV	n/a	n/a	V1P3288

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA88388-1, FA88388-2, FA88388-3, FA88388-4

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
71-43-2	Benzene	ND	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.24	ug/l	
75-25-2	Bromoform	ND	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	ND	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.67	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
110-82-7	Cyclohexane	ND	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.36	ug/l	
76-13-1	Freon 113	ND	1.0	0.48	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	ND	20	5.0	ug/l	
74-83-9	Methyl Bromide	ND	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	ND	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	2.4	5.0	2.0	ug/l	J
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.0	ug/l	

Method Blank Summary

Job Number: FA88388
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1P3288-MB	1P80876.D	1	08/27/21	CV	n/a	n/a	V1P3288

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA88388-1, FA88388-2, FA88388-3, FA88388-4

CAS No.	Compound	Result	RL	MDL	Units	Q
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.23	ug/l	
100-42-5	Styrene	ND	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	97%	83-118%
17060-07-0	1,2-Dichloroethane-D4	99%	79-125%
2037-26-5	Toluene-D8	100%	85-112%
460-00-4	4-Bromofluorobenzene	103%	83-118%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	system artifact	1.02	680	ug/l	J
	Total TIC, Volatile		0	ug/l	

Method Blank Summary

Job Number: FA88388
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VC6082-MB [a]	C0150680.D	1	08/30/21	SO	n/a	n/a	VC6082

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA88388-5, FA88388-6, FA88388-7

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
71-43-2	Benzene	ND	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.24	ug/l	
75-25-2	Bromoform	ND	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	ND	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.67	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
110-82-7	Cyclohexane	ND	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.36	ug/l	
76-13-1	Freon 113	ND	1.0	0.48	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	ND	20	5.0	ug/l	
74-83-9	Methyl Bromide	ND	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	ND	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	ND	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.0	ug/l	

Method Blank Summary

Job Number: FA88388
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VC6082-MB [a]	C0150680.D	1	08/30/21	SO	n/a	n/a	VC6082

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA88388-5, FA88388-6, FA88388-7

CAS No.	Compound	Result	RL	MDL	Units	Q
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.23	ug/l	
100-42-5	Styrene	ND	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	96%	83-118%
17060-07-0	1,2-Dichloroethane-D4	98%	79-125%
2037-26-5	Toluene-D8	102%	85-112%
460-00-4	4-Bromofluorobenzene	104%	83-118%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	system artifact	1.93	45	ug/l	J
	system artifact	12.01	180	ug/l	J
	system artifact	13.24	71	ug/l	J
	system artifact	14.34	15	ug/l	J
	Total TIC, Volatile		0	ug/l	

(a) Sample was treated with an anti-foaming agent.

Method Blank Summary

Job Number: FA88388
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2P3290-MB	2P80978.D	1	08/31/21	CV	n/a	n/a	V2P3290

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA88388-2, FA88388-4

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	1.0	0.35	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	96%	83-118%
17060-07-0	1,2-Dichloroethane-D4	92%	79-125%
2037-26-5	Toluene-D8	102%	85-112%
460-00-4	4-Bromofluorobenzene	102%	83-118%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Blank Spike Summary

Job Number: FA88388
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1P3288-BS	1P80872.D	1	08/27/21	CV	n/a	n/a	V1P3288

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA88388-1, FA88388-2, FA88388-3, FA88388-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	119	95	50-147
71-43-2	Benzene	25	25.9	104	81-122
74-97-5	Bromochloromethane	25	23.4	94	76-123
75-27-4	Bromodichloromethane	25	27.7	111	79-123
75-25-2	Bromoform	25	27.1	108	66-123
78-93-3	2-Butanone (MEK)	125	129	103	56-143
75-15-0	Carbon Disulfide	25	31.6	126	66-148
56-23-5	Carbon Tetrachloride	25	30.3	121	76-136
108-90-7	Chlorobenzene	25	25.7	103	82-124
75-00-3	Chloroethane	25	22.1	88	62-144
67-66-3	Chloroform	25	26.3	105	80-124
110-82-7	Cyclohexane	25	28.9	116	73-138
124-48-1	Dibromochloromethane	25	26.3	105	78-122
96-12-8	1,2-Dibromo-3-chloropropane	25	25.0	100	64-123
106-93-4	1,2-Dibromoethane	25	24.8	99	75-120
75-71-8	Dichlorodifluoromethane	25	20.7	83	42-167
95-50-1	1,2-Dichlorobenzene	25	25.8	103	82-124
541-73-1	1,3-Dichlorobenzene	25	25.6	102	84-125
106-46-7	1,4-Dichlorobenzene	25	25.9	104	78-120
75-34-3	1,1-Dichloroethane	25	28.3	113	81-122
107-06-2	1,2-Dichloroethane	25	24.6	98	75-125
75-35-4	1,1-Dichloroethylene	25	29.9	120	78-137
156-59-2	cis-1,2-Dichloroethylene	25	26.9	108	78-120
156-60-5	trans-1,2-Dichloroethylene	25	27.2	109	76-127
78-87-5	1,2-Dichloropropane	25	27.1	108	76-124
10061-01-5	cis-1,3-Dichloropropene	25	26.9	108	75-118
10061-02-6	trans-1,3-Dichloropropene	25	28.0	112	80-120
100-41-4	Ethylbenzene	25	26.3	105	81-121
76-13-1	Freon 113	25	28.3	113	72-134
591-78-6	2-Hexanone	125	98.8	79	61-129
98-82-8	Isopropylbenzene	25	29.0	116	83-132
79-20-9	Methyl Acetate	125	122	98	65-126
74-83-9	Methyl Bromide	25	31.3	125	59-143
74-87-3	Methyl Chloride	25	21.7	87	50-159
75-09-2	Methylene Chloride	25	25.8	103	69-135
108-10-1	4-Methyl-2-pentanone (MIBK)	125	124	99	66-122

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA88388
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1P3288-BS	1P80872.D	1	08/27/21	CV	n/a	n/a	V1P3288

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA88388-1, FA88388-2, FA88388-3, FA88388-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
1634-04-4	Methyl Tert Butyl Ether	25	25.1	100	72-117
100-42-5	Styrene	25	26.8	107	78-119
630-20-6	1,1,1,2-Tetrachloroethane	25	28.0	112	77-122
79-34-5	1,1,2,2-Tetrachloroethane	25	24.1	96	72-120
127-18-4	Tetrachloroethylene	25	26.0	104	76-135
108-88-3	Toluene	25	26.3	105	80-120
87-61-6	1,2,3-Trichlorobenzene	25	26.2	105	68-131
120-82-1	1,2,4-Trichlorobenzene	25	26.2	105	73-129
71-55-6	1,1,1-Trichloroethane	25	28.8	115	75-130
79-00-5	1,1,2-Trichloroethane	25	25.0	100	76-119
79-01-6	Trichloroethylene	25	26.4	106	81-126
75-69-4	Trichlorofluoromethane	25	25.2	101	71-156
75-01-4	Vinyl Chloride	25	26.3	105	69-159
1330-20-7	Xylene (total)	75	80.9	108	80-126

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	99%	83-118%
17060-07-0	1,2-Dichloroethane-D4	100%	79-125%
2037-26-5	Toluene-D8	99%	85-112%
460-00-4	4-Bromofluorobenzene	102%	83-118%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA88388
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VC6082-BS	C0150677.D	1	08/30/21	SO	n/a	n/a	VC6082

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA88388-5, FA88388-6, FA88388-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	109	87	50-147
71-43-2	Benzene	25	22.3	89	81-122
74-97-5	Bromochloromethane	25	19.6	78	76-123
75-27-4	Bromodichloromethane	25	22.9	92	79-123
75-25-2	Bromoform	25	23.7	95	66-123
78-93-3	2-Butanone (MEK)	125	124	99	56-143
75-15-0	Carbon Disulfide	25	20.1	80	66-148
56-23-5	Carbon Tetrachloride	25	22.9	92	76-136
108-90-7	Chlorobenzene	25	24.0	96	82-124
75-00-3	Chloroethane	25	19.1	76	62-144
67-66-3	Chloroform	25	22.1	88	80-124
110-82-7	Cyclohexane	25	21.3	85	73-138
124-48-1	Dibromochloromethane	25	23.0	92	78-122
96-12-8	1,2-Dibromo-3-chloropropane	25	22.8	91	64-123
106-93-4	1,2-Dibromoethane	25	23.6	94	75-120
75-71-8	Dichlorodifluoromethane	25	15.4	62	42-167
95-50-1	1,2-Dichlorobenzene	25	24.8	99	82-124
541-73-1	1,3-Dichlorobenzene	25	25.7	103	84-125
106-46-7	1,4-Dichlorobenzene	25	23.9	96	78-120
75-34-3	1,1-Dichloroethane	25	23.4	94	81-122
107-06-2	1,2-Dichloroethane	25	21.7	87	75-125
75-35-4	1,1-Dichloroethylene	25	23.5	94	78-137
156-59-2	cis-1,2-Dichloroethylene	25	21.6	86	78-120
156-60-5	trans-1,2-Dichloroethylene	25	22.5	90	76-127
78-87-5	1,2-Dichloropropane	25	22.0	88	76-124
10061-01-5	cis-1,3-Dichloropropene	25	21.6	86	75-118
10061-02-6	trans-1,3-Dichloropropene	25	25.3	101	80-120
100-41-4	Ethylbenzene	25	24.2	97	81-121
76-13-1	Freon 113	25	23.0	92	72-134
591-78-6	2-Hexanone	125	131	105	61-129
98-82-8	Isopropylbenzene	25	25.4	102	83-132
79-20-9	Methyl Acetate	125	106	85	65-126
74-83-9	Methyl Bromide	25	21.1	84	59-143
74-87-3	Methyl Chloride	25	17.4	70	50-159
75-09-2	Methylene Chloride	25	18.6	74	69-135
108-10-1	4-Methyl-2-pentanone (MIBK)	125	124	99	66-122

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA88388
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VC6082-BS	C0150677.D	1	08/30/21	SO	n/a	n/a	VC6082

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA88388-5, FA88388-6, FA88388-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
1634-04-4	Methyl Tert Butyl Ether	25	20.8	83	72-117
100-42-5	Styrene	25	23.4	94	78-119
630-20-6	1,1,1,2-Tetrachloroethane	25	23.4	94	77-122
79-34-5	1,1,2,2-Tetrachloroethane	25	24.8	99	72-120
127-18-4	Tetrachloroethylene	25	24.6	98	76-135
108-88-3	Toluene	25	23.6	94	80-120
87-61-6	1,2,3-Trichlorobenzene	25	24.6	98	68-131
120-82-1	1,2,4-Trichlorobenzene	25	25.1	100	73-129
71-55-6	1,1,1-Trichloroethane	25	22.1	88	75-130
79-00-5	1,1,2-Trichloroethane	25	24.9	100	76-119
79-01-6	Trichloroethylene	25	21.7	87	81-126
75-69-4	Trichlorofluoromethane	25	21.3	85	71-156
75-01-4	Vinyl Chloride	25	19.3	77	69-159
1330-20-7	Xylene (total)	75	73.2	98	80-126

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	99%	83-118%
17060-07-0	1,2-Dichloroethane-D4	101%	79-125%
2037-26-5	Toluene-D8	103%	85-112%
460-00-4	4-Bromofluorobenzene	103%	83-118%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA88388
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2P3290-BS	2P80974.D	1	08/31/21	CV	n/a	n/a	V2P3290

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA88388-2, FA88388-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
79-01-6	Trichloroethylene	25	28.3	113	81-126

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	99%	83-118%
17060-07-0	1,2-Dichloroethane-D4	96%	79-125%
2037-26-5	Toluene-D8	99%	85-112%
460-00-4	4-Bromofluorobenzene	99%	83-118%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA88388
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA88211-2MS	1P80900.D	1	08/27/21	CV	n/a	n/a	V1P3288
FA88211-2MSD	1P80902.D	1	08/27/21	CV	n/a	n/a	V1P3288
FA88211-2	1P80882.D	10	08/27/21	CV	n/a	n/a	V1P3288

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA88388-1, FA88388-2, FA88388-3, FA88388-4

CAS No.	Compound	FA88211-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		125	143	114	125	143	114	0	50-147/21
71-43-2	Benzene	220		25	49.2	-683* [a]	25	49.5	-682* [a]	1	81-122/14
74-97-5	Bromochloromethane	ND		25	24.0	96	25	24.6	98	2	76-123/14
75-27-4	Bromodichloromethane	ND		25	27.2	109	25	27.8	111	2	79-123/19
75-25-2	Bromoform	ND		25	26.3	105	25	26.1	104	1	66-123/21
78-93-3	2-Butanone (MEK)	ND		125	134	107	125	134	107	0	56-143/18
75-15-0	Carbon Disulfide	ND		25	29.2	117	25	30.0	120	3	66-148/23
56-23-5	Carbon Tetrachloride	ND		25	30.5	122	25	30.6	122	0	76-136/23
108-90-7	Chlorobenzene	2330	E	25	254	-8304* [a]	25	257	-8292* [a]	1	82-124/14
75-00-3	Chloroethane	10.3	J	25	23.3	52*	25	24.9	58*	7	62-144/20
67-66-3	Chloroform	ND		25	26.9	108	25	26.9	108	0	80-124/15
110-82-7	Cyclohexane	ND		25	29.1	116	25	28.8	115	1	73-138/18
124-48-1	Dibromochloromethane	ND		25	24.6	98	25	25.7	103	4	78-122/19
96-12-8	1,2-Dibromo-3-chloropropane	ND		25	25.5	102	25	25.1	100	2	64-123/18
106-93-4	1,2-Dibromoethane	ND		25	25.1	100	25	25.0	100	0	75-120/13
75-71-8	Dichlorodifluoromethane	ND		25	19.1	76	25	19.6	78	3	42-167/19
95-50-1	1,2-Dichlorobenzene	ND		25	26.0	104	25	25.5	102	2	82-124/14
541-73-1	1,3-Dichlorobenzene	4.2	J	25	26.4	89	25	26.1	88	1	84-125/14
106-46-7	1,4-Dichlorobenzene	13.4		25	26.9	54*	25	26.9	54*	0	78-120/15
75-34-3	1,1-Dichloroethane	ND		25	29.1	116	25	29.0	116	0	81-122/15
107-06-2	1,2-Dichloroethane	ND		25	25.7	103	25	25.7	103	0	75-125/14
75-35-4	1,1-Dichloroethylene	ND		25	30.1	120	25	30.4	122	1	78-137/18
156-59-2	cis-1,2-Dichloroethylene	ND		25	28.3	113	25	27.3	109	4	78-120/15
156-60-5	trans-1,2-Dichloroethylene	ND		25	28.4	114	25	28.8	115	1	76-127/17
78-87-5	1,2-Dichloropropane	ND		25	27.7	111	25	27.3	109	1	76-124/14
10061-01-5	cis-1,3-Dichloropropene	ND		25	27.1	108	25	27.6	110	2	75-118/23
10061-02-6	trans-1,3-Dichloropropene	ND		25	27.4	110	25	27.6	110	1	80-120/22
100-41-4	Ethylbenzene	ND		25	25.6	102	25	26.5	106	3	81-121/14
76-13-1	Freon 113	ND		25	28.8	115	25	28.5	114	1	72-134/20
591-78-6	2-Hexanone	ND		125	129	103	125	120	96	7	61-129/18
98-82-8	Isopropylbenzene	5.6	J	25	29.0	94	25	29.4	95	1	83-132/15
79-20-9	Methyl Acetate	ND		125	129	103	125	131	105	2	65-126/18
74-83-9	Methyl Bromide	ND		25	27.1	108	25	30.8	123	13	59-143/19
74-87-3	Methyl Chloride	ND		25	23.0	92	25	23.4	94	2	50-159/19
75-09-2	Methylene Chloride	29.6	JB	25	29.4	-1*	25	29.5	0*	0	69-135/16
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		125	128	102	125	129	103	1	66-122/16

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA88388
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA88211-2MS	1P80900.D	1	08/27/21	CV	n/a	n/a	V1P3288
FA88211-2MSD	1P80902.D	1	08/27/21	CV	n/a	n/a	V1P3288
FA88211-2	1P80882.D	10	08/27/21	CV	n/a	n/a	V1P3288

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA88388-1, FA88388-2, FA88388-3, FA88388-4

CAS No.	Compound	FA88211-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
1634-04-4	Methyl Tert Butyl Ether	ND		25	25.4	102	25	26.4	106	4	72-117/14
100-42-5	Styrene	ND		25	26.1	104	25	25.6	102	2	78-119/23
630-20-6	1,1,1,2-Tetrachloroethane	ND		25	26.6	106	25	27.0	108	1	77-122/19
79-34-5	1,1,2,2-Tetrachloroethane	ND		25	24.5	98	25	25.1	100	2	72-120/14
127-18-4	Tetrachloroethylene	ND		25	24.7	99	25	25.7	103	4	76-135/16
108-88-3	Toluene	ND		25	25.4	102	25	25.8	103	2	80-120/14
87-61-6	1,2,3-Trichlorobenzene	ND		25	24.6	98	25	25.3	101	3	68-131/25
120-82-1	1,2,4-Trichlorobenzene	ND		25	26.1	104	25	25.7	103	2	73-129/20
71-55-6	1,1,1-Trichloroethane	ND		25	28.5	114	25	29.2	117	2	75-130/16
79-00-5	1,1,2-Trichloroethane	ND		25	25.0	100	25	25.2	101	1	76-119/14
79-01-6	Trichloroethylene	ND		25	26.7	107	25	26.4	106	1	81-126/15
75-69-4	Trichlorofluoromethane	ND		25	25.3	101	25	26.2	105	3	71-156/21
75-01-4	Vinyl Chloride	ND		25	24.2	97	25	25.6	102	6	69-159/18
1330-20-7	Xylene (total)	ND		75	79.2	106	75	80.8	108	2	80-126/15

CAS No.	Surrogate Recoveries	MS	MSD	FA88211-2	Limits
1868-53-7	Dibromofluoromethane	100%	100%	96%	83-118%
17060-07-0	1,2-Dichloroethane-D4	103%	103%	101%	79-125%
2037-26-5	Toluene-D8	97%	98%	97%	85-112%
460-00-4	4-Bromofluorobenzene	101%	99%	100%	83-118%

(a) Outside control limits due to high level in sample relative to spike amount.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA88388
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA88207-4MS	C0150701.D	1	08/30/21	SO	n/a	n/a	VC6082
FA88207-4MSD	C0150702.D	1	08/30/21	SO	n/a	n/a	VC6082
FA88207-4	C0150685.D	1	08/30/21	SO	n/a	n/a	VC6082

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA88388-5, FA88388-6, FA88388-7

CAS No.	Compound	FA88207-4 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	25 U		125	123	98	125	120	96	2	50-147/21
71-43-2	Benzene	1.0 U		25	23.3	93	25	23.3	93	0	81-122/14
74-97-5	Bromochloromethane	1.0 U		25	19.3	77	25	21.3	85	10	76-123/14
75-27-4	Bromodichloromethane	1.0 U		25	24.1	96	25	24.1	96	0	79-123/19
75-25-2	Bromoform	1.0 U		25	24.3	97	25	25.3	101	4	66-123/21
78-93-3	2-Butanone (MEK)	5.0 U		125	115	92	125	115	92	0	56-143/18
75-15-0	Carbon Disulfide	2.0 U		25	21.2	85	25	21.5	86	1	66-148/23
56-23-5	Carbon Tetrachloride	1.0 U		25	24.8	99	25	25.5	102	3	76-136/23
108-90-7	Chlorobenzene	1.0 U		25	25.1	100	25	25.7	103	2	82-124/14
75-00-3	Chloroethane	2.0 U		25	21.3	85	25	20.5	82	4	62-144/20
67-66-3	Chloroform	1.0 U		25	22.6	90	25	23.3	93	3	80-124/15
110-82-7	Cyclohexane	1.0 U		25	22.4	90	25	23.1	92	3	73-138/18
124-48-1	Dibromochloromethane	1.0 U		25	25.3	101	25	24.6	98	3	78-122/19
96-12-8	1,2-Dibromo-3-chloropropane	5.0 U		25	24.5	98	25	25.0	100	2	64-123/18
106-93-4	1,2-Dibromoethane	2.0 U		25	25.2	101	25	26.6	106	5	75-120/13
75-71-8	Dichlorodifluoromethane	2.0 U		25	17.9	72	25	17.9	72	0	42-167/19
95-50-1	1,2-Dichlorobenzene	1.0 U		25	25.2	101	25	26.4	106	5	82-124/14
541-73-1	1,3-Dichlorobenzene	1.0 U		25	26.8	107	25	27.2	109	1	84-125/14
106-46-7	1,4-Dichlorobenzene	1.0 U		25	25.2	101	25	26.6	106	5	78-120/15
75-34-3	1,1-Dichloroethane	1.0 U		25	25.6	102	25	25.4	102	1	81-122/15
107-06-2	1,2-Dichloroethane	1.0 U		25	23.6	94	25	23.8	95	1	75-125/14
75-35-4	1,1-Dichloroethylene	1.0 U		25	23.7	95	25	24.8	99	5	78-137/18
156-59-2	cis-1,2-Dichloroethylene	1.0 U		25	24.7	99	25	24.0	96	3	78-120/15
156-60-5	trans-1,2-Dichloroethylene	1.0 U		25	23.6	94	25	24.5	98	4	76-127/17
78-87-5	1,2-Dichloropropane	1.0 U		25	23.1	92	25	23.2	93	0	76-124/14
10061-01-5	cis-1,3-Dichloropropene	1.0 U		25	22.0	88	25	21.6	86	2	75-118/23
10061-02-6	trans-1,3-Dichloropropene	1.0 U		25	26.7	107	25	26.1	104	2	80-120/22
100-41-4	Ethylbenzene	1.0 U		25	25.0	100	25	25.6	102	2	81-121/14
76-13-1	Freon 113	1.0 U		25	24.7	99	25	24.6	98	0	72-134/20
591-78-6	2-Hexanone	10 U		125	134	107	125	131	105	2	61-129/18
98-82-8	Isopropylbenzene	1.0 U		25	26.0	104	25	26.1	104	0	83-132/15
79-20-9	Methyl Acetate	20 U		125	106	85	125	105	84	1	65-126/18
74-83-9	Methyl Bromide	5.0 U		25	15.1	60	25	16.0	64	6	59-143/19
74-87-3	Methyl Chloride	2.0 U		25	19.2	77	25	19.0	76	1	50-159/19
75-09-2	Methylene Chloride	5.0 U		25	20.0	80	25	20.4	82	2	69-135/16
108-10-1	4-Methyl-2-pentanone (MIBK)	5.0 U		125	126	101	125	126	101	0	66-122/16

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA88388
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA88207-4MS	C0150701.D	1	08/30/21	SO	n/a	n/a	VC6082
FA88207-4MSD	C0150702.D	1	08/30/21	SO	n/a	n/a	VC6082
FA88207-4	C0150685.D	1	08/30/21	SO	n/a	n/a	VC6082

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA88388-5, FA88388-6, FA88388-7

CAS No.	Compound	FA88207-4 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
1634-04-4	Methyl Tert Butyl Ether	1.0	U	25	23.3	93	25	23.5	94	1	72-117/14
100-42-5	Styrene	1.0	U	25	23.6	94	25	23.7	95	0	78-119/23
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	25	24.9	100	25	25.1	100	1	77-122/19
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	25	24.9	100	25	27.1	108	8	72-120/14
127-18-4	Tetrachloroethylene	1.0	U	25	24.4	98	25	25.9	104	6	76-135/16
108-88-3	Toluene	1.0	U	25	24.6	98	25	25.6	102	4	80-120/14
87-61-6	1,2,3-Trichlorobenzene	2.0	U	25	24.6	98	25	25.7	103	4	68-131/25
120-82-1	1,2,4-Trichlorobenzene	2.0	U	25	24.1	96	25	25.4	102	5	73-129/20
71-55-6	1,1,1-Trichloroethane	1.0	U	25	24.5	98	25	24.7	99	1	75-130/16
79-00-5	1,1,2-Trichloroethane	1.0	U	25	27.4	110	25	25.0	100	9	76-119/14
79-01-6	Trichloroethylene	1.0	U	25	22.9	92	25	25.3	101	10	81-126/15
75-69-4	Trichlorofluoromethane	2.0	U	25	23.8	95	25	23.3	93	2	71-156/21
75-01-4	Vinyl Chloride	1.0	U	25	22.1	88	25	22.7	91	3	69-159/18
1330-20-7	Xylene (total)	3.0	U	75	76.2	102	75	76.2	102	0	80-126/15

CAS No.	Surrogate Recoveries	MS	MSD	FA88207-4	Limits
1868-53-7	Dibromofluoromethane	98%	101%	94%	83-118%
17060-07-0	1,2-Dichloroethane-D4	98%	98%	103%	79-125%
2037-26-5	Toluene-D8	105%	103%	100%	85-112%
460-00-4	4-Bromofluorobenzene	103%	105%	108%	83-118%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA88388
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA88418-1MS [a]	2P81006.D	20	08/31/21	CV	n/a	n/a	V2P3290
FA88418-1MSD [a]	2P81008.D	20	08/31/21	CV	n/a	n/a	V2P3290
FA88418-1 [a]	2P80992.D	20	08/31/21	CV	n/a	n/a	V2P3290

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA88388-2, FA88388-4

CAS No.	Compound	FA88418-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
79-01-6	Trichloroethylene	746		500	1330	117	500	1320	115	1	81-126/15

CAS No.	Surrogate Recoveries	MS	MSD	FA88418-1	Limits
1868-53-7	Dibromofluoromethane	99%	100%	97%	83-118%
17060-07-0	1,2-Dichloroethane-D4	93%	96%	95%	79-125%
2037-26-5	Toluene-D8	100%	101%	101%	85-112%
460-00-4	4-Bromofluorobenzene	101%	100%	102%	83-118%

(a) Sample was not preserved to a pH < 2.

* = Outside of Control Limits.

ENCO Laboratories

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Friday, September 24, 2021
Tetra Tech NUS, Inc. (TE015)
Attn: Mark Jonnet
Foster Plaza 7, 661 Anderson Drive
Pittsburgh, PA 15220

RE: Laboratory Results for
Project Number: 112G08985, Project Name/Desc: NASA KSC LC34
ENCO Workorder(s): AE05696

Dear Mark Jonnet,

Enclosed is a copy of your laboratory report for test samples received by our laboratory on Tuesday, September 14, 2021.

Unless otherwise noted in an attached project narrative, all samples were received in acceptable condition and processed in accordance with the referenced methods/procedures. Results for these procedures apply only to the samples as submitted.

The analytical results contained in this report are in compliance with NELAC standards, except as noted in the project narrative if applicable. This report shall not be reproduced except in full, without the written approval of the Laboratory.

This report contains only those analyses performed by Environmental Conservation Laboratories. Unless otherwise noted, all analyses were performed at ENCO Orlando. Data from outside organizations will be reported under separate cover.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

Kaitlin Dylnicki

Project Manager

Enclosure(s)

SAMPLE SUMMARY/LABORATORY CHRONICLE

Client ID: LC34-GAC-20210914 | **Lab ID: AE05696-01** | **Sampled: 09/14/21 08:00** | **Received: 09/14/21 15:00**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	09/28/21	09/21/21 07:59	09/21/21 10:51

Client ID: LC34-AS1-20210914 | **Lab ID: AE05696-02** | **Sampled: 09/14/21 08:10** | **Received: 09/14/21 15:00**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	09/28/21	09/21/21 07:59	09/21/21 12:18

Client ID: LC34-AS2-20210914 | **Lab ID: AE05696-03** | **Sampled: 09/14/21 08:20** | **Received: 09/14/21 15:00**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	09/28/21	09/21/21 07:59	09/21/21 12:46

Client ID: LC34-AS2-20210914 | **Lab ID: AE05696-03RE1** | **Sampled: 09/14/21 08:20** | **Received: 09/14/21 15:00**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	09/28/21	09/23/21 10:12	09/23/21 16:45

Client ID: LC34-INFLUENT-20210914 | **Lab ID: AE05696-04** | **Sampled: 09/14/21 08:30** | **Received: 09/14/21 15:00**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	09/28/21	09/21/21 07:59	09/21/21 13:15

Client ID: LC34-RW2A-20210914 | **Lab ID: AE05696-05** | **Sampled: 09/14/21 08:40** | **Received: 09/14/21 15:00**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	09/28/21	09/21/21 07:59	09/21/21 13:44

Client ID: LC34-RW2B-20210914 | **Lab ID: AE05696-06** | **Sampled: 09/14/21 08:50** | **Received: 09/14/21 15:00**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	09/28/21	09/21/21 07:59	09/21/21 14:13

Client ID: LC34-RW5B-20210914 | **Lab ID: AE05696-07** | **Sampled: 09/14/21 09:00** | **Received: 09/14/21 15:00**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	09/28/21	09/21/21 07:59	09/21/21 14:41

Client ID: LC34-RW5B-20210914 | **Lab ID: AE05696-07RE1** | **Sampled: 09/14/21 09:00** | **Received: 09/14/21 15:00**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	09/28/21	09/23/21 10:12	09/23/21 17:13

Client ID: LC34-RW9A-20210914 | **Lab ID: AE05696-08RE1** | **Sampled: 09/14/21 09:10** | **Received: 09/14/21 15:00**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	09/28/21	09/22/21 08:03	09/22/21 14:02

Client ID: LC34-RW10A-20210914 | **Lab ID: AE05696-09** | **Sampled: 09/14/21 09:20** | **Received: 09/14/21 15:00**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	09/28/21	09/21/21 07:59	09/21/21 15:39

Client ID: LC34-RW10A-20210914 | **Lab ID: AE05696-09RE1** | **Sampled: 09/14/21 09:20** | **Received: 09/14/21 15:00**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	09/28/21	09/22/21 08:03	09/22/21 14:30

Client ID: LC34-RW12A-20210914 | **Lab ID: AE05696-10** | **Sampled: 09/14/21 09:30** | **Received: 09/14/21 15:00**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	09/28/21	09/21/21 07:59	09/21/21 16:08

Client ID: LC34-RW12A-20210914 | **Lab ID: AE05696-10RE1** | **Sampled: 09/14/21 09:30** | **Received: 09/14/21 15:00**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	09/28/21	09/23/21 10:12	09/23/21 17:41

SAMPLE SUMMARY/LABORATORY CHRONICLE

Client ID: LC34-RW13A-20210914 **Lab ID: AE05696-11** **Sampled: 09/14/21 09:40** **Received: 09/14/21 15:00**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	09/28/21	09/21/21 07:59	09/21/21 16:36

Client ID: LC34-RW13A-20210914 **Lab ID: AE05696-11RE1** **Sampled: 09/14/21 09:40** **Received: 09/14/21 15:00**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	09/28/21	09/23/21 10:12	09/23/21 18:09

Client ID: LC34-RW14A-20210914 **Lab ID: AE05696-12** **Sampled: 09/14/21 09:50** **Received: 09/14/21 15:00**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	09/28/21	09/21/21 07:59	09/21/21 17:05

Client ID: LC34-RW14A-20210914 **Lab ID: AE05696-12RE1** **Sampled: 09/14/21 09:50** **Received: 09/14/21 15:00**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	09/28/21	09/23/21 10:12	09/23/21 18:37

Client ID: LC34-RW15A-20210914 **Lab ID: AE05696-13** **Sampled: 09/14/21 10:00** **Received: 09/14/21 15:00**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	09/28/21	09/21/21 07:59	09/21/21 17:34

Client ID: LC34-RW15A-20210914 **Lab ID: AE05696-13RE1** **Sampled: 09/14/21 10:00** **Received: 09/14/21 15:00**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	09/28/21	09/23/21 10:12	09/23/21 19:05

Client ID: LC34-RW16B-20210914 **Lab ID: AE05696-14** **Sampled: 09/14/21 10:10** **Received: 09/14/21 15:00**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	09/28/21	09/21/21 07:59	09/21/21 18:02

Client ID: LC34-RW17C-20210914 **Lab ID: AE05696-15** **Sampled: 09/14/21 10:20** **Received: 09/14/21 15:00**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	09/28/21	09/21/21 07:59	09/21/21 18:31

Client ID: LC34-RW17C-20210914 **Lab ID: AE05696-15RE1** **Sampled: 09/14/21 10:20** **Received: 09/14/21 15:00**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	09/28/21	09/23/21 10:12	09/23/21 19:33

Client ID: LC34-RW18C-20210914 **Lab ID: AE05696-16RE1** **Sampled: 09/14/21 10:30** **Received: 09/14/21 15:00**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	09/28/21	09/22/21 08:03	09/22/21 14:59

Client ID: LC34-RW19C-20210914 **Lab ID: AE05696-17** **Sampled: 09/14/21 10:40** **Received: 09/14/21 15:00**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	09/28/21	09/22/21 08:03	09/22/21 13:04

Client ID: LC34-RW19C-20210914 **Lab ID: AE05696-17RE1** **Sampled: 09/14/21 10:40** **Received: 09/14/21 15:00**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	09/28/21	09/23/21 10:12	09/23/21 20:00

Client ID: LC34-RW20C-20210914 **Lab ID: AE05696-18** **Sampled: 09/14/21 10:50** **Received: 09/14/21 15:00**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	09/28/21	09/22/21 08:03	09/22/21 13:33

Client ID: LC34-RW20C-20210914 **Lab ID: AE05696-18RE1** **Sampled: 09/14/21 10:50** **Received: 09/14/21 15:00**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	09/28/21	09/23/21 10:12	09/23/21 20:28

SAMPLE DETECTION SUMMARY

Client ID: LC34-AS1-20210914 **Lab ID:** AE05696-02

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	1.6	I	0.53	2.5	ug/L	EPA 8260D	
Trichloroethene	6.0		0.89	2.5	ug/L	EPA 8260D	

Client ID: LC34-AS2-20210914 **Lab ID:** AE05696-03

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	130		1.3	6.2	ug/L	EPA 8260D	
Vinyl chloride	3.9	I	1.8	6.2	ug/L	EPA 8260D	

Client ID: LC34-AS2-20210914 **Lab ID:** AE05696-03RE1

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Trichloroethene	390		8.9	25	ug/L	EPA 8260D	

Client ID: LC34-INFLUENT-20210914 **Lab ID:** AE05696-04

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	3000		130	620	ug/L	EPA 8260D	
Trichloroethene	17000		220	620	ug/L	EPA 8260D	
Vinyl chloride	430	I	180	620	ug/L	EPA 8260D	

Client ID: LC34-RW2A-20210914 **Lab ID:** AE05696-05

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	3100		260	1200	ug/L	EPA 8260D	
Trichloroethene	30000		440	1200	ug/L	EPA 8260D	
Vinyl chloride	850	I	360	1200	ug/L	EPA 8260D	

Client ID: LC34-RW2B-20210914 **Lab ID:** AE05696-06

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	2100		260	1200	ug/L	EPA 8260D	
Trichloroethene	29000		440	1200	ug/L	EPA 8260D	
Vinyl chloride	520	I	360	1200	ug/L	EPA 8260D	

Client ID: LC34-RW5B-20210914 **Lab ID:** AE05696-07

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
trans-1,2-Dichloroethene	5.5		0.73	2.5	ug/L	EPA 8260D	
Trichloroethene	11		0.89	2.5	ug/L	EPA 8260D	
Vinyl chloride	14		0.71	2.5	ug/L	EPA 8260D	

Client ID: LC34-RW5B-20210914 **Lab ID:** AE05696-07RE1

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	91		2.6	12	ug/L	EPA 8260D	

Client ID: LC34-RW9A-20210914 **Lab ID:** AE05696-08RE1

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	4200		26	120	ug/L	EPA 8260D	
trans-1,2-Dichloroethene	86	I	36	120	ug/L	EPA 8260D	
Trichloroethene	91	I	44	120	ug/L	EPA 8260D	
Vinyl chloride	1400		36	120	ug/L	EPA 8260D	

Client ID: LC34-RW10A-20210914 **Lab ID:** AE05696-09

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	1200		26	120	ug/L	EPA 8260D	

Client ID: LC34-RW10A-20210914 **Lab ID:** AE05696-09RE1

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
trans-1,2-Dichloroethene	53		7.3	25	ug/L	EPA 8260D	
Vinyl chloride	770		7.1	25	ug/L	EPA 8260D	

Client ID: LC34-RW12A-20210914 **Lab ID:** AE05696-10

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
trans-1,2-Dichloroethene	140		36	120	ug/L	EPA 8260D	
Vinyl chloride	1100		36	120	ug/L	EPA 8260D	

Client ID: LC34-RW12A-20210914 **Lab ID:** AE05696-10RE1

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	5200		110	500	ug/L	EPA 8260D	

SAMPLE DETECTION SUMMARY

Client ID: LC34-RW13A-20210914 **Lab ID: AE05696-11**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
trans-1,2-Dichloroethene	100	I	36	120	ug/L	EPA 8260D	
Trichloroethene	54	I	44	120	ug/L	EPA 8260D	
Vinyl chloride	1300		36	120	ug/L	EPA 8260D	

Client ID: LC34-RW13A-20210914 **Lab ID: AE05696-11RE1**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	5900		110	500	ug/L	EPA 8260D	

Client ID: LC34-RW14A-20210914 **Lab ID: AE05696-12**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
trans-1,2-Dichloroethene	110	I	36	120	ug/L	EPA 8260D	
Vinyl chloride	1200		36	120	ug/L	EPA 8260D	

Client ID: LC34-RW14A-20210914 **Lab ID: AE05696-12RE1**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	5200		110	500	ug/L	EPA 8260D	

Client ID: LC34-RW15A-20210914 **Lab ID: AE05696-13**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
trans-1,2-Dichloroethene	46	I	18	62	ug/L	EPA 8260D	
Vinyl chloride	590		18	62	ug/L	EPA 8260D	

Client ID: LC34-RW15A-20210914 **Lab ID: AE05696-13RE1**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	2400		53	250	ug/L	EPA 8260D	

Client ID: LC34-RW16B-20210914 **Lab ID: AE05696-14**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	230		1.3	6.2	ug/L	EPA 8260D	
trans-1,2-Dichloroethene	7.8		1.8	6.2	ug/L	EPA 8260D	
Trichloroethene	25		2.2	6.2	ug/L	EPA 8260D	
Vinyl chloride	39		1.8	6.2	ug/L	EPA 8260D	

Client ID: LC34-RW17C-20210914 **Lab ID: AE05696-15**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	6500		530	2500	ug/L	EPA 8260D	

Client ID: LC34-RW17C-20210914 **Lab ID: AE05696-15RE1**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Trichloroethene	190000		8900	25000	ug/L	EPA 8260D	

Client ID: LC34-RW18C-20210914 **Lab ID: AE05696-16RE1**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	3500		530	2500	ug/L	EPA 8260D	
Trichloroethene	96000		890	2500	ug/L	EPA 8260D	

Client ID: LC34-RW19C-20210914 **Lab ID: AE05696-17**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	5900		1100	5000	ug/L	EPA 8260D	

Client ID: LC34-RW19C-20210914 **Lab ID: AE05696-17RE1**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Trichloroethene	650000		18000	50000	ug/L	EPA 8260D	

Client ID: LC34-RW20C-20210914 **Lab ID: AE05696-18**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	5100		530	2500	ug/L	EPA 8260D	

Client ID: LC34-RW20C-20210914 **Lab ID: AE05696-18RE1**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Trichloroethene	160000		4400	12000	ug/L	EPA 8260D	

ANALYTICAL RESULTS

Description: LC34-GAC-20210914 **Lab Sample ID:** AE05696-01 **Received:** 09/14/21 15:00

Matrix: Ground Water **Sampled:** 09/14/21 08:00 **Work Order:** AE05696

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden/Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	1I21007	EPA 8260D	09/21/21 10:51	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	1I21007	EPA 8260D	09/21/21 10:51	nmc	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	1I21007	EPA 8260D	09/21/21 10:51	nmc	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	1I21007	EPA 8260D	09/21/21 10:51	nmc	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	1I21007	EPA 8260D	09/21/21 10:51	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	1I21007	EPA 8260D	09/21/21 10:51	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	1I21007	EPA 8260D	09/21/21 10:51	nmc	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	1I21007	EPA 8260D	09/21/21 10:51	nmc	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	1I21007	EPA 8260D	09/21/21 10:51	nmc	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	1I21007	EPA 8260D	09/21/21 10:51	nmc	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	1I21007	EPA 8260D	09/21/21 10:51	nmc	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	1I21007	EPA 8260D	09/21/21 10:51	nmc	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	1I21007	EPA 8260D	09/21/21 10:51	nmc	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	1I21007	EPA 8260D	09/21/21 10:51	nmc	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	1I21007	EPA 8260D	09/21/21 10:51	nmc	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	1I21007	EPA 8260D	09/21/21 10:51	nmc	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	1I21007	EPA 8260D	09/21/21 10:51	nmc	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	1I21007	EPA 8260D	09/21/21 10:51	nmc	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	1I21007	EPA 8260D	09/21/21 10:51	nmc	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	1I21007	EPA 8260D	09/21/21 10:51	nmc	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	1I21007	EPA 8260D	09/21/21 10:51	nmc	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	1I21007	EPA 8260D	09/21/21 10:51	nmc	QL-02, QM-19, QV-01
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	1I21007	EPA 8260D	09/21/21 10:51	nmc	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	1I21007	EPA 8260D	09/21/21 10:51	nmc	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	1I21007	EPA 8260D	09/21/21 10:51	nmc	QV-01
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	1I21007	EPA 8260D	09/21/21 10:51	nmc	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	1I21007	EPA 8260D	09/21/21 10:51	nmc	
cis-1,2-Dichloroethene [156-59-2]^	0.53	U	ug/L	1	0.53	2.5	1I21007	EPA 8260D	09/21/21 10:51	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	1I21007	EPA 8260D	09/21/21 10:51	nmc	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	1I21007	EPA 8260D	09/21/21 10:51	nmc	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	1I21007	EPA 8260D	09/21/21 10:51	nmc	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	1I21007	EPA 8260D	09/21/21 10:51	nmc	QV-01
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	1I21007	EPA 8260D	09/21/21 10:51	nmc	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	1I21007	EPA 8260D	09/21/21 10:51	nmc	QV-01
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	1I21007	EPA 8260D	09/21/21 10:51	nmc	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	1I21007	EPA 8260D	09/21/21 10:51	nmc	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	1I21007	EPA 8260D	09/21/21 10:51	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	1I21007	EPA 8260D	09/21/21 10:51	nmc	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	1I21007	EPA 8260D	09/21/21 10:51	nmc	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	1I21007	EPA 8260D	09/21/21 10:51	nmc	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	1I21007	EPA 8260D	09/21/21 10:51	nmc	
trans-1,2-Dichloroethene [156-60-5]^	0.73	U	ug/L	1	0.73	2.5	1I21007	EPA 8260D	09/21/21 10:51	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	1I21007	EPA 8260D	09/21/21 10:51	nmc	
Trichloroethene [79-01-6]^	0.89	U	ug/L	1	0.89	2.5	1I21007	EPA 8260D	09/21/21 10:51	nmc	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	1I21007	EPA 8260D	09/21/21 10:51	nmc	

ANALYTICAL RESULTS

Description: LC34-GAC-20210914 | **Lab Sample ID:** AE05696-01 | **Received:** 09/14/21 15:00
Matrix: Ground Water | **Sampled:** 09/14/21 08:00 | **Work Order:** AE05696
Project: NASA KSC LC34 | **Sampled By:** Chuck Sorden/Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Vinyl chloride [75-01-4]^	0.71	U	ug/L	1	0.71	2.5	1I21007	EPA 8260D	09/21/21 10:51	nmc	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*45*	*1*	*50.0*	*89 %*	*41-142*	*1I21007*	*EPA 8260D*	*09/21/21 10:51*	*nmc*	
Dibromofluoromethane	*50*	*1*	*50.0*	*100 %*	*53-146*	*1I21007*	*EPA 8260D*	*09/21/21 10:51*	*nmc*	
Toluene-d8	*45*	*1*	*50.0*	*90 %*	*41-146*	*1I21007*	*EPA 8260D*	*09/21/21 10:51*	*nmc*	

ANALYTICAL RESULTS

Description: LC34-AS1-20210914 **Lab Sample ID:** AE05696-02 **Received:** 09/14/21 15:00

Matrix: Ground Water **Sampled:** 09/14/21 08:10 **Work Order:** AE05696

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden/Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	1I21007	EPA 8260D	09/21/21 12:18	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	1I21007	EPA 8260D	09/21/21 12:18	nmc	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	1I21007	EPA 8260D	09/21/21 12:18	nmc	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	1I21007	EPA 8260D	09/21/21 12:18	nmc	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	1I21007	EPA 8260D	09/21/21 12:18	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	1I21007	EPA 8260D	09/21/21 12:18	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	1I21007	EPA 8260D	09/21/21 12:18	nmc	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	1I21007	EPA 8260D	09/21/21 12:18	nmc	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	1I21007	EPA 8260D	09/21/21 12:18	nmc	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	1I21007	EPA 8260D	09/21/21 12:18	nmc	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	1I21007	EPA 8260D	09/21/21 12:18	nmc	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	1I21007	EPA 8260D	09/21/21 12:18	nmc	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	1I21007	EPA 8260D	09/21/21 12:18	nmc	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	1I21007	EPA 8260D	09/21/21 12:18	nmc	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	1I21007	EPA 8260D	09/21/21 12:18	nmc	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	1I21007	EPA 8260D	09/21/21 12:18	nmc	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	1I21007	EPA 8260D	09/21/21 12:18	nmc	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	1I21007	EPA 8260D	09/21/21 12:18	nmc	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	1I21007	EPA 8260D	09/21/21 12:18	nmc	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	1I21007	EPA 8260D	09/21/21 12:18	nmc	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	1I21007	EPA 8260D	09/21/21 12:18	nmc	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	1I21007	EPA 8260D	09/21/21 12:18	nmc	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	1I21007	EPA 8260D	09/21/21 12:18	nmc	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	1I21007	EPA 8260D	09/21/21 12:18	nmc	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	1I21007	EPA 8260D	09/21/21 12:18	nmc	QV-01
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	1I21007	EPA 8260D	09/21/21 12:18	nmc	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	1I21007	EPA 8260D	09/21/21 12:18	nmc	
cis-1,2-Dichloroethene [156-59-2]^	**1.6**	I	ug/L	1	0.53	2.5	1I21007	EPA 8260D	09/21/21 12:18	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	1I21007	EPA 8260D	09/21/21 12:18	nmc	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	1I21007	EPA 8260D	09/21/21 12:18	nmc	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	1I21007	EPA 8260D	09/21/21 12:18	nmc	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	1I21007	EPA 8260D	09/21/21 12:18	nmc	QV-01
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	1I21007	EPA 8260D	09/21/21 12:18	nmc	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	1I21007	EPA 8260D	09/21/21 12:18	nmc	QV-01
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	1I21007	EPA 8260D	09/21/21 12:18	nmc	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	1I21007	EPA 8260D	09/21/21 12:18	nmc	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	1I21007	EPA 8260D	09/21/21 12:18	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	1I21007	EPA 8260D	09/21/21 12:18	nmc	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	1I21007	EPA 8260D	09/21/21 12:18	nmc	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	1I21007	EPA 8260D	09/21/21 12:18	nmc	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	1I21007	EPA 8260D	09/21/21 12:18	nmc	
trans-1,2-Dichloroethene [156-60-5]^	0.73	U	ug/L	1	0.73	2.5	1I21007	EPA 8260D	09/21/21 12:18	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	1I21007	EPA 8260D	09/21/21 12:18	nmc	
Trichloroethene [79-01-6]^	**6.0**		ug/L	1	0.89	2.5	1I21007	EPA 8260D	09/21/21 12:18	nmc	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	1I21007	EPA 8260D	09/21/21 12:18	nmc	
Vinyl chloride [75-01-4]^	0.71	U	ug/L	1	0.71	2.5	1I21007	EPA 8260D	09/21/21 12:18	nmc	

ANALYTICAL RESULTS

Description: LC34-AS1-20210914 | **Lab Sample ID:** AE05696-02 | **Received:** 09/14/21 15:00

Matrix: Ground Water | **Sampled:** 09/14/21 08:10 | **Work Order:** AE05696

Project: NASA KSC LC34 | **Sampled By:** Chuck Sorden/Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*46*	*1*	*50.0*	*91 %*	*41-142*	*1I21007*	*EPA 8260D*	*09/21/21 12:18*	*nmc*	
Dibromofluoromethane	*51*	*1*	*50.0*	*102 %*	*53-146*	*1I21007*	*EPA 8260D*	*09/21/21 12:18*	*nmc*	
Toluene-d8	*51*	*1*	*50.0*	*103 %*	*41-146*	*1I21007*	*EPA 8260D*	*09/21/21 12:18*	*nmc*	

ANALYTICAL RESULTS

Description: LC34-AS2-20210914 **Lab Sample ID:** AE05696-03 **Received:** 09/14/21 15:00

Matrix: Ground Water **Sampled:** 09/14/21 08:20 **Work Order:** AE05696

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden/Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	2.0	U	ug/L	2.5	2.0	6.2	1I21007	EPA 8260D	09/21/21 12:46	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	1.4	U	ug/L	2.5	1.4	6.2	1I21007	EPA 8260D	09/21/21 12:46	nmc	
1,1,2-Trichloroethane [79-00-5]^	1.9	U	ug/L	2.5	1.9	6.2	1I21007	EPA 8260D	09/21/21 12:46	nmc	
1,1-Dichloroethane [75-34-3]^	1.6	U	ug/L	2.5	1.6	6.2	1I21007	EPA 8260D	09/21/21 12:46	nmc	
1,1-Dichloroethene [75-35-4]^	2.4	U	ug/L	2.5	2.4	6.2	1I21007	EPA 8260D	09/21/21 12:46	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	1.8	U	ug/L	2.5	1.8	6.2	1I21007	EPA 8260D	09/21/21 12:46	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	2.4	U	ug/L	2.5	2.4	6.2	1I21007	EPA 8260D	09/21/21 12:46	nmc	
1,2-Dibromoethane [106-93-4]^	2.0	U	ug/L	2.5	2.0	6.2	1I21007	EPA 8260D	09/21/21 12:46	nmc	
1,2-Dichlorobenzene [95-50-1]^	1.8	U	ug/L	2.5	1.8	6.2	1I21007	EPA 8260D	09/21/21 12:46	nmc	
1,2-Dichloroethane [107-06-2]^	1.6	U	ug/L	2.5	1.6	6.2	1I21007	EPA 8260D	09/21/21 12:46	nmc	
1,2-Dichloropropane [78-87-5]^	2.0	U	ug/L	2.5	2.0	6.2	1I21007	EPA 8260D	09/21/21 12:46	nmc	
1,3-Dichlorobenzene [541-73-1]^	1.9	U	ug/L	2.5	1.9	6.2	1I21007	EPA 8260D	09/21/21 12:46	nmc	
1,4-Dichlorobenzene [106-46-7]^	1.9	U	ug/L	2.5	1.9	6.2	1I21007	EPA 8260D	09/21/21 12:46	nmc	
2-Butanone [78-93-3]^	11	U	ug/L	2.5	11	31	1I21007	EPA 8260D	09/21/21 12:46	nmc	
2-Hexanone [591-78-6]^	6.2	U	ug/L	2.5	6.2	31	1I21007	EPA 8260D	09/21/21 12:46	nmc	
4-Methyl-2-pentanone [108-10-1]^	6.2	U	ug/L	2.5	6.2	31	1I21007	EPA 8260D	09/21/21 12:46	nmc	
Acetone [67-64-1]^	25	U	ug/L	2.5	25	62	1I21007	EPA 8260D	09/21/21 12:46	nmc	
Benzene [71-43-2]^	1.8	U	ug/L	2.5	1.8	6.2	1I21007	EPA 8260D	09/21/21 12:46	nmc	
Bromodichloromethane [75-27-4]^	1.3	U	ug/L	2.5	1.3	6.2	1I21007	EPA 8260D	09/21/21 12:46	nmc	
Bromoform [75-25-2]^	1.9	U	ug/L	2.5	1.9	6.2	1I21007	EPA 8260D	09/21/21 12:46	nmc	
Bromomethane [74-83-9]^	2.4	U	ug/L	2.5	2.4	6.2	1I21007	EPA 8260D	09/21/21 12:46	nmc	QV-01
Carbon disulfide [75-15-0]^	6.2	U	ug/L	2.5	6.2	31	1I21007	EPA 8260D	09/21/21 12:46	nmc	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	2.4	U	ug/L	2.5	2.4	6.2	1I21007	EPA 8260D	09/21/21 12:46	nmc	
Chlorobenzene [108-90-7]^	1.8	U	ug/L	2.5	1.8	6.2	1I21007	EPA 8260D	09/21/21 12:46	nmc	
Chloroethane [75-00-3]^	2.4	U	ug/L	2.5	2.4	6.2	1I21007	EPA 8260D	09/21/21 12:46	nmc	QV-01
Chloroform [67-66-3]^	2.0	U	ug/L	2.5	2.0	6.2	1I21007	EPA 8260D	09/21/21 12:46	nmc	
Chloromethane [74-87-3]^	2.0	U	ug/L	2.5	2.0	6.2	1I21007	EPA 8260D	09/21/21 12:46	nmc	
cis-1,2-Dichloroethene [156-59-2]^	**130**		ug/L	2.5	1.3	6.2	1I21007	EPA 8260D	09/21/21 12:46	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	1.5	U	ug/L	2.5	1.5	6.2	1I21007	EPA 8260D	09/21/21 12:46	nmc	
Cyclohexane [110-82-7]^	2.3	U	ug/L	2.5	2.3	6.2	1I21007	EPA 8260D	09/21/21 12:46	nmc	
Dibromochloromethane [124-48-1]^	1.2	U	ug/L	2.5	1.2	6.2	1I21007	EPA 8260D	09/21/21 12:46	nmc	
Dichlorodifluoromethane [75-71-8]^	1.8	U	ug/L	2.5	1.8	6.2	1I21007	EPA 8260D	09/21/21 12:46	nmc	QV-01
Ethylbenzene [100-41-4]^	1.7	U	ug/L	2.5	1.7	6.2	1I21007	EPA 8260D	09/21/21 12:46	nmc	
Freon 113 [76-13-1]^	1.8	U	ug/L	2.5	1.8	6.2	1I21007	EPA 8260D	09/21/21 12:46	nmc	QV-01
Isopropylbenzene [98-82-8]^	1.7	U	ug/L	2.5	1.7	6.2	1I21007	EPA 8260D	09/21/21 12:46	nmc	
Methyl acetate [79-20-9]^	2.4	U	ug/L	2.5	2.4	6.2	1I21007	EPA 8260D	09/21/21 12:46	nmc	
Methylene Chloride [75-09-2]^	6.2	U	ug/L	2.5	6.2	31	1I21007	EPA 8260D	09/21/21 12:46	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	1.5	U	ug/L	2.5	1.5	6.2	1I21007	EPA 8260D	09/21/21 12:46	nmc	
Styrene [100-42-5]^	1.5	U	ug/L	2.5	1.5	6.2	1I21007	EPA 8260D	09/21/21 12:46	nmc	
Tetrachloroethene [127-18-4]^	1.9	U	ug/L	2.5	1.9	6.2	1I21007	EPA 8260D	09/21/21 12:46	nmc	
Toluene [108-88-3]^	1.8	U	ug/L	2.5	1.8	6.2	1I21007	EPA 8260D	09/21/21 12:46	nmc	
trans-1,2-Dichloroethene [156-60-5]^	1.8	U	ug/L	2.5	1.8	6.2	1I21007	EPA 8260D	09/21/21 12:46	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	1.8	U	ug/L	2.5	1.8	6.2	1I21007	EPA 8260D	09/21/21 12:46	nmc	
Trichloroethene [79-01-6]^	**390**		ug/L	10	8.9	25	1I23015	EPA 8260D	09/23/21 16:45	kkw	
Trichlorofluoromethane [75-69-4]^	2.4	U	ug/L	2.5	2.4	6.2	1I21007	EPA 8260D	09/21/21 12:46	nmc	
Vinyl chloride [75-01-4]^	**3.9**	I	ug/L	2.5	1.8	6.2	1I21007	EPA 8260D	09/21/21 12:46	nmc	

ANALYTICAL RESULTS

Description: LC34-AS2-20210914 **Lab Sample ID:** AE05696-03 **Received:** 09/14/21 15:00

Matrix: Ground Water **Sampled:** 09/14/21 08:20 **Work Order:** AE05696

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden/Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*46*	*1*	*50.0*	*92 %*	*41-142*	*1I21007*	*EPA 8260D*	*09/21/21 12:46*	*nmc*	
4-Bromofluorobenzene	*55*	*1*	*50.0*	*110 %*	*41-142*	*1I23015*	*EPA 8260D*	*09/23/21 16:45*	*kkw*	
Dibromofluoromethane	*51*	*1*	*50.0*	*101 %*	*53-146*	*1I21007*	*EPA 8260D*	*09/21/21 12:46*	*nmc*	
Dibromofluoromethane	*53*	*1*	*50.0*	*106 %*	*53-146*	*1I23015*	*EPA 8260D*	*09/23/21 16:45*	*kkw*	
Toluene-d8	*45*	*1*	*50.0*	*90 %*	*41-146*	*1I21007*	*EPA 8260D*	*09/21/21 12:46*	*nmc*	
Toluene-d8	*51*	*1*	*50.0*	*101 %*	*41-146*	*1I23015*	*EPA 8260D*	*09/23/21 16:45*	*kkw*	

ANALYTICAL RESULTS

Description: LC34-INFLUENT-20210914 **Lab Sample ID:** AE05696-04 **Received:** 09/14/21 15:00

Matrix: Ground Water **Sampled:** 09/14/21 08:30 **Work Order:** AE05696

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden/Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	200	U	ug/L	250	200	620	1I21007	EPA 8260D	09/21/21 13:15	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	140	U	ug/L	250	140	620	1I21007	EPA 8260D	09/21/21 13:15	nmc	
1,1,2-Trichloroethane [79-00-5]^	190	U	ug/L	250	190	620	1I21007	EPA 8260D	09/21/21 13:15	nmc	
1,1-Dichloroethane [75-34-3]^	160	U	ug/L	250	160	620	1I21007	EPA 8260D	09/21/21 13:15	nmc	
1,1-Dichloroethene [75-35-4]^	240	U	ug/L	250	240	620	1I21007	EPA 8260D	09/21/21 13:15	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	180	U	ug/L	250	180	620	1I21007	EPA 8260D	09/21/21 13:15	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	240	U	ug/L	250	240	620	1I21007	EPA 8260D	09/21/21 13:15	nmc	
1,2-Dibromoethane [106-93-4]^	200	U	ug/L	250	200	620	1I21007	EPA 8260D	09/21/21 13:15	nmc	
1,2-Dichlorobenzene [95-50-1]^	180	U	ug/L	250	180	620	1I21007	EPA 8260D	09/21/21 13:15	nmc	
1,2-Dichloroethane [107-06-2]^	160	U	ug/L	250	160	620	1I21007	EPA 8260D	09/21/21 13:15	nmc	
1,2-Dichloropropane [78-87-5]^	200	U	ug/L	250	200	620	1I21007	EPA 8260D	09/21/21 13:15	nmc	
1,3-Dichlorobenzene [541-73-1]^	190	U	ug/L	250	190	620	1I21007	EPA 8260D	09/21/21 13:15	nmc	
1,4-Dichlorobenzene [106-46-7]^	190	U	ug/L	250	190	620	1I21007	EPA 8260D	09/21/21 13:15	nmc	
2-Butanone [78-93-3]^	1100	U	ug/L	250	1100	3100	1I21007	EPA 8260D	09/21/21 13:15	nmc	
2-Hexanone [591-78-6]^	620	U	ug/L	250	620	3100	1I21007	EPA 8260D	09/21/21 13:15	nmc	
4-Methyl-2-pentanone [108-10-1]^	620	U	ug/L	250	620	3100	1I21007	EPA 8260D	09/21/21 13:15	nmc	
Acetone [67-64-1]^	2500	U	ug/L	250	2500	6200	1I21007	EPA 8260D	09/21/21 13:15	nmc	
Benzene [71-43-2]^	180	U	ug/L	250	180	620	1I21007	EPA 8260D	09/21/21 13:15	nmc	
Bromodichloromethane [75-27-4]^	130	U	ug/L	250	130	620	1I21007	EPA 8260D	09/21/21 13:15	nmc	
Bromoform [75-25-2]^	190	U	ug/L	250	190	620	1I21007	EPA 8260D	09/21/21 13:15	nmc	
Bromomethane [74-83-9]^	240	U	ug/L	250	240	620	1I21007	EPA 8260D	09/21/21 13:15	nmc	QV-01
Carbon disulfide [75-15-0]^	620	U	ug/L	250	620	3100	1I21007	EPA 8260D	09/21/21 13:15	nmc	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	240	U	ug/L	250	240	620	1I21007	EPA 8260D	09/21/21 13:15	nmc	
Chlorobenzene [108-90-7]^	180	U	ug/L	250	180	620	1I21007	EPA 8260D	09/21/21 13:15	nmc	
Chloroethane [75-00-3]^	240	U	ug/L	250	240	620	1I21007	EPA 8260D	09/21/21 13:15	nmc	QV-01
Chloroform [67-66-3]^	200	U	ug/L	250	200	620	1I21007	EPA 8260D	09/21/21 13:15	nmc	
Chloromethane [74-87-3]^	200	U	ug/L	250	200	620	1I21007	EPA 8260D	09/21/21 13:15	nmc	
cis-1,2-Dichloroethene [156-59-2]^	**3000**		ug/L	250	130	620	1I21007	EPA 8260D	09/21/21 13:15	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	150	U	ug/L	250	150	620	1I21007	EPA 8260D	09/21/21 13:15	nmc	
Cyclohexane [110-82-7]^	230	U	ug/L	250	230	620	1I21007	EPA 8260D	09/21/21 13:15	nmc	
Dibromochloromethane [124-48-1]^	120	U	ug/L	250	120	620	1I21007	EPA 8260D	09/21/21 13:15	nmc	
Dichlorodifluoromethane [75-71-8]^	180	U	ug/L	250	180	620	1I21007	EPA 8260D	09/21/21 13:15	nmc	QV-01
Ethylbenzene [100-41-4]^	170	U	ug/L	250	170	620	1I21007	EPA 8260D	09/21/21 13:15	nmc	
Freon 113 [76-13-1]^	180	U	ug/L	250	180	620	1I21007	EPA 8260D	09/21/21 13:15	nmc	QV-01
Isopropylbenzene [98-82-8]^	170	U	ug/L	250	170	620	1I21007	EPA 8260D	09/21/21 13:15	nmc	
Methyl acetate [79-20-9]^	240	U	ug/L	250	240	620	1I21007	EPA 8260D	09/21/21 13:15	nmc	
Methylene Chloride [75-09-2]^	620	U	ug/L	250	620	3100	1I21007	EPA 8260D	09/21/21 13:15	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	150	U	ug/L	250	150	620	1I21007	EPA 8260D	09/21/21 13:15	nmc	
Styrene [100-42-5]^	150	U	ug/L	250	150	620	1I21007	EPA 8260D	09/21/21 13:15	nmc	
Tetrachloroethene [127-18-4]^	190	U	ug/L	250	190	620	1I21007	EPA 8260D	09/21/21 13:15	nmc	
Toluene [108-88-3]^	180	U	ug/L	250	180	620	1I21007	EPA 8260D	09/21/21 13:15	nmc	
trans-1,2-Dichloroethene [156-60-5]^	180	U	ug/L	250	180	620	1I21007	EPA 8260D	09/21/21 13:15	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	180	U	ug/L	250	180	620	1I21007	EPA 8260D	09/21/21 13:15	nmc	
Trichloroethene [79-01-6]^	**17000**		ug/L	250	220	620	1I21007	EPA 8260D	09/21/21 13:15	nmc	
Trichlorofluoromethane [75-69-4]^	240	U	ug/L	250	240	620	1I21007	EPA 8260D	09/21/21 13:15	nmc	
Vinyl chloride [75-01-4]^	**430**	I	ug/L	250	180	620	1I21007	EPA 8260D	09/21/21 13:15	nmc	

ANALYTICAL RESULTS

Description: LC34-INFLUENT-20210914 **Lab Sample ID:** AE05696-04 **Received:** 09/14/21 15:00

Matrix: Ground Water **Sampled:** 09/14/21 08:30 **Work Order:** AE05696

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden/Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*47*	*1*	*50.0*	*93 %*	*41-142*	*1I21007*	*EPA 8260D*	*09/21/21 13:15*	*nmc*	
Dibromofluoromethane	*52*	*1*	*50.0*	*104 %*	*53-146*	*1I21007*	*EPA 8260D*	*09/21/21 13:15*	*nmc*	
Toluene-d8	*47*	*1*	*50.0*	*93 %*	*41-146*	*1I21007*	*EPA 8260D*	*09/21/21 13:15*	*nmc*	

ANALYTICAL RESULTS

Description: LC34-RW2A-20210914 **Lab Sample ID:** AE05696-05 **Received:** 09/14/21 15:00

Matrix: Ground Water **Sampled:** 09/14/21 08:40 **Work Order:** AE05696

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden/Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	400	U	ug/L	500	400	1200	1I21007	EPA 8260D	09/21/21 13:44	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	270	U	ug/L	500	270	1200	1I21007	EPA 8260D	09/21/21 13:44	nmc	
1,1,2-Trichloroethane [79-00-5]^	380	U	ug/L	500	380	1200	1I21007	EPA 8260D	09/21/21 13:44	nmc	
1,1-Dichloroethane [75-34-3]^	310	U	ug/L	500	310	1200	1I21007	EPA 8260D	09/21/21 13:44	nmc	
1,1-Dichloroethene [75-35-4]^	470	U	ug/L	500	470	1200	1I21007	EPA 8260D	09/21/21 13:44	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	350	U	ug/L	500	350	1200	1I21007	EPA 8260D	09/21/21 13:44	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	480	U	ug/L	500	480	1200	1I21007	EPA 8260D	09/21/21 13:44	nmc	
1,2-Dibromoethane [106-93-4]^	390	U	ug/L	500	390	1200	1I21007	EPA 8260D	09/21/21 13:44	nmc	
1,2-Dichlorobenzene [95-50-1]^	360	U	ug/L	500	360	1200	1I21007	EPA 8260D	09/21/21 13:44	nmc	
1,2-Dichloroethane [107-06-2]^	320	U	ug/L	500	320	1200	1I21007	EPA 8260D	09/21/21 13:44	nmc	
1,2-Dichloropropane [78-87-5]^	400	U	ug/L	500	400	1200	1I21007	EPA 8260D	09/21/21 13:44	nmc	
1,3-Dichlorobenzene [541-73-1]^	380	U	ug/L	500	380	1200	1I21007	EPA 8260D	09/21/21 13:44	nmc	
1,4-Dichlorobenzene [106-46-7]^	380	U	ug/L	500	380	1200	1I21007	EPA 8260D	09/21/21 13:44	nmc	
2-Butanone [78-93-3]^	2200	U	ug/L	500	2200	6200	1I21007	EPA 8260D	09/21/21 13:44	nmc	
2-Hexanone [591-78-6]^	1200	U	ug/L	500	1200	6200	1I21007	EPA 8260D	09/21/21 13:44	nmc	
4-Methyl-2-pentanone [108-10-1]^	1200	U	ug/L	500	1200	6200	1I21007	EPA 8260D	09/21/21 13:44	nmc	
Acetone [67-64-1]^	5000	U	ug/L	500	5000	12000	1I21007	EPA 8260D	09/21/21 13:44	nmc	
Benzene [71-43-2]^	360	U	ug/L	500	360	1200	1I21007	EPA 8260D	09/21/21 13:44	nmc	
Bromodichloromethane [75-27-4]^	260	U	ug/L	500	260	1200	1I21007	EPA 8260D	09/21/21 13:44	nmc	
Bromoform [75-25-2]^	380	U	ug/L	500	380	1200	1I21007	EPA 8260D	09/21/21 13:44	nmc	
Bromomethane [74-83-9]^	480	U	ug/L	500	480	1200	1I21007	EPA 8260D	09/21/21 13:44	nmc	QV-01
Carbon disulfide [75-15-0]^	1200	U	ug/L	500	1200	6200	1I21007	EPA 8260D	09/21/21 13:44	nmc	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	470	U	ug/L	500	470	1200	1I21007	EPA 8260D	09/21/21 13:44	nmc	
Chlorobenzene [108-90-7]^	360	U	ug/L	500	360	1200	1I21007	EPA 8260D	09/21/21 13:44	nmc	
Chloroethane [75-00-3]^	490	U	ug/L	500	490	1200	1I21007	EPA 8260D	09/21/21 13:44	nmc	QV-01
Chloroform [67-66-3]^	400	U	ug/L	500	400	1200	1I21007	EPA 8260D	09/21/21 13:44	nmc	
Chloromethane [74-87-3]^	410	U	ug/L	500	410	1200	1I21007	EPA 8260D	09/21/21 13:44	nmc	
cis-1,2-Dichloroethene [156-59-2]^	**3100**		ug/L	500	260	1200	1I21007	EPA 8260D	09/21/21 13:44	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	300	U	ug/L	500	300	1200	1I21007	EPA 8260D	09/21/21 13:44	nmc	
Cyclohexane [110-82-7]^	460	U	ug/L	500	460	1200	1I21007	EPA 8260D	09/21/21 13:44	nmc	
Dibromochloromethane [124-48-1]^	250	U	ug/L	500	250	1200	1I21007	EPA 8260D	09/21/21 13:44	nmc	
Dichlorodifluoromethane [75-71-8]^	370	U	ug/L	500	370	1200	1I21007	EPA 8260D	09/21/21 13:44	nmc	QV-01
Ethylbenzene [100-41-4]^	340	U	ug/L	500	340	1200	1I21007	EPA 8260D	09/21/21 13:44	nmc	
Freon 113 [76-13-1]^	360	U	ug/L	500	360	1200	1I21007	EPA 8260D	09/21/21 13:44	nmc	QV-01
Isopropylbenzene [98-82-8]^	340	U	ug/L	500	340	1200	1I21007	EPA 8260D	09/21/21 13:44	nmc	
Methyl acetate [79-20-9]^	480	U	ug/L	500	480	1200	1I21007	EPA 8260D	09/21/21 13:44	nmc	
Methylene Chloride [75-09-2]^	1200	U	ug/L	500	1200	6200	1I21007	EPA 8260D	09/21/21 13:44	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	300	U	ug/L	500	300	1200	1I21007	EPA 8260D	09/21/21 13:44	nmc	
Styrene [100-42-5]^	300	U	ug/L	500	300	1200	1I21007	EPA 8260D	09/21/21 13:44	nmc	
Tetrachloroethene [127-18-4]^	380	U	ug/L	500	380	1200	1I21007	EPA 8260D	09/21/21 13:44	nmc	
Toluene [108-88-3]^	360	U	ug/L	500	360	1200	1I21007	EPA 8260D	09/21/21 13:44	nmc	
trans-1,2-Dichloroethene [156-60-5]^	360	U	ug/L	500	360	1200	1I21007	EPA 8260D	09/21/21 13:44	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	360	U	ug/L	500	360	1200	1I21007	EPA 8260D	09/21/21 13:44	nmc	
Trichloroethene [79-01-6]^	**30000**		ug/L	500	440	1200	1I21007	EPA 8260D	09/21/21 13:44	nmc	
Trichlorofluoromethane [75-69-4]^	470	U	ug/L	500	470	1200	1I21007	EPA 8260D	09/21/21 13:44	nmc	
Vinyl chloride [75-01-4]^	**850**	I	ug/L	500	360	1200	1I21007	EPA 8260D	09/21/21 13:44	nmc	

ANALYTICAL RESULTS

Description: LC34-RW2A-20210914 **Lab Sample ID:** AE05696-05 **Received:** 09/14/21 15:00

Matrix: Ground Water **Sampled:** 09/14/21 08:40 **Work Order:** AE05696

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden/Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*47*	*1*	*50.0*	*94 %*	*41-142*	*1I21007*	*EPA 8260D*	*09/21/21 13:44*	*nmc*	
Dibromofluoromethane	*53*	*1*	*50.0*	*105 %*	*53-146*	*1I21007*	*EPA 8260D*	*09/21/21 13:44*	*nmc*	
Toluene-d8	*47*	*1*	*50.0*	*93 %*	*41-146*	*1I21007*	*EPA 8260D*	*09/21/21 13:44*	*nmc*	

ANALYTICAL RESULTS

Description: LC34-RW2B-20210914 **Lab Sample ID:** AE05696-06 **Received:** 09/14/21 15:00

Matrix: Ground Water **Sampled:** 09/14/21 08:50 **Work Order:** AE05696

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden/Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	400	U	ug/L	500	400	1200	1I21007	EPA 8260D	09/21/21 14:13	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	270	U	ug/L	500	270	1200	1I21007	EPA 8260D	09/21/21 14:13	nmc	
1,1,2-Trichloroethane [79-00-5]^	380	U	ug/L	500	380	1200	1I21007	EPA 8260D	09/21/21 14:13	nmc	
1,1-Dichloroethane [75-34-3]^	310	U	ug/L	500	310	1200	1I21007	EPA 8260D	09/21/21 14:13	nmc	
1,1-Dichloroethene [75-35-4]^	470	U	ug/L	500	470	1200	1I21007	EPA 8260D	09/21/21 14:13	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	350	U	ug/L	500	350	1200	1I21007	EPA 8260D	09/21/21 14:13	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	480	U	ug/L	500	480	1200	1I21007	EPA 8260D	09/21/21 14:13	nmc	
1,2-Dibromoethane [106-93-4]^	390	U	ug/L	500	390	1200	1I21007	EPA 8260D	09/21/21 14:13	nmc	
1,2-Dichlorobenzene [95-50-1]^	360	U	ug/L	500	360	1200	1I21007	EPA 8260D	09/21/21 14:13	nmc	
1,2-Dichloroethane [107-06-2]^	320	U	ug/L	500	320	1200	1I21007	EPA 8260D	09/21/21 14:13	nmc	
1,2-Dichloropropane [78-87-5]^	400	U	ug/L	500	400	1200	1I21007	EPA 8260D	09/21/21 14:13	nmc	
1,3-Dichlorobenzene [541-73-1]^	380	U	ug/L	500	380	1200	1I21007	EPA 8260D	09/21/21 14:13	nmc	
1,4-Dichlorobenzene [106-46-7]^	380	U	ug/L	500	380	1200	1I21007	EPA 8260D	09/21/21 14:13	nmc	
2-Butanone [78-93-3]^	2200	U	ug/L	500	2200	6200	1I21007	EPA 8260D	09/21/21 14:13	nmc	
2-Hexanone [591-78-6]^	1200	U	ug/L	500	1200	6200	1I21007	EPA 8260D	09/21/21 14:13	nmc	
4-Methyl-2-pentanone [108-10-1]^	1200	U	ug/L	500	1200	6200	1I21007	EPA 8260D	09/21/21 14:13	nmc	
Acetone [67-64-1]^	5000	U	ug/L	500	5000	12000	1I21007	EPA 8260D	09/21/21 14:13	nmc	
Benzene [71-43-2]^	360	U	ug/L	500	360	1200	1I21007	EPA 8260D	09/21/21 14:13	nmc	
Bromodichloromethane [75-27-4]^	260	U	ug/L	500	260	1200	1I21007	EPA 8260D	09/21/21 14:13	nmc	
Bromoform [75-25-2]^	380	U	ug/L	500	380	1200	1I21007	EPA 8260D	09/21/21 14:13	nmc	
Bromomethane [74-83-9]^	480	U	ug/L	500	480	1200	1I21007	EPA 8260D	09/21/21 14:13	nmc	QV-01
Carbon disulfide [75-15-0]^	1200	U	ug/L	500	1200	6200	1I21007	EPA 8260D	09/21/21 14:13	nmc	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	470	U	ug/L	500	470	1200	1I21007	EPA 8260D	09/21/21 14:13	nmc	
Chlorobenzene [108-90-7]^	360	U	ug/L	500	360	1200	1I21007	EPA 8260D	09/21/21 14:13	nmc	
Chloroethane [75-00-3]^	490	U	ug/L	500	490	1200	1I21007	EPA 8260D	09/21/21 14:13	nmc	QV-01
Chloroform [67-66-3]^	400	U	ug/L	500	400	1200	1I21007	EPA 8260D	09/21/21 14:13	nmc	
Chloromethane [74-87-3]^	410	U	ug/L	500	410	1200	1I21007	EPA 8260D	09/21/21 14:13	nmc	
cis-1,2-Dichloroethene [156-59-2]^	**2100**		ug/L	500	260	1200	1I21007	EPA 8260D	09/21/21 14:13	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	300	U	ug/L	500	300	1200	1I21007	EPA 8260D	09/21/21 14:13	nmc	
Cyclohexane [110-82-7]^	460	U	ug/L	500	460	1200	1I21007	EPA 8260D	09/21/21 14:13	nmc	
Dibromochloromethane [124-48-1]^	250	U	ug/L	500	250	1200	1I21007	EPA 8260D	09/21/21 14:13	nmc	
Dichlorodifluoromethane [75-71-8]^	370	U	ug/L	500	370	1200	1I21007	EPA 8260D	09/21/21 14:13	nmc	QV-01
Ethylbenzene [100-41-4]^	340	U	ug/L	500	340	1200	1I21007	EPA 8260D	09/21/21 14:13	nmc	
Freon 113 [76-13-1]^	360	U	ug/L	500	360	1200	1I21007	EPA 8260D	09/21/21 14:13	nmc	QV-01
Isopropylbenzene [98-82-8]^	340	U	ug/L	500	340	1200	1I21007	EPA 8260D	09/21/21 14:13	nmc	
Methyl acetate [79-20-9]^	480	U	ug/L	500	480	1200	1I21007	EPA 8260D	09/21/21 14:13	nmc	
Methylene Chloride [75-09-2]^	1200	U	ug/L	500	1200	6200	1I21007	EPA 8260D	09/21/21 14:13	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	300	U	ug/L	500	300	1200	1I21007	EPA 8260D	09/21/21 14:13	nmc	
Styrene [100-42-5]^	300	U	ug/L	500	300	1200	1I21007	EPA 8260D	09/21/21 14:13	nmc	
Tetrachloroethene [127-18-4]^	380	U	ug/L	500	380	1200	1I21007	EPA 8260D	09/21/21 14:13	nmc	
Toluene [108-88-3]^	360	U	ug/L	500	360	1200	1I21007	EPA 8260D	09/21/21 14:13	nmc	
trans-1,2-Dichloroethene [156-60-5]^	360	U	ug/L	500	360	1200	1I21007	EPA 8260D	09/21/21 14:13	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	360	U	ug/L	500	360	1200	1I21007	EPA 8260D	09/21/21 14:13	nmc	
Trichloroethene [79-01-6]^	**29000**		ug/L	500	440	1200	1I21007	EPA 8260D	09/21/21 14:13	nmc	
Trichlorofluoromethane [75-69-4]^	470	U	ug/L	500	470	1200	1I21007	EPA 8260D	09/21/21 14:13	nmc	
Vinyl chloride [75-01-4]^	**520**	I	ug/L	500	360	1200	1I21007	EPA 8260D	09/21/21 14:13	nmc	

ANALYTICAL RESULTS

Description: LC34-RW2B-20210914 | **Lab Sample ID:** AE05696-06 | **Received:** 09/14/21 15:00
Matrix: Ground Water | **Sampled:** 09/14/21 08:50 | **Work Order:** AE05696
Project: NASA KSC LC34 | **Sampled By:** Chuck Sorden/Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*46*	*1*	*50.0*	*93 %*	*41-142*	*1I21007*	*EPA 8260D*	*09/21/21 14:13*	*nmc*	
Dibromofluoromethane	*50*	*1*	*50.0*	*101 %*	*53-146*	*1I21007*	*EPA 8260D*	*09/21/21 14:13*	*nmc*	
Toluene-d8	*46*	*1*	*50.0*	*92 %*	*41-146*	*1I21007*	*EPA 8260D*	*09/21/21 14:13*	*nmc*	

ANALYTICAL RESULTS

Description: LC34-RW5B-20210914 **Lab Sample ID:** AE05696-07 **Received:** 09/14/21 15:00

Matrix: Ground Water **Sampled:** 09/14/21 09:00 **Work Order:** AE05696

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden/Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	1I21007	EPA 8260D	09/21/21 14:41	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	1I21007	EPA 8260D	09/21/21 14:41	nmc	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	1I21007	EPA 8260D	09/21/21 14:41	nmc	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	1I21007	EPA 8260D	09/21/21 14:41	nmc	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	1I21007	EPA 8260D	09/21/21 14:41	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	1I21007	EPA 8260D	09/21/21 14:41	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	1I21007	EPA 8260D	09/21/21 14:41	nmc	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	1I21007	EPA 8260D	09/21/21 14:41	nmc	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	1I21007	EPA 8260D	09/21/21 14:41	nmc	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	1I21007	EPA 8260D	09/21/21 14:41	nmc	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	1I21007	EPA 8260D	09/21/21 14:41	nmc	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	1I21007	EPA 8260D	09/21/21 14:41	nmc	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	1I21007	EPA 8260D	09/21/21 14:41	nmc	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	1I21007	EPA 8260D	09/21/21 14:41	nmc	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	1I21007	EPA 8260D	09/21/21 14:41	nmc	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	1I21007	EPA 8260D	09/21/21 14:41	nmc	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	1I21007	EPA 8260D	09/21/21 14:41	nmc	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	1I21007	EPA 8260D	09/21/21 14:41	nmc	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	1I21007	EPA 8260D	09/21/21 14:41	nmc	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	1I21007	EPA 8260D	09/21/21 14:41	nmc	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	1I21007	EPA 8260D	09/21/21 14:41	nmc	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	1I21007	EPA 8260D	09/21/21 14:41	nmc	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	1I21007	EPA 8260D	09/21/21 14:41	nmc	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	1I21007	EPA 8260D	09/21/21 14:41	nmc	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	1I21007	EPA 8260D	09/21/21 14:41	nmc	QV-01
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	1I21007	EPA 8260D	09/21/21 14:41	nmc	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	1I21007	EPA 8260D	09/21/21 14:41	nmc	
cis-1,2-Dichloroethene [156-59-2]^	**91**		ug/L	5	2.6	12	1I23015	EPA 8260D	09/23/21 17:13	kkw	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	1I21007	EPA 8260D	09/21/21 14:41	nmc	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	1I21007	EPA 8260D	09/21/21 14:41	nmc	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	1I21007	EPA 8260D	09/21/21 14:41	nmc	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	1I21007	EPA 8260D	09/21/21 14:41	nmc	QV-01
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	1I21007	EPA 8260D	09/21/21 14:41	nmc	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	1I21007	EPA 8260D	09/21/21 14:41	nmc	QV-01
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	1I21007	EPA 8260D	09/21/21 14:41	nmc	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	1I21007	EPA 8260D	09/21/21 14:41	nmc	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	1I21007	EPA 8260D	09/21/21 14:41	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	1I21007	EPA 8260D	09/21/21 14:41	nmc	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	1I21007	EPA 8260D	09/21/21 14:41	nmc	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	1I21007	EPA 8260D	09/21/21 14:41	nmc	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	1I21007	EPA 8260D	09/21/21 14:41	nmc	
trans-1,2-Dichloroethene [156-60-5]^	**5.5**		ug/L	1	0.73	2.5	1I21007	EPA 8260D	09/21/21 14:41	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	1I21007	EPA 8260D	09/21/21 14:41	nmc	
Trichloroethene [79-01-6]^	**11**		ug/L	1	0.89	2.5	1I21007	EPA 8260D	09/21/21 14:41	nmc	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	1I21007	EPA 8260D	09/21/21 14:41	nmc	
Vinyl chloride [75-01-4]^	**14**		ug/L	1	0.71	2.5	1I21007	EPA 8260D	09/21/21 14:41	nmc	

ANALYTICAL RESULTS

Description: LC34-RW5B-20210914 **Lab Sample ID:** AE05696-07 **Received:** 09/14/21 15:00

Matrix: Ground Water **Sampled:** 09/14/21 09:00 **Work Order:** AE05696

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden/Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*46*	*1*	*50.0*	*92 %*	*41-142*	*1I21007*	*EPA 8260D*	*09/21/21 14:41*	*nmc*	
4-Bromofluorobenzene	*51*	*1*	*50.0*	*102 %*	*41-142*	*1I23015*	*EPA 8260D*	*09/23/21 17:13*	*kkw*	
Dibromofluoromethane	*51*	*1*	*50.0*	*101 %*	*53-146*	*1I21007*	*EPA 8260D*	*09/21/21 14:41*	*nmc*	
Dibromofluoromethane	*54*	*1*	*50.0*	*109 %*	*53-146*	*1I23015*	*EPA 8260D*	*09/23/21 17:13*	*kkw*	
Toluene-d8	*46*	*1*	*50.0*	*93 %*	*41-146*	*1I21007*	*EPA 8260D*	*09/21/21 14:41*	*nmc*	
Toluene-d8	*50*	*1*	*50.0*	*100 %*	*41-146*	*1I23015*	*EPA 8260D*	*09/23/21 17:13*	*kkw*	

ANALYTICAL RESULTS

Description: LC34-RW9A-20210914 **Lab Sample ID:** AE05696-08 **Received:** 09/14/21 15:00

Matrix: Ground Water **Sampled:** 09/14/21 09:10 **Work Order:** AE05696

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden/Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	40	U	ug/L	50	40	120	1I22007	EPA 8260D	09/22/21 14:02	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	27	U	ug/L	50	27	120	1I22007	EPA 8260D	09/22/21 14:02	nmc	
1,1,2-Trichloroethane [79-00-5]^	38	U	ug/L	50	38	120	1I22007	EPA 8260D	09/22/21 14:02	nmc	
1,1-Dichloroethane [75-34-3]^	31	U	ug/L	50	31	120	1I22007	EPA 8260D	09/22/21 14:02	nmc	
1,1-Dichloroethene [75-35-4]^	47	U	ug/L	50	47	120	1I22007	EPA 8260D	09/22/21 14:02	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	35	U	ug/L	50	35	120	1I22007	EPA 8260D	09/22/21 14:02	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	48	U	ug/L	50	48	120	1I22007	EPA 8260D	09/22/21 14:02	nmc	
1,2-Dibromoethane [106-93-4]^	39	U	ug/L	50	39	120	1I22007	EPA 8260D	09/22/21 14:02	nmc	
1,2-Dichlorobenzene [95-50-1]^	36	U	ug/L	50	36	120	1I22007	EPA 8260D	09/22/21 14:02	nmc	
1,2-Dichloroethane [107-06-2]^	32	U	ug/L	50	32	120	1I22007	EPA 8260D	09/22/21 14:02	nmc	
1,2-Dichloropropane [78-87-5]^	40	U	ug/L	50	40	120	1I22007	EPA 8260D	09/22/21 14:02	nmc	
1,3-Dichlorobenzene [541-73-1]^	38	U	ug/L	50	38	120	1I22007	EPA 8260D	09/22/21 14:02	nmc	
1,4-Dichlorobenzene [106-46-7]^	38	U	ug/L	50	38	120	1I22007	EPA 8260D	09/22/21 14:02	nmc	
2-Butanone [78-93-3]^	220	U	ug/L	50	220	620	1I22007	EPA 8260D	09/22/21 14:02	nmc	
2-Hexanone [591-78-6]^	120	U	ug/L	50	120	620	1I22007	EPA 8260D	09/22/21 14:02	nmc	
4-Methyl-2-pentanone [108-10-1]^	120	U	ug/L	50	120	620	1I22007	EPA 8260D	09/22/21 14:02	nmc	
Acetone [67-64-1]^	500	U	ug/L	50	500	1200	1I22007	EPA 8260D	09/22/21 14:02	nmc	
Benzene [71-43-2]^	36	U	ug/L	50	36	120	1I22007	EPA 8260D	09/22/21 14:02	nmc	
Bromodichloromethane [75-27-4]^	26	U	ug/L	50	26	120	1I22007	EPA 8260D	09/22/21 14:02	nmc	
Bromoform [75-25-2]^	38	U	ug/L	50	38	120	1I22007	EPA 8260D	09/22/21 14:02	nmc	
Bromomethane [74-83-9]^	48	U	ug/L	50	48	120	1I22007	EPA 8260D	09/22/21 14:02	nmc	QV-01
Carbon disulfide [75-15-0]^	120	U	ug/L	50	120	620	1I22007	EPA 8260D	09/22/21 14:02	nmc	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	47	U	ug/L	50	47	120	1I22007	EPA 8260D	09/22/21 14:02	nmc	
Chlorobenzene [108-90-7]^	36	U	ug/L	50	36	120	1I22007	EPA 8260D	09/22/21 14:02	nmc	
Chloroethane [75-00-3]^	49	U	ug/L	50	49	120	1I22007	EPA 8260D	09/22/21 14:02	nmc	QV-01
Chloroform [67-66-3]^	40	U	ug/L	50	40	120	1I22007	EPA 8260D	09/22/21 14:02	nmc	
Chloromethane [74-87-3]^	41	U	ug/L	50	41	120	1I22007	EPA 8260D	09/22/21 14:02	nmc	QV-01
cis-1,2-Dichloroethene [156-59-2]^	**4200**		ug/L	50	26	120	1I22007	EPA 8260D	09/22/21 14:02	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	30	U	ug/L	50	30	120	1I22007	EPA 8260D	09/22/21 14:02	nmc	
Cyclohexane [110-82-7]^	46	U	ug/L	50	46	120	1I22007	EPA 8260D	09/22/21 14:02	nmc	
Dibromochloromethane [124-48-1]^	25	U	ug/L	50	25	120	1I22007	EPA 8260D	09/22/21 14:02	nmc	
Dichlorodifluoromethane [75-71-8]^	37	U	ug/L	50	37	120	1I22007	EPA 8260D	09/22/21 14:02	nmc	QV-01
Ethylbenzene [100-41-4]^	34	U	ug/L	50	34	120	1I22007	EPA 8260D	09/22/21 14:02	nmc	
Freon 113 [76-13-1]^	36	U	ug/L	50	36	120	1I22007	EPA 8260D	09/22/21 14:02	nmc	
Isopropylbenzene [98-82-8]^	34	U	ug/L	50	34	120	1I22007	EPA 8260D	09/22/21 14:02	nmc	
Methyl acetate [79-20-9]^	48	U	ug/L	50	48	120	1I22007	EPA 8260D	09/22/21 14:02	nmc	
Methylene Chloride [75-09-2]^	120	U	ug/L	50	120	620	1I22007	EPA 8260D	09/22/21 14:02	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	30	U	ug/L	50	30	120	1I22007	EPA 8260D	09/22/21 14:02	nmc	
Styrene [100-42-5]^	30	U	ug/L	50	30	120	1I22007	EPA 8260D	09/22/21 14:02	nmc	
Tetrachloroethene [127-18-4]^	38	U	ug/L	50	38	120	1I22007	EPA 8260D	09/22/21 14:02	nmc	
Toluene [108-88-3]^	36	U	ug/L	50	36	120	1I22007	EPA 8260D	09/22/21 14:02	nmc	
trans-1,2-Dichloroethene [156-60-5]^	**86**	I	ug/L	50	36	120	1I22007	EPA 8260D	09/22/21 14:02	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	36	U	ug/L	50	36	120	1I22007	EPA 8260D	09/22/21 14:02	nmc	
Trichloroethene [79-01-6]^	**91**	I	ug/L	50	44	120	1I22007	EPA 8260D	09/22/21 14:02	nmc	
Trichlorofluoromethane [75-69-4]^	47	U	ug/L	50	47	120	1I22007	EPA 8260D	09/22/21 14:02	nmc	QV-01
Vinyl chloride [75-01-4]^	**1400**		ug/L	50	36	120	1I22007	EPA 8260D	09/22/21 14:02	nmc	

ANALYTICAL RESULTS

Description: LC34-RW9A-20210914 **Lab Sample ID:** AE05696-08 **Received:** 09/14/21 15:00

Matrix: Ground Water **Sampled:** 09/14/21 09:10 **Work Order:** AE05696

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden/Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*47*	*1*	*50.0*	*94 %*	*41-142*	*1I22007*	*EPA 8260D*	*09/22/21 14:02*	*nmc*	
Dibromofluoromethane	*52*	*1*	*50.0*	*104 %*	*53-146*	*1I22007*	*EPA 8260D*	*09/22/21 14:02*	*nmc*	
Toluene-d8	*47*	*1*	*50.0*	*94 %*	*41-146*	*1I22007*	*EPA 8260D*	*09/22/21 14:02*	*nmc*	

ANALYTICAL RESULTS

Description: LC34-RW10A-20210914 **Lab Sample ID:** AE05696-09 **Received:** 09/14/21 15:00

Matrix: Ground Water **Sampled:** 09/14/21 09:20 **Work Order:** AE05696

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden/Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	8.0	U	ug/L	10	8.0	25	1I22007	EPA 8260D	09/22/21 14:30	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	5.4	U	ug/L	10	5.4	25	1I22007	EPA 8260D	09/22/21 14:30	nmc	
1,1,2-Trichloroethane [79-00-5]^	7.6	U	ug/L	10	7.6	25	1I22007	EPA 8260D	09/22/21 14:30	nmc	
1,1-Dichloroethane [75-34-3]^	6.2	U	ug/L	10	6.2	25	1I22007	EPA 8260D	09/22/21 14:30	nmc	
1,1-Dichloroethene [75-35-4]^	9.4	U	ug/L	10	9.4	25	1I22007	EPA 8260D	09/22/21 14:30	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	7.0	U	ug/L	10	7.0	25	1I22007	EPA 8260D	09/22/21 14:30	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	9.6	U	ug/L	10	9.6	25	1I22007	EPA 8260D	09/22/21 14:30	nmc	
1,2-Dibromoethane [106-93-4]^	7.8	U	ug/L	10	7.8	25	1I22007	EPA 8260D	09/22/21 14:30	nmc	
1,2-Dichlorobenzene [95-50-1]^	7.3	U	ug/L	10	7.3	25	1I22007	EPA 8260D	09/22/21 14:30	nmc	
1,2-Dichloroethane [107-06-2]^	6.3	U	ug/L	10	6.3	25	1I22007	EPA 8260D	09/22/21 14:30	nmc	
1,2-Dichloropropane [78-87-5]^	8.0	U	ug/L	10	8.0	25	1I22007	EPA 8260D	09/22/21 14:30	nmc	
1,3-Dichlorobenzene [541-73-1]^	7.7	U	ug/L	10	7.7	25	1I22007	EPA 8260D	09/22/21 14:30	nmc	
1,4-Dichlorobenzene [106-46-7]^	7.6	U	ug/L	10	7.6	25	1I22007	EPA 8260D	09/22/21 14:30	nmc	
2-Butanone [78-93-3]^	45	U	ug/L	10	45	120	1I22007	EPA 8260D	09/22/21 14:30	nmc	
2-Hexanone [591-78-6]^	25	U	ug/L	10	25	120	1I22007	EPA 8260D	09/22/21 14:30	nmc	
4-Methyl-2-pentanone [108-10-1]^	25	U	ug/L	10	25	120	1I22007	EPA 8260D	09/22/21 14:30	nmc	
Acetone [67-64-1]^	100	U	ug/L	10	100	250	1I22007	EPA 8260D	09/22/21 14:30	nmc	
Benzene [71-43-2]^	7.1	U	ug/L	10	7.1	25	1I22007	EPA 8260D	09/22/21 14:30	nmc	
Bromodichloromethane [75-27-4]^	5.2	U	ug/L	10	5.2	25	1I22007	EPA 8260D	09/22/21 14:30	nmc	
Bromoform [75-25-2]^	7.5	U	ug/L	10	7.5	25	1I22007	EPA 8260D	09/22/21 14:30	nmc	
Bromomethane [74-83-9]^	9.5	U	ug/L	10	9.5	25	1I22007	EPA 8260D	09/22/21 14:30	nmc	QV-01
Carbon disulfide [75-15-0]^	25	U	ug/L	10	25	120	1I22007	EPA 8260D	09/22/21 14:30	nmc	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	9.4	U	ug/L	10	9.4	25	1I22007	EPA 8260D	09/22/21 14:30	nmc	
Chlorobenzene [108-90-7]^	7.2	U	ug/L	10	7.2	25	1I22007	EPA 8260D	09/22/21 14:30	nmc	
Chloroethane [75-00-3]^	9.8	U	ug/L	10	9.8	25	1I22007	EPA 8260D	09/22/21 14:30	nmc	QV-01
Chloroform [67-66-3]^	8.0	U	ug/L	10	8.0	25	1I22007	EPA 8260D	09/22/21 14:30	nmc	
Chloromethane [74-87-3]^	8.2	U	ug/L	10	8.2	25	1I22007	EPA 8260D	09/22/21 14:30	nmc	QV-01
cis-1,2-Dichloroethene [156-59-2]^	**1200**		ug/L	50	26	120	1I21007	EPA 8260D	09/21/21 15:39	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	5.9	U	ug/L	10	5.9	25	1I22007	EPA 8260D	09/22/21 14:30	nmc	
Cyclohexane [110-82-7]^	9.3	U	ug/L	10	9.3	25	1I22007	EPA 8260D	09/22/21 14:30	nmc	
Dibromochloromethane [124-48-1]^	5.0	U	ug/L	10	5.0	25	1I22007	EPA 8260D	09/22/21 14:30	nmc	
Dichlorodifluoromethane [75-71-8]^	7.4	U	ug/L	10	7.4	25	1I22007	EPA 8260D	09/22/21 14:30	nmc	QV-01
Ethylbenzene [100-41-4]^	6.9	U	ug/L	10	6.9	25	1I22007	EPA 8260D	09/22/21 14:30	nmc	
Freon 113 [76-13-1]^	7.3	U	ug/L	10	7.3	25	1I22007	EPA 8260D	09/22/21 14:30	nmc	
Isopropylbenzene [98-82-8]^	6.7	U	ug/L	10	6.7	25	1I22007	EPA 8260D	09/22/21 14:30	nmc	
Methyl acetate [79-20-9]^	9.5	U	ug/L	10	9.5	25	1I22007	EPA 8260D	09/22/21 14:30	nmc	
Methylene Chloride [75-09-2]^	25	U	ug/L	10	25	120	1I22007	EPA 8260D	09/22/21 14:30	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	6.0	U	ug/L	10	6.0	25	1I22007	EPA 8260D	09/22/21 14:30	nmc	
Styrene [100-42-5]^	6.1	U	ug/L	10	6.1	25	1I22007	EPA 8260D	09/22/21 14:30	nmc	
Tetrachloroethene [127-18-4]^	7.6	U	ug/L	10	7.6	25	1I22007	EPA 8260D	09/22/21 14:30	nmc	
Toluene [108-88-3]^	7.2	U	ug/L	10	7.2	25	1I22007	EPA 8260D	09/22/21 14:30	nmc	
trans-1,2-Dichloroethene [156-60-5]^	**53**		ug/L	10	7.3	25	1I22007	EPA 8260D	09/22/21 14:30	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	7.3	U	ug/L	10	7.3	25	1I22007	EPA 8260D	09/22/21 14:30	nmc	
Trichloroethene [79-01-6]^	8.9	U	ug/L	10	8.9	25	1I22007	EPA 8260D	09/22/21 14:30	nmc	
Trichlorofluoromethane [75-69-4]^	9.4	U	ug/L	10	9.4	25	1I22007	EPA 8260D	09/22/21 14:30	nmc	QV-01
Vinyl chloride [75-01-4]^	**770**		ug/L	10	7.1	25	1I22007	EPA 8260D	09/22/21 14:30	nmc	

ANALYTICAL RESULTS

Description: LC34-RW10A-20210914 **Lab Sample ID:** AE05696-09 **Received:** 09/14/21 15:00

Matrix: Ground Water **Sampled:** 09/14/21 09:20 **Work Order:** AE05696

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden/Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*46*	*1*	*50.0*	*91 %*	*41-142*	*1I21007*	*EPA 8260D*	*09/21/21 15:39*	*nmc*	
4-Bromofluorobenzene	*46*	*1*	*50.0*	*92 %*	*41-142*	*1I22007*	*EPA 8260D*	*09/22/21 14:30*	*nmc*	
Dibromofluoromethane	*51*	*1*	*50.0*	*103 %*	*53-146*	*1I21007*	*EPA 8260D*	*09/21/21 15:39*	*nmc*	
Dibromofluoromethane	*52*	*1*	*50.0*	*103 %*	*53-146*	*1I22007*	*EPA 8260D*	*09/22/21 14:30*	*nmc*	
Toluene-d8	*46*	*1*	*50.0*	*92 %*	*41-146*	*1I21007*	*EPA 8260D*	*09/21/21 15:39*	*nmc*	
Toluene-d8	*51*	*1*	*50.0*	*103 %*	*41-146*	*1I22007*	*EPA 8260D*	*09/22/21 14:30*	*nmc*	

ANALYTICAL RESULTS

Description: LC34-RW12A-20210914 **Lab Sample ID:** AE05696-10 **Received:** 09/14/21 15:00

Matrix: Ground Water **Sampled:** 09/14/21 09:30 **Work Order:** AE05696

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden/Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	40	U	ug/L	50	40	120	1I21007	EPA 8260D	09/21/21 16:08	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	27	U	ug/L	50	27	120	1I21007	EPA 8260D	09/21/21 16:08	nmc	
1,1,2-Trichloroethane [79-00-5]^	38	U	ug/L	50	38	120	1I21007	EPA 8260D	09/21/21 16:08	nmc	
1,1-Dichloroethane [75-34-3]^	31	U	ug/L	50	31	120	1I21007	EPA 8260D	09/21/21 16:08	nmc	
1,1-Dichloroethene [75-35-4]^	47	U	ug/L	50	47	120	1I21007	EPA 8260D	09/21/21 16:08	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	35	U	ug/L	50	35	120	1I21007	EPA 8260D	09/21/21 16:08	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	48	U	ug/L	50	48	120	1I21007	EPA 8260D	09/21/21 16:08	nmc	
1,2-Dibromoethane [106-93-4]^	39	U	ug/L	50	39	120	1I21007	EPA 8260D	09/21/21 16:08	nmc	
1,2-Dichlorobenzene [95-50-1]^	36	U	ug/L	50	36	120	1I21007	EPA 8260D	09/21/21 16:08	nmc	
1,2-Dichloroethane [107-06-2]^	32	U	ug/L	50	32	120	1I21007	EPA 8260D	09/21/21 16:08	nmc	
1,2-Dichloropropane [78-87-5]^	40	U	ug/L	50	40	120	1I21007	EPA 8260D	09/21/21 16:08	nmc	
1,3-Dichlorobenzene [541-73-1]^	38	U	ug/L	50	38	120	1I21007	EPA 8260D	09/21/21 16:08	nmc	
1,4-Dichlorobenzene [106-46-7]^	38	U	ug/L	50	38	120	1I21007	EPA 8260D	09/21/21 16:08	nmc	
2-Butanone [78-93-3]^	220	U	ug/L	50	220	620	1I21007	EPA 8260D	09/21/21 16:08	nmc	
2-Hexanone [591-78-6]^	120	U	ug/L	50	120	620	1I21007	EPA 8260D	09/21/21 16:08	nmc	
4-Methyl-2-pentanone [108-10-1]^	120	U	ug/L	50	120	620	1I21007	EPA 8260D	09/21/21 16:08	nmc	
Acetone [67-64-1]^	500	U	ug/L	50	500	1200	1I21007	EPA 8260D	09/21/21 16:08	nmc	
Benzene [71-43-2]^	36	U	ug/L	50	36	120	1I21007	EPA 8260D	09/21/21 16:08	nmc	
Bromodichloromethane [75-27-4]^	26	U	ug/L	50	26	120	1I21007	EPA 8260D	09/21/21 16:08	nmc	
Bromoform [75-25-2]^	38	U	ug/L	50	38	120	1I21007	EPA 8260D	09/21/21 16:08	nmc	
Bromomethane [74-83-9]^	48	U	ug/L	50	48	120	1I21007	EPA 8260D	09/21/21 16:08	nmc	QV-01
Carbon disulfide [75-15-0]^	120	U	ug/L	50	120	620	1I21007	EPA 8260D	09/21/21 16:08	nmc	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	47	U	ug/L	50	47	120	1I21007	EPA 8260D	09/21/21 16:08	nmc	
Chlorobenzene [108-90-7]^	36	U	ug/L	50	36	120	1I21007	EPA 8260D	09/21/21 16:08	nmc	
Chloroethane [75-00-3]^	49	U	ug/L	50	49	120	1I21007	EPA 8260D	09/21/21 16:08	nmc	QV-01
Chloroform [67-66-3]^	40	U	ug/L	50	40	120	1I21007	EPA 8260D	09/21/21 16:08	nmc	
Chloromethane [74-87-3]^	41	U	ug/L	50	41	120	1I21007	EPA 8260D	09/21/21 16:08	nmc	
cis-1,2-Dichloroethene [156-59-2]^	**5200**		ug/L	200	110	500	1I23015	EPA 8260D	09/23/21 17:41	kkw	
cis-1,3-Dichloropropene [10061-01-5]^	30	U	ug/L	50	30	120	1I21007	EPA 8260D	09/21/21 16:08	nmc	
Cyclohexane [110-82-7]^	46	U	ug/L	50	46	120	1I21007	EPA 8260D	09/21/21 16:08	nmc	
Dibromochloromethane [124-48-1]^	25	U	ug/L	50	25	120	1I21007	EPA 8260D	09/21/21 16:08	nmc	
Dichlorodifluoromethane [75-71-8]^	37	U	ug/L	50	37	120	1I21007	EPA 8260D	09/21/21 16:08	nmc	QV-01
Ethylbenzene [100-41-4]^	34	U	ug/L	50	34	120	1I21007	EPA 8260D	09/21/21 16:08	nmc	
Freon 113 [76-13-1]^	36	U	ug/L	50	36	120	1I21007	EPA 8260D	09/21/21 16:08	nmc	QV-01
Isopropylbenzene [98-82-8]^	34	U	ug/L	50	34	120	1I21007	EPA 8260D	09/21/21 16:08	nmc	
Methyl acetate [79-20-9]^	48	U	ug/L	50	48	120	1I21007	EPA 8260D	09/21/21 16:08	nmc	
Methylene Chloride [75-09-2]^	120	U	ug/L	50	120	620	1I21007	EPA 8260D	09/21/21 16:08	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	30	U	ug/L	50	30	120	1I21007	EPA 8260D	09/21/21 16:08	nmc	
Styrene [100-42-5]^	30	U	ug/L	50	30	120	1I21007	EPA 8260D	09/21/21 16:08	nmc	
Tetrachloroethene [127-18-4]^	38	U	ug/L	50	38	120	1I21007	EPA 8260D	09/21/21 16:08	nmc	
Toluene [108-88-3]^	36	U	ug/L	50	36	120	1I21007	EPA 8260D	09/21/21 16:08	nmc	
trans-1,2-Dichloroethene [156-60-5]^	**140**		ug/L	50	36	120	1I21007	EPA 8260D	09/21/21 16:08	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	36	U	ug/L	50	36	120	1I21007	EPA 8260D	09/21/21 16:08	nmc	
Trichloroethene [79-01-6]^	44	U	ug/L	50	44	120	1I21007	EPA 8260D	09/21/21 16:08	nmc	
Trichlorofluoromethane [75-69-4]^	47	U	ug/L	50	47	120	1I21007	EPA 8260D	09/21/21 16:08	nmc	
Vinyl chloride [75-01-4]^	**1100**		ug/L	50	36	120	1I21007	EPA 8260D	09/21/21 16:08	nmc	

ANALYTICAL RESULTS

Description: LC34-RW12A-20210914 **Lab Sample ID:** AE05696-10 **Received:** 09/14/21 15:00

Matrix: Ground Water **Sampled:** 09/14/21 09:30 **Work Order:** AE05696

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden/Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*47*	*1*	*50.0*	*93 %*	*41-142*	*1I21007*	*EPA 8260D*	*09/21/21 16:08*	*nmc*	
4-Bromofluorobenzene	*54*	*1*	*50.0*	*107 %*	*41-142*	*1I23015*	*EPA 8260D*	*09/23/21 17:41*	*kkw*	
Dibromofluoromethane	*51*	*1*	*50.0*	*103 %*	*53-146*	*1I21007*	*EPA 8260D*	*09/21/21 16:08*	*nmc*	
Dibromofluoromethane	*54*	*1*	*50.0*	*108 %*	*53-146*	*1I23015*	*EPA 8260D*	*09/23/21 17:41*	*kkw*	
Toluene-d8	*46*	*1*	*50.0*	*91 %*	*41-146*	*1I21007*	*EPA 8260D*	*09/21/21 16:08*	*nmc*	
Toluene-d8	*51*	*1*	*50.0*	*101 %*	*41-146*	*1I23015*	*EPA 8260D*	*09/23/21 17:41*	*kkw*	

ANALYTICAL RESULTS

Description: LC34-RW13A-20210914 **Lab Sample ID:** AE05696-11 **Received:** 09/14/21 15:00

Matrix: Ground Water **Sampled:** 09/14/21 09:40 **Work Order:** AE05696

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden/Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	40	U	ug/L	50	40	120	1I21007	EPA 8260D	09/21/21 16:36	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	27	U	ug/L	50	27	120	1I21007	EPA 8260D	09/21/21 16:36	nmc	
1,1,2-Trichloroethane [79-00-5]^	38	U	ug/L	50	38	120	1I21007	EPA 8260D	09/21/21 16:36	nmc	
1,1-Dichloroethane [75-34-3]^	31	U	ug/L	50	31	120	1I21007	EPA 8260D	09/21/21 16:36	nmc	
1,1-Dichloroethene [75-35-4]^	47	U	ug/L	50	47	120	1I21007	EPA 8260D	09/21/21 16:36	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	35	U	ug/L	50	35	120	1I21007	EPA 8260D	09/21/21 16:36	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	48	U	ug/L	50	48	120	1I21007	EPA 8260D	09/21/21 16:36	nmc	
1,2-Dibromoethane [106-93-4]^	39	U	ug/L	50	39	120	1I21007	EPA 8260D	09/21/21 16:36	nmc	
1,2-Dichlorobenzene [95-50-1]^	36	U	ug/L	50	36	120	1I21007	EPA 8260D	09/21/21 16:36	nmc	
1,2-Dichloroethane [107-06-2]^	32	U	ug/L	50	32	120	1I21007	EPA 8260D	09/21/21 16:36	nmc	
1,2-Dichloropropane [78-87-5]^	40	U	ug/L	50	40	120	1I21007	EPA 8260D	09/21/21 16:36	nmc	
1,3-Dichlorobenzene [541-73-1]^	38	U	ug/L	50	38	120	1I21007	EPA 8260D	09/21/21 16:36	nmc	
1,4-Dichlorobenzene [106-46-7]^	38	U	ug/L	50	38	120	1I21007	EPA 8260D	09/21/21 16:36	nmc	
2-Butanone [78-93-3]^	220	U	ug/L	50	220	620	1I21007	EPA 8260D	09/21/21 16:36	nmc	
2-Hexanone [591-78-6]^	120	U	ug/L	50	120	620	1I21007	EPA 8260D	09/21/21 16:36	nmc	
4-Methyl-2-pentanone [108-10-1]^	120	U	ug/L	50	120	620	1I21007	EPA 8260D	09/21/21 16:36	nmc	
Acetone [67-64-1]^	500	U	ug/L	50	500	1200	1I21007	EPA 8260D	09/21/21 16:36	nmc	
Benzene [71-43-2]^	36	U	ug/L	50	36	120	1I21007	EPA 8260D	09/21/21 16:36	nmc	
Bromodichloromethane [75-27-4]^	26	U	ug/L	50	26	120	1I21007	EPA 8260D	09/21/21 16:36	nmc	
Bromoform [75-25-2]^	38	U	ug/L	50	38	120	1I21007	EPA 8260D	09/21/21 16:36	nmc	
Bromomethane [74-83-9]^	48	U	ug/L	50	48	120	1I21007	EPA 8260D	09/21/21 16:36	nmc	QV-01
Carbon disulfide [75-15-0]^	120	U	ug/L	50	120	620	1I21007	EPA 8260D	09/21/21 16:36	nmc	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	47	U	ug/L	50	47	120	1I21007	EPA 8260D	09/21/21 16:36	nmc	
Chlorobenzene [108-90-7]^	36	U	ug/L	50	36	120	1I21007	EPA 8260D	09/21/21 16:36	nmc	
Chloroethane [75-00-3]^	49	U	ug/L	50	49	120	1I21007	EPA 8260D	09/21/21 16:36	nmc	QV-01
Chloroform [67-66-3]^	40	U	ug/L	50	40	120	1I21007	EPA 8260D	09/21/21 16:36	nmc	
Chloromethane [74-87-3]^	41	U	ug/L	50	41	120	1I21007	EPA 8260D	09/21/21 16:36	nmc	
cis-1,2-Dichloroethene [156-59-2]^	**5900**		ug/L	200	110	500	1I23015	EPA 8260D	09/23/21 18:09	kkw	
cis-1,3-Dichloropropene [10061-01-5]^	30	U	ug/L	50	30	120	1I21007	EPA 8260D	09/21/21 16:36	nmc	
Cyclohexane [110-82-7]^	46	U	ug/L	50	46	120	1I21007	EPA 8260D	09/21/21 16:36	nmc	
Dibromochloromethane [124-48-1]^	25	U	ug/L	50	25	120	1I21007	EPA 8260D	09/21/21 16:36	nmc	
Dichlorodifluoromethane [75-71-8]^	37	U	ug/L	50	37	120	1I21007	EPA 8260D	09/21/21 16:36	nmc	QV-01
Ethylbenzene [100-41-4]^	34	U	ug/L	50	34	120	1I21007	EPA 8260D	09/21/21 16:36	nmc	
Freon 113 [76-13-1]^	36	U	ug/L	50	36	120	1I21007	EPA 8260D	09/21/21 16:36	nmc	QV-01
Isopropylbenzene [98-82-8]^	34	U	ug/L	50	34	120	1I21007	EPA 8260D	09/21/21 16:36	nmc	
Methyl acetate [79-20-9]^	48	U	ug/L	50	48	120	1I21007	EPA 8260D	09/21/21 16:36	nmc	
Methylene Chloride [75-09-2]^	120	U	ug/L	50	120	620	1I21007	EPA 8260D	09/21/21 16:36	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	30	U	ug/L	50	30	120	1I21007	EPA 8260D	09/21/21 16:36	nmc	
Styrene [100-42-5]^	30	U	ug/L	50	30	120	1I21007	EPA 8260D	09/21/21 16:36	nmc	
Tetrachloroethene [127-18-4]^	38	U	ug/L	50	38	120	1I21007	EPA 8260D	09/21/21 16:36	nmc	
Toluene [108-88-3]^	36	U	ug/L	50	36	120	1I21007	EPA 8260D	09/21/21 16:36	nmc	
trans-1,2-Dichloroethene [156-60-5]^	**100**	I	ug/L	50	36	120	1I21007	EPA 8260D	09/21/21 16:36	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	36	U	ug/L	50	36	120	1I21007	EPA 8260D	09/21/21 16:36	nmc	
Trichloroethene [79-01-6]^	**54**	I	ug/L	50	44	120	1I21007	EPA 8260D	09/21/21 16:36	nmc	
Trichlorofluoromethane [75-69-4]^	47	U	ug/L	50	47	120	1I21007	EPA 8260D	09/21/21 16:36	nmc	
Vinyl chloride [75-01-4]^	**1300**		ug/L	50	36	120	1I21007	EPA 8260D	09/21/21 16:36	nmc	

ANALYTICAL RESULTS

Description: LC34-RW13A-20210914 | **Lab Sample ID:** AE05696-11 | **Received:** 09/14/21 15:00

Matrix: Ground Water | **Sampled:** 09/14/21 09:40 | **Work Order:** AE05696

Project: NASA KSC LC34 | **Sampled By:** Chuck Sorden/Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*46*	*1*	*50.0*	*92 %*	*41-142*	*1I21007*	*EPA 8260D*	*09/21/21 16:36*	*nmc*	
4-Bromofluorobenzene	*53*	*1*	*50.0*	*107 %*	*41-142*	*1I23015*	*EPA 8260D*	*09/23/21 18:09*	*kkw*	
Dibromofluoromethane	*51*	*1*	*50.0*	*102 %*	*53-146*	*1I21007*	*EPA 8260D*	*09/21/21 16:36*	*nmc*	
Dibromofluoromethane	*53*	*1*	*50.0*	*105 %*	*53-146*	*1I23015*	*EPA 8260D*	*09/23/21 18:09*	*kkw*	
Toluene-d8	*46*	*1*	*50.0*	*93 %*	*41-146*	*1I21007*	*EPA 8260D*	*09/21/21 16:36*	*nmc*	
Toluene-d8	*50*	*1*	*50.0*	*99 %*	*41-146*	*1I23015*	*EPA 8260D*	*09/23/21 18:09*	*kkw*	

ANALYTICAL RESULTS

Description: LC34-RW14A-20210914 **Lab Sample ID:** AE05696-12 **Received:** 09/14/21 15:00

Matrix: Ground Water **Sampled:** 09/14/21 09:50 **Work Order:** AE05696

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden/Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	40	U	ug/L	50	40	120	1I21007	EPA 8260D	09/21/21 17:05	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	27	U	ug/L	50	27	120	1I21007	EPA 8260D	09/21/21 17:05	nmc	
1,1,2-Trichloroethane [79-00-5]^	38	U	ug/L	50	38	120	1I21007	EPA 8260D	09/21/21 17:05	nmc	
1,1-Dichloroethane [75-34-3]^	31	U	ug/L	50	31	120	1I21007	EPA 8260D	09/21/21 17:05	nmc	
1,1-Dichloroethene [75-35-4]^	47	U	ug/L	50	47	120	1I21007	EPA 8260D	09/21/21 17:05	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	35	U	ug/L	50	35	120	1I21007	EPA 8260D	09/21/21 17:05	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	48	U	ug/L	50	48	120	1I21007	EPA 8260D	09/21/21 17:05	nmc	
1,2-Dibromoethane [106-93-4]^	39	U	ug/L	50	39	120	1I21007	EPA 8260D	09/21/21 17:05	nmc	
1,2-Dichlorobenzene [95-50-1]^	36	U	ug/L	50	36	120	1I21007	EPA 8260D	09/21/21 17:05	nmc	
1,2-Dichloroethane [107-06-2]^	32	U	ug/L	50	32	120	1I21007	EPA 8260D	09/21/21 17:05	nmc	
1,2-Dichloropropane [78-87-5]^	40	U	ug/L	50	40	120	1I21007	EPA 8260D	09/21/21 17:05	nmc	
1,3-Dichlorobenzene [541-73-1]^	38	U	ug/L	50	38	120	1I21007	EPA 8260D	09/21/21 17:05	nmc	
1,4-Dichlorobenzene [106-46-7]^	38	U	ug/L	50	38	120	1I21007	EPA 8260D	09/21/21 17:05	nmc	
2-Butanone [78-93-3]^	220	U	ug/L	50	220	620	1I21007	EPA 8260D	09/21/21 17:05	nmc	
2-Hexanone [591-78-6]^	120	U	ug/L	50	120	620	1I21007	EPA 8260D	09/21/21 17:05	nmc	
4-Methyl-2-pentanone [108-10-1]^	120	U	ug/L	50	120	620	1I21007	EPA 8260D	09/21/21 17:05	nmc	
Acetone [67-64-1]^	500	U	ug/L	50	500	1200	1I21007	EPA 8260D	09/21/21 17:05	nmc	
Benzene [71-43-2]^	36	U	ug/L	50	36	120	1I21007	EPA 8260D	09/21/21 17:05	nmc	
Bromodichloromethane [75-27-4]^	26	U	ug/L	50	26	120	1I21007	EPA 8260D	09/21/21 17:05	nmc	
Bromoform [75-25-2]^	38	U	ug/L	50	38	120	1I21007	EPA 8260D	09/21/21 17:05	nmc	
Bromomethane [74-83-9]^	48	U	ug/L	50	48	120	1I21007	EPA 8260D	09/21/21 17:05	nmc	QV-01
Carbon disulfide [75-15-0]^	120	U	ug/L	50	120	620	1I21007	EPA 8260D	09/21/21 17:05	nmc	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	47	U	ug/L	50	47	120	1I21007	EPA 8260D	09/21/21 17:05	nmc	
Chlorobenzene [108-90-7]^	36	U	ug/L	50	36	120	1I21007	EPA 8260D	09/21/21 17:05	nmc	
Chloroethane [75-00-3]^	49	U	ug/L	50	49	120	1I21007	EPA 8260D	09/21/21 17:05	nmc	QV-01
Chloroform [67-66-3]^	40	U	ug/L	50	40	120	1I21007	EPA 8260D	09/21/21 17:05	nmc	
Chloromethane [74-87-3]^	41	U	ug/L	50	41	120	1I21007	EPA 8260D	09/21/21 17:05	nmc	
cis-1,2-Dichloroethene [156-59-2]^	**5200**		ug/L	200	110	500	1I23015	EPA 8260D	09/23/21 18:37	kkw	
cis-1,3-Dichloropropene [10061-01-5]^	30	U	ug/L	50	30	120	1I21007	EPA 8260D	09/21/21 17:05	nmc	
Cyclohexane [110-82-7]^	46	U	ug/L	50	46	120	1I21007	EPA 8260D	09/21/21 17:05	nmc	
Dibromochloromethane [124-48-1]^	25	U	ug/L	50	25	120	1I21007	EPA 8260D	09/21/21 17:05	nmc	
Dichlorodifluoromethane [75-71-8]^	37	U	ug/L	50	37	120	1I21007	EPA 8260D	09/21/21 17:05	nmc	QV-01
Ethylbenzene [100-41-4]^	34	U	ug/L	50	34	120	1I21007	EPA 8260D	09/21/21 17:05	nmc	
Freon 113 [76-13-1]^	36	U	ug/L	50	36	120	1I21007	EPA 8260D	09/21/21 17:05	nmc	QV-01
Isopropylbenzene [98-82-8]^	34	U	ug/L	50	34	120	1I21007	EPA 8260D	09/21/21 17:05	nmc	
Methyl acetate [79-20-9]^	48	U	ug/L	50	48	120	1I21007	EPA 8260D	09/21/21 17:05	nmc	
Methylene Chloride [75-09-2]^	120	U	ug/L	50	120	620	1I21007	EPA 8260D	09/21/21 17:05	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	30	U	ug/L	50	30	120	1I21007	EPA 8260D	09/21/21 17:05	nmc	
Styrene [100-42-5]^	30	U	ug/L	50	30	120	1I21007	EPA 8260D	09/21/21 17:05	nmc	
Tetrachloroethene [127-18-4]^	38	U	ug/L	50	38	120	1I21007	EPA 8260D	09/21/21 17:05	nmc	
Toluene [108-88-3]^	36	U	ug/L	50	36	120	1I21007	EPA 8260D	09/21/21 17:05	nmc	
trans-1,2-Dichloroethene [156-60-5]^	**110**	I	ug/L	50	36	120	1I21007	EPA 8260D	09/21/21 17:05	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	36	U	ug/L	50	36	120	1I21007	EPA 8260D	09/21/21 17:05	nmc	
Trichloroethene [79-01-6]^	44	U	ug/L	50	44	120	1I21007	EPA 8260D	09/21/21 17:05	nmc	
Trichlorofluoromethane [75-69-4]^	47	U	ug/L	50	47	120	1I21007	EPA 8260D	09/21/21 17:05	nmc	
Vinyl chloride [75-01-4]^	**1200**		ug/L	50	36	120	1I21007	EPA 8260D	09/21/21 17:05	nmc	

ANALYTICAL RESULTS

Description: LC34-RW14A-20210914 | **Lab Sample ID:** AE05696-12 | **Received:** 09/14/21 15:00

Matrix: Ground Water | **Sampled:** 09/14/21 09:50 | **Work Order:** AE05696

Project: NASA KSC LC34 | **Sampled By:** Chuck Sorden/Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*47*	*1*	*50.0*	*93 %*	*41-142*	*1I21007*	*EPA 8260D*	*09/21/21 17:05*	*nmc*	
4-Bromofluorobenzene	*53*	*1*	*50.0*	*106 %*	*41-142*	*1I23015*	*EPA 8260D*	*09/23/21 18:37*	*kkw*	
Dibromofluoromethane	*52*	*1*	*50.0*	*103 %*	*53-146*	*1I21007*	*EPA 8260D*	*09/21/21 17:05*	*nmc*	
Dibromofluoromethane	*53*	*1*	*50.0*	*106 %*	*53-146*	*1I23015*	*EPA 8260D*	*09/23/21 18:37*	*kkw*	
Toluene-d8	*47*	*1*	*50.0*	*93 %*	*41-146*	*1I21007*	*EPA 8260D*	*09/21/21 17:05*	*nmc*	
Toluene-d8	*50*	*1*	*50.0*	*99 %*	*41-146*	*1I23015*	*EPA 8260D*	*09/23/21 18:37*	*kkw*	

ANALYTICAL RESULTS

Description: LC34-RW15A-20210914 **Lab Sample ID:** AE05696-13 **Received:** 09/14/21 15:00

Matrix: Ground Water **Sampled:** 09/14/21 10:00 **Work Order:** AE05696

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden/Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	20	U	ug/L	25	20	62	1I21007	EPA 8260D	09/21/21 17:34	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	14	U	ug/L	25	14	62	1I21007	EPA 8260D	09/21/21 17:34	nmc	
1,1,2-Trichloroethane [79-00-5]^	19	U	ug/L	25	19	62	1I21007	EPA 8260D	09/21/21 17:34	nmc	
1,1-Dichloroethane [75-34-3]^	16	U	ug/L	25	16	62	1I21007	EPA 8260D	09/21/21 17:34	nmc	
1,1-Dichloroethene [75-35-4]^	24	U	ug/L	25	24	62	1I21007	EPA 8260D	09/21/21 17:34	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	18	U	ug/L	25	18	62	1I21007	EPA 8260D	09/21/21 17:34	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	24	U	ug/L	25	24	62	1I21007	EPA 8260D	09/21/21 17:34	nmc	
1,2-Dibromoethane [106-93-4]^	20	U	ug/L	25	20	62	1I21007	EPA 8260D	09/21/21 17:34	nmc	
1,2-Dichlorobenzene [95-50-1]^	18	U	ug/L	25	18	62	1I21007	EPA 8260D	09/21/21 17:34	nmc	
1,2-Dichloroethane [107-06-2]^	16	U	ug/L	25	16	62	1I21007	EPA 8260D	09/21/21 17:34	nmc	
1,2-Dichloropropane [78-87-5]^	20	U	ug/L	25	20	62	1I21007	EPA 8260D	09/21/21 17:34	nmc	
1,3-Dichlorobenzene [541-73-1]^	19	U	ug/L	25	19	62	1I21007	EPA 8260D	09/21/21 17:34	nmc	
1,4-Dichlorobenzene [106-46-7]^	19	U	ug/L	25	19	62	1I21007	EPA 8260D	09/21/21 17:34	nmc	
2-Butanone [78-93-3]^	110	U	ug/L	25	110	310	1I21007	EPA 8260D	09/21/21 17:34	nmc	
2-Hexanone [591-78-6]^	62	U	ug/L	25	62	310	1I21007	EPA 8260D	09/21/21 17:34	nmc	
4-Methyl-2-pentanone [108-10-1]^	62	U	ug/L	25	62	310	1I21007	EPA 8260D	09/21/21 17:34	nmc	
Acetone [67-64-1]^	250	U	ug/L	25	250	620	1I21007	EPA 8260D	09/21/21 17:34	nmc	
Benzene [71-43-2]^	18	U	ug/L	25	18	62	1I21007	EPA 8260D	09/21/21 17:34	nmc	
Bromodichloromethane [75-27-4]^	13	U	ug/L	25	13	62	1I21007	EPA 8260D	09/21/21 17:34	nmc	
Bromoform [75-25-2]^	19	U	ug/L	25	19	62	1I21007	EPA 8260D	09/21/21 17:34	nmc	
Bromomethane [74-83-9]^	24	U	ug/L	25	24	62	1I21007	EPA 8260D	09/21/21 17:34	nmc	QV-01
Carbon disulfide [75-15-0]^	62	U	ug/L	25	62	310	1I21007	EPA 8260D	09/21/21 17:34	nmc	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	24	U	ug/L	25	24	62	1I21007	EPA 8260D	09/21/21 17:34	nmc	
Chlorobenzene [108-90-7]^	18	U	ug/L	25	18	62	1I21007	EPA 8260D	09/21/21 17:34	nmc	
Chloroethane [75-00-3]^	24	U	ug/L	25	24	62	1I21007	EPA 8260D	09/21/21 17:34	nmc	QV-01
Chloroform [67-66-3]^	20	U	ug/L	25	20	62	1I21007	EPA 8260D	09/21/21 17:34	nmc	
Chloromethane [74-87-3]^	20	U	ug/L	25	20	62	1I21007	EPA 8260D	09/21/21 17:34	nmc	
cis-1,2-Dichloroethene [156-59-2]^	**2400**		ug/L	100	53	250	1I23015	EPA 8260D	09/23/21 19:05	kkw	
cis-1,3-Dichloropropene [10061-01-5]^	15	U	ug/L	25	15	62	1I21007	EPA 8260D	09/21/21 17:34	nmc	
Cyclohexane [110-82-7]^	23	U	ug/L	25	23	62	1I21007	EPA 8260D	09/21/21 17:34	nmc	
Dibromochloromethane [124-48-1]^	12	U	ug/L	25	12	62	1I21007	EPA 8260D	09/21/21 17:34	nmc	
Dichlorodifluoromethane [75-71-8]^	18	U	ug/L	25	18	62	1I21007	EPA 8260D	09/21/21 17:34	nmc	QV-01
Ethylbenzene [100-41-4]^	17	U	ug/L	25	17	62	1I21007	EPA 8260D	09/21/21 17:34	nmc	
Freon 113 [76-13-1]^	18	U	ug/L	25	18	62	1I21007	EPA 8260D	09/21/21 17:34	nmc	QV-01
Isopropylbenzene [98-82-8]^	17	U	ug/L	25	17	62	1I21007	EPA 8260D	09/21/21 17:34	nmc	
Methyl acetate [79-20-9]^	24	U	ug/L	25	24	62	1I21007	EPA 8260D	09/21/21 17:34	nmc	
Methylene Chloride [75-09-2]^	62	U	ug/L	25	62	310	1I21007	EPA 8260D	09/21/21 17:34	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	15	U	ug/L	25	15	62	1I21007	EPA 8260D	09/21/21 17:34	nmc	
Styrene [100-42-5]^	15	U	ug/L	25	15	62	1I21007	EPA 8260D	09/21/21 17:34	nmc	
Tetrachloroethene [127-18-4]^	19	U	ug/L	25	19	62	1I21007	EPA 8260D	09/21/21 17:34	nmc	
Toluene [108-88-3]^	18	U	ug/L	25	18	62	1I21007	EPA 8260D	09/21/21 17:34	nmc	
trans-1,2-Dichloroethene [156-60-5]^	**46**	I	ug/L	25	18	62	1I21007	EPA 8260D	09/21/21 17:34	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	18	U	ug/L	25	18	62	1I21007	EPA 8260D	09/21/21 17:34	nmc	
Trichloroethene [79-01-6]^	22	U	ug/L	25	22	62	1I21007	EPA 8260D	09/21/21 17:34	nmc	
Trichlorofluoromethane [75-69-4]^	24	U	ug/L	25	24	62	1I21007	EPA 8260D	09/21/21 17:34	nmc	
Vinyl chloride [75-01-4]^	**590**		ug/L	25	18	62	1I21007	EPA 8260D	09/21/21 17:34	nmc	

ANALYTICAL RESULTS

Description: LC34-RW15A-20210914 | **Lab Sample ID:** AE05696-13 | **Received:** 09/14/21 15:00

Matrix: Ground Water | **Sampled:** 09/14/21 10:00 | **Work Order:** AE05696

Project: NASA KSC LC34 | **Sampled By:** Chuck Sorden/Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*46*	*1*	*50.0*	*92 %*	*41-142*	*1I21007*	*EPA 8260D*	*09/21/21 17:34*	*nmc*	
4-Bromofluorobenzene	*54*	*1*	*50.0*	*108 %*	*41-142*	*1I23015*	*EPA 8260D*	*09/23/21 19:05*	*kkw*	
Dibromofluoromethane	*50*	*1*	*50.0*	*101 %*	*53-146*	*1I21007*	*EPA 8260D*	*09/21/21 17:34*	*nmc*	
Dibromofluoromethane	*53*	*1*	*50.0*	*106 %*	*53-146*	*1I23015*	*EPA 8260D*	*09/23/21 19:05*	*kkw*	
Toluene-d8	*48*	*1*	*50.0*	*95 %*	*41-146*	*1I21007*	*EPA 8260D*	*09/21/21 17:34*	*nmc*	
Toluene-d8	*50*	*1*	*50.0*	*100 %*	*41-146*	*1I23015*	*EPA 8260D*	*09/23/21 19:05*	*kkw*	

ANALYTICAL RESULTS

Description: LC34-RW16B-20210914 **Lab Sample ID:** AE05696-14 **Received:** 09/14/21 15:00

Matrix: Ground Water **Sampled:** 09/14/21 10:10 **Work Order:** AE05696

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden/Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	2.0	U	ug/L	2.5	2.0	6.2	1I21007	EPA 8260D	09/21/21 18:02	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	1.4	U	ug/L	2.5	1.4	6.2	1I21007	EPA 8260D	09/21/21 18:02	nmc	
1,1,2-Trichloroethane [79-00-5]^	1.9	U	ug/L	2.5	1.9	6.2	1I21007	EPA 8260D	09/21/21 18:02	nmc	
1,1-Dichloroethane [75-34-3]^	1.6	U	ug/L	2.5	1.6	6.2	1I21007	EPA 8260D	09/21/21 18:02	nmc	
1,1-Dichloroethene [75-35-4]^	2.4	U	ug/L	2.5	2.4	6.2	1I21007	EPA 8260D	09/21/21 18:02	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	1.8	U	ug/L	2.5	1.8	6.2	1I21007	EPA 8260D	09/21/21 18:02	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	2.4	U	ug/L	2.5	2.4	6.2	1I21007	EPA 8260D	09/21/21 18:02	nmc	
1,2-Dibromoethane [106-93-4]^	2.0	U	ug/L	2.5	2.0	6.2	1I21007	EPA 8260D	09/21/21 18:02	nmc	
1,2-Dichlorobenzene [95-50-1]^	1.8	U	ug/L	2.5	1.8	6.2	1I21007	EPA 8260D	09/21/21 18:02	nmc	
1,2-Dichloroethane [107-06-2]^	1.6	U	ug/L	2.5	1.6	6.2	1I21007	EPA 8260D	09/21/21 18:02	nmc	
1,2-Dichloropropane [78-87-5]^	2.0	U	ug/L	2.5	2.0	6.2	1I21007	EPA 8260D	09/21/21 18:02	nmc	
1,3-Dichlorobenzene [541-73-1]^	1.9	U	ug/L	2.5	1.9	6.2	1I21007	EPA 8260D	09/21/21 18:02	nmc	
1,4-Dichlorobenzene [106-46-7]^	1.9	U	ug/L	2.5	1.9	6.2	1I21007	EPA 8260D	09/21/21 18:02	nmc	
2-Butanone [78-93-3]^	11	U	ug/L	2.5	11	31	1I21007	EPA 8260D	09/21/21 18:02	nmc	
2-Hexanone [591-78-6]^	6.2	U	ug/L	2.5	6.2	31	1I21007	EPA 8260D	09/21/21 18:02	nmc	
4-Methyl-2-pentanone [108-10-1]^	6.2	U	ug/L	2.5	6.2	31	1I21007	EPA 8260D	09/21/21 18:02	nmc	
Acetone [67-64-1]^	25	U	ug/L	2.5	25	62	1I21007	EPA 8260D	09/21/21 18:02	nmc	
Benzene [71-43-2]^	1.8	U	ug/L	2.5	1.8	6.2	1I21007	EPA 8260D	09/21/21 18:02	nmc	
Bromodichloromethane [75-27-4]^	1.3	U	ug/L	2.5	1.3	6.2	1I21007	EPA 8260D	09/21/21 18:02	nmc	
Bromoform [75-25-2]^	1.9	U	ug/L	2.5	1.9	6.2	1I21007	EPA 8260D	09/21/21 18:02	nmc	
Bromomethane [74-83-9]^	2.4	U	ug/L	2.5	2.4	6.2	1I21007	EPA 8260D	09/21/21 18:02	nmc	QV-01
Carbon disulfide [75-15-0]^	6.2	U	ug/L	2.5	6.2	31	1I21007	EPA 8260D	09/21/21 18:02	nmc	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	2.4	U	ug/L	2.5	2.4	6.2	1I21007	EPA 8260D	09/21/21 18:02	nmc	
Chlorobenzene [108-90-7]^	1.8	U	ug/L	2.5	1.8	6.2	1I21007	EPA 8260D	09/21/21 18:02	nmc	
Chloroethane [75-00-3]^	2.4	U	ug/L	2.5	2.4	6.2	1I21007	EPA 8260D	09/21/21 18:02	nmc	QV-01
Chloroform [67-66-3]^	2.0	U	ug/L	2.5	2.0	6.2	1I21007	EPA 8260D	09/21/21 18:02	nmc	
Chloromethane [74-87-3]^	2.0	U	ug/L	2.5	2.0	6.2	1I21007	EPA 8260D	09/21/21 18:02	nmc	
cis-1,2-Dichloroethene [156-59-2]^	**230**		ug/L	2.5	1.3	6.2	1I21007	EPA 8260D	09/21/21 18:02	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	1.5	U	ug/L	2.5	1.5	6.2	1I21007	EPA 8260D	09/21/21 18:02	nmc	
Cyclohexane [110-82-7]^	2.3	U	ug/L	2.5	2.3	6.2	1I21007	EPA 8260D	09/21/21 18:02	nmc	
Dibromochloromethane [124-48-1]^	1.2	U	ug/L	2.5	1.2	6.2	1I21007	EPA 8260D	09/21/21 18:02	nmc	
Dichlorodifluoromethane [75-71-8]^	1.8	U	ug/L	2.5	1.8	6.2	1I21007	EPA 8260D	09/21/21 18:02	nmc	QV-01
Ethylbenzene [100-41-4]^	1.7	U	ug/L	2.5	1.7	6.2	1I21007	EPA 8260D	09/21/21 18:02	nmc	
Freon 113 [76-13-1]^	1.8	U	ug/L	2.5	1.8	6.2	1I21007	EPA 8260D	09/21/21 18:02	nmc	QV-01
Isopropylbenzene [98-82-8]^	1.7	U	ug/L	2.5	1.7	6.2	1I21007	EPA 8260D	09/21/21 18:02	nmc	
Methyl acetate [79-20-9]^	2.4	U	ug/L	2.5	2.4	6.2	1I21007	EPA 8260D	09/21/21 18:02	nmc	
Methylene Chloride [75-09-2]^	6.2	U	ug/L	2.5	6.2	31	1I21007	EPA 8260D	09/21/21 18:02	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	1.5	U	ug/L	2.5	1.5	6.2	1I21007	EPA 8260D	09/21/21 18:02	nmc	
Styrene [100-42-5]^	1.5	U	ug/L	2.5	1.5	6.2	1I21007	EPA 8260D	09/21/21 18:02	nmc	
Tetrachloroethene [127-18-4]^	1.9	U	ug/L	2.5	1.9	6.2	1I21007	EPA 8260D	09/21/21 18:02	nmc	
Toluene [108-88-3]^	1.8	U	ug/L	2.5	1.8	6.2	1I21007	EPA 8260D	09/21/21 18:02	nmc	
trans-1,2-Dichloroethene [156-60-5]^	**7.8**		ug/L	2.5	1.8	6.2	1I21007	EPA 8260D	09/21/21 18:02	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	1.8	U	ug/L	2.5	1.8	6.2	1I21007	EPA 8260D	09/21/21 18:02	nmc	
Trichloroethene [79-01-6]^	**25**		ug/L	2.5	2.2	6.2	1I21007	EPA 8260D	09/21/21 18:02	nmc	
Trichlorofluoromethane [75-69-4]^	2.4	U	ug/L	2.5	2.4	6.2	1I21007	EPA 8260D	09/21/21 18:02	nmc	
Vinyl chloride [75-01-4]^	**39**		ug/L	2.5	1.8	6.2	1I21007	EPA 8260D	09/21/21 18:02	nmc	

ANALYTICAL RESULTS

Description: LC34-RW16B-20210914 **Lab Sample ID:** AE05696-14 **Received:** 09/14/21 15:00

Matrix: Ground Water **Sampled:** 09/14/21 10:10 **Work Order:** AE05696

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden/Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*46*	*1*	*50.0*	*92 %*	*41-142*	*1I21007*	*EPA 8260D*	*09/21/21 18:02*	*nmc*	
Dibromofluoromethane	*50*	*1*	*50.0*	*101 %*	*53-146*	*1I21007*	*EPA 8260D*	*09/21/21 18:02*	*nmc*	
Toluene-d8	*46*	*1*	*50.0*	*92 %*	*41-146*	*1I21007*	*EPA 8260D*	*09/21/21 18:02*	*nmc*	

ANALYTICAL RESULTS

Description: LC34-RW17C-20210914 **Lab Sample ID:** AE05696-15 **Received:** 09/14/21 15:00

Matrix: Ground Water **Sampled:** 09/14/21 10:20 **Work Order:** AE05696

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden/Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	800	U	ug/L	1000	800	2500	1I21007	EPA 8260D	09/21/21 18:31	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	540	U	ug/L	1000	540	2500	1I21007	EPA 8260D	09/21/21 18:31	nmc	
1,1,2-Trichloroethane [79-00-5]^	760	U	ug/L	1000	760	2500	1I21007	EPA 8260D	09/21/21 18:31	nmc	
1,1-Dichloroethane [75-34-3]^	620	U	ug/L	1000	620	2500	1I21007	EPA 8260D	09/21/21 18:31	nmc	
1,1-Dichloroethene [75-35-4]^	940	U	ug/L	1000	940	2500	1I21007	EPA 8260D	09/21/21 18:31	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	700	U	ug/L	1000	700	2500	1I21007	EPA 8260D	09/21/21 18:31	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	960	U	ug/L	1000	960	2500	1I21007	EPA 8260D	09/21/21 18:31	nmc	
1,2-Dibromoethane [106-93-4]^	780	U	ug/L	1000	780	2500	1I21007	EPA 8260D	09/21/21 18:31	nmc	
1,2-Dichlorobenzene [95-50-1]^	730	U	ug/L	1000	730	2500	1I21007	EPA 8260D	09/21/21 18:31	nmc	
1,2-Dichloroethane [107-06-2]^	630	U	ug/L	1000	630	2500	1I21007	EPA 8260D	09/21/21 18:31	nmc	
1,2-Dichloropropane [78-87-5]^	800	U	ug/L	1000	800	2500	1I21007	EPA 8260D	09/21/21 18:31	nmc	
1,3-Dichlorobenzene [541-73-1]^	770	U	ug/L	1000	770	2500	1I21007	EPA 8260D	09/21/21 18:31	nmc	
1,4-Dichlorobenzene [106-46-7]^	760	U	ug/L	1000	760	2500	1I21007	EPA 8260D	09/21/21 18:31	nmc	
2-Butanone [78-93-3]^	4500	U	ug/L	1000	4500	12000	1I21007	EPA 8260D	09/21/21 18:31	nmc	
2-Hexanone [591-78-6]^	2500	U	ug/L	1000	2500	12000	1I21007	EPA 8260D	09/21/21 18:31	nmc	
4-Methyl-2-pentanone [108-10-1]^	2500	U	ug/L	1000	2500	12000	1I21007	EPA 8260D	09/21/21 18:31	nmc	
Acetone [67-64-1]^	10000	U	ug/L	1000	10000	25000	1I21007	EPA 8260D	09/21/21 18:31	nmc	
Benzene [71-43-2]^	710	U	ug/L	1000	710	2500	1I21007	EPA 8260D	09/21/21 18:31	nmc	
Bromodichloromethane [75-27-4]^	520	U	ug/L	1000	520	2500	1I21007	EPA 8260D	09/21/21 18:31	nmc	
Bromoform [75-25-2]^	750	U	ug/L	1000	750	2500	1I21007	EPA 8260D	09/21/21 18:31	nmc	
Bromomethane [74-83-9]^	950	U	ug/L	1000	950	2500	1I21007	EPA 8260D	09/21/21 18:31	nmc	QV-01
Carbon disulfide [75-15-0]^	2500	U	ug/L	1000	2500	12000	1I21007	EPA 8260D	09/21/21 18:31	nmc	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	940	U	ug/L	1000	940	2500	1I21007	EPA 8260D	09/21/21 18:31	nmc	
Chlorobenzene [108-90-7]^	720	U	ug/L	1000	720	2500	1I21007	EPA 8260D	09/21/21 18:31	nmc	
Chloroethane [75-00-3]^	980	U	ug/L	1000	980	2500	1I21007	EPA 8260D	09/21/21 18:31	nmc	QV-01
Chloroform [67-66-3]^	800	U	ug/L	1000	800	2500	1I21007	EPA 8260D	09/21/21 18:31	nmc	
Chloromethane [74-87-3]^	820	U	ug/L	1000	820	2500	1I21007	EPA 8260D	09/21/21 18:31	nmc	
cis-1,2-Dichloroethene [156-59-2]^	**6500**		ug/L	1000	530	2500	1I21007	EPA 8260D	09/21/21 18:31	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	590	U	ug/L	1000	590	2500	1I21007	EPA 8260D	09/21/21 18:31	nmc	
Cyclohexane [110-82-7]^	930	U	ug/L	1000	930	2500	1I21007	EPA 8260D	09/21/21 18:31	nmc	
Dibromochloromethane [124-48-1]^	500	U	ug/L	1000	500	2500	1I21007	EPA 8260D	09/21/21 18:31	nmc	
Dichlorodifluoromethane [75-71-8]^	740	U	ug/L	1000	740	2500	1I21007	EPA 8260D	09/21/21 18:31	nmc	QV-01
Ethylbenzene [100-41-4]^	690	U	ug/L	1000	690	2500	1I21007	EPA 8260D	09/21/21 18:31	nmc	
Freon 113 [76-13-1]^	730	U	ug/L	1000	730	2500	1I21007	EPA 8260D	09/21/21 18:31	nmc	QV-01
Isopropylbenzene [98-82-8]^	670	U	ug/L	1000	670	2500	1I21007	EPA 8260D	09/21/21 18:31	nmc	
Methyl acetate [79-20-9]^	950	U	ug/L	1000	950	2500	1I21007	EPA 8260D	09/21/21 18:31	nmc	
Methylene Chloride [75-09-2]^	2500	U	ug/L	1000	2500	12000	1I21007	EPA 8260D	09/21/21 18:31	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	600	U	ug/L	1000	600	2500	1I21007	EPA 8260D	09/21/21 18:31	nmc	
Styrene [100-42-5]^	610	U	ug/L	1000	610	2500	1I21007	EPA 8260D	09/21/21 18:31	nmc	
Tetrachloroethene [127-18-4]^	760	U	ug/L	1000	760	2500	1I21007	EPA 8260D	09/21/21 18:31	nmc	
Toluene [108-88-3]^	720	U	ug/L	1000	720	2500	1I21007	EPA 8260D	09/21/21 18:31	nmc	
trans-1,2-Dichloroethene [156-60-5]^	730	U	ug/L	1000	730	2500	1I21007	EPA 8260D	09/21/21 18:31	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	730	U	ug/L	1000	730	2500	1I21007	EPA 8260D	09/21/21 18:31	nmc	
Trichloroethene [79-01-6]^	**190000**		ug/L	10000	8900	25000	1I23015	EPA 8260D	09/23/21 19:33	kkw	
Trichlorofluoromethane [75-69-4]^	940	U	ug/L	1000	940	2500	1I21007	EPA 8260D	09/21/21 18:31	nmc	
Vinyl chloride [75-01-4]^	710	U	ug/L	1000	710	2500	1I21007	EPA 8260D	09/21/21 18:31	nmc	

ANALYTICAL RESULTS

Description: LC34-RW17C-20210914 **Lab Sample ID:** AE05696-15 **Received:** 09/14/21 15:00

Matrix: Ground Water **Sampled:** 09/14/21 10:20 **Work Order:** AE05696

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden/Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*46*	*1*	*50.0*	*92 %*	*41-142*	*1I21007*	*EPA 8260D*	*09/21/21 18:31*	*nmc*	
4-Bromofluorobenzene	*53*	*1*	*50.0*	*105 %*	*41-142*	*1I23015*	*EPA 8260D*	*09/23/21 19:33*	*kkw*	
Dibromofluoromethane	*52*	*1*	*50.0*	*103 %*	*53-146*	*1I21007*	*EPA 8260D*	*09/21/21 18:31*	*nmc*	
Dibromofluoromethane	*54*	*1*	*50.0*	*108 %*	*53-146*	*1I23015*	*EPA 8260D*	*09/23/21 19:33*	*kkw*	
Toluene-d8	*46*	*1*	*50.0*	*92 %*	*41-146*	*1I21007*	*EPA 8260D*	*09/21/21 18:31*	*nmc*	
Toluene-d8	*51*	*1*	*50.0*	*102 %*	*41-146*	*1I23015*	*EPA 8260D*	*09/23/21 19:33*	*kkw*	

ANALYTICAL RESULTS

Description: LC34-RW18C-20210914 **Lab Sample ID:** AE05696-16 **Received:** 09/14/21 15:00

Matrix: Ground Water **Sampled:** 09/14/21 10:30 **Work Order:** AE05696

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden/Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	800	U	ug/L	1000	800	2500	1I22007	EPA 8260D	09/22/21 14:59	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	540	U	ug/L	1000	540	2500	1I22007	EPA 8260D	09/22/21 14:59	nmc	
1,1,2-Trichloroethane [79-00-5]^	760	U	ug/L	1000	760	2500	1I22007	EPA 8260D	09/22/21 14:59	nmc	
1,1-Dichloroethane [75-34-3]^	620	U	ug/L	1000	620	2500	1I22007	EPA 8260D	09/22/21 14:59	nmc	
1,1-Dichloroethene [75-35-4]^	940	U	ug/L	1000	940	2500	1I22007	EPA 8260D	09/22/21 14:59	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	700	U	ug/L	1000	700	2500	1I22007	EPA 8260D	09/22/21 14:59	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	960	U	ug/L	1000	960	2500	1I22007	EPA 8260D	09/22/21 14:59	nmc	
1,2-Dibromoethane [106-93-4]^	780	U	ug/L	1000	780	2500	1I22007	EPA 8260D	09/22/21 14:59	nmc	
1,2-Dichlorobenzene [95-50-1]^	730	U	ug/L	1000	730	2500	1I22007	EPA 8260D	09/22/21 14:59	nmc	
1,2-Dichloroethane [107-06-2]^	630	U	ug/L	1000	630	2500	1I22007	EPA 8260D	09/22/21 14:59	nmc	
1,2-Dichloropropane [78-87-5]^	800	U	ug/L	1000	800	2500	1I22007	EPA 8260D	09/22/21 14:59	nmc	
1,3-Dichlorobenzene [541-73-1]^	770	U	ug/L	1000	770	2500	1I22007	EPA 8260D	09/22/21 14:59	nmc	
1,4-Dichlorobenzene [106-46-7]^	760	U	ug/L	1000	760	2500	1I22007	EPA 8260D	09/22/21 14:59	nmc	
2-Butanone [78-93-3]^	4500	U	ug/L	1000	4500	12000	1I22007	EPA 8260D	09/22/21 14:59	nmc	
2-Hexanone [591-78-6]^	2500	U	ug/L	1000	2500	12000	1I22007	EPA 8260D	09/22/21 14:59	nmc	
4-Methyl-2-pentanone [108-10-1]^	2500	U	ug/L	1000	2500	12000	1I22007	EPA 8260D	09/22/21 14:59	nmc	
Acetone [67-64-1]^	10000	U	ug/L	1000	10000	25000	1I22007	EPA 8260D	09/22/21 14:59	nmc	
Benzene [71-43-2]^	710	U	ug/L	1000	710	2500	1I22007	EPA 8260D	09/22/21 14:59	nmc	
Bromodichloromethane [75-27-4]^	520	U	ug/L	1000	520	2500	1I22007	EPA 8260D	09/22/21 14:59	nmc	
Bromoform [75-25-2]^	750	U	ug/L	1000	750	2500	1I22007	EPA 8260D	09/22/21 14:59	nmc	
Bromomethane [74-83-9]^	950	U	ug/L	1000	950	2500	1I22007	EPA 8260D	09/22/21 14:59	nmc	QV-01
Carbon disulfide [75-15-0]^	2500	U	ug/L	1000	2500	12000	1I22007	EPA 8260D	09/22/21 14:59	nmc	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	940	U	ug/L	1000	940	2500	1I22007	EPA 8260D	09/22/21 14:59	nmc	
Chlorobenzene [108-90-7]^	720	U	ug/L	1000	720	2500	1I22007	EPA 8260D	09/22/21 14:59	nmc	
Chloroethane [75-00-3]^	980	U	ug/L	1000	980	2500	1I22007	EPA 8260D	09/22/21 14:59	nmc	QV-01
Chloroform [67-66-3]^	800	U	ug/L	1000	800	2500	1I22007	EPA 8260D	09/22/21 14:59	nmc	
Chloromethane [74-87-3]^	820	U	ug/L	1000	820	2500	1I22007	EPA 8260D	09/22/21 14:59	nmc	QV-01
cis-1,2-Dichloroethene [156-59-2]^	**3500**		ug/L	1000	530	2500	1I22007	EPA 8260D	09/22/21 14:59	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	590	U	ug/L	1000	590	2500	1I22007	EPA 8260D	09/22/21 14:59	nmc	
Cyclohexane [110-82-7]^	930	U	ug/L	1000	930	2500	1I22007	EPA 8260D	09/22/21 14:59	nmc	
Dibromochloromethane [124-48-1]^	500	U	ug/L	1000	500	2500	1I22007	EPA 8260D	09/22/21 14:59	nmc	
Dichlorodifluoromethane [75-71-8]^	740	U	ug/L	1000	740	2500	1I22007	EPA 8260D	09/22/21 14:59	nmc	QV-01
Ethylbenzene [100-41-4]^	690	U	ug/L	1000	690	2500	1I22007	EPA 8260D	09/22/21 14:59	nmc	
Freon 113 [76-13-1]^	730	U	ug/L	1000	730	2500	1I22007	EPA 8260D	09/22/21 14:59	nmc	
Isopropylbenzene [98-82-8]^	670	U	ug/L	1000	670	2500	1I22007	EPA 8260D	09/22/21 14:59	nmc	
Methyl acetate [79-20-9]^	950	U	ug/L	1000	950	2500	1I22007	EPA 8260D	09/22/21 14:59	nmc	
Methylene Chloride [75-09-2]^	2500	U	ug/L	1000	2500	12000	1I22007	EPA 8260D	09/22/21 14:59	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	600	U	ug/L	1000	600	2500	1I22007	EPA 8260D	09/22/21 14:59	nmc	
Styrene [100-42-5]^	610	U	ug/L	1000	610	2500	1I22007	EPA 8260D	09/22/21 14:59	nmc	
Tetrachloroethene [127-18-4]^	760	U	ug/L	1000	760	2500	1I22007	EPA 8260D	09/22/21 14:59	nmc	
Toluene [108-88-3]^	720	U	ug/L	1000	720	2500	1I22007	EPA 8260D	09/22/21 14:59	nmc	
trans-1,2-Dichloroethene [156-60-5]^	730	U	ug/L	1000	730	2500	1I22007	EPA 8260D	09/22/21 14:59	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	730	U	ug/L	1000	730	2500	1I22007	EPA 8260D	09/22/21 14:59	nmc	
Trichloroethene [79-01-6]^	**96000**		ug/L	1000	890	2500	1I22007	EPA 8260D	09/22/21 14:59	nmc	
Trichlorofluoromethane [75-69-4]^	940	U	ug/L	1000	940	2500	1I22007	EPA 8260D	09/22/21 14:59	nmc	QV-01
Vinyl chloride [75-01-4]^	710	U	ug/L	1000	710	2500	1I22007	EPA 8260D	09/22/21 14:59	nmc	

ANALYTICAL RESULTS

Description: LC34-RW18C-20210914 **Lab Sample ID:** AE05696-16 **Received:** 09/14/21 15:00

Matrix: Ground Water **Sampled:** 09/14/21 10:30 **Work Order:** AE05696

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden/Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*47*	*1*	*50.0*	*94 %*	*41-142*	*1I22007*	*EPA 8260D*	*09/22/21 14:59*	*nmc*	
Dibromofluoromethane	*53*	*1*	*50.0*	*107 %*	*53-146*	*1I22007*	*EPA 8260D*	*09/22/21 14:59*	*nmc*	
Toluene-d8	*47*	*1*	*50.0*	*95 %*	*41-146*	*1I22007*	*EPA 8260D*	*09/22/21 14:59*	*nmc*	

ANALYTICAL RESULTS

Description: LC34-RW19C-20210914 **Lab Sample ID:** AE05696-17 **Received:** 09/14/21 15:00

Matrix: Ground Water **Sampled:** 09/14/21 10:40 **Work Order:** AE05696

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden/Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	1600	U	ug/L	2000	1600	5000	1I22007	EPA 8260D	09/22/21 13:04	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	1100	U	ug/L	2000	1100	5000	1I22007	EPA 8260D	09/22/21 13:04	nmc	
1,1,2-Trichloroethane [79-00-5]^	1500	U	ug/L	2000	1500	5000	1I22007	EPA 8260D	09/22/21 13:04	nmc	
1,1-Dichloroethane [75-34-3]^	1200	U	ug/L	2000	1200	5000	1I22007	EPA 8260D	09/22/21 13:04	nmc	
1,1-Dichloroethene [75-35-4]^	1900	U	ug/L	2000	1900	5000	1I22007	EPA 8260D	09/22/21 13:04	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	1400	U	ug/L	2000	1400	5000	1I22007	EPA 8260D	09/22/21 13:04	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	1900	U	ug/L	2000	1900	5000	1I22007	EPA 8260D	09/22/21 13:04	nmc	
1,2-Dibromoethane [106-93-4]^	1600	U	ug/L	2000	1600	5000	1I22007	EPA 8260D	09/22/21 13:04	nmc	
1,2-Dichlorobenzene [95-50-1]^	1500	U	ug/L	2000	1500	5000	1I22007	EPA 8260D	09/22/21 13:04	nmc	
1,2-Dichloroethane [107-06-2]^	1300	U	ug/L	2000	1300	5000	1I22007	EPA 8260D	09/22/21 13:04	nmc	
1,2-Dichloropropane [78-87-5]^	1600	U	ug/L	2000	1600	5000	1I22007	EPA 8260D	09/22/21 13:04	nmc	
1,3-Dichlorobenzene [541-73-1]^	1500	U	ug/L	2000	1500	5000	1I22007	EPA 8260D	09/22/21 13:04	nmc	
1,4-Dichlorobenzene [106-46-7]^	1500	U	ug/L	2000	1500	5000	1I22007	EPA 8260D	09/22/21 13:04	nmc	
2-Butanone [78-93-3]^	9000	U	ug/L	2000	9000	25000	1I22007	EPA 8260D	09/22/21 13:04	nmc	
2-Hexanone [591-78-6]^	5000	U	ug/L	2000	5000	25000	1I22007	EPA 8260D	09/22/21 13:04	nmc	
4-Methyl-2-pentanone [108-10-1]^	5000	U	ug/L	2000	5000	25000	1I22007	EPA 8260D	09/22/21 13:04	nmc	
Acetone [67-64-1]^	20000	U	ug/L	2000	20000	50000	1I22007	EPA 8260D	09/22/21 13:04	nmc	
Benzene [71-43-2]^	1400	U	ug/L	2000	1400	5000	1I22007	EPA 8260D	09/22/21 13:04	nmc	
Bromodichloromethane [75-27-4]^	1000	U	ug/L	2000	1000	5000	1I22007	EPA 8260D	09/22/21 13:04	nmc	
Bromoform [75-25-2]^	1500	U	ug/L	2000	1500	5000	1I22007	EPA 8260D	09/22/21 13:04	nmc	
Bromomethane [74-83-9]^	1900	U	ug/L	2000	1900	5000	1I22007	EPA 8260D	09/22/21 13:04	nmc	QV-01
Carbon disulfide [75-15-0]^	5000	U	ug/L	2000	5000	25000	1I22007	EPA 8260D	09/22/21 13:04	nmc	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	1900	U	ug/L	2000	1900	5000	1I22007	EPA 8260D	09/22/21 13:04	nmc	
Chlorobenzene [108-90-7]^	1400	U	ug/L	2000	1400	5000	1I22007	EPA 8260D	09/22/21 13:04	nmc	
Chloroethane [75-00-3]^	2000	U	ug/L	2000	2000	5000	1I22007	EPA 8260D	09/22/21 13:04	nmc	QV-01
Chloroform [67-66-3]^	1600	U	ug/L	2000	1600	5000	1I22007	EPA 8260D	09/22/21 13:04	nmc	
Chloromethane [74-87-3]^	1600	U	ug/L	2000	1600	5000	1I22007	EPA 8260D	09/22/21 13:04	nmc	QV-01
cis-1,2-Dichloroethene [156-59-2]^	**5900**		ug/L	2000	1100	5000	1I22007	EPA 8260D	09/22/21 13:04	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	1200	U	ug/L	2000	1200	5000	1I22007	EPA 8260D	09/22/21 13:04	nmc	
Cyclohexane [110-82-7]^	1900	U	ug/L	2000	1900	5000	1I22007	EPA 8260D	09/22/21 13:04	nmc	
Dibromochloromethane [124-48-1]^	1000	U	ug/L	2000	1000	5000	1I22007	EPA 8260D	09/22/21 13:04	nmc	
Dichlorodifluoromethane [75-71-8]^	1500	U	ug/L	2000	1500	5000	1I22007	EPA 8260D	09/22/21 13:04	nmc	QV-01
Ethylbenzene [100-41-4]^	1400	U	ug/L	2000	1400	5000	1I22007	EPA 8260D	09/22/21 13:04	nmc	
Freon 113 [76-13-1]^	1500	U	ug/L	2000	1500	5000	1I22007	EPA 8260D	09/22/21 13:04	nmc	
Isopropylbenzene [98-82-8]^	1300	U	ug/L	2000	1300	5000	1I22007	EPA 8260D	09/22/21 13:04	nmc	
Methyl acetate [79-20-9]^	1900	U	ug/L	2000	1900	5000	1I22007	EPA 8260D	09/22/21 13:04	nmc	
Methylene Chloride [75-09-2]^	5000	U	ug/L	2000	5000	25000	1I22007	EPA 8260D	09/22/21 13:04	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	1200	U	ug/L	2000	1200	5000	1I22007	EPA 8260D	09/22/21 13:04	nmc	
Styrene [100-42-5]^	1200	U	ug/L	2000	1200	5000	1I22007	EPA 8260D	09/22/21 13:04	nmc	
Tetrachloroethene [127-18-4]^	1500	U	ug/L	2000	1500	5000	1I22007	EPA 8260D	09/22/21 13:04	nmc	
Toluene [108-88-3]^	1400	U	ug/L	2000	1400	5000	1I22007	EPA 8260D	09/22/21 13:04	nmc	
trans-1,2-Dichloroethene [156-60-5]^	1500	U	ug/L	2000	1500	5000	1I22007	EPA 8260D	09/22/21 13:04	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	1500	U	ug/L	2000	1500	5000	1I22007	EPA 8260D	09/22/21 13:04	nmc	
Trichloroethene [79-01-6]^	**650000**		ug/L	20000	18000	50000	1I23015	EPA 8260D	09/23/21 20:00	kkw	
Trichlorofluoromethane [75-69-4]^	1900	U	ug/L	2000	1900	5000	1I22007	EPA 8260D	09/22/21 13:04	nmc	QV-01
Vinyl chloride [75-01-4]^	1400	U	ug/L	2000	1400	5000	1I22007	EPA 8260D	09/22/21 13:04	nmc	

ANALYTICAL RESULTS

Description: LC34-RW19C-20210914 **Lab Sample ID:** AE05696-17 **Received:** 09/14/21 15:00

Matrix: Ground Water **Sampled:** 09/14/21 10:40 **Work Order:** AE05696

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden/Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*45*	*1*	*50.0*	*91 %*	*41-142*	*1I22007*	*EPA 8260D*	*09/22/21 13:04*	*nmc*	
4-Bromofluorobenzene	*53*	*1*	*50.0*	*105 %*	*41-142*	*1I23015*	*EPA 8260D*	*09/23/21 20:00*	*kkw*	
Dibromofluoromethane	*50*	*1*	*50.0*	*100 %*	*53-146*	*1I22007*	*EPA 8260D*	*09/22/21 13:04*	*nmc*	
Dibromofluoromethane	*53*	*1*	*50.0*	*105 %*	*53-146*	*1I23015*	*EPA 8260D*	*09/23/21 20:00*	*kkw*	
Toluene-d8	*46*	*1*	*50.0*	*92 %*	*41-146*	*1I22007*	*EPA 8260D*	*09/22/21 13:04*	*nmc*	
Toluene-d8	*51*	*1*	*50.0*	*102 %*	*41-146*	*1I23015*	*EPA 8260D*	*09/23/21 20:00*	*kkw*	

ANALYTICAL RESULTS

Description: LC34-RW20C-20210914 **Lab Sample ID:** AE05696-18 **Received:** 09/14/21 15:00

Matrix: Ground Water **Sampled:** 09/14/21 10:50 **Work Order:** AE05696

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden/Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	800	U	ug/L	1000	800	2500	1I22007	EPA 8260D	09/22/21 13:33	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	540	U	ug/L	1000	540	2500	1I22007	EPA 8260D	09/22/21 13:33	nmc	
1,1,2-Trichloroethane [79-00-5]^	760	U	ug/L	1000	760	2500	1I22007	EPA 8260D	09/22/21 13:33	nmc	
1,1-Dichloroethane [75-34-3]^	620	U	ug/L	1000	620	2500	1I22007	EPA 8260D	09/22/21 13:33	nmc	
1,1-Dichloroethene [75-35-4]^	940	U	ug/L	1000	940	2500	1I22007	EPA 8260D	09/22/21 13:33	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	700	U	ug/L	1000	700	2500	1I22007	EPA 8260D	09/22/21 13:33	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	960	U	ug/L	1000	960	2500	1I22007	EPA 8260D	09/22/21 13:33	nmc	
1,2-Dibromoethane [106-93-4]^	780	U	ug/L	1000	780	2500	1I22007	EPA 8260D	09/22/21 13:33	nmc	
1,2-Dichlorobenzene [95-50-1]^	730	U	ug/L	1000	730	2500	1I22007	EPA 8260D	09/22/21 13:33	nmc	
1,2-Dichloroethane [107-06-2]^	630	U	ug/L	1000	630	2500	1I22007	EPA 8260D	09/22/21 13:33	nmc	
1,2-Dichloropropane [78-87-5]^	800	U	ug/L	1000	800	2500	1I22007	EPA 8260D	09/22/21 13:33	nmc	
1,3-Dichlorobenzene [541-73-1]^	770	U	ug/L	1000	770	2500	1I22007	EPA 8260D	09/22/21 13:33	nmc	
1,4-Dichlorobenzene [106-46-7]^	760	U	ug/L	1000	760	2500	1I22007	EPA 8260D	09/22/21 13:33	nmc	
2-Butanone [78-93-3]^	4500	U	ug/L	1000	4500	12000	1I22007	EPA 8260D	09/22/21 13:33	nmc	
2-Hexanone [591-78-6]^	2500	U	ug/L	1000	2500	12000	1I22007	EPA 8260D	09/22/21 13:33	nmc	
4-Methyl-2-pentanone [108-10-1]^	2500	U	ug/L	1000	2500	12000	1I22007	EPA 8260D	09/22/21 13:33	nmc	
Acetone [67-64-1]^	10000	U	ug/L	1000	10000	25000	1I22007	EPA 8260D	09/22/21 13:33	nmc	
Benzene [71-43-2]^	710	U	ug/L	1000	710	2500	1I22007	EPA 8260D	09/22/21 13:33	nmc	
Bromodichloromethane [75-27-4]^	520	U	ug/L	1000	520	2500	1I22007	EPA 8260D	09/22/21 13:33	nmc	
Bromoform [75-25-2]^	750	U	ug/L	1000	750	2500	1I22007	EPA 8260D	09/22/21 13:33	nmc	
Bromomethane [74-83-9]^	950	U	ug/L	1000	950	2500	1I22007	EPA 8260D	09/22/21 13:33	nmc	QV-01
Carbon disulfide [75-15-0]^	2500	U	ug/L	1000	2500	12000	1I22007	EPA 8260D	09/22/21 13:33	nmc	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	940	U	ug/L	1000	940	2500	1I22007	EPA 8260D	09/22/21 13:33	nmc	
Chlorobenzene [108-90-7]^	720	U	ug/L	1000	720	2500	1I22007	EPA 8260D	09/22/21 13:33	nmc	
Chloroethane [75-00-3]^	980	U	ug/L	1000	980	2500	1I22007	EPA 8260D	09/22/21 13:33	nmc	QV-01
Chloroform [67-66-3]^	800	U	ug/L	1000	800	2500	1I22007	EPA 8260D	09/22/21 13:33	nmc	
Chloromethane [74-87-3]^	820	U	ug/L	1000	820	2500	1I22007	EPA 8260D	09/22/21 13:33	nmc	QV-01
cis-1,2-Dichloroethene [156-59-2]^	**5100**		ug/L	1000	530	2500	1I22007	EPA 8260D	09/22/21 13:33	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	590	U	ug/L	1000	590	2500	1I22007	EPA 8260D	09/22/21 13:33	nmc	
Cyclohexane [110-82-7]^	930	U	ug/L	1000	930	2500	1I22007	EPA 8260D	09/22/21 13:33	nmc	
Dibromochloromethane [124-48-1]^	500	U	ug/L	1000	500	2500	1I22007	EPA 8260D	09/22/21 13:33	nmc	
Dichlorodifluoromethane [75-71-8]^	740	U	ug/L	1000	740	2500	1I22007	EPA 8260D	09/22/21 13:33	nmc	QV-01
Ethylbenzene [100-41-4]^	690	U	ug/L	1000	690	2500	1I22007	EPA 8260D	09/22/21 13:33	nmc	
Freon 113 [76-13-1]^	730	U	ug/L	1000	730	2500	1I22007	EPA 8260D	09/22/21 13:33	nmc	
Isopropylbenzene [98-82-8]^	670	U	ug/L	1000	670	2500	1I22007	EPA 8260D	09/22/21 13:33	nmc	
Methyl acetate [79-20-9]^	950	U	ug/L	1000	950	2500	1I22007	EPA 8260D	09/22/21 13:33	nmc	
Methylene Chloride [75-09-2]^	2500	U	ug/L	1000	2500	12000	1I22007	EPA 8260D	09/22/21 13:33	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	600	U	ug/L	1000	600	2500	1I22007	EPA 8260D	09/22/21 13:33	nmc	
Styrene [100-42-5]^	610	U	ug/L	1000	610	2500	1I22007	EPA 8260D	09/22/21 13:33	nmc	
Tetrachloroethene [127-18-4]^	760	U	ug/L	1000	760	2500	1I22007	EPA 8260D	09/22/21 13:33	nmc	
Toluene [108-88-3]^	720	U	ug/L	1000	720	2500	1I22007	EPA 8260D	09/22/21 13:33	nmc	
trans-1,2-Dichloroethene [156-60-5]^	730	U	ug/L	1000	730	2500	1I22007	EPA 8260D	09/22/21 13:33	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	730	U	ug/L	1000	730	2500	1I22007	EPA 8260D	09/22/21 13:33	nmc	
Trichloroethene [79-01-6]^	**160000**		ug/L	5000	4400	12000	1I23015	EPA 8260D	09/23/21 20:28	kkw	
Trichlorofluoromethane [75-69-4]^	940	U	ug/L	1000	940	2500	1I22007	EPA 8260D	09/22/21 13:33	nmc	QV-01
Vinyl chloride [75-01-4]^	710	U	ug/L	1000	710	2500	1I22007	EPA 8260D	09/22/21 13:33	nmc	

ANALYTICAL RESULTS

Description: LC34-RW20C-20210914 **Lab Sample ID:** AE05696-18 **Received:** 09/14/21 15:00

Matrix: Ground Water **Sampled:** 09/14/21 10:50 **Work Order:** AE05696

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden/Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*46*	*1*	*50.0*	*93 %*	*41-142*	*1I22007*	*EPA 8260D*	*09/22/21 13:33*	*nmc*	
4-Bromofluorobenzene	*53*	*1*	*50.0*	*107 %*	*41-142*	*1I23015*	*EPA 8260D*	*09/23/21 20:28*	*kkw*	
Dibromofluoromethane	*52*	*1*	*50.0*	*103 %*	*53-146*	*1I22007*	*EPA 8260D*	*09/22/21 13:33*	*nmc*	
Dibromofluoromethane	*53*	*1*	*50.0*	*106 %*	*53-146*	*1I23015*	*EPA 8260D*	*09/23/21 20:28*	*kkw*	
Toluene-d8	*46*	*1*	*50.0*	*92 %*	*41-146*	*1I22007*	*EPA 8260D*	*09/22/21 13:33*	*nmc*	
Toluene-d8	*51*	*1*	*50.0*	*102 %*	*41-146*	*1I23015*	*EPA 8260D*	*09/23/21 20:28*	*kkw*	

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1I21007 - EPA 5030B_MS

Blank (1I21007-BLK1) Prepared: 09/21/2021 00:00 Analyzed: 09/21/2021 10:23

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	0.80	U	2.5	ug/L							
1,1,2,2-Tetrachloroethane	0.54	U	2.5	ug/L							
1,1,2-Trichloroethane	0.76	U	2.5	ug/L							
1,1-Dichloroethane	0.62	U	2.5	ug/L							
1,1-Dichloroethene	0.94	U	2.5	ug/L							
1,2,4-Trichlorobenzene	0.70	U	2.5	ug/L							
1,2-Dibromo-3-chloropropane	0.96	U	2.5	ug/L							
1,2-Dibromoethane	0.78	U	2.5	ug/L							
1,2-Dichlorobenzene	0.73	U	2.5	ug/L							
1,2-Dichloroethane	0.63	U	2.5	ug/L							
1,2-Dichloropropane	0.80	U	2.5	ug/L							
1,3-Dichlorobenzene	0.77	U	2.5	ug/L							
1,4-Dichlorobenzene	0.76	U	2.5	ug/L							
2-Butanone	4.5	U	12	ug/L							
2-Hexanone	2.5	U	12	ug/L							
4-Methyl-2-pentanone	2.5	U	12	ug/L							
Acetone	10	U	25	ug/L							
Benzene	0.71	U	2.5	ug/L							
Bromodichloromethane	0.52	U	2.5	ug/L							
Bromoform	0.75	U	2.5	ug/L							
Bromomethane	0.95	U	2.5	ug/L							
Carbon disulfide	2.5	U	12	ug/L							
Carbon Tetrachloride	0.94	U	2.5	ug/L							
Chlorobenzene	0.72	U	2.5	ug/L							
Chloroethane	0.98	U	2.5	ug/L							
Chloroform	0.80	U	2.5	ug/L							
Chloromethane	0.82	U	2.5	ug/L							
cis-1,2-Dichloroethene	0.53	U	2.5	ug/L							
cis-1,3-Dichloropropene	0.59	U	2.5	ug/L							
Cyclohexane	0.93	U	2.5	ug/L							
Dibromochloromethane	0.50	U	2.5	ug/L							
Dichlorodifluoromethane	0.74	U	2.5	ug/L							
Ethylbenzene	0.69	U	2.5	ug/L							
Freon 113	0.73	U	2.5	ug/L							
Isopropylbenzene	0.67	U	2.5	ug/L							
Methyl acetate	0.95	U	2.5	ug/L							
Methylene Chloride	2.5	U	12	ug/L							
Methyl-tert-Butyl Ether	0.60	U	2.5	ug/L							
Styrene	0.61	U	2.5	ug/L							
Tetrachloroethene	0.76	U	2.5	ug/L							
Toluene	0.72	U	2.5	ug/L							
trans-1,2-Dichloroethene	0.73	U	2.5	ug/L							
trans-1,3-Dichloropropene	0.73	U	2.5	ug/L							
Trichloroethene	0.89	U	2.5	ug/L							
Trichlorofluoromethane	0.94	U	2.5	ug/L							
Vinyl chloride	0.71	U	2.5	ug/L							
4-Bromofluorobenzene	*45*	*I*		*ug/L*	*50.0*		*91*	*41-142*			
Dibromofluoromethane	*49*	*I*		*ug/L*	*50.0*		*99*	*53-146*			
Toluene-d8	*45*	*I*		*ug/L*	*50.0*		*90*	*41-146*			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1I21007 - EPA 5030B_MS - Continued

LCS (1I21007-BS1) Prepared: 09/21/2021 00:00 Analyzed: 09/21/2021 08:25

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	22		2.5	ug/L	20.0		112	57-148			
1,1,2,2-Tetrachloroethane	18		2.5	ug/L	20.0		89	60-139			
1,1,2-Trichloroethane	19		2.5	ug/L	20.0		93	57-141			
1,1-Dichloroethane	23		2.5	ug/L	20.0		114	57-142			
1,1-Dichloroethene	19		2.5	ug/L	20.0		95	47-139			
1,2,4-Trichlorobenzene	22		2.5	ug/L	20.0		108	52-159			
1,2-Dibromo-3-chloropropane	19		2.5	ug/L	20.0		93	48-150			
1,2-Dibromoethane	19		2.5	ug/L	20.0		95	57-140			
1,2-Dichlorobenzene	19		2.5	ug/L	20.0		97	63-131			
1,2-Dichloroethane	20		2.5	ug/L	20.0		102	50-156			
1,2-Dichloropropane	19		2.5	ug/L	20.0		95	61-133			
1,3-Dichlorobenzene	19		2.5	ug/L	20.0		97	66-129			
1,4-Dichlorobenzene	19		2.5	ug/L	20.0		96	65-133			
2-Butanone	140		12	ug/L	100		142	10-180			
2-Hexanone	110		12	ug/L	100		107	12-180			
4-Methyl-2-pentanone	93		12	ug/L	100		93	19-180			
Acetone	100		25	ug/L	100		102	10-180			
Benzene	20		2.5	ug/L	20.0		100	56-136			
Bromodichloromethane	20		2.5	ug/L	20.0		100	58-135			
Bromoform	19		2.5	ug/L	20.0		94	46-148			
Bromomethane	11		2.5	ug/L	20.0		55	10-173			
Carbon disulfide	33		12	ug/L	20.0		163	43-153			QL-02
Carbon Tetrachloride	21		2.5	ug/L	20.0		104	54-156			
Chlorobenzene	20		2.5	ug/L	20.0		99	51-139			
Chloroethane	24		2.5	ug/L	20.0		120	27-180			
Chloroform	22		2.5	ug/L	20.0		112	58-139			
Chloromethane	21		2.5	ug/L	20.0		103	33-154			
cis-1,2-Dichloroethene	21		2.5	ug/L	20.0		106	56-128			
cis-1,3-Dichloropropene	18		2.5	ug/L	20.0		91	64-128			
Cyclohexane	22		2.5	ug/L	20.0		108	70-130			
Dibromochloromethane	18		2.5	ug/L	20.0		91	50-140			
Dichlorodifluoromethane	21		2.5	ug/L	20.0		103	10-180			
Ethylbenzene	19		2.5	ug/L	20.0		96	63-133			
Freon 113	19		2.5	ug/L	20.0		96	47-173			
Isopropylbenzene	20		2.5	ug/L	20.0		98	60-132			
m,p-Xylenes	38		5.0	ug/L	40.0		94	64-133			
Methyl acetate	19		2.5	ug/L	20.0		95	70-130			
Methylene Chloride	19		12	ug/L	20.0		95	43-142			
Methyl-tert-Butyl Ether	19		2.5	ug/L	20.0		96	51-145			
o-Xylene	19		2.5	ug/L	20.0		96	61-129			
Styrene	20		2.5	ug/L	20.0		100	59-136			
Tetrachloroethene	18		2.5	ug/L	20.0		89	60-147			
Toluene	19		2.5	ug/L	20.0		93	64-131			
trans-1,2-Dichloroethene	20		2.5	ug/L	20.0		98	54-134			
trans-1,3-Dichloropropene	18		2.5	ug/L	20.0		91	65-149			
Trichloroethene	21		2.5	ug/L	20.0		105	62-135			
Trichlorofluoromethane	22		2.5	ug/L	20.0		111	56-155			
Vinyl chloride	20		2.5	ug/L	20.0		99	20-167			
4-Bromofluorobenzene	*47*	*I*		*ug/L*	*50.0*		*95*	*41-142*			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1I21007 - EPA 5030B_MS - Continued

LCS (1I21007-BS1) Continued Prepared: 09/21/2021 00:00 Analyzed: 09/21/2021 08:25

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Dibromofluoromethane	*50*			*ug/L*	*50.0*		*101*	*53-146*			
Toluene-d8	*46*	*I*		*ug/L*	*50.0*		*93*	*41-146*			

Matrix Spike (1I21007-MS1) Prepared: 09/21/2021 00:00 Analyzed: 09/21/2021 08:56

Source: AE05696-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	25		2.5	ug/L	20.0	0.80 U	124	57-148			
1,1,2,2-Tetrachloroethane	18		2.5	ug/L	20.0	0.54 U	91	60-139			
1,1,2-Trichloroethane	19		2.5	ug/L	20.0	0.76 U	96	57-141			
1,1-Dichloroethane	24		2.5	ug/L	20.0	0.62 U	119	57-142			
1,1-Dichloroethene	22		2.5	ug/L	20.0	0.94 U	110	47-139			
1,2,4-Trichlorobenzene	21		2.5	ug/L	20.0	0.70 U	107	52-159			
1,2-Dibromo-3-chloropropane	18		2.5	ug/L	20.0	0.96 U	92	48-150			
1,2-Dibromoethane	20		2.5	ug/L	20.0	0.78 U	98	57-140			
1,2-Dichlorobenzene	20		2.5	ug/L	20.0	0.73 U	100	63-131			
1,2-Dichloroethane	21		2.5	ug/L	20.0	0.63 U	105	50-156			
1,2-Dichloropropane	20		2.5	ug/L	20.0	0.80 U	100	61-133			
1,3-Dichlorobenzene	20		2.5	ug/L	20.0	0.77 U	101	66-129			
1,4-Dichlorobenzene	20		2.5	ug/L	20.0	0.76 U	98	65-133			
2-Butanone	150		12	ug/L	100	4.5 U	145	10-180			
2-Hexanone	110		12	ug/L	100	2.5 U	109	12-180			
4-Methyl-2-pentanone	97		12	ug/L	100	2.5 U	97	19-180			
Acetone	120		25	ug/L	100	10 U	115	10-180			
Benzene	21		2.5	ug/L	20.0	0.71 U	107	56-136			
Bromodichloromethane	21		2.5	ug/L	20.0	0.52 U	103	58-135			
Bromoform	19		2.5	ug/L	20.0	0.75 U	96	46-148			
Bromomethane	14		2.5	ug/L	20.0	0.95 U	71	10-173			
Carbon disulfide	35		12	ug/L	20.0	2.5 U	175	43-153			QM-19
Carbon Tetrachloride	23		2.5	ug/L	20.0	0.94 U	114	54-156			
Chlorobenzene	21		2.5	ug/L	20.0	0.72 U	106	51-139			
Chloroethane	24		2.5	ug/L	20.0	0.98 U	121	27-180			
Chloroform	24		2.5	ug/L	20.0	0.80 U	118	58-139			
Chloromethane	21		2.5	ug/L	20.0	0.82 U	105	33-154			
cis-1,2-Dichloroethene	22		2.5	ug/L	20.0	0.53 U	112	56-128			
cis-1,3-Dichloropropene	19		2.5	ug/L	20.0	0.59 U	96	64-128			
Cyclohexane	23		2.5	ug/L	20.0	0.93 U	117	70-130			
Dibromochloromethane	19		2.5	ug/L	20.0	0.50 U	94	50-140			
Dichlorodifluoromethane	18		2.5	ug/L	20.0	0.74 U	91	10-180			
Ethylbenzene	21		2.5	ug/L	20.0	0.69 U	103	63-133			
Freon 113	20		2.5	ug/L	20.0	0.73 U	99	47-173			
Isopropylbenzene	21		2.5	ug/L	20.0	0.67 U	105	60-132			
m,p-Xylenes	41		5.0	ug/L	40.0	1.3 U	102	64-133			
Methyl acetate	20		2.5	ug/L	20.0	0.95 U	101	70-130			
Methylene Chloride	23		12	ug/L	20.0	2.5 U	116	43-142			
Methyl-tert-Butyl Ether	22		2.5	ug/L	20.0	0.60 U	108	51-145			
o-Xylene	20		2.5	ug/L	20.0	0.53 U	101	61-129			
Styrene	21		2.5	ug/L	20.0	0.61 U	107	59-136			
Tetrachloroethene	19		2.5	ug/L	20.0	0.76 U	96	60-147			
Toluene	20		2.5	ug/L	20.0	0.72 U	100	64-131			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1I21007 - EPA 5030B_MS - Continued

Matrix Spike (1I21007-MS1) Continued Prepared: 09/21/2021 00:00 Analyzed: 09/21/2021 08:56

Source: AE05696-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
trans-1,2-Dichloroethene	23		2.5	ug/L	20.0	0.73 U	115	54-134			
trans-1,3-Dichloropropene	19		2.5	ug/L	20.0	0.73 U	97	65-149			
Trichloroethene	23		2.5	ug/L	20.0	0.89 U	114	62-135			
Trichlorofluoromethane	22		2.5	ug/L	20.0	0.94 U	111	56-155			
Vinyl chloride	20		2.5	ug/L	20.0	0.71 U	99	20-167			
4-Bromofluorobenzene	*47*	*I*		*ug/L*	*50.0*		*93*	*41-142*			
Dibromofluoromethane	*50*			*ug/L*	*50.0*		*100*	*53-146*			
Toluene-d8	*46*	*I*		*ug/L*	*50.0*		*92*	*41-146*			

Matrix Spike Dup (1I21007-MSD1) Prepared: 09/21/2021 00:00 Analyzed: 09/21/2021 09:25

Source: AE05696-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	25		2.5	ug/L	20.0	0.80 U	123	57-148	0.6	25	
1,1,2,2-Tetrachloroethane	18		2.5	ug/L	20.0	0.54 U	90	60-139	2	17	
1,1,2-Trichloroethane	19		2.5	ug/L	20.0	0.76 U	96	57-141	0.2	16	
1,1-Dichloroethane	24		2.5	ug/L	20.0	0.62 U	120	57-142	0.3	24	
1,1-Dichloroethene	24		2.5	ug/L	20.0	0.94 U	119	47-139	8	16	
1,2,4-Trichlorobenzene	21		2.5	ug/L	20.0	0.70 U	105	52-159	1	24	
1,2-Dibromo-3-chloropropane	18		2.5	ug/L	20.0	0.96 U	92	48-150	0.4	21	
1,2-Dibromoethane	19		2.5	ug/L	20.0	0.78 U	97	57-140	1	16	
1,2-Dichlorobenzene	20		2.5	ug/L	20.0	0.73 U	98	63-131	2	25	
1,2-Dichloroethane	21		2.5	ug/L	20.0	0.63 U	104	50-156	0.9	18	
1,2-Dichloropropane	19		2.5	ug/L	20.0	0.80 U	97	61-133	3	26	
1,3-Dichlorobenzene	20		2.5	ug/L	20.0	0.77 U	99	66-129	2	23	
1,4-Dichlorobenzene	19		2.5	ug/L	20.0	0.76 U	97	65-133	1	23	
2-Butanone	150		12	ug/L	100	4.5 U	151	10-180	4	29	
2-Hexanone	110		12	ug/L	100	2.5 U	108	12-180	0.8	28	
4-Methyl-2-pentanone	97		12	ug/L	100	2.5 U	97	19-180	0.5	24	
Acetone	120		25	ug/L	100	10 U	117	10-180	2	19	
Benzene	21		2.5	ug/L	20.0	0.71 U	106	56-136	0.9	14	
Bromodichloromethane	21		2.5	ug/L	20.0	0.52 U	103	58-135	0.05	19	
Bromoform	19		2.5	ug/L	20.0	0.75 U	96	46-148	0.2	18	
Bromomethane	16		2.5	ug/L	20.0	0.95 U	78	10-173	9	29	
Carbon disulfide	36		12	ug/L	20.0	2.5 U	179	43-153	2	26	QM-19
Carbon Tetrachloride	23		2.5	ug/L	20.0	0.94 U	113	54-156	1	27	
Chlorobenzene	21		2.5	ug/L	20.0	0.72 U	103	51-139	3	13	
Chloroethane	23		2.5	ug/L	20.0	0.98 U	116	27-180	4	22	
Chloroform	23		2.5	ug/L	20.0	0.80 U	116	58-139	1	17	
Chloromethane	20		2.5	ug/L	20.0	0.82 U	102	33-154	3	31	
cis-1,2-Dichloroethene	22		2.5	ug/L	20.0	0.53 U	110	56-128	1	17	
cis-1,3-Dichloropropene	19		2.5	ug/L	20.0	0.59 U	93	64-128	3	20	
Cyclohexane	23		2.5	ug/L	20.0	0.93 U	115	70-130	1	20	
Dibromochloromethane	18		2.5	ug/L	20.0	0.50 U	92	50-140	2	18	
Dichlorodifluoromethane	18		2.5	ug/L	20.0	0.74 U	88	10-180	3	26	
Ethylbenzene	20		2.5	ug/L	20.0	0.69 U	100	63-133	4	18	
Freon 113	22		2.5	ug/L	20.0	0.73 U	109	47-173	9	30	
Isopropylbenzene	20		2.5	ug/L	20.0	0.67 U	102	60-132	2	23	
m,p-Xylenes	39		5.0	ug/L	40.0	1.3 U	98	64-133	4	18	

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1I21007 - EPA 5030B_MS - Continued

Matrix Spike Dup (1I21007-MSD1) Continued Prepared: 09/21/2021 00:00 Analyzed: 09/21/2021 09:25

Source: AE05696-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Methyl acetate	21		2.5	ug/L	20.0	0.95 U	104	70-130	3	20	
Methylene Chloride	23		12	ug/L	20.0	2.5 U	114	43-142	2	23	
Methyl-tert-Butyl Ether	21		2.5	ug/L	20.0	0.60 U	107	51-145	0.7	22	
o-Xylene	20		2.5	ug/L	20.0	0.53 U	99	61-129	3	16	
Styrene	21		2.5	ug/L	20.0	0.61 U	103	59-136	3	32	
Tetrachloroethene	19		2.5	ug/L	20.0	0.76 U	94	60-147	2	21	
Toluene	20		2.5	ug/L	20.0	0.72 U	98	64-131	2	16	
trans-1,2-Dichloroethene	23		2.5	ug/L	20.0	0.73 U	113	54-134	1	20	
trans-1,3-Dichloropropene	19		2.5	ug/L	20.0	0.73 U	95	65-149	2	17	
Trichloroethene	23		2.5	ug/L	20.0	0.89 U	113	62-135	1	20	
Trichlorofluoromethane	22		2.5	ug/L	20.0	0.94 U	108	56-155	3	22	
Vinyl chloride	20		2.5	ug/L	20.0	0.71 U	98	20-167	2	24	
4-Bromofluorobenzene	*46*	*I*		*ug/L*	*50.0*		*92*	*41-142*			
Dibromofluoromethane	*50*			*ug/L*	*50.0*		*100*	*53-146*			
Toluene-d8	*46*	*I*		*ug/L*	*50.0*		*91*	*41-146*			

Batch 1I22007 - EPA 5030B_MS

Blank (1I22007-BLK1) Prepared: 09/22/2021 00:00 Analyzed: 09/22/2021 10:12

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	0.80	U	2.5	ug/L							
1,1,2,2-Tetrachloroethane	0.54	U	2.5	ug/L							
1,1,2-Trichloroethane	0.76	U	2.5	ug/L							
1,1-Dichloroethane	0.62	U	2.5	ug/L							
1,1-Dichloroethene	0.94	U	2.5	ug/L							
1,2,4-Trichlorobenzene	0.70	U	2.5	ug/L							
1,2-Dibromo-3-chloropropane	0.96	U	2.5	ug/L							
1,2-Dibromoethane	0.78	U	2.5	ug/L							
1,2-Dichlorobenzene	0.73	U	2.5	ug/L							
1,2-Dichloroethane	0.63	U	2.5	ug/L							
1,2-Dichloropropane	0.80	U	2.5	ug/L							
1,3-Dichlorobenzene	0.77	U	2.5	ug/L							
1,4-Dichlorobenzene	0.76	U	2.5	ug/L							
2-Butanone	4.5	U	12	ug/L							
2-Hexanone	2.5	U	12	ug/L							
4-Methyl-2-pentanone	2.5	U	12	ug/L							
Acetone	10	U	25	ug/L							
Benzene	0.71	U	2.5	ug/L							
Bromodichloromethane	0.52	U	2.5	ug/L							
Bromoform	0.75	U	2.5	ug/L							
Bromomethane	0.95	U	2.5	ug/L							
Carbon disulfide	2.5	U	12	ug/L							
Carbon Tetrachloride	0.94	U	2.5	ug/L							
Chlorobenzene	0.72	U	2.5	ug/L							
Chloroethane	0.98	U	2.5	ug/L							
Chloroform	0.80	U	2.5	ug/L							
Chloromethane	0.82	U	2.5	ug/L							
cis-1,2-Dichloroethene	0.53	U	2.5	ug/L							

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1I22007 - EPA 5030B_MS - Continued

Blank (1I22007-BLK1) Continued Prepared: 09/22/2021 00:00 Analyzed: 09/22/2021 10:12

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
cis-1,3-Dichloropropene	0.59	U	2.5	ug/L							
Cyclohexane	0.93	U	2.5	ug/L							
Dibromochloromethane	0.50	U	2.5	ug/L							
Dichlorodifluoromethane	0.74	U	2.5	ug/L							
Ethylbenzene	0.69	U	2.5	ug/L							
Freon 113	0.73	U	2.5	ug/L							
Isopropylbenzene	0.67	U	2.5	ug/L							
Methyl acetate	0.95	U	2.5	ug/L							
Methylene Chloride	2.5	U	12	ug/L							
Methyl-tert-Butyl Ether	0.60	U	2.5	ug/L							
Styrene	0.61	U	2.5	ug/L							
Tetrachloroethene	0.76	U	2.5	ug/L							
Toluene	0.72	U	2.5	ug/L							
trans-1,2-Dichloroethene	0.73	U	2.5	ug/L							
trans-1,3-Dichloropropene	0.73	U	2.5	ug/L							
Trichloroethene	0.89	U	2.5	ug/L							
Trichlorofluoromethane	0.94	U	2.5	ug/L							
Vinyl chloride	0.71	U	2.5	ug/L							
4-Bromofluorobenzene	*47*	*I*		*ug/L*	*50.0*		*95*	*41-142*			
Dibromofluoromethane	*53*			*ug/L*	*50.0*		*105*	*53-146*			
Toluene-d8	*48*	*I*		*ug/L*	*50.0*		*95*	*41-146*			

LCS (1I22007-BS1) Prepared: 09/22/2021 00:00 Analyzed: 09/22/2021 08:10

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	23		2.5	ug/L	20.0		115	57-148			
1,1,2,2-Tetrachloroethane	17		2.5	ug/L	20.0		83	60-139			
1,1,2-Trichloroethane	18		2.5	ug/L	20.0		91	57-141			
1,1-Dichloroethane	23		2.5	ug/L	20.0		113	57-142			
1,1-Dichloroethene	23		2.5	ug/L	20.0		114	47-139			
1,2,4-Trichlorobenzene	21		2.5	ug/L	20.0		106	52-159			
1,2-Dibromo-3-chloropropane	18		2.5	ug/L	20.0		88	48-150			
1,2-Dibromoethane	18		2.5	ug/L	20.0		91	57-140			
1,2-Dichlorobenzene	19		2.5	ug/L	20.0		97	63-131			
1,2-Dichloroethane	21		2.5	ug/L	20.0		105	50-156			
1,2-Dichloropropane	19		2.5	ug/L	20.0		97	61-133			
1,3-Dichlorobenzene	19		2.5	ug/L	20.0		97	66-129			
1,4-Dichlorobenzene	19		2.5	ug/L	20.0		97	65-133			
2-Butanone	140		12	ug/L	100		138	10-180			
2-Hexanone	99		12	ug/L	100		99	12-180			
4-Methyl-2-pentanone	88		12	ug/L	100		88	19-180			
Acetone	110		25	ug/L	100		110	10-180			
Benzene	20		2.5	ug/L	20.0		102	56-136			
Bromodichloromethane	20		2.5	ug/L	20.0		100	58-135			
Bromoform	18		2.5	ug/L	20.0		90	46-148			
Bromomethane	12		2.5	ug/L	20.0		60	10-173			
Carbon disulfide	37		12	ug/L	20.0		187	43-153			QL-02
Carbon Tetrachloride	21		2.5	ug/L	20.0		105	54-156			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1I22007 - EPA 5030B_MS - Continued

LCS (1I22007-BS1) Continued Prepared: 09/22/2021 00:00 Analyzed: 09/22/2021 08:10

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Chlorobenzene	20		2.5	ug/L	20.0		99	51-139			
Chloroethane	24		2.5	ug/L	20.0		122	27-180			
Chloroform	23		2.5	ug/L	20.0		113	58-139			
Chloromethane	20		2.5	ug/L	20.0		100	33-154			
cis-1,2-Dichloroethene	21		2.5	ug/L	20.0		105	56-128			
cis-1,3-Dichloropropene	18		2.5	ug/L	20.0		91	64-128			
Cyclohexane	23		2.5	ug/L	20.0		113	70-130			
Dibromochloromethane	18		2.5	ug/L	20.0		89	50-140			
Dichlorodifluoromethane	19		2.5	ug/L	20.0		97	10-180			
Ethylbenzene	19		2.5	ug/L	20.0		94	63-133			
Freon 113	23		2.5	ug/L	20.0		116	47-173			
Isopropylbenzene	20		2.5	ug/L	20.0		98	60-132			
m,p-Xylenes	38		5.0	ug/L	40.0		95	64-133			
Methyl acetate	19		2.5	ug/L	20.0		96	70-130			
Methylene Chloride	21		12	ug/L	20.0		107	43-142			
Methyl-tert-Butyl Ether	20		2.5	ug/L	20.0		102	51-145			
o-Xylene	19		2.5	ug/L	20.0		95	61-129			
Styrene	20		2.5	ug/L	20.0		101	59-136			
Tetrachloroethene	18		2.5	ug/L	20.0		90	60-147			
Toluene	18		2.5	ug/L	20.0		92	64-131			
trans-1,2-Dichloroethene	22		2.5	ug/L	20.0		108	54-134			
trans-1,3-Dichloropropene	18		2.5	ug/L	20.0		91	65-149			
Trichloroethene	21		2.5	ug/L	20.0		106	62-135			
Trichlorofluoromethane	22		2.5	ug/L	20.0		110	56-155			
Vinyl chloride	20		2.5	ug/L	20.0		101	20-167			
4-Bromofluorobenzene	*46*	*I*		*ug/L*	*50.0*		*92*	*41-142*			
Dibromofluoromethane	*50*			*ug/L*	*50.0*		*99*	*53-146*			
Toluene-d8	*46*	*I*		*ug/L*	*50.0*		*92*	*41-146*			

Matrix Spike (1I22007-MS1) Prepared: 09/22/2021 08:03 Analyzed: 09/22/2021 08:46

Source: AE07454-09RE1

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	24		2.5	ug/L	20.0	0.80 U	122	57-148			
1,1,2,2-Tetrachloroethane	17		2.5	ug/L	20.0	0.54 U	86	60-139			
1,1,2-Trichloroethane	18		2.5	ug/L	20.0	0.76 U	91	57-141			
1,1-Dichloroethane	21		2.5	ug/L	20.0	0.62 U	106	57-142			
1,1-Dichloroethene	21		2.5	ug/L	20.0	0.94 U	105	47-139			
1,2,4-Trichlorobenzene	21		2.5	ug/L	20.0	0.70 U	105	52-159			
1,2-Dibromo-3-chloropropane	17		2.5	ug/L	20.0	0.96 U	87	48-150			
1,2-Dibromoethane	18		2.5	ug/L	20.0	0.78 U	91	57-140			
1,2-Dichlorobenzene	19		2.5	ug/L	20.0	0.73 U	97	63-131			
1,2-Dichloroethane	21		2.5	ug/L	20.0	0.63 U	103	50-156			
1,2-Dichloropropane	19		2.5	ug/L	20.0	0.80 U	94	61-133			
1,3-Dichlorobenzene	20		2.5	ug/L	20.0	0.77 U	98	66-129			
1,4-Dichlorobenzene	19		2.5	ug/L	20.0	0.76 U	96	65-133			
2-Butanone	140		12	ug/L	100	8.0	134	10-180			
2-Hexanone	100		12	ug/L	100	2.5 U	104	12-180			
4-Methyl-2-pentanone	94		12	ug/L	100	2.5 U	94	19-180			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1I22007 - EPA 5030B_MS - Continued

Matrix Spike (1I22007-MS1) Continued Prepared: 09/22/2021 08:03 Analyzed: 09/22/2021 08:46

Source: AE07454-09RE1

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Acetone	140		25	ug/L	100	50	91	10-180			
Benzene	22		2.5	ug/L	20.0	1.1	103	56-136			
Bromodichloromethane	20		2.5	ug/L	20.0	0.52 U	102	58-135			
Bromoform	18		2.5	ug/L	20.0	0.75 U	91	46-148			
Bromomethane	15		2.5	ug/L	20.0	0.95 U	76	10-173			
Carbon disulfide	32		12	ug/L	20.0	2.5 U	162	43-153			QM-19
Carbon Tetrachloride	23		2.5	ug/L	20.0	0.94 U	113	54-156			
Chlorobenzene	22		2.5	ug/L	20.0	1.9	101	51-139			
Chloroethane	24		2.5	ug/L	20.0	0.98 U	120	27-180			
Chloroform	23		2.5	ug/L	20.0	0.80 U	115	58-139			
Chloromethane	20		2.5	ug/L	20.0	0.82 U	102	33-154			
cis-1,2-Dichloroethene	21		2.5	ug/L	20.0	0.53 U	104	56-128			
cis-1,3-Dichloropropene	18		2.5	ug/L	20.0	0.59 U	91	64-128			
Cyclohexane	25		2.5	ug/L	20.0	0.93 U	125	70-130			
Dibromochloromethane	18		2.5	ug/L	20.0	0.50 U	88	50-140			
Dichlorodifluoromethane	20		2.5	ug/L	20.0	0.74 U	101	10-180			
Ethylbenzene	20		2.5	ug/L	20.0	0.69 U	99	63-133			
Freon 113	22		2.5	ug/L	20.0	0.73 U	111	47-173			
Isopropylbenzene	20		2.5	ug/L	20.0	0.67 U	102	60-132			
m,p-Xylenes	39		5.0	ug/L	40.0	1.3 U	98	64-133			
Methyl acetate	17		2.5	ug/L	20.0	0.95 U	85	70-130			
Methylene Chloride	20		12	ug/L	20.0	2.5 U	98	43-142			
Methyl-tert-Butyl Ether	18		2.5	ug/L	20.0	0.60 U	90	51-145			
o-Xylene	19		2.5	ug/L	20.0	0.53 U	97	61-129			
Styrene	20		2.5	ug/L	20.0	0.61 U	102	59-136			
Tetrachloroethene	19		2.5	ug/L	20.0	0.76 U	96	60-147			
Toluene	20		2.5	ug/L	20.0	0.72 U	98	64-131			
trans-1,2-Dichloroethene	20		2.5	ug/L	20.0	0.73 U	99	54-134			
trans-1,3-Dichloropropene	18		2.5	ug/L	20.0	0.73 U	90	65-149			
Trichloroethene	22		2.5	ug/L	20.0	0.89 U	111	62-135			
Trichlorofluoromethane	22		2.5	ug/L	20.0	0.94 U	112	56-155			
Vinyl chloride	20		2.5	ug/L	20.0	0.71 U	101	20-167			
4-Bromofluorobenzene	*46*	*I*		*ug/L*	*50.0*		*92*	*41-142*			
Dibromofluoromethane	*50*			*ug/L*	*50.0*		*100*	*53-146*			
Toluene-d8	*46*	*I*		*ug/L*	*50.0*		*92*	*41-146*			

Matrix Spike Dup (1I22007-MSD1) Prepared: 09/22/2021 08:03 Analyzed: 09/22/2021 09:15

Source: AE07454-09RE1

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	24		2.5	ug/L	20.0	0.80 U	120	57-148	2	25	
1,1,2,2-Tetrachloroethane	17		2.5	ug/L	20.0	0.54 U	86	60-139	1	17	
1,1,2-Trichloroethane	18		2.5	ug/L	20.0	0.76 U	92	57-141	0.8	16	
1,1-Dichloroethane	23		2.5	ug/L	20.0	0.62 U	117	57-142	9	24	
1,1-Dichloroethene	24		2.5	ug/L	20.0	0.94 U	120	47-139	14	16	
1,2,4-Trichlorobenzene	21		2.5	ug/L	20.0	0.70 U	105	52-159	0.1	24	
1,2-Dibromo-3-chloropropane	18		2.5	ug/L	20.0	0.96 U	92	48-150	6	21	
1,2-Dibromoethane	18		2.5	ug/L	20.0	0.78 U	92	57-140	2	16	
1,2-Dichlorobenzene	20		2.5	ug/L	20.0	0.73 U	98	63-131	0.8	25	

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1I22007 - EPA 5030B_MS - Continued

Matrix Spike Dup (1I22007-MSD1) Continued Prepared: 09/22/2021 08:03 Analyzed: 09/22/2021 09:15

Source: AE07454-09RE1

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,2-Dichloroethane	21		2.5	ug/L	20.0	0.63 U	103	50-156	0.4	18	
1,2-Dichloropropane	20		2.5	ug/L	20.0	0.80 U	98	61-133	4	26	
1,3-Dichlorobenzene	19		2.5	ug/L	20.0	0.77 U	96	66-129	2	23	
1,4-Dichlorobenzene	20		2.5	ug/L	20.0	0.76 U	98	65-133	2	23	
2-Butanone	150		12	ug/L	100	8.0	140	10-180	4	29	
2-Hexanone	110		12	ug/L	100	2.5 U	109	12-180	4	28	
4-Methyl-2-pentanone	100		12	ug/L	100	2.5 U	100	19-180	6	24	
Acetone	160		25	ug/L	100	50	112	10-180	14	19	
Benzene	22		2.5	ug/L	20.0	1.1	103	56-136	0.09	14	
Bromodichloromethane	21		2.5	ug/L	20.0	0.52 U	103	58-135	2	19	
Bromoform	18		2.5	ug/L	20.0	0.75 U	92	46-148	1	18	
Bromomethane	17		2.5	ug/L	20.0	0.95 U	85	10-173	12	29	
Carbon disulfide	35		12	ug/L	20.0	2.5 U	175	43-153	8	26	QM-19
Carbon Tetrachloride	22		2.5	ug/L	20.0	0.94 U	112	54-156	0.9	27	
Chlorobenzene	22		2.5	ug/L	20.0	1.9	101	51-139	0.2	13	
Chloroethane	24		2.5	ug/L	20.0	0.98 U	118	27-180	1	22	
Chloroform	23		2.5	ug/L	20.0	0.80 U	114	58-139	0.8	17	
Chloromethane	20		2.5	ug/L	20.0	0.82 U	100	33-154	2	31	
cis-1,2-Dichloroethene	21		2.5	ug/L	20.0	0.53 U	107	56-128	3	17	
cis-1,3-Dichloropropene	18		2.5	ug/L	20.0	0.59 U	91	64-128	0.3	20	
Cyclohexane	24		2.5	ug/L	20.0	0.93 U	122	70-130	3	20	
Dibromochloromethane	18		2.5	ug/L	20.0	0.50 U	89	50-140	1	18	
Dichlorodifluoromethane	20		2.5	ug/L	20.0	0.74 U	100	10-180	1	26	
Ethylbenzene	20		2.5	ug/L	20.0	0.69 U	99	63-133	0.7	18	
Freon 113	25		2.5	ug/L	20.0	0.73 U	124	47-173	11	30	
Isopropylbenzene	20		2.5	ug/L	20.0	0.67 U	101	60-132	1	23	
m,p-Xylenes	39		5.0	ug/L	40.0	1.3 U	97	64-133	2	18	
Methyl acetate	21		2.5	ug/L	20.0	0.95 U	103	70-130	19	20	
Methylene Chloride	22		12	ug/L	20.0	2.5 U	109	43-142	11	23	
Methyl-tert-Butyl Ether	21		2.5	ug/L	20.0	0.60 U	104	51-145	14	22	
o-Xylene	20		2.5	ug/L	20.0	0.53 U	98	61-129	0.4	16	
Styrene	20		2.5	ug/L	20.0	0.61 U	101	59-136	1	32	
Tetrachloroethene	19		2.5	ug/L	20.0	0.76 U	94	60-147	3	21	
Toluene	20		2.5	ug/L	20.0	0.72 U	98	64-131	0.4	16	
trans-1,2-Dichloroethene	22		2.5	ug/L	20.0	0.73 U	110	54-134	11	20	
trans-1,3-Dichloropropene	18		2.5	ug/L	20.0	0.73 U	92	65-149	2	17	
Trichloroethene	22		2.5	ug/L	20.0	0.89 U	109	62-135	2	20	
Trichlorofluoromethane	22		2.5	ug/L	20.0	0.94 U	111	56-155	1	22	
Vinyl chloride	20		2.5	ug/L	20.0	0.71 U	98	20-167	3	24	
4-Bromofluorobenzene	*48*	*I*		*ug/L*	*50.0*		*95*	*41-142*			
Dibromofluoromethane	*51*			*ug/L*	*50.0*		*101*	*53-146*			
Toluene-d8	*48*	*I*		*ug/L*	*50.0*		*96*	*41-146*			

Batch 1I23015 - EPA 5030B_MS

Blank (1I23015-BLK1) Prepared: 09/23/2021 00:00 Analyzed: 09/23/2021 10:40

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	0.80	U	2.5	ug/L							

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1I23015 - EPA 5030B_MS - Continued

Blank (1I23015-BLK1) Continued Prepared: 09/23/2021 00:00 Analyzed: 09/23/2021 10:40

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,2,2-Tetrachloroethane	0.54	U	2.5	ug/L							
1,1,2-Trichloroethane	0.76	U	2.5	ug/L							
1,1-Dichloroethane	0.62	U	2.5	ug/L							
1,1-Dichloroethene	0.94	U	2.5	ug/L							
1,2,4-Trichlorobenzene	0.70	U	2.5	ug/L							
1,2-Dibromo-3-chloropropane	0.96	U	2.5	ug/L							
1,2-Dibromoethane	0.78	U	2.5	ug/L							
1,2-Dichlorobenzene	0.73	U	2.5	ug/L							
1,2-Dichloroethane	0.63	U	2.5	ug/L							
1,2-Dichloropropane	0.80	U	2.5	ug/L							
1,3-Dichlorobenzene	0.77	U	2.5	ug/L							
1,4-Dichlorobenzene	0.76	U	2.5	ug/L							
2-Butanone	4.5	U	12	ug/L							
2-Hexanone	2.5	U	12	ug/L							
4-Methyl-2-pentanone	2.5	U	12	ug/L							
Acetone	10	U	25	ug/L							
Benzene	0.71	U	2.5	ug/L							
Bromodichloromethane	0.52	U	2.5	ug/L							
Bromoform	0.75	U	2.5	ug/L							
Bromomethane	0.95	U	2.5	ug/L							
Carbon disulfide	2.5	U	12	ug/L							
Carbon Tetrachloride	0.94	U	2.5	ug/L							
Chlorobenzene	0.72	U	2.5	ug/L							
Chloroethane	0.98	U	2.5	ug/L							
Chloroform	0.80	U	2.5	ug/L							
Chloromethane	0.82	U	2.5	ug/L							
cis-1,2-Dichloroethene	0.53	U	2.5	ug/L							
cis-1,3-Dichloropropene	0.59	U	2.5	ug/L							
Cyclohexane	0.93	U	2.5	ug/L							
Dibromochloromethane	0.50	U	2.5	ug/L							
Dichlorodifluoromethane	0.74	U	2.5	ug/L							
Ethylbenzene	0.69	U	2.5	ug/L							
Freon 113	0.73	U	2.5	ug/L							
Isopropylbenzene	0.67	U	2.5	ug/L							
Methyl acetate	0.95	U	2.5	ug/L							
Methylene Chloride	2.5	U	12	ug/L							
Methyl-tert-Butyl Ether	0.60	U	2.5	ug/L							
Styrene	0.61	U	2.5	ug/L							
Tetrachloroethene	0.76	U	2.5	ug/L							
Toluene	0.72	U	2.5	ug/L							
trans-1,2-Dichloroethene	0.73	U	2.5	ug/L							
trans-1,3-Dichloropropene	0.73	U	2.5	ug/L							
Trichloroethene	0.89	U	2.5	ug/L							
Trichlorofluoromethane	0.94	U	2.5	ug/L							
Vinyl chloride	0.71	U	2.5	ug/L							
4-Bromofluorobenzene	*54*			*ug/L*	*50.0*		*109*	*41-142*			
Dibromofluoromethane	*54*			*ug/L*	*50.0*		*107*	*53-146*			
Toluene-d8	*50*			*ug/L*	*50.0*		*100*	*41-146*			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1I23015 - EPA 5030B_MS - Continued

LCS (1I23015-BS1) Prepared: 09/23/2021 00:00 Analyzed: 09/23/2021 10:13

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	22		2.5	ug/L	20.0		109	57-148			
1,1,2,2-Tetrachloroethane	16		2.5	ug/L	20.0		79	60-139			
1,1,2-Trichloroethane	19		2.5	ug/L	20.0		93	57-141			
1,1-Dichloroethane	20		2.5	ug/L	20.0		101	57-142			
1,1-Dichloroethene	20		2.5	ug/L	20.0		98	47-139			
1,2,4-Trichlorobenzene	6.4		2.5	ug/L	20.0		32	52-159			
1,2-Dibromo-3-chloropropane	8.4		2.5	ug/L	20.0		42	48-150			
1,2-Dibromoethane	17		2.5	ug/L	20.0		84	57-140			
1,2-Dichlorobenzene	19		2.5	ug/L	20.0		97	63-131			
1,2-Dichloroethane	19		2.5	ug/L	20.0		95	50-156			
1,2-Dichloropropane	18		2.5	ug/L	20.0		90	61-133			
1,3-Dichlorobenzene	22		2.5	ug/L	20.0		109	66-129			
1,4-Dichlorobenzene	21		2.5	ug/L	20.0		103	65-133			
2-Butanone	54		12	ug/L	100		54	10-180			
2-Hexanone	56		12	ug/L	100		56	12-180			
4-Methyl-2-pentanone	59		12	ug/L	100		59	19-180			
Acetone	48		25	ug/L	100		48	10-180			
Benzene	19		2.5	ug/L	20.0		95	56-136			
Bromodichloromethane	21		2.5	ug/L	20.0		104	58-135			
Bromoform	21		2.5	ug/L	20.0		106	46-148			
Bromomethane	28		2.5	ug/L	20.0		138	10-173			
Carbon disulfide	27		12	ug/L	20.0		135	43-153			
Carbon Tetrachloride	25		2.5	ug/L	20.0		124	54-156			
Chlorobenzene	20		2.5	ug/L	20.0		102	51-139			
Chloroethane	31	L	2.5	ug/L	20.0		157	27-180			
Chloroform	20		2.5	ug/L	20.0		98	58-139			
Chloromethane	17		2.5	ug/L	20.0		84	33-154			
cis-1,2-Dichloroethene	20		2.5	ug/L	20.0		98	56-128			
cis-1,3-Dichloropropene	19		2.5	ug/L	20.0		93	64-128			
Cyclohexane	20		2.5	ug/L	20.0		99	70-130			
Dibromochloromethane	20		2.5	ug/L	20.0		99	50-140			
Dichlorodifluoromethane	14		2.5	ug/L	20.0		71	10-180			
Ethylbenzene	21		2.5	ug/L	20.0		105	63-133			
Freon 113	20		2.5	ug/L	20.0		101	47-173			
Isopropylbenzene	22		2.5	ug/L	20.0		111	60-132			
m,p-Xylenes	45		5.0	ug/L	40.0		112	64-133			
Methyl acetate	11		2.5	ug/L	20.0		55	70-130			
Methylene Chloride	20		12	ug/L	20.0		102	43-142			
Methyl-tert-Butyl Ether	17		2.5	ug/L	20.0		87	51-145			
o-Xylene	23		2.5	ug/L	20.0		114	61-129			
Styrene	22		2.5	ug/L	20.0		111	59-136			
Tetrachloroethene	19		2.5	ug/L	20.0		95	60-147			
Toluene	19		2.5	ug/L	20.0		97	64-131			
trans-1,2-Dichloroethene	21		2.5	ug/L	20.0		104	54-134			
trans-1,3-Dichloropropene	20		2.5	ug/L	20.0		100	65-149			
Trichloroethene	19		2.5	ug/L	20.0		96	62-135			
Trichlorofluoromethane	19		2.5	ug/L	20.0		93	56-155			
Vinyl chloride	18		2.5	ug/L	20.0		92	20-167			
4-Bromofluorobenzene	*55*			*ug/L*	*50.0*		*110*	*41-142*			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1I23015 - EPA 5030B_MS - Continued

LCS (1I23015-BS1) Continued Prepared: 09/23/2021 00:00 Analyzed: 09/23/2021 10:13

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Dibromofluoromethane	*53*			*ug/L*	*50.0*		*106*	*53-146*			
Toluene-d8	*51*			*ug/L*	*50.0*		*102*	*41-146*			

Matrix Spike (1I23015-MS1) Prepared: 09/23/2021 00:00 Analyzed: 09/23/2021 12:04

Source: AE05449-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	23		2.5	ug/L	20.0	0.80 U	115	57-148			
1,1,2,2-Tetrachloroethane	16		2.5	ug/L	20.0	0.54 U	80	60-139			
1,1,2-Trichloroethane	20		2.5	ug/L	20.0	0.76 U	99	57-141			
1,1-Dichloroethane	22		2.5	ug/L	20.0	0.62 U	111	57-142			
1,1-Dichloroethene	22		2.5	ug/L	20.0	0.94 U	110	47-139			
1,2,4-Trichlorobenzene	6.5		2.5	ug/L	20.0	0.70 U	32	52-159			
1,2-Dibromo-3-chloropropane	9.5		2.5	ug/L	20.0	0.96 U	47	48-150			
1,2-Dibromoethane	18		2.5	ug/L	20.0	0.78 U	91	57-140			
1,2-Dichlorobenzene	20		2.5	ug/L	20.0	0.73 U	102	63-131			
1,2-Dichloroethane	20		2.5	ug/L	20.0	0.63 U	98	50-156			
1,2-Dichloropropane	19		2.5	ug/L	20.0	0.80 U	97	61-133			
1,3-Dichlorobenzene	21		2.5	ug/L	20.0	0.77 U	106	66-129			
1,4-Dichlorobenzene	22		2.5	ug/L	20.0	0.76 U	108	65-133			
2-Butanone	53		12	ug/L	100	4.5 U	53	10-180			
2-Hexanone	53		12	ug/L	100	2.5 U	53	12-180			
4-Methyl-2-pentanone	60		12	ug/L	100	2.5 U	60	19-180			
Acetone	47		25	ug/L	100	10 U	47	10-180			
Benzene	51		2.5	ug/L	20.0	31	100	56-136			
Bromodichloromethane	22		2.5	ug/L	20.0	0.52 U	112	58-135			
Bromoform	21		2.5	ug/L	20.0	0.75 U	104	46-148			
Bromomethane	34		2.5	ug/L	20.0	0.95 U	170	10-173			
Carbon disulfide	28		12	ug/L	20.0	2.5 U	141	43-153			
Carbon Tetrachloride	24		2.5	ug/L	20.0	0.94 U	121	54-156			
Chlorobenzene	23		2.5	ug/L	20.0	0.72 U	114	51-139			
Chloroethane	34	L	2.5	ug/L	20.0	0.98 U	172	27-180			
Chloroform	21		2.5	ug/L	20.0	0.80 U	104	58-139			
Chloromethane	19		2.5	ug/L	20.0	0.82 U	95	33-154			
cis-1,2-Dichloroethene	22		2.5	ug/L	20.0	0.53 U	108	56-128			
cis-1,3-Dichloropropene	19		2.5	ug/L	20.0	0.59 U	96	64-128			
Cyclohexane	24		2.5	ug/L	20.0	2.0	113	70-130			
Dibromochloromethane	22		2.5	ug/L	20.0	0.50 U	108	50-140			
Dichlorodifluoromethane	17		2.5	ug/L	20.0	0.74 U	83	10-180			
Ethylbenzene	24		2.5	ug/L	20.0	0.69 U	118	63-133			
Freon 113	21		2.5	ug/L	20.0	0.73 U	105	47-173			
Isopropylbenzene	25		2.5	ug/L	20.0	0.67 U	124	60-132			
m,p-Xylenes	57		5.0	ug/L	40.0	8.6	120	64-133			
Methyl acetate	11		2.5	ug/L	20.0	0.95 U	57	70-130			
Methylene Chloride	20		12	ug/L	20.0	2.5 U	102	43-142			
Methyl-tert-Butyl Ether	29		2.5	ug/L	20.0	10	96	51-145			
o-Xylene	37		2.5	ug/L	20.0	12	124	61-129			
Styrene	23		2.5	ug/L	20.0	0.61 U	116	59-136			
Tetrachloroethene	21		2.5	ug/L	20.0	0.76 U	103	60-147			
Toluene	21		2.5	ug/L	20.0	0.72 U	105	64-131			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1I23015 - EPA 5030B_MS - Continued

Matrix Spike (1I23015-MS1) Continued Prepared: 09/23/2021 00:00 Analyzed: 09/23/2021 12:04

Source: AE05449-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
trans-1,2-Dichloroethene	21		2.5	ug/L	20.0	0.73 U	106	54-134			
trans-1,3-Dichloropropene	21		2.5	ug/L	20.0	0.73 U	107	65-149			
Trichloroethene	22		2.5	ug/L	20.0	0.89 U	112	62-135			
Trichlorofluoromethane	22		2.5	ug/L	20.0	0.94 U	108	56-155			
Vinyl chloride	19		2.5	ug/L	20.0	0.71 U	96	20-167			
4-Bromofluorobenzene	*55*			*ug/L*	*50.0*		*111*	*41-142*			
Dibromofluoromethane	*54*			*ug/L*	*50.0*		*108*	*53-146*			
Toluene-d8	*51*			*ug/L*	*50.0*		*103*	*41-146*			

Matrix Spike Dup (1I23015-MSD1) Prepared: 09/23/2021 00:00 Analyzed: 09/23/2021 12:32

Source: AE05449-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	23		2.5	ug/L	20.0	0.80 U	113	57-148	2	25	
1,1,2,2-Tetrachloroethane	15		2.5	ug/L	20.0	0.54 U	77	60-139	3	17	
1,1,2-Trichloroethane	19		2.5	ug/L	20.0	0.76 U	95	57-141	4	16	
1,1-Dichloroethane	21		2.5	ug/L	20.0	0.62 U	107	57-142	4	24	
1,1-Dichloroethene	21		2.5	ug/L	20.0	0.94 U	105	47-139	4	16	
1,2,4-Trichlorobenzene	7.4		2.5	ug/L	20.0	0.70 U	37	52-159	13	24	
1,2-Dibromo-3-chloropropane	11		2.5	ug/L	20.0	0.96 U	54	48-150	12	21	
1,2-Dibromoethane	18		2.5	ug/L	20.0	0.78 U	89	57-140	3	16	
1,2-Dichlorobenzene	20		2.5	ug/L	20.0	0.73 U	101	63-131	1	25	
1,2-Dichloroethane	19		2.5	ug/L	20.0	0.63 U	96	50-156	2	18	
1,2-Dichloropropane	19		2.5	ug/L	20.0	0.80 U	94	61-133	3	26	
1,3-Dichlorobenzene	23		2.5	ug/L	20.0	0.77 U	114	66-129	8	23	
1,4-Dichlorobenzene	22		2.5	ug/L	20.0	0.76 U	110	65-133	2	23	
2-Butanone	54		12	ug/L	100	4.5 U	54	10-180	2	29	
2-Hexanone	55		12	ug/L	100	2.5 U	55	12-180	3	28	
4-Methyl-2-pentanone	61		12	ug/L	100	2.5 U	61	19-180	2	24	
Acetone	46		25	ug/L	100	10 U	46	10-180	0.6	19	
Benzene	51		2.5	ug/L	20.0	31	98	56-136	0.9	14	
Bromodichloromethane	21		2.5	ug/L	20.0	0.52 U	104	58-135	7	19	
Bromoform	20		2.5	ug/L	20.0	0.75 U	100	46-148	4	18	
Bromomethane	35		2.5	ug/L	20.0	0.95 U	173	10-173	2	29	
Carbon disulfide	28		12	ug/L	20.0	2.5 U	139	43-153	1	26	
Carbon Tetrachloride	27		2.5	ug/L	20.0	0.94 U	134	54-156	10	27	
Chlorobenzene	22		2.5	ug/L	20.0	0.72 U	110	51-139	4	13	
Chloroethane	35	L	2.5	ug/L	20.0	0.98 U	176	27-180	2	22	
Chloroform	20		2.5	ug/L	20.0	0.80 U	101	58-139	4	17	
Chloromethane	19		2.5	ug/L	20.0	0.82 U	94	33-154	2	31	
cis-1,2-Dichloroethene	20		2.5	ug/L	20.0	0.53 U	98	56-128	10	17	
cis-1,3-Dichloropropene	19		2.5	ug/L	20.0	0.59 U	94	64-128	3	20	
Cyclohexane	24		2.5	ug/L	20.0	2.0	111	70-130	1	20	
Dibromochloromethane	21		2.5	ug/L	20.0	0.50 U	104	50-140	4	18	
Dichlorodifluoromethane	17		2.5	ug/L	20.0	0.74 U	83	10-180	0.4	26	
Ethylbenzene	22		2.5	ug/L	20.0	0.69 U	111	63-133	6	18	
Freon 113	20		2.5	ug/L	20.0	0.73 U	101	47-173	4	30	
Isopropylbenzene	24		2.5	ug/L	20.0	0.67 U	122	60-132	2	23	
m,p-Xylenes	55		5.0	ug/L	40.0	8.6	115	64-133	4	18	

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1I23015 - EPA 5030B_MS - Continued

Matrix Spike Dup (1I23015-MSD1) Continued Prepared: 09/23/2021 00:00 Analyzed: 09/23/2021 12:32

Source: AE05449-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Methyl acetate	12		2.5	ug/L	20.0	0.95 U	60	70-130	6	20	
Methylene Chloride	20		12	ug/L	20.0	2.5 U	101	43-142	0.4	23	
Methyl-tert-Butyl Ether	29		2.5	ug/L	20.0	10	93	51-145	2	22	
o-Xylene	36		2.5	ug/L	20.0	12	119	61-129	3	16	
Styrene	22		2.5	ug/L	20.0	0.61 U	112	59-136	3	32	
Tetrachloroethene	20		2.5	ug/L	20.0	0.76 U	98	60-147	5	21	
Toluene	21		2.5	ug/L	20.0	0.72 U	104	64-131	1	16	
trans-1,2-Dichloroethene	21		2.5	ug/L	20.0	0.73 U	106	54-134	0.1	20	
trans-1,3-Dichloropropene	21		2.5	ug/L	20.0	0.73 U	106	65-149	1	17	
Trichloroethene	21		2.5	ug/L	20.0	0.89 U	105	62-135	6	20	
Trichlorofluoromethane	21		2.5	ug/L	20.0	0.94 U	105	56-155	3	22	
Vinyl chloride	20		2.5	ug/L	20.0	0.71 U	98	20-167	2	24	
4-Bromofluorobenzene	*54*			*ug/L*	*50.0*		*108*	*41-142*			
Dibromofluoromethane	*54*			*ug/L*	*50.0*		*108*	*53-146*			
Toluene-d8	*51*			*ug/L*	*50.0*		*103*	*41-146*			

FLAGS/NOTES AND DEFINITIONS

PQL	PQL: Practical Quantitation Limit. The PQL presented is the laboratory MRL.
B	Results are based upon membrane filter colony counts that are outside the method indicated ideal range.
I	The reported value is between the laboratory method detection limit (MDL) and the practical quantitation limit (PQL).
J	Estimated value.
K	Off-scale low; Actual value is known to be less than the value given.
L	Off-scale high; Actual value is known to be greater than value given.
M	Presence of analyte is verified but not quantified; the actual value is less than the MRL but greater than the MDL.
N	Presumptive evidence of presence of material.
O	Sampled, but analysis lost or not performed.
Q	Sample exceeded the accepted holding time.
T	Value reported is less than the laboratory method detection limit. The value is reported for informational purposes only and shall not be used in statistical analysis.
U	Indicates that the compound was analyzed for but not detected.
V	Indicates that the analyte was detected in both the sample and the associated method blank.
Y	The laboratory analysis was from an improperly preserved sample. The data may not be accurate.
Z	Too many colonies were present (TNTC); the numeric value represents the filtration volume.
?	Data are rejected and should not be used. Some or all of the quality control data for the analyte were outside criteria, and the presence or absence of the analyte cannot be determined from the data.
*	Not reported due to interference.
[CALC]	Calculated analyte - MDL/MRL reported to the highest reporting limit of the component analyses.
QL-02	The associated laboratory control sample exhibited high bias; since the result is ND, there is no impact.
QM-19	The spike recovery was outside acceptance limits for the MS and/or MSD.
QV-01	The associated continuing calibration verification standard exhibited high bias; since the result is ND, there is no impact.

AE05696

Tetra Tech, Inc. CHAIN OF CUSTODY | NUMBER No. 2488 | PAGE 1 OF 2

PROJECT NO: 112G08985	FACILITY: LC 34 - HCS	PROJECT MANAGER MARK JONNET	PHONE NUMBER 412-921-8622	LABORATORY NAME AND CONTACT: ENCO
SAMPLERS (SIGNATURE) Dan Forester, Chuck Sarden		FIELD OPERATIONS LEADER DAN FORESTER	PHONE NUMBER 304-780-1426	ADDRESS
		CARRIER/WAYBILL NUMBER COURIER		CITY, STATE ORLANDO, FL

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR 2021	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	CONTAINER TYPE PLASTIC (P) or GLASS (G): G	PRESERVATIVE USED: HCL	TYPE OF ANALYSIS: VOC 8260	COMMENTS
14SEP	0800	LC34 - GAC - 20210914	LC34	/	/	GW	G	3	X			
	0810	LC34 - AS1 - 20210914		/	/							
	0820	LC34 - AS2 - 20210914		/	/							
	0830	LC34 - INFLUENT - 20210914		/	/							
	0840	LC34 - RW2A - 20210914		/	/							
	0850	LC34 - RW2B - 20210914		/	/							
	0900	LC34 - RW5B - 20210914		/	/							
	0910	LC34 - RW9A - 20210914		/	/							
	0920	LC34 - RW10A - 20210914		/	/							
	0930	LC34 - RW12A - 20210914		/	/							
	0940	LC34 - RW13A - 20210914		/	/							
	0950	LC34 - RW14A - 20210914		/	/							
X	1000	LC34 - RW15A - 20210914	X	/	/	X	X	X	X			

Samp ID: GW
Lab ID: AE05696-06C
Client: Tetra Tech NUS, Inc. (TE015)
Project: NASA KSC LC34
Project #: 112G08985
Date/Time:
Init:
Ctr ID: 40mLV+HCl
2260D TCL SOM01

USE THIS CABLE FOR CAB INFO

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	09/14/21	1500	1. RECEIVED BY	9/14/21	1500
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS: Q100 0.1°C

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

Tetra Tech, Inc.

CHAIN OF CUSTODY | NUMBER No. 2489 (ACO 5696) | PAGE 2 OF 2

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G08985	LC34 - HCS	MARK JONNET	412-921-8622	ENCO
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER	PHONE NUMBER	ADDRESS
DAN FORESTER, Chuck Scroder		DAN FORESTER	304-780-1426	
		CARRIER/WAYBILL NUMBER		CITY, STATE
		COURIER		ORLANDO, FL

STANDARD TAT ☒
RUSH TAT ☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR 2021	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	CONTAINER TYPE PLASTIC (P) or GLASS (G): G	PRESERVATIVE USED: HCL	TYPE OF ANALYSIS: VOC 8260	COMMENTS
14 SEP	1010	LC34-RW16B	LC34			GW	G	3	X			
	1020	LC34-RW17C										
	1030	LC34-RW18C										
	1040	LC34-RW19C										
X	1050	LC34-RW20C	X			X	X	X	X			

Samp ID: GW
Lab ID: AE05696-06B
Client: Tetra Tech NUS, Inc. (TE015)
Project: NASA KSC LC34
Project #: 112G08985
Date/Time:
Init:
Ctr ID: 40mLV+HCl
2800 TCL SOM01
USE THIS LABLE FOR LAB INFO

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	09/14/21	1500	1. RECEIVED BY James W Gregory	9/14/21	1500
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS: 0.100 0.100

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

Environmental Conservation Laboratories, Inc.
10775 Central Port Drive, Orlando, FL 32824
4810 Executive Park Court, Suite 211,Jacksonville, FL 32216
102-A Woodwinds Industrial Ct, Cary, NC 27511

www.encolabs.com

COMPENDIUM METHOD TO-14A/COMPENDIUM METHOD TO-15 CANISTER SAMPLING FIELD TEST DATA SHEET

General Sampling Information should be recorded for each SUMMA canister used to collect samples.

General Information

SITE LOCATION:	NASA KSC
SITE ADDRESS:	LC39
SAMPLER ID:	LC39PS - VMPF - 20210910
SAMPLING DATE:	10SEP21
OPERATOR:	DAN FORESTER
SHIPPING DATE:	
CANISTER SERIAL NO.:	5S016
CANISTER LEAK CHECK DATE:	Laboratory information on file.
REGULATOR SERIAL NO.:	4696

Sampling Information

	Temperature	Canister Pressure	Local Time	Regulator Flow Rate
START	80	-30 inHg	0745	0.2 L/M
STOP	88	-3 inHg	1530	STOP

Signature/Title: _____

ENCO Laboratories

Accurate. Timely. Responsive. Innovative.

10775 Central Port Drive
Orlando FL, 32824
Phone: 407.826.5314 FAX: 407.850.6945

Friday, October 15, 2021
Tetra Tech NUS, Inc. (TE015)
Attn: Mark Jonnet
Foster Plaza 7, 661 Anderson Drive
Pittsburgh, PA 15220

RE: Laboratory Results for
Project Number: 112G08985, Project Name/Desc: NASA KSC LC34
ENCO Workorder(s): AE08059

Dear Mark Jonnet,

Enclosed is a copy of your laboratory report for test samples received by our laboratory on Thursday, October 7, 2021.

Unless otherwise noted in an attached project narrative, all samples were received in acceptable condition and processed in accordance with the referenced methods/procedures. Results for these procedures apply only to the samples as submitted.

The analytical results contained in this report are in compliance with NELAC standards, except as noted in the project narrative if applicable. This report shall not be reproduced except in full, without the written approval of the Laboratory.

This report contains only those analyses performed by Environmental Conservation Laboratories. Unless otherwise noted, all analyses were performed at ENCO Orlando. Data from outside organizations will be reported under separate cover.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

Kaitlin Dylnicki

Project Manager

Enclosure(s)

SAMPLE SUMMARY/LABORATORY CHRONICLE

Client ID: LC34-GAC-20211007 | **Lab ID: AE08059-01** | **Sampled: 10/07/21 10:00** | **Received: 10/07/21 15:15**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	10/21/21	10/11/21 00:00	10/11/21 23:18

Client ID: LC34-AS1-20211007 | **Lab ID: AE08059-02** | **Sampled: 10/07/21 10:10** | **Received: 10/07/21 15:15**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	10/21/21	10/11/21 00:00	10/11/21 23:47

Client ID: LC34-AS2-20211007 | **Lab ID: AE08059-03RE1** | **Sampled: 10/07/21 10:20** | **Received: 10/07/21 15:15**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	10/21/21	10/13/21 00:00	10/13/21 15:04

Client ID: LC34-RW17C-20211007 | **Lab ID: AE08059-04** | **Sampled: 10/07/21 10:30** | **Received: 10/07/21 15:15**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	10/21/21	10/12/21 09:39	10/12/21 12:46

Client ID: LC34-RW17C-20211007 | **Lab ID: AE08059-04RE1** | **Sampled: 10/07/21 10:30** | **Received: 10/07/21 15:15**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	10/21/21	10/14/21 00:00	10/14/21 18:43

Client ID: LC34-RW18C-20211007 | **Lab ID: AE08059-05** | **Sampled: 10/07/21 10:40** | **Received: 10/07/21 15:15**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	10/21/21	10/12/21 09:39	10/12/21 13:15

Client ID: LC34-RW19C-20211007 | **Lab ID: AE08059-06** | **Sampled: 10/07/21 10:50** | **Received: 10/07/21 15:15**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	10/21/21	10/12/21 09:39	10/12/21 13:44

Client ID: LC34-RW20C-20211007 | **Lab ID: AE08059-07** | **Sampled: 10/07/21 11:00** | **Received: 10/07/21 15:15**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	10/21/21	10/12/21 09:39	10/12/21 14:12

Client ID: LC34-RW20C-20211007 | **Lab ID: AE08059-07RE1** | **Sampled: 10/07/21 11:00** | **Received: 10/07/21 15:15**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	10/21/21	10/14/21 00:00	10/14/21 19:11

SAMPLE DETECTION SUMMARY

Client ID: LC34-AS1-20211007 **Lab ID:** AE08059-02

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	4.9		0.53	2.5	ug/L	EPA 8260D	
Trichloroethene	1.9	I	0.89	2.5	ug/L	EPA 8260D	

Client ID: LC34-AS2-20211007 **Lab ID:** AE08059-03RE1

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	150		1.1	5.0	ug/L	EPA 8260D	
Trichloroethene	140		1.8	5.0	ug/L	EPA 8260D	
Vinyl chloride	3.9	I	1.4	5.0	ug/L	EPA 8260D	

Client ID: LC34-RW17C-20211007 **Lab ID:** AE08059-04

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	11000		1100	5000	ug/L	EPA 8260D	

Client ID: LC34-RW17C-20211007 **Lab ID:** AE08059-04RE1

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Trichloroethene	240000		8900	25000	ug/L	EPA 8260D	

Client ID: LC34-RW18C-20211007 **Lab ID:** AE08059-05

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	4700		530	2500	ug/L	EPA 8260D	
Trichloroethene	89000		890	2500	ug/L	EPA 8260D	

Client ID: LC34-RW19C-20211007 **Lab ID:** AE08059-06

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Trichloroethene	430000		8900	25000	ug/L	EPA 8260D	

Client ID: LC34-RW20C-20211007 **Lab ID:** AE08059-07

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	6600		1100	5000	ug/L	EPA 8260D	

Client ID: LC34-RW20C-20211007 **Lab ID:** AE08059-07RE1

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Trichloroethene	270000		8900	25000	ug/L	EPA 8260D	

ANALYTICAL RESULTS

Description: LC34-GAC-20211007 **Lab Sample ID:** AE08059-01 **Received:** 10/07/21 15:15

Matrix: Ground Water **Sampled:** 10/07/21 10:00 **Work Order:** AE08059

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	1J11029	EPA 8260D	10/11/21 23:18	kkw	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	1J11029	EPA 8260D	10/11/21 23:18	kkw	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	1J11029	EPA 8260D	10/11/21 23:18	kkw	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	1J11029	EPA 8260D	10/11/21 23:18	kkw	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	1J11029	EPA 8260D	10/11/21 23:18	kkw	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	1J11029	EPA 8260D	10/11/21 23:18	kkw	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	1J11029	EPA 8260D	10/11/21 23:18	kkw	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	1J11029	EPA 8260D	10/11/21 23:18	kkw	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	1J11029	EPA 8260D	10/11/21 23:18	kkw	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	1J11029	EPA 8260D	10/11/21 23:18	kkw	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	1J11029	EPA 8260D	10/11/21 23:18	kkw	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	1J11029	EPA 8260D	10/11/21 23:18	kkw	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	1J11029	EPA 8260D	10/11/21 23:18	kkw	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	1J11029	EPA 8260D	10/11/21 23:18	kkw	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	1J11029	EPA 8260D	10/11/21 23:18	kkw	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	1J11029	EPA 8260D	10/11/21 23:18	kkw	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	1J11029	EPA 8260D	10/11/21 23:18	kkw	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	1J11029	EPA 8260D	10/11/21 23:18	kkw	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	1J11029	EPA 8260D	10/11/21 23:18	kkw	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	1J11029	EPA 8260D	10/11/21 23:18	kkw	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	1J11029	EPA 8260D	10/11/21 23:18	kkw	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	1J11029	EPA 8260D	10/11/21 23:18	kkw	QL-02, QM-19, QV-01
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	1J11029	EPA 8260D	10/11/21 23:18	kkw	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	1J11029	EPA 8260D	10/11/21 23:18	kkw	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	1J11029	EPA 8260D	10/11/21 23:18	kkw	QV-01
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	1J11029	EPA 8260D	10/11/21 23:18	kkw	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	1J11029	EPA 8260D	10/11/21 23:18	kkw	
cis-1,2-Dichloroethene [156-59-2]^	0.53	U	ug/L	1	0.53	2.5	1J11029	EPA 8260D	10/11/21 23:18	kkw	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	1J11029	EPA 8260D	10/11/21 23:18	kkw	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	1J11029	EPA 8260D	10/11/21 23:18	kkw	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	1J11029	EPA 8260D	10/11/21 23:18	kkw	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	1J11029	EPA 8260D	10/11/21 23:18	kkw	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	1J11029	EPA 8260D	10/11/21 23:18	kkw	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	1J11029	EPA 8260D	10/11/21 23:18	kkw	QV-01
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	1J11029	EPA 8260D	10/11/21 23:18	kkw	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	1J11029	EPA 8260D	10/11/21 23:18	kkw	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	1J11029	EPA 8260D	10/11/21 23:18	kkw	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	1J11029	EPA 8260D	10/11/21 23:18	kkw	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	1J11029	EPA 8260D	10/11/21 23:18	kkw	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	1J11029	EPA 8260D	10/11/21 23:18	kkw	QL-02, QV-01
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	1J11029	EPA 8260D	10/11/21 23:18	kkw	
trans-1,2-Dichloroethene [156-60-5]^	0.73	U	ug/L	1	0.73	2.5	1J11029	EPA 8260D	10/11/21 23:18	kkw	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	1J11029	EPA 8260D	10/11/21 23:18	kkw	
Trichloroethene [79-01-6]^	0.89	U	ug/L	1	0.89	2.5	1J11029	EPA 8260D	10/11/21 23:18	kkw	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	1J11029	EPA 8260D	10/11/21 23:18	kkw	

ANALYTICAL RESULTS

Description: LC34-GAC-20211007 **Lab Sample ID:** AE08059-01 **Received:** 10/07/21 15:15

Matrix: Ground Water **Sampled:** 10/07/21 10:00 **Work Order:** AE08059

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Vinyl chloride [75-01-4]^	0.71	U	ug/L	1	0.71	2.5	1J11029	EPA 8260D	10/11/21 23:18	kkw	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*45*	*1*	*50.0*	*90 %*	*41-142*	*1J11029*	*EPA 8260D*	*10/11/21 23:18*	*kkw*	
Dibromofluoromethane	*55*	*1*	*50.0*	*110 %*	*53-146*	*1J11029*	*EPA 8260D*	*10/11/21 23:18*	*kkw*	
Toluene-d8	*51*	*1*	*50.0*	*103 %*	*41-146*	*1J11029*	*EPA 8260D*	*10/11/21 23:18*	*kkw*	

ANALYTICAL RESULTS

Description: LC34-AS1-20211007 **Lab Sample ID:** AE08059-02 **Received:** 10/07/21 15:15

Matrix: Ground Water **Sampled:** 10/07/21 10:10 **Work Order:** AE08059

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	1J11029	EPA 8260D	10/11/21 23:47	kkw	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	1J11029	EPA 8260D	10/11/21 23:47	kkw	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	1J11029	EPA 8260D	10/11/21 23:47	kkw	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	1J11029	EPA 8260D	10/11/21 23:47	kkw	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	1J11029	EPA 8260D	10/11/21 23:47	kkw	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	1J11029	EPA 8260D	10/11/21 23:47	kkw	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	1J11029	EPA 8260D	10/11/21 23:47	kkw	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	1J11029	EPA 8260D	10/11/21 23:47	kkw	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	1J11029	EPA 8260D	10/11/21 23:47	kkw	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	1J11029	EPA 8260D	10/11/21 23:47	kkw	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	1J11029	EPA 8260D	10/11/21 23:47	kkw	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	1J11029	EPA 8260D	10/11/21 23:47	kkw	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	1J11029	EPA 8260D	10/11/21 23:47	kkw	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	1J11029	EPA 8260D	10/11/21 23:47	kkw	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	1J11029	EPA 8260D	10/11/21 23:47	kkw	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	1J11029	EPA 8260D	10/11/21 23:47	kkw	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	1J11029	EPA 8260D	10/11/21 23:47	kkw	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	1J11029	EPA 8260D	10/11/21 23:47	kkw	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	1J11029	EPA 8260D	10/11/21 23:47	kkw	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	1J11029	EPA 8260D	10/11/21 23:47	kkw	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	1J11029	EPA 8260D	10/11/21 23:47	kkw	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	1J11029	EPA 8260D	10/11/21 23:47	kkw	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	1J11029	EPA 8260D	10/11/21 23:47	kkw	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	1J11029	EPA 8260D	10/11/21 23:47	kkw	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	1J11029	EPA 8260D	10/11/21 23:47	kkw	QV-01
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	1J11029	EPA 8260D	10/11/21 23:47	kkw	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	1J11029	EPA 8260D	10/11/21 23:47	kkw	
cis-1,2-Dichloroethene [156-59-2]^	**4.9**		ug/L	1	0.53	2.5	1J11029	EPA 8260D	10/11/21 23:47	kkw	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	1J11029	EPA 8260D	10/11/21 23:47	kkw	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	1J11029	EPA 8260D	10/11/21 23:47	kkw	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	1J11029	EPA 8260D	10/11/21 23:47	kkw	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	1J11029	EPA 8260D	10/11/21 23:47	kkw	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	1J11029	EPA 8260D	10/11/21 23:47	kkw	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	1J11029	EPA 8260D	10/11/21 23:47	kkw	QV-01
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	1J11029	EPA 8260D	10/11/21 23:47	kkw	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	1J11029	EPA 8260D	10/11/21 23:47	kkw	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	1J11029	EPA 8260D	10/11/21 23:47	kkw	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	1J11029	EPA 8260D	10/11/21 23:47	kkw	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	1J11029	EPA 8260D	10/11/21 23:47	kkw	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	1J11029	EPA 8260D	10/11/21 23:47	kkw	QL-02, QV-01
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	1J11029	EPA 8260D	10/11/21 23:47	kkw	
trans-1,2-Dichloroethene [156-60-5]^	0.73	U	ug/L	1	0.73	2.5	1J11029	EPA 8260D	10/11/21 23:47	kkw	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	1J11029	EPA 8260D	10/11/21 23:47	kkw	
Trichloroethene [79-01-6]^	**1.9**	I	ug/L	1	0.89	2.5	1J11029	EPA 8260D	10/11/21 23:47	kkw	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	1J11029	EPA 8260D	10/11/21 23:47	kkw	

ANALYTICAL RESULTS

Description: LC34-AS1-20211007 **Lab Sample ID:** AE08059-02 **Received:** 10/07/21 15:15

Matrix: Ground Water **Sampled:** 10/07/21 10:10 **Work Order:** AE08059

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Vinyl chloride [75-01-4]^	0.71	U	ug/L	1	0.71	2.5	1J11029	EPA 8260D	10/11/21 23:47	kkw	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*46*	*1*	*50.0*	*91 %*	*41-142*	*1J11029*	*EPA 8260D*	*10/11/21 23:47*	*kkw*	
Dibromofluoromethane	*55*	*1*	*50.0*	*110 %*	*53-146*	*1J11029*	*EPA 8260D*	*10/11/21 23:47*	*kkw*	
Toluene-d8	*51*	*1*	*50.0*	*102 %*	*41-146*	*1J11029*	*EPA 8260D*	*10/11/21 23:47*	*kkw*	

ANALYTICAL RESULTS

Description: LC34-AS2-20211007 **Lab Sample ID:** AE08059-03 **Received:** 10/07/21 15:15

Matrix: Ground Water **Sampled:** 10/07/21 10:20 **Work Order:** AE08059

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	1.6	U	ug/L	2	1.6	5.0	1J13009	EPA 8260D	10/13/21 15:04	kkw	
1,1,2,2-Tetrachloroethane [79-34-5]^	1.1	U	ug/L	2	1.1	5.0	1J13009	EPA 8260D	10/13/21 15:04	kkw	
1,1,2-Trichloroethane [79-00-5]^	1.5	U	ug/L	2	1.5	5.0	1J13009	EPA 8260D	10/13/21 15:04	kkw	
1,1-Dichloroethane [75-34-3]^	1.2	U	ug/L	2	1.2	5.0	1J13009	EPA 8260D	10/13/21 15:04	kkw	
1,1-Dichloroethene [75-35-4]^	1.9	U	ug/L	2	1.9	5.0	1J13009	EPA 8260D	10/13/21 15:04	kkw	
1,2,4-Trichlorobenzene [120-82-1]^	1.4	U	ug/L	2	1.4	5.0	1J13009	EPA 8260D	10/13/21 15:04	kkw	
1,2-Dibromo-3-chloropropane [96-12-8]^	1.9	U	ug/L	2	1.9	5.0	1J13009	EPA 8260D	10/13/21 15:04	kkw	
1,2-Dibromoethane [106-93-4]^	1.6	U	ug/L	2	1.6	5.0	1J13009	EPA 8260D	10/13/21 15:04	kkw	
1,2-Dichlorobenzene [95-50-1]^	1.5	U	ug/L	2	1.5	5.0	1J13009	EPA 8260D	10/13/21 15:04	kkw	
1,2-Dichloroethane [107-06-2]^	1.3	U	ug/L	2	1.3	5.0	1J13009	EPA 8260D	10/13/21 15:04	kkw	
1,2-Dichloropropane [78-87-5]^	1.6	U	ug/L	2	1.6	5.0	1J13009	EPA 8260D	10/13/21 15:04	kkw	
1,3-Dichlorobenzene [541-73-1]^	1.5	U	ug/L	2	1.5	5.0	1J13009	EPA 8260D	10/13/21 15:04	kkw	
1,4-Dichlorobenzene [106-46-7]^	1.5	U	ug/L	2	1.5	5.0	1J13009	EPA 8260D	10/13/21 15:04	kkw	
2-Butanone [78-93-3]^	9.0	U	ug/L	2	9.0	25	1J13009	EPA 8260D	10/13/21 15:04	kkw	
2-Hexanone [591-78-6]^	5.0	U	ug/L	2	5.0	25	1J13009	EPA 8260D	10/13/21 15:04	kkw	
4-Methyl-2-pentanone [108-10-1]^	5.0	U	ug/L	2	5.0	25	1J13009	EPA 8260D	10/13/21 15:04	kkw	
Acetone [67-64-1]^	20	U	ug/L	2	20	50	1J13009	EPA 8260D	10/13/21 15:04	kkw	
Benzene [71-43-2]^	1.4	U	ug/L	2	1.4	5.0	1J13009	EPA 8260D	10/13/21 15:04	kkw	
Bromodichloromethane [75-27-4]^	1.0	U	ug/L	2	1.0	5.0	1J13009	EPA 8260D	10/13/21 15:04	kkw	
Bromoform [75-25-2]^	1.5	U	ug/L	2	1.5	5.0	1J13009	EPA 8260D	10/13/21 15:04	kkw	
Bromomethane [74-83-9]^	1.9	U	ug/L	2	1.9	5.0	1J13009	EPA 8260D	10/13/21 15:04	kkw	QV-01
Carbon disulfide [75-15-0]^	5.0	U	ug/L	2	5.0	25	1J13009	EPA 8260D	10/13/21 15:04	kkw	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	1.9	U	ug/L	2	1.9	5.0	1J13009	EPA 8260D	10/13/21 15:04	kkw	
Chlorobenzene [108-90-7]^	1.4	U	ug/L	2	1.4	5.0	1J13009	EPA 8260D	10/13/21 15:04	kkw	
Chloroethane [75-00-3]^	2.0	U	ug/L	2	2.0	5.0	1J13009	EPA 8260D	10/13/21 15:04	kkw	QV-01
Chloroform [67-66-3]^	1.6	U	ug/L	2	1.6	5.0	1J13009	EPA 8260D	10/13/21 15:04	kkw	
Chloromethane [74-87-3]^	1.6	U	ug/L	2	1.6	5.0	1J13009	EPA 8260D	10/13/21 15:04	kkw	
cis-1,2-Dichloroethene [156-59-2]^	**150**		ug/L	2	1.1	5.0	1J13009	EPA 8260D	10/13/21 15:04	kkw	
cis-1,3-Dichloropropene [10061-01-5]^	1.2	U	ug/L	2	1.2	5.0	1J13009	EPA 8260D	10/13/21 15:04	kkw	
Cyclohexane [110-82-7]^	1.9	U	ug/L	2	1.9	5.0	1J13009	EPA 8260D	10/13/21 15:04	kkw	
Dibromochloromethane [124-48-1]^	1.0	U	ug/L	2	1.0	5.0	1J13009	EPA 8260D	10/13/21 15:04	kkw	
Dichlorodifluoromethane [75-71-8]^	1.5	U	ug/L	2	1.5	5.0	1J13009	EPA 8260D	10/13/21 15:04	kkw	
Ethylbenzene [100-41-4]^	1.4	U	ug/L	2	1.4	5.0	1J13009	EPA 8260D	10/13/21 15:04	kkw	
Freon 113 [76-13-1]^	1.5	U	ug/L	2	1.5	5.0	1J13009	EPA 8260D	10/13/21 15:04	kkw	
Isopropylbenzene [98-82-8]^	1.3	U	ug/L	2	1.3	5.0	1J13009	EPA 8260D	10/13/21 15:04	kkw	
Methyl acetate [79-20-9]^	1.9	U	ug/L	2	1.9	5.0	1J13009	EPA 8260D	10/13/21 15:04	kkw	
Methylene Chloride [75-09-2]^	5.0	U	ug/L	2	5.0	25	1J13009	EPA 8260D	10/13/21 15:04	kkw	
Methyl-tert-Butyl Ether [1634-04-4]^	1.2	U	ug/L	2	1.2	5.0	1J13009	EPA 8260D	10/13/21 15:04	kkw	
Styrene [100-42-5]^	1.2	U	ug/L	2	1.2	5.0	1J13009	EPA 8260D	10/13/21 15:04	kkw	
Tetrachloroethene [127-18-4]^	1.5	U	ug/L	2	1.5	5.0	1J13009	EPA 8260D	10/13/21 15:04	kkw	
Toluene [108-88-3]^	1.4	U	ug/L	2	1.4	5.0	1J13009	EPA 8260D	10/13/21 15:04	kkw	
trans-1,2-Dichloroethene [156-60-5]^	1.5	U	ug/L	2	1.5	5.0	1J13009	EPA 8260D	10/13/21 15:04	kkw	
trans-1,3-Dichloropropene [10061-02-6]^	1.5	U	ug/L	2	1.5	5.0	1J13009	EPA 8260D	10/13/21 15:04	kkw	
Trichloroethene [79-01-6]^	**140**		ug/L	2	1.8	5.0	1J13009	EPA 8260D	10/13/21 15:04	kkw	
Trichlorofluoromethane [75-69-4]^	1.9	U	ug/L	2	1.9	5.0	1J13009	EPA 8260D	10/13/21 15:04	kkw	
Vinyl chloride [75-01-4]^	**3.9**	I	ug/L	2	1.4	5.0	1J13009	EPA 8260D	10/13/21 15:04	kkw	

ANALYTICAL RESULTS

Description: LC34-AS2-20211007 | **Lab Sample ID:** AE08059-03 | **Received:** 10/07/21 15:15

Matrix: Ground Water | **Sampled:** 10/07/21 10:20 | **Work Order:** AE08059

Project: NASA KSC LC34 | **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*46*	*1*	*50.0*	*91 %*	*41-142*	*1J13009*	*EPA 8260D*	*10/13/21 15:04*	*kkw*	
Dibromofluoromethane	*49*	*1*	*50.0*	*99 %*	*53-146*	*1J13009*	*EPA 8260D*	*10/13/21 15:04*	*kkw*	
Toluene-d8	*48*	*1*	*50.0*	*96 %*	*41-146*	*1J13009*	*EPA 8260D*	*10/13/21 15:04*	*kkw*	

ANALYTICAL RESULTS

Description: LC34-RW17C-20211007 **Lab Sample ID:** AE08059-04 **Received:** 10/07/21 15:15

Matrix: Ground Water **Sampled:** 10/07/21 10:30 **Work Order:** AE08059

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	1600	U	ug/L	2000	1600	5000	1J12019	EPA 8260D	10/12/21 12:46	kkw	
1,1,2,2-Tetrachloroethane [79-34-5]^	1100	U	ug/L	2000	1100	5000	1J12019	EPA 8260D	10/12/21 12:46	kkw	
1,1,2-Trichloroethane [79-00-5]^	1500	U	ug/L	2000	1500	5000	1J12019	EPA 8260D	10/12/21 12:46	kkw	
1,1-Dichloroethane [75-34-3]^	1200	U	ug/L	2000	1200	5000	1J12019	EPA 8260D	10/12/21 12:46	kkw	
1,1-Dichloroethene [75-35-4]^	1900	U	ug/L	2000	1900	5000	1J12019	EPA 8260D	10/12/21 12:46	kkw	
1,2,4-Trichlorobenzene [120-82-1]^	1400	U	ug/L	2000	1400	5000	1J12019	EPA 8260D	10/12/21 12:46	kkw	QB-02
1,2-Dibromo-3-chloropropane [96-12-8]^	1900	U	ug/L	2000	1900	5000	1J12019	EPA 8260D	10/12/21 12:46	kkw	
1,2-Dibromoethane [106-93-4]^	1600	U	ug/L	2000	1600	5000	1J12019	EPA 8260D	10/12/21 12:46	kkw	
1,2-Dichlorobenzene [95-50-1]^	1500	U	ug/L	2000	1500	5000	1J12019	EPA 8260D	10/12/21 12:46	kkw	
1,2-Dichloroethane [107-06-2]^	1300	U	ug/L	2000	1300	5000	1J12019	EPA 8260D	10/12/21 12:46	kkw	
1,2-Dichloropropane [78-87-5]^	1600	U	ug/L	2000	1600	5000	1J12019	EPA 8260D	10/12/21 12:46	kkw	
1,3-Dichlorobenzene [541-73-1]^	1500	U	ug/L	2000	1500	5000	1J12019	EPA 8260D	10/12/21 12:46	kkw	
1,4-Dichlorobenzene [106-46-7]^	1500	U	ug/L	2000	1500	5000	1J12019	EPA 8260D	10/12/21 12:46	kkw	
2-Butanone [78-93-3]^	9000	U	ug/L	2000	9000	25000	1J12019	EPA 8260D	10/12/21 12:46	kkw	
2-Hexanone [591-78-6]^	5000	U	ug/L	2000	5000	25000	1J12019	EPA 8260D	10/12/21 12:46	kkw	
4-Methyl-2-pentanone [108-10-1]^	5000	U	ug/L	2000	5000	25000	1J12019	EPA 8260D	10/12/21 12:46	kkw	
Acetone [67-64-1]^	20000	U	ug/L	2000	20000	50000	1J12019	EPA 8260D	10/12/21 12:46	kkw	
Benzene [71-43-2]^	1400	U	ug/L	2000	1400	5000	1J12019	EPA 8260D	10/12/21 12:46	kkw	
Bromodichloromethane [75-27-4]^	1000	U	ug/L	2000	1000	5000	1J12019	EPA 8260D	10/12/21 12:46	kkw	
Bromoform [75-25-2]^	1500	U	ug/L	2000	1500	5000	1J12019	EPA 8260D	10/12/21 12:46	kkw	
Bromomethane [74-83-9]^	1900	U	ug/L	2000	1900	5000	1J12019	EPA 8260D	10/12/21 12:46	kkw	QV-01
Carbon disulfide [75-15-0]^	5000	U	ug/L	2000	5000	25000	1J12019	EPA 8260D	10/12/21 12:46	kkw	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	1900	U	ug/L	2000	1900	5000	1J12019	EPA 8260D	10/12/21 12:46	kkw	
Chlorobenzene [108-90-7]^	1400	U	ug/L	2000	1400	5000	1J12019	EPA 8260D	10/12/21 12:46	kkw	
Chloroethane [75-00-3]^	2000	U	ug/L	2000	2000	5000	1J12019	EPA 8260D	10/12/21 12:46	kkw	
Chloroform [67-66-3]^	1600	U	ug/L	2000	1600	5000	1J12019	EPA 8260D	10/12/21 12:46	kkw	
Chloromethane [74-87-3]^	1600	U	ug/L	2000	1600	5000	1J12019	EPA 8260D	10/12/21 12:46	kkw	
cis-1,2-Dichloroethene [156-59-2]^	**11000**		ug/L	2000	1100	5000	1J12019	EPA 8260D	10/12/21 12:46	kkw	
cis-1,3-Dichloropropene [10061-01-5]^	1200	U	ug/L	2000	1200	5000	1J12019	EPA 8260D	10/12/21 12:46	kkw	
Cyclohexane [110-82-7]^	1900	U	ug/L	2000	1900	5000	1J12019	EPA 8260D	10/12/21 12:46	kkw	
Dibromochloromethane [124-48-1]^	1000	U	ug/L	2000	1000	5000	1J12019	EPA 8260D	10/12/21 12:46	kkw	
Dichlorodifluoromethane [75-71-8]^	1500	U	ug/L	2000	1500	5000	1J12019	EPA 8260D	10/12/21 12:46	kkw	
Ethylbenzene [100-41-4]^	1400	U	ug/L	2000	1400	5000	1J12019	EPA 8260D	10/12/21 12:46	kkw	
Freon 113 [76-13-1]^	1500	U	ug/L	2000	1500	5000	1J12019	EPA 8260D	10/12/21 12:46	kkw	
Isopropylbenzene [98-82-8]^	1300	U	ug/L	2000	1300	5000	1J12019	EPA 8260D	10/12/21 12:46	kkw	
Methyl acetate [79-20-9]^	1900	U	ug/L	2000	1900	5000	1J12019	EPA 8260D	10/12/21 12:46	kkw	
Methylene Chloride [75-09-2]^	5000	U	ug/L	2000	5000	25000	1J12019	EPA 8260D	10/12/21 12:46	kkw	
Methyl-tert-Butyl Ether [1634-04-4]^	1200	U	ug/L	2000	1200	5000	1J12019	EPA 8260D	10/12/21 12:46	kkw	
Styrene [100-42-5]^	1200	U	ug/L	2000	1200	5000	1J12019	EPA 8260D	10/12/21 12:46	kkw	
Tetrachloroethene [127-18-4]^	1500	U	ug/L	2000	1500	5000	1J12019	EPA 8260D	10/12/21 12:46	kkw	
Toluene [108-88-3]^	1400	U	ug/L	2000	1400	5000	1J12019	EPA 8260D	10/12/21 12:46	kkw	
trans-1,2-Dichloroethene [156-60-5]^	1500	U	ug/L	2000	1500	5000	1J12019	EPA 8260D	10/12/21 12:46	kkw	
trans-1,3-Dichloropropene [10061-02-6]^	1500	U	ug/L	2000	1500	5000	1J12019	EPA 8260D	10/12/21 12:46	kkw	
Trichloroethene [79-01-6]^	**240000**		ug/L	10000	8900	25000	1J14017	EPA 8260D	10/14/21 18:43	nmc	
Trichlorofluoromethane [75-69-4]^	1900	U	ug/L	2000	1900	5000	1J12019	EPA 8260D	10/12/21 12:46	kkw	
Vinyl chloride [75-01-4]^	1400	U	ug/L	2000	1400	5000	1J12019	EPA 8260D	10/12/21 12:46	kkw	

ANALYTICAL RESULTS

Description: LC34-RW17C-20211007 **Lab Sample ID:** AE08059-04 **Received:** 10/07/21 15:15

Matrix: Ground Water **Sampled:** 10/07/21 10:30 **Work Order:** AE08059

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*45*	*1*	*50.0*	*90 %*	*41-142*	*1J12019*	*EPA 8260D*	*10/12/21 12:46*	*kkw*	
4-Bromofluorobenzene	*44*	*1*	*50.0*	*89 %*	*41-142*	*1J14017*	*EPA 8260D*	*10/14/21 18:43*	*nmc*	
Dibromofluoromethane	*47*	*1*	*50.0*	*94 %*	*53-146*	*1J12019*	*EPA 8260D*	*10/12/21 12:46*	*kkw*	
Dibromofluoromethane	*49*	*1*	*50.0*	*98 %*	*53-146*	*1J14017*	*EPA 8260D*	*10/14/21 18:43*	*nmc*	
Toluene-d8	*46*	*1*	*50.0*	*93 %*	*41-146*	*1J12019*	*EPA 8260D*	*10/12/21 12:46*	*kkw*	
Toluene-d8	*49*	*1*	*50.0*	*99 %*	*41-146*	*1J14017*	*EPA 8260D*	*10/14/21 18:43*	*nmc*	

ANALYTICAL RESULTS

Description: LC34-RW18C-20211007 **Lab Sample ID:** AE08059-05 **Received:** 10/07/21 15:15

Matrix: Ground Water **Sampled:** 10/07/21 10:40 **Work Order:** AE08059

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	800	U	ug/L	1000	800	2500	1J12019	EPA 8260D	10/12/21 13:15	kkw	
1,1,2,2-Tetrachloroethane [79-34-5]^	540	U	ug/L	1000	540	2500	1J12019	EPA 8260D	10/12/21 13:15	kkw	
1,1,2-Trichloroethane [79-00-5]^	760	U	ug/L	1000	760	2500	1J12019	EPA 8260D	10/12/21 13:15	kkw	
1,1-Dichloroethane [75-34-3]^	620	U	ug/L	1000	620	2500	1J12019	EPA 8260D	10/12/21 13:15	kkw	
1,1-Dichloroethene [75-35-4]^	940	U	ug/L	1000	940	2500	1J12019	EPA 8260D	10/12/21 13:15	kkw	
1,2,4-Trichlorobenzene [120-82-1]^	700	U	ug/L	1000	700	2500	1J12019	EPA 8260D	10/12/21 13:15	kkw	QB-02
1,2-Dibromo-3-chloropropane [96-12-8]^	960	U	ug/L	1000	960	2500	1J12019	EPA 8260D	10/12/21 13:15	kkw	
1,2-Dibromoethane [106-93-4]^	780	U	ug/L	1000	780	2500	1J12019	EPA 8260D	10/12/21 13:15	kkw	
1,2-Dichlorobenzene [95-50-1]^	730	U	ug/L	1000	730	2500	1J12019	EPA 8260D	10/12/21 13:15	kkw	
1,2-Dichloroethane [107-06-2]^	630	U	ug/L	1000	630	2500	1J12019	EPA 8260D	10/12/21 13:15	kkw	
1,2-Dichloropropane [78-87-5]^	800	U	ug/L	1000	800	2500	1J12019	EPA 8260D	10/12/21 13:15	kkw	
1,3-Dichlorobenzene [541-73-1]^	770	U	ug/L	1000	770	2500	1J12019	EPA 8260D	10/12/21 13:15	kkw	
1,4-Dichlorobenzene [106-46-7]^	760	U	ug/L	1000	760	2500	1J12019	EPA 8260D	10/12/21 13:15	kkw	
2-Butanone [78-93-3]^	4500	U	ug/L	1000	4500	12000	1J12019	EPA 8260D	10/12/21 13:15	kkw	
2-Hexanone [591-78-6]^	2500	U	ug/L	1000	2500	12000	1J12019	EPA 8260D	10/12/21 13:15	kkw	
4-Methyl-2-pentanone [108-10-1]^	2500	U	ug/L	1000	2500	12000	1J12019	EPA 8260D	10/12/21 13:15	kkw	
Acetone [67-64-1]^	10000	U	ug/L	1000	10000	25000	1J12019	EPA 8260D	10/12/21 13:15	kkw	
Benzene [71-43-2]^	710	U	ug/L	1000	710	2500	1J12019	EPA 8260D	10/12/21 13:15	kkw	
Bromodichloromethane [75-27-4]^	520	U	ug/L	1000	520	2500	1J12019	EPA 8260D	10/12/21 13:15	kkw	
Bromoform [75-25-2]^	750	U	ug/L	1000	750	2500	1J12019	EPA 8260D	10/12/21 13:15	kkw	
Bromomethane [74-83-9]^	950	U	ug/L	1000	950	2500	1J12019	EPA 8260D	10/12/21 13:15	kkw	QV-01
Carbon disulfide [75-15-0]^	2500	U	ug/L	1000	2500	12000	1J12019	EPA 8260D	10/12/21 13:15	kkw	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	940	U	ug/L	1000	940	2500	1J12019	EPA 8260D	10/12/21 13:15	kkw	
Chlorobenzene [108-90-7]^	720	U	ug/L	1000	720	2500	1J12019	EPA 8260D	10/12/21 13:15	kkw	
Chloroethane [75-00-3]^	980	U	ug/L	1000	980	2500	1J12019	EPA 8260D	10/12/21 13:15	kkw	
Chloroform [67-66-3]^	800	U	ug/L	1000	800	2500	1J12019	EPA 8260D	10/12/21 13:15	kkw	
Chloromethane [74-87-3]^	820	U	ug/L	1000	820	2500	1J12019	EPA 8260D	10/12/21 13:15	kkw	
cis-1,2-Dichloroethene [156-59-2]^	**4700**		ug/L	1000	530	2500	1J12019	EPA 8260D	10/12/21 13:15	kkw	
cis-1,3-Dichloropropene [10061-01-5]^	590	U	ug/L	1000	590	2500	1J12019	EPA 8260D	10/12/21 13:15	kkw	
Cyclohexane [110-82-7]^	930	U	ug/L	1000	930	2500	1J12019	EPA 8260D	10/12/21 13:15	kkw	
Dibromochloromethane [124-48-1]^	500	U	ug/L	1000	500	2500	1J12019	EPA 8260D	10/12/21 13:15	kkw	
Dichlorodifluoromethane [75-71-8]^	740	U	ug/L	1000	740	2500	1J12019	EPA 8260D	10/12/21 13:15	kkw	
Ethylbenzene [100-41-4]^	690	U	ug/L	1000	690	2500	1J12019	EPA 8260D	10/12/21 13:15	kkw	
Freon 113 [76-13-1]^	730	U	ug/L	1000	730	2500	1J12019	EPA 8260D	10/12/21 13:15	kkw	
Isopropylbenzene [98-82-8]^	670	U	ug/L	1000	670	2500	1J12019	EPA 8260D	10/12/21 13:15	kkw	
Methyl acetate [79-20-9]^	950	U	ug/L	1000	950	2500	1J12019	EPA 8260D	10/12/21 13:15	kkw	
Methylene Chloride [75-09-2]^	2500	U	ug/L	1000	2500	12000	1J12019	EPA 8260D	10/12/21 13:15	kkw	
Methyl-tert-Butyl Ether [1634-04-4]^	600	U	ug/L	1000	600	2500	1J12019	EPA 8260D	10/12/21 13:15	kkw	
Styrene [100-42-5]^	610	U	ug/L	1000	610	2500	1J12019	EPA 8260D	10/12/21 13:15	kkw	
Tetrachloroethene [127-18-4]^	760	U	ug/L	1000	760	2500	1J12019	EPA 8260D	10/12/21 13:15	kkw	
Toluene [108-88-3]^	720	U	ug/L	1000	720	2500	1J12019	EPA 8260D	10/12/21 13:15	kkw	
trans-1,2-Dichloroethene [156-60-5]^	730	U	ug/L	1000	730	2500	1J12019	EPA 8260D	10/12/21 13:15	kkw	
trans-1,3-Dichloropropene [10061-02-6]^	730	U	ug/L	1000	730	2500	1J12019	EPA 8260D	10/12/21 13:15	kkw	
Trichloroethene [79-01-6]^	**89000**		ug/L	1000	890	2500	1J12019	EPA 8260D	10/12/21 13:15	kkw	
Trichlorofluoromethane [75-69-4]^	940	U	ug/L	1000	940	2500	1J12019	EPA 8260D	10/12/21 13:15	kkw	
Vinyl chloride [75-01-4]^	710	U	ug/L	1000	710	2500	1J12019	EPA 8260D	10/12/21 13:15	kkw	

ANALYTICAL RESULTS

Description: LC34-RW18C-20211007 **Lab Sample ID:** AE08059-05 **Received:** 10/07/21 15:15

Matrix: Ground Water **Sampled:** 10/07/21 10:40 **Work Order:** AE08059

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*46*	*1*	*50.0*	*93 %*	*41-142*	*1J12019*	*EPA 8260D*	*10/12/21 13:15*	*kkw*	
Dibromofluoromethane	*49*	*1*	*50.0*	*98 %*	*53-146*	*1J12019*	*EPA 8260D*	*10/12/21 13:15*	*kkw*	
Toluene-d8	*48*	*1*	*50.0*	*96 %*	*41-146*	*1J12019*	*EPA 8260D*	*10/12/21 13:15*	*kkw*	

ANALYTICAL RESULTS

Description: LC34-RW19C-20211007 **Lab Sample ID:** AE08059-06 **Received:** 10/07/21 15:15

Matrix: Ground Water **Sampled:** 10/07/21 10:50 **Work Order:** AE08059

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	8000	U	ug/L	10000	8000	25000	1J12019	EPA 8260D	10/12/21 13:44	kkw	
1,1,2,2-Tetrachloroethane [79-34-5]^	5400	U	ug/L	10000	5400	25000	1J12019	EPA 8260D	10/12/21 13:44	kkw	
1,1,2-Trichloroethane [79-00-5]^	7600	U	ug/L	10000	7600	25000	1J12019	EPA 8260D	10/12/21 13:44	kkw	
1,1-Dichloroethane [75-34-3]^	6200	U	ug/L	10000	6200	25000	1J12019	EPA 8260D	10/12/21 13:44	kkw	
1,1-Dichloroethene [75-35-4]^	9400	U	ug/L	10000	9400	25000	1J12019	EPA 8260D	10/12/21 13:44	kkw	
1,2,4-Trichlorobenzene [120-82-1]^	7000	U	ug/L	10000	7000	25000	1J12019	EPA 8260D	10/12/21 13:44	kkw	QB-02
1,2-Dibromo-3-chloropropane [96-12-8]^	9600	U	ug/L	10000	9600	25000	1J12019	EPA 8260D	10/12/21 13:44	kkw	
1,2-Dibromoethane [106-93-4]^	7800	U	ug/L	10000	7800	25000	1J12019	EPA 8260D	10/12/21 13:44	kkw	
1,2-Dichlorobenzene [95-50-1]^	7300	U	ug/L	10000	7300	25000	1J12019	EPA 8260D	10/12/21 13:44	kkw	
1,2-Dichloroethane [107-06-2]^	6300	U	ug/L	10000	6300	25000	1J12019	EPA 8260D	10/12/21 13:44	kkw	
1,2-Dichloropropane [78-87-5]^	8000	U	ug/L	10000	8000	25000	1J12019	EPA 8260D	10/12/21 13:44	kkw	
1,3-Dichlorobenzene [541-73-1]^	7700	U	ug/L	10000	7700	25000	1J12019	EPA 8260D	10/12/21 13:44	kkw	
1,4-Dichlorobenzene [106-46-7]^	7600	U	ug/L	10000	7600	25000	1J12019	EPA 8260D	10/12/21 13:44	kkw	
2-Butanone [78-93-3]^	45000	U	ug/L	10000	45000	120000	1J12019	EPA 8260D	10/12/21 13:44	kkw	
2-Hexanone [591-78-6]^	25000	U	ug/L	10000	25000	120000	1J12019	EPA 8260D	10/12/21 13:44	kkw	
4-Methyl-2-pentanone [108-10-1]^	25000	U	ug/L	10000	25000	120000	1J12019	EPA 8260D	10/12/21 13:44	kkw	
Acetone [67-64-1]^	100000	U	ug/L	10000	100000	250000	1J12019	EPA 8260D	10/12/21 13:44	kkw	
Benzene [71-43-2]^	7100	U	ug/L	10000	7100	25000	1J12019	EPA 8260D	10/12/21 13:44	kkw	
Bromodichloromethane [75-27-4]^	5200	U	ug/L	10000	5200	25000	1J12019	EPA 8260D	10/12/21 13:44	kkw	
Bromoform [75-25-2]^	7500	U	ug/L	10000	7500	25000	1J12019	EPA 8260D	10/12/21 13:44	kkw	
Bromomethane [74-83-9]^	9500	U	ug/L	10000	9500	25000	1J12019	EPA 8260D	10/12/21 13:44	kkw	QV-01
Carbon disulfide [75-15-0]^	25000	U	ug/L	10000	25000	120000	1J12019	EPA 8260D	10/12/21 13:44	kkw	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	9400	U	ug/L	10000	9400	25000	1J12019	EPA 8260D	10/12/21 13:44	kkw	
Chlorobenzene [108-90-7]^	7200	U	ug/L	10000	7200	25000	1J12019	EPA 8260D	10/12/21 13:44	kkw	
Chloroethane [75-00-3]^	9800	U	ug/L	10000	9800	25000	1J12019	EPA 8260D	10/12/21 13:44	kkw	
Chloroform [67-66-3]^	8000	U	ug/L	10000	8000	25000	1J12019	EPA 8260D	10/12/21 13:44	kkw	
Chloromethane [74-87-3]^	8200	U	ug/L	10000	8200	25000	1J12019	EPA 8260D	10/12/21 13:44	kkw	
cis-1,2-Dichloroethene [156-59-2]^	5300	U	ug/L	10000	5300	25000	1J12019	EPA 8260D	10/12/21 13:44	kkw	
cis-1,3-Dichloropropene [10061-01-5]^	5900	U	ug/L	10000	5900	25000	1J12019	EPA 8260D	10/12/21 13:44	kkw	
Cyclohexane [110-82-7]^	9300	U	ug/L	10000	9300	25000	1J12019	EPA 8260D	10/12/21 13:44	kkw	
Dibromochloromethane [124-48-1]^	5000	U	ug/L	10000	5000	25000	1J12019	EPA 8260D	10/12/21 13:44	kkw	
Dichlorodifluoromethane [75-71-8]^	7400	U	ug/L	10000	7400	25000	1J12019	EPA 8260D	10/12/21 13:44	kkw	
Ethylbenzene [100-41-4]^	6900	U	ug/L	10000	6900	25000	1J12019	EPA 8260D	10/12/21 13:44	kkw	
Freon 113 [76-13-1]^	7300	U	ug/L	10000	7300	25000	1J12019	EPA 8260D	10/12/21 13:44	kkw	
Isopropylbenzene [98-82-8]^	6700	U	ug/L	10000	6700	25000	1J12019	EPA 8260D	10/12/21 13:44	kkw	
Methyl acetate [79-20-9]^	9500	U	ug/L	10000	9500	25000	1J12019	EPA 8260D	10/12/21 13:44	kkw	
Methylene Chloride [75-09-2]^	25000	U	ug/L	10000	25000	120000	1J12019	EPA 8260D	10/12/21 13:44	kkw	
Methyl-tert-Butyl Ether [1634-04-4]^	6000	U	ug/L	10000	6000	25000	1J12019	EPA 8260D	10/12/21 13:44	kkw	
Styrene [100-42-5]^	6100	U	ug/L	10000	6100	25000	1J12019	EPA 8260D	10/12/21 13:44	kkw	
Tetrachloroethene [127-18-4]^	7600	U	ug/L	10000	7600	25000	1J12019	EPA 8260D	10/12/21 13:44	kkw	
Toluene [108-88-3]^	7200	U	ug/L	10000	7200	25000	1J12019	EPA 8260D	10/12/21 13:44	kkw	
trans-1,2-Dichloroethene [156-60-5]^	7300	U	ug/L	10000	7300	25000	1J12019	EPA 8260D	10/12/21 13:44	kkw	
trans-1,3-Dichloropropene [10061-02-6]^	7300	U	ug/L	10000	7300	25000	1J12019	EPA 8260D	10/12/21 13:44	kkw	
Trichloroethene [79-01-6]^	**430000**		ug/L	10000	8900	25000	1J12019	EPA 8260D	10/12/21 13:44	kkw	
Trichlorofluoromethane [75-69-4]^	9400	U	ug/L	10000	9400	25000	1J12019	EPA 8260D	10/12/21 13:44	kkw	
Vinyl chloride [75-01-4]^	7100	U	ug/L	10000	7100	25000	1J12019	EPA 8260D	10/12/21 13:44	kkw	

ANALYTICAL RESULTS

Description: LC34-RW19C-20211007 **Lab Sample ID:** AE08059-06 **Received:** 10/07/21 15:15

Matrix: Ground Water **Sampled:** 10/07/21 10:50 **Work Order:** AE08059

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*48*	*1*	*50.0*	*96 %*	*41-142*	*1J12019*	*EPA 8260D*	*10/12/21 13:44*	*kkw*	
Dibromofluoromethane	*49*	*1*	*50.0*	*98 %*	*53-146*	*1J12019*	*EPA 8260D*	*10/12/21 13:44*	*kkw*	
Toluene-d8	*44*	*1*	*50.0*	*89 %*	*41-146*	*1J12019*	*EPA 8260D*	*10/12/21 13:44*	*kkw*	

ANALYTICAL RESULTS

Description: LC34-RW20C-20211007 **Lab Sample ID:** AE08059-07 **Received:** 10/07/21 15:15

Matrix: Ground Water **Sampled:** 10/07/21 11:00 **Work Order:** AE08059

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	1600	U	ug/L	2000	1600	5000	1J12019	EPA 8260D	10/12/21 14:12	kkw	
1,1,2,2-Tetrachloroethane [79-34-5]^	1100	U	ug/L	2000	1100	5000	1J12019	EPA 8260D	10/12/21 14:12	kkw	
1,1,2-Trichloroethane [79-00-5]^	1500	U	ug/L	2000	1500	5000	1J12019	EPA 8260D	10/12/21 14:12	kkw	
1,1-Dichloroethane [75-34-3]^	1200	U	ug/L	2000	1200	5000	1J12019	EPA 8260D	10/12/21 14:12	kkw	
1,1-Dichloroethene [75-35-4]^	1900	U	ug/L	2000	1900	5000	1J12019	EPA 8260D	10/12/21 14:12	kkw	
1,2,4-Trichlorobenzene [120-82-1]^	1400	U	ug/L	2000	1400	5000	1J12019	EPA 8260D	10/12/21 14:12	kkw	QB-02
1,2-Dibromo-3-chloropropane [96-12-8]^	1900	U	ug/L	2000	1900	5000	1J12019	EPA 8260D	10/12/21 14:12	kkw	
1,2-Dibromoethane [106-93-4]^	1600	U	ug/L	2000	1600	5000	1J12019	EPA 8260D	10/12/21 14:12	kkw	
1,2-Dichlorobenzene [95-50-1]^	1500	U	ug/L	2000	1500	5000	1J12019	EPA 8260D	10/12/21 14:12	kkw	
1,2-Dichloroethane [107-06-2]^	1300	U	ug/L	2000	1300	5000	1J12019	EPA 8260D	10/12/21 14:12	kkw	
1,2-Dichloropropane [78-87-5]^	1600	U	ug/L	2000	1600	5000	1J12019	EPA 8260D	10/12/21 14:12	kkw	
1,3-Dichlorobenzene [541-73-1]^	1500	U	ug/L	2000	1500	5000	1J12019	EPA 8260D	10/12/21 14:12	kkw	
1,4-Dichlorobenzene [106-46-7]^	1500	U	ug/L	2000	1500	5000	1J12019	EPA 8260D	10/12/21 14:12	kkw	
2-Butanone [78-93-3]^	9000	U	ug/L	2000	9000	25000	1J12019	EPA 8260D	10/12/21 14:12	kkw	
2-Hexanone [591-78-6]^	5000	U	ug/L	2000	5000	25000	1J12019	EPA 8260D	10/12/21 14:12	kkw	
4-Methyl-2-pentanone [108-10-1]^	5000	U	ug/L	2000	5000	25000	1J12019	EPA 8260D	10/12/21 14:12	kkw	
Acetone [67-64-1]^	20000	U	ug/L	2000	20000	50000	1J12019	EPA 8260D	10/12/21 14:12	kkw	
Benzene [71-43-2]^	1400	U	ug/L	2000	1400	5000	1J12019	EPA 8260D	10/12/21 14:12	kkw	
Bromodichloromethane [75-27-4]^	1000	U	ug/L	2000	1000	5000	1J12019	EPA 8260D	10/12/21 14:12	kkw	
Bromoform [75-25-2]^	1500	U	ug/L	2000	1500	5000	1J12019	EPA 8260D	10/12/21 14:12	kkw	
Bromomethane [74-83-9]^	1900	U	ug/L	2000	1900	5000	1J12019	EPA 8260D	10/12/21 14:12	kkw	QV-01
Carbon disulfide [75-15-0]^	5000	U	ug/L	2000	5000	25000	1J12019	EPA 8260D	10/12/21 14:12	kkw	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	1900	U	ug/L	2000	1900	5000	1J12019	EPA 8260D	10/12/21 14:12	kkw	
Chlorobenzene [108-90-7]^	1400	U	ug/L	2000	1400	5000	1J12019	EPA 8260D	10/12/21 14:12	kkw	
Chloroethane [75-00-3]^	2000	U	ug/L	2000	2000	5000	1J12019	EPA 8260D	10/12/21 14:12	kkw	
Chloroform [67-66-3]^	1600	U	ug/L	2000	1600	5000	1J12019	EPA 8260D	10/12/21 14:12	kkw	
Chloromethane [74-87-3]^	1600	U	ug/L	2000	1600	5000	1J12019	EPA 8260D	10/12/21 14:12	kkw	
cis-1,2-Dichloroethene [156-59-2]^	**6600**		ug/L	2000	1100	5000	1J12019	EPA 8260D	10/12/21 14:12	kkw	
cis-1,3-Dichloropropene [10061-01-5]^	1200	U	ug/L	2000	1200	5000	1J12019	EPA 8260D	10/12/21 14:12	kkw	
Cyclohexane [110-82-7]^	1900	U	ug/L	2000	1900	5000	1J12019	EPA 8260D	10/12/21 14:12	kkw	
Dibromochloromethane [124-48-1]^	1000	U	ug/L	2000	1000	5000	1J12019	EPA 8260D	10/12/21 14:12	kkw	
Dichlorodifluoromethane [75-71-8]^	1500	U	ug/L	2000	1500	5000	1J12019	EPA 8260D	10/12/21 14:12	kkw	
Ethylbenzene [100-41-4]^	1400	U	ug/L	2000	1400	5000	1J12019	EPA 8260D	10/12/21 14:12	kkw	
Freon 113 [76-13-1]^	1500	U	ug/L	2000	1500	5000	1J12019	EPA 8260D	10/12/21 14:12	kkw	
Isopropylbenzene [98-82-8]^	1300	U	ug/L	2000	1300	5000	1J12019	EPA 8260D	10/12/21 14:12	kkw	
Methyl acetate [79-20-9]^	1900	U	ug/L	2000	1900	5000	1J12019	EPA 8260D	10/12/21 14:12	kkw	
Methylene Chloride [75-09-2]^	5000	U	ug/L	2000	5000	25000	1J12019	EPA 8260D	10/12/21 14:12	kkw	
Methyl-tert-Butyl Ether [1634-04-4]^	1200	U	ug/L	2000	1200	5000	1J12019	EPA 8260D	10/12/21 14:12	kkw	
Styrene [100-42-5]^	1200	U	ug/L	2000	1200	5000	1J12019	EPA 8260D	10/12/21 14:12	kkw	
Tetrachloroethene [127-18-4]^	1500	U	ug/L	2000	1500	5000	1J12019	EPA 8260D	10/12/21 14:12	kkw	
Toluene [108-88-3]^	1400	U	ug/L	2000	1400	5000	1J12019	EPA 8260D	10/12/21 14:12	kkw	
trans-1,2-Dichloroethene [156-60-5]^	1500	U	ug/L	2000	1500	5000	1J12019	EPA 8260D	10/12/21 14:12	kkw	
trans-1,3-Dichloropropene [10061-02-6]^	1500	U	ug/L	2000	1500	5000	1J12019	EPA 8260D	10/12/21 14:12	kkw	
Trichloroethene [79-01-6]^	**270000**		ug/L	10000	8900	25000	1J14017	EPA 8260D	10/14/21 19:11	nmc	
Trichlorofluoromethane [75-69-4]^	1900	U	ug/L	2000	1900	5000	1J12019	EPA 8260D	10/12/21 14:12	kkw	
Vinyl chloride [75-01-4]^	1400	U	ug/L	2000	1400	5000	1J12019	EPA 8260D	10/12/21 14:12	kkw	

ANALYTICAL RESULTS

Description: LC34-RW20C-20211007 **Lab Sample ID:** AE08059-07 **Received:** 10/07/21 15:15

Matrix: Ground Water **Sampled:** 10/07/21 11:00 **Work Order:** AE08059

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*47*	*1*	*50.0*	*94 %*	*41-142*	*1J12019*	*EPA 8260D*	*10/12/21 14:12*	*kkw*	
4-Bromofluorobenzene	*45*	*1*	*50.0*	*90 %*	*41-142*	*1J14017*	*EPA 8260D*	*10/14/21 19:11*	*nmc*	
Dibromofluoromethane	*49*	*1*	*50.0*	*97 %*	*53-146*	*1J12019*	*EPA 8260D*	*10/12/21 14:12*	*kkw*	
Dibromofluoromethane	*49*	*1*	*50.0*	*99 %*	*53-146*	*1J14017*	*EPA 8260D*	*10/14/21 19:11*	*nmc*	
Toluene-d8	*48*	*1*	*50.0*	*96 %*	*41-146*	*1J12019*	*EPA 8260D*	*10/12/21 14:12*	*kkw*	
Toluene-d8	*50*	*1*	*50.0*	*99 %*	*41-146*	*1J14017*	*EPA 8260D*	*10/14/21 19:11*	*nmc*	

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1J11029 - EPA 5030B_MS

Blank (1J11029-BLK1) Prepared: 10/11/2021 00:00 Analyzed: 10/11/2021 22:21

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	0.80	U	2.5	ug/L							
1,1,2,2-Tetrachloroethane	0.54	U	2.5	ug/L							
1,1,2-Trichloroethane	0.76	U	2.5	ug/L							
1,1-Dichloroethane	0.62	U	2.5	ug/L							
1,1-Dichloroethene	0.94	U	2.5	ug/L							
1,2,4-Trichlorobenzene	0.70	U	2.5	ug/L							
1,2-Dibromo-3-chloropropane	0.96	U	2.5	ug/L							
1,2-Dibromoethane	0.78	U	2.5	ug/L							
1,2-Dichlorobenzene	0.73	U	2.5	ug/L							
1,2-Dichloroethane	0.63	U	2.5	ug/L							
1,2-Dichloropropane	0.80	U	2.5	ug/L							
1,3-Dichlorobenzene	0.77	U	2.5	ug/L							
1,4-Dichlorobenzene	0.76	U	2.5	ug/L							
2-Butanone	4.5	U	12	ug/L							
2-Hexanone	2.5	U	12	ug/L							
4-Methyl-2-pentanone	2.5	U	12	ug/L							
Acetone	10	U	25	ug/L							
Benzene	0.71	U	2.5	ug/L							
Bromodichloromethane	0.52	U	2.5	ug/L							
Bromoform	0.75	U	2.5	ug/L							
Bromomethane	0.95	U	2.5	ug/L							
Carbon disulfide	2.5	U	12	ug/L							
Carbon Tetrachloride	0.94	U	2.5	ug/L							
Chlorobenzene	0.72	U	2.5	ug/L							
Chloroethane	0.98	U	2.5	ug/L							
Chloroform	0.80	U	2.5	ug/L							
Chloromethane	0.82	U	2.5	ug/L							
cis-1,2-Dichloroethene	0.53	U	2.5	ug/L							
cis-1,3-Dichloropropene	0.59	U	2.5	ug/L							
Cyclohexane	0.93	U	2.5	ug/L							
Dibromochloromethane	0.50	U	2.5	ug/L							
Dichlorodifluoromethane	0.74	U	2.5	ug/L							
Ethylbenzene	0.69	U	2.5	ug/L							
Freon 113	0.73	U	2.5	ug/L							
Isopropylbenzene	0.67	U	2.5	ug/L							
Methyl acetate	0.95	U	2.5	ug/L							
Methylene Chloride	2.5	U	12	ug/L							
Methyl-tert-Butyl Ether	0.60	U	2.5	ug/L							
Styrene	0.61	U	2.5	ug/L							
Tetrachloroethene	0.76	U	2.5	ug/L							
Toluene	0.72	U	2.5	ug/L							
trans-1,2-Dichloroethene	0.73	U	2.5	ug/L							
trans-1,3-Dichloropropene	0.73	U	2.5	ug/L							
Trichloroethene	0.89	U	2.5	ug/L							
Trichlorofluoromethane	0.94	U	2.5	ug/L							
Vinyl chloride	0.71	U	2.5	ug/L							
4-Bromofluorobenzene	*44*	*I*		*ug/L*	*50.0*		*88*	*41-142*			
Dibromofluoromethane	*53*			*ug/L*	*50.0*		*106*	*53-146*			
Toluene-d8	*50*			*ug/L*	*50.0*		*100*	*41-146*			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1J11029 - EPA 5030B_MS - Continued

LCS (1J11029-BS1) Prepared: 10/11/2021 00:00 Analyzed: 10/11/2021 20:27

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	24		2.5	ug/L	20.0		118	57-148			
1,1,2,2-Tetrachloroethane	16		2.5	ug/L	20.0		82	60-139			
1,1,2-Trichloroethane	19		2.5	ug/L	20.0		93	57-141			
1,1-Dichloroethane	22		2.5	ug/L	20.0		110	57-142			
1,1-Dichloroethene	24		2.5	ug/L	20.0		119	47-139			
1,2,4-Trichlorobenzene	21		2.5	ug/L	20.0		104	52-159			
1,2-Dibromo-3-chloropropane	17		2.5	ug/L	20.0		86	48-150			
1,2-Dibromoethane	19		2.5	ug/L	20.0		95	57-140			
1,2-Dichlorobenzene	19		2.5	ug/L	20.0		93	63-131			
1,2-Dichloroethane	22		2.5	ug/L	20.0		109	50-156			
1,2-Dichloropropane	18		2.5	ug/L	20.0		92	61-133			
1,3-Dichlorobenzene	18		2.5	ug/L	20.0		91	66-129			
1,4-Dichlorobenzene	19		2.5	ug/L	20.0		94	65-133			
2-Butanone	140		12	ug/L	100		137	10-180			
2-Hexanone	97		12	ug/L	100		97	12-180			
4-Methyl-2-pentanone	94		12	ug/L	100		94	19-180			
Acetone	110		25	ug/L	100		108	10-180			
Benzene	21		2.5	ug/L	20.0		103	56-136			
Bromodichloromethane	21		2.5	ug/L	20.0		104	58-135			
Bromoform	20		2.5	ug/L	20.0		102	46-148			
Bromomethane	11		2.5	ug/L	20.0		56	10-173			
Carbon disulfide	39		12	ug/L	20.0		197	43-153			QL-02
Carbon Tetrachloride	23		2.5	ug/L	20.0		115	54-156			
Chlorobenzene	20		2.5	ug/L	20.0		99	51-139			
Chloroethane	23		2.5	ug/L	20.0		114	27-180			
Chloroform	23		2.5	ug/L	20.0		113	58-139			
Chloromethane	16		2.5	ug/L	20.0		79	33-154			
cis-1,2-Dichloroethene	21		2.5	ug/L	20.0		106	56-128			
cis-1,3-Dichloropropene	18		2.5	ug/L	20.0		91	64-128			
Cyclohexane	23		2.5	ug/L	20.0		114	70-130			
Dibromochloromethane	18		2.5	ug/L	20.0		92	50-140			
Dichlorodifluoromethane	14		2.5	ug/L	20.0		68	10-180			
Ethylbenzene	19		2.5	ug/L	20.0		95	63-133			
Freon 113	23		2.5	ug/L	20.0		116	47-173			
Isopropylbenzene	19		2.5	ug/L	20.0		97	60-132			
m,p-Xylenes	39		5.0	ug/L	40.0		96	64-133			
Methyl acetate	20		2.5	ug/L	20.0		101	70-130			
Methylene Chloride	22		12	ug/L	20.0		108	43-142			
Methyl-tert-Butyl Ether	21		2.5	ug/L	20.0		103	51-145			
o-Xylene	19		2.5	ug/L	20.0		95	61-129			
Styrene	20		2.5	ug/L	20.0		100	59-136			
Tetrachloroethene	30		2.5	ug/L	20.0		151	60-147			QL-02
Toluene	19		2.5	ug/L	20.0		93	64-131			
trans-1,2-Dichloroethene	22		2.5	ug/L	20.0		109	54-134			
trans-1,3-Dichloropropene	17		2.5	ug/L	20.0		87	65-149			
Trichloroethene	23		2.5	ug/L	20.0		114	62-135			
Trichlorofluoromethane	22		2.5	ug/L	20.0		110	56-155			
Vinyl chloride	18		2.5	ug/L	20.0		91	20-167			
4-Bromofluorobenzene	*48*	*I*		*ug/L*	*50.0*		*97*	*41-142*			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1J11029 - EPA 5030B_MS - Continued

LCS (1J11029-BS1) Continued Prepared: 10/11/2021 00:00 Analyzed: 10/11/2021 20:27

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Dibromofluoromethane	*54*			*ug/L*	*50.0*		*108*	*53-146*			
Toluene-d8	*51*			*ug/L*	*50.0*		*102*	*41-146*			

Matrix Spike (1J11029-MS1) Prepared: 10/11/2021 00:00 Analyzed: 10/11/2021 20:55

Source: AE08059-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	26		2.5	ug/L	20.0	0.80 U	129	57-148			
1,1,2,2-Tetrachloroethane	17		2.5	ug/L	20.0	0.54 U	85	60-139			
1,1,2-Trichloroethane	19		2.5	ug/L	20.0	0.76 U	95	57-141			
1,1-Dichloroethane	23		2.5	ug/L	20.0	0.62 U	114	57-142			
1,1-Dichloroethene	26		2.5	ug/L	20.0	0.94 U	128	47-139			
1,2,4-Trichlorobenzene	20		2.5	ug/L	20.0	0.70 U	102	52-159			
1,2-Dibromo-3-chloropropane	17		2.5	ug/L	20.0	0.96 U	86	48-150			
1,2-Dibromoethane	19		2.5	ug/L	20.0	0.78 U	95	57-140			
1,2-Dichlorobenzene	19		2.5	ug/L	20.0	0.73 U	96	63-131			
1,2-Dichloroethane	22		2.5	ug/L	20.0	0.63 U	108	50-156			
1,2-Dichloropropane	19		2.5	ug/L	20.0	0.80 U	97	61-133			
1,3-Dichlorobenzene	19		2.5	ug/L	20.0	0.77 U	96	66-129			
1,4-Dichlorobenzene	19		2.5	ug/L	20.0	0.76 U	96	65-133			
2-Butanone	140		12	ug/L	100	4.5 U	138	10-180			
2-Hexanone	96		12	ug/L	100	2.5 U	96	12-180			
4-Methyl-2-pentanone	95		12	ug/L	100	2.5 U	95	19-180			
Acetone	100		25	ug/L	100	10 U	105	10-180			
Benzene	22		2.5	ug/L	20.0	0.71 U	108	56-136			
Bromodichloromethane	22		2.5	ug/L	20.0	0.52 U	110	58-135			
Bromoform	21		2.5	ug/L	20.0	0.75 U	103	46-148			
Bromomethane	15		2.5	ug/L	20.0	0.95 U	75	10-173			
Carbon disulfide	38		12	ug/L	20.0	2.5 U	192	43-153			QM-19
Carbon Tetrachloride	25		2.5	ug/L	20.0	0.94 U	124	54-156			
Chlorobenzene	21		2.5	ug/L	20.0	0.72 U	105	51-139			
Chloroethane	25		2.5	ug/L	20.0	0.98 U	127	27-180			
Chloroform	24		2.5	ug/L	20.0	0.80 U	121	58-139			
Chloromethane	17		2.5	ug/L	20.0	0.82 U	85	33-154			
cis-1,2-Dichloroethene	23		2.5	ug/L	20.0	0.53 U	114	56-128			
cis-1,3-Dichloropropene	19		2.5	ug/L	20.0	0.59 U	93	64-128			
Cyclohexane	24		2.5	ug/L	20.0	0.93 U	122	70-130			
Dibromochloromethane	19		2.5	ug/L	20.0	0.50 U	95	50-140			
Dichlorodifluoromethane	15		2.5	ug/L	20.0	0.74 U	75	10-180			
Ethylbenzene	21		2.5	ug/L	20.0	0.69 U	103	63-133			
Freon 113	25		2.5	ug/L	20.0	0.73 U	127	47-173			
Isopropylbenzene	21		2.5	ug/L	20.0	0.67 U	105	60-132			
m,p-Xylenes	41		5.0	ug/L	40.0	1.3 U	102	64-133			
Methyl acetate	19		2.5	ug/L	20.0	0.95 U	97	70-130			
Methylene Chloride	22		12	ug/L	20.0	2.5 U	112	43-142			
Methyl-tert-Butyl Ether	21		2.5	ug/L	20.0	0.60 U	104	51-145			
o-Xylene	20		2.5	ug/L	20.0	0.53 U	101	61-129			
Styrene	21		2.5	ug/L	20.0	0.61 U	103	59-136			
Tetrachloroethene	21		2.5	ug/L	20.0	0.76 U	104	60-147			
Toluene	20		2.5	ug/L	20.0	0.72 U	100	64-131			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1J11029 - EPA 5030B_MS - Continued

Matrix Spike (1J11029-MS1) Continued Prepared: 10/11/2021 00:00 Analyzed: 10/11/2021 20:55

Source: AE08059-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
trans-1,2-Dichloroethene	23		2.5	ug/L	20.0	0.73 U	117	54-134			
trans-1,3-Dichloropropene	18		2.5	ug/L	20.0	0.73 U	89	65-149			
Trichloroethene	25		2.5	ug/L	20.0	0.89 U	124	62-135			
Trichlorofluoromethane	25		2.5	ug/L	20.0	0.94 U	123	56-155			
Vinyl chloride	20		2.5	ug/L	20.0	0.71 U	101	20-167			
4-Bromofluorobenzene	*48*	*I*		*ug/L*	*50.0*		*96*	*41-142*			
Dibromofluoromethane	*54*			*ug/L*	*50.0*		*108*	*53-146*			
Toluene-d8	*51*			*ug/L*	*50.0*		*102*	*41-146*			

Matrix Spike Dup (1J11029-MSD1) Prepared: 10/11/2021 00:00 Analyzed: 10/11/2021 21:24

Source: AE08059-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	24		2.5	ug/L	20.0	0.80 U	121	57-148	6	25	
1,1,2,2-Tetrachloroethane	17		2.5	ug/L	20.0	0.54 U	84	60-139	0.7	17	
1,1,2-Trichloroethane	18		2.5	ug/L	20.0	0.76 U	90	57-141	5	16	
1,1-Dichloroethane	22		2.5	ug/L	20.0	0.62 U	112	57-142	2	24	
1,1-Dichloroethene	25		2.5	ug/L	20.0	0.94 U	127	47-139	0.9	16	
1,2,4-Trichlorobenzene	20		2.5	ug/L	20.0	0.70 U	101	52-159	0.9	24	
1,2-Dibromo-3-chloropropane	16		2.5	ug/L	20.0	0.96 U	82	48-150	5	21	
1,2-Dibromoethane	18		2.5	ug/L	20.0	0.78 U	89	57-140	6	16	
1,2-Dichlorobenzene	18		2.5	ug/L	20.0	0.73 U	91	63-131	6	25	
1,2-Dichloroethane	21		2.5	ug/L	20.0	0.63 U	105	50-156	3	18	
1,2-Dichloropropane	20		2.5	ug/L	20.0	0.80 U	98	61-133	0.9	26	
1,3-Dichlorobenzene	18		2.5	ug/L	20.0	0.77 U	88	66-129	8	23	
1,4-Dichlorobenzene	18		2.5	ug/L	20.0	0.76 U	90	65-133	6	23	
2-Butanone	130		12	ug/L	100	4.5 U	134	10-180	4	29	
2-Hexanone	97		12	ug/L	100	2.5 U	97	12-180	1	28	
4-Methyl-2-pentanone	92		12	ug/L	100	2.5 U	92	19-180	3	24	
Acetone	97		25	ug/L	100	10 U	97	10-180	8	19	
Benzene	23		2.5	ug/L	20.0	0.71 U	115	56-136	6	14	
Bromodichloromethane	22		2.5	ug/L	20.0	0.52 U	108	58-135	1	19	
Bromoform	19		2.5	ug/L	20.0	0.75 U	95	46-148	8	18	
Bromomethane	16		2.5	ug/L	20.0	0.95 U	79	10-173	5	29	
Carbon disulfide	35		12	ug/L	20.0	2.5 U	177	43-153	8	26	QM-19
Carbon Tetrachloride	26		2.5	ug/L	20.0	0.94 U	129	54-156	4	27	
Chlorobenzene	19		2.5	ug/L	20.0	0.72 U	96	51-139	8	13	
Chloroethane	24		2.5	ug/L	20.0	0.98 U	119	27-180	6	22	
Chloroform	23		2.5	ug/L	20.0	0.80 U	114	58-139	6	17	
Chloromethane	16		2.5	ug/L	20.0	0.82 U	81	33-154	6	31	
cis-1,2-Dichloroethene	22		2.5	ug/L	20.0	0.53 U	111	56-128	2	17	
cis-1,3-Dichloropropene	19		2.5	ug/L	20.0	0.59 U	95	64-128	1	20	
Cyclohexane	24		2.5	ug/L	20.0	0.93 U	119	70-130	2	20	
Dibromochloromethane	17		2.5	ug/L	20.0	0.50 U	84	50-140	12	18	
Dichlorodifluoromethane	14		2.5	ug/L	20.0	0.74 U	71	10-180	5	26	
Ethylbenzene	19		2.5	ug/L	20.0	0.69 U	94	63-133	9	18	
Freon 113	24		2.5	ug/L	20.0	0.73 U	122	47-173	4	30	
Isopropylbenzene	19		2.5	ug/L	20.0	0.67 U	97	60-132	8	23	
m,p-Xylenes	38		5.0	ug/L	40.0	1.3 U	95	64-133	6	18	

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1J11029 - EPA 5030B_MS - Continued

Matrix Spike Dup (1J11029-MSD1) Continued Prepared: 10/11/2021 00:00 Analyzed: 10/11/2021 21:24

Source: AE08059-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Methyl acetate	19		2.5	ug/L	20.0	0.95 U	96	70-130	1	20	
Methylene Chloride	21		12	ug/L	20.0	2.5 U	105	43-142	6	23	
Methyl-tert-Butyl Ether	20		2.5	ug/L	20.0	0.60 U	100	51-145	4	22	
o-Xylene	19		2.5	ug/L	20.0	0.53 U	93	61-129	8	16	
Styrene	19		2.5	ug/L	20.0	0.61 U	96	59-136	7	32	
Tetrachloroethene	19		2.5	ug/L	20.0	0.76 U	95	60-147	9	21	
Toluene	19		2.5	ug/L	20.0	0.72 U	95	64-131	6	16	
trans-1,2-Dichloroethene	23		2.5	ug/L	20.0	0.73 U	113	54-134	4	20	
trans-1,3-Dichloropropene	17		2.5	ug/L	20.0	0.73 U	84	65-149	5	17	
Trichloroethene	23		2.5	ug/L	20.0	0.89 U	114	62-135	9	20	
Trichlorofluoromethane	23		2.5	ug/L	20.0	0.94 U	117	56-155	4	22	
Vinyl chloride	19		2.5	ug/L	20.0	0.71 U	95	20-167	6	24	
4-Bromofluorobenzene	*44*	*I*		*ug/L*	*50.0*		*88*	*41-142*			
Dibromofluoromethane	*53*			*ug/L*	*50.0*		*105*	*53-146*			
Toluene-d8	*51*			*ug/L*	*50.0*		*101*	*41-146*			

Batch 1J12019 - EPA 5030B_MS

Blank (1J12019-BLK1) Prepared: 10/12/2021 00:00 Analyzed: 10/12/2021 10:52

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	0.80	U	2.5	ug/L							
1,1,2,2-Tetrachloroethane	0.54	U	2.5	ug/L							
1,1,2-Trichloroethane	0.76	U	2.5	ug/L							
1,1-Dichloroethane	0.62	U	2.5	ug/L							
1,1-Dichloroethene	0.94	U	2.5	ug/L							
1,2,4-Trichlorobenzene	**0.77**	**I**	2.5	ug/L							QB-02
1,2-Dibromo-3-chloropropane	0.96	U	2.5	ug/L							
1,2-Dibromoethane	0.78	U	2.5	ug/L							
1,2-Dichlorobenzene	0.73	U	2.5	ug/L							
1,2-Dichloroethane	0.63	U	2.5	ug/L							
1,2-Dichloropropane	0.80	U	2.5	ug/L							
1,3-Dichlorobenzene	0.77	U	2.5	ug/L							
1,4-Dichlorobenzene	0.76	U	2.5	ug/L							
2-Butanone	4.5	U	12	ug/L							
2-Hexanone	2.5	U	12	ug/L							
4-Methyl-2-pentanone	2.5	U	12	ug/L							
Acetone	10	U	25	ug/L							
Benzene	0.71	U	2.5	ug/L							
Bromodichloromethane	0.52	U	2.5	ug/L							
Bromoform	0.75	U	2.5	ug/L							
Bromomethane	0.95	U	2.5	ug/L							
Carbon disulfide	2.5	U	12	ug/L							
Carbon Tetrachloride	0.94	U	2.5	ug/L							
Chlorobenzene	0.72	U	2.5	ug/L							
Chloroethane	0.98	U	2.5	ug/L							
Chloroform	0.80	U	2.5	ug/L							
Chloromethane	0.82	U	2.5	ug/L							
cis-1,2-Dichloroethene	0.53	U	2.5	ug/L							

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1J12019 - EPA 5030B_MS - Continued

Blank (1J12019-BLK1) Continued Prepared: 10/12/2021 00:00 Analyzed: 10/12/2021 10:52

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
cis-1,3-Dichloropropene	0.59	U	2.5	ug/L							
Cyclohexane	0.93	U	2.5	ug/L							
Dibromochloromethane	0.50	U	2.5	ug/L							
Dichlorodifluoromethane	0.74	U	2.5	ug/L							
Ethylbenzene	0.69	U	2.5	ug/L							
Freon 113	0.73	U	2.5	ug/L							
Isopropylbenzene	0.67	U	2.5	ug/L							
Methyl acetate	0.95	U	2.5	ug/L							
Methylene Chloride	2.5	U	12	ug/L							
Methyl-tert-Butyl Ether	0.60	U	2.5	ug/L							
Styrene	0.61	U	2.5	ug/L							
Tetrachloroethene	0.76	U	2.5	ug/L							
Toluene	0.72	U	2.5	ug/L							
trans-1,2-Dichloroethene	0.73	U	2.5	ug/L							
trans-1,3-Dichloropropene	0.73	U	2.5	ug/L							
Trichloroethene	0.89	U	2.5	ug/L							
Trichlorofluoromethane	0.94	U	2.5	ug/L							
Vinyl chloride	0.71	U	2.5	ug/L							
4-Bromofluorobenzene	*47*	*I*		*ug/L*	*50.0*		*94*	*41-142*			
Dibromofluoromethane	*48*	*I*		*ug/L*	*50.0*		*97*	*53-146*			
Toluene-d8	*41*	*I*		*ug/L*	*50.0*		*81*	*41-146*			

LCS (1J12019-BS1) Prepared: 10/12/2021 00:00 Analyzed: 10/12/2021 08:57

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	23		2.5	ug/L	20.0		117	57-148			
1,1,2,2-Tetrachloroethane	18		2.5	ug/L	20.0		91	60-139			
1,1,2-Trichloroethane	20		2.5	ug/L	20.0		102	57-141			
1,1-Dichloroethane	22		2.5	ug/L	20.0		108	57-142			
1,1-Dichloroethene	24		2.5	ug/L	20.0		118	47-139			
1,2,4-Trichlorobenzene	25		2.5	ug/L	20.0		123	52-159			
1,2-Dibromo-3-chloropropane	18		2.5	ug/L	20.0		90	48-150			
1,2-Dibromoethane	21		2.5	ug/L	20.0		103	57-140			
1,2-Dichlorobenzene	21		2.5	ug/L	20.0		105	63-131			
1,2-Dichloroethane	21		2.5	ug/L	20.0		107	50-156			
1,2-Dichloropropane	19		2.5	ug/L	20.0		96	61-133			
1,3-Dichlorobenzene	21		2.5	ug/L	20.0		105	66-129			
1,4-Dichlorobenzene	21		2.5	ug/L	20.0		106	65-133			
2-Butanone	130		12	ug/L	100		131	10-180			
2-Hexanone	97		12	ug/L	100		97	12-180			
4-Methyl-2-pentanone	98		12	ug/L	100		98	19-180			
Acetone	100		25	ug/L	100		102	10-180			
Benzene	22		2.5	ug/L	20.0		108	56-136			
Bromodichloromethane	22		2.5	ug/L	20.0		109	58-135			
Bromoform	22		2.5	ug/L	20.0		112	46-148			
Bromomethane	10		2.5	ug/L	20.0		52	10-173			
Carbon disulfide	40		12	ug/L	20.0		198	43-153			QL-02
Carbon Tetrachloride	24		2.5	ug/L	20.0		119	54-156			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1J12019 - EPA 5030B_MS - Continued

LCS (1J12019-BS1) Continued Prepared: 10/12/2021 00:00 Analyzed: 10/12/2021 08:57

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Chlorobenzene	22		2.5	ug/L	20.0		112	51-139			
Chloroethane	22		2.5	ug/L	20.0		111	27-180			
Chloroform	22		2.5	ug/L	20.0		111	58-139			
Chloromethane	15		2.5	ug/L	20.0		77	33-154			
cis-1,2-Dichloroethene	21		2.5	ug/L	20.0		107	56-128			
cis-1,3-Dichloropropene	20		2.5	ug/L	20.0		98	64-128			
Cyclohexane	23		2.5	ug/L	20.0		113	70-130			
Dibromochloromethane	20		2.5	ug/L	20.0		102	50-140			
Dichlorodifluoromethane	13		2.5	ug/L	20.0		66	10-180			
Ethylbenzene	22		2.5	ug/L	20.0		110	63-133			
Freon 113	24		2.5	ug/L	20.0		121	47-173			
Isopropylbenzene	22		2.5	ug/L	20.0		110	60-132			
m,p-Xylenes	43		5.0	ug/L	40.0		109	64-133			
Methyl acetate	19		2.5	ug/L	20.0		97	70-130			
Methylene Chloride	21		12	ug/L	20.0		105	43-142			
Methyl-tert-Butyl Ether	21		2.5	ug/L	20.0		103	51-145			
o-Xylene	22		2.5	ug/L	20.0		110	61-129			
Styrene	23		2.5	ug/L	20.0		113	59-136			
Tetrachloroethene	22		2.5	ug/L	20.0		110	60-147			
Toluene	21		2.5	ug/L	20.0		105	64-131			
trans-1,2-Dichloroethene	22		2.5	ug/L	20.0		112	54-134			
trans-1,3-Dichloropropene	20		2.5	ug/L	20.0		100	65-149			
Trichloroethene	24		2.5	ug/L	20.0		118	62-135			
Trichlorofluoromethane	22		2.5	ug/L	20.0		108	56-155			
Vinyl chloride	18		2.5	ug/L	20.0		90	20-167			
4-Bromofluorobenzene	*48*	*I*		*ug/L*	*50.0*		*96*	*41-142*			
Dibromofluoromethane	*49*	*I*		*ug/L*	*50.0*		*97*	*53-146*			
Toluene-d8	*48*	*I*		*ug/L*	*50.0*		*95*	*41-146*			

Matrix Spike (1J12019-MS1) Prepared: 10/12/2021 00:00 Analyzed: 10/12/2021 09:26

Source: AE08060-03

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	24		2.5	ug/L	20.0	0.80 U	118	57-148			
1,1,2,2-Tetrachloroethane	18		2.5	ug/L	20.0	0.54 U	88	60-139			
1,1,2-Trichloroethane	19		2.5	ug/L	20.0	0.76 U	93	57-141			
1,1-Dichloroethane	22		2.5	ug/L	20.0	0.62 U	110	57-142			
1,1-Dichloroethene	25		2.5	ug/L	20.0	0.94 U	123	47-139			
1,2,4-Trichlorobenzene	22		2.5	ug/L	20.0	0.70 U	109	52-159			
1,2-Dibromo-3-chloropropane	19		2.5	ug/L	20.0	0.96 U	95	48-150			
1,2-Dibromoethane	19		2.5	ug/L	20.0	0.78 U	93	57-140			
1,2-Dichlorobenzene	19		2.5	ug/L	20.0	0.73 U	96	63-131			
1,2-Dichloroethane	21		2.5	ug/L	20.0	0.63 U	106	50-156			
1,2-Dichloropropane	19		2.5	ug/L	20.0	0.80 U	96	61-133			
1,3-Dichlorobenzene	19		2.5	ug/L	20.0	0.77 U	97	66-129			
1,4-Dichlorobenzene	20		2.5	ug/L	20.0	0.76 U	99	65-133			
2-Butanone	120		12	ug/L	100	4.5 U	124	10-180			
2-Hexanone	100		12	ug/L	100	2.5 U	104	12-180			
4-Methyl-2-pentanone	98		12	ug/L	100	2.5 U	98	19-180			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1J12019 - EPA 5030B_MS - Continued

Matrix Spike (1J12019-MS1) Continued Prepared: 10/12/2021 00:00 Analyzed: 10/12/2021 09:26

Source: AE08060-03

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Acetone	100		25	ug/L	100	10 U	101	10-180			
Benzene	21		2.5	ug/L	20.0	0.71 U	107	56-136			
Bromodichloromethane	21		2.5	ug/L	20.0	0.52 U	105	58-135			
Bromoform	20		2.5	ug/L	20.0	0.75 U	100	46-148			
Bromomethane	13		2.5	ug/L	20.0	0.95 U	64	10-173			
Carbon disulfide	37		12	ug/L	20.0	2.5 U	184	43-153			QM-19
Carbon Tetrachloride	23		2.5	ug/L	20.0	0.94 U	117	54-156			
Chlorobenzene	20		2.5	ug/L	20.0	0.72 U	102	51-139			
Chloroethane	23		2.5	ug/L	20.0	0.98 U	113	27-180			
Chloroform	22		2.5	ug/L	20.0	0.80 U	109	58-139			
Chloromethane	16		2.5	ug/L	20.0	0.82 U	79	33-154			
cis-1,2-Dichloroethene	21		2.5	ug/L	20.0	0.53 U	106	56-128			
cis-1,3-Dichloropropene	19		2.5	ug/L	20.0	0.59 U	94	64-128			
Cyclohexane	23		2.5	ug/L	20.0	0.93 U	114	70-130			
Dibromochloromethane	18		2.5	ug/L	20.0	0.50 U	88	50-140			
Dichlorodifluoromethane	14		2.5	ug/L	20.0	0.74 U	69	10-180			
Ethylbenzene	20		2.5	ug/L	20.0	0.69 U	101	63-133			
Freon 113	25		2.5	ug/L	20.0	0.73 U	126	47-173			
Isopropylbenzene	20		2.5	ug/L	20.0	0.67 U	101	60-132			
m,p-Xylenes	40		5.0	ug/L	40.0	1.3 U	100	64-133			
Methyl acetate	19		2.5	ug/L	20.0	0.95 U	97	70-130			
Methylene Chloride	21		12	ug/L	20.0	2.5 U	107	43-142			
Methyl-tert-Butyl Ether	20		2.5	ug/L	20.0	0.60 U	98	51-145			
o-Xylene	20		2.5	ug/L	20.0	0.53 U	99	61-129			
Styrene	21		2.5	ug/L	20.0	0.61 U	104	59-136			
Tetrachloroethene	20		2.5	ug/L	20.0	0.76 U	100	60-147			
Toluene	20		2.5	ug/L	20.0	0.72 U	99	64-131			
trans-1,2-Dichloroethene	22		2.5	ug/L	20.0	0.73 U	112	54-134			
trans-1,3-Dichloropropene	18		2.5	ug/L	20.0	0.73 U	90	65-149			
Trichloroethene	23		2.5	ug/L	20.0	0.89 U	114	62-135			
Trichlorofluoromethane	22		2.5	ug/L	20.0	0.94 U	111	56-155			
Vinyl chloride	18		2.5	ug/L	20.0	0.71 U	92	20-167			
4-Bromofluorobenzene	*46*	*I*		*ug/L*	*50.0*		*92*	*41-142*			
Dibromofluoromethane	*47*	*I*		*ug/L*	*50.0*		*94*	*53-146*			
Toluene-d8	*47*	*I*		*ug/L*	*50.0*		*95*	*41-146*			

Matrix Spike Dup (1J12019-MSD1) Prepared: 10/12/2021 00:00 Analyzed: 10/12/2021 09:54

Source: AE08060-03

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	24		2.5	ug/L	20.0	0.80 U	118	57-148	0.08	25	
1,1,2,2-Tetrachloroethane	18		2.5	ug/L	20.0	0.54 U	89	60-139	2	17	
1,1,2-Trichloroethane	19		2.5	ug/L	20.0	0.76 U	94	57-141	1	16	
1,1-Dichloroethane	22		2.5	ug/L	20.0	0.62 U	109	57-142	2	24	
1,1-Dichloroethene	24		2.5	ug/L	20.0	0.94 U	118	47-139	4	16	
1,2,4-Trichlorobenzene	22		2.5	ug/L	20.0	0.70 U	110	52-159	2	24	
1,2-Dibromo-3-chloropropane	20		2.5	ug/L	20.0	0.96 U	98	48-150	3	21	
1,2-Dibromoethane	19		2.5	ug/L	20.0	0.78 U	94	57-140	0.5	16	
1,2-Dichlorobenzene	20		2.5	ug/L	20.0	0.73 U	100	63-131	3	25	

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1J12019 - EPA 5030B_MS - Continued

Matrix Spike Dup (1J12019-MSD1) Continued Prepared: 10/12/2021 00:00 Analyzed: 10/12/2021 09:54

Source: AE08060-03

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,2-Dichloroethane	21		2.5	ug/L	20.0	0.63 U	104	50-156	3	18	
1,2-Dichloropropane	19		2.5	ug/L	20.0	0.80 U	94	61-133	2	26	
1,3-Dichlorobenzene	20		2.5	ug/L	20.0	0.77 U	98	66-129	1	23	
1,4-Dichlorobenzene	19		2.5	ug/L	20.0	0.76 U	95	65-133	4	23	
2-Butanone	130		12	ug/L	100	4.5 U	133	10-180	7	29	
2-Hexanone	110		12	ug/L	100	2.5 U	106	12-180	2	28	
4-Methyl-2-pentanone	98		12	ug/L	100	2.5 U	98	19-180	0.5	24	
Acetone	100		25	ug/L	100	10 U	100	10-180	0.9	19	
Benzene	21		2.5	ug/L	20.0	0.71 U	107	56-136	0.05	14	
Bromodichloromethane	21		2.5	ug/L	20.0	0.52 U	105	58-135	0.2	19	
Bromoform	21		2.5	ug/L	20.0	0.75 U	103	46-148	3	18	
Bromomethane	15		2.5	ug/L	20.0	0.95 U	73	10-173	12	29	
Carbon disulfide	35		12	ug/L	20.0	2.5 U	177	43-153	4	26	QM-19
Carbon Tetrachloride	24		2.5	ug/L	20.0	0.94 U	118	54-156	1	27	
Chlorobenzene	20		2.5	ug/L	20.0	0.72 U	102	51-139	0.3	13	
Chloroethane	22		2.5	ug/L	20.0	0.98 U	112	27-180	1	22	
Chloroform	22		2.5	ug/L	20.0	0.80 U	110	58-139	0.5	17	
Chloromethane	15		2.5	ug/L	20.0	0.82 U	77	33-154	2	31	
cis-1,2-Dichloroethene	21		2.5	ug/L	20.0	0.53 U	105	56-128	1	17	
cis-1,3-Dichloropropene	19		2.5	ug/L	20.0	0.59 U	94	64-128	0.4	20	
Cyclohexane	23		2.5	ug/L	20.0	0.93 U	117	70-130	3	20	
Dibromochloromethane	18		2.5	ug/L	20.0	0.50 U	91	50-140	4	18	
Dichlorodifluoromethane	14		2.5	ug/L	20.0	0.74 U	71	10-180	3	26	
Ethylbenzene	20		2.5	ug/L	20.0	0.69 U	99	63-133	2	18	
Freon 113	25		2.5	ug/L	20.0	0.73 U	124	47-173	1	30	
Isopropylbenzene	20		2.5	ug/L	20.0	0.67 U	102	60-132	0.7	23	
m,p-Xylenes	40		5.0	ug/L	40.0	1.3 U	99	64-133	0.5	18	
Methyl acetate	20		2.5	ug/L	20.0	0.95 U	98	70-130	1	20	
Methylene Chloride	21		12	ug/L	20.0	2.5 U	103	43-142	3	23	
Methyl-tert-Butyl Ether	20		2.5	ug/L	20.0	0.60 U	99	51-145	0.7	22	
o-Xylene	20		2.5	ug/L	20.0	0.53 U	98	61-129	0.7	16	
Styrene	20		2.5	ug/L	20.0	0.61 U	102	59-136	1	32	
Tetrachloroethene	20		2.5	ug/L	20.0	0.76 U	101	60-147	0.8	21	
Toluene	20		2.5	ug/L	20.0	0.72 U	99	64-131	0.8	16	
trans-1,2-Dichloroethene	21		2.5	ug/L	20.0	0.73 U	106	54-134	5	20	
trans-1,3-Dichloropropene	18		2.5	ug/L	20.0	0.73 U	90	65-149	0.7	17	
Trichloroethene	23		2.5	ug/L	20.0	0.89 U	113	62-135	1	20	
Trichlorofluoromethane	22		2.5	ug/L	20.0	0.94 U	111	56-155	0.09	22	
Vinyl chloride	18		2.5	ug/L	20.0	0.71 U	90	20-167	3	24	
4-Bromofluorobenzene	*47*	*I*		*ug/L*	*50.0*		*95*	*41-142*			
Dibromofluoromethane	*49*	*I*		*ug/L*	*50.0*		*98*	*53-146*			
Toluene-d8	*49*	*I*		*ug/L*	*50.0*		*97*	*41-146*			

Batch 1J13009 - EPA 5030B_MS

Blank (1J13009-BLK1) Prepared: 10/13/2021 00:00 Analyzed: 10/13/2021 10:46

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	0.80	U	2.5	ug/L							

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1J13009 - EPA 5030B_MS - Continued

Blank (1J13009-BLK1) Continued Prepared: 10/13/2021 00:00 Analyzed: 10/13/2021 10:46

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,2,2-Tetrachloroethane	0.54	U	2.5	ug/L							
1,1,2-Trichloroethane	0.76	U	2.5	ug/L							
1,1-Dichloroethane	0.62	U	2.5	ug/L							
1,1-Dichloroethene	0.94	U	2.5	ug/L							
1,2,4-Trichlorobenzene	0.70	U	2.5	ug/L							
1,2-Dibromo-3-chloropropane	0.96	U	2.5	ug/L							
1,2-Dibromoethane	0.78	U	2.5	ug/L							
1,2-Dichlorobenzene	0.73	U	2.5	ug/L							
1,2-Dichloroethane	0.63	U	2.5	ug/L							
1,2-Dichloropropane	0.80	U	2.5	ug/L							
1,3-Dichlorobenzene	0.77	U	2.5	ug/L							
1,4-Dichlorobenzene	0.76	U	2.5	ug/L							
2-Butanone	4.5	U	12	ug/L							
2-Hexanone	2.5	U	12	ug/L							
4-Methyl-2-pentanone	2.5	U	12	ug/L							
Acetone	10	U	25	ug/L							
Benzene	0.71	U	2.5	ug/L							
Bromodichloromethane	0.52	U	2.5	ug/L							
Bromoform	0.75	U	2.5	ug/L							
Bromomethane	0.95	U	2.5	ug/L							
Carbon disulfide	2.5	U	12	ug/L							
Carbon Tetrachloride	0.94	U	2.5	ug/L							
Chlorobenzene	0.72	U	2.5	ug/L							
Chloroethane	0.98	U	2.5	ug/L							
Chloroform	0.80	U	2.5	ug/L							
Chloromethane	0.82	U	2.5	ug/L							
cis-1,2-Dichloroethene	0.53	U	2.5	ug/L							
cis-1,3-Dichloropropene	0.59	U	2.5	ug/L							
Cyclohexane	0.93	U	2.5	ug/L							
Dibromochloromethane	0.50	U	2.5	ug/L							
Dichlorodifluoromethane	0.74	U	2.5	ug/L							
Ethylbenzene	0.69	U	2.5	ug/L							
Freon 113	0.73	U	2.5	ug/L							
Isopropylbenzene	0.67	U	2.5	ug/L							
Methyl acetate	0.95	U	2.5	ug/L							
Methylene Chloride	2.5	U	12	ug/L							
Methyl-tert-Butyl Ether	0.60	U	2.5	ug/L							
Styrene	0.61	U	2.5	ug/L							
Tetrachloroethene	0.76	U	2.5	ug/L							
Toluene	0.72	U	2.5	ug/L							
trans-1,2-Dichloroethene	0.73	U	2.5	ug/L							
trans-1,3-Dichloropropene	0.73	U	2.5	ug/L							
Trichloroethene	0.89	U	2.5	ug/L							
Trichlorofluoromethane	0.94	U	2.5	ug/L							
Vinyl chloride	0.71	U	2.5	ug/L							
4-Bromofluorobenzene	*49*	*I*		*ug/L*	*50.0*		*98*	*41-142*			
Dibromofluoromethane	*47*	*I*		*ug/L*	*50.0*		*94*	*53-146*			
Toluene-d8	*44*	*I*		*ug/L*	*50.0*		*88*	*41-146*			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1J13009 - EPA 5030B_MS - Continued

LCS (1J13009-BS1) Prepared: 10/13/2021 00:00 Analyzed: 10/13/2021 08:22

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	25		2.5	ug/L	20.0		123	57-148			
1,1,2,2-Tetrachloroethane	18		2.5	ug/L	20.0		92	60-139			
1,1,2-Trichloroethane	20		2.5	ug/L	20.0		101	57-141			
1,1-Dichloroethane	23		2.5	ug/L	20.0		113	57-142			
1,1-Dichloroethene	24		2.5	ug/L	20.0		121	47-139			
1,2,4-Trichlorobenzene	23		2.5	ug/L	20.0		114	52-159			
1,2-Dibromo-3-chloropropane	15		2.5	ug/L	20.0		74	48-150			
1,2-Dibromoethane	20		2.5	ug/L	20.0		102	57-140			
1,2-Dichlorobenzene	20		2.5	ug/L	20.0		102	63-131			
1,2-Dichloroethane	23		2.5	ug/L	20.0		116	50-156			
1,2-Dichloropropane	20		2.5	ug/L	20.0		100	61-133			
1,3-Dichlorobenzene	22		2.5	ug/L	20.0		112	66-129			
1,4-Dichlorobenzene	21		2.5	ug/L	20.0		106	65-133			
2-Butanone	130		12	ug/L	100		134	10-180			
2-Hexanone	100		12	ug/L	100		103	12-180			
4-Methyl-2-pentanone	98		12	ug/L	100		98	19-180			
Acetone	110		25	ug/L	100		110	10-180			
Benzene	22		2.5	ug/L	20.0		109	56-136			
Bromodichloromethane	23		2.5	ug/L	20.0		114	58-135			
Bromoform	22		2.5	ug/L	20.0		108	46-148			
Bromomethane	12		2.5	ug/L	20.0		62	10-173			
Carbon disulfide	42		12	ug/L	20.0		209	43-153			QL-02
Carbon Tetrachloride	24		2.5	ug/L	20.0		121	54-156			
Chlorobenzene	22		2.5	ug/L	20.0		108	51-139			
Chloroethane	26		2.5	ug/L	20.0		129	27-180			
Chloroform	23		2.5	ug/L	20.0		116	58-139			
Chloromethane	20		2.5	ug/L	20.0		101	33-154			
cis-1,2-Dichloroethene	23		2.5	ug/L	20.0		114	56-128			
cis-1,3-Dichloropropene	20		2.5	ug/L	20.0		101	64-128			
Cyclohexane	23		2.5	ug/L	20.0		113	70-130			
Dibromochloromethane	20		2.5	ug/L	20.0		100	50-140			
Dichlorodifluoromethane	24		2.5	ug/L	20.0		119	10-180			
Ethylbenzene	21		2.5	ug/L	20.0		106	63-133			
Freon 113	25		2.5	ug/L	20.0		124	47-173			
Isopropylbenzene	21		2.5	ug/L	20.0		107	60-132			
m,p-Xylenes	42		5.0	ug/L	40.0		105	64-133			
Methyl acetate	21		2.5	ug/L	20.0		105	70-130			
Methylene Chloride	22		12	ug/L	20.0		112	43-142			
Methyl-tert-Butyl Ether	22		2.5	ug/L	20.0		108	51-145			
o-Xylene	21		2.5	ug/L	20.0		103	61-129			
Styrene	22		2.5	ug/L	20.0		109	59-136			
Tetrachloroethene	22		2.5	ug/L	20.0		112	60-147			
Toluene	21		2.5	ug/L	20.0		104	64-131			
trans-1,2-Dichloroethene	23		2.5	ug/L	20.0		114	54-134			
trans-1,3-Dichloropropene	20		2.5	ug/L	20.0		99	65-149			
Trichloroethene	24		2.5	ug/L	20.0		118	62-135			
Trichlorofluoromethane	25		2.5	ug/L	20.0		124	56-155			
Vinyl chloride	22		2.5	ug/L	20.0		110	20-167			
4-Bromofluorobenzene	*48*	*I*		*ug/L*	*50.0*		*96*	*41-142*			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1J13009 - EPA 5030B_MS - Continued

LCS (1J13009-BS1) Continued Prepared: 10/13/2021 00:00 Analyzed: 10/13/2021 08:22

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Dibromofluoromethane	*50*			*ug/L*	*50.0*		*100*	*53-146*			
Toluene-d8	*49*	*I*		*ug/L*	*50.0*		*99*	*41-146*			

Matrix Spike (1J13009-MS1) Prepared: 10/13/2021 00:00 Analyzed: 10/13/2021 08:51

Source: AE08103-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	20		2.5	ug/L	20.0	0.80 U	100	57-148			
1,1,2,2-Tetrachloroethane	17		2.5	ug/L	20.0	0.54 U	86	60-139			
1,1,2-Trichloroethane	20		2.5	ug/L	20.0	0.76 U	102	57-141			
1,1-Dichloroethane	18		2.5	ug/L	20.0	0.62 U	91	57-142			
1,1-Dichloroethene	28		2.5	ug/L	20.0	0.94 U	139	47-139			
1,2,4-Trichlorobenzene	21		2.5	ug/L	20.0	0.70 U	107	52-159			
1,2-Dibromo-3-chloropropane	14		2.5	ug/L	20.0	0.96 U	69	48-150			
1,2-Dibromoethane	21		2.5	ug/L	20.0	0.78 U	105	57-140			
1,2-Dichlorobenzene	20		2.5	ug/L	20.0	0.73 U	101	63-131			
1,2-Dichloroethane	17		2.5	ug/L	20.0	0.63 U	85	50-156			
1,2-Dichloropropane	16		2.5	ug/L	20.0	0.80 U	81	61-133			
1,3-Dichlorobenzene	20		2.5	ug/L	20.0	0.77 U	101	66-129			
1,4-Dichlorobenzene	20		2.5	ug/L	20.0	0.76 U	98	65-133			
2-Butanone	100		12	ug/L	100	4.5 U	103	10-180			
2-Hexanone	71		12	ug/L	100	2.5 U	71	12-180			QM-11
4-Methyl-2-pentanone	90		12	ug/L	100	2.5 U	90	19-180			
Acetone	110		25	ug/L	100	10 U	107	10-180			
Benzene	19		2.5	ug/L	20.0	0.71 U	93	56-136			
Bromodichloromethane	18		2.5	ug/L	20.0	0.52 U	88	58-135			
Bromoform	23		2.5	ug/L	20.0	0.75 U	113	46-148			
Bromomethane	19		2.5	ug/L	20.0	0.95 U	94	10-173			
Carbon disulfide	42		12	ug/L	20.0	2.5 U	209	43-153			QM-19
Carbon Tetrachloride	22		2.5	ug/L	20.0	0.94 U	108	54-156			
Chlorobenzene	24		2.5	ug/L	20.0	0.72 U	121	51-139			QM-11
Chloroethane	29		2.5	ug/L	20.0	0.98 U	145	27-180			
Chloroform	19		2.5	ug/L	20.0	0.80 U	94	58-139			
Chloromethane	24		2.5	ug/L	20.0	0.82 U	119	33-154			
cis-1,2-Dichloroethene	24		2.5	ug/L	20.0	5.0	97	56-128			
cis-1,3-Dichloropropene	16		2.5	ug/L	20.0	0.59 U	81	64-128			
Cyclohexane	19		2.5	ug/L	20.0	0.93 U	96	70-130			
Dibromochloromethane	22		2.5	ug/L	20.0	0.50 U	108	50-140			
Dichlorodifluoromethane	26		2.5	ug/L	20.0	0.74 U	132	10-180			
Ethylbenzene	23		2.5	ug/L	20.0	0.69 U	117	63-133			
Freon 113	29		2.5	ug/L	20.0	0.73 U	145	47-173			
Isopropylbenzene	23		2.5	ug/L	20.0	0.67 U	116	60-132			
m,p-Xylenes	46		5.0	ug/L	40.0	1.3 U	116	64-133			
Methyl acetate	21		2.5	ug/L	20.0	0.95 U	107	70-130			
Methylene Chloride	24		12	ug/L	20.0	2.5 U	119	43-142			
Methyl-tert-Butyl Ether	22		2.5	ug/L	20.0	0.60 U	111	51-145			
o-Xylene	23		2.5	ug/L	20.0	0.53 U	113	61-129			
Styrene	23		2.5	ug/L	20.0	0.61 U	116	59-136			
Tetrachloroethene	25		2.5	ug/L	20.0	0.76 U	123	60-147			
Toluene	22		2.5	ug/L	20.0	0.72 U	108	64-131			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1J13009 - EPA 5030B_MS - Continued

Matrix Spike (1J13009-MS1) Continued Prepared: 10/13/2021 00:00 Analyzed: 10/13/2021 08:51

Source: AE08103-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
trans-1,2-Dichloroethene	26		2.5	ug/L	20.0	0.73 U	128	54-134			
trans-1,3-Dichloropropene	18		2.5	ug/L	20.0	0.73 U	91	65-149			
Trichloroethene	25		2.5	ug/L	20.0	0.89 U	123	62-135			
Trichlorofluoromethane	29		2.5	ug/L	20.0	0.94 U	144	56-155			
Vinyl chloride	26		2.5	ug/L	20.0	0.71 U	130	20-167			
4-Bromofluorobenzene	*49*	*I*		*ug/L*	*50.0*		*98*	*41-142*			
Dibromofluoromethane	*45*	*I*		*ug/L*	*50.0*		*90*	*53-146*			
Toluene-d8	*44*	*I*		*ug/L*	*50.0*		*88*	*41-146*			

Matrix Spike Dup (1J13009-MSD1) Prepared: 10/13/2021 00:00 Analyzed: 10/13/2021 09:20

Source: AE08103-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	23		2.5	ug/L	20.0	0.80 U	114	57-148	14	25	
1,1,2,2-Tetrachloroethane	17		2.5	ug/L	20.0	0.54 U	84	60-139	3	17	
1,1,2-Trichloroethane	19		2.5	ug/L	20.0	0.76 U	95	57-141	7	16	
1,1-Dichloroethane	21		2.5	ug/L	20.0	0.62 U	104	57-142	13	24	
1,1-Dichloroethene	24		2.5	ug/L	20.0	0.94 U	118	47-139	16	16	
1,2,4-Trichlorobenzene	21		2.5	ug/L	20.0	0.70 U	106	52-159	1	24	
1,2-Dibromo-3-chloropropane	14		2.5	ug/L	20.0	0.96 U	71	48-150	2	21	
1,2-Dibromoethane	19		2.5	ug/L	20.0	0.78 U	93	57-140	12	16	
1,2-Dichlorobenzene	19		2.5	ug/L	20.0	0.73 U	96	63-131	5	25	
1,2-Dichloroethane	20		2.5	ug/L	20.0	0.63 U	102	50-156	18	18	
1,2-Dichloropropane	18		2.5	ug/L	20.0	0.80 U	91	61-133	11	26	
1,3-Dichlorobenzene	19		2.5	ug/L	20.0	0.77 U	97	66-129	4	23	
1,4-Dichlorobenzene	20		2.5	ug/L	20.0	0.76 U	98	65-133	0.2	23	
2-Butanone	120		12	ug/L	100	4.5 U	125	10-180	19	29	
2-Hexanone	97		12	ug/L	100	2.5 U	97	12-180	31	28	QM-11
4-Methyl-2-pentanone	93		12	ug/L	100	2.5 U	93	19-180	3	24	
Acetone	97		25	ug/L	100	10 U	97	10-180	10	19	
Benzene	21		2.5	ug/L	20.0	0.71 U	105	56-136	12	14	
Bromodichloromethane	21		2.5	ug/L	20.0	0.52 U	104	58-135	16	19	
Bromoform	20		2.5	ug/L	20.0	0.75 U	101	46-148	11	18	
Bromomethane	18		2.5	ug/L	20.0	0.95 U	92	10-173	1	29	
Carbon disulfide	34		12	ug/L	20.0	2.5 U	172	43-153	20	26	QM-19
Carbon Tetrachloride	23		2.5	ug/L	20.0	0.94 U	116	54-156	6	27	
Chlorobenzene	20		2.5	ug/L	20.0	0.72 U	100	51-139	19	13	QM-11
Chloroethane	25		2.5	ug/L	20.0	0.98 U	127	27-180	14	22	
Chloroform	21		2.5	ug/L	20.0	0.80 U	106	58-139	12	17	
Chloromethane	20		2.5	ug/L	20.0	0.82 U	101	33-154	16	31	
cis-1,2-Dichloroethene	25		2.5	ug/L	20.0	5.0	102	56-128	3	17	
cis-1,3-Dichloropropene	18		2.5	ug/L	20.0	0.59 U	92	64-128	12	20	
Cyclohexane	22		2.5	ug/L	20.0	0.93 U	110	70-130	13	20	
Dibromochloromethane	18		2.5	ug/L	20.0	0.50 U	90	50-140	18	18	
Dichlorodifluoromethane	22		2.5	ug/L	20.0	0.74 U	109	10-180	19	26	
Ethylbenzene	20		2.5	ug/L	20.0	0.69 U	98	63-133	18	18	
Freon 113	24		2.5	ug/L	20.0	0.73 U	120	47-173	19	30	
Isopropylbenzene	20		2.5	ug/L	20.0	0.67 U	102	60-132	12	23	
m,p-Xylenes	39		5.0	ug/L	40.0	1.3 U	98	64-133	16	18	

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1J13009 - EPA 5030B_MS - Continued

Matrix Spike Dup (1J13009-MSD1) Continued Prepared: 10/13/2021 00:00 Analyzed: 10/13/2021 09:20

Source: AE08103-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Methyl acetate	18		2.5	ug/L	20.0	0.95 U	91	70-130	16	20	
Methylene Chloride	20		12	ug/L	20.0	2.5 U	102	43-142	15	23	
Methyl-tert-Butyl Ether	19		2.5	ug/L	20.0	0.60 U	96	51-145	14	22	
o-Xylene	19		2.5	ug/L	20.0	0.53 U	97	61-129	15	16	
Styrene	20		2.5	ug/L	20.0	0.61 U	101	59-136	14	32	
Tetrachloroethene	20		2.5	ug/L	20.0	0.76 U	101	60-147	20	21	
Toluene	19		2.5	ug/L	20.0	0.72 U	96	64-131	11	16	
trans-1,2-Dichloroethene	22		2.5	ug/L	20.0	0.73 U	108	54-134	17	20	
trans-1,3-Dichloropropene	18		2.5	ug/L	20.0	0.73 U	90	65-149	1	17	
Trichloroethene	22		2.5	ug/L	20.0	0.89 U	111	62-135	10	20	
Trichlorofluoromethane	24		2.5	ug/L	20.0	0.94 U	121	56-155	18	22	
Vinyl chloride	22		2.5	ug/L	20.0	0.71 U	110	20-167	17	24	
4-Bromofluorobenzene	*47*	*I*		*ug/L*	*50.0*		*95*	*41-142*			
Dibromofluoromethane	*47*	*I*		*ug/L*	*50.0*		*94*	*53-146*			
Toluene-d8	*47*	*I*		*ug/L*	*50.0*		*95*	*41-146*			

Batch 1J14017 - EPA 5030B_MS

Blank (1J14017-BLK1) Prepared: 10/14/2021 00:00 Analyzed: 10/14/2021 11:32

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	0.80	U	2.5	ug/L							
1,1,2,2-Tetrachloroethane	0.54	U	2.5	ug/L							
1,1,2-Trichloroethane	0.76	U	2.5	ug/L							
1,1-Dichloroethane	0.62	U	2.5	ug/L							
1,1-Dichloroethene	0.94	U	2.5	ug/L							
1,2,4-Trichlorobenzene	0.70	U	2.5	ug/L							
1,2-Dibromo-3-chloropropane	0.96	U	2.5	ug/L							
1,2-Dibromoethane	0.78	U	2.5	ug/L							
1,2-Dichlorobenzene	0.73	U	2.5	ug/L							
1,2-Dichloroethane	0.63	U	2.5	ug/L							
1,2-Dichloropropane	0.80	U	2.5	ug/L							
1,3-Dichlorobenzene	0.77	U	2.5	ug/L							
1,4-Dichlorobenzene	0.76	U	2.5	ug/L							
2-Butanone	4.5	U	12	ug/L							
2-Hexanone	2.5	U	12	ug/L							
4-Methyl-2-pentanone	2.5	U	12	ug/L							
Acetone	10	U	25	ug/L							
Benzene	0.71	U	2.5	ug/L							
Bromodichloromethane	0.52	U	2.5	ug/L							
Bromoform	0.75	U	2.5	ug/L							
Bromomethane	0.95	U	2.5	ug/L							
Carbon disulfide	2.5	U	12	ug/L							
Carbon Tetrachloride	0.94	U	2.5	ug/L							
Chlorobenzene	0.72	U	2.5	ug/L							
Chloroethane	0.98	U	2.5	ug/L							
Chloroform	0.80	U	2.5	ug/L							
Chloromethane	0.82	U	2.5	ug/L							
cis-1,2-Dichloroethene	0.53	U	2.5	ug/L							

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1J14017 - EPA 5030B_MS - Continued

Blank (1J14017-BLK1) Continued Prepared: 10/14/2021 00:00 Analyzed: 10/14/2021 11:32

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
cis-1,3-Dichloropropene	0.59	U	2.5	ug/L							
Cyclohexane	0.93	U	2.5	ug/L							
Dibromochloromethane	0.50	U	2.5	ug/L							
Dichlorodifluoromethane	0.74	U	2.5	ug/L							
Ethylbenzene	0.69	U	2.5	ug/L							
Freon 113	0.73	U	2.5	ug/L							
Isopropylbenzene	0.67	U	2.5	ug/L							
Methyl acetate	0.95	U	2.5	ug/L							
Methylene Chloride	2.5	U	12	ug/L							
Methyl-tert-Butyl Ether	0.60	U	2.5	ug/L							
Styrene	0.61	U	2.5	ug/L							
Tetrachloroethene	0.76	U	2.5	ug/L							
Toluene	0.72	U	2.5	ug/L							
trans-1,2-Dichloroethene	0.73	U	2.5	ug/L							
trans-1,3-Dichloropropene	0.73	U	2.5	ug/L							
Trichloroethene	0.89	U	2.5	ug/L							
Trichlorofluoromethane	0.94	U	2.5	ug/L							
Vinyl chloride	0.71	U	2.5	ug/L							
4-Bromofluorobenzene	*45*	*I*		*ug/L*	*50.0*		*89*	*41-142*			
Dibromofluoromethane	*48*	*I*		*ug/L*	*50.0*		*97*	*53-146*			
Toluene-d8	*49*	*I*		*ug/L*	*50.0*		*97*	*41-146*			

LCS (1J14017-BS1) Prepared: 10/14/2021 00:00 Analyzed: 10/14/2021 09:07

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	22		2.5	ug/L	20.0		109	57-148			
1,1,2,2-Tetrachloroethane	17		2.5	ug/L	20.0		86	60-139			
1,1,2-Trichloroethane	17		2.5	ug/L	20.0		86	57-141			
1,1-Dichloroethane	21		2.5	ug/L	20.0		104	57-142			
1,1-Dichloroethene	24		2.5	ug/L	20.0		120	47-139			
1,2,4-Trichlorobenzene	20		2.5	ug/L	20.0		102	52-159			
1,2-Dibromo-3-chloropropane	16		2.5	ug/L	20.0		82	48-150			
1,2-Dibromoethane	17		2.5	ug/L	20.0		87	57-140			
1,2-Dichlorobenzene	18		2.5	ug/L	20.0		90	63-131			
1,2-Dichloroethane	19		2.5	ug/L	20.0		97	50-156			
1,2-Dichloropropane	18		2.5	ug/L	20.0		90	61-133			
1,3-Dichlorobenzene	18		2.5	ug/L	20.0		91	66-129			
1,4-Dichlorobenzene	19		2.5	ug/L	20.0		94	65-133			
2-Butanone	130		12	ug/L	100		130	10-180			
2-Hexanone	96		12	ug/L	100		96	12-180			
4-Methyl-2-pentanone	92		12	ug/L	100		92	19-180			
Acetone	100		25	ug/L	100		105	10-180			
Benzene	21		2.5	ug/L	20.0		105	56-136			
Bromodichloromethane	20		2.5	ug/L	20.0		100	58-135			
Bromoform	19		2.5	ug/L	20.0		96	46-148			
Bromomethane	13		2.5	ug/L	20.0		67	10-173			
Carbon disulfide	40		12	ug/L	20.0		200	43-153			QL-02
Carbon Tetrachloride	21		2.5	ug/L	20.0		107	54-156			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1J14017 - EPA 5030B_MS - Continued

LCS (1J14017-BS1) Continued Prepared: 10/14/2021 00:00 Analyzed: 10/14/2021 09:07

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Chlorobenzene	19		2.5	ug/L	20.0		95	51-139			
Chloroethane	26		2.5	ug/L	20.0		129	27-180			
Chloroform	21		2.5	ug/L	20.0		104	58-139			
Chloromethane	19		2.5	ug/L	20.0		97	33-154			
cis-1,2-Dichloroethene	20		2.5	ug/L	20.0		101	56-128			
cis-1,3-Dichloropropene	19		2.5	ug/L	20.0		93	64-128			
Cyclohexane	22		2.5	ug/L	20.0		108	70-130			
Dibromochloromethane	16		2.5	ug/L	20.0		80	50-140			
Dichlorodifluoromethane	22		2.5	ug/L	20.0		109	10-180			
Ethylbenzene	19		2.5	ug/L	20.0		93	63-133			
Freon 113	25		2.5	ug/L	20.0		125	47-173			
Isopropylbenzene	19		2.5	ug/L	20.0		94	60-132			
m,p-Xylenes	37		5.0	ug/L	40.0		93	64-133			
Methyl acetate	21		2.5	ug/L	20.0		103	70-130			
Methylene Chloride	22		12	ug/L	20.0		108	43-142			
Methyl-tert-Butyl Ether	20		2.5	ug/L	20.0		98	51-145			
o-Xylene	18		2.5	ug/L	20.0		90	61-129			
Styrene	19		2.5	ug/L	20.0		95	59-136			
Tetrachloroethene	18		2.5	ug/L	20.0		89	60-147			
Toluene	18		2.5	ug/L	20.0		92	64-131			
trans-1,2-Dichloroethene	22		2.5	ug/L	20.0		110	54-134			
trans-1,3-Dichloropropene	17		2.5	ug/L	20.0		85	65-149			
Trichloroethene	21		2.5	ug/L	20.0		106	62-135			
Trichlorofluoromethane	24		2.5	ug/L	20.0		121	56-155			
Vinyl chloride	21		2.5	ug/L	20.0		104	20-167			
4-Bromofluorobenzene	*45*	*I*		*ug/L*	*50.0*		*91*	*41-142*			
Dibromofluoromethane	*47*	*I*		*ug/L*	*50.0*		*95*	*53-146*			
Toluene-d8	*49*	*I*		*ug/L*	*50.0*		*97*	*41-146*			

Matrix Spike (1J14017-MS1) Prepared: 10/14/2021 00:00 Analyzed: 10/14/2021 09:38

Source: AE08103-11

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	24		2.5	ug/L	20.0	0.80 U	120	57-148			
1,1,2,2-Tetrachloroethane	18		2.5	ug/L	20.0	0.54 U	92	60-139			
1,1,2-Trichloroethane	19		2.5	ug/L	20.0	0.76 U	96	57-141			
1,1-Dichloroethane	23		2.5	ug/L	20.0	0.62 U	113	57-142			
1,1-Dichloroethene	25		2.5	ug/L	20.0	0.94 U	123	47-139			
1,2,4-Trichlorobenzene	21		2.5	ug/L	20.0	0.70 U	105	52-159			
1,2-Dibromo-3-chloropropane	17		2.5	ug/L	20.0	0.96 U	85	48-150			
1,2-Dibromoethane	19		2.5	ug/L	20.0	0.78 U	93	57-140			
1,2-Dichlorobenzene	19		2.5	ug/L	20.0	0.73 U	97	63-131			
1,2-Dichloroethane	20		2.5	ug/L	20.0	0.63 U	102	50-156			
1,2-Dichloropropane	20		2.5	ug/L	20.0	0.80 U	100	61-133			
1,3-Dichlorobenzene	19		2.5	ug/L	20.0	0.77 U	97	66-129			
1,4-Dichlorobenzene	20		2.5	ug/L	20.0	0.76 U	99	65-133			
2-Butanone	140		12	ug/L	100	4.5 U	138	10-180			
2-Hexanone	100		12	ug/L	100	2.5 U	103	12-180			
4-Methyl-2-pentanone	100		12	ug/L	100	2.5 U	101	19-180			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1J14017 - EPA 5030B_MS - Continued

Matrix Spike (1J14017-MS1) Continued Prepared: 10/14/2021 00:00 Analyzed: 10/14/2021 09:38

Source: AE08103-11

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Acetone	100		25	ug/L	100	10 U	102	10-180			
Benzene	23		2.5	ug/L	20.0	0.71 U	115	56-136			
Bromodichloromethane	22		2.5	ug/L	20.0	0.52 U	109	58-135			
Bromoform	21		2.5	ug/L	20.0	0.75 U	104	46-148			
Bromomethane	14		2.5	ug/L	20.0	0.95 U	72	10-173			
Carbon disulfide	38		12	ug/L	20.0	2.5 U	189	43-153			QM-19
Carbon Tetrachloride	24		2.5	ug/L	20.0	0.94 U	121	54-156			
Chlorobenzene	21		2.5	ug/L	20.0	0.72 U	104	51-139			
Chloroethane	24		2.5	ug/L	20.0	0.98 U	119	27-180			
Chloroform	22		2.5	ug/L	20.0	0.80 U	112	58-139			
Chloromethane	15		2.5	ug/L	20.0	0.82 U	74	33-154			
cis-1,2-Dichloroethene	24		2.5	ug/L	20.0	2.1	110	56-128			
cis-1,3-Dichloropropene	20		2.5	ug/L	20.0	0.59 U	99	64-128			
Cyclohexane	23		2.5	ug/L	20.0	0.93 U	116	70-130			
Dibromochloromethane	18		2.5	ug/L	20.0	0.50 U	88	50-140			
Dichlorodifluoromethane	11		2.5	ug/L	20.0	0.74 U	56	10-180			
Ethylbenzene	20		2.5	ug/L	20.0	0.69 U	101	63-133			
Freon 113	24		2.5	ug/L	20.0	0.73 U	118	47-173			
Isopropylbenzene	21		2.5	ug/L	20.0	0.67 U	104	60-132			
m,p-Xylenes	41		5.0	ug/L	40.0	1.3 U	103	64-133			
Methyl acetate	20		2.5	ug/L	20.0	0.95 U	101	70-130			
Methylene Chloride	22		12	ug/L	20.0	2.5 U	109	43-142			
Methyl-tert-Butyl Ether	20		2.5	ug/L	20.0	0.60 U	100	51-145			
o-Xylene	20		2.5	ug/L	20.0	0.53 U	100	61-129			
Styrene	21		2.5	ug/L	20.0	0.61 U	104	59-136			
Tetrachloroethene	20		2.5	ug/L	20.0	0.76 U	102	60-147			
Toluene	20		2.5	ug/L	20.0	0.72 U	101	64-131			
trans-1,2-Dichloroethene	22		2.5	ug/L	20.0	0.73 U	112	54-134			
trans-1,3-Dichloropropene	18		2.5	ug/L	20.0	0.73 U	92	65-149			
Trichloroethene	23		2.5	ug/L	20.0	0.89 U	114	62-135			
Trichlorofluoromethane	23		2.5	ug/L	20.0	0.94 U	114	56-155			
Vinyl chloride	18		2.5	ug/L	20.0	0.71 U	91	20-167			
4-Bromofluorobenzene	*46*	*I*		*ug/L*	*50.0*		*92*	*41-142*			
Dibromofluoromethane	*48*	*I*		*ug/L*	*50.0*		*97*	*53-146*			
Toluene-d8	*50*			*ug/L*	*50.0*		*100*	*41-146*			

Matrix Spike Dup (1J14017-MSD1) Prepared: 10/14/2021 00:00 Analyzed: 10/14/2021 10:06

Source: AE08103-11

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	23		2.5	ug/L	20.0	0.80 U	117	57-148	3	25	
1,1,2,2-Tetrachloroethane	18		2.5	ug/L	20.0	0.54 U	91	60-139	1	17	
1,1,2-Trichloroethane	19		2.5	ug/L	20.0	0.76 U	95	57-141	0.6	16	
1,1-Dichloroethane	22		2.5	ug/L	20.0	0.62 U	110	57-142	3	24	
1,1-Dichloroethene	24		2.5	ug/L	20.0	0.94 U	121	47-139	2	16	
1,2,4-Trichlorobenzene	21		2.5	ug/L	20.0	0.70 U	106	52-159	1	24	
1,2-Dibromo-3-chloropropane	18		2.5	ug/L	20.0	0.96 U	88	48-150	3	21	
1,2-Dibromoethane	18		2.5	ug/L	20.0	0.78 U	92	57-140	1	16	
1,2-Dichlorobenzene	19		2.5	ug/L	20.0	0.73 U	94	63-131	2	25	

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1J14017 - EPA 5030B_MS - Continued

Matrix Spike Dup (1J14017-MSD1) Continued Prepared: 10/14/2021 00:00 Analyzed: 10/14/2021 10:06

Source: AE08103-11

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,2-Dichloroethane	21		2.5	ug/L	20.0	0.63 U	104	50-156	2	18	
1,2-Dichloropropane	19		2.5	ug/L	20.0	0.80 U	97	61-133	4	26	
1,3-Dichlorobenzene	19		2.5	ug/L	20.0	0.77 U	96	66-129	0.8	23	
1,4-Dichlorobenzene	19		2.5	ug/L	20.0	0.76 U	96	65-133	3	23	
2-Butanone	140		12	ug/L	100	4.5 U	140	10-180	1	29	
2-Hexanone	110		12	ug/L	100	2.5 U	106	12-180	3	28	
4-Methyl-2-pentanone	100		12	ug/L	100	2.5 U	101	19-180	0.3	24	
Acetone	100		25	ug/L	100	10 U	103	10-180	2	19	
Benzene	23		2.5	ug/L	20.0	0.71 U	113	56-136	2	14	
Bromodichloromethane	21		2.5	ug/L	20.0	0.52 U	107	58-135	1	19	
Bromoform	20		2.5	ug/L	20.0	0.75 U	102	46-148	2	18	
Bromomethane	16		2.5	ug/L	20.0	0.95 U	78	10-173	8	29	
Carbon disulfide	36		12	ug/L	20.0	2.5 U	180	43-153	5	26	QM-19
Carbon Tetrachloride	23		2.5	ug/L	20.0	0.94 U	117	54-156	3	27	
Chlorobenzene	20		2.5	ug/L	20.0	0.72 U	100	51-139	4	13	
Chloroethane	23		2.5	ug/L	20.0	0.98 U	114	27-180	4	22	
Chloroform	22		2.5	ug/L	20.0	0.80 U	111	58-139	1	17	
Chloromethane	14		2.5	ug/L	20.0	0.82 U	71	33-154	4	31	
cis-1,2-Dichloroethene	24		2.5	ug/L	20.0	2.1	108	56-128	2	17	
cis-1,3-Dichloropropene	20		2.5	ug/L	20.0	0.59 U	98	64-128	1	20	
Cyclohexane	22		2.5	ug/L	20.0	0.93 U	112	70-130	4	20	
Dibromochloromethane	17		2.5	ug/L	20.0	0.50 U	87	50-140	0.4	18	
Dichlorodifluoromethane	10		2.5	ug/L	20.0	0.74 U	51	10-180	10	26	
Ethylbenzene	20		2.5	ug/L	20.0	0.69 U	98	63-133	3	18	
Freon 113	23		2.5	ug/L	20.0	0.73 U	117	47-173	2	30	
Isopropylbenzene	20		2.5	ug/L	20.0	0.67 U	101	60-132	3	23	
m,p-Xylenes	40		5.0	ug/L	40.0	1.3 U	99	64-133	3	18	
Methyl acetate	20		2.5	ug/L	20.0	0.95 U	102	70-130	1	20	
Methylene Chloride	22		12	ug/L	20.0	2.5 U	108	43-142	1	23	
Methyl-tert-Butyl Ether	20		2.5	ug/L	20.0	0.60 U	101	51-145	0.9	22	
o-Xylene	19		2.5	ug/L	20.0	0.53 U	96	61-129	3	16	
Styrene	20		2.5	ug/L	20.0	0.61 U	101	59-136	2	32	
Tetrachloroethene	20		2.5	ug/L	20.0	0.76 U	98	60-147	4	21	
Toluene	20		2.5	ug/L	20.0	0.72 U	99	64-131	2	16	
trans-1,2-Dichloroethene	22		2.5	ug/L	20.0	0.73 U	108	54-134	4	20	
trans-1,3-Dichloropropene	18		2.5	ug/L	20.0	0.73 U	90	65-149	2	17	
Trichloroethene	23		2.5	ug/L	20.0	0.89 U	114	62-135	0.5	20	
Trichlorofluoromethane	23		2.5	ug/L	20.0	0.94 U	113	56-155	0.6	22	
Vinyl chloride	17		2.5	ug/L	20.0	0.71 U	86	20-167	5	24	
4-Bromofluorobenzene	*46*	*I*		*ug/L*	*50.0*		*91*	*41-142*			
Dibromofluoromethane	*48*	*I*		*ug/L*	*50.0*		*97*	*53-146*			
Toluene-d8	*49*	*I*		*ug/L*	*50.0*		*98*	*41-146*			

FLAGS/NOTES AND DEFINITIONS

PQL	PQL: Practical Quantitation Limit. The PQL presented is the laboratory MRL.
B	Results are based upon membrane filter colony counts that are outside the method indicated ideal range.
I	The reported value is between the laboratory method detection limit (MDL) and the practical quantitation limit (PQL).
J	Estimated value.
K	Off-scale low; Actual value is known to be less than the value given.
L	Off-scale high; Actual value is known to be greater than value given.
M	Presence of analyte is verified but not quantified; the actual value is less than the MRL but greater than the MDL.
N	Presumptive evidence of presence of material.
O	Sampled, but analysis lost or not performed.
Q	Sample exceeded the accepted holding time.
T	Value reported is less than the laboratory method detection limit. The value is reported for informational purposes only and shall not be used in statistical analysis.
U	Indicates that the compound was analyzed for but not detected.
V	Indicates that the analyte was detected in both the sample and the associated method blank.
Y	The laboratory analysis was from an improperly preserved sample. The data may not be accurate.
Z	Too many colonies were present (TNTC); the numeric value represents the filtration volume.
?	Data are rejected and should not be used. Some or all of the quality control data for the analyte were outside criteria, and the presence or absence of the analyte cannot be determined from the data.
*	Not reported due to interference.
[CALC]	Calculated analyte - MDL/MRL reported to the highest reporting limit of the component analyses.
QB-02	The method blank contains analyte at a concentration above the MDL and/or greater than one-half the MRL. The analyte was not detected in the sample.
QL-02	The associated laboratory control sample exhibited high bias; since the result is ND, there is no impact.
QM-11	Precision between duplicate matrix spikes of the same sample was outside acceptance limits.
QM-19	The spike recovery was outside acceptance limits for the MS and/or MSD.
QV-01	The associated continuing calibration verification standard exhibited high bias; since the result is ND, there is no impact.

AEO8059

Tetra Tech, Inc. CHAIN OF CUSTODY | NUMBER No. 2490 | PAGE 1 OF 1

PROJECT NO: 112G08985	FACILITY: LC34	PROJECT MANAGER MARK JONNET	PHONE NUMBER 412 921 8622	LABORATORY NAME AND CONTACT: ENCO
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER DAN FORESTEL	PHONE NUMBER 304-780-1426	ADDRESS
		CARRIER/WAYBILL NUMBER		CITY, STATE ORLANDO, FC

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR 2021	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	CONTAINER TYPE PLASTIC (P) or GLASS (G): G	PRESERVATIVE USED: HCL	TYPE OF ANALYSIS: VOC's 8260	COOLED ON ICE	COMMENTS
7OCT	1000	LC34-GAC - 20211007	LC34	/	/	GW	G	3	X				
	1010	LC34-AS1 - 20211007											
	1020	LC34-AS2 - 20211007											
	1030	LC34-RW17C - 20211007											
	1040	LC34-RW18C - 20211007											
	1050	LC34-RW19C - 20211007											
	1100	LC34-RW20C - 20211007		/	/	/	/	/	/				

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	10/07/21	1230	1. RECEIVED BY	10/07/21	1230
2. RELINQUISHED BY	10/07/21	1515	2. RECEIVED BY	10/7/21	1515
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS LG566 3.7°C

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

ENCO Laboratories

Accurate. Timely. Responsive. Innovative.

10775 Central Port Drive
Orlando FL, 32824
Phone: 407.826.5314 FAX: 407.850.6945

Thursday, November 18, 2021
Tetra Tech NUS, Inc. (TE015)
Attn: Mark Jonnet
Foster Plaza 7, 661 Anderson Drive
Pittsburgh, PA 15220

RE: Laboratory Results for
Project Number: 112G08985, Project Name/Desc: NASA KSC LC34
ENCO Workorder(s): AE07280

Dear Mark Jonnet,

Enclosed is a copy of your laboratory report for test samples received by our laboratory on Thursday, November 11, 2021.

Unless otherwise noted in an attached project narrative, all samples were received in acceptable condition and processed in accordance with the referenced methods/procedures. Results for these procedures apply only to the samples as submitted.

The analytical results contained in this report are in compliance with NELAC standards, except as noted in the project narrative if applicable. This report shall not be reproduced except in full, without the written approval of the Laboratory.

This report contains only those analyses performed by Environmental Conservation Laboratories. Unless otherwise noted, all analyses were performed at ENCO Orlando. Data from outside organizations will be reported under separate cover.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

Kaitlin Dylnicki

Project Manager

Enclosure(s)

SAMPLE SUMMARY/LABORATORY CHRONICLE

Client ID: LC34-GAC-20211110	Lab ID: AE07280-01	Sampled: 11/10/21 08:00	Received: 11/11/21 15:25

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/24/21	11/12/21 00:00	11/12/21 11:43

Client ID: LC34-AS1-20211110	Lab ID: AE07280-02	Sampled: 11/10/21 08:10	Received: 11/11/21 15:25

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/24/21	11/12/21 00:00	11/12/21 12:11

Client ID: LC34-AS2-20211110	Lab ID: AE07280-03	Sampled: 11/10/21 08:20	Received: 11/11/21 15:25

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/24/21	11/12/21 00:00	11/12/21 13:38

Client ID: LC34-AS2-20211110	Lab ID: AE07280-03RE1	Sampled: 11/10/21 08:20	Received: 11/11/21 15:25

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/24/21	11/17/21 09:02	11/17/21 10:47

Client ID: LC34-RW17C-20211110	Lab ID: AE07280-04	Sampled: 11/10/21 09:30	Received: 11/11/21 15:25

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/24/21	11/12/21 00:00	11/12/21 14:06

Client ID: LC34-RW18C-20211110	Lab ID: AE07280-05	Sampled: 11/10/21 08:40	Received: 11/11/21 15:25

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/24/21	11/12/21 00:00	11/12/21 14:35

Client ID: LC34-RW18C-20211110	Lab ID: AE07280-05RE2	Sampled: 11/10/21 08:40	Received: 11/11/21 15:25

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/24/21	11/17/21 08:07	11/17/21 18:43

Client ID: LC34-RW19C-20211110	Lab ID: AE07280-06	Sampled: 11/10/21 08:50	Received: 11/11/21 15:25

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/24/21	11/12/21 00:00	11/12/21 15:04

Client ID: LC34-RW20C-20211110	Lab ID: AE07280-07	Sampled: 11/10/21 09:00	Received: 11/11/21 15:25

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/24/21	11/12/21 00:00	11/12/21 15:33

Client ID: LC34PS-PZI-040.0-20211111	Lab ID: AE07280-08	Sampled: 11/11/21 09:00	Received: 11/11/21 15:25

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/25/21	11/12/21 00:00	11/12/21 16:01

Client ID: LC34PS-PZI-040.0-20211111	Lab ID: AE07280-08RE1	Sampled: 11/11/21 09:00	Received: 11/11/21 15:25

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/25/21	11/17/21 09:02	11/17/21 11:42

Client ID: LC34PS-PZI-050.0-20211111	Lab ID: AE07280-09	Sampled: 11/11/21 09:02	Received: 11/11/21 15:25

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/25/21	11/12/21 00:00	11/12/21 16:30

Client ID: LC34PS-PZI-058.0-20211111	Lab ID: AE07280-10	Sampled: 11/11/21 09:04	Received: 11/11/21 15:25

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/25/21	11/12/21 00:00	11/12/21 17:27

Client ID: LC34PS-PZI-073.0-20211111	Lab ID: AE07280-11	Sampled: 11/11/21 09:06	Received: 11/11/21 15:25

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/25/21	11/15/21 00:00	11/15/21 12:00

SAMPLE SUMMARY/LABORATORY CHRONICLE

Client ID: LC34PS-PZI-080.0-20211111 **Lab ID: AE07280-12** **Sampled: 11/11/21 09:08** **Received: 11/11/21 15:25**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/25/21	11/12/21 00:00	11/12/21 12:40

Client ID: LC34PS-PZI-080.0-20211111 **Lab ID: AE07280-12RE1** **Sampled: 11/11/21 09:08** **Received: 11/11/21 15:25**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/25/21	11/17/21 09:02	11/17/21 12:10

Client ID: LC34PS-PZH-040.0-20211111 **Lab ID: AE07280-13** **Sampled: 11/11/21 09:30** **Received: 11/11/21 15:25**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/25/21	11/12/21 00:00	11/12/21 17:56

Client ID: LC34PS-PZH-040.0-20211111 **Lab ID: AE07280-13RE1** **Sampled: 11/11/21 09:30** **Received: 11/11/21 15:25**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/25/21	11/17/21 09:02	11/17/21 12:38

Client ID: LC34PS-PZH-050.0-20211111 **Lab ID: AE07280-14** **Sampled: 11/11/21 09:32** **Received: 11/11/21 15:25**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/25/21	11/12/21 00:00	11/12/21 18:25

Client ID: LC34PS-PZH-058.0-20211111 **Lab ID: AE07280-15RE1** **Sampled: 11/11/21 09:34** **Received: 11/11/21 15:25**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/25/21	11/15/21 00:00	11/15/21 11:31

Client ID: LC34PS-PZH-073.0-20211111 **Lab ID: AE07280-16** **Sampled: 11/11/21 09:36** **Received: 11/11/21 15:25**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/25/21	11/12/21 09:27	11/12/21 09:54

Client ID: LC34PS-PZH-073.0-20211111 **Lab ID: AE07280-16RE1** **Sampled: 11/11/21 09:36** **Received: 11/11/21 15:25**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/25/21	11/17/21 09:02	11/17/21 13:05

Client ID: LC34PS-PZH-080.0-20211111 **Lab ID: AE07280-17** **Sampled: 11/11/21 09:38** **Received: 11/11/21 15:25**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/25/21	11/12/21 09:27	11/12/21 13:08

Client ID: LC34PS-PZK-040.0-20211111 **Lab ID: AE07280-18RE1** **Sampled: 11/11/21 10:00** **Received: 11/11/21 15:25**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/25/21	11/15/21 00:00	11/15/21 12:57

Client ID: LC34PS-PZK-050.0-20211111 **Lab ID: AE07280-19** **Sampled: 11/11/21 10:02** **Received: 11/11/21 15:25**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/25/21	11/12/21 09:27	11/12/21 14:03

Client ID: LC34PS-PZK-050.0-20211111 **Lab ID: AE07280-19RE1** **Sampled: 11/11/21 10:02** **Received: 11/11/21 15:25**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/25/21	11/17/21 09:02	11/17/21 13:33

Client ID: LC34PS-PZK-058.0-20211111 **Lab ID: AE07280-20** **Sampled: 11/11/21 10:04** **Received: 11/11/21 15:25**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/25/21	11/12/21 09:27	11/12/21 14:31

Client ID: LC34PS-PZK-073.0-20211111 **Lab ID: AE07280-21** **Sampled: 11/11/21 10:06** **Received: 11/11/21 15:25**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/25/21	11/15/21 00:00	11/15/21 13:26

SAMPLE SUMMARY/LABORATORY CHRONICLE

Client ID: LC34PS-PZK-073.0-20211111 | **Lab ID: AE07280-21RE1** | **Sampled: 11/11/21 10:06** | **Received: 11/11/21 15:25**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/25/21	11/17/21 09:02	11/17/21 14:01

Client ID: LC34PS-PZK-080.0-20211111 | **Lab ID: AE07280-22RE1** | **Sampled: 11/11/21 10:08** | **Received: 11/11/21 15:25**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/25/21	11/15/21 00:00	11/15/21 13:55

Client ID: LC34PS-PZJ-040.0-20211111 | **Lab ID: AE07280-23** | **Sampled: 11/11/21 10:30** | **Received: 11/11/21 15:25**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/25/21	11/12/21 09:27	11/12/21 15:26

Client ID: LC34PS-PZJ-050.0-20211111 | **Lab ID: AE07280-24** | **Sampled: 11/11/21 10:32** | **Received: 11/11/21 15:25**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/25/21	11/12/21 09:27	11/12/21 15:54

Client ID: LC34PS-PZJ-058.0-20211111 | **Lab ID: AE07280-25** | **Sampled: 11/11/21 10:34** | **Received: 11/11/21 15:25**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/25/21	11/12/21 09:27	11/12/21 16:22

Client ID: LC34PS-PZJ-058.0-20211111 | **Lab ID: AE07280-25RE1** | **Sampled: 11/11/21 10:34** | **Received: 11/11/21 15:25**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/25/21	11/15/21 00:00	11/15/21 14:24

Client ID: LC34PS-PZJ-073.0-20211111 | **Lab ID: AE07280-26RE1** | **Sampled: 11/11/21 10:36** | **Received: 11/11/21 15:25**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/25/21	11/15/21 00:00	11/15/21 12:28

Client ID: LC34PS-PZJ-080.0-20211111 | **Lab ID: AE07280-27** | **Sampled: 11/11/21 10:38** | **Received: 11/11/21 15:25**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/25/21	11/12/21 09:27	11/12/21 17:17

Client ID: LC34PS-PZJ-080.0-20211111 | **Lab ID: AE07280-27RE1** | **Sampled: 11/11/21 10:38** | **Received: 11/11/21 15:25**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/25/21	11/17/21 09:02	11/17/21 14:28

Client ID: LC34PS-PZG-040.0-20211111 | **Lab ID: AE07280-28** | **Sampled: 11/11/21 11:30** | **Received: 11/11/21 15:25**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/25/21	11/12/21 09:27	11/12/21 17:45

Client ID: LC34PS-PZG-040.0-20211111 | **Lab ID: AE07280-28RE1** | **Sampled: 11/11/21 11:30** | **Received: 11/11/21 15:25**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/25/21	11/17/21 09:02	11/17/21 14:56

Client ID: LC34PS-PZG-050.0-20211111 | **Lab ID: AE07280-29** | **Sampled: 11/11/21 11:32** | **Received: 11/11/21 15:25**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/25/21	11/12/21 00:00	11/12/21 19:22

Client ID: LC34PS-PZG-058.0-20211111 | **Lab ID: AE07280-30RE1** | **Sampled: 11/11/21 11:34** | **Received: 11/11/21 15:25**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/25/21	11/15/21 00:00	11/15/21 14:52

Client ID: LC34PS-PZG-073.0-20211111 | **Lab ID: AE07280-31** | **Sampled: 11/11/21 11:36** | **Received: 11/11/21 15:25**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/25/21	11/12/21 12:20	11/13/21 04:29

SAMPLE SUMMARY/LABORATORY CHRONICLE

Client ID: LC34PS-PZG-073.0-20211111 **Lab ID: AE07280-31RE1** **Sampled: 11/11/21 11:36** **Received: 11/11/21 15:25**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/25/21	11/17/21 09:02	11/17/21 15:24

Client ID: LC34PS-PZG-080.0-20211111 **Lab ID: AE07280-32** **Sampled: 11/11/21 11:38** **Received: 11/11/21 15:25**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/25/21	11/12/21 12:20	11/13/21 04:58

Client ID: LC34PS-PZF-040.0-20211111 **Lab ID: AE07280-33** **Sampled: 11/11/21 12:00** **Received: 11/11/21 15:25**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/25/21	11/15/21 00:00	11/15/21 15:21

Client ID: LC34PS-PZF-050.0-20211111 **Lab ID: AE07280-34** **Sampled: 11/11/21 12:02** **Received: 11/11/21 15:25**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/25/21	11/15/21 00:00	11/15/21 15:50

Client ID: LC34PS-PZF-058.0-20211111 **Lab ID: AE07280-35RE1** **Sampled: 11/11/21 12:04** **Received: 11/11/21 15:25**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/25/21	11/16/21 08:00	11/16/21 18:15

Client ID: LC34PS-PZF-073.0-20211111 **Lab ID: AE07280-36** **Sampled: 11/11/21 12:06** **Received: 11/11/21 15:25**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/25/21	11/12/21 12:20	11/13/21 00:39

Client ID: LC34PS-PZF-080.0-20211111 **Lab ID: AE07280-37** **Sampled: 11/11/21 12:08** **Received: 11/11/21 15:25**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/25/21	11/12/21 12:20	11/13/21 02:05

Client ID: LC34PS-PZA-040.0-20211111 **Lab ID: AE07280-38** **Sampled: 11/11/21 12:30** **Received: 11/11/21 15:25**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/25/21	11/15/21 00:00	11/15/21 16:47

Client ID: LC34PS-PZA-050.0-20211111 **Lab ID: AE07280-39** **Sampled: 11/11/21 12:32** **Received: 11/11/21 15:25**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/25/21	11/15/21 00:00	11/15/21 17:16

Client ID: LC34PS-PZA-058.0-20211111 **Lab ID: AE07280-40RE1** **Sampled: 11/11/21 12:34** **Received: 11/11/21 15:25**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/25/21	11/16/21 08:00	11/16/21 18:44

Client ID: LC34PS-PZA-073.0-20211111 **Lab ID: AE07280-41RE1** **Sampled: 11/11/21 12:36** **Received: 11/11/21 15:25**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/25/21	11/17/21 09:02	11/17/21 15:51

Client ID: LC34PS-PZA-080.0-20211111 **Lab ID: AE07280-42** **Sampled: 11/11/21 12:38** **Received: 11/11/21 15:25**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/25/21	11/12/21 12:20	11/13/21 02:34

Client ID: LC34PS-PZB-040.0-20211111 **Lab ID: AE07280-43** **Sampled: 11/11/21 13:00** **Received: 11/11/21 15:25**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/25/21	11/15/21 00:00	11/15/21 18:42

Client ID: LC34PS-PZB-050.0-20211111 **Lab ID: AE07280-44** **Sampled: 11/11/21 13:02** **Received: 11/11/21 15:25**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/25/21	11/15/21 00:00	11/15/21 19:11

SAMPLE SUMMARY/LABORATORY CHRONICLE

Client ID: LC34PS-PZB-058.0-20211111 **Lab ID: AE07280-45** **Sampled: 11/11/21 13:04** **Received: 11/11/21 15:25**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/25/21	11/16/21 08:00	11/16/21 11:03

Client ID: LC34PS-PZB-073.0-20211111 **Lab ID: AE07280-46RE1** **Sampled: 11/11/21 13:06** **Received: 11/11/21 15:25**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/25/21	11/17/21 09:02	11/17/21 16:19

Client ID: LC34PS-PZB-080.0-20211111 **Lab ID: AE07280-47** **Sampled: 11/11/21 13:08** **Received: 11/11/21 15:25**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/25/21	11/16/21 08:00	11/16/21 12:01

Client ID: LC34PS-PZC-040.0-20211111 **Lab ID: AE07280-48** **Sampled: 11/11/21 13:30** **Received: 11/11/21 15:25**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/25/21	11/16/21 08:00	11/16/21 12:30

Client ID: LC34PS-PZC-050.0-20211111 **Lab ID: AE07280-49** **Sampled: 11/11/21 13:32** **Received: 11/11/21 15:25**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/25/21	11/16/21 08:00	11/16/21 12:58

Client ID: LC34PS-PZC-058.0-20211111 **Lab ID: AE07280-50** **Sampled: 11/11/21 13:34** **Received: 11/11/21 15:25**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/25/21	11/16/21 08:00	11/16/21 13:27

Client ID: LC34PS-PZC-073.0-20211111 **Lab ID: AE07280-51** **Sampled: 11/11/21 13:36** **Received: 11/11/21 15:25**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/25/21	11/16/21 08:00	11/16/21 13:56

Client ID: LC34PS-PZC-080.0-20211111 **Lab ID: AE07280-52** **Sampled: 11/11/21 13:38** **Received: 11/11/21 15:25**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/25/21	11/12/21 12:20	11/13/21 03:03

Client ID: LC34PS-PZD-040.0-20211111 **Lab ID: AE07280-53** **Sampled: 11/11/21 14:00** **Received: 11/11/21 15:25**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/25/21	11/16/21 08:00	11/16/21 14:25

Client ID: LC34PS-PZD-050.0-20211111 **Lab ID: AE07280-54** **Sampled: 11/11/21 14:02** **Received: 11/11/21 15:25**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/25/21	11/16/21 08:00	11/16/21 14:54

Client ID: LC34PS-PZD-058.0-20211111 **Lab ID: AE07280-55** **Sampled: 11/11/21 14:04** **Received: 11/11/21 15:25**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/25/21	11/16/21 08:00	11/16/21 15:22

Client ID: LC34PS-PZD-073.0-20211111 **Lab ID: AE07280-56** **Sampled: 11/11/21 14:06** **Received: 11/11/21 15:25**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/25/21	11/16/21 08:00	11/16/21 15:51

Client ID: LC34PS-PZD-073.0-20211111 **Lab ID: AE07280-56RE1** **Sampled: 11/11/21 14:06** **Received: 11/11/21 15:25**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/25/21	11/17/21 09:02	11/17/21 16:47

Client ID: LC34PS-PZD-080.0-20211111 **Lab ID: AE07280-57** **Sampled: 11/11/21 14:08** **Received: 11/11/21 15:25**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/25/21	11/12/21 12:20	11/13/21 03:32

SAMPLE SUMMARY/LABORATORY CHRONICLE

Client ID: LC34PS-PZE-040.0-20211111 **Lab ID: AE07280-58** **Sampled: 11/11/21 14:30** **Received: 11/11/21 15:25**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/25/21	11/16/21 08:00	11/16/21 16:20

Client ID: LC34PS-PZE-050.0-20211111 **Lab ID: AE07280-59** **Sampled: 11/11/21 14:32** **Received: 11/11/21 15:25**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/25/21	11/16/21 08:00	11/16/21 16:49

Client ID: LC34PS-PZE-058.0-20211111 **Lab ID: AE07280-60** **Sampled: 11/11/21 14:34** **Received: 11/11/21 15:25**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/25/21	11/16/21 08:00	11/16/21 17:18

Client ID: LC34PS-PZE-073.0-20211111 **Lab ID: AE07280-61** **Sampled: 11/11/21 14:36** **Received: 11/11/21 15:25**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/25/21	11/12/21 12:20	11/13/21 04:00

Client ID: LC34PS-PZE-080.0-20211111 **Lab ID: AE07280-62RE1** **Sampled: 11/11/21 14:38** **Received: 11/11/21 15:25**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	11/25/21	11/17/21 09:02	11/17/21 17:14

SAMPLE DETECTION SUMMARY

Client ID: LC34-AS1-20211110 **Lab ID: AE07280-02**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	2.3	I	0.53	2.5	ug/L	EPA 8260D	
Trichloroethene	4.0		0.89	2.5	ug/L	EPA 8260D	

Client ID: LC34-AS2-20211110 **Lab ID: AE07280-03**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	98		1.3	6.2	ug/L	EPA 8260D	
Vinyl chloride	2.8	I	1.8	6.2	ug/L	EPA 8260D	

Client ID: LC34-AS2-20211110 **Lab ID: AE07280-03RE1**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Trichloroethene	390		4.4	12	ug/L	EPA 8260D	

Client ID: LC34-RW17C-20211110 **Lab ID: AE07280-04**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	7300		1300	6200	ug/L	EPA 8260D	
Trichloroethene	210000		2200	6200	ug/L	EPA 8260D	

Client ID: LC34-RW18C-20211110 **Lab ID: AE07280-05**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	4100	I	1100	5000	ug/L	EPA 8260D	

Client ID: LC34-RW18C-20211110 **Lab ID: AE07280-05RE2**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Trichloroethene	560000		8900	25000	ug/L	EPA 8260D	

Client ID: LC34-RW19C-20211110 **Lab ID: AE07280-06**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	5900	I	5300	25000	ug/L	EPA 8260D	
Trichloroethene	510000		8900	25000	ug/L	EPA 8260D	

Client ID: LC34-RW20C-20211110 **Lab ID: AE07280-07**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	5400	I	2600	12000	ug/L	EPA 8260D	
Trichloroethene	370000		4400	12000	ug/L	EPA 8260D	

Client ID: LC34PS-PZI-040.0-20211111 **Lab ID: AE07280-08**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	18000		260	1200	ug/L	EPA 8260D	
Vinyl chloride	940	I	360	1200	ug/L	EPA 8260D	

Client ID: LC34PS-PZI-040.0-20211111 **Lab ID: AE07280-08RE1**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Trichloroethene	52000		1800	5000	ug/L	EPA 8260D	

Client ID: LC34PS-PZI-050.0-20211111 **Lab ID: AE07280-09**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	13000		2600	12000	ug/L	EPA 8260D	
Trichloroethene	150000		4400	12000	ug/L	EPA 8260D	

Client ID: LC34PS-PZI-058.0-20211111 **Lab ID: AE07280-10**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	24000		2600	12000	ug/L	EPA 8260D	
Trichloroethene	230000		4400	12000	ug/L	EPA 8260D	

Client ID: LC34PS-PZI-073.0-20211111 **Lab ID: AE07280-11**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	1.4	I	0.53	2.5	ug/L	EPA 8260D	
Trichloroethene	16		0.89	2.5	ug/L	EPA 8260D	
Vinyl chloride	0.92	I	0.71	2.5	ug/L	EPA 8260D	

Client ID: LC34PS-PZI-080.0-20211111 **Lab ID: AE07280-12**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	19		0.53	2.5	ug/L	EPA 8260D	
trans-1,2-Dichloroethene	6.0		0.73	2.5	ug/L	EPA 8260D	
Vinyl chloride	81		0.71	2.5	ug/L	EPA 8260D	

SAMPLE DETECTION SUMMARY

Client ID: LC34PS-PZI-080.0-20211111 **Lab ID:** AE07280-12RE1

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Trichloroethene	100		8.9	25	ug/L	EPA 8260D	

Client ID: LC34PS-PZH-040.0-20211111 **Lab ID:** AE07280-13

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	4900		260	1200	ug/L	EPA 8260D	

Client ID: LC34PS-PZH-040.0-20211111 **Lab ID:** AE07280-13RE1

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Trichloroethene	110000		2200	6200	ug/L	EPA 8260D	

Client ID: LC34PS-PZH-050.0-20211111 **Lab ID:** AE07280-14

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	14000	I	5300	25000	ug/L	EPA 8260D	
Trichloroethene	440000		8900	25000	ug/L	EPA 8260D	

Client ID: LC34PS-PZH-058.0-20211111 **Lab ID:** AE07280-15RE1

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	18000		1300	6200	ug/L	EPA 8260D	
Trichloroethene	230000		2200	6200	ug/L	EPA 8260D	

Client ID: LC34PS-PZH-073.0-20211111 **Lab ID:** AE07280-16

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	11		0.53	2.5	ug/L	EPA 8260D	

Client ID: LC34PS-PZH-073.0-20211111 **Lab ID:** AE07280-16RE1

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Trichloroethene	430		8.9	25	ug/L	EPA 8260D	

Client ID: LC34PS-PZH-080.0-20211111 **Lab ID:** AE07280-17

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	62		0.53	2.5	ug/L	EPA 8260D	
trans-1,2-Dichloroethene	16		0.73	2.5	ug/L	EPA 8260D	
Trichloroethene	12		0.89	2.5	ug/L	EPA 8260D	
Vinyl chloride	34		0.71	2.5	ug/L	EPA 8260D	

Client ID: LC34PS-PZK-040.0-20211111 **Lab ID:** AE07280-18RE1

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	13000		530	2500	ug/L	EPA 8260D	
Trichloroethene	83000		890	2500	ug/L	EPA 8260D	

Client ID: LC34PS-PZK-050.0-20211111 **Lab ID:** AE07280-19

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	11000		1100	5000	ug/L	EPA 8260D	

Client ID: LC34PS-PZK-050.0-20211111 **Lab ID:** AE07280-19RE1

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Trichloroethene	360000		8900	25000	ug/L	EPA 8260D	

Client ID: LC34PS-PZK-058.0-20211111 **Lab ID:** AE07280-20

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	15000	I	5300	25000	ug/L	EPA 8260D	
Trichloroethene	480000		8900	25000	ug/L	EPA 8260D	

Client ID: LC34PS-PZK-073.0-20211111 **Lab ID:** AE07280-21

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	16	I	5.3	25	ug/L	EPA 8260D	

Client ID: LC34PS-PZK-073.0-20211111 **Lab ID:** AE07280-21RE1

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Trichloroethene	1100		44	120	ug/L	EPA 8260D	

Client ID: LC34PS-PZK-080.0-20211111 **Lab ID:** AE07280-22RE1

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	27		1.1	5.0	ug/L	EPA 8260D	
trans-1,2-Dichloroethene	9.3		1.5	5.0	ug/L	EPA 8260D	
Trichloroethene	160		1.8	5.0	ug/L	EPA 8260D	
Vinyl chloride	28		1.4	5.0	ug/L	EPA 8260D	

SAMPLE DETECTION SUMMARY

Client ID: LC34PS-PZJ-040.0-20211111 **Lab ID:** AE07280-23

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	27000		260	1200	ug/L	EPA 8260D	
trans-1,2-Dichloroethene	610	I	360	1200	ug/L	EPA 8260D	
Trichloroethene	21000		440	1200	ug/L	EPA 8260D	
Vinyl chloride	2100		360	1200	ug/L	EPA 8260D	

Client ID: LC34PS-PZJ-050.0-20211111 **Lab ID:** AE07280-24

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	32000		1300	6200	ug/L	EPA 8260D	
Trichloroethene	240000		2200	6200	ug/L	EPA 8260D	

Client ID: LC34PS-PZJ-058.0-20211111 **Lab ID:** AE07280-25

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Trichloroethene	260000		8900	25000	ug/L	EPA 8260D	

Client ID: LC34PS-PZJ-058.0-20211111 **Lab ID:** AE07280-25RE1

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	25000		1300	6200	ug/L	EPA 8260D	

Client ID: LC34PS-PZJ-073.0-20211111 **Lab ID:** AE07280-26RE1

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	9.5		0.53	2.5	ug/L	EPA 8260D	
Trichloroethene	51		0.89	2.5	ug/L	EPA 8260D	

Client ID: LC34PS-PZJ-080.0-20211111 **Lab ID:** AE07280-27

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
trans-1,2-Dichloroethene	13		0.73	2.5	ug/L	EPA 8260D	
Vinyl chloride	16		0.71	2.5	ug/L	EPA 8260D	

Client ID: LC34PS-PZJ-080.0-20211111 **Lab ID:** AE07280-27RE1

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	210		2.6	12	ug/L	EPA 8260D	
Trichloroethene	99		4.4	12	ug/L	EPA 8260D	

Client ID: LC34PS-PZG-040.0-20211111 **Lab ID:** AE07280-28

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	200000		2600	12000	ug/L	EPA 8260D	
Vinyl chloride	16000		3600	12000	ug/L	EPA 8260D	

Client ID: LC34PS-PZG-040.0-20211111 **Lab ID:** AE07280-28RE1

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Trichloroethene	55000		1800	5000	ug/L	EPA 8260D	

Client ID: LC34PS-PZG-050.0-20211111 **Lab ID:** AE07280-29

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	49000		5300	25000	ug/L	EPA 8260D	
Trichloroethene	650000		8900	25000	ug/L	EPA 8260D	

Client ID: LC34PS-PZG-058.0-20211111 **Lab ID:** AE07280-30RE1

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	20000		1300	6200	ug/L	EPA 8260D	
Trichloroethene	220000		2200	6200	ug/L	EPA 8260D	

Client ID: LC34PS-PZG-073.0-20211111 **Lab ID:** AE07280-31

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	6.1		0.53	2.5	ug/L	EPA 8260D	
trans-1,2-Dichloroethene	0.84	I	0.73	2.5	ug/L	EPA 8260D	
Vinyl chloride	0.72	I	0.71	2.5	ug/L	EPA 8260D	

Client ID: LC34PS-PZG-073.0-20211111 **Lab ID:** AE07280-31RE1

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Trichloroethene	160		4.4	12	ug/L	EPA 8260D	

SAMPLE DETECTION SUMMARY

Client ID: LC34PS-PZG-080.0-20211111 **Lab ID:** AE07280-32

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	71		0.53	2.5	ug/L	EPA 8260D	
trans-1,2-Dichloroethene	11		0.73	2.5	ug/L	EPA 8260D	
Trichloroethene	10		0.89	2.5	ug/L	EPA 8260D	
Vinyl chloride	32		0.71	2.5	ug/L	EPA 8260D	

Client ID: LC34PS-PZF-040.0-20211111 **Lab ID:** AE07280-33

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	33000		1300	6200	ug/L	EPA 8260D	
Trichloroethene	210000		2200	6200	ug/L	EPA 8260D	

Client ID: LC34PS-PZF-050.0-20211111 **Lab ID:** AE07280-34

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	44000	I	11000	50000	ug/L	EPA 8260D	
Trichloroethene	1000000		18000	50000	ug/L	EPA 8260D	

Client ID: LC34PS-PZF-058.0-20211111 **Lab ID:** AE07280-35RE1

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	12000		1300	6200	ug/L	EPA 8260D	
Trichloroethene	240000		2200	6200	ug/L	EPA 8260D	

Client ID: LC34PS-PZF-073.0-20211111 **Lab ID:** AE07280-36

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Trichloroethene	23		0.89	2.5	ug/L	EPA 8260D	

Client ID: LC34PS-PZF-080.0-20211111 **Lab ID:** AE07280-37

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	32		0.53	2.5	ug/L	EPA 8260D	
trans-1,2-Dichloroethene	4.5		0.73	2.5	ug/L	EPA 8260D	
Trichloroethene	11		0.89	2.5	ug/L	EPA 8260D	
Vinyl chloride	28		0.71	2.5	ug/L	EPA 8260D	

Client ID: LC34PS-PZA-040.0-20211111 **Lab ID:** AE07280-38

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	14000		2600	12000	ug/L	EPA 8260D	
Trichloroethene	420000		4400	12000	ug/L	EPA 8260D	

Client ID: LC34PS-PZA-050.0-20211111 **Lab ID:** AE07280-39

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	32000	I	11000	50000	ug/L	EPA 8260D	
Trichloroethene	1000000		18000	50000	ug/L	EPA 8260D	

Client ID: LC34PS-PZA-058.0-20211111 **Lab ID:** AE07280-40RE1

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	22000		1100	5000	ug/L	EPA 8260D	
Trichloroethene	170000		1800	5000	ug/L	EPA 8260D	

Client ID: LC34PS-PZA-073.0-20211111 **Lab ID:** AE07280-41RE1

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	3700		26	120	ug/L	EPA 8260D	
Trichloroethene	4200		44	120	ug/L	EPA 8260D	
Vinyl chloride	190		36	120	ug/L	EPA 8260D	

Client ID: LC34PS-PZA-080.0-20211111 **Lab ID:** AE07280-42

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	49		0.53	2.5	ug/L	EPA 8260D	
trans-1,2-Dichloroethene	8.6		0.73	2.5	ug/L	EPA 8260D	
Trichloroethene	4.7		0.89	2.5	ug/L	EPA 8260D	
Vinyl chloride	0.94	I	0.71	2.5	ug/L	EPA 8260D	

Client ID: LC34PS-PZB-040.0-20211111 **Lab ID:** AE07280-43

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	33000		5300	25000	ug/L	EPA 8260D	
Trichloroethene	410000		8900	25000	ug/L	EPA 8260D	

SAMPLE DETECTION SUMMARY

Client ID: LC34PS-PZB-050.0-20211111 **Lab ID:** AE07280-44

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	41000	I	11000	50000	ug/L	EPA 8260D	
Trichloroethene	950000		18000	50000	ug/L	EPA 8260D	

Client ID: LC34PS-PZB-058.0-20211111 **Lab ID:** AE07280-45

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	28000		5300	25000	ug/L	EPA 8260D	
Trichloroethene	340000		8900	25000	ug/L	EPA 8260D	

Client ID: LC34PS-PZB-073.0-20211111 **Lab ID:** AE07280-46RE1

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	15		2.6	12	ug/L	EPA 8260D	
Trichloroethene	270		4.4	12	ug/L	EPA 8260D	

Client ID: LC34PS-PZB-080.0-20211111 **Lab ID:** AE07280-47

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	140		1.1	5.0	ug/L	EPA 8260D	
trans-1,2-Dichloroethene	24		1.5	5.0	ug/L	EPA 8260D	
Trichloroethene	12		1.8	5.0	ug/L	EPA 8260D	

Client ID: LC34PS-PZC-040.0-20211111 **Lab ID:** AE07280-48

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	27000	I	11000	50000	ug/L	EPA 8260D	
Trichloroethene	620000		18000	50000	ug/L	EPA 8260D	

Client ID: LC34PS-PZC-050.0-20211111 **Lab ID:** AE07280-49

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	39000	I	11000	50000	ug/L	EPA 8260D	
Trichloroethene	700000		18000	50000	ug/L	EPA 8260D	

Client ID: LC34PS-PZC-058.0-20211111 **Lab ID:** AE07280-50

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	29000		5300	25000	ug/L	EPA 8260D	
Trichloroethene	490000		8900	25000	ug/L	EPA 8260D	

Client ID: LC34PS-PZC-073.0-20211111 **Lab ID:** AE07280-51

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	10	I	2.6	12	ug/L	EPA 8260D	
Trichloroethene	470		4.4	12	ug/L	EPA 8260D	

Client ID: LC34PS-PZC-080.0-20211111 **Lab ID:** AE07280-52

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	78		0.53	2.5	ug/L	EPA 8260D	
trans-1,2-Dichloroethene	14		0.73	2.5	ug/L	EPA 8260D	
Trichloroethene	3.0		0.89	2.5	ug/L	EPA 8260D	
Vinyl chloride	0.93	I	0.71	2.5	ug/L	EPA 8260D	

Client ID: LC34PS-PZD-040.0-20211111 **Lab ID:** AE07280-53

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	43000		2600	12000	ug/L	EPA 8260D	
Trichloroethene	240000		4400	12000	ug/L	EPA 8260D	

Client ID: LC34PS-PZD-050.0-20211111 **Lab ID:** AE07280-54

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	67000		11000	50000	ug/L	EPA 8260D	
Trichloroethene	790000		18000	50000	ug/L	EPA 8260D	

Client ID: LC34PS-PZD-058.0-20211111 **Lab ID:** AE07280-55

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	58000		11000	50000	ug/L	EPA 8260D	
Trichloroethene	690000		18000	50000	ug/L	EPA 8260D	

Client ID: LC34PS-PZD-073.0-20211111 **Lab ID:** AE07280-56

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	6.4		0.53	2.5	ug/L	EPA 8260D	
Vinyl chloride	3.0		0.71	2.5	ug/L	EPA 8260D	

SAMPLE DETECTION SUMMARY

Client ID: LC34PS-PZD-073.0-20211111 **Lab ID:** AE07280-56RE1

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Trichloroethene	260		8.9	25	ug/L	EPA 8260D	

Client ID: LC34PS-PZD-080.0-20211111 **Lab ID:** AE07280-57

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	54		0.53	2.5	ug/L	EPA 8260D	
trans-1,2-Dichloroethene	13		0.73	2.5	ug/L	EPA 8260D	
Trichloroethene	7.0		0.89	2.5	ug/L	EPA 8260D	

Client ID: LC34PS-PZE-040.0-20211111 **Lab ID:** AE07280-58

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	18000	I	5300	25000	ug/L	EPA 8260D	
Trichloroethene	670000		8900	25000	ug/L	EPA 8260D	

Client ID: LC34PS-PZE-050.0-20211111 **Lab ID:** AE07280-59

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	52000		5300	25000	ug/L	EPA 8260D	
Trichloroethene	600000		8900	25000	ug/L	EPA 8260D	
Vinyl chloride	7400	I	7100	25000	ug/L	EPA 8260D	

Client ID: LC34PS-PZE-058.0-20211111 **Lab ID:** AE07280-60

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	40000		5300	25000	ug/L	EPA 8260D	
Trichloroethene	500000		8900	25000	ug/L	EPA 8260D	

Client ID: LC34PS-PZE-073.0-20211111 **Lab ID:** AE07280-61

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	4.4		0.53	2.5	ug/L	EPA 8260D	
Trichloroethene	64		0.89	2.5	ug/L	EPA 8260D	

Client ID: LC34PS-PZE-080.0-20211111 **Lab ID:** AE07280-62RE1

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	84		0.53	2.5	ug/L	EPA 8260D	
trans-1,2-Dichloroethene	18		0.73	2.5	ug/L	EPA 8260D	
Trichloroethene	22		0.89	2.5	ug/L	EPA 8260D	

ANALYTICAL RESULTS

Description: LC34-GAC-20211110 **Lab Sample ID:** AE07280-01 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/10/21 08:00 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	1K12010	EPA 8260D	11/12/21 11:43	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	1K12010	EPA 8260D	11/12/21 11:43	nmc	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	1K12010	EPA 8260D	11/12/21 11:43	nmc	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	1K12010	EPA 8260D	11/12/21 11:43	nmc	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	1K12010	EPA 8260D	11/12/21 11:43	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	1K12010	EPA 8260D	11/12/21 11:43	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	1K12010	EPA 8260D	11/12/21 11:43	nmc	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	1K12010	EPA 8260D	11/12/21 11:43	nmc	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	1K12010	EPA 8260D	11/12/21 11:43	nmc	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	1K12010	EPA 8260D	11/12/21 11:43	nmc	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	1K12010	EPA 8260D	11/12/21 11:43	nmc	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	1K12010	EPA 8260D	11/12/21 11:43	nmc	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	1K12010	EPA 8260D	11/12/21 11:43	nmc	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	1K12010	EPA 8260D	11/12/21 11:43	nmc	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	1K12010	EPA 8260D	11/12/21 11:43	nmc	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	1K12010	EPA 8260D	11/12/21 11:43	nmc	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	1K12010	EPA 8260D	11/12/21 11:43	nmc	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	1K12010	EPA 8260D	11/12/21 11:43	nmc	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	1K12010	EPA 8260D	11/12/21 11:43	nmc	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	1K12010	EPA 8260D	11/12/21 11:43	nmc	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	1K12010	EPA 8260D	11/12/21 11:43	nmc	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	1K12010	EPA 8260D	11/12/21 11:43	nmc	QL-02, QM-19, QV-01
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	1K12010	EPA 8260D	11/12/21 11:43	nmc	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	1K12010	EPA 8260D	11/12/21 11:43	nmc	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	1K12010	EPA 8260D	11/12/21 11:43	nmc	QM-07, QV-01
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	1K12010	EPA 8260D	11/12/21 11:43	nmc	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	1K12010	EPA 8260D	11/12/21 11:43	nmc	QV-01
cis-1,2-Dichloroethene [156-59-2]^	0.53	U	ug/L	1	0.53	2.5	1K12010	EPA 8260D	11/12/21 11:43	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	1K12010	EPA 8260D	11/12/21 11:43	nmc	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	1K12010	EPA 8260D	11/12/21 11:43	nmc	QL-02, QM-19
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	1K12010	EPA 8260D	11/12/21 11:43	nmc	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	1K12010	EPA 8260D	11/12/21 11:43	nmc	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	1K12010	EPA 8260D	11/12/21 11:43	nmc	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	1K12010	EPA 8260D	11/12/21 11:43	nmc	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	1K12010	EPA 8260D	11/12/21 11:43	nmc	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	1K12010	EPA 8260D	11/12/21 11:43	nmc	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	1K12010	EPA 8260D	11/12/21 11:43	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	1K12010	EPA 8260D	11/12/21 11:43	nmc	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	1K12010	EPA 8260D	11/12/21 11:43	nmc	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	1K12010	EPA 8260D	11/12/21 11:43	nmc	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	1K12010	EPA 8260D	11/12/21 11:43	nmc	
trans-1,2-Dichloroethene [156-60-5]^	0.73	U	ug/L	1	0.73	2.5	1K12010	EPA 8260D	11/12/21 11:43	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	1K12010	EPA 8260D	11/12/21 11:43	nmc	
Trichloroethene [79-01-6]^	0.89	U	ug/L	1	0.89	2.5	1K12010	EPA 8260D	11/12/21 11:43	nmc	

ANALYTICAL RESULTS

Description: LC34-GAC-20211110 | **Lab Sample ID:** AE07280-01 | **Received:** 11/11/21 15:25
Matrix: Ground Water | **Sampled:** 11/10/21 08:00 | **Work Order:** AE07280
Project: NASA KSC LC34 | **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	1K12010	EPA 8260D	11/12/21 11:43	nmc	QM-07, QV-01
Vinyl chloride [75-01-4]^	0.71	U	ug/L	1	0.71	2.5	1K12010	EPA 8260D	11/12/21 11:43	nmc	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*42*	*1*	*50.0*	*83 %*	*41-142*	*1K12010*	*EPA 8260D*	*11/12/21 11:43*	*nmc*	
Dibromofluoromethane	*47*	*1*	*50.0*	*95 %*	*53-146*	*1K12010*	*EPA 8260D*	*11/12/21 11:43*	*nmc*	
Toluene-d8	*47*	*1*	*50.0*	*93 %*	*41-146*	*1K12010*	*EPA 8260D*	*11/12/21 11:43*	*nmc*	

ANALYTICAL RESULTS

Description: LC34-AS1-20211110 **Lab Sample ID:** AE07280-02 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/10/21 08:10 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	1K12010	EPA 8260D	11/12/21 12:11	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	1K12010	EPA 8260D	11/12/21 12:11	nmc	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	1K12010	EPA 8260D	11/12/21 12:11	nmc	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	1K12010	EPA 8260D	11/12/21 12:11	nmc	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	1K12010	EPA 8260D	11/12/21 12:11	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	1K12010	EPA 8260D	11/12/21 12:11	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	1K12010	EPA 8260D	11/12/21 12:11	nmc	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	1K12010	EPA 8260D	11/12/21 12:11	nmc	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	1K12010	EPA 8260D	11/12/21 12:11	nmc	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	1K12010	EPA 8260D	11/12/21 12:11	nmc	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	1K12010	EPA 8260D	11/12/21 12:11	nmc	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	1K12010	EPA 8260D	11/12/21 12:11	nmc	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	1K12010	EPA 8260D	11/12/21 12:11	nmc	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	1K12010	EPA 8260D	11/12/21 12:11	nmc	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	1K12010	EPA 8260D	11/12/21 12:11	nmc	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	1K12010	EPA 8260D	11/12/21 12:11	nmc	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	1K12010	EPA 8260D	11/12/21 12:11	nmc	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	1K12010	EPA 8260D	11/12/21 12:11	nmc	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	1K12010	EPA 8260D	11/12/21 12:11	nmc	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	1K12010	EPA 8260D	11/12/21 12:11	nmc	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	1K12010	EPA 8260D	11/12/21 12:11	nmc	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	1K12010	EPA 8260D	11/12/21 12:11	nmc	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	1K12010	EPA 8260D	11/12/21 12:11	nmc	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	1K12010	EPA 8260D	11/12/21 12:11	nmc	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	1K12010	EPA 8260D	11/12/21 12:11	nmc	QV-01
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	1K12010	EPA 8260D	11/12/21 12:11	nmc	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	1K12010	EPA 8260D	11/12/21 12:11	nmc	QV-01
cis-1,2-Dichloroethene [156-59-2]^	**2.3**	I	ug/L	1	0.53	2.5	1K12010	EPA 8260D	11/12/21 12:11	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	1K12010	EPA 8260D	11/12/21 12:11	nmc	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	1K12010	EPA 8260D	11/12/21 12:11	nmc	QL-02
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	1K12010	EPA 8260D	11/12/21 12:11	nmc	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	1K12010	EPA 8260D	11/12/21 12:11	nmc	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	1K12010	EPA 8260D	11/12/21 12:11	nmc	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	1K12010	EPA 8260D	11/12/21 12:11	nmc	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	1K12010	EPA 8260D	11/12/21 12:11	nmc	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	1K12010	EPA 8260D	11/12/21 12:11	nmc	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	1K12010	EPA 8260D	11/12/21 12:11	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	1K12010	EPA 8260D	11/12/21 12:11	nmc	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	1K12010	EPA 8260D	11/12/21 12:11	nmc	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	1K12010	EPA 8260D	11/12/21 12:11	nmc	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	1K12010	EPA 8260D	11/12/21 12:11	nmc	
trans-1,2-Dichloroethene [156-60-5]^	0.73	U	ug/L	1	0.73	2.5	1K12010	EPA 8260D	11/12/21 12:11	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	1K12010	EPA 8260D	11/12/21 12:11	nmc	
Trichloroethene [79-01-6]^	**4.0**		ug/L	1	0.89	2.5	1K12010	EPA 8260D	11/12/21 12:11	nmc	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	1K12010	EPA 8260D	11/12/21 12:11	nmc	QV-01
Vinyl chloride [75-01-4]^	0.71	U	ug/L	1	0.71	2.5	1K12010	EPA 8260D	11/12/21 12:11	nmc	

ANALYTICAL RESULTS

Description: LC34-AS1-20211110 **Lab Sample ID:** AE07280-02 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/10/21 08:10 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*41*	*1*	*50.0*	*82 %*	*41-142*	*1K12010*	*EPA 8260D*	*11/12/21 12:11*	*nmc*	
Dibromofluoromethane	*44*	*1*	*50.0*	*89 %*	*53-146*	*1K12010*	*EPA 8260D*	*11/12/21 12:11*	*nmc*	
Toluene-d8	*45*	*1*	*50.0*	*90 %*	*41-146*	*1K12010*	*EPA 8260D*	*11/12/21 12:11*	*nmc*	

ANALYTICAL RESULTS

Description: LC34-AS2-20211110 **Lab Sample ID:** AE07280-03 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/10/21 08:20 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	2.0	U	ug/L	2.5	2.0	6.2	1K12010	EPA 8260D	11/12/21 13:38	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	1.4	U	ug/L	2.5	1.4	6.2	1K12010	EPA 8260D	11/12/21 13:38	nmc	
1,1,2-Trichloroethane [79-00-5]^	1.9	U	ug/L	2.5	1.9	6.2	1K12010	EPA 8260D	11/12/21 13:38	nmc	
1,1-Dichloroethane [75-34-3]^	1.6	U	ug/L	2.5	1.6	6.2	1K12010	EPA 8260D	11/12/21 13:38	nmc	
1,1-Dichloroethene [75-35-4]^	2.4	U	ug/L	2.5	2.4	6.2	1K12010	EPA 8260D	11/12/21 13:38	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	1.8	U	ug/L	2.5	1.8	6.2	1K12010	EPA 8260D	11/12/21 13:38	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	2.4	U	ug/L	2.5	2.4	6.2	1K12010	EPA 8260D	11/12/21 13:38	nmc	
1,2-Dibromoethane [106-93-4]^	2.0	U	ug/L	2.5	2.0	6.2	1K12010	EPA 8260D	11/12/21 13:38	nmc	
1,2-Dichlorobenzene [95-50-1]^	1.8	U	ug/L	2.5	1.8	6.2	1K12010	EPA 8260D	11/12/21 13:38	nmc	
1,2-Dichloroethane [107-06-2]^	1.6	U	ug/L	2.5	1.6	6.2	1K12010	EPA 8260D	11/12/21 13:38	nmc	
1,2-Dichloropropane [78-87-5]^	2.0	U	ug/L	2.5	2.0	6.2	1K12010	EPA 8260D	11/12/21 13:38	nmc	
1,3-Dichlorobenzene [541-73-1]^	1.9	U	ug/L	2.5	1.9	6.2	1K12010	EPA 8260D	11/12/21 13:38	nmc	
1,4-Dichlorobenzene [106-46-7]^	1.9	U	ug/L	2.5	1.9	6.2	1K12010	EPA 8260D	11/12/21 13:38	nmc	
2-Butanone [78-93-3]^	11	U	ug/L	2.5	11	31	1K12010	EPA 8260D	11/12/21 13:38	nmc	
2-Hexanone [591-78-6]^	6.2	U	ug/L	2.5	6.2	31	1K12010	EPA 8260D	11/12/21 13:38	nmc	
4-Methyl-2-pentanone [108-10-1]^	6.2	U	ug/L	2.5	6.2	31	1K12010	EPA 8260D	11/12/21 13:38	nmc	
Acetone [67-64-1]^	25	U	ug/L	2.5	25	62	1K12010	EPA 8260D	11/12/21 13:38	nmc	
Benzene [71-43-2]^	1.8	U	ug/L	2.5	1.8	6.2	1K12010	EPA 8260D	11/12/21 13:38	nmc	
Bromodichloromethane [75-27-4]^	1.3	U	ug/L	2.5	1.3	6.2	1K12010	EPA 8260D	11/12/21 13:38	nmc	
Bromoform [75-25-2]^	1.9	U	ug/L	2.5	1.9	6.2	1K12010	EPA 8260D	11/12/21 13:38	nmc	
Bromomethane [74-83-9]^	2.4	U	ug/L	2.5	2.4	6.2	1K12010	EPA 8260D	11/12/21 13:38	nmc	QV-01
Carbon disulfide [75-15-0]^	6.2	U	ug/L	2.5	6.2	31	1K12010	EPA 8260D	11/12/21 13:38	nmc	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	2.4	U	ug/L	2.5	2.4	6.2	1K12010	EPA 8260D	11/12/21 13:38	nmc	
Chlorobenzene [108-90-7]^	1.8	U	ug/L	2.5	1.8	6.2	1K12010	EPA 8260D	11/12/21 13:38	nmc	
Chloroethane [75-00-3]^	2.4	U	ug/L	2.5	2.4	6.2	1K12010	EPA 8260D	11/12/21 13:38	nmc	QV-01
Chloroform [67-66-3]^	2.0	U	ug/L	2.5	2.0	6.2	1K12010	EPA 8260D	11/12/21 13:38	nmc	
Chloromethane [74-87-3]^	2.0	U	ug/L	2.5	2.0	6.2	1K12010	EPA 8260D	11/12/21 13:38	nmc	QV-01
cis-1,2-Dichloroethene [156-59-2]^	**98**		ug/L	2.5	1.3	6.2	1K12010	EPA 8260D	11/12/21 13:38	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	1.5	U	ug/L	2.5	1.5	6.2	1K12010	EPA 8260D	11/12/21 13:38	nmc	
Cyclohexane [110-82-7]^	2.3	U	ug/L	2.5	2.3	6.2	1K12010	EPA 8260D	11/12/21 13:38	nmc	QL-02
Dibromochloromethane [124-48-1]^	1.2	U	ug/L	2.5	1.2	6.2	1K12010	EPA 8260D	11/12/21 13:38	nmc	
Dichlorodifluoromethane [75-71-8]^	1.8	U	ug/L	2.5	1.8	6.2	1K12010	EPA 8260D	11/12/21 13:38	nmc	
Ethylbenzene [100-41-4]^	1.7	U	ug/L	2.5	1.7	6.2	1K12010	EPA 8260D	11/12/21 13:38	nmc	
Freon 113 [76-13-1]^	1.8	U	ug/L	2.5	1.8	6.2	1K12010	EPA 8260D	11/12/21 13:38	nmc	
Isopropylbenzene [98-82-8]^	1.7	U	ug/L	2.5	1.7	6.2	1K12010	EPA 8260D	11/12/21 13:38	nmc	
Methyl acetate [79-20-9]^	2.4	U	ug/L	2.5	2.4	6.2	1K12010	EPA 8260D	11/12/21 13:38	nmc	
Methylene Chloride [75-09-2]^	6.2	U	ug/L	2.5	6.2	31	1K12010	EPA 8260D	11/12/21 13:38	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	1.5	U	ug/L	2.5	1.5	6.2	1K12010	EPA 8260D	11/12/21 13:38	nmc	
Styrene [100-42-5]^	1.5	U	ug/L	2.5	1.5	6.2	1K12010	EPA 8260D	11/12/21 13:38	nmc	
Tetrachloroethene [127-18-4]^	1.9	U	ug/L	2.5	1.9	6.2	1K12010	EPA 8260D	11/12/21 13:38	nmc	
Toluene [108-88-3]^	1.8	U	ug/L	2.5	1.8	6.2	1K12010	EPA 8260D	11/12/21 13:38	nmc	
trans-1,2-Dichloroethene [156-60-5]^	1.8	U	ug/L	2.5	1.8	6.2	1K12010	EPA 8260D	11/12/21 13:38	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	1.8	U	ug/L	2.5	1.8	6.2	1K12010	EPA 8260D	11/12/21 13:38	nmc	
Trichloroethene [79-01-6]^	**390**		ug/L	5	4.4	12	1K17014	EPA 8260D	11/17/21 10:47	KKW	
Trichlorofluoromethane [75-69-4]^	2.4	U	ug/L	2.5	2.4	6.2	1K12010	EPA 8260D	11/12/21 13:38	nmc	QV-01
Vinyl chloride [75-01-4]^	**2.8**	I	ug/L	2.5	1.8	6.2	1K12010	EPA 8260D	11/12/21 13:38	nmc	

ANALYTICAL RESULTS

Description: LC34-AS2-20211110 | **Lab Sample ID:** AE07280-03 | **Received:** 11/11/21 15:25

Matrix: Ground Water | **Sampled:** 11/10/21 08:20 | **Work Order:** AE07280

Project: NASA KSC LC34 | **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*41*	*1*	*50.0*	*82 %*	*41-142*	*1K12010*	*EPA 8260D*	*11/12/21 13:38*	*nmc*	
4-Bromofluorobenzene	*52*	*1*	*50.0*	*103 %*	*41-142*	*1K17014*	*EPA 8260D*	*11/17/21 10:47*	*KKW*	
Dibromofluoromethane	*46*	*1*	*50.0*	*92 %*	*53-146*	*1K12010*	*EPA 8260D*	*11/12/21 13:38*	*nmc*	
Dibromofluoromethane	*50*	*1*	*50.0*	*100 %*	*53-146*	*1K17014*	*EPA 8260D*	*11/17/21 10:47*	*KKW*	
Toluene-d8	*44*	*1*	*50.0*	*89 %*	*41-146*	*1K12010*	*EPA 8260D*	*11/12/21 13:38*	*nmc*	
Toluene-d8	*53*	*1*	*50.0*	*107 %*	*41-146*	*1K17014*	*EPA 8260D*	*11/17/21 10:47*	*KKW*	

ANALYTICAL RESULTS

Description: LC34-RW17C-20211110 **Lab Sample ID:** AE07280-04 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/10/21 09:30 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	2000	U	ug/L	2500	2000	6200	1K12010	EPA 8260D	11/12/21 14:06	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	1400	U	ug/L	2500	1400	6200	1K12010	EPA 8260D	11/12/21 14:06	nmc	
1,1,2-Trichloroethane [79-00-5]^	1900	U	ug/L	2500	1900	6200	1K12010	EPA 8260D	11/12/21 14:06	nmc	
1,1-Dichloroethane [75-34-3]^	1600	U	ug/L	2500	1600	6200	1K12010	EPA 8260D	11/12/21 14:06	nmc	
1,1-Dichloroethene [75-35-4]^	2400	U	ug/L	2500	2400	6200	1K12010	EPA 8260D	11/12/21 14:06	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	1800	U	ug/L	2500	1800	6200	1K12010	EPA 8260D	11/12/21 14:06	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	2400	U	ug/L	2500	2400	6200	1K12010	EPA 8260D	11/12/21 14:06	nmc	
1,2-Dibromoethane [106-93-4]^	2000	U	ug/L	2500	2000	6200	1K12010	EPA 8260D	11/12/21 14:06	nmc	
1,2-Dichlorobenzene [95-50-1]^	1800	U	ug/L	2500	1800	6200	1K12010	EPA 8260D	11/12/21 14:06	nmc	
1,2-Dichloroethane [107-06-2]^	1600	U	ug/L	2500	1600	6200	1K12010	EPA 8260D	11/12/21 14:06	nmc	
1,2-Dichloropropane [78-87-5]^	2000	U	ug/L	2500	2000	6200	1K12010	EPA 8260D	11/12/21 14:06	nmc	
1,3-Dichlorobenzene [541-73-1]^	1900	U	ug/L	2500	1900	6200	1K12010	EPA 8260D	11/12/21 14:06	nmc	
1,4-Dichlorobenzene [106-46-7]^	1900	U	ug/L	2500	1900	6200	1K12010	EPA 8260D	11/12/21 14:06	nmc	
2-Butanone [78-93-3]^	11000	U	ug/L	2500	11000	31000	1K12010	EPA 8260D	11/12/21 14:06	nmc	
2-Hexanone [591-78-6]^	6200	U	ug/L	2500	6200	31000	1K12010	EPA 8260D	11/12/21 14:06	nmc	
4-Methyl-2-pentanone [108-10-1]^	6200	U	ug/L	2500	6200	31000	1K12010	EPA 8260D	11/12/21 14:06	nmc	
Acetone [67-64-1]^	25000	U	ug/L	2500	25000	62000	1K12010	EPA 8260D	11/12/21 14:06	nmc	
Benzene [71-43-2]^	1800	U	ug/L	2500	1800	6200	1K12010	EPA 8260D	11/12/21 14:06	nmc	
Bromodichloromethane [75-27-4]^	1300	U	ug/L	2500	1300	6200	1K12010	EPA 8260D	11/12/21 14:06	nmc	
Bromoform [75-25-2]^	1900	U	ug/L	2500	1900	6200	1K12010	EPA 8260D	11/12/21 14:06	nmc	
Bromomethane [74-83-9]^	2400	U	ug/L	2500	2400	6200	1K12010	EPA 8260D	11/12/21 14:06	nmc	QV-01
Carbon disulfide [75-15-0]^	6200	U	ug/L	2500	6200	31000	1K12010	EPA 8260D	11/12/21 14:06	nmc	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	2400	U	ug/L	2500	2400	6200	1K12010	EPA 8260D	11/12/21 14:06	nmc	
Chlorobenzene [108-90-7]^	1800	U	ug/L	2500	1800	6200	1K12010	EPA 8260D	11/12/21 14:06	nmc	
Chloroethane [75-00-3]^	2400	U	ug/L	2500	2400	6200	1K12010	EPA 8260D	11/12/21 14:06	nmc	QV-01
Chloroform [67-66-3]^	2000	U	ug/L	2500	2000	6200	1K12010	EPA 8260D	11/12/21 14:06	nmc	
Chloromethane [74-87-3]^	2000	U	ug/L	2500	2000	6200	1K12010	EPA 8260D	11/12/21 14:06	nmc	QV-01
cis-1,2-Dichloroethene [156-59-2]^	**7300**		ug/L	2500	1300	6200	1K12010	EPA 8260D	11/12/21 14:06	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	1500	U	ug/L	2500	1500	6200	1K12010	EPA 8260D	11/12/21 14:06	nmc	
Cyclohexane [110-82-7]^	2300	U	ug/L	2500	2300	6200	1K12010	EPA 8260D	11/12/21 14:06	nmc	QL-02
Dibromochloromethane [124-48-1]^	1200	U	ug/L	2500	1200	6200	1K12010	EPA 8260D	11/12/21 14:06	nmc	
Dichlorodifluoromethane [75-71-8]^	1800	U	ug/L	2500	1800	6200	1K12010	EPA 8260D	11/12/21 14:06	nmc	
Ethylbenzene [100-41-4]^	1700	U	ug/L	2500	1700	6200	1K12010	EPA 8260D	11/12/21 14:06	nmc	
Freon 113 [76-13-1]^	1800	U	ug/L	2500	1800	6200	1K12010	EPA 8260D	11/12/21 14:06	nmc	
Isopropylbenzene [98-82-8]^	1700	U	ug/L	2500	1700	6200	1K12010	EPA 8260D	11/12/21 14:06	nmc	
Methyl acetate [79-20-9]^	2400	U	ug/L	2500	2400	6200	1K12010	EPA 8260D	11/12/21 14:06	nmc	
Methylene Chloride [75-09-2]^	6200	U	ug/L	2500	6200	31000	1K12010	EPA 8260D	11/12/21 14:06	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	1500	U	ug/L	2500	1500	6200	1K12010	EPA 8260D	11/12/21 14:06	nmc	
Styrene [100-42-5]^	1500	U	ug/L	2500	1500	6200	1K12010	EPA 8260D	11/12/21 14:06	nmc	
Tetrachloroethene [127-18-4]^	1900	U	ug/L	2500	1900	6200	1K12010	EPA 8260D	11/12/21 14:06	nmc	
Toluene [108-88-3]^	1800	U	ug/L	2500	1800	6200	1K12010	EPA 8260D	11/12/21 14:06	nmc	
trans-1,2-Dichloroethene [156-60-5]^	1800	U	ug/L	2500	1800	6200	1K12010	EPA 8260D	11/12/21 14:06	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	1800	U	ug/L	2500	1800	6200	1K12010	EPA 8260D	11/12/21 14:06	nmc	
Trichloroethene [79-01-6]^	**210000**		ug/L	2500	2200	6200	1K12010	EPA 8260D	11/12/21 14:06	nmc	
Trichlorofluoromethane [75-69-4]^	2400	U	ug/L	2500	2400	6200	1K12010	EPA 8260D	11/12/21 14:06	nmc	QV-01
Vinyl chloride [75-01-4]^	1800	U	ug/L	2500	1800	6200	1K12010	EPA 8260D	11/12/21 14:06	nmc	

ANALYTICAL RESULTS

Description: LC34-RW17C-20211110 **Lab Sample ID:** AE07280-04 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/10/21 09:30 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*40*	*1*	*50.0*	*79 %*	*41-142*	*1K12010*	*EPA 8260D*	*11/12/21 14:06*	*nmc*	
Dibromofluoromethane	*44*	*1*	*50.0*	*88 %*	*53-146*	*1K12010*	*EPA 8260D*	*11/12/21 14:06*	*nmc*	
Toluene-d8	*44*	*1*	*50.0*	*89 %*	*41-146*	*1K12010*	*EPA 8260D*	*11/12/21 14:06*	*nmc*	

ANALYTICAL RESULTS

Description: LC34-RW18C-20211110 **Lab Sample ID:** AE07280-05 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/10/21 08:40 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	1600	U	ug/L	2000	1600	5000	1K12010	EPA 8260D	11/12/21 14:35	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	1100	U	ug/L	2000	1100	5000	1K12010	EPA 8260D	11/12/21 14:35	nmc	
1,1,2-Trichloroethane [79-00-5]^	1500	U	ug/L	2000	1500	5000	1K12010	EPA 8260D	11/12/21 14:35	nmc	
1,1-Dichloroethane [75-34-3]^	1200	U	ug/L	2000	1200	5000	1K12010	EPA 8260D	11/12/21 14:35	nmc	
1,1-Dichloroethene [75-35-4]^	1900	U	ug/L	2000	1900	5000	1K12010	EPA 8260D	11/12/21 14:35	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	1400	U	ug/L	2000	1400	5000	1K12010	EPA 8260D	11/12/21 14:35	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	1900	U	ug/L	2000	1900	5000	1K12010	EPA 8260D	11/12/21 14:35	nmc	
1,2-Dibromoethane [106-93-4]^	1600	U	ug/L	2000	1600	5000	1K12010	EPA 8260D	11/12/21 14:35	nmc	
1,2-Dichlorobenzene [95-50-1]^	1500	U	ug/L	2000	1500	5000	1K12010	EPA 8260D	11/12/21 14:35	nmc	
1,2-Dichloroethane [107-06-2]^	1300	U	ug/L	2000	1300	5000	1K12010	EPA 8260D	11/12/21 14:35	nmc	
1,2-Dichloropropane [78-87-5]^	1600	U	ug/L	2000	1600	5000	1K12010	EPA 8260D	11/12/21 14:35	nmc	
1,3-Dichlorobenzene [541-73-1]^	1500	U	ug/L	2000	1500	5000	1K12010	EPA 8260D	11/12/21 14:35	nmc	
1,4-Dichlorobenzene [106-46-7]^	1500	U	ug/L	2000	1500	5000	1K12010	EPA 8260D	11/12/21 14:35	nmc	
2-Butanone [78-93-3]^	9000	U	ug/L	2000	9000	25000	1K12010	EPA 8260D	11/12/21 14:35	nmc	
2-Hexanone [591-78-6]^	5000	U	ug/L	2000	5000	25000	1K12010	EPA 8260D	11/12/21 14:35	nmc	
4-Methyl-2-pentanone [108-10-1]^	5000	U	ug/L	2000	5000	25000	1K12010	EPA 8260D	11/12/21 14:35	nmc	
Acetone [67-64-1]^	20000	U	ug/L	2000	20000	50000	1K12010	EPA 8260D	11/12/21 14:35	nmc	
Benzene [71-43-2]^	1400	U	ug/L	2000	1400	5000	1K12010	EPA 8260D	11/12/21 14:35	nmc	
Bromodichloromethane [75-27-4]^	1000	U	ug/L	2000	1000	5000	1K12010	EPA 8260D	11/12/21 14:35	nmc	
Bromoform [75-25-2]^	1500	U	ug/L	2000	1500	5000	1K12010	EPA 8260D	11/12/21 14:35	nmc	
Bromomethane [74-83-9]^	1900	U	ug/L	2000	1900	5000	1K12010	EPA 8260D	11/12/21 14:35	nmc	QV-01
Carbon disulfide [75-15-0]^	5000	U	ug/L	2000	5000	25000	1K12010	EPA 8260D	11/12/21 14:35	nmc	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	1900	U	ug/L	2000	1900	5000	1K12010	EPA 8260D	11/12/21 14:35	nmc	
Chlorobenzene [108-90-7]^	1400	U	ug/L	2000	1400	5000	1K12010	EPA 8260D	11/12/21 14:35	nmc	
Chloroethane [75-00-3]^	2000	U	ug/L	2000	2000	5000	1K12010	EPA 8260D	11/12/21 14:35	nmc	QV-01
Chloroform [67-66-3]^	1600	U	ug/L	2000	1600	5000	1K12010	EPA 8260D	11/12/21 14:35	nmc	
Chloromethane [74-87-3]^	1600	U	ug/L	2000	1600	5000	1K12010	EPA 8260D	11/12/21 14:35	nmc	QV-01
cis-1,2-Dichloroethene [156-59-2]^	**4100**	I	ug/L	2000	1100	5000	1K12010	EPA 8260D	11/12/21 14:35	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	1200	U	ug/L	2000	1200	5000	1K12010	EPA 8260D	11/12/21 14:35	nmc	
Cyclohexane [110-82-7]^	1900	U	ug/L	2000	1900	5000	1K12010	EPA 8260D	11/12/21 14:35	nmc	QL-02
Dibromochloromethane [124-48-1]^	1000	U	ug/L	2000	1000	5000	1K12010	EPA 8260D	11/12/21 14:35	nmc	
Dichlorodifluoromethane [75-71-8]^	1500	U	ug/L	2000	1500	5000	1K12010	EPA 8260D	11/12/21 14:35	nmc	
Ethylbenzene [100-41-4]^	1400	U	ug/L	2000	1400	5000	1K12010	EPA 8260D	11/12/21 14:35	nmc	
Freon 113 [76-13-1]^	1500	U	ug/L	2000	1500	5000	1K12010	EPA 8260D	11/12/21 14:35	nmc	
Isopropylbenzene [98-82-8]^	1300	U	ug/L	2000	1300	5000	1K12010	EPA 8260D	11/12/21 14:35	nmc	
Methyl acetate [79-20-9]^	1900	U	ug/L	2000	1900	5000	1K12010	EPA 8260D	11/12/21 14:35	nmc	
Methylene Chloride [75-09-2]^	5000	U	ug/L	2000	5000	25000	1K12010	EPA 8260D	11/12/21 14:35	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	1200	U	ug/L	2000	1200	5000	1K12010	EPA 8260D	11/12/21 14:35	nmc	
Styrene [100-42-5]^	1200	U	ug/L	2000	1200	5000	1K12010	EPA 8260D	11/12/21 14:35	nmc	
Tetrachloroethene [127-18-4]^	1500	U	ug/L	2000	1500	5000	1K12010	EPA 8260D	11/12/21 14:35	nmc	
Toluene [108-88-3]^	1400	U	ug/L	2000	1400	5000	1K12010	EPA 8260D	11/12/21 14:35	nmc	
trans-1,2-Dichloroethene [156-60-5]^	1500	U	ug/L	2000	1500	5000	1K12010	EPA 8260D	11/12/21 14:35	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	1500	U	ug/L	2000	1500	5000	1K12010	EPA 8260D	11/12/21 14:35	nmc	
Trichloroethene [79-01-6]^	**560000**		ug/L	10000	8900	25000	1K17007	EPA 8260D	11/17/21 18:43	nmc	
Trichlorofluoromethane [75-69-4]^	1900	U	ug/L	2000	1900	5000	1K12010	EPA 8260D	11/12/21 14:35	nmc	QV-01
Vinyl chloride [75-01-4]^	1400	U	ug/L	2000	1400	5000	1K12010	EPA 8260D	11/12/21 14:35	nmc	

ANALYTICAL RESULTS

Description: LC34-RW18C-20211110 **Lab Sample ID:** AE07280-05 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/10/21 08:40 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*41*	*1*	*50.0*	*82 %*	*41-142*	*1K12010*	*EPA 8260D*	*11/12/21 14:35*	*nmc*	
4-Bromofluorobenzene	*41*	*1*	*50.0*	*82 %*	*41-142*	*1K17007*	*EPA 8260D*	*11/17/21 18:43*	*nmc*	
Dibromofluoromethane	*45*	*1*	*50.0*	*91 %*	*53-146*	*1K12010*	*EPA 8260D*	*11/12/21 14:35*	*nmc*	
Dibromofluoromethane	*47*	*1*	*50.0*	*93 %*	*53-146*	*1K17007*	*EPA 8260D*	*11/17/21 18:43*	*nmc*	
Toluene-d8	*45*	*1*	*50.0*	*89 %*	*41-146*	*1K12010*	*EPA 8260D*	*11/12/21 14:35*	*nmc*	
Toluene-d8	*45*	*1*	*50.0*	*90 %*	*41-146*	*1K17007*	*EPA 8260D*	*11/17/21 18:43*	*nmc*	

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ANALYTICAL RESULTS

Description: LC34-RW19C-20211110 **Lab Sample ID:** AE07280-06 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/10/21 08:50 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	8000	U	ug/L	10000	8000	25000	1K12010	EPA 8260D	11/12/21 15:04	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	5400	U	ug/L	10000	5400	25000	1K12010	EPA 8260D	11/12/21 15:04	nmc	
1,1,2-Trichloroethane [79-00-5]^	7600	U	ug/L	10000	7600	25000	1K12010	EPA 8260D	11/12/21 15:04	nmc	
1,1-Dichloroethane [75-34-3]^	6200	U	ug/L	10000	6200	25000	1K12010	EPA 8260D	11/12/21 15:04	nmc	
1,1-Dichloroethene [75-35-4]^	9400	U	ug/L	10000	9400	25000	1K12010	EPA 8260D	11/12/21 15:04	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	7000	U	ug/L	10000	7000	25000	1K12010	EPA 8260D	11/12/21 15:04	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	9600	U	ug/L	10000	9600	25000	1K12010	EPA 8260D	11/12/21 15:04	nmc	
1,2-Dibromoethane [106-93-4]^	7800	U	ug/L	10000	7800	25000	1K12010	EPA 8260D	11/12/21 15:04	nmc	
1,2-Dichlorobenzene [95-50-1]^	7300	U	ug/L	10000	7300	25000	1K12010	EPA 8260D	11/12/21 15:04	nmc	
1,2-Dichloroethane [107-06-2]^	6300	U	ug/L	10000	6300	25000	1K12010	EPA 8260D	11/12/21 15:04	nmc	
1,2-Dichloropropane [78-87-5]^	8000	U	ug/L	10000	8000	25000	1K12010	EPA 8260D	11/12/21 15:04	nmc	
1,3-Dichlorobenzene [541-73-1]^	7700	U	ug/L	10000	7700	25000	1K12010	EPA 8260D	11/12/21 15:04	nmc	
1,4-Dichlorobenzene [106-46-7]^	7600	U	ug/L	10000	7600	25000	1K12010	EPA 8260D	11/12/21 15:04	nmc	
2-Butanone [78-93-3]^	45000	U	ug/L	10000	45000	120000	1K12010	EPA 8260D	11/12/21 15:04	nmc	
2-Hexanone [591-78-6]^	25000	U	ug/L	10000	25000	120000	1K12010	EPA 8260D	11/12/21 15:04	nmc	
4-Methyl-2-pentanone [108-10-1]^	25000	U	ug/L	10000	25000	120000	1K12010	EPA 8260D	11/12/21 15:04	nmc	
Acetone [67-64-1]^	100000	U	ug/L	10000	100000	250000	1K12010	EPA 8260D	11/12/21 15:04	nmc	
Benzene [71-43-2]^	7100	U	ug/L	10000	7100	25000	1K12010	EPA 8260D	11/12/21 15:04	nmc	
Bromodichloromethane [75-27-4]^	5200	U	ug/L	10000	5200	25000	1K12010	EPA 8260D	11/12/21 15:04	nmc	
Bromoform [75-25-2]^	7500	U	ug/L	10000	7500	25000	1K12010	EPA 8260D	11/12/21 15:04	nmc	
Bromomethane [74-83-9]^	9500	U	ug/L	10000	9500	25000	1K12010	EPA 8260D	11/12/21 15:04	nmc	QV-01
Carbon disulfide [75-15-0]^	25000	U	ug/L	10000	25000	120000	1K12010	EPA 8260D	11/12/21 15:04	nmc	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	9400	U	ug/L	10000	9400	25000	1K12010	EPA 8260D	11/12/21 15:04	nmc	
Chlorobenzene [108-90-7]^	7200	U	ug/L	10000	7200	25000	1K12010	EPA 8260D	11/12/21 15:04	nmc	
Chloroethane [75-00-3]^	9800	U	ug/L	10000	9800	25000	1K12010	EPA 8260D	11/12/21 15:04	nmc	QV-01
Chloroform [67-66-3]^	8000	U	ug/L	10000	8000	25000	1K12010	EPA 8260D	11/12/21 15:04	nmc	
Chloromethane [74-87-3]^	8200	U	ug/L	10000	8200	25000	1K12010	EPA 8260D	11/12/21 15:04	nmc	QV-01
cis-1,2-Dichloroethene [156-59-2]^	**5900**	I	ug/L	10000	5300	25000	1K12010	EPA 8260D	11/12/21 15:04	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	5900	U	ug/L	10000	5900	25000	1K12010	EPA 8260D	11/12/21 15:04	nmc	
Cyclohexane [110-82-7]^	9300	U	ug/L	10000	9300	25000	1K12010	EPA 8260D	11/12/21 15:04	nmc	QL-02
Dibromochloromethane [124-48-1]^	5000	U	ug/L	10000	5000	25000	1K12010	EPA 8260D	11/12/21 15:04	nmc	
Dichlorodifluoromethane [75-71-8]^	7400	U	ug/L	10000	7400	25000	1K12010	EPA 8260D	11/12/21 15:04	nmc	
Ethylbenzene [100-41-4]^	6900	U	ug/L	10000	6900	25000	1K12010	EPA 8260D	11/12/21 15:04	nmc	
Freon 113 [76-13-1]^	7300	U	ug/L	10000	7300	25000	1K12010	EPA 8260D	11/12/21 15:04	nmc	
Isopropylbenzene [98-82-8]^	6700	U	ug/L	10000	6700	25000	1K12010	EPA 8260D	11/12/21 15:04	nmc	
Methyl acetate [79-20-9]^	9500	U	ug/L	10000	9500	25000	1K12010	EPA 8260D	11/12/21 15:04	nmc	
Methylene Chloride [75-09-2]^	25000	U	ug/L	10000	25000	120000	1K12010	EPA 8260D	11/12/21 15:04	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	6000	U	ug/L	10000	6000	25000	1K12010	EPA 8260D	11/12/21 15:04	nmc	
Styrene [100-42-5]^	6100	U	ug/L	10000	6100	25000	1K12010	EPA 8260D	11/12/21 15:04	nmc	
Tetrachloroethene [127-18-4]^	7600	U	ug/L	10000	7600	25000	1K12010	EPA 8260D	11/12/21 15:04	nmc	
Toluene [108-88-3]^	7200	U	ug/L	10000	7200	25000	1K12010	EPA 8260D	11/12/21 15:04	nmc	
trans-1,2-Dichloroethene [156-60-5]^	7300	U	ug/L	10000	7300	25000	1K12010	EPA 8260D	11/12/21 15:04	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	7300	U	ug/L	10000	7300	25000	1K12010	EPA 8260D	11/12/21 15:04	nmc	
Trichloroethene [79-01-6]^	**510000**		ug/L	10000	8900	25000	1K12010	EPA 8260D	11/12/21 15:04	nmc	
Trichlorofluoromethane [75-69-4]^	9400	U	ug/L	10000	9400	25000	1K12010	EPA 8260D	11/12/21 15:04	nmc	QV-01
Vinyl chloride [75-01-4]^	7100	U	ug/L	10000	7100	25000	1K12010	EPA 8260D	11/12/21 15:04	nmc	

ANALYTICAL RESULTS

Description: LC34-RW19C-20211110 **Lab Sample ID:** AE07280-06 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/10/21 08:50 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*42*	*1*	*50.0*	*84 %*	*41-142*	*1K12010*	*EPA 8260D*	*11/12/21 15:04*	*nmc*	
Dibromofluoromethane	*47*	*1*	*50.0*	*94 %*	*53-146*	*1K12010*	*EPA 8260D*	*11/12/21 15:04*	*nmc*	
Toluene-d8	*45*	*1*	*50.0*	*90 %*	*41-146*	*1K12010*	*EPA 8260D*	*11/12/21 15:04*	*nmc*	

ANALYTICAL RESULTS

Description: LC34-RW20C-20211110 **Lab Sample ID:** AE07280-07 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/10/21 09:00 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	4000	U	ug/L	5000	4000	12000	1K12010	EPA 8260D	11/12/21 15:33	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	2700	U	ug/L	5000	2700	12000	1K12010	EPA 8260D	11/12/21 15:33	nmc	
1,1,2-Trichloroethane [79-00-5]^	3800	U	ug/L	5000	3800	12000	1K12010	EPA 8260D	11/12/21 15:33	nmc	
1,1-Dichloroethane [75-34-3]^	3100	U	ug/L	5000	3100	12000	1K12010	EPA 8260D	11/12/21 15:33	nmc	
1,1-Dichloroethene [75-35-4]^	4700	U	ug/L	5000	4700	12000	1K12010	EPA 8260D	11/12/21 15:33	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	3500	U	ug/L	5000	3500	12000	1K12010	EPA 8260D	11/12/21 15:33	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	4800	U	ug/L	5000	4800	12000	1K12010	EPA 8260D	11/12/21 15:33	nmc	
1,2-Dibromoethane [106-93-4]^	3900	U	ug/L	5000	3900	12000	1K12010	EPA 8260D	11/12/21 15:33	nmc	
1,2-Dichlorobenzene [95-50-1]^	3600	U	ug/L	5000	3600	12000	1K12010	EPA 8260D	11/12/21 15:33	nmc	
1,2-Dichloroethane [107-06-2]^	3200	U	ug/L	5000	3200	12000	1K12010	EPA 8260D	11/12/21 15:33	nmc	
1,2-Dichloropropane [78-87-5]^	4000	U	ug/L	5000	4000	12000	1K12010	EPA 8260D	11/12/21 15:33	nmc	
1,3-Dichlorobenzene [541-73-1]^	3800	U	ug/L	5000	3800	12000	1K12010	EPA 8260D	11/12/21 15:33	nmc	
1,4-Dichlorobenzene [106-46-7]^	3800	U	ug/L	5000	3800	12000	1K12010	EPA 8260D	11/12/21 15:33	nmc	
2-Butanone [78-93-3]^	22000	U	ug/L	5000	22000	62000	1K12010	EPA 8260D	11/12/21 15:33	nmc	
2-Hexanone [591-78-6]^	12000	U	ug/L	5000	12000	62000	1K12010	EPA 8260D	11/12/21 15:33	nmc	
4-Methyl-2-pentanone [108-10-1]^	12000	U	ug/L	5000	12000	62000	1K12010	EPA 8260D	11/12/21 15:33	nmc	
Acetone [67-64-1]^	50000	U	ug/L	5000	50000	120000	1K12010	EPA 8260D	11/12/21 15:33	nmc	
Benzene [71-43-2]^	3600	U	ug/L	5000	3600	12000	1K12010	EPA 8260D	11/12/21 15:33	nmc	
Bromodichloromethane [75-27-4]^	2600	U	ug/L	5000	2600	12000	1K12010	EPA 8260D	11/12/21 15:33	nmc	
Bromoform [75-25-2]^	3800	U	ug/L	5000	3800	12000	1K12010	EPA 8260D	11/12/21 15:33	nmc	
Bromomethane [74-83-9]^	4800	U	ug/L	5000	4800	12000	1K12010	EPA 8260D	11/12/21 15:33	nmc	QV-01
Carbon disulfide [75-15-0]^	12000	U	ug/L	5000	12000	62000	1K12010	EPA 8260D	11/12/21 15:33	nmc	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	4700	U	ug/L	5000	4700	12000	1K12010	EPA 8260D	11/12/21 15:33	nmc	
Chlorobenzene [108-90-7]^	3600	U	ug/L	5000	3600	12000	1K12010	EPA 8260D	11/12/21 15:33	nmc	
Chloroethane [75-00-3]^	4900	U	ug/L	5000	4900	12000	1K12010	EPA 8260D	11/12/21 15:33	nmc	QV-01
Chloroform [67-66-3]^	4000	U	ug/L	5000	4000	12000	1K12010	EPA 8260D	11/12/21 15:33	nmc	
Chloromethane [74-87-3]^	4100	U	ug/L	5000	4100	12000	1K12010	EPA 8260D	11/12/21 15:33	nmc	QV-01
cis-1,2-Dichloroethene [156-59-2]^	**5400**	I	ug/L	5000	2600	12000	1K12010	EPA 8260D	11/12/21 15:33	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	3000	U	ug/L	5000	3000	12000	1K12010	EPA 8260D	11/12/21 15:33	nmc	
Cyclohexane [110-82-7]^	4600	U	ug/L	5000	4600	12000	1K12010	EPA 8260D	11/12/21 15:33	nmc	QL-02
Dibromochloromethane [124-48-1]^	2500	U	ug/L	5000	2500	12000	1K12010	EPA 8260D	11/12/21 15:33	nmc	
Dichlorodifluoromethane [75-71-8]^	3700	U	ug/L	5000	3700	12000	1K12010	EPA 8260D	11/12/21 15:33	nmc	
Ethylbenzene [100-41-4]^	3400	U	ug/L	5000	3400	12000	1K12010	EPA 8260D	11/12/21 15:33	nmc	
Freon 113 [76-13-1]^	3600	U	ug/L	5000	3600	12000	1K12010	EPA 8260D	11/12/21 15:33	nmc	
Isopropylbenzene [98-82-8]^	3400	U	ug/L	5000	3400	12000	1K12010	EPA 8260D	11/12/21 15:33	nmc	
Methyl acetate [79-20-9]^	4800	U	ug/L	5000	4800	12000	1K12010	EPA 8260D	11/12/21 15:33	nmc	
Methylene Chloride [75-09-2]^	12000	U	ug/L	5000	12000	62000	1K12010	EPA 8260D	11/12/21 15:33	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	3000	U	ug/L	5000	3000	12000	1K12010	EPA 8260D	11/12/21 15:33	nmc	
Styrene [100-42-5]^	3000	U	ug/L	5000	3000	12000	1K12010	EPA 8260D	11/12/21 15:33	nmc	
Tetrachloroethene [127-18-4]^	3800	U	ug/L	5000	3800	12000	1K12010	EPA 8260D	11/12/21 15:33	nmc	
Toluene [108-88-3]^	3600	U	ug/L	5000	3600	12000	1K12010	EPA 8260D	11/12/21 15:33	nmc	
trans-1,2-Dichloroethene [156-60-5]^	3600	U	ug/L	5000	3600	12000	1K12010	EPA 8260D	11/12/21 15:33	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	3600	U	ug/L	5000	3600	12000	1K12010	EPA 8260D	11/12/21 15:33	nmc	
Trichloroethene [79-01-6]^	**370000**		ug/L	5000	4400	12000	1K12010	EPA 8260D	11/12/21 15:33	nmc	
Trichlorofluoromethane [75-69-4]^	4700	U	ug/L	5000	4700	12000	1K12010	EPA 8260D	11/12/21 15:33	nmc	QV-01
Vinyl chloride [75-01-4]^	3600	U	ug/L	5000	3600	12000	1K12010	EPA 8260D	11/12/21 15:33	nmc	

ANALYTICAL RESULTS

Description: LC34-RW20C-20211110 **Lab Sample ID:** AE07280-07 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/10/21 09:00 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*41*	*1*	*50.0*	*82 %*	*41-142*	*1K12010*	*EPA 8260D*	*11/12/21 15:33*	*nmc*	
Dibromofluoromethane	*46*	*1*	*50.0*	*92 %*	*53-146*	*1K12010*	*EPA 8260D*	*11/12/21 15:33*	*nmc*	
Toluene-d8	*45*	*1*	*50.0*	*90 %*	*41-146*	*1K12010*	*EPA 8260D*	*11/12/21 15:33*	*nmc*	

ANALYTICAL RESULTS

Description: LC34PS-PZI-040.0-20211111 **Lab Sample ID:** AE07280-08 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 09:00 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	400	U	ug/L	500	400	1200	1K12010	EPA 8260D	11/12/21 16:01	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	270	U	ug/L	500	270	1200	1K12010	EPA 8260D	11/12/21 16:01	nmc	
1,1,2-Trichloroethane [79-00-5]^	380	U	ug/L	500	380	1200	1K12010	EPA 8260D	11/12/21 16:01	nmc	
1,1-Dichloroethane [75-34-3]^	310	U	ug/L	500	310	1200	1K12010	EPA 8260D	11/12/21 16:01	nmc	
1,1-Dichloroethene [75-35-4]^	470	U	ug/L	500	470	1200	1K12010	EPA 8260D	11/12/21 16:01	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	350	U	ug/L	500	350	1200	1K12010	EPA 8260D	11/12/21 16:01	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	480	U	ug/L	500	480	1200	1K12010	EPA 8260D	11/12/21 16:01	nmc	
1,2-Dibromoethane [106-93-4]^	390	U	ug/L	500	390	1200	1K12010	EPA 8260D	11/12/21 16:01	nmc	
1,2-Dichlorobenzene [95-50-1]^	360	U	ug/L	500	360	1200	1K12010	EPA 8260D	11/12/21 16:01	nmc	
1,2-Dichloroethane [107-06-2]^	320	U	ug/L	500	320	1200	1K12010	EPA 8260D	11/12/21 16:01	nmc	
1,2-Dichloropropane [78-87-5]^	400	U	ug/L	500	400	1200	1K12010	EPA 8260D	11/12/21 16:01	nmc	
1,3-Dichlorobenzene [541-73-1]^	380	U	ug/L	500	380	1200	1K12010	EPA 8260D	11/12/21 16:01	nmc	
1,4-Dichlorobenzene [106-46-7]^	380	U	ug/L	500	380	1200	1K12010	EPA 8260D	11/12/21 16:01	nmc	
2-Butanone [78-93-3]^	2200	U	ug/L	500	2200	6200	1K12010	EPA 8260D	11/12/21 16:01	nmc	
2-Hexanone [591-78-6]^	1200	U	ug/L	500	1200	6200	1K12010	EPA 8260D	11/12/21 16:01	nmc	
4-Methyl-2-pentanone [108-10-1]^	1200	U	ug/L	500	1200	6200	1K12010	EPA 8260D	11/12/21 16:01	nmc	
Acetone [67-64-1]^	5000	U	ug/L	500	5000	12000	1K12010	EPA 8260D	11/12/21 16:01	nmc	
Benzene [71-43-2]^	360	U	ug/L	500	360	1200	1K12010	EPA 8260D	11/12/21 16:01	nmc	
Bromodichloromethane [75-27-4]^	260	U	ug/L	500	260	1200	1K12010	EPA 8260D	11/12/21 16:01	nmc	
Bromoform [75-25-2]^	380	U	ug/L	500	380	1200	1K12010	EPA 8260D	11/12/21 16:01	nmc	
Bromomethane [74-83-9]^	480	U	ug/L	500	480	1200	1K12010	EPA 8260D	11/12/21 16:01	nmc	QV-01
Carbon disulfide [75-15-0]^	1200	U	ug/L	500	1200	6200	1K12010	EPA 8260D	11/12/21 16:01	nmc	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	470	U	ug/L	500	470	1200	1K12010	EPA 8260D	11/12/21 16:01	nmc	
Chlorobenzene [108-90-7]^	360	U	ug/L	500	360	1200	1K12010	EPA 8260D	11/12/21 16:01	nmc	
Chloroethane [75-00-3]^	490	U	ug/L	500	490	1200	1K12010	EPA 8260D	11/12/21 16:01	nmc	QV-01
Chloroform [67-66-3]^	400	U	ug/L	500	400	1200	1K12010	EPA 8260D	11/12/21 16:01	nmc	
Chloromethane [74-87-3]^	410	U	ug/L	500	410	1200	1K12010	EPA 8260D	11/12/21 16:01	nmc	QV-01
cis-1,2-Dichloroethene [156-59-2]^	**18000**		ug/L	500	260	1200	1K12010	EPA 8260D	11/12/21 16:01	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	300	U	ug/L	500	300	1200	1K12010	EPA 8260D	11/12/21 16:01	nmc	
Cyclohexane [110-82-7]^	460	U	ug/L	500	460	1200	1K12010	EPA 8260D	11/12/21 16:01	nmc	QL-02
Dibromochloromethane [124-48-1]^	250	U	ug/L	500	250	1200	1K12010	EPA 8260D	11/12/21 16:01	nmc	
Dichlorodifluoromethane [75-71-8]^	370	U	ug/L	500	370	1200	1K12010	EPA 8260D	11/12/21 16:01	nmc	
Ethylbenzene [100-41-4]^	340	U	ug/L	500	340	1200	1K12010	EPA 8260D	11/12/21 16:01	nmc	
Freon 113 [76-13-1]^	360	U	ug/L	500	360	1200	1K12010	EPA 8260D	11/12/21 16:01	nmc	
Isopropylbenzene [98-82-8]^	340	U	ug/L	500	340	1200	1K12010	EPA 8260D	11/12/21 16:01	nmc	
Methyl acetate [79-20-9]^	480	U	ug/L	500	480	1200	1K12010	EPA 8260D	11/12/21 16:01	nmc	
Methylene Chloride [75-09-2]^	1200	U	ug/L	500	1200	6200	1K12010	EPA 8260D	11/12/21 16:01	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	300	U	ug/L	500	300	1200	1K12010	EPA 8260D	11/12/21 16:01	nmc	
Styrene [100-42-5]^	300	U	ug/L	500	300	1200	1K12010	EPA 8260D	11/12/21 16:01	nmc	
Tetrachloroethene [127-18-4]^	380	U	ug/L	500	380	1200	1K12010	EPA 8260D	11/12/21 16:01	nmc	
Toluene [108-88-3]^	360	U	ug/L	500	360	1200	1K12010	EPA 8260D	11/12/21 16:01	nmc	
trans-1,2-Dichloroethene [156-60-5]^	360	U	ug/L	500	360	1200	1K12010	EPA 8260D	11/12/21 16:01	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	360	U	ug/L	500	360	1200	1K12010	EPA 8260D	11/12/21 16:01	nmc	
Trichloroethene [79-01-6]^	**52000**		ug/L	2000	1800	5000	1K17014	EPA 8260D	11/17/21 11:42	KKW	
Trichlorofluoromethane [75-69-4]^	470	U	ug/L	500	470	1200	1K12010	EPA 8260D	11/12/21 16:01	nmc	QV-01
Vinyl chloride [75-01-4]^	**940**	I	ug/L	500	360	1200	1K12010	EPA 8260D	11/12/21 16:01	nmc	

ANALYTICAL RESULTS

Description: LC34PS-PZI-040.0-20211111 **Lab Sample ID:** AE07280-08 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 09:00 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*41*	*1*	*50.0*	*83 %*	*41-142*	*1K12010*	*EPA 8260D*	*11/12/21 16:01*	*nmc*	
4-Bromofluorobenzene	*52*	*1*	*50.0*	*105 %*	*41-142*	*1K17014*	*EPA 8260D*	*11/17/21 11:42*	*KKW*	
Dibromofluoromethane	*45*	*1*	*50.0*	*90 %*	*53-146*	*1K12010*	*EPA 8260D*	*11/12/21 16:01*	*nmc*	
Dibromofluoromethane	*49*	*1*	*50.0*	*98 %*	*53-146*	*1K17014*	*EPA 8260D*	*11/17/21 11:42*	*KKW*	
Toluene-d8	*44*	*1*	*50.0*	*89 %*	*41-146*	*1K12010*	*EPA 8260D*	*11/12/21 16:01*	*nmc*	
Toluene-d8	*53*	*1*	*50.0*	*106 %*	*41-146*	*1K17014*	*EPA 8260D*	*11/17/21 11:42*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZI-050.0-20211111 **Lab Sample ID:** AE07280-09 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 09:02 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	4000	U	ug/L	5000	4000	12000	1K12010	EPA 8260D	11/12/21 16:30	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	2700	U	ug/L	5000	2700	12000	1K12010	EPA 8260D	11/12/21 16:30	nmc	
1,1,2-Trichloroethane [79-00-5]^	3800	U	ug/L	5000	3800	12000	1K12010	EPA 8260D	11/12/21 16:30	nmc	
1,1-Dichloroethane [75-34-3]^	3100	U	ug/L	5000	3100	12000	1K12010	EPA 8260D	11/12/21 16:30	nmc	
1,1-Dichloroethene [75-35-4]^	4700	U	ug/L	5000	4700	12000	1K12010	EPA 8260D	11/12/21 16:30	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	3500	U	ug/L	5000	3500	12000	1K12010	EPA 8260D	11/12/21 16:30	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	4800	U	ug/L	5000	4800	12000	1K12010	EPA 8260D	11/12/21 16:30	nmc	
1,2-Dibromoethane [106-93-4]^	3900	U	ug/L	5000	3900	12000	1K12010	EPA 8260D	11/12/21 16:30	nmc	
1,2-Dichlorobenzene [95-50-1]^	3600	U	ug/L	5000	3600	12000	1K12010	EPA 8260D	11/12/21 16:30	nmc	
1,2-Dichloroethane [107-06-2]^	3200	U	ug/L	5000	3200	12000	1K12010	EPA 8260D	11/12/21 16:30	nmc	
1,2-Dichloropropane [78-87-5]^	4000	U	ug/L	5000	4000	12000	1K12010	EPA 8260D	11/12/21 16:30	nmc	
1,3-Dichlorobenzene [541-73-1]^	3800	U	ug/L	5000	3800	12000	1K12010	EPA 8260D	11/12/21 16:30	nmc	
1,4-Dichlorobenzene [106-46-7]^	3800	U	ug/L	5000	3800	12000	1K12010	EPA 8260D	11/12/21 16:30	nmc	
2-Butanone [78-93-3]^	22000	U	ug/L	5000	22000	62000	1K12010	EPA 8260D	11/12/21 16:30	nmc	
2-Hexanone [591-78-6]^	12000	U	ug/L	5000	12000	62000	1K12010	EPA 8260D	11/12/21 16:30	nmc	
4-Methyl-2-pentanone [108-10-1]^	12000	U	ug/L	5000	12000	62000	1K12010	EPA 8260D	11/12/21 16:30	nmc	
Acetone [67-64-1]^	50000	U	ug/L	5000	50000	120000	1K12010	EPA 8260D	11/12/21 16:30	nmc	
Benzene [71-43-2]^	3600	U	ug/L	5000	3600	12000	1K12010	EPA 8260D	11/12/21 16:30	nmc	
Bromodichloromethane [75-27-4]^	2600	U	ug/L	5000	2600	12000	1K12010	EPA 8260D	11/12/21 16:30	nmc	
Bromoform [75-25-2]^	3800	U	ug/L	5000	3800	12000	1K12010	EPA 8260D	11/12/21 16:30	nmc	
Bromomethane [74-83-9]^	4800	U	ug/L	5000	4800	12000	1K12010	EPA 8260D	11/12/21 16:30	nmc	QV-01
Carbon disulfide [75-15-0]^	12000	U	ug/L	5000	12000	62000	1K12010	EPA 8260D	11/12/21 16:30	nmc	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	4700	U	ug/L	5000	4700	12000	1K12010	EPA 8260D	11/12/21 16:30	nmc	
Chlorobenzene [108-90-7]^	3600	U	ug/L	5000	3600	12000	1K12010	EPA 8260D	11/12/21 16:30	nmc	
Chloroethane [75-00-3]^	4900	U	ug/L	5000	4900	12000	1K12010	EPA 8260D	11/12/21 16:30	nmc	QV-01
Chloroform [67-66-3]^	4000	U	ug/L	5000	4000	12000	1K12010	EPA 8260D	11/12/21 16:30	nmc	
Chloromethane [74-87-3]^	4100	U	ug/L	5000	4100	12000	1K12010	EPA 8260D	11/12/21 16:30	nmc	QV-01
cis-1,2-Dichloroethene [156-59-2]^	**13000**		ug/L	5000	2600	12000	1K12010	EPA 8260D	11/12/21 16:30	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	3000	U	ug/L	5000	3000	12000	1K12010	EPA 8260D	11/12/21 16:30	nmc	
Cyclohexane [110-82-7]^	4600	U	ug/L	5000	4600	12000	1K12010	EPA 8260D	11/12/21 16:30	nmc	QL-02
Dibromochloromethane [124-48-1]^	2500	U	ug/L	5000	2500	12000	1K12010	EPA 8260D	11/12/21 16:30	nmc	
Dichlorodifluoromethane [75-71-8]^	3700	U	ug/L	5000	3700	12000	1K12010	EPA 8260D	11/12/21 16:30	nmc	
Ethylbenzene [100-41-4]^	3400	U	ug/L	5000	3400	12000	1K12010	EPA 8260D	11/12/21 16:30	nmc	
Freon 113 [76-13-1]^	3600	U	ug/L	5000	3600	12000	1K12010	EPA 8260D	11/12/21 16:30	nmc	
Isopropylbenzene [98-82-8]^	3400	U	ug/L	5000	3400	12000	1K12010	EPA 8260D	11/12/21 16:30	nmc	
Methyl acetate [79-20-9]^	4800	U	ug/L	5000	4800	12000	1K12010	EPA 8260D	11/12/21 16:30	nmc	
Methylene Chloride [75-09-2]^	12000	U	ug/L	5000	12000	62000	1K12010	EPA 8260D	11/12/21 16:30	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	3000	U	ug/L	5000	3000	12000	1K12010	EPA 8260D	11/12/21 16:30	nmc	
Styrene [100-42-5]^	3000	U	ug/L	5000	3000	12000	1K12010	EPA 8260D	11/12/21 16:30	nmc	
Tetrachloroethene [127-18-4]^	3800	U	ug/L	5000	3800	12000	1K12010	EPA 8260D	11/12/21 16:30	nmc	
Toluene [108-88-3]^	3600	U	ug/L	5000	3600	12000	1K12010	EPA 8260D	11/12/21 16:30	nmc	
trans-1,2-Dichloroethene [156-60-5]^	3600	U	ug/L	5000	3600	12000	1K12010	EPA 8260D	11/12/21 16:30	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	3600	U	ug/L	5000	3600	12000	1K12010	EPA 8260D	11/12/21 16:30	nmc	
Trichloroethene [79-01-6]^	**150000**		ug/L	5000	4400	12000	1K12010	EPA 8260D	11/12/21 16:30	nmc	
Trichlorofluoromethane [75-69-4]^	4700	U	ug/L	5000	4700	12000	1K12010	EPA 8260D	11/12/21 16:30	nmc	QV-01
Vinyl chloride [75-01-4]^	3600	U	ug/L	5000	3600	12000	1K12010	EPA 8260D	11/12/21 16:30	nmc	

ANALYTICAL RESULTS

Description: LC34PS-PZI-050.0-20211111 **Lab Sample ID:** AE07280-09 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 09:02 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*41*	*1*	*50.0*	*83 %*	*41-142*	*1K12010*	*EPA 8260D*	*11/12/21 16:30*	*nmc*	
Dibromofluoromethane	*46*	*1*	*50.0*	*92 %*	*53-146*	*1K12010*	*EPA 8260D*	*11/12/21 16:30*	*nmc*	
Toluene-d8	*44*	*1*	*50.0*	*89 %*	*41-146*	*1K12010*	*EPA 8260D*	*11/12/21 16:30*	*nmc*	

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ANALYTICAL RESULTS

Description: LC34PS-PZI-058.0-20211111 **Lab Sample ID:** AE07280-10 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 09:04 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	4000	U	ug/L	5000	4000	12000	1K12010	EPA 8260D	11/12/21 17:27	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	2700	U	ug/L	5000	2700	12000	1K12010	EPA 8260D	11/12/21 17:27	nmc	
1,1,2-Trichloroethane [79-00-5]^	3800	U	ug/L	5000	3800	12000	1K12010	EPA 8260D	11/12/21 17:27	nmc	
1,1-Dichloroethane [75-34-3]^	3100	U	ug/L	5000	3100	12000	1K12010	EPA 8260D	11/12/21 17:27	nmc	
1,1-Dichloroethene [75-35-4]^	4700	U	ug/L	5000	4700	12000	1K12010	EPA 8260D	11/12/21 17:27	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	3500	U	ug/L	5000	3500	12000	1K12010	EPA 8260D	11/12/21 17:27	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	4800	U	ug/L	5000	4800	12000	1K12010	EPA 8260D	11/12/21 17:27	nmc	
1,2-Dibromoethane [106-93-4]^	3900	U	ug/L	5000	3900	12000	1K12010	EPA 8260D	11/12/21 17:27	nmc	
1,2-Dichlorobenzene [95-50-1]^	3600	U	ug/L	5000	3600	12000	1K12010	EPA 8260D	11/12/21 17:27	nmc	
1,2-Dichloroethane [107-06-2]^	3200	U	ug/L	5000	3200	12000	1K12010	EPA 8260D	11/12/21 17:27	nmc	
1,2-Dichloropropane [78-87-5]^	4000	U	ug/L	5000	4000	12000	1K12010	EPA 8260D	11/12/21 17:27	nmc	
1,3-Dichlorobenzene [541-73-1]^	3800	U	ug/L	5000	3800	12000	1K12010	EPA 8260D	11/12/21 17:27	nmc	
1,4-Dichlorobenzene [106-46-7]^	3800	U	ug/L	5000	3800	12000	1K12010	EPA 8260D	11/12/21 17:27	nmc	
2-Butanone [78-93-3]^	22000	U	ug/L	5000	22000	62000	1K12010	EPA 8260D	11/12/21 17:27	nmc	
2-Hexanone [591-78-6]^	12000	U	ug/L	5000	12000	62000	1K12010	EPA 8260D	11/12/21 17:27	nmc	
4-Methyl-2-pentanone [108-10-1]^	12000	U	ug/L	5000	12000	62000	1K12010	EPA 8260D	11/12/21 17:27	nmc	
Acetone [67-64-1]^	50000	U	ug/L	5000	50000	120000	1K12010	EPA 8260D	11/12/21 17:27	nmc	
Benzene [71-43-2]^	3600	U	ug/L	5000	3600	12000	1K12010	EPA 8260D	11/12/21 17:27	nmc	
Bromodichloromethane [75-27-4]^	2600	U	ug/L	5000	2600	12000	1K12010	EPA 8260D	11/12/21 17:27	nmc	
Bromoform [75-25-2]^	3800	U	ug/L	5000	3800	12000	1K12010	EPA 8260D	11/12/21 17:27	nmc	
Bromomethane [74-83-9]^	4800	U	ug/L	5000	4800	12000	1K12010	EPA 8260D	11/12/21 17:27	nmc	QV-01
Carbon disulfide [75-15-0]^	12000	U	ug/L	5000	12000	62000	1K12010	EPA 8260D	11/12/21 17:27	nmc	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	4700	U	ug/L	5000	4700	12000	1K12010	EPA 8260D	11/12/21 17:27	nmc	
Chlorobenzene [108-90-7]^	3600	U	ug/L	5000	3600	12000	1K12010	EPA 8260D	11/12/21 17:27	nmc	
Chloroethane [75-00-3]^	4900	U	ug/L	5000	4900	12000	1K12010	EPA 8260D	11/12/21 17:27	nmc	QV-01
Chloroform [67-66-3]^	4000	U	ug/L	5000	4000	12000	1K12010	EPA 8260D	11/12/21 17:27	nmc	
Chloromethane [74-87-3]^	4100	U	ug/L	5000	4100	12000	1K12010	EPA 8260D	11/12/21 17:27	nmc	QV-01
cis-1,2-Dichloroethene [156-59-2]^	**24000**		ug/L	5000	2600	12000	1K12010	EPA 8260D	11/12/21 17:27	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	3000	U	ug/L	5000	3000	12000	1K12010	EPA 8260D	11/12/21 17:27	nmc	
Cyclohexane [110-82-7]^	4600	U	ug/L	5000	4600	12000	1K12010	EPA 8260D	11/12/21 17:27	nmc	QL-02
Dibromochloromethane [124-48-1]^	2500	U	ug/L	5000	2500	12000	1K12010	EPA 8260D	11/12/21 17:27	nmc	
Dichlorodifluoromethane [75-71-8]^	3700	U	ug/L	5000	3700	12000	1K12010	EPA 8260D	11/12/21 17:27	nmc	
Ethylbenzene [100-41-4]^	3400	U	ug/L	5000	3400	12000	1K12010	EPA 8260D	11/12/21 17:27	nmc	
Freon 113 [76-13-1]^	3600	U	ug/L	5000	3600	12000	1K12010	EPA 8260D	11/12/21 17:27	nmc	
Isopropylbenzene [98-82-8]^	3400	U	ug/L	5000	3400	12000	1K12010	EPA 8260D	11/12/21 17:27	nmc	
Methyl acetate [79-20-9]^	4800	U	ug/L	5000	4800	12000	1K12010	EPA 8260D	11/12/21 17:27	nmc	
Methylene Chloride [75-09-2]^	12000	U	ug/L	5000	12000	62000	1K12010	EPA 8260D	11/12/21 17:27	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	3000	U	ug/L	5000	3000	12000	1K12010	EPA 8260D	11/12/21 17:27	nmc	
Styrene [100-42-5]^	3000	U	ug/L	5000	3000	12000	1K12010	EPA 8260D	11/12/21 17:27	nmc	
Tetrachloroethene [127-18-4]^	3800	U	ug/L	5000	3800	12000	1K12010	EPA 8260D	11/12/21 17:27	nmc	
Toluene [108-88-3]^	3600	U	ug/L	5000	3600	12000	1K12010	EPA 8260D	11/12/21 17:27	nmc	
trans-1,2-Dichloroethene [156-60-5]^	3600	U	ug/L	5000	3600	12000	1K12010	EPA 8260D	11/12/21 17:27	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	3600	U	ug/L	5000	3600	12000	1K12010	EPA 8260D	11/12/21 17:27	nmc	
Trichloroethene [79-01-6]^	**230000**		ug/L	5000	4400	12000	1K12010	EPA 8260D	11/12/21 17:27	nmc	
Trichlorofluoromethane [75-69-4]^	4700	U	ug/L	5000	4700	12000	1K12010	EPA 8260D	11/12/21 17:27	nmc	QV-01
Vinyl chloride [75-01-4]^	3600	U	ug/L	5000	3600	12000	1K12010	EPA 8260D	11/12/21 17:27	nmc	

ANALYTICAL RESULTS

Description: LC34PS-PZI-058.0-20211111
Matrix: Ground Water
Project: NASA KSC LC34

Lab Sample ID: AE07280-10
Sampled: 11/11/21 09:04
Sampled By: Dan Forester

Received: 11/11/21 15:25
Work Order: AE07280

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*41*	*1*	*50.0*	*82 %*	*41-142*	*1K12010*	*EPA 8260D*	*11/12/21 17:27*	*nmc*	
Dibromofluoromethane	*46*	*1*	*50.0*	*91 %*	*53-146*	*1K12010*	*EPA 8260D*	*11/12/21 17:27*	*nmc*	
Toluene-d8	*46*	*1*	*50.0*	*92 %*	*41-146*	*1K12010*	*EPA 8260D*	*11/12/21 17:27*	*nmc*	

ANALYTICAL RESULTS

Description: LC34PS-PZI-073.0-20211111 **Lab Sample ID:** AE07280-11 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 09:06 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	1K15010	EPA 8260D	11/15/21 12:00	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	1K15010	EPA 8260D	11/15/21 12:00	nmc	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	1K15010	EPA 8260D	11/15/21 12:00	nmc	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	1K15010	EPA 8260D	11/15/21 12:00	nmc	QV-01
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	1K15010	EPA 8260D	11/15/21 12:00	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	1K15010	EPA 8260D	11/15/21 12:00	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	1K15010	EPA 8260D	11/15/21 12:00	nmc	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	1K15010	EPA 8260D	11/15/21 12:00	nmc	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	1K15010	EPA 8260D	11/15/21 12:00	nmc	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	1K15010	EPA 8260D	11/15/21 12:00	nmc	QV-01
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	1K15010	EPA 8260D	11/15/21 12:00	nmc	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	1K15010	EPA 8260D	11/15/21 12:00	nmc	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	1K15010	EPA 8260D	11/15/21 12:00	nmc	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	1K15010	EPA 8260D	11/15/21 12:00	nmc	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	1K15010	EPA 8260D	11/15/21 12:00	nmc	QV-01
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	1K15010	EPA 8260D	11/15/21 12:00	nmc	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	1K15010	EPA 8260D	11/15/21 12:00	nmc	QV-01
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	1K15010	EPA 8260D	11/15/21 12:00	nmc	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	1K15010	EPA 8260D	11/15/21 12:00	nmc	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	1K15010	EPA 8260D	11/15/21 12:00	nmc	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	1K15010	EPA 8260D	11/15/21 12:00	nmc	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	1K15010	EPA 8260D	11/15/21 12:00	nmc	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	1K15010	EPA 8260D	11/15/21 12:00	nmc	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	1K15010	EPA 8260D	11/15/21 12:00	nmc	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	1K15010	EPA 8260D	11/15/21 12:00	nmc	QV-01
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	1K15010	EPA 8260D	11/15/21 12:00	nmc	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	1K15010	EPA 8260D	11/15/21 12:00	nmc	
cis-1,2-Dichloroethene [156-59-2]^	**1.4**	I	ug/L	1	0.53	2.5	1K15010	EPA 8260D	11/15/21 12:00	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	1K15010	EPA 8260D	11/15/21 12:00	nmc	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	1K15010	EPA 8260D	11/15/21 12:00	nmc	QL-02
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	1K15010	EPA 8260D	11/15/21 12:00	nmc	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	1K15010	EPA 8260D	11/15/21 12:00	nmc	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	1K15010	EPA 8260D	11/15/21 12:00	nmc	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	1K15010	EPA 8260D	11/15/21 12:00	nmc	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	1K15010	EPA 8260D	11/15/21 12:00	nmc	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	1K15010	EPA 8260D	11/15/21 12:00	nmc	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	1K15010	EPA 8260D	11/15/21 12:00	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	1K15010	EPA 8260D	11/15/21 12:00	nmc	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	1K15010	EPA 8260D	11/15/21 12:00	nmc	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	1K15010	EPA 8260D	11/15/21 12:00	nmc	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	1K15010	EPA 8260D	11/15/21 12:00	nmc	
trans-1,2-Dichloroethene [156-60-5]^	0.73	U	ug/L	1	0.73	2.5	1K15010	EPA 8260D	11/15/21 12:00	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	1K15010	EPA 8260D	11/15/21 12:00	nmc	
Trichloroethene [79-01-6]^	**16**		ug/L	1	0.89	2.5	1K15010	EPA 8260D	11/15/21 12:00	nmc	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	1K15010	EPA 8260D	11/15/21 12:00	nmc	QV-01
Vinyl chloride [75-01-4]^	**0.92**	I	ug/L	1	0.71	2.5	1K15010	EPA 8260D	11/15/21 12:00	nmc	

ANALYTICAL RESULTS

Description: LC34PS-PZI-073.0-20211111 **Lab Sample ID:** AE07280-11 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 09:06 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*41*	*1*	*50.0*	*82 %*	*41-142*	*1K15010*	*EPA 8260D*	*11/15/21 12:00*	*nmc*	
Dibromofluoromethane	*45*	*1*	*50.0*	*91 %*	*53-146*	*1K15010*	*EPA 8260D*	*11/15/21 12:00*	*nmc*	
Toluene-d8	*46*	*1*	*50.0*	*92 %*	*41-146*	*1K15010*	*EPA 8260D*	*11/15/21 12:00*	*nmc*	

ANALYTICAL RESULTS

Description: LC34PS-PZI-080.0-20211111 **Lab Sample ID:** AE07280-12 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 09:08 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	1K12010	EPA 8260D	11/12/21 12:40	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	1K12010	EPA 8260D	11/12/21 12:40	nmc	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	1K12010	EPA 8260D	11/12/21 12:40	nmc	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	1K12010	EPA 8260D	11/12/21 12:40	nmc	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	1K12010	EPA 8260D	11/12/21 12:40	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	1K12010	EPA 8260D	11/12/21 12:40	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	1K12010	EPA 8260D	11/12/21 12:40	nmc	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	1K12010	EPA 8260D	11/12/21 12:40	nmc	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	1K12010	EPA 8260D	11/12/21 12:40	nmc	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	1K12010	EPA 8260D	11/12/21 12:40	nmc	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	1K12010	EPA 8260D	11/12/21 12:40	nmc	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	1K12010	EPA 8260D	11/12/21 12:40	nmc	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	1K12010	EPA 8260D	11/12/21 12:40	nmc	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	1K12010	EPA 8260D	11/12/21 12:40	nmc	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	1K12010	EPA 8260D	11/12/21 12:40	nmc	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	1K12010	EPA 8260D	11/12/21 12:40	nmc	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	1K12010	EPA 8260D	11/12/21 12:40	nmc	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	1K12010	EPA 8260D	11/12/21 12:40	nmc	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	1K12010	EPA 8260D	11/12/21 12:40	nmc	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	1K12010	EPA 8260D	11/12/21 12:40	nmc	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	1K12010	EPA 8260D	11/12/21 12:40	nmc	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	1K12010	EPA 8260D	11/12/21 12:40	nmc	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	1K12010	EPA 8260D	11/12/21 12:40	nmc	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	1K12010	EPA 8260D	11/12/21 12:40	nmc	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	1K12010	EPA 8260D	11/12/21 12:40	nmc	QV-01
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	1K12010	EPA 8260D	11/12/21 12:40	nmc	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	1K12010	EPA 8260D	11/12/21 12:40	nmc	QV-01
cis-1,2-Dichloroethene [156-59-2]^	**19**		ug/L	1	0.53	2.5	1K12010	EPA 8260D	11/12/21 12:40	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	1K12010	EPA 8260D	11/12/21 12:40	nmc	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	1K12010	EPA 8260D	11/12/21 12:40	nmc	QL-02
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	1K12010	EPA 8260D	11/12/21 12:40	nmc	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	1K12010	EPA 8260D	11/12/21 12:40	nmc	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	1K12010	EPA 8260D	11/12/21 12:40	nmc	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	1K12010	EPA 8260D	11/12/21 12:40	nmc	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	1K12010	EPA 8260D	11/12/21 12:40	nmc	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	1K12010	EPA 8260D	11/12/21 12:40	nmc	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	1K12010	EPA 8260D	11/12/21 12:40	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	1K12010	EPA 8260D	11/12/21 12:40	nmc	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	1K12010	EPA 8260D	11/12/21 12:40	nmc	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	1K12010	EPA 8260D	11/12/21 12:40	nmc	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	1K12010	EPA 8260D	11/12/21 12:40	nmc	
trans-1,2-Dichloroethene [156-60-5]^	**6.0**		ug/L	1	0.73	2.5	1K12010	EPA 8260D	11/12/21 12:40	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	1K12010	EPA 8260D	11/12/21 12:40	nmc	
Trichloroethene [79-01-6]^	**100**		ug/L	10	8.9	25	1K17014	EPA 8260D	11/17/21 12:10	KKW	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	1K12010	EPA 8260D	11/12/21 12:40	nmc	QV-01
Vinyl chloride [75-01-4]^	**81**		ug/L	1	0.71	2.5	1K12010	EPA 8260D	11/12/21 12:40	nmc	

ANALYTICAL RESULTS

Description: LC34PS-PZI-080.0-20211111 **Lab Sample ID:** AE07280-12 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 09:08 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*43*	*1*	*50.0*	*85 %*	*41-142*	*1K12010*	*EPA 8260D*	*11/12/21 12:40*	*nmc*	
4-Bromofluorobenzene	*51*	*1*	*50.0*	*102 %*	*41-142*	*1K17014*	*EPA 8260D*	*11/17/21 12:10*	*KKW*	
Dibromofluoromethane	*47*	*1*	*50.0*	*94 %*	*53-146*	*1K12010*	*EPA 8260D*	*11/12/21 12:40*	*nmc*	
Dibromofluoromethane	*49*	*1*	*50.0*	*98 %*	*53-146*	*1K17014*	*EPA 8260D*	*11/17/21 12:10*	*KKW*	
Toluene-d8	*46*	*1*	*50.0*	*91 %*	*41-146*	*1K12010*	*EPA 8260D*	*11/12/21 12:40*	*nmc*	
Toluene-d8	*52*	*1*	*50.0*	*105 %*	*41-146*	*1K17014*	*EPA 8260D*	*11/17/21 12:10*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZH-040.0-20211111 **Lab Sample ID:** AE07280-13 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 09:30 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	400	U	ug/L	500	400	1200	1K12010	EPA 8260D	11/12/21 17:56	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	270	U	ug/L	500	270	1200	1K12010	EPA 8260D	11/12/21 17:56	nmc	
1,1,2-Trichloroethane [79-00-5]^	380	U	ug/L	500	380	1200	1K12010	EPA 8260D	11/12/21 17:56	nmc	
1,1-Dichloroethane [75-34-3]^	310	U	ug/L	500	310	1200	1K12010	EPA 8260D	11/12/21 17:56	nmc	
1,1-Dichloroethene [75-35-4]^	470	U	ug/L	500	470	1200	1K12010	EPA 8260D	11/12/21 17:56	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	350	U	ug/L	500	350	1200	1K12010	EPA 8260D	11/12/21 17:56	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	480	U	ug/L	500	480	1200	1K12010	EPA 8260D	11/12/21 17:56	nmc	
1,2-Dibromoethane [106-93-4]^	390	U	ug/L	500	390	1200	1K12010	EPA 8260D	11/12/21 17:56	nmc	
1,2-Dichlorobenzene [95-50-1]^	360	U	ug/L	500	360	1200	1K12010	EPA 8260D	11/12/21 17:56	nmc	
1,2-Dichloroethane [107-06-2]^	320	U	ug/L	500	320	1200	1K12010	EPA 8260D	11/12/21 17:56	nmc	
1,2-Dichloropropane [78-87-5]^	400	U	ug/L	500	400	1200	1K12010	EPA 8260D	11/12/21 17:56	nmc	
1,3-Dichlorobenzene [541-73-1]^	380	U	ug/L	500	380	1200	1K12010	EPA 8260D	11/12/21 17:56	nmc	
1,4-Dichlorobenzene [106-46-7]^	380	U	ug/L	500	380	1200	1K12010	EPA 8260D	11/12/21 17:56	nmc	
2-Butanone [78-93-3]^	2200	U	ug/L	500	2200	6200	1K12010	EPA 8260D	11/12/21 17:56	nmc	
2-Hexanone [591-78-6]^	1200	U	ug/L	500	1200	6200	1K12010	EPA 8260D	11/12/21 17:56	nmc	
4-Methyl-2-pentanone [108-10-1]^	1200	U	ug/L	500	1200	6200	1K12010	EPA 8260D	11/12/21 17:56	nmc	
Acetone [67-64-1]^	5000	U	ug/L	500	5000	12000	1K12010	EPA 8260D	11/12/21 17:56	nmc	
Benzene [71-43-2]^	360	U	ug/L	500	360	1200	1K12010	EPA 8260D	11/12/21 17:56	nmc	
Bromodichloromethane [75-27-4]^	260	U	ug/L	500	260	1200	1K12010	EPA 8260D	11/12/21 17:56	nmc	
Bromoform [75-25-2]^	380	U	ug/L	500	380	1200	1K12010	EPA 8260D	11/12/21 17:56	nmc	
Bromomethane [74-83-9]^	480	U	ug/L	500	480	1200	1K12010	EPA 8260D	11/12/21 17:56	nmc	QV-01
Carbon disulfide [75-15-0]^	1200	U	ug/L	500	1200	6200	1K12010	EPA 8260D	11/12/21 17:56	nmc	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	470	U	ug/L	500	470	1200	1K12010	EPA 8260D	11/12/21 17:56	nmc	
Chlorobenzene [108-90-7]^	360	U	ug/L	500	360	1200	1K12010	EPA 8260D	11/12/21 17:56	nmc	
Chloroethane [75-00-3]^	490	U	ug/L	500	490	1200	1K12010	EPA 8260D	11/12/21 17:56	nmc	QV-01
Chloroform [67-66-3]^	400	U	ug/L	500	400	1200	1K12010	EPA 8260D	11/12/21 17:56	nmc	
Chloromethane [74-87-3]^	410	U	ug/L	500	410	1200	1K12010	EPA 8260D	11/12/21 17:56	nmc	QV-01
cis-1,2-Dichloroethene [156-59-2]^	**4900**		ug/L	500	260	1200	1K12010	EPA 8260D	11/12/21 17:56	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	300	U	ug/L	500	300	1200	1K12010	EPA 8260D	11/12/21 17:56	nmc	
Cyclohexane [110-82-7]^	460	U	ug/L	500	460	1200	1K12010	EPA 8260D	11/12/21 17:56	nmc	QL-02
Dibromochloromethane [124-48-1]^	250	U	ug/L	500	250	1200	1K12010	EPA 8260D	11/12/21 17:56	nmc	
Dichlorodifluoromethane [75-71-8]^	370	U	ug/L	500	370	1200	1K12010	EPA 8260D	11/12/21 17:56	nmc	
Ethylbenzene [100-41-4]^	340	U	ug/L	500	340	1200	1K12010	EPA 8260D	11/12/21 17:56	nmc	
Freon 113 [76-13-1]^	360	U	ug/L	500	360	1200	1K12010	EPA 8260D	11/12/21 17:56	nmc	
Isopropylbenzene [98-82-8]^	340	U	ug/L	500	340	1200	1K12010	EPA 8260D	11/12/21 17:56	nmc	
Methyl acetate [79-20-9]^	480	U	ug/L	500	480	1200	1K12010	EPA 8260D	11/12/21 17:56	nmc	
Methylene Chloride [75-09-2]^	1200	U	ug/L	500	1200	6200	1K12010	EPA 8260D	11/12/21 17:56	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	300	U	ug/L	500	300	1200	1K12010	EPA 8260D	11/12/21 17:56	nmc	
Styrene [100-42-5]^	300	U	ug/L	500	300	1200	1K12010	EPA 8260D	11/12/21 17:56	nmc	
Tetrachloroethene [127-18-4]^	380	U	ug/L	500	380	1200	1K12010	EPA 8260D	11/12/21 17:56	nmc	
Toluene [108-88-3]^	360	U	ug/L	500	360	1200	1K12010	EPA 8260D	11/12/21 17:56	nmc	
trans-1,2-Dichloroethene [156-60-5]^	360	U	ug/L	500	360	1200	1K12010	EPA 8260D	11/12/21 17:56	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	360	U	ug/L	500	360	1200	1K12010	EPA 8260D	11/12/21 17:56	nmc	
Trichloroethene [79-01-6]^	**110000**		ug/L	2500	2200	6200	1K17014	EPA 8260D	11/17/21 12:38	KKW	
Trichlorofluoromethane [75-69-4]^	470	U	ug/L	500	470	1200	1K12010	EPA 8260D	11/12/21 17:56	nmc	QV-01
Vinyl chloride [75-01-4]^	360	U	ug/L	500	360	1200	1K12010	EPA 8260D	11/12/21 17:56	nmc	

ANALYTICAL RESULTS

Description: LC34PS-PZH-040.0-20211111 **Lab Sample ID:** AE07280-13 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 09:30 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*42*	*1*	*50.0*	*83 %*	*41-142*	*1K12010*	*EPA 8260D*	*11/12/21 17:56*	*nmc*	
4-Bromofluorobenzene	*52*	*1*	*50.0*	*104 %*	*41-142*	*1K17014*	*EPA 8260D*	*11/17/21 12:38*	*KKW*	
Dibromofluoromethane	*46*	*1*	*50.0*	*93 %*	*53-146*	*1K12010*	*EPA 8260D*	*11/12/21 17:56*	*nmc*	
Dibromofluoromethane	*49*	*1*	*50.0*	*98 %*	*53-146*	*1K17014*	*EPA 8260D*	*11/17/21 12:38*	*KKW*	
Toluene-d8	*45*	*1*	*50.0*	*89 %*	*41-146*	*1K12010*	*EPA 8260D*	*11/12/21 17:56*	*nmc*	
Toluene-d8	*53*	*1*	*50.0*	*107 %*	*41-146*	*1K17014*	*EPA 8260D*	*11/17/21 12:38*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZH-050.0-20211111 **Lab Sample ID:** AE07280-14 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 09:32 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	8000	U	ug/L	10000	8000	25000	1K12010	EPA 8260D	11/12/21 18:25	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	5400	U	ug/L	10000	5400	25000	1K12010	EPA 8260D	11/12/21 18:25	nmc	
1,1,2-Trichloroethane [79-00-5]^	7600	U	ug/L	10000	7600	25000	1K12010	EPA 8260D	11/12/21 18:25	nmc	
1,1-Dichloroethane [75-34-3]^	6200	U	ug/L	10000	6200	25000	1K12010	EPA 8260D	11/12/21 18:25	nmc	
1,1-Dichloroethene [75-35-4]^	9400	U	ug/L	10000	9400	25000	1K12010	EPA 8260D	11/12/21 18:25	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	7000	U	ug/L	10000	7000	25000	1K12010	EPA 8260D	11/12/21 18:25	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	9600	U	ug/L	10000	9600	25000	1K12010	EPA 8260D	11/12/21 18:25	nmc	
1,2-Dibromoethane [106-93-4]^	7800	U	ug/L	10000	7800	25000	1K12010	EPA 8260D	11/12/21 18:25	nmc	
1,2-Dichlorobenzene [95-50-1]^	7300	U	ug/L	10000	7300	25000	1K12010	EPA 8260D	11/12/21 18:25	nmc	
1,2-Dichloroethane [107-06-2]^	6300	U	ug/L	10000	6300	25000	1K12010	EPA 8260D	11/12/21 18:25	nmc	
1,2-Dichloropropane [78-87-5]^	8000	U	ug/L	10000	8000	25000	1K12010	EPA 8260D	11/12/21 18:25	nmc	
1,3-Dichlorobenzene [541-73-1]^	7700	U	ug/L	10000	7700	25000	1K12010	EPA 8260D	11/12/21 18:25	nmc	
1,4-Dichlorobenzene [106-46-7]^	7600	U	ug/L	10000	7600	25000	1K12010	EPA 8260D	11/12/21 18:25	nmc	
2-Butanone [78-93-3]^	45000	U	ug/L	10000	45000	120000	1K12010	EPA 8260D	11/12/21 18:25	nmc	
2-Hexanone [591-78-6]^	25000	U	ug/L	10000	25000	120000	1K12010	EPA 8260D	11/12/21 18:25	nmc	
4-Methyl-2-pentanone [108-10-1]^	25000	U	ug/L	10000	25000	120000	1K12010	EPA 8260D	11/12/21 18:25	nmc	
Acetone [67-64-1]^	100000	U	ug/L	10000	100000	250000	1K12010	EPA 8260D	11/12/21 18:25	nmc	
Benzene [71-43-2]^	7100	U	ug/L	10000	7100	25000	1K12010	EPA 8260D	11/12/21 18:25	nmc	
Bromodichloromethane [75-27-4]^	5200	U	ug/L	10000	5200	25000	1K12010	EPA 8260D	11/12/21 18:25	nmc	
Bromoform [75-25-2]^	7500	U	ug/L	10000	7500	25000	1K12010	EPA 8260D	11/12/21 18:25	nmc	
Bromomethane [74-83-9]^	9500	U	ug/L	10000	9500	25000	1K12010	EPA 8260D	11/12/21 18:25	nmc	QV-01
Carbon disulfide [75-15-0]^	25000	U	ug/L	10000	25000	120000	1K12010	EPA 8260D	11/12/21 18:25	nmc	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	9400	U	ug/L	10000	9400	25000	1K12010	EPA 8260D	11/12/21 18:25	nmc	
Chlorobenzene [108-90-7]^	7200	U	ug/L	10000	7200	25000	1K12010	EPA 8260D	11/12/21 18:25	nmc	
Chloroethane [75-00-3]^	9800	U	ug/L	10000	9800	25000	1K12010	EPA 8260D	11/12/21 18:25	nmc	QV-01
Chloroform [67-66-3]^	8000	U	ug/L	10000	8000	25000	1K12010	EPA 8260D	11/12/21 18:25	nmc	
Chloromethane [74-87-3]^	8200	U	ug/L	10000	8200	25000	1K12010	EPA 8260D	11/12/21 18:25	nmc	QV-01
cis-1,2-Dichloroethene [156-59-2]^	**14000**	I	ug/L	10000	5300	25000	1K12010	EPA 8260D	11/12/21 18:25	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	5900	U	ug/L	10000	5900	25000	1K12010	EPA 8260D	11/12/21 18:25	nmc	
Cyclohexane [110-82-7]^	9300	U	ug/L	10000	9300	25000	1K12010	EPA 8260D	11/12/21 18:25	nmc	QL-02
Dibromochloromethane [124-48-1]^	5000	U	ug/L	10000	5000	25000	1K12010	EPA 8260D	11/12/21 18:25	nmc	
Dichlorodifluoromethane [75-71-8]^	7400	U	ug/L	10000	7400	25000	1K12010	EPA 8260D	11/12/21 18:25	nmc	
Ethylbenzene [100-41-4]^	6900	U	ug/L	10000	6900	25000	1K12010	EPA 8260D	11/12/21 18:25	nmc	
Freon 113 [76-13-1]^	7300	U	ug/L	10000	7300	25000	1K12010	EPA 8260D	11/12/21 18:25	nmc	
Isopropylbenzene [98-82-8]^	6700	U	ug/L	10000	6700	25000	1K12010	EPA 8260D	11/12/21 18:25	nmc	
Methyl acetate [79-20-9]^	9500	U	ug/L	10000	9500	25000	1K12010	EPA 8260D	11/12/21 18:25	nmc	
Methylene Chloride [75-09-2]^	25000	U	ug/L	10000	25000	120000	1K12010	EPA 8260D	11/12/21 18:25	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	6000	U	ug/L	10000	6000	25000	1K12010	EPA 8260D	11/12/21 18:25	nmc	
Styrene [100-42-5]^	6100	U	ug/L	10000	6100	25000	1K12010	EPA 8260D	11/12/21 18:25	nmc	
Tetrachloroethene [127-18-4]^	7600	U	ug/L	10000	7600	25000	1K12010	EPA 8260D	11/12/21 18:25	nmc	
Toluene [108-88-3]^	7200	U	ug/L	10000	7200	25000	1K12010	EPA 8260D	11/12/21 18:25	nmc	
trans-1,2-Dichloroethene [156-60-5]^	7300	U	ug/L	10000	7300	25000	1K12010	EPA 8260D	11/12/21 18:25	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	7300	U	ug/L	10000	7300	25000	1K12010	EPA 8260D	11/12/21 18:25	nmc	
Trichloroethene [79-01-6]^	**440000**		ug/L	10000	8900	25000	1K12010	EPA 8260D	11/12/21 18:25	nmc	
Trichlorofluoromethane [75-69-4]^	9400	U	ug/L	10000	9400	25000	1K12010	EPA 8260D	11/12/21 18:25	nmc	QV-01
Vinyl chloride [75-01-4]^	7100	U	ug/L	10000	7100	25000	1K12010	EPA 8260D	11/12/21 18:25	nmc	

ANALYTICAL RESULTS

Description: LC34PS-PZH-050.0-20211111 **Lab Sample ID:** AE07280-14 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 09:32 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*41*	*1*	*50.0*	*82 %*	*41-142*	*1K12010*	*EPA 8260D*	*11/12/21 18:25*	*nmc*	
Dibromofluoromethane	*45*	*1*	*50.0*	*91 %*	*53-146*	*1K12010*	*EPA 8260D*	*11/12/21 18:25*	*nmc*	
Toluene-d8	*45*	*1*	*50.0*	*90 %*	*41-146*	*1K12010*	*EPA 8260D*	*11/12/21 18:25*	*nmc*	

ANALYTICAL RESULTS

Description: LC34PS-PZH-058.0-20211111 **Lab Sample ID:** AE07280-15 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 09:34 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	2000	U	ug/L	2500	2000	6200	1K15010	EPA 8260D	11/15/21 11:31	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	1400	U	ug/L	2500	1400	6200	1K15010	EPA 8260D	11/15/21 11:31	nmc	
1,1,2-Trichloroethane [79-00-5]^	1900	U	ug/L	2500	1900	6200	1K15010	EPA 8260D	11/15/21 11:31	nmc	
1,1-Dichloroethane [75-34-3]^	1600	U	ug/L	2500	1600	6200	1K15010	EPA 8260D	11/15/21 11:31	nmc	QV-01
1,1-Dichloroethene [75-35-4]^	2400	U	ug/L	2500	2400	6200	1K15010	EPA 8260D	11/15/21 11:31	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	1800	U	ug/L	2500	1800	6200	1K15010	EPA 8260D	11/15/21 11:31	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	2400	U	ug/L	2500	2400	6200	1K15010	EPA 8260D	11/15/21 11:31	nmc	
1,2-Dibromoethane [106-93-4]^	2000	U	ug/L	2500	2000	6200	1K15010	EPA 8260D	11/15/21 11:31	nmc	
1,2-Dichlorobenzene [95-50-1]^	1800	U	ug/L	2500	1800	6200	1K15010	EPA 8260D	11/15/21 11:31	nmc	
1,2-Dichloroethane [107-06-2]^	1600	U	ug/L	2500	1600	6200	1K15010	EPA 8260D	11/15/21 11:31	nmc	QV-01
1,2-Dichloropropane [78-87-5]^	2000	U	ug/L	2500	2000	6200	1K15010	EPA 8260D	11/15/21 11:31	nmc	
1,3-Dichlorobenzene [541-73-1]^	1900	U	ug/L	2500	1900	6200	1K15010	EPA 8260D	11/15/21 11:31	nmc	
1,4-Dichlorobenzene [106-46-7]^	1900	U	ug/L	2500	1900	6200	1K15010	EPA 8260D	11/15/21 11:31	nmc	
2-Butanone [78-93-3]^	11000	U	ug/L	2500	11000	31000	1K15010	EPA 8260D	11/15/21 11:31	nmc	
2-Hexanone [591-78-6]^	6200	U	ug/L	2500	6200	31000	1K15010	EPA 8260D	11/15/21 11:31	nmc	QV-01
4-Methyl-2-pentanone [108-10-1]^	6200	U	ug/L	2500	6200	31000	1K15010	EPA 8260D	11/15/21 11:31	nmc	
Acetone [67-64-1]^	25000	U	ug/L	2500	25000	62000	1K15010	EPA 8260D	11/15/21 11:31	nmc	QV-01
Benzene [71-43-2]^	1800	U	ug/L	2500	1800	6200	1K15010	EPA 8260D	11/15/21 11:31	nmc	
Bromodichloromethane [75-27-4]^	1300	U	ug/L	2500	1300	6200	1K15010	EPA 8260D	11/15/21 11:31	nmc	
Bromoform [75-25-2]^	1900	U	ug/L	2500	1900	6200	1K15010	EPA 8260D	11/15/21 11:31	nmc	
Bromomethane [74-83-9]^	2400	U	ug/L	2500	2400	6200	1K15010	EPA 8260D	11/15/21 11:31	nmc	QV-01
Carbon disulfide [75-15-0]^	6200	U	ug/L	2500	6200	31000	1K15010	EPA 8260D	11/15/21 11:31	nmc	QL-02, QM-19, QV-01
Carbon Tetrachloride [56-23-5]^	2400	U	ug/L	2500	2400	6200	1K15010	EPA 8260D	11/15/21 11:31	nmc	
Chlorobenzene [108-90-7]^	1800	U	ug/L	2500	1800	6200	1K15010	EPA 8260D	11/15/21 11:31	nmc	
Chloroethane [75-00-3]^	2400	U	ug/L	2500	2400	6200	1K15010	EPA 8260D	11/15/21 11:31	nmc	QM-07, QV-01
Chloroform [67-66-3]^	2000	U	ug/L	2500	2000	6200	1K15010	EPA 8260D	11/15/21 11:31	nmc	
Chloromethane [74-87-3]^	2000	U	ug/L	2500	2000	6200	1K15010	EPA 8260D	11/15/21 11:31	nmc	
cis-1,2-Dichloroethene [156-59-2]^	**18000**		ug/L	2500	1300	6200	1K15010	EPA 8260D	11/15/21 11:31	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	1500	U	ug/L	2500	1500	6200	1K15010	EPA 8260D	11/15/21 11:31	nmc	
Cyclohexane [110-82-7]^	2300	U	ug/L	2500	2300	6200	1K15010	EPA 8260D	11/15/21 11:31	nmc	QL-02, QM-19
Dibromochloromethane [124-48-1]^	1200	U	ug/L	2500	1200	6200	1K15010	EPA 8260D	11/15/21 11:31	nmc	
Dichlorodifluoromethane [75-71-8]^	1800	U	ug/L	2500	1800	6200	1K15010	EPA 8260D	11/15/21 11:31	nmc	
Ethylbenzene [100-41-4]^	1700	U	ug/L	2500	1700	6200	1K15010	EPA 8260D	11/15/21 11:31	nmc	
Freon 113 [76-13-1]^	1800	U	ug/L	2500	1800	6200	1K15010	EPA 8260D	11/15/21 11:31	nmc	
Isopropylbenzene [98-82-8]^	1700	U	ug/L	2500	1700	6200	1K15010	EPA 8260D	11/15/21 11:31	nmc	
Methyl acetate [79-20-9]^	2400	U	ug/L	2500	2400	6200	1K15010	EPA 8260D	11/15/21 11:31	nmc	
Methylene Chloride [75-09-2]^	6200	U	ug/L	2500	6200	31000	1K15010	EPA 8260D	11/15/21 11:31	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	1500	U	ug/L	2500	1500	6200	1K15010	EPA 8260D	11/15/21 11:31	nmc	
Styrene [100-42-5]^	1500	U	ug/L	2500	1500	6200	1K15010	EPA 8260D	11/15/21 11:31	nmc	
Tetrachloroethene [127-18-4]^	1900	U	ug/L	2500	1900	6200	1K15010	EPA 8260D	11/15/21 11:31	nmc	
Toluene [108-88-3]^	1800	U	ug/L	2500	1800	6200	1K15010	EPA 8260D	11/15/21 11:31	nmc	
trans-1,2-Dichloroethene [156-60-5]^	1800	U	ug/L	2500	1800	6200	1K15010	EPA 8260D	11/15/21 11:31	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	1800	U	ug/L	2500	1800	6200	1K15010	EPA 8260D	11/15/21 11:31	nmc	
Trichloroethene [79-01-6]^	**230000**		ug/L	2500	2200	6200	1K15010	EPA 8260D	11/15/21 11:31	nmc	

ANALYTICAL RESULTS

Description: LC34PS-PZH-058.0-20211111 **Lab Sample ID:** AE07280-15 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 09:34 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Trichlorofluoromethane [75-69-4]^	2400	U	ug/L	2500	2400	6200	1K15010	EPA 8260D	11/15/21 11:31	nmc	QM-07, QV-01
Vinyl chloride [75-01-4]^	1800	U	ug/L	2500	1800	6200	1K15010	EPA 8260D	11/15/21 11:31	nmc	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*41*	*1*	*50.0*	*82 %*	*41-142*	*1K15010*	*EPA 8260D*	*11/15/21 11:31*	*nmc*	
Dibromofluoromethane	*46*	*1*	*50.0*	*92 %*	*53-146*	*1K15010*	*EPA 8260D*	*11/15/21 11:31*	*nmc*	
Toluene-d8	*45*	*1*	*50.0*	*91 %*	*41-146*	*1K15010*	*EPA 8260D*	*11/15/21 11:31*	*nmc*	

ANALYTICAL RESULTS

Description: LC34PS-PZH-073.0-20211111 **Lab Sample ID:** AE07280-16 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 09:36 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	1K12013	EPA 8260D	11/12/21 09:54	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	1K12013	EPA 8260D	11/12/21 09:54	KKW	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	1K12013	EPA 8260D	11/12/21 09:54	KKW	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	1K12013	EPA 8260D	11/12/21 09:54	KKW	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	1K12013	EPA 8260D	11/12/21 09:54	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	1K12013	EPA 8260D	11/12/21 09:54	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	1K12013	EPA 8260D	11/12/21 09:54	KKW	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	1K12013	EPA 8260D	11/12/21 09:54	KKW	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	1K12013	EPA 8260D	11/12/21 09:54	KKW	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	1K12013	EPA 8260D	11/12/21 09:54	KKW	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	1K12013	EPA 8260D	11/12/21 09:54	KKW	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	1K12013	EPA 8260D	11/12/21 09:54	KKW	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	1K12013	EPA 8260D	11/12/21 09:54	KKW	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	1K12013	EPA 8260D	11/12/21 09:54	KKW	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	1K12013	EPA 8260D	11/12/21 09:54	KKW	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	1K12013	EPA 8260D	11/12/21 09:54	KKW	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	1K12013	EPA 8260D	11/12/21 09:54	KKW	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	1K12013	EPA 8260D	11/12/21 09:54	KKW	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	1K12013	EPA 8260D	11/12/21 09:54	KKW	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	1K12013	EPA 8260D	11/12/21 09:54	KKW	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	1K12013	EPA 8260D	11/12/21 09:54	KKW	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	1K12013	EPA 8260D	11/12/21 09:54	KKW	
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	1K12013	EPA 8260D	11/12/21 09:54	KKW	QM-07
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	1K12013	EPA 8260D	11/12/21 09:54	KKW	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	1K12013	EPA 8260D	11/12/21 09:54	KKW	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	1K12013	EPA 8260D	11/12/21 09:54	KKW	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	1K12013	EPA 8260D	11/12/21 09:54	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**11**		ug/L	1	0.53	2.5	1K12013	EPA 8260D	11/12/21 09:54	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	1K12013	EPA 8260D	11/12/21 09:54	KKW	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	1K12013	EPA 8260D	11/12/21 09:54	KKW	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	1K12013	EPA 8260D	11/12/21 09:54	KKW	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	1K12013	EPA 8260D	11/12/21 09:54	KKW	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	1K12013	EPA 8260D	11/12/21 09:54	KKW	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	1K12013	EPA 8260D	11/12/21 09:54	KKW	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	1K12013	EPA 8260D	11/12/21 09:54	KKW	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	1K12013	EPA 8260D	11/12/21 09:54	KKW	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	1K12013	EPA 8260D	11/12/21 09:54	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	1K12013	EPA 8260D	11/12/21 09:54	KKW	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	1K12013	EPA 8260D	11/12/21 09:54	KKW	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	1K12013	EPA 8260D	11/12/21 09:54	KKW	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	1K12013	EPA 8260D	11/12/21 09:54	KKW	
trans-1,2-Dichloroethene [156-60-5]^	0.73	U	ug/L	1	0.73	2.5	1K12013	EPA 8260D	11/12/21 09:54	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	1K12013	EPA 8260D	11/12/21 09:54	KKW	
Trichloroethene [79-01-6]^	**430**		ug/L	10	8.9	25	1K17014	EPA 8260D	11/17/21 13:05	KKW	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	1K12013	EPA 8260D	11/12/21 09:54	KKW	
Vinyl chloride [75-01-4]^	0.71	U	ug/L	1	0.71	2.5	1K12013	EPA 8260D	11/12/21 09:54	KKW	

ANALYTICAL RESULTS

Description: LC34PS-PZH-073.0-20211111 **Lab Sample ID:** AE07280-16 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 09:36 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*52*	*1*	*50.0*	*103 %*	*41-142*	*1K12013*	*EPA 8260D*	*11/12/21 09:54*	*KKW*	
Dibromofluoromethane	*50*	*1*	*50.0*	*99 %*	*53-146*	*1K12013*	*EPA 8260D*	*11/12/21 09:54*	*KKW*	
Toluene-d8	*64*	*1*	*50.0*	*129 %*	*41-146*	*1K12013*	*EPA 8260D*	*11/12/21 09:54*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZH-080.0-20211111 **Lab Sample ID:** AE07280-17 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 09:38 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	1K12013	EPA 8260D	11/12/21 13:08	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	1K12013	EPA 8260D	11/12/21 13:08	KKW	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	1K12013	EPA 8260D	11/12/21 13:08	KKW	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	1K12013	EPA 8260D	11/12/21 13:08	KKW	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	1K12013	EPA 8260D	11/12/21 13:08	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	1K12013	EPA 8260D	11/12/21 13:08	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	1K12013	EPA 8260D	11/12/21 13:08	KKW	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	1K12013	EPA 8260D	11/12/21 13:08	KKW	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	1K12013	EPA 8260D	11/12/21 13:08	KKW	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	1K12013	EPA 8260D	11/12/21 13:08	KKW	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	1K12013	EPA 8260D	11/12/21 13:08	KKW	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	1K12013	EPA 8260D	11/12/21 13:08	KKW	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	1K12013	EPA 8260D	11/12/21 13:08	KKW	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	1K12013	EPA 8260D	11/12/21 13:08	KKW	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	1K12013	EPA 8260D	11/12/21 13:08	KKW	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	1K12013	EPA 8260D	11/12/21 13:08	KKW	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	1K12013	EPA 8260D	11/12/21 13:08	KKW	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	1K12013	EPA 8260D	11/12/21 13:08	KKW	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	1K12013	EPA 8260D	11/12/21 13:08	KKW	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	1K12013	EPA 8260D	11/12/21 13:08	KKW	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	1K12013	EPA 8260D	11/12/21 13:08	KKW	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	1K12013	EPA 8260D	11/12/21 13:08	KKW	
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	1K12013	EPA 8260D	11/12/21 13:08	KKW	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	1K12013	EPA 8260D	11/12/21 13:08	KKW	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	1K12013	EPA 8260D	11/12/21 13:08	KKW	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	1K12013	EPA 8260D	11/12/21 13:08	KKW	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	1K12013	EPA 8260D	11/12/21 13:08	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**62**		ug/L	1	0.53	2.5	1K12013	EPA 8260D	11/12/21 13:08	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	1K12013	EPA 8260D	11/12/21 13:08	KKW	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	1K12013	EPA 8260D	11/12/21 13:08	KKW	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	1K12013	EPA 8260D	11/12/21 13:08	KKW	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	1K12013	EPA 8260D	11/12/21 13:08	KKW	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	1K12013	EPA 8260D	11/12/21 13:08	KKW	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	1K12013	EPA 8260D	11/12/21 13:08	KKW	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	1K12013	EPA 8260D	11/12/21 13:08	KKW	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	1K12013	EPA 8260D	11/12/21 13:08	KKW	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	1K12013	EPA 8260D	11/12/21 13:08	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	1K12013	EPA 8260D	11/12/21 13:08	KKW	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	1K12013	EPA 8260D	11/12/21 13:08	KKW	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	1K12013	EPA 8260D	11/12/21 13:08	KKW	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	1K12013	EPA 8260D	11/12/21 13:08	KKW	
trans-1,2-Dichloroethene [156-60-5]^	**16**		ug/L	1	0.73	2.5	1K12013	EPA 8260D	11/12/21 13:08	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	1K12013	EPA 8260D	11/12/21 13:08	KKW	
Trichloroethene [79-01-6]^	**12**		ug/L	1	0.89	2.5	1K12013	EPA 8260D	11/12/21 13:08	KKW	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	1K12013	EPA 8260D	11/12/21 13:08	KKW	
Vinyl chloride [75-01-4]^	**34**		ug/L	1	0.71	2.5	1K12013	EPA 8260D	11/12/21 13:08	KKW	

ANALYTICAL RESULTS

Description: LC34PS-PZH-080.0-20211111 **Lab Sample ID:** AE07280-17 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 09:38 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*50*	*1*	*50.0*	*101 %*	*41-142*	*1K12013*	*EPA 8260D*	*11/12/21 13:08*	*KKW*	
Dibromofluoromethane	*47*	*1*	*50.0*	*95 %*	*53-146*	*1K12013*	*EPA 8260D*	*11/12/21 13:08*	*KKW*	
Toluene-d8	*51*	*1*	*50.0*	*102 %*	*41-146*	*1K12013*	*EPA 8260D*	*11/12/21 13:08*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZK-040.0-20211111 **Lab Sample ID:** AE07280-18 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 10:00 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	800	U	ug/L	1000	800	2500	1K15010	EPA 8260D	11/15/21 12:57	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	540	U	ug/L	1000	540	2500	1K15010	EPA 8260D	11/15/21 12:57	nmc	
1,1,2-Trichloroethane [79-00-5]^	760	U	ug/L	1000	760	2500	1K15010	EPA 8260D	11/15/21 12:57	nmc	
1,1-Dichloroethane [75-34-3]^	620	U	ug/L	1000	620	2500	1K15010	EPA 8260D	11/15/21 12:57	nmc	QV-01
1,1-Dichloroethene [75-35-4]^	940	U	ug/L	1000	940	2500	1K15010	EPA 8260D	11/15/21 12:57	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	700	U	ug/L	1000	700	2500	1K15010	EPA 8260D	11/15/21 12:57	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	960	U	ug/L	1000	960	2500	1K15010	EPA 8260D	11/15/21 12:57	nmc	
1,2-Dibromoethane [106-93-4]^	780	U	ug/L	1000	780	2500	1K15010	EPA 8260D	11/15/21 12:57	nmc	
1,2-Dichlorobenzene [95-50-1]^	730	U	ug/L	1000	730	2500	1K15010	EPA 8260D	11/15/21 12:57	nmc	
1,2-Dichloroethane [107-06-2]^	630	U	ug/L	1000	630	2500	1K15010	EPA 8260D	11/15/21 12:57	nmc	QV-01
1,2-Dichloropropane [78-87-5]^	800	U	ug/L	1000	800	2500	1K15010	EPA 8260D	11/15/21 12:57	nmc	
1,3-Dichlorobenzene [541-73-1]^	770	U	ug/L	1000	770	2500	1K15010	EPA 8260D	11/15/21 12:57	nmc	
1,4-Dichlorobenzene [106-46-7]^	760	U	ug/L	1000	760	2500	1K15010	EPA 8260D	11/15/21 12:57	nmc	
2-Butanone [78-93-3]^	4500	U	ug/L	1000	4500	12000	1K15010	EPA 8260D	11/15/21 12:57	nmc	
2-Hexanone [591-78-6]^	2500	U	ug/L	1000	2500	12000	1K15010	EPA 8260D	11/15/21 12:57	nmc	QV-01
4-Methyl-2-pentanone [108-10-1]^	2500	U	ug/L	1000	2500	12000	1K15010	EPA 8260D	11/15/21 12:57	nmc	
Acetone [67-64-1]^	10000	U	ug/L	1000	10000	25000	1K15010	EPA 8260D	11/15/21 12:57	nmc	QV-01
Benzene [71-43-2]^	710	U	ug/L	1000	710	2500	1K15010	EPA 8260D	11/15/21 12:57	nmc	
Bromodichloromethane [75-27-4]^	520	U	ug/L	1000	520	2500	1K15010	EPA 8260D	11/15/21 12:57	nmc	
Bromoform [75-25-2]^	750	U	ug/L	1000	750	2500	1K15010	EPA 8260D	11/15/21 12:57	nmc	
Bromomethane [74-83-9]^	950	U	ug/L	1000	950	2500	1K15010	EPA 8260D	11/15/21 12:57	nmc	QV-01
Carbon disulfide [75-15-0]^	2500	U	ug/L	1000	2500	12000	1K15010	EPA 8260D	11/15/21 12:57	nmc	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	940	U	ug/L	1000	940	2500	1K15010	EPA 8260D	11/15/21 12:57	nmc	
Chlorobenzene [108-90-7]^	720	U	ug/L	1000	720	2500	1K15010	EPA 8260D	11/15/21 12:57	nmc	
Chloroethane [75-00-3]^	980	U	ug/L	1000	980	2500	1K15010	EPA 8260D	11/15/21 12:57	nmc	QV-01
Chloroform [67-66-3]^	800	U	ug/L	1000	800	2500	1K15010	EPA 8260D	11/15/21 12:57	nmc	
Chloromethane [74-87-3]^	820	U	ug/L	1000	820	2500	1K15010	EPA 8260D	11/15/21 12:57	nmc	
cis-1,2-Dichloroethene [156-59-2]^	**13000**		ug/L	1000	530	2500	1K15010	EPA 8260D	11/15/21 12:57	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	590	U	ug/L	1000	590	2500	1K15010	EPA 8260D	11/15/21 12:57	nmc	
Cyclohexane [110-82-7]^	930	U	ug/L	1000	930	2500	1K15010	EPA 8260D	11/15/21 12:57	nmc	QL-02
Dibromochloromethane [124-48-1]^	500	U	ug/L	1000	500	2500	1K15010	EPA 8260D	11/15/21 12:57	nmc	
Dichlorodifluoromethane [75-71-8]^	740	U	ug/L	1000	740	2500	1K15010	EPA 8260D	11/15/21 12:57	nmc	
Ethylbenzene [100-41-4]^	690	U	ug/L	1000	690	2500	1K15010	EPA 8260D	11/15/21 12:57	nmc	
Freon 113 [76-13-1]^	730	U	ug/L	1000	730	2500	1K15010	EPA 8260D	11/15/21 12:57	nmc	
Isopropylbenzene [98-82-8]^	670	U	ug/L	1000	670	2500	1K15010	EPA 8260D	11/15/21 12:57	nmc	
Methyl acetate [79-20-9]^	950	U	ug/L	1000	950	2500	1K15010	EPA 8260D	11/15/21 12:57	nmc	
Methylene Chloride [75-09-2]^	2500	U	ug/L	1000	2500	12000	1K15010	EPA 8260D	11/15/21 12:57	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	600	U	ug/L	1000	600	2500	1K15010	EPA 8260D	11/15/21 12:57	nmc	
Styrene [100-42-5]^	610	U	ug/L	1000	610	2500	1K15010	EPA 8260D	11/15/21 12:57	nmc	
Tetrachloroethene [127-18-4]^	760	U	ug/L	1000	760	2500	1K15010	EPA 8260D	11/15/21 12:57	nmc	
Toluene [108-88-3]^	720	U	ug/L	1000	720	2500	1K15010	EPA 8260D	11/15/21 12:57	nmc	
trans-1,2-Dichloroethene [156-60-5]^	730	U	ug/L	1000	730	2500	1K15010	EPA 8260D	11/15/21 12:57	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	730	U	ug/L	1000	730	2500	1K15010	EPA 8260D	11/15/21 12:57	nmc	
Trichloroethene [79-01-6]^	**83000**		ug/L	1000	890	2500	1K15010	EPA 8260D	11/15/21 12:57	nmc	
Trichlorofluoromethane [75-69-4]^	940	U	ug/L	1000	940	2500	1K15010	EPA 8260D	11/15/21 12:57	nmc	QV-01
Vinyl chloride [75-01-4]^	710	U	ug/L	1000	710	2500	1K15010	EPA 8260D	11/15/21 12:57	nmc	

ANALYTICAL RESULTS

Description: LC34PS-PZK-040.0-20211111 **Lab Sample ID:** AE07280-18 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 10:00 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*41*	*1*	*50.0*	*81 %*	*41-142*	*1K15010*	*EPA 8260D*	*11/15/21 12:57*	*nmc*	
Dibromofluoromethane	*47*	*1*	*50.0*	*94 %*	*53-146*	*1K15010*	*EPA 8260D*	*11/15/21 12:57*	*nmc*	
Toluene-d8	*47*	*1*	*50.0*	*93 %*	*41-146*	*1K15010*	*EPA 8260D*	*11/15/21 12:57*	*nmc*	

ANALYTICAL RESULTS

Description: LC34PS-PZK-050.0-20211111 **Lab Sample ID:** AE07280-19 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 10:02 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	1600	U	ug/L	2000	1600	5000	1K12013	EPA 8260D	11/12/21 14:03	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	1100	U	ug/L	2000	1100	5000	1K12013	EPA 8260D	11/12/21 14:03	KKW	
1,1,2-Trichloroethane [79-00-5]^	1500	U	ug/L	2000	1500	5000	1K12013	EPA 8260D	11/12/21 14:03	KKW	
1,1-Dichloroethane [75-34-3]^	1200	U	ug/L	2000	1200	5000	1K12013	EPA 8260D	11/12/21 14:03	KKW	
1,1-Dichloroethene [75-35-4]^	1900	U	ug/L	2000	1900	5000	1K12013	EPA 8260D	11/12/21 14:03	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	1400	U	ug/L	2000	1400	5000	1K12013	EPA 8260D	11/12/21 14:03	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	1900	U	ug/L	2000	1900	5000	1K12013	EPA 8260D	11/12/21 14:03	KKW	
1,2-Dibromoethane [106-93-4]^	1600	U	ug/L	2000	1600	5000	1K12013	EPA 8260D	11/12/21 14:03	KKW	
1,2-Dichlorobenzene [95-50-1]^	1500	U	ug/L	2000	1500	5000	1K12013	EPA 8260D	11/12/21 14:03	KKW	
1,2-Dichloroethane [107-06-2]^	1300	U	ug/L	2000	1300	5000	1K12013	EPA 8260D	11/12/21 14:03	KKW	
1,2-Dichloropropane [78-87-5]^	1600	U	ug/L	2000	1600	5000	1K12013	EPA 8260D	11/12/21 14:03	KKW	
1,3-Dichlorobenzene [541-73-1]^	1500	U	ug/L	2000	1500	5000	1K12013	EPA 8260D	11/12/21 14:03	KKW	
1,4-Dichlorobenzene [106-46-7]^	1500	U	ug/L	2000	1500	5000	1K12013	EPA 8260D	11/12/21 14:03	KKW	
2-Butanone [78-93-3]^	9000	U	ug/L	2000	9000	25000	1K12013	EPA 8260D	11/12/21 14:03	KKW	
2-Hexanone [591-78-6]^	5000	U	ug/L	2000	5000	25000	1K12013	EPA 8260D	11/12/21 14:03	KKW	
4-Methyl-2-pentanone [108-10-1]^	5000	U	ug/L	2000	5000	25000	1K12013	EPA 8260D	11/12/21 14:03	KKW	
Acetone [67-64-1]^	20000	U	ug/L	2000	20000	50000	1K12013	EPA 8260D	11/12/21 14:03	KKW	
Benzene [71-43-2]^	1400	U	ug/L	2000	1400	5000	1K12013	EPA 8260D	11/12/21 14:03	KKW	
Bromodichloromethane [75-27-4]^	1000	U	ug/L	2000	1000	5000	1K12013	EPA 8260D	11/12/21 14:03	KKW	
Bromoform [75-25-2]^	1500	U	ug/L	2000	1500	5000	1K12013	EPA 8260D	11/12/21 14:03	KKW	
Bromomethane [74-83-9]^	1900	U	ug/L	2000	1900	5000	1K12013	EPA 8260D	11/12/21 14:03	KKW	QV-01
Carbon disulfide [75-15-0]^	5000	U	ug/L	2000	5000	25000	1K12013	EPA 8260D	11/12/21 14:03	KKW	
Carbon Tetrachloride [56-23-5]^	1900	U	ug/L	2000	1900	5000	1K12013	EPA 8260D	11/12/21 14:03	KKW	
Chlorobenzene [108-90-7]^	1400	U	ug/L	2000	1400	5000	1K12013	EPA 8260D	11/12/21 14:03	KKW	
Chloroethane [75-00-3]^	2000	U	ug/L	2000	2000	5000	1K12013	EPA 8260D	11/12/21 14:03	KKW	
Chloroform [67-66-3]^	1600	U	ug/L	2000	1600	5000	1K12013	EPA 8260D	11/12/21 14:03	KKW	
Chloromethane [74-87-3]^	1600	U	ug/L	2000	1600	5000	1K12013	EPA 8260D	11/12/21 14:03	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**11000**		ug/L	2000	1100	5000	1K12013	EPA 8260D	11/12/21 14:03	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	1200	U	ug/L	2000	1200	5000	1K12013	EPA 8260D	11/12/21 14:03	KKW	
Cyclohexane [110-82-7]^	1900	U	ug/L	2000	1900	5000	1K12013	EPA 8260D	11/12/21 14:03	KKW	
Dibromochloromethane [124-48-1]^	1000	U	ug/L	2000	1000	5000	1K12013	EPA 8260D	11/12/21 14:03	KKW	
Dichlorodifluoromethane [75-71-8]^	1500	U	ug/L	2000	1500	5000	1K12013	EPA 8260D	11/12/21 14:03	KKW	
Ethylbenzene [100-41-4]^	1400	U	ug/L	2000	1400	5000	1K12013	EPA 8260D	11/12/21 14:03	KKW	
Freon 113 [76-13-1]^	1500	U	ug/L	2000	1500	5000	1K12013	EPA 8260D	11/12/21 14:03	KKW	
Isopropylbenzene [98-82-8]^	1300	U	ug/L	2000	1300	5000	1K12013	EPA 8260D	11/12/21 14:03	KKW	
Methyl acetate [79-20-9]^	1900	U	ug/L	2000	1900	5000	1K12013	EPA 8260D	11/12/21 14:03	KKW	
Methylene Chloride [75-09-2]^	5000	U	ug/L	2000	5000	25000	1K12013	EPA 8260D	11/12/21 14:03	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	1200	U	ug/L	2000	1200	5000	1K12013	EPA 8260D	11/12/21 14:03	KKW	
Styrene [100-42-5]^	1200	U	ug/L	2000	1200	5000	1K12013	EPA 8260D	11/12/21 14:03	KKW	
Tetrachloroethene [127-18-4]^	1500	U	ug/L	2000	1500	5000	1K12013	EPA 8260D	11/12/21 14:03	KKW	
Toluene [108-88-3]^	1400	U	ug/L	2000	1400	5000	1K12013	EPA 8260D	11/12/21 14:03	KKW	
trans-1,2-Dichloroethene [156-60-5]^	1500	U	ug/L	2000	1500	5000	1K12013	EPA 8260D	11/12/21 14:03	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	1500	U	ug/L	2000	1500	5000	1K12013	EPA 8260D	11/12/21 14:03	KKW	
Trichloroethene [79-01-6]^	**360000**		ug/L	10000	8900	25000	1K17014	EPA 8260D	11/17/21 13:33	KKW	
Trichlorofluoromethane [75-69-4]^	1900	U	ug/L	2000	1900	5000	1K12013	EPA 8260D	11/12/21 14:03	KKW	
Vinyl chloride [75-01-4]^	1400	U	ug/L	2000	1400	5000	1K12013	EPA 8260D	11/12/21 14:03	KKW	

ANALYTICAL RESULTS

Description: LC34PS-PZK-050.0-20211111 **Lab Sample ID:** AE07280-19 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 10:02 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*51*	*1*	*50.0*	*101 %*	*41-142*	*1K12013*	*EPA 8260D*	*11/12/21 14:03*	*KKW*	
4-Bromofluorobenzene	*53*	*1*	*50.0*	*106 %*	*41-142*	*1K17014*	*EPA 8260D*	*11/17/21 13:33*	*KKW*	
Dibromofluoromethane	*48*	*1*	*50.0*	*96 %*	*53-146*	*1K12013*	*EPA 8260D*	*11/12/21 14:03*	*KKW*	
Dibromofluoromethane	*49*	*1*	*50.0*	*99 %*	*53-146*	*1K17014*	*EPA 8260D*	*11/17/21 13:33*	*KKW*	
Toluene-d8	*54*	*1*	*50.0*	*107 %*	*41-146*	*1K12013*	*EPA 8260D*	*11/12/21 14:03*	*KKW*	
Toluene-d8	*54*	*1*	*50.0*	*108 %*	*41-146*	*1K17014*	*EPA 8260D*	*11/17/21 13:33*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZK-058.0-20211111 **Lab Sample ID:** AE07280-20 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 10:04 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	8000	U	ug/L	10000	8000	25000	1K12013	EPA 8260D	11/12/21 14:31	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	5400	U	ug/L	10000	5400	25000	1K12013	EPA 8260D	11/12/21 14:31	KKW	
1,1,2-Trichloroethane [79-00-5]^	7600	U	ug/L	10000	7600	25000	1K12013	EPA 8260D	11/12/21 14:31	KKW	
1,1-Dichloroethane [75-34-3]^	6200	U	ug/L	10000	6200	25000	1K12013	EPA 8260D	11/12/21 14:31	KKW	
1,1-Dichloroethene [75-35-4]^	9400	U	ug/L	10000	9400	25000	1K12013	EPA 8260D	11/12/21 14:31	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	7000	U	ug/L	10000	7000	25000	1K12013	EPA 8260D	11/12/21 14:31	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	9600	U	ug/L	10000	9600	25000	1K12013	EPA 8260D	11/12/21 14:31	KKW	
1,2-Dibromoethane [106-93-4]^	7800	U	ug/L	10000	7800	25000	1K12013	EPA 8260D	11/12/21 14:31	KKW	
1,2-Dichlorobenzene [95-50-1]^	7300	U	ug/L	10000	7300	25000	1K12013	EPA 8260D	11/12/21 14:31	KKW	
1,2-Dichloroethane [107-06-2]^	6300	U	ug/L	10000	6300	25000	1K12013	EPA 8260D	11/12/21 14:31	KKW	
1,2-Dichloropropane [78-87-5]^	8000	U	ug/L	10000	8000	25000	1K12013	EPA 8260D	11/12/21 14:31	KKW	
1,3-Dichlorobenzene [541-73-1]^	7700	U	ug/L	10000	7700	25000	1K12013	EPA 8260D	11/12/21 14:31	KKW	
1,4-Dichlorobenzene [106-46-7]^	7600	U	ug/L	10000	7600	25000	1K12013	EPA 8260D	11/12/21 14:31	KKW	
2-Butanone [78-93-3]^	45000	U	ug/L	10000	45000	120000	1K12013	EPA 8260D	11/12/21 14:31	KKW	
2-Hexanone [591-78-6]^	25000	U	ug/L	10000	25000	120000	1K12013	EPA 8260D	11/12/21 14:31	KKW	
4-Methyl-2-pentanone [108-10-1]^	25000	U	ug/L	10000	25000	120000	1K12013	EPA 8260D	11/12/21 14:31	KKW	
Acetone [67-64-1]^	100000	U	ug/L	10000	100000	250000	1K12013	EPA 8260D	11/12/21 14:31	KKW	
Benzene [71-43-2]^	7100	U	ug/L	10000	7100	25000	1K12013	EPA 8260D	11/12/21 14:31	KKW	
Bromodichloromethane [75-27-4]^	5200	U	ug/L	10000	5200	25000	1K12013	EPA 8260D	11/12/21 14:31	KKW	
Bromoform [75-25-2]^	7500	U	ug/L	10000	7500	25000	1K12013	EPA 8260D	11/12/21 14:31	KKW	
Bromomethane [74-83-9]^	9500	U	ug/L	10000	9500	25000	1K12013	EPA 8260D	11/12/21 14:31	KKW	QV-01
Carbon disulfide [75-15-0]^	25000	U	ug/L	10000	25000	120000	1K12013	EPA 8260D	11/12/21 14:31	KKW	
Carbon Tetrachloride [56-23-5]^	9400	U	ug/L	10000	9400	25000	1K12013	EPA 8260D	11/12/21 14:31	KKW	
Chlorobenzene [108-90-7]^	7200	U	ug/L	10000	7200	25000	1K12013	EPA 8260D	11/12/21 14:31	KKW	
Chloroethane [75-00-3]^	9800	U	ug/L	10000	9800	25000	1K12013	EPA 8260D	11/12/21 14:31	KKW	
Chloroform [67-66-3]^	8000	U	ug/L	10000	8000	25000	1K12013	EPA 8260D	11/12/21 14:31	KKW	
Chloromethane [74-87-3]^	8200	U	ug/L	10000	8200	25000	1K12013	EPA 8260D	11/12/21 14:31	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**15000**	I	ug/L	10000	5300	25000	1K12013	EPA 8260D	11/12/21 14:31	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	5900	U	ug/L	10000	5900	25000	1K12013	EPA 8260D	11/12/21 14:31	KKW	
Cyclohexane [110-82-7]^	9300	U	ug/L	10000	9300	25000	1K12013	EPA 8260D	11/12/21 14:31	KKW	
Dibromochloromethane [124-48-1]^	5000	U	ug/L	10000	5000	25000	1K12013	EPA 8260D	11/12/21 14:31	KKW	
Dichlorodifluoromethane [75-71-8]^	7400	U	ug/L	10000	7400	25000	1K12013	EPA 8260D	11/12/21 14:31	KKW	
Ethylbenzene [100-41-4]^	6900	U	ug/L	10000	6900	25000	1K12013	EPA 8260D	11/12/21 14:31	KKW	
Freon 113 [76-13-1]^	7300	U	ug/L	10000	7300	25000	1K12013	EPA 8260D	11/12/21 14:31	KKW	
Isopropylbenzene [98-82-8]^	6700	U	ug/L	10000	6700	25000	1K12013	EPA 8260D	11/12/21 14:31	KKW	
Methyl acetate [79-20-9]^	9500	U	ug/L	10000	9500	25000	1K12013	EPA 8260D	11/12/21 14:31	KKW	
Methylene Chloride [75-09-2]^	25000	U	ug/L	10000	25000	120000	1K12013	EPA 8260D	11/12/21 14:31	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	6000	U	ug/L	10000	6000	25000	1K12013	EPA 8260D	11/12/21 14:31	KKW	
Styrene [100-42-5]^	6100	U	ug/L	10000	6100	25000	1K12013	EPA 8260D	11/12/21 14:31	KKW	
Tetrachloroethene [127-18-4]^	7600	U	ug/L	10000	7600	25000	1K12013	EPA 8260D	11/12/21 14:31	KKW	
Toluene [108-88-3]^	7200	U	ug/L	10000	7200	25000	1K12013	EPA 8260D	11/12/21 14:31	KKW	
trans-1,2-Dichloroethene [156-60-5]^	7300	U	ug/L	10000	7300	25000	1K12013	EPA 8260D	11/12/21 14:31	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	7300	U	ug/L	10000	7300	25000	1K12013	EPA 8260D	11/12/21 14:31	KKW	
Trichloroethene [79-01-6]^	**480000**		ug/L	10000	8900	25000	1K12013	EPA 8260D	11/12/21 14:31	KKW	
Trichlorofluoromethane [75-69-4]^	9400	U	ug/L	10000	9400	25000	1K12013	EPA 8260D	11/12/21 14:31	KKW	
Vinyl chloride [75-01-4]^	7100	U	ug/L	10000	7100	25000	1K12013	EPA 8260D	11/12/21 14:31	KKW	

ANALYTICAL RESULTS

Description: LC34PS-PZK-058.0-20211111 **Lab Sample ID:** AE07280-20 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 10:04 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*51*	*1*	*50.0*	*102 %*	*41-142*	*1K12013*	*EPA 8260D*	*11/12/21 14:31*	*KKW*	
Dibromofluoromethane	*48*	*1*	*50.0*	*96 %*	*53-146*	*1K12013*	*EPA 8260D*	*11/12/21 14:31*	*KKW*	
Toluene-d8	*52*	*1*	*50.0*	*103 %*	*41-146*	*1K12013*	*EPA 8260D*	*11/12/21 14:31*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZK-073.0-20211111 **Lab Sample ID:** AE07280-21 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 10:06 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	8.0	U	ug/L	10	8.0	25	1K15010	EPA 8260D	11/15/21 13:26	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	5.4	U	ug/L	10	5.4	25	1K15010	EPA 8260D	11/15/21 13:26	nmc	
1,1,2-Trichloroethane [79-00-5]^	7.6	U	ug/L	10	7.6	25	1K15010	EPA 8260D	11/15/21 13:26	nmc	
1,1-Dichloroethane [75-34-3]^	6.2	U	ug/L	10	6.2	25	1K15010	EPA 8260D	11/15/21 13:26	nmc	QV-01
1,1-Dichloroethene [75-35-4]^	9.4	U	ug/L	10	9.4	25	1K15010	EPA 8260D	11/15/21 13:26	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	7.0	U	ug/L	10	7.0	25	1K15010	EPA 8260D	11/15/21 13:26	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	9.6	U	ug/L	10	9.6	25	1K15010	EPA 8260D	11/15/21 13:26	nmc	
1,2-Dibromoethane [106-93-4]^	7.8	U	ug/L	10	7.8	25	1K15010	EPA 8260D	11/15/21 13:26	nmc	
1,2-Dichlorobenzene [95-50-1]^	7.3	U	ug/L	10	7.3	25	1K15010	EPA 8260D	11/15/21 13:26	nmc	
1,2-Dichloroethane [107-06-2]^	6.3	U	ug/L	10	6.3	25	1K15010	EPA 8260D	11/15/21 13:26	nmc	QV-01
1,2-Dichloropropane [78-87-5]^	8.0	U	ug/L	10	8.0	25	1K15010	EPA 8260D	11/15/21 13:26	nmc	
1,3-Dichlorobenzene [541-73-1]^	7.7	U	ug/L	10	7.7	25	1K15010	EPA 8260D	11/15/21 13:26	nmc	
1,4-Dichlorobenzene [106-46-7]^	7.6	U	ug/L	10	7.6	25	1K15010	EPA 8260D	11/15/21 13:26	nmc	
2-Butanone [78-93-3]^	45	U	ug/L	10	45	120	1K15010	EPA 8260D	11/15/21 13:26	nmc	
2-Hexanone [591-78-6]^	25	U	ug/L	10	25	120	1K15010	EPA 8260D	11/15/21 13:26	nmc	QV-01
4-Methyl-2-pentanone [108-10-1]^	25	U	ug/L	10	25	120	1K15010	EPA 8260D	11/15/21 13:26	nmc	
Acetone [67-64-1]^	100	U	ug/L	10	100	250	1K15010	EPA 8260D	11/15/21 13:26	nmc	QV-01
Benzene [71-43-2]^	7.1	U	ug/L	10	7.1	25	1K15010	EPA 8260D	11/15/21 13:26	nmc	
Bromodichloromethane [75-27-4]^	5.2	U	ug/L	10	5.2	25	1K15010	EPA 8260D	11/15/21 13:26	nmc	
Bromoform [75-25-2]^	7.5	U	ug/L	10	7.5	25	1K15010	EPA 8260D	11/15/21 13:26	nmc	
Bromomethane [74-83-9]^	9.5	U	ug/L	10	9.5	25	1K15010	EPA 8260D	11/15/21 13:26	nmc	QV-01
Carbon disulfide [75-15-0]^	25	U	ug/L	10	25	120	1K15010	EPA 8260D	11/15/21 13:26	nmc	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	9.4	U	ug/L	10	9.4	25	1K15010	EPA 8260D	11/15/21 13:26	nmc	
Chlorobenzene [108-90-7]^	7.2	U	ug/L	10	7.2	25	1K15010	EPA 8260D	11/15/21 13:26	nmc	
Chloroethane [75-00-3]^	9.8	U	ug/L	10	9.8	25	1K15010	EPA 8260D	11/15/21 13:26	nmc	QV-01
Chloroform [67-66-3]^	8.0	U	ug/L	10	8.0	25	1K15010	EPA 8260D	11/15/21 13:26	nmc	
Chloromethane [74-87-3]^	8.2	U	ug/L	10	8.2	25	1K15010	EPA 8260D	11/15/21 13:26	nmc	
cis-1,2-Dichloroethene [156-59-2]^	**16**	I	ug/L	10	5.3	25	1K15010	EPA 8260D	11/15/21 13:26	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	5.9	U	ug/L	10	5.9	25	1K15010	EPA 8260D	11/15/21 13:26	nmc	
Cyclohexane [110-82-7]^	9.3	U	ug/L	10	9.3	25	1K15010	EPA 8260D	11/15/21 13:26	nmc	QL-02
Dibromochloromethane [124-48-1]^	5.0	U	ug/L	10	5.0	25	1K15010	EPA 8260D	11/15/21 13:26	nmc	
Dichlorodifluoromethane [75-71-8]^	7.4	U	ug/L	10	7.4	25	1K15010	EPA 8260D	11/15/21 13:26	nmc	
Ethylbenzene [100-41-4]^	6.9	U	ug/L	10	6.9	25	1K15010	EPA 8260D	11/15/21 13:26	nmc	
Freon 113 [76-13-1]^	7.3	U	ug/L	10	7.3	25	1K15010	EPA 8260D	11/15/21 13:26	nmc	
Isopropylbenzene [98-82-8]^	6.7	U	ug/L	10	6.7	25	1K15010	EPA 8260D	11/15/21 13:26	nmc	
Methyl acetate [79-20-9]^	9.5	U	ug/L	10	9.5	25	1K15010	EPA 8260D	11/15/21 13:26	nmc	
Methylene Chloride [75-09-2]^	25	U	ug/L	10	25	120	1K15010	EPA 8260D	11/15/21 13:26	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	6.0	U	ug/L	10	6.0	25	1K15010	EPA 8260D	11/15/21 13:26	nmc	
Styrene [100-42-5]^	6.1	U	ug/L	10	6.1	25	1K15010	EPA 8260D	11/15/21 13:26	nmc	
Tetrachloroethene [127-18-4]^	7.6	U	ug/L	10	7.6	25	1K15010	EPA 8260D	11/15/21 13:26	nmc	
Toluene [108-88-3]^	7.2	U	ug/L	10	7.2	25	1K15010	EPA 8260D	11/15/21 13:26	nmc	
trans-1,2-Dichloroethene [156-60-5]^	7.3	U	ug/L	10	7.3	25	1K15010	EPA 8260D	11/15/21 13:26	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	7.3	U	ug/L	10	7.3	25	1K15010	EPA 8260D	11/15/21 13:26	nmc	
Trichloroethene [79-01-6]^	**1100**		ug/L	50	44	120	1K17014	EPA 8260D	11/17/21 14:01	KKW	
Trichlorofluoromethane [75-69-4]^	9.4	U	ug/L	10	9.4	25	1K15010	EPA 8260D	11/15/21 13:26	nmc	QV-01
Vinyl chloride [75-01-4]^	7.1	U	ug/L	10	7.1	25	1K15010	EPA 8260D	11/15/21 13:26	nmc	

ANALYTICAL RESULTS

Description: LC34PS-PZK-073.0-20211111 **Lab Sample ID:** AE07280-21 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 10:06 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*41*	*1*	*50.0*	*83 %*	*41-142*	*1K15010*	*EPA 8260D*	*11/15/21 13:26*	*nmc*	
4-Bromofluorobenzene	*51*	*1*	*50.0*	*101 %*	*41-142*	*1K17014*	*EPA 8260D*	*11/17/21 14:01*	*KKW*	
Dibromofluoromethane	*47*	*1*	*50.0*	*94 %*	*53-146*	*1K15010*	*EPA 8260D*	*11/15/21 13:26*	*nmc*	
Dibromofluoromethane	*50*	*1*	*50.0*	*100 %*	*53-146*	*1K17014*	*EPA 8260D*	*11/17/21 14:01*	*KKW*	
Toluene-d8	*45*	*1*	*50.0*	*89 %*	*41-146*	*1K15010*	*EPA 8260D*	*11/15/21 13:26*	*nmc*	
Toluene-d8	*53*	*1*	*50.0*	*106 %*	*41-146*	*1K17014*	*EPA 8260D*	*11/17/21 14:01*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZK-080.0-20211111 **Lab Sample ID:** AE07280-22 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 10:08 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	1.6	U	ug/L	2	1.6	5.0	1K15010	EPA 8260D	11/15/21 13:55	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	1.1	U	ug/L	2	1.1	5.0	1K15010	EPA 8260D	11/15/21 13:55	nmc	
1,1,2-Trichloroethane [79-00-5]^	1.5	U	ug/L	2	1.5	5.0	1K15010	EPA 8260D	11/15/21 13:55	nmc	
1,1-Dichloroethane [75-34-3]^	1.2	U	ug/L	2	1.2	5.0	1K15010	EPA 8260D	11/15/21 13:55	nmc	QV-01
1,1-Dichloroethene [75-35-4]^	1.9	U	ug/L	2	1.9	5.0	1K15010	EPA 8260D	11/15/21 13:55	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	1.4	U	ug/L	2	1.4	5.0	1K15010	EPA 8260D	11/15/21 13:55	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	1.9	U	ug/L	2	1.9	5.0	1K15010	EPA 8260D	11/15/21 13:55	nmc	
1,2-Dibromoethane [106-93-4]^	1.6	U	ug/L	2	1.6	5.0	1K15010	EPA 8260D	11/15/21 13:55	nmc	
1,2-Dichlorobenzene [95-50-1]^	1.5	U	ug/L	2	1.5	5.0	1K15010	EPA 8260D	11/15/21 13:55	nmc	
1,2-Dichloroethane [107-06-2]^	1.3	U	ug/L	2	1.3	5.0	1K15010	EPA 8260D	11/15/21 13:55	nmc	QV-01
1,2-Dichloropropane [78-87-5]^	1.6	U	ug/L	2	1.6	5.0	1K15010	EPA 8260D	11/15/21 13:55	nmc	
1,3-Dichlorobenzene [541-73-1]^	1.5	U	ug/L	2	1.5	5.0	1K15010	EPA 8260D	11/15/21 13:55	nmc	
1,4-Dichlorobenzene [106-46-7]^	1.5	U	ug/L	2	1.5	5.0	1K15010	EPA 8260D	11/15/21 13:55	nmc	
2-Butanone [78-93-3]^	9.0	U	ug/L	2	9.0	25	1K15010	EPA 8260D	11/15/21 13:55	nmc	
2-Hexanone [591-78-6]^	5.0	U	ug/L	2	5.0	25	1K15010	EPA 8260D	11/15/21 13:55	nmc	QV-01
4-Methyl-2-pentanone [108-10-1]^	5.0	U	ug/L	2	5.0	25	1K15010	EPA 8260D	11/15/21 13:55	nmc	
Acetone [67-64-1]^	20	U	ug/L	2	20	50	1K15010	EPA 8260D	11/15/21 13:55	nmc	QV-01
Benzene [71-43-2]^	1.4	U	ug/L	2	1.4	5.0	1K15010	EPA 8260D	11/15/21 13:55	nmc	
Bromodichloromethane [75-27-4]^	1.0	U	ug/L	2	1.0	5.0	1K15010	EPA 8260D	11/15/21 13:55	nmc	
Bromoform [75-25-2]^	1.5	U	ug/L	2	1.5	5.0	1K15010	EPA 8260D	11/15/21 13:55	nmc	
Bromomethane [74-83-9]^	1.9	U	ug/L	2	1.9	5.0	1K15010	EPA 8260D	11/15/21 13:55	nmc	QV-01
Carbon disulfide [75-15-0]^	5.0	U	ug/L	2	5.0	25	1K15010	EPA 8260D	11/15/21 13:55	nmc	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	1.9	U	ug/L	2	1.9	5.0	1K15010	EPA 8260D	11/15/21 13:55	nmc	
Chlorobenzene [108-90-7]^	1.4	U	ug/L	2	1.4	5.0	1K15010	EPA 8260D	11/15/21 13:55	nmc	
Chloroethane [75-00-3]^	2.0	U	ug/L	2	2.0	5.0	1K15010	EPA 8260D	11/15/21 13:55	nmc	QV-01
Chloroform [67-66-3]^	1.6	U	ug/L	2	1.6	5.0	1K15010	EPA 8260D	11/15/21 13:55	nmc	
Chloromethane [74-87-3]^	1.6	U	ug/L	2	1.6	5.0	1K15010	EPA 8260D	11/15/21 13:55	nmc	
cis-1,2-Dichloroethene [156-59-2]^	**27**		ug/L	2	1.1	5.0	1K15010	EPA 8260D	11/15/21 13:55	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	1.2	U	ug/L	2	1.2	5.0	1K15010	EPA 8260D	11/15/21 13:55	nmc	
Cyclohexane [110-82-7]^	1.9	U	ug/L	2	1.9	5.0	1K15010	EPA 8260D	11/15/21 13:55	nmc	QL-02
Dibromochloromethane [124-48-1]^	1.0	U	ug/L	2	1.0	5.0	1K15010	EPA 8260D	11/15/21 13:55	nmc	
Dichlorodifluoromethane [75-71-8]^	1.5	U	ug/L	2	1.5	5.0	1K15010	EPA 8260D	11/15/21 13:55	nmc	
Ethylbenzene [100-41-4]^	1.4	U	ug/L	2	1.4	5.0	1K15010	EPA 8260D	11/15/21 13:55	nmc	
Freon 113 [76-13-1]^	1.5	U	ug/L	2	1.5	5.0	1K15010	EPA 8260D	11/15/21 13:55	nmc	
Isopropylbenzene [98-82-8]^	1.3	U	ug/L	2	1.3	5.0	1K15010	EPA 8260D	11/15/21 13:55	nmc	
Methyl acetate [79-20-9]^	1.9	U	ug/L	2	1.9	5.0	1K15010	EPA 8260D	11/15/21 13:55	nmc	
Methylene Chloride [75-09-2]^	5.0	U	ug/L	2	5.0	25	1K15010	EPA 8260D	11/15/21 13:55	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	1.2	U	ug/L	2	1.2	5.0	1K15010	EPA 8260D	11/15/21 13:55	nmc	
Styrene [100-42-5]^	1.2	U	ug/L	2	1.2	5.0	1K15010	EPA 8260D	11/15/21 13:55	nmc	
Tetrachloroethene [127-18-4]^	1.5	U	ug/L	2	1.5	5.0	1K15010	EPA 8260D	11/15/21 13:55	nmc	
Toluene [108-88-3]^	1.4	U	ug/L	2	1.4	5.0	1K15010	EPA 8260D	11/15/21 13:55	nmc	
trans-1,2-Dichloroethene [156-60-5]^	**9.3**		ug/L	2	1.5	5.0	1K15010	EPA 8260D	11/15/21 13:55	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	1.5	U	ug/L	2	1.5	5.0	1K15010	EPA 8260D	11/15/21 13:55	nmc	
Trichloroethene [79-01-6]^	**160**		ug/L	2	1.8	5.0	1K15010	EPA 8260D	11/15/21 13:55	nmc	
Trichlorofluoromethane [75-69-4]^	1.9	U	ug/L	2	1.9	5.0	1K15010	EPA 8260D	11/15/21 13:55	nmc	QV-01
Vinyl chloride [75-01-4]^	**28**		ug/L	2	1.4	5.0	1K15010	EPA 8260D	11/15/21 13:55	nmc	

ANALYTICAL RESULTS

Description: LC34PS-PZK-080.0-20211111 **Lab Sample ID:** AE07280-22 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 10:08 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*41*	*1*	*50.0*	*82 %*	*41-142*	*1K15010*	*EPA 8260D*	*11/15/21 13:55*	*nmc*	
Dibromofluoromethane	*47*	*1*	*50.0*	*94 %*	*53-146*	*1K15010*	*EPA 8260D*	*11/15/21 13:55*	*nmc*	
Toluene-d8	*45*	*1*	*50.0*	*90 %*	*41-146*	*1K15010*	*EPA 8260D*	*11/15/21 13:55*	*nmc*	

ANALYTICAL RESULTS

Description: LC34PS-PZJ-040.0-20211111 **Lab Sample ID:** AE07280-23 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 10:30 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	400	U	ug/L	500	400	1200	1K12013	EPA 8260D	11/12/21 15:26	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	270	U	ug/L	500	270	1200	1K12013	EPA 8260D	11/12/21 15:26	KKW	
1,1,2-Trichloroethane [79-00-5]^	380	U	ug/L	500	380	1200	1K12013	EPA 8260D	11/12/21 15:26	KKW	
1,1-Dichloroethane [75-34-3]^	310	U	ug/L	500	310	1200	1K12013	EPA 8260D	11/12/21 15:26	KKW	
1,1-Dichloroethene [75-35-4]^	470	U	ug/L	500	470	1200	1K12013	EPA 8260D	11/12/21 15:26	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	350	U	ug/L	500	350	1200	1K12013	EPA 8260D	11/12/21 15:26	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	480	U	ug/L	500	480	1200	1K12013	EPA 8260D	11/12/21 15:26	KKW	
1,2-Dibromoethane [106-93-4]^	390	U	ug/L	500	390	1200	1K12013	EPA 8260D	11/12/21 15:26	KKW	
1,2-Dichlorobenzene [95-50-1]^	360	U	ug/L	500	360	1200	1K12013	EPA 8260D	11/12/21 15:26	KKW	
1,2-Dichloroethane [107-06-2]^	320	U	ug/L	500	320	1200	1K12013	EPA 8260D	11/12/21 15:26	KKW	
1,2-Dichloropropane [78-87-5]^	400	U	ug/L	500	400	1200	1K12013	EPA 8260D	11/12/21 15:26	KKW	
1,3-Dichlorobenzene [541-73-1]^	380	U	ug/L	500	380	1200	1K12013	EPA 8260D	11/12/21 15:26	KKW	
1,4-Dichlorobenzene [106-46-7]^	380	U	ug/L	500	380	1200	1K12013	EPA 8260D	11/12/21 15:26	KKW	
2-Butanone [78-93-3]^	2200	U	ug/L	500	2200	6200	1K12013	EPA 8260D	11/12/21 15:26	KKW	
2-Hexanone [591-78-6]^	1200	U	ug/L	500	1200	6200	1K12013	EPA 8260D	11/12/21 15:26	KKW	
4-Methyl-2-pentanone [108-10-1]^	1200	U	ug/L	500	1200	6200	1K12013	EPA 8260D	11/12/21 15:26	KKW	
Acetone [67-64-1]^	5000	U	ug/L	500	5000	12000	1K12013	EPA 8260D	11/12/21 15:26	KKW	
Benzene [71-43-2]^	360	U	ug/L	500	360	1200	1K12013	EPA 8260D	11/12/21 15:26	KKW	
Bromodichloromethane [75-27-4]^	260	U	ug/L	500	260	1200	1K12013	EPA 8260D	11/12/21 15:26	KKW	
Bromoform [75-25-2]^	380	U	ug/L	500	380	1200	1K12013	EPA 8260D	11/12/21 15:26	KKW	
Bromomethane [74-83-9]^	480	U	ug/L	500	480	1200	1K12013	EPA 8260D	11/12/21 15:26	KKW	QV-01
Carbon disulfide [75-15-0]^	1200	U	ug/L	500	1200	6200	1K12013	EPA 8260D	11/12/21 15:26	KKW	
Carbon Tetrachloride [56-23-5]^	470	U	ug/L	500	470	1200	1K12013	EPA 8260D	11/12/21 15:26	KKW	
Chlorobenzene [108-90-7]^	360	U	ug/L	500	360	1200	1K12013	EPA 8260D	11/12/21 15:26	KKW	
Chloroethane [75-00-3]^	490	U	ug/L	500	490	1200	1K12013	EPA 8260D	11/12/21 15:26	KKW	
Chloroform [67-66-3]^	400	U	ug/L	500	400	1200	1K12013	EPA 8260D	11/12/21 15:26	KKW	
Chloromethane [74-87-3]^	410	U	ug/L	500	410	1200	1K12013	EPA 8260D	11/12/21 15:26	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**27000**		ug/L	500	260	1200	1K12013	EPA 8260D	11/12/21 15:26	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	300	U	ug/L	500	300	1200	1K12013	EPA 8260D	11/12/21 15:26	KKW	
Cyclohexane [110-82-7]^	460	U	ug/L	500	460	1200	1K12013	EPA 8260D	11/12/21 15:26	KKW	
Dibromochloromethane [124-48-1]^	250	U	ug/L	500	250	1200	1K12013	EPA 8260D	11/12/21 15:26	KKW	
Dichlorodifluoromethane [75-71-8]^	370	U	ug/L	500	370	1200	1K12013	EPA 8260D	11/12/21 15:26	KKW	
Ethylbenzene [100-41-4]^	340	U	ug/L	500	340	1200	1K12013	EPA 8260D	11/12/21 15:26	KKW	
Freon 113 [76-13-1]^	360	U	ug/L	500	360	1200	1K12013	EPA 8260D	11/12/21 15:26	KKW	
Isopropylbenzene [98-82-8]^	340	U	ug/L	500	340	1200	1K12013	EPA 8260D	11/12/21 15:26	KKW	
Methyl acetate [79-20-9]^	480	U	ug/L	500	480	1200	1K12013	EPA 8260D	11/12/21 15:26	KKW	
Methylene Chloride [75-09-2]^	1200	U	ug/L	500	1200	6200	1K12013	EPA 8260D	11/12/21 15:26	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	300	U	ug/L	500	300	1200	1K12013	EPA 8260D	11/12/21 15:26	KKW	
Styrene [100-42-5]^	300	U	ug/L	500	300	1200	1K12013	EPA 8260D	11/12/21 15:26	KKW	
Tetrachloroethene [127-18-4]^	380	U	ug/L	500	380	1200	1K12013	EPA 8260D	11/12/21 15:26	KKW	
Toluene [108-88-3]^	360	U	ug/L	500	360	1200	1K12013	EPA 8260D	11/12/21 15:26	KKW	
trans-1,2-Dichloroethene [156-60-5]^	**610**	I	ug/L	500	360	1200	1K12013	EPA 8260D	11/12/21 15:26	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	360	U	ug/L	500	360	1200	1K12013	EPA 8260D	11/12/21 15:26	KKW	
Trichloroethene [79-01-6]^	**21000**		ug/L	500	440	1200	1K12013	EPA 8260D	11/12/21 15:26	KKW	
Trichlorofluoromethane [75-69-4]^	470	U	ug/L	500	470	1200	1K12013	EPA 8260D	11/12/21 15:26	KKW	
Vinyl chloride [75-01-4]^	**2100**		ug/L	500	360	1200	1K12013	EPA 8260D	11/12/21 15:26	KKW	

ANALYTICAL RESULTS

Description: LC34PS-PZJ-040.0-20211111 **Lab Sample ID:** AE07280-23 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 10:30 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*52*	*1*	*50.0*	*103 %*	*41-142*	*1K12013*	*EPA 8260D*	*11/12/21 15:26*	*KKW*	
Dibromofluoromethane	*49*	*1*	*50.0*	*97 %*	*53-146*	*1K12013*	*EPA 8260D*	*11/12/21 15:26*	*KKW*	
Toluene-d8	*52*	*1*	*50.0*	*105 %*	*41-146*	*1K12013*	*EPA 8260D*	*11/12/21 15:26*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZJ-050.0-20211111 **Lab Sample ID:** AE07280-24 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 10:32 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	2000	U	ug/L	2500	2000	6200	1K12013	EPA 8260D	11/12/21 15:54	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	1400	U	ug/L	2500	1400	6200	1K12013	EPA 8260D	11/12/21 15:54	KKW	
1,1,2-Trichloroethane [79-00-5]^	1900	U	ug/L	2500	1900	6200	1K12013	EPA 8260D	11/12/21 15:54	KKW	
1,1-Dichloroethane [75-34-3]^	1600	U	ug/L	2500	1600	6200	1K12013	EPA 8260D	11/12/21 15:54	KKW	
1,1-Dichloroethene [75-35-4]^	2400	U	ug/L	2500	2400	6200	1K12013	EPA 8260D	11/12/21 15:54	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	1800	U	ug/L	2500	1800	6200	1K12013	EPA 8260D	11/12/21 15:54	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	2400	U	ug/L	2500	2400	6200	1K12013	EPA 8260D	11/12/21 15:54	KKW	
1,2-Dibromoethane [106-93-4]^	2000	U	ug/L	2500	2000	6200	1K12013	EPA 8260D	11/12/21 15:54	KKW	
1,2-Dichlorobenzene [95-50-1]^	1800	U	ug/L	2500	1800	6200	1K12013	EPA 8260D	11/12/21 15:54	KKW	
1,2-Dichloroethane [107-06-2]^	1600	U	ug/L	2500	1600	6200	1K12013	EPA 8260D	11/12/21 15:54	KKW	
1,2-Dichloropropane [78-87-5]^	2000	U	ug/L	2500	2000	6200	1K12013	EPA 8260D	11/12/21 15:54	KKW	
1,3-Dichlorobenzene [541-73-1]^	1900	U	ug/L	2500	1900	6200	1K12013	EPA 8260D	11/12/21 15:54	KKW	
1,4-Dichlorobenzene [106-46-7]^	1900	U	ug/L	2500	1900	6200	1K12013	EPA 8260D	11/12/21 15:54	KKW	
2-Butanone [78-93-3]^	11000	U	ug/L	2500	11000	31000	1K12013	EPA 8260D	11/12/21 15:54	KKW	
2-Hexanone [591-78-6]^	6200	U	ug/L	2500	6200	31000	1K12013	EPA 8260D	11/12/21 15:54	KKW	
4-Methyl-2-pentanone [108-10-1]^	6200	U	ug/L	2500	6200	31000	1K12013	EPA 8260D	11/12/21 15:54	KKW	
Acetone [67-64-1]^	25000	U	ug/L	2500	25000	62000	1K12013	EPA 8260D	11/12/21 15:54	KKW	
Benzene [71-43-2]^	1800	U	ug/L	2500	1800	6200	1K12013	EPA 8260D	11/12/21 15:54	KKW	
Bromodichloromethane [75-27-4]^	1300	U	ug/L	2500	1300	6200	1K12013	EPA 8260D	11/12/21 15:54	KKW	
Bromoform [75-25-2]^	1900	U	ug/L	2500	1900	6200	1K12013	EPA 8260D	11/12/21 15:54	KKW	
Bromomethane [74-83-9]^	2400	U	ug/L	2500	2400	6200	1K12013	EPA 8260D	11/12/21 15:54	KKW	QV-01
Carbon disulfide [75-15-0]^	6200	U	ug/L	2500	6200	31000	1K12013	EPA 8260D	11/12/21 15:54	KKW	
Carbon Tetrachloride [56-23-5]^	2400	U	ug/L	2500	2400	6200	1K12013	EPA 8260D	11/12/21 15:54	KKW	
Chlorobenzene [108-90-7]^	1800	U	ug/L	2500	1800	6200	1K12013	EPA 8260D	11/12/21 15:54	KKW	
Chloroethane [75-00-3]^	2400	U	ug/L	2500	2400	6200	1K12013	EPA 8260D	11/12/21 15:54	KKW	
Chloroform [67-66-3]^	2000	U	ug/L	2500	2000	6200	1K12013	EPA 8260D	11/12/21 15:54	KKW	
Chloromethane [74-87-3]^	2000	U	ug/L	2500	2000	6200	1K12013	EPA 8260D	11/12/21 15:54	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**32000**		ug/L	2500	1300	6200	1K12013	EPA 8260D	11/12/21 15:54	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	1500	U	ug/L	2500	1500	6200	1K12013	EPA 8260D	11/12/21 15:54	KKW	
Cyclohexane [110-82-7]^	2300	U	ug/L	2500	2300	6200	1K12013	EPA 8260D	11/12/21 15:54	KKW	
Dibromochloromethane [124-48-1]^	1200	U	ug/L	2500	1200	6200	1K12013	EPA 8260D	11/12/21 15:54	KKW	
Dichlorodifluoromethane [75-71-8]^	1800	U	ug/L	2500	1800	6200	1K12013	EPA 8260D	11/12/21 15:54	KKW	
Ethylbenzene [100-41-4]^	1700	U	ug/L	2500	1700	6200	1K12013	EPA 8260D	11/12/21 15:54	KKW	
Freon 113 [76-13-1]^	1800	U	ug/L	2500	1800	6200	1K12013	EPA 8260D	11/12/21 15:54	KKW	
Isopropylbenzene [98-82-8]^	1700	U	ug/L	2500	1700	6200	1K12013	EPA 8260D	11/12/21 15:54	KKW	
Methyl acetate [79-20-9]^	2400	U	ug/L	2500	2400	6200	1K12013	EPA 8260D	11/12/21 15:54	KKW	
Methylene Chloride [75-09-2]^	6200	U	ug/L	2500	6200	31000	1K12013	EPA 8260D	11/12/21 15:54	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	1500	U	ug/L	2500	1500	6200	1K12013	EPA 8260D	11/12/21 15:54	KKW	
Styrene [100-42-5]^	1500	U	ug/L	2500	1500	6200	1K12013	EPA 8260D	11/12/21 15:54	KKW	
Tetrachloroethene [127-18-4]^	1900	U	ug/L	2500	1900	6200	1K12013	EPA 8260D	11/12/21 15:54	KKW	
Toluene [108-88-3]^	1800	U	ug/L	2500	1800	6200	1K12013	EPA 8260D	11/12/21 15:54	KKW	
trans-1,2-Dichloroethene [156-60-5]^	1800	U	ug/L	2500	1800	6200	1K12013	EPA 8260D	11/12/21 15:54	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	1800	U	ug/L	2500	1800	6200	1K12013	EPA 8260D	11/12/21 15:54	KKW	
Trichloroethene [79-01-6]^	**240000**		ug/L	2500	2200	6200	1K12013	EPA 8260D	11/12/21 15:54	KKW	
Trichlorofluoromethane [75-69-4]^	2400	U	ug/L	2500	2400	6200	1K12013	EPA 8260D	11/12/21 15:54	KKW	
Vinyl chloride [75-01-4]^	1800	U	ug/L	2500	1800	6200	1K12013	EPA 8260D	11/12/21 15:54	KKW	

ANALYTICAL RESULTS

Description: LC34PS-PZJ-050.0-20211111 **Lab Sample ID:** AE07280-24 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 10:32 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*52*	*1*	*50.0*	*104 %*	*41-142*	*1K12013*	*EPA 8260D*	*11/12/21 15:54*	*KKW*	
Dibromofluoromethane	*48*	*1*	*50.0*	*96 %*	*53-146*	*1K12013*	*EPA 8260D*	*11/12/21 15:54*	*KKW*	
Toluene-d8	*52*	*1*	*50.0*	*105 %*	*41-146*	*1K12013*	*EPA 8260D*	*11/12/21 15:54*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZJ-058.0-20211111 **Lab Sample ID:** AE07280-25 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 10:34 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	2000	U	ug/L	2500	2000	6200	1K15010	EPA 8260D	11/15/21 14:24	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	1400	U	ug/L	2500	1400	6200	1K15010	EPA 8260D	11/15/21 14:24	nmc	
1,1,2-Trichloroethane [79-00-5]^	1900	U	ug/L	2500	1900	6200	1K15010	EPA 8260D	11/15/21 14:24	nmc	
1,1-Dichloroethane [75-34-3]^	1600	U	ug/L	2500	1600	6200	1K15010	EPA 8260D	11/15/21 14:24	nmc	QV-01
1,1-Dichloroethene [75-35-4]^	2400	U	ug/L	2500	2400	6200	1K15010	EPA 8260D	11/15/21 14:24	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	1800	U	ug/L	2500	1800	6200	1K15010	EPA 8260D	11/15/21 14:24	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	2400	U	ug/L	2500	2400	6200	1K15010	EPA 8260D	11/15/21 14:24	nmc	
1,2-Dibromoethane [106-93-4]^	2000	U	ug/L	2500	2000	6200	1K15010	EPA 8260D	11/15/21 14:24	nmc	
1,2-Dichlorobenzene [95-50-1]^	1800	U	ug/L	2500	1800	6200	1K15010	EPA 8260D	11/15/21 14:24	nmc	
1,2-Dichloroethane [107-06-2]^	1600	U	ug/L	2500	1600	6200	1K15010	EPA 8260D	11/15/21 14:24	nmc	QV-01
1,2-Dichloropropane [78-87-5]^	2000	U	ug/L	2500	2000	6200	1K15010	EPA 8260D	11/15/21 14:24	nmc	
1,3-Dichlorobenzene [541-73-1]^	1900	U	ug/L	2500	1900	6200	1K15010	EPA 8260D	11/15/21 14:24	nmc	
1,4-Dichlorobenzene [106-46-7]^	1900	U	ug/L	2500	1900	6200	1K15010	EPA 8260D	11/15/21 14:24	nmc	
2-Butanone [78-93-3]^	11000	U	ug/L	2500	11000	31000	1K15010	EPA 8260D	11/15/21 14:24	nmc	
2-Hexanone [591-78-6]^	6200	U	ug/L	2500	6200	31000	1K15010	EPA 8260D	11/15/21 14:24	nmc	QV-01
4-Methyl-2-pentanone [108-10-1]^	6200	U	ug/L	2500	6200	31000	1K15010	EPA 8260D	11/15/21 14:24	nmc	
Acetone [67-64-1]^	25000	U	ug/L	2500	25000	62000	1K15010	EPA 8260D	11/15/21 14:24	nmc	QV-01
Benzene [71-43-2]^	1800	U	ug/L	2500	1800	6200	1K15010	EPA 8260D	11/15/21 14:24	nmc	
Bromodichloromethane [75-27-4]^	1300	U	ug/L	2500	1300	6200	1K15010	EPA 8260D	11/15/21 14:24	nmc	
Bromoform [75-25-2]^	1900	U	ug/L	2500	1900	6200	1K15010	EPA 8260D	11/15/21 14:24	nmc	
Bromomethane [74-83-9]^	2400	U	ug/L	2500	2400	6200	1K15010	EPA 8260D	11/15/21 14:24	nmc	QV-01
Carbon disulfide [75-15-0]^	6200	U	ug/L	2500	6200	31000	1K15010	EPA 8260D	11/15/21 14:24	nmc	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	2400	U	ug/L	2500	2400	6200	1K15010	EPA 8260D	11/15/21 14:24	nmc	
Chlorobenzene [108-90-7]^	1800	U	ug/L	2500	1800	6200	1K15010	EPA 8260D	11/15/21 14:24	nmc	
Chloroethane [75-00-3]^	2400	U	ug/L	2500	2400	6200	1K15010	EPA 8260D	11/15/21 14:24	nmc	QV-01
Chloroform [67-66-3]^	2000	U	ug/L	2500	2000	6200	1K15010	EPA 8260D	11/15/21 14:24	nmc	
Chloromethane [74-87-3]^	2000	U	ug/L	2500	2000	6200	1K15010	EPA 8260D	11/15/21 14:24	nmc	
cis-1,2-Dichloroethene [156-59-2]^	**25000**		ug/L	2500	1300	6200	1K15010	EPA 8260D	11/15/21 14:24	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	1500	U	ug/L	2500	1500	6200	1K15010	EPA 8260D	11/15/21 14:24	nmc	
Cyclohexane [110-82-7]^	2300	U	ug/L	2500	2300	6200	1K15010	EPA 8260D	11/15/21 14:24	nmc	QL-02
Dibromochloromethane [124-48-1]^	1200	U	ug/L	2500	1200	6200	1K15010	EPA 8260D	11/15/21 14:24	nmc	
Dichlorodifluoromethane [75-71-8]^	1800	U	ug/L	2500	1800	6200	1K15010	EPA 8260D	11/15/21 14:24	nmc	
Ethylbenzene [100-41-4]^	1700	U	ug/L	2500	1700	6200	1K15010	EPA 8260D	11/15/21 14:24	nmc	
Freon 113 [76-13-1]^	1800	U	ug/L	2500	1800	6200	1K15010	EPA 8260D	11/15/21 14:24	nmc	
Isopropylbenzene [98-82-8]^	1700	U	ug/L	2500	1700	6200	1K15010	EPA 8260D	11/15/21 14:24	nmc	
Methyl acetate [79-20-9]^	2400	U	ug/L	2500	2400	6200	1K15010	EPA 8260D	11/15/21 14:24	nmc	
Methylene Chloride [75-09-2]^	6200	U	ug/L	2500	6200	31000	1K15010	EPA 8260D	11/15/21 14:24	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	1500	U	ug/L	2500	1500	6200	1K15010	EPA 8260D	11/15/21 14:24	nmc	
Styrene [100-42-5]^	1500	U	ug/L	2500	1500	6200	1K15010	EPA 8260D	11/15/21 14:24	nmc	
Tetrachloroethene [127-18-4]^	1900	U	ug/L	2500	1900	6200	1K15010	EPA 8260D	11/15/21 14:24	nmc	
Toluene [108-88-3]^	1800	U	ug/L	2500	1800	6200	1K15010	EPA 8260D	11/15/21 14:24	nmc	
trans-1,2-Dichloroethene [156-60-5]^	1800	U	ug/L	2500	1800	6200	1K15010	EPA 8260D	11/15/21 14:24	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	1800	U	ug/L	2500	1800	6200	1K15010	EPA 8260D	11/15/21 14:24	nmc	
Trichloroethene [79-01-6]^	**260000**		ug/L	10000	8900	25000	1K12013	EPA 8260D	11/12/21 16:22	KKW	
Trichlorofluoromethane [75-69-4]^	2400	U	ug/L	2500	2400	6200	1K15010	EPA 8260D	11/15/21 14:24	nmc	QV-01
Vinyl chloride [75-01-4]^	1800	U	ug/L	2500	1800	6200	1K15010	EPA 8260D	11/15/21 14:24	nmc	

ANALYTICAL RESULTS

Description: LC34PS-PZJ-058.0-20211111 **Lab Sample ID:** AE07280-25 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 10:34 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*51*	*1*	*50.0*	*102 %*	*41-142*	*1K12013*	*EPA 8260D*	*11/12/21 16:22*	*KKW*	
4-Bromofluorobenzene	*42*	*1*	*50.0*	*83 %*	*41-142*	*1K15010*	*EPA 8260D*	*11/15/21 14:24*	*nmc*	
Dibromofluoromethane	*48*	*1*	*50.0*	*96 %*	*53-146*	*1K12013*	*EPA 8260D*	*11/12/21 16:22*	*KKW*	
Dibromofluoromethane	*46*	*1*	*50.0*	*92 %*	*53-146*	*1K15010*	*EPA 8260D*	*11/15/21 14:24*	*nmc*	
Toluene-d8	*52*	*1*	*50.0*	*105 %*	*41-146*	*1K12013*	*EPA 8260D*	*11/12/21 16:22*	*KKW*	
Toluene-d8	*46*	*1*	*50.0*	*91 %*	*41-146*	*1K15010*	*EPA 8260D*	*11/15/21 14:24*	*nmc*	

ANALYTICAL RESULTS

Description: LC34PS-PZJ-073.0-20211111 **Lab Sample ID:** AE07280-26 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 10:36 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	1K15010	EPA 8260D	11/15/21 12:28	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	1K15010	EPA 8260D	11/15/21 12:28	nmc	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	1K15010	EPA 8260D	11/15/21 12:28	nmc	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	1K15010	EPA 8260D	11/15/21 12:28	nmc	QV-01
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	1K15010	EPA 8260D	11/15/21 12:28	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	1K15010	EPA 8260D	11/15/21 12:28	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	1K15010	EPA 8260D	11/15/21 12:28	nmc	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	1K15010	EPA 8260D	11/15/21 12:28	nmc	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	1K15010	EPA 8260D	11/15/21 12:28	nmc	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	1K15010	EPA 8260D	11/15/21 12:28	nmc	QV-01
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	1K15010	EPA 8260D	11/15/21 12:28	nmc	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	1K15010	EPA 8260D	11/15/21 12:28	nmc	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	1K15010	EPA 8260D	11/15/21 12:28	nmc	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	1K15010	EPA 8260D	11/15/21 12:28	nmc	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	1K15010	EPA 8260D	11/15/21 12:28	nmc	QV-01
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	1K15010	EPA 8260D	11/15/21 12:28	nmc	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	1K15010	EPA 8260D	11/15/21 12:28	nmc	QV-01
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	1K15010	EPA 8260D	11/15/21 12:28	nmc	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	1K15010	EPA 8260D	11/15/21 12:28	nmc	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	1K15010	EPA 8260D	11/15/21 12:28	nmc	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	1K15010	EPA 8260D	11/15/21 12:28	nmc	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	1K15010	EPA 8260D	11/15/21 12:28	nmc	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	1K15010	EPA 8260D	11/15/21 12:28	nmc	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	1K15010	EPA 8260D	11/15/21 12:28	nmc	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	1K15010	EPA 8260D	11/15/21 12:28	nmc	QV-01
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	1K15010	EPA 8260D	11/15/21 12:28	nmc	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	1K15010	EPA 8260D	11/15/21 12:28	nmc	
cis-1,2-Dichloroethene [156-59-2]^	**9.5**		ug/L	1	0.53	2.5	1K15010	EPA 8260D	11/15/21 12:28	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	1K15010	EPA 8260D	11/15/21 12:28	nmc	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	1K15010	EPA 8260D	11/15/21 12:28	nmc	QL-02
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	1K15010	EPA 8260D	11/15/21 12:28	nmc	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	1K15010	EPA 8260D	11/15/21 12:28	nmc	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	1K15010	EPA 8260D	11/15/21 12:28	nmc	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	1K15010	EPA 8260D	11/15/21 12:28	nmc	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	1K15010	EPA 8260D	11/15/21 12:28	nmc	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	1K15010	EPA 8260D	11/15/21 12:28	nmc	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	1K15010	EPA 8260D	11/15/21 12:28	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	1K15010	EPA 8260D	11/15/21 12:28	nmc	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	1K15010	EPA 8260D	11/15/21 12:28	nmc	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	1K15010	EPA 8260D	11/15/21 12:28	nmc	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	1K15010	EPA 8260D	11/15/21 12:28	nmc	
trans-1,2-Dichloroethene [156-60-5]^	0.73	U	ug/L	1	0.73	2.5	1K15010	EPA 8260D	11/15/21 12:28	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	1K15010	EPA 8260D	11/15/21 12:28	nmc	
Trichloroethene [79-01-6]^	**51**		ug/L	1	0.89	2.5	1K15010	EPA 8260D	11/15/21 12:28	nmc	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	1K15010	EPA 8260D	11/15/21 12:28	nmc	QV-01
Vinyl chloride [75-01-4]^	0.71	U	ug/L	1	0.71	2.5	1K15010	EPA 8260D	11/15/21 12:28	nmc	

ANALYTICAL RESULTS

Description: LC34PS-PZJ-073.0-20211111 **Lab Sample ID:** AE07280-26 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 10:36 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*41*	*1*	*50.0*	*83 %*	*41-142*	*1K15010*	*EPA 8260D*	*11/15/21 12:28*	*nmc*	
Dibromofluoromethane	*46*	*1*	*50.0*	*92 %*	*53-146*	*1K15010*	*EPA 8260D*	*11/15/21 12:28*	*nmc*	
Toluene-d8	*45*	*1*	*50.0*	*90 %*	*41-146*	*1K15010*	*EPA 8260D*	*11/15/21 12:28*	*nmc*	

ANALYTICAL RESULTS

Description: LC34PS-PZJ-080.0-20211111 **Lab Sample ID:** AE07280-27 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 10:38 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	1K12013	EPA 8260D	11/12/21 17:17	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	1K12013	EPA 8260D	11/12/21 17:17	KKW	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	1K12013	EPA 8260D	11/12/21 17:17	KKW	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	1K12013	EPA 8260D	11/12/21 17:17	KKW	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	1K12013	EPA 8260D	11/12/21 17:17	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	1K12013	EPA 8260D	11/12/21 17:17	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	1K12013	EPA 8260D	11/12/21 17:17	KKW	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	1K12013	EPA 8260D	11/12/21 17:17	KKW	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	1K12013	EPA 8260D	11/12/21 17:17	KKW	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	1K12013	EPA 8260D	11/12/21 17:17	KKW	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	1K12013	EPA 8260D	11/12/21 17:17	KKW	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	1K12013	EPA 8260D	11/12/21 17:17	KKW	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	1K12013	EPA 8260D	11/12/21 17:17	KKW	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	1K12013	EPA 8260D	11/12/21 17:17	KKW	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	1K12013	EPA 8260D	11/12/21 17:17	KKW	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	1K12013	EPA 8260D	11/12/21 17:17	KKW	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	1K12013	EPA 8260D	11/12/21 17:17	KKW	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	1K12013	EPA 8260D	11/12/21 17:17	KKW	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	1K12013	EPA 8260D	11/12/21 17:17	KKW	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	1K12013	EPA 8260D	11/12/21 17:17	KKW	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	1K12013	EPA 8260D	11/12/21 17:17	KKW	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	1K12013	EPA 8260D	11/12/21 17:17	KKW	
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	1K12013	EPA 8260D	11/12/21 17:17	KKW	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	1K12013	EPA 8260D	11/12/21 17:17	KKW	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	1K12013	EPA 8260D	11/12/21 17:17	KKW	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	1K12013	EPA 8260D	11/12/21 17:17	KKW	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	1K12013	EPA 8260D	11/12/21 17:17	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**210**		ug/L	5	2.6	12	1K17014	EPA 8260D	11/17/21 14:28	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	1K12013	EPA 8260D	11/12/21 17:17	KKW	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	1K12013	EPA 8260D	11/12/21 17:17	KKW	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	1K12013	EPA 8260D	11/12/21 17:17	KKW	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	1K12013	EPA 8260D	11/12/21 17:17	KKW	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	1K12013	EPA 8260D	11/12/21 17:17	KKW	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	1K12013	EPA 8260D	11/12/21 17:17	KKW	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	1K12013	EPA 8260D	11/12/21 17:17	KKW	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	1K12013	EPA 8260D	11/12/21 17:17	KKW	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	1K12013	EPA 8260D	11/12/21 17:17	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	1K12013	EPA 8260D	11/12/21 17:17	KKW	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	1K12013	EPA 8260D	11/12/21 17:17	KKW	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	1K12013	EPA 8260D	11/12/21 17:17	KKW	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	1K12013	EPA 8260D	11/12/21 17:17	KKW	
trans-1,2-Dichloroethene [156-60-5]^	**13**		ug/L	1	0.73	2.5	1K12013	EPA 8260D	11/12/21 17:17	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	1K12013	EPA 8260D	11/12/21 17:17	KKW	
Trichloroethene [79-01-6]^	**99**		ug/L	5	4.4	12	1K17014	EPA 8260D	11/17/21 14:28	KKW	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	1K12013	EPA 8260D	11/12/21 17:17	KKW	
Vinyl chloride [75-01-4]^	**16**		ug/L	1	0.71	2.5	1K12013	EPA 8260D	11/12/21 17:17	KKW	

ANALYTICAL RESULTS

Description: LC34PS-PZJ-080.0-20211111 **Lab Sample ID:** AE07280-27 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 10:38 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*52*	*1*	*50.0*	*104 %*	*41-142*	*1K12013*	*EPA 8260D*	*11/12/21 17:17*	*KKW*	
4-Bromofluorobenzene	*53*	*1*	*50.0*	*105 %*	*41-142*	*1K17014*	*EPA 8260D*	*11/17/21 14:28*	*KKW*	
Dibromofluoromethane	*49*	*1*	*50.0*	*97 %*	*53-146*	*1K12013*	*EPA 8260D*	*11/12/21 17:17*	*KKW*	
Dibromofluoromethane	*51*	*1*	*50.0*	*102 %*	*53-146*	*1K17014*	*EPA 8260D*	*11/17/21 14:28*	*KKW*	
Toluene-d8	*52*	*1*	*50.0*	*104 %*	*41-146*	*1K12013*	*EPA 8260D*	*11/12/21 17:17*	*KKW*	
Toluene-d8	*53*	*1*	*50.0*	*105 %*	*41-146*	*1K17014*	*EPA 8260D*	*11/17/21 14:28*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZG-040.0-20211111 **Lab Sample ID:** AE07280-28 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 11:30 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	4000	U	ug/L	5000	4000	12000	1K12013	EPA 8260D	11/12/21 17:45	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	2700	U	ug/L	5000	2700	12000	1K12013	EPA 8260D	11/12/21 17:45	KKW	
1,1,2-Trichloroethane [79-00-5]^	3800	U	ug/L	5000	3800	12000	1K12013	EPA 8260D	11/12/21 17:45	KKW	
1,1-Dichloroethane [75-34-3]^	3100	U	ug/L	5000	3100	12000	1K12013	EPA 8260D	11/12/21 17:45	KKW	
1,1-Dichloroethene [75-35-4]^	4700	U	ug/L	5000	4700	12000	1K12013	EPA 8260D	11/12/21 17:45	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	3500	U	ug/L	5000	3500	12000	1K12013	EPA 8260D	11/12/21 17:45	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	4800	U	ug/L	5000	4800	12000	1K12013	EPA 8260D	11/12/21 17:45	KKW	
1,2-Dibromoethane [106-93-4]^	3900	U	ug/L	5000	3900	12000	1K12013	EPA 8260D	11/12/21 17:45	KKW	
1,2-Dichlorobenzene [95-50-1]^	3600	U	ug/L	5000	3600	12000	1K12013	EPA 8260D	11/12/21 17:45	KKW	
1,2-Dichloroethane [107-06-2]^	3200	U	ug/L	5000	3200	12000	1K12013	EPA 8260D	11/12/21 17:45	KKW	
1,2-Dichloropropane [78-87-5]^	4000	U	ug/L	5000	4000	12000	1K12013	EPA 8260D	11/12/21 17:45	KKW	
1,3-Dichlorobenzene [541-73-1]^	3800	U	ug/L	5000	3800	12000	1K12013	EPA 8260D	11/12/21 17:45	KKW	
1,4-Dichlorobenzene [106-46-7]^	3800	U	ug/L	5000	3800	12000	1K12013	EPA 8260D	11/12/21 17:45	KKW	
2-Butanone [78-93-3]^	22000	U	ug/L	5000	22000	62000	1K12013	EPA 8260D	11/12/21 17:45	KKW	
2-Hexanone [591-78-6]^	12000	U	ug/L	5000	12000	62000	1K12013	EPA 8260D	11/12/21 17:45	KKW	
4-Methyl-2-pentanone [108-10-1]^	12000	U	ug/L	5000	12000	62000	1K12013	EPA 8260D	11/12/21 17:45	KKW	
Acetone [67-64-1]^	50000	U	ug/L	5000	50000	120000	1K12013	EPA 8260D	11/12/21 17:45	KKW	
Benzene [71-43-2]^	3600	U	ug/L	5000	3600	12000	1K12013	EPA 8260D	11/12/21 17:45	KKW	
Bromodichloromethane [75-27-4]^	2600	U	ug/L	5000	2600	12000	1K12013	EPA 8260D	11/12/21 17:45	KKW	
Bromoform [75-25-2]^	3800	U	ug/L	5000	3800	12000	1K12013	EPA 8260D	11/12/21 17:45	KKW	
Bromomethane [74-83-9]^	4800	U	ug/L	5000	4800	12000	1K12013	EPA 8260D	11/12/21 17:45	KKW	QV-01
Carbon disulfide [75-15-0]^	12000	U	ug/L	5000	12000	62000	1K12013	EPA 8260D	11/12/21 17:45	KKW	
Carbon Tetrachloride [56-23-5]^	4700	U	ug/L	5000	4700	12000	1K12013	EPA 8260D	11/12/21 17:45	KKW	
Chlorobenzene [108-90-7]^	3600	U	ug/L	5000	3600	12000	1K12013	EPA 8260D	11/12/21 17:45	KKW	
Chloroethane [75-00-3]^	4900	U	ug/L	5000	4900	12000	1K12013	EPA 8260D	11/12/21 17:45	KKW	
Chloroform [67-66-3]^	4000	U	ug/L	5000	4000	12000	1K12013	EPA 8260D	11/12/21 17:45	KKW	
Chloromethane [74-87-3]^	4100	U	ug/L	5000	4100	12000	1K12013	EPA 8260D	11/12/21 17:45	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**200000**		ug/L	5000	2600	12000	1K12013	EPA 8260D	11/12/21 17:45	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	3000	U	ug/L	5000	3000	12000	1K12013	EPA 8260D	11/12/21 17:45	KKW	
Cyclohexane [110-82-7]^	4600	U	ug/L	5000	4600	12000	1K12013	EPA 8260D	11/12/21 17:45	KKW	
Dibromochloromethane [124-48-1]^	2500	U	ug/L	5000	2500	12000	1K12013	EPA 8260D	11/12/21 17:45	KKW	
Dichlorodifluoromethane [75-71-8]^	3700	U	ug/L	5000	3700	12000	1K12013	EPA 8260D	11/12/21 17:45	KKW	
Ethylbenzene [100-41-4]^	3400	U	ug/L	5000	3400	12000	1K12013	EPA 8260D	11/12/21 17:45	KKW	
Freon 113 [76-13-1]^	3600	U	ug/L	5000	3600	12000	1K12013	EPA 8260D	11/12/21 17:45	KKW	
Isopropylbenzene [98-82-8]^	3400	U	ug/L	5000	3400	12000	1K12013	EPA 8260D	11/12/21 17:45	KKW	
Methyl acetate [79-20-9]^	4800	U	ug/L	5000	4800	12000	1K12013	EPA 8260D	11/12/21 17:45	KKW	
Methylene Chloride [75-09-2]^	12000	U	ug/L	5000	12000	62000	1K12013	EPA 8260D	11/12/21 17:45	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	3000	U	ug/L	5000	3000	12000	1K12013	EPA 8260D	11/12/21 17:45	KKW	
Styrene [100-42-5]^	3000	U	ug/L	5000	3000	12000	1K12013	EPA 8260D	11/12/21 17:45	KKW	
Tetrachloroethene [127-18-4]^	3800	U	ug/L	5000	3800	12000	1K12013	EPA 8260D	11/12/21 17:45	KKW	
Toluene [108-88-3]^	3600	U	ug/L	5000	3600	12000	1K12013	EPA 8260D	11/12/21 17:45	KKW	
trans-1,2-Dichloroethene [156-60-5]^	3600	U	ug/L	5000	3600	12000	1K12013	EPA 8260D	11/12/21 17:45	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	3600	U	ug/L	5000	3600	12000	1K12013	EPA 8260D	11/12/21 17:45	KKW	
Trichloroethene [79-01-6]^	**55000**		ug/L	2000	1800	5000	1K17014	EPA 8260D	11/17/21 14:56	KKW	
Trichlorofluoromethane [75-69-4]^	4700	U	ug/L	5000	4700	12000	1K12013	EPA 8260D	11/12/21 17:45	KKW	
Vinyl chloride [75-01-4]^	**16000**		ug/L	5000	3600	12000	1K12013	EPA 8260D	11/12/21 17:45	KKW	

ANALYTICAL RESULTS

Description: LC34PS-PZG-040.0-20211111 **Lab Sample ID:** AE07280-28 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 11:30 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	51	1	50.0	101 %	41-142	1K12013	EPA 8260D	11/12/21 17:45	KKW	
4-Bromofluorobenzene	52	1	50.0	104 %	41-142	1K17014	EPA 8260D	11/17/21 14:56	KKW	
Dibromofluoromethane	49	1	50.0	97 %	53-146	1K12013	EPA 8260D	11/12/21 17:45	KKW	
Dibromofluoromethane	50	1	50.0	100 %	53-146	1K17014	EPA 8260D	11/17/21 14:56	KKW	
Toluene-d8	53	1	50.0	106 %	41-146	1K12013	EPA 8260D	11/12/21 17:45	KKW	
Toluene-d8	53	1	50.0	106 %	41-146	1K17014	EPA 8260D	11/17/21 14:56	KKW	

ANALYTICAL RESULTS

Description: LC34PS-PZG-050.0-20211111 **Lab Sample ID:** AE07280-29 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 11:32 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	8000	U	ug/L	10000	8000	25000	1K12010	EPA 8260D	11/12/21 19:22	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	5400	U	ug/L	10000	5400	25000	1K12010	EPA 8260D	11/12/21 19:22	nmc	
1,1,2-Trichloroethane [79-00-5]^	7600	U	ug/L	10000	7600	25000	1K12010	EPA 8260D	11/12/21 19:22	nmc	
1,1-Dichloroethane [75-34-3]^	6200	U	ug/L	10000	6200	25000	1K12010	EPA 8260D	11/12/21 19:22	nmc	
1,1-Dichloroethene [75-35-4]^	9400	U	ug/L	10000	9400	25000	1K12010	EPA 8260D	11/12/21 19:22	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	7000	U	ug/L	10000	7000	25000	1K12010	EPA 8260D	11/12/21 19:22	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	9600	U	ug/L	10000	9600	25000	1K12010	EPA 8260D	11/12/21 19:22	nmc	
1,2-Dibromoethane [106-93-4]^	7800	U	ug/L	10000	7800	25000	1K12010	EPA 8260D	11/12/21 19:22	nmc	
1,2-Dichlorobenzene [95-50-1]^	7300	U	ug/L	10000	7300	25000	1K12010	EPA 8260D	11/12/21 19:22	nmc	
1,2-Dichloroethane [107-06-2]^	6300	U	ug/L	10000	6300	25000	1K12010	EPA 8260D	11/12/21 19:22	nmc	
1,2-Dichloropropane [78-87-5]^	8000	U	ug/L	10000	8000	25000	1K12010	EPA 8260D	11/12/21 19:22	nmc	
1,3-Dichlorobenzene [541-73-1]^	7700	U	ug/L	10000	7700	25000	1K12010	EPA 8260D	11/12/21 19:22	nmc	
1,4-Dichlorobenzene [106-46-7]^	7600	U	ug/L	10000	7600	25000	1K12010	EPA 8260D	11/12/21 19:22	nmc	
2-Butanone [78-93-3]^	45000	U	ug/L	10000	45000	120000	1K12010	EPA 8260D	11/12/21 19:22	nmc	
2-Hexanone [591-78-6]^	25000	U	ug/L	10000	25000	120000	1K12010	EPA 8260D	11/12/21 19:22	nmc	
4-Methyl-2-pentanone [108-10-1]^	25000	U	ug/L	10000	25000	120000	1K12010	EPA 8260D	11/12/21 19:22	nmc	
Acetone [67-64-1]^	100000	U	ug/L	10000	100000	250000	1K12010	EPA 8260D	11/12/21 19:22	nmc	
Benzene [71-43-2]^	7100	U	ug/L	10000	7100	25000	1K12010	EPA 8260D	11/12/21 19:22	nmc	
Bromodichloromethane [75-27-4]^	5200	U	ug/L	10000	5200	25000	1K12010	EPA 8260D	11/12/21 19:22	nmc	
Bromoform [75-25-2]^	7500	U	ug/L	10000	7500	25000	1K12010	EPA 8260D	11/12/21 19:22	nmc	
Bromomethane [74-83-9]^	9500	U	ug/L	10000	9500	25000	1K12010	EPA 8260D	11/12/21 19:22	nmc	QV-01
Carbon disulfide [75-15-0]^	25000	U	ug/L	10000	25000	120000	1K12010	EPA 8260D	11/12/21 19:22	nmc	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	9400	U	ug/L	10000	9400	25000	1K12010	EPA 8260D	11/12/21 19:22	nmc	
Chlorobenzene [108-90-7]^	7200	U	ug/L	10000	7200	25000	1K12010	EPA 8260D	11/12/21 19:22	nmc	
Chloroethane [75-00-3]^	9800	U	ug/L	10000	9800	25000	1K12010	EPA 8260D	11/12/21 19:22	nmc	QV-01
Chloroform [67-66-3]^	8000	U	ug/L	10000	8000	25000	1K12010	EPA 8260D	11/12/21 19:22	nmc	
Chloromethane [74-87-3]^	8200	U	ug/L	10000	8200	25000	1K12010	EPA 8260D	11/12/21 19:22	nmc	QV-01
cis-1,2-Dichloroethene [156-59-2]^	**49000**		ug/L	10000	5300	25000	1K12010	EPA 8260D	11/12/21 19:22	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	5900	U	ug/L	10000	5900	25000	1K12010	EPA 8260D	11/12/21 19:22	nmc	
Cyclohexane [110-82-7]^	9300	U	ug/L	10000	9300	25000	1K12010	EPA 8260D	11/12/21 19:22	nmc	QL-02
Dibromochloromethane [124-48-1]^	5000	U	ug/L	10000	5000	25000	1K12010	EPA 8260D	11/12/21 19:22	nmc	
Dichlorodifluoromethane [75-71-8]^	7400	U	ug/L	10000	7400	25000	1K12010	EPA 8260D	11/12/21 19:22	nmc	
Ethylbenzene [100-41-4]^	6900	U	ug/L	10000	6900	25000	1K12010	EPA 8260D	11/12/21 19:22	nmc	
Freon 113 [76-13-1]^	7300	U	ug/L	10000	7300	25000	1K12010	EPA 8260D	11/12/21 19:22	nmc	
Isopropylbenzene [98-82-8]^	6700	U	ug/L	10000	6700	25000	1K12010	EPA 8260D	11/12/21 19:22	nmc	
Methyl acetate [79-20-9]^	9500	U	ug/L	10000	9500	25000	1K12010	EPA 8260D	11/12/21 19:22	nmc	
Methylene Chloride [75-09-2]^	25000	U	ug/L	10000	25000	120000	1K12010	EPA 8260D	11/12/21 19:22	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	6000	U	ug/L	10000	6000	25000	1K12010	EPA 8260D	11/12/21 19:22	nmc	
Styrene [100-42-5]^	6100	U	ug/L	10000	6100	25000	1K12010	EPA 8260D	11/12/21 19:22	nmc	
Tetrachloroethene [127-18-4]^	7600	U	ug/L	10000	7600	25000	1K12010	EPA 8260D	11/12/21 19:22	nmc	
Toluene [108-88-3]^	7200	U	ug/L	10000	7200	25000	1K12010	EPA 8260D	11/12/21 19:22	nmc	
trans-1,2-Dichloroethene [156-60-5]^	7300	U	ug/L	10000	7300	25000	1K12010	EPA 8260D	11/12/21 19:22	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	7300	U	ug/L	10000	7300	25000	1K12010	EPA 8260D	11/12/21 19:22	nmc	
Trichloroethene [79-01-6]^	**650000**		ug/L	10000	8900	25000	1K12010	EPA 8260D	11/12/21 19:22	nmc	
Trichlorofluoromethane [75-69-4]^	9400	U	ug/L	10000	9400	25000	1K12010	EPA 8260D	11/12/21 19:22	nmc	QV-01
Vinyl chloride [75-01-4]^	7100	U	ug/L	10000	7100	25000	1K12010	EPA 8260D	11/12/21 19:22	nmc	

ANALYTICAL RESULTS

Description: LC34PS-PZG-050.0-20211111 | **Lab Sample ID:** AE07280-29 | **Received:** 11/11/21 15:25

Matrix: Ground Water | **Sampled:** 11/11/21 11:32 | **Work Order:** AE07280

Project: NASA KSC LC34 | **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*41*	*1*	*50.0*	*82 %*	*41-142*	*1K12010*	*EPA 8260D*	*11/12/21 19:22*	*nmc*	
Dibromofluoromethane	*45*	*1*	*50.0*	*89 %*	*53-146*	*1K12010*	*EPA 8260D*	*11/12/21 19:22*	*nmc*	
Toluene-d8	*44*	*1*	*50.0*	*88 %*	*41-146*	*1K12010*	*EPA 8260D*	*11/12/21 19:22*	*nmc*	

ANALYTICAL RESULTS

Description: LC34PS-PZG-058.0-20211111 **Lab Sample ID:** AE07280-30 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 11:34 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	2000	U	ug/L	2500	2000	6200	1K15010	EPA 8260D	11/15/21 14:52	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	1400	U	ug/L	2500	1400	6200	1K15010	EPA 8260D	11/15/21 14:52	nmc	
1,1,2-Trichloroethane [79-00-5]^	1900	U	ug/L	2500	1900	6200	1K15010	EPA 8260D	11/15/21 14:52	nmc	
1,1-Dichloroethane [75-34-3]^	1600	U	ug/L	2500	1600	6200	1K15010	EPA 8260D	11/15/21 14:52	nmc	QV-01
1,1-Dichloroethene [75-35-4]^	2400	U	ug/L	2500	2400	6200	1K15010	EPA 8260D	11/15/21 14:52	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	1800	U	ug/L	2500	1800	6200	1K15010	EPA 8260D	11/15/21 14:52	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	2400	U	ug/L	2500	2400	6200	1K15010	EPA 8260D	11/15/21 14:52	nmc	
1,2-Dibromoethane [106-93-4]^	2000	U	ug/L	2500	2000	6200	1K15010	EPA 8260D	11/15/21 14:52	nmc	
1,2-Dichlorobenzene [95-50-1]^	1800	U	ug/L	2500	1800	6200	1K15010	EPA 8260D	11/15/21 14:52	nmc	
1,2-Dichloroethane [107-06-2]^	1600	U	ug/L	2500	1600	6200	1K15010	EPA 8260D	11/15/21 14:52	nmc	QV-01
1,2-Dichloropropane [78-87-5]^	2000	U	ug/L	2500	2000	6200	1K15010	EPA 8260D	11/15/21 14:52	nmc	
1,3-Dichlorobenzene [541-73-1]^	1900	U	ug/L	2500	1900	6200	1K15010	EPA 8260D	11/15/21 14:52	nmc	
1,4-Dichlorobenzene [106-46-7]^	1900	U	ug/L	2500	1900	6200	1K15010	EPA 8260D	11/15/21 14:52	nmc	
2-Butanone [78-93-3]^	11000	U	ug/L	2500	11000	31000	1K15010	EPA 8260D	11/15/21 14:52	nmc	
2-Hexanone [591-78-6]^	6200	U	ug/L	2500	6200	31000	1K15010	EPA 8260D	11/15/21 14:52	nmc	QV-01
4-Methyl-2-pentanone [108-10-1]^	6200	U	ug/L	2500	6200	31000	1K15010	EPA 8260D	11/15/21 14:52	nmc	
Acetone [67-64-1]^	25000	U	ug/L	2500	25000	62000	1K15010	EPA 8260D	11/15/21 14:52	nmc	QV-01
Benzene [71-43-2]^	1800	U	ug/L	2500	1800	6200	1K15010	EPA 8260D	11/15/21 14:52	nmc	
Bromodichloromethane [75-27-4]^	1300	U	ug/L	2500	1300	6200	1K15010	EPA 8260D	11/15/21 14:52	nmc	
Bromoform [75-25-2]^	1900	U	ug/L	2500	1900	6200	1K15010	EPA 8260D	11/15/21 14:52	nmc	
Bromomethane [74-83-9]^	2400	U	ug/L	2500	2400	6200	1K15010	EPA 8260D	11/15/21 14:52	nmc	QV-01
Carbon disulfide [75-15-0]^	6200	U	ug/L	2500	6200	31000	1K15010	EPA 8260D	11/15/21 14:52	nmc	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	2400	U	ug/L	2500	2400	6200	1K15010	EPA 8260D	11/15/21 14:52	nmc	
Chlorobenzene [108-90-7]^	1800	U	ug/L	2500	1800	6200	1K15010	EPA 8260D	11/15/21 14:52	nmc	
Chloroethane [75-00-3]^	2400	U	ug/L	2500	2400	6200	1K15010	EPA 8260D	11/15/21 14:52	nmc	QV-01
Chloroform [67-66-3]^	2000	U	ug/L	2500	2000	6200	1K15010	EPA 8260D	11/15/21 14:52	nmc	
Chloromethane [74-87-3]^	2000	U	ug/L	2500	2000	6200	1K15010	EPA 8260D	11/15/21 14:52	nmc	
cis-1,2-Dichloroethene [156-59-2]^	**20000**		ug/L	2500	1300	6200	1K15010	EPA 8260D	11/15/21 14:52	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	1500	U	ug/L	2500	1500	6200	1K15010	EPA 8260D	11/15/21 14:52	nmc	
Cyclohexane [110-82-7]^	2300	U	ug/L	2500	2300	6200	1K15010	EPA 8260D	11/15/21 14:52	nmc	QL-02
Dibromochloromethane [124-48-1]^	1200	U	ug/L	2500	1200	6200	1K15010	EPA 8260D	11/15/21 14:52	nmc	
Dichlorodifluoromethane [75-71-8]^	1800	U	ug/L	2500	1800	6200	1K15010	EPA 8260D	11/15/21 14:52	nmc	
Ethylbenzene [100-41-4]^	1700	U	ug/L	2500	1700	6200	1K15010	EPA 8260D	11/15/21 14:52	nmc	
Freon 113 [76-13-1]^	1800	U	ug/L	2500	1800	6200	1K15010	EPA 8260D	11/15/21 14:52	nmc	
Isopropylbenzene [98-82-8]^	1700	U	ug/L	2500	1700	6200	1K15010	EPA 8260D	11/15/21 14:52	nmc	
Methyl acetate [79-20-9]^	2400	U	ug/L	2500	2400	6200	1K15010	EPA 8260D	11/15/21 14:52	nmc	
Methylene Chloride [75-09-2]^	6200	U	ug/L	2500	6200	31000	1K15010	EPA 8260D	11/15/21 14:52	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	1500	U	ug/L	2500	1500	6200	1K15010	EPA 8260D	11/15/21 14:52	nmc	
Styrene [100-42-5]^	1500	U	ug/L	2500	1500	6200	1K15010	EPA 8260D	11/15/21 14:52	nmc	
Tetrachloroethene [127-18-4]^	1900	U	ug/L	2500	1900	6200	1K15010	EPA 8260D	11/15/21 14:52	nmc	
Toluene [108-88-3]^	1800	U	ug/L	2500	1800	6200	1K15010	EPA 8260D	11/15/21 14:52	nmc	
trans-1,2-Dichloroethene [156-60-5]^	1800	U	ug/L	2500	1800	6200	1K15010	EPA 8260D	11/15/21 14:52	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	1800	U	ug/L	2500	1800	6200	1K15010	EPA 8260D	11/15/21 14:52	nmc	
Trichloroethene [79-01-6]^	**220000**		ug/L	2500	2200	6200	1K15010	EPA 8260D	11/15/21 14:52	nmc	
Trichlorofluoromethane [75-69-4]^	2400	U	ug/L	2500	2400	6200	1K15010	EPA 8260D	11/15/21 14:52	nmc	QV-01
Vinyl chloride [75-01-4]^	1800	U	ug/L	2500	1800	6200	1K15010	EPA 8260D	11/15/21 14:52	nmc	

ANALYTICAL RESULTS

Description: LC34PS-PZG-058.0-20211111 **Lab Sample ID:** AE07280-30 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 11:34 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*40*	*1*	*50.0*	*81 %*	*41-142*	*1K15010*	*EPA 8260D*	*11/15/21 14:52*	*nmc*	
Dibromofluoromethane	*46*	*1*	*50.0*	*92 %*	*53-146*	*1K15010*	*EPA 8260D*	*11/15/21 14:52*	*nmc*	
Toluene-d8	*45*	*1*	*50.0*	*89 %*	*41-146*	*1K15010*	*EPA 8260D*	*11/15/21 14:52*	*nmc*	

ANALYTICAL RESULTS

Description: LC34PS-PZG-073.0-20211111 **Lab Sample ID:** AE07280-31 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 11:36 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	1K12031	EPA 8260D	11/13/21 04:29	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	1K12031	EPA 8260D	11/13/21 04:29	nmc	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	1K12031	EPA 8260D	11/13/21 04:29	nmc	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	1K12031	EPA 8260D	11/13/21 04:29	nmc	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	1K12031	EPA 8260D	11/13/21 04:29	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	1K12031	EPA 8260D	11/13/21 04:29	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	1K12031	EPA 8260D	11/13/21 04:29	nmc	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	1K12031	EPA 8260D	11/13/21 04:29	nmc	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	1K12031	EPA 8260D	11/13/21 04:29	nmc	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	1K12031	EPA 8260D	11/13/21 04:29	nmc	QV-01
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	1K12031	EPA 8260D	11/13/21 04:29	nmc	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	1K12031	EPA 8260D	11/13/21 04:29	nmc	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	1K12031	EPA 8260D	11/13/21 04:29	nmc	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	1K12031	EPA 8260D	11/13/21 04:29	nmc	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	1K12031	EPA 8260D	11/13/21 04:29	nmc	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	1K12031	EPA 8260D	11/13/21 04:29	nmc	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	1K12031	EPA 8260D	11/13/21 04:29	nmc	QV-01
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	1K12031	EPA 8260D	11/13/21 04:29	nmc	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	1K12031	EPA 8260D	11/13/21 04:29	nmc	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	1K12031	EPA 8260D	11/13/21 04:29	nmc	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	1K12031	EPA 8260D	11/13/21 04:29	nmc	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	1K12031	EPA 8260D	11/13/21 04:29	nmc	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	1K12031	EPA 8260D	11/13/21 04:29	nmc	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	1K12031	EPA 8260D	11/13/21 04:29	nmc	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	1K12031	EPA 8260D	11/13/21 04:29	nmc	QV-01
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	1K12031	EPA 8260D	11/13/21 04:29	nmc	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	1K12031	EPA 8260D	11/13/21 04:29	nmc	
cis-1,2-Dichloroethene [156-59-2]^	**6.1**		ug/L	1	0.53	2.5	1K12031	EPA 8260D	11/13/21 04:29	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	1K12031	EPA 8260D	11/13/21 04:29	nmc	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	1K12031	EPA 8260D	11/13/21 04:29	nmc	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	1K12031	EPA 8260D	11/13/21 04:29	nmc	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	1K12031	EPA 8260D	11/13/21 04:29	nmc	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	1K12031	EPA 8260D	11/13/21 04:29	nmc	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	1K12031	EPA 8260D	11/13/21 04:29	nmc	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	1K12031	EPA 8260D	11/13/21 04:29	nmc	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	1K12031	EPA 8260D	11/13/21 04:29	nmc	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	1K12031	EPA 8260D	11/13/21 04:29	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	1K12031	EPA 8260D	11/13/21 04:29	nmc	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	1K12031	EPA 8260D	11/13/21 04:29	nmc	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	1K12031	EPA 8260D	11/13/21 04:29	nmc	QV-01
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	1K12031	EPA 8260D	11/13/21 04:29	nmc	
trans-1,2-Dichloroethene [156-60-5]^	**0.84**	I	ug/L	1	0.73	2.5	1K12031	EPA 8260D	11/13/21 04:29	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	1K12031	EPA 8260D	11/13/21 04:29	nmc	
Trichloroethene [79-01-6]^	**160**		ug/L	5	4.4	12	1K17014	EPA 8260D	11/17/21 15:24	KKW	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	1K12031	EPA 8260D	11/13/21 04:29	nmc	QL-02, QV-01

ANALYTICAL RESULTS

Description: LC34PS-PZG-073.0-20211111 **Lab Sample ID:** AE07280-31 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 11:36 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Vinyl chloride [75-01-4]^	**0.72**	I	ug/L	1	0.71	2.5	1K12031	EPA 8260D	11/13/21 04:29	nmc	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*41*	*1*	*50.0*	*81 %*	*41-142*	*1K12031*	*EPA 8260D*	*11/13/21 04:29*	*nmc*	
4-Bromofluorobenzene	*52*	*1*	*50.0*	*104 %*	*41-142*	*1K17014*	*EPA 8260D*	*11/17/21 15:24*	*KKW*	
Dibromofluoromethane	*44*	*1*	*50.0*	*87 %*	*53-146*	*1K12031*	*EPA 8260D*	*11/13/21 04:29*	*nmc*	
Dibromofluoromethane	*50*	*1*	*50.0*	*99 %*	*53-146*	*1K17014*	*EPA 8260D*	*11/17/21 15:24*	*KKW*	
Toluene-d8	*44*	*1*	*50.0*	*87 %*	*41-146*	*1K12031*	*EPA 8260D*	*11/13/21 04:29*	*nmc*	
Toluene-d8	*53*	*1*	*50.0*	*107 %*	*41-146*	*1K17014*	*EPA 8260D*	*11/17/21 15:24*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZG-080.0-20211111 **Lab Sample ID:** AE07280-32 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 11:38 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	1K12031	EPA 8260D	11/13/21 04:58	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	1K12031	EPA 8260D	11/13/21 04:58	nmc	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	1K12031	EPA 8260D	11/13/21 04:58	nmc	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	1K12031	EPA 8260D	11/13/21 04:58	nmc	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	1K12031	EPA 8260D	11/13/21 04:58	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	1K12031	EPA 8260D	11/13/21 04:58	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	1K12031	EPA 8260D	11/13/21 04:58	nmc	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	1K12031	EPA 8260D	11/13/21 04:58	nmc	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	1K12031	EPA 8260D	11/13/21 04:58	nmc	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	1K12031	EPA 8260D	11/13/21 04:58	nmc	QV-01
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	1K12031	EPA 8260D	11/13/21 04:58	nmc	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	1K12031	EPA 8260D	11/13/21 04:58	nmc	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	1K12031	EPA 8260D	11/13/21 04:58	nmc	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	1K12031	EPA 8260D	11/13/21 04:58	nmc	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	1K12031	EPA 8260D	11/13/21 04:58	nmc	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	1K12031	EPA 8260D	11/13/21 04:58	nmc	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	1K12031	EPA 8260D	11/13/21 04:58	nmc	QV-01
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	1K12031	EPA 8260D	11/13/21 04:58	nmc	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	1K12031	EPA 8260D	11/13/21 04:58	nmc	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	1K12031	EPA 8260D	11/13/21 04:58	nmc	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	1K12031	EPA 8260D	11/13/21 04:58	nmc	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	1K12031	EPA 8260D	11/13/21 04:58	nmc	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	1K12031	EPA 8260D	11/13/21 04:58	nmc	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	1K12031	EPA 8260D	11/13/21 04:58	nmc	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	1K12031	EPA 8260D	11/13/21 04:58	nmc	QV-01
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	1K12031	EPA 8260D	11/13/21 04:58	nmc	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	1K12031	EPA 8260D	11/13/21 04:58	nmc	
cis-1,2-Dichloroethene [156-59-2]^	**71**		ug/L	1	0.53	2.5	1K12031	EPA 8260D	11/13/21 04:58	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	1K12031	EPA 8260D	11/13/21 04:58	nmc	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	1K12031	EPA 8260D	11/13/21 04:58	nmc	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	1K12031	EPA 8260D	11/13/21 04:58	nmc	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	1K12031	EPA 8260D	11/13/21 04:58	nmc	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	1K12031	EPA 8260D	11/13/21 04:58	nmc	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	1K12031	EPA 8260D	11/13/21 04:58	nmc	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	1K12031	EPA 8260D	11/13/21 04:58	nmc	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	1K12031	EPA 8260D	11/13/21 04:58	nmc	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	1K12031	EPA 8260D	11/13/21 04:58	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	1K12031	EPA 8260D	11/13/21 04:58	nmc	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	1K12031	EPA 8260D	11/13/21 04:58	nmc	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	1K12031	EPA 8260D	11/13/21 04:58	nmc	QV-01
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	1K12031	EPA 8260D	11/13/21 04:58	nmc	
trans-1,2-Dichloroethene [156-60-5]^	**11**		ug/L	1	0.73	2.5	1K12031	EPA 8260D	11/13/21 04:58	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	1K12031	EPA 8260D	11/13/21 04:58	nmc	
Trichloroethene [79-01-6]^	**10**		ug/L	1	0.89	2.5	1K12031	EPA 8260D	11/13/21 04:58	nmc	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	1K12031	EPA 8260D	11/13/21 04:58	nmc	QL-02, QV-01

ANALYTICAL RESULTS

Description: LC34PS-PZG-080.0-20211111 **Lab Sample ID:** AE07280-32 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 11:38 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Vinyl chloride [75-01-4]^	**32**		ug/L	1	0.71	2.5	1K12031	EPA 8260D	11/13/21 04:58	nmc	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*40*	*1*	*50.0*	*80 %*	*41-142*	*1K12031*	*EPA 8260D*	*11/13/21 04:58*	*nmc*	
Dibromofluoromethane	*43*	*1*	*50.0*	*87 %*	*53-146*	*1K12031*	*EPA 8260D*	*11/13/21 04:58*	*nmc*	
Toluene-d8	*45*	*1*	*50.0*	*89 %*	*41-146*	*1K12031*	*EPA 8260D*	*11/13/21 04:58*	*nmc*	

ANALYTICAL RESULTS

Description: LC34PS-PZF-040.0-20211111 **Lab Sample ID:** AE07280-33 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 12:00 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	2000	U	ug/L	2500	2000	6200	1K15010	EPA 8260D	11/15/21 15:21	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	1400	U	ug/L	2500	1400	6200	1K15010	EPA 8260D	11/15/21 15:21	nmc	
1,1,2-Trichloroethane [79-00-5]^	1900	U	ug/L	2500	1900	6200	1K15010	EPA 8260D	11/15/21 15:21	nmc	
1,1-Dichloroethane [75-34-3]^	1600	U	ug/L	2500	1600	6200	1K15010	EPA 8260D	11/15/21 15:21	nmc	QV-01
1,1-Dichloroethene [75-35-4]^	2400	U	ug/L	2500	2400	6200	1K15010	EPA 8260D	11/15/21 15:21	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	1800	U	ug/L	2500	1800	6200	1K15010	EPA 8260D	11/15/21 15:21	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	2400	U	ug/L	2500	2400	6200	1K15010	EPA 8260D	11/15/21 15:21	nmc	
1,2-Dibromoethane [106-93-4]^	2000	U	ug/L	2500	2000	6200	1K15010	EPA 8260D	11/15/21 15:21	nmc	
1,2-Dichlorobenzene [95-50-1]^	1800	U	ug/L	2500	1800	6200	1K15010	EPA 8260D	11/15/21 15:21	nmc	
1,2-Dichloroethane [107-06-2]^	1600	U	ug/L	2500	1600	6200	1K15010	EPA 8260D	11/15/21 15:21	nmc	QV-01
1,2-Dichloropropane [78-87-5]^	2000	U	ug/L	2500	2000	6200	1K15010	EPA 8260D	11/15/21 15:21	nmc	
1,3-Dichlorobenzene [541-73-1]^	1900	U	ug/L	2500	1900	6200	1K15010	EPA 8260D	11/15/21 15:21	nmc	
1,4-Dichlorobenzene [106-46-7]^	1900	U	ug/L	2500	1900	6200	1K15010	EPA 8260D	11/15/21 15:21	nmc	
2-Butanone [78-93-3]^	11000	U	ug/L	2500	11000	31000	1K15010	EPA 8260D	11/15/21 15:21	nmc	
2-Hexanone [591-78-6]^	6200	U	ug/L	2500	6200	31000	1K15010	EPA 8260D	11/15/21 15:21	nmc	QV-01
4-Methyl-2-pentanone [108-10-1]^	6200	U	ug/L	2500	6200	31000	1K15010	EPA 8260D	11/15/21 15:21	nmc	
Acetone [67-64-1]^	25000	U	ug/L	2500	25000	62000	1K15010	EPA 8260D	11/15/21 15:21	nmc	QV-01
Benzene [71-43-2]^	1800	U	ug/L	2500	1800	6200	1K15010	EPA 8260D	11/15/21 15:21	nmc	
Bromodichloromethane [75-27-4]^	1300	U	ug/L	2500	1300	6200	1K15010	EPA 8260D	11/15/21 15:21	nmc	
Bromoform [75-25-2]^	1900	U	ug/L	2500	1900	6200	1K15010	EPA 8260D	11/15/21 15:21	nmc	
Bromomethane [74-83-9]^	2400	U	ug/L	2500	2400	6200	1K15010	EPA 8260D	11/15/21 15:21	nmc	QV-01
Carbon disulfide [75-15-0]^	6200	U	ug/L	2500	6200	31000	1K15010	EPA 8260D	11/15/21 15:21	nmc	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	2400	U	ug/L	2500	2400	6200	1K15010	EPA 8260D	11/15/21 15:21	nmc	
Chlorobenzene [108-90-7]^	1800	U	ug/L	2500	1800	6200	1K15010	EPA 8260D	11/15/21 15:21	nmc	
Chloroethane [75-00-3]^	2400	U	ug/L	2500	2400	6200	1K15010	EPA 8260D	11/15/21 15:21	nmc	QV-01
Chloroform [67-66-3]^	2000	U	ug/L	2500	2000	6200	1K15010	EPA 8260D	11/15/21 15:21	nmc	
Chloromethane [74-87-3]^	2000	U	ug/L	2500	2000	6200	1K15010	EPA 8260D	11/15/21 15:21	nmc	
cis-1,2-Dichloroethene [156-59-2]^	**33000**		ug/L	2500	1300	6200	1K15010	EPA 8260D	11/15/21 15:21	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	1500	U	ug/L	2500	1500	6200	1K15010	EPA 8260D	11/15/21 15:21	nmc	
Cyclohexane [110-82-7]^	2300	U	ug/L	2500	2300	6200	1K15010	EPA 8260D	11/15/21 15:21	nmc	QL-02
Dibromochloromethane [124-48-1]^	1200	U	ug/L	2500	1200	6200	1K15010	EPA 8260D	11/15/21 15:21	nmc	
Dichlorodifluoromethane [75-71-8]^	1800	U	ug/L	2500	1800	6200	1K15010	EPA 8260D	11/15/21 15:21	nmc	
Ethylbenzene [100-41-4]^	1700	U	ug/L	2500	1700	6200	1K15010	EPA 8260D	11/15/21 15:21	nmc	
Freon 113 [76-13-1]^	1800	U	ug/L	2500	1800	6200	1K15010	EPA 8260D	11/15/21 15:21	nmc	
Isopropylbenzene [98-82-8]^	1700	U	ug/L	2500	1700	6200	1K15010	EPA 8260D	11/15/21 15:21	nmc	
Methyl acetate [79-20-9]^	2400	U	ug/L	2500	2400	6200	1K15010	EPA 8260D	11/15/21 15:21	nmc	
Methylene Chloride [75-09-2]^	6200	U	ug/L	2500	6200	31000	1K15010	EPA 8260D	11/15/21 15:21	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	1500	U	ug/L	2500	1500	6200	1K15010	EPA 8260D	11/15/21 15:21	nmc	
Styrene [100-42-5]^	1500	U	ug/L	2500	1500	6200	1K15010	EPA 8260D	11/15/21 15:21	nmc	
Tetrachloroethene [127-18-4]^	1900	U	ug/L	2500	1900	6200	1K15010	EPA 8260D	11/15/21 15:21	nmc	
Toluene [108-88-3]^	1800	U	ug/L	2500	1800	6200	1K15010	EPA 8260D	11/15/21 15:21	nmc	
trans-1,2-Dichloroethene [156-60-5]^	1800	U	ug/L	2500	1800	6200	1K15010	EPA 8260D	11/15/21 15:21	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	1800	U	ug/L	2500	1800	6200	1K15010	EPA 8260D	11/15/21 15:21	nmc	
Trichloroethene [79-01-6]^	**210000**		ug/L	2500	2200	6200	1K15010	EPA 8260D	11/15/21 15:21	nmc	
Trichlorofluoromethane [75-69-4]^	2400	U	ug/L	2500	2400	6200	1K15010	EPA 8260D	11/15/21 15:21	nmc	QV-01
Vinyl chloride [75-01-4]^	1800	U	ug/L	2500	1800	6200	1K15010	EPA 8260D	11/15/21 15:21	nmc	

ANALYTICAL RESULTS

Description: LC34PS-PZF-040.0-20211111 **Lab Sample ID:** AE07280-33 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 12:00 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*41*	*1*	*50.0*	*81 %*	*41-142*	*1K15010*	*EPA 8260D*	*11/15/21 15:21*	*nmc*	
Dibromofluoromethane	*46*	*1*	*50.0*	*91 %*	*53-146*	*1K15010*	*EPA 8260D*	*11/15/21 15:21*	*nmc*	
Toluene-d8	*45*	*1*	*50.0*	*89 %*	*41-146*	*1K15010*	*EPA 8260D*	*11/15/21 15:21*	*nmc*	

ANALYTICAL RESULTS

Description: LC34PS-PZF-050.0-20211111 **Lab Sample ID:** AE07280-34 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 12:02 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	16000	U	ug/L	20000	16000	50000	1K15010	EPA 8260D	11/15/21 15:50	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	11000	U	ug/L	20000	11000	50000	1K15010	EPA 8260D	11/15/21 15:50	nmc	
1,1,2-Trichloroethane [79-00-5]^	15000	U	ug/L	20000	15000	50000	1K15010	EPA 8260D	11/15/21 15:50	nmc	
1,1-Dichloroethane [75-34-3]^	12000	U	ug/L	20000	12000	50000	1K15010	EPA 8260D	11/15/21 15:50	nmc	QV-01
1,1-Dichloroethene [75-35-4]^	19000	U	ug/L	20000	19000	50000	1K15010	EPA 8260D	11/15/21 15:50	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	14000	U	ug/L	20000	14000	50000	1K15010	EPA 8260D	11/15/21 15:50	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	19000	U	ug/L	20000	19000	50000	1K15010	EPA 8260D	11/15/21 15:50	nmc	
1,2-Dibromoethane [106-93-4]^	16000	U	ug/L	20000	16000	50000	1K15010	EPA 8260D	11/15/21 15:50	nmc	
1,2-Dichlorobenzene [95-50-1]^	15000	U	ug/L	20000	15000	50000	1K15010	EPA 8260D	11/15/21 15:50	nmc	
1,2-Dichloroethane [107-06-2]^	13000	U	ug/L	20000	13000	50000	1K15010	EPA 8260D	11/15/21 15:50	nmc	QV-01
1,2-Dichloropropane [78-87-5]^	16000	U	ug/L	20000	16000	50000	1K15010	EPA 8260D	11/15/21 15:50	nmc	
1,3-Dichlorobenzene [541-73-1]^	15000	U	ug/L	20000	15000	50000	1K15010	EPA 8260D	11/15/21 15:50	nmc	
1,4-Dichlorobenzene [106-46-7]^	15000	U	ug/L	20000	15000	50000	1K15010	EPA 8260D	11/15/21 15:50	nmc	
2-Butanone [78-93-3]^	90000	U	ug/L	20000	90000	250000	1K15010	EPA 8260D	11/15/21 15:50	nmc	
2-Hexanone [591-78-6]^	50000	U	ug/L	20000	50000	250000	1K15010	EPA 8260D	11/15/21 15:50	nmc	QV-01
4-Methyl-2-pentanone [108-10-1]^	50000	U	ug/L	20000	50000	250000	1K15010	EPA 8260D	11/15/21 15:50	nmc	
Acetone [67-64-1]^	200000	U	ug/L	20000	200000	500000	1K15010	EPA 8260D	11/15/21 15:50	nmc	QV-01
Benzene [71-43-2]^	14000	U	ug/L	20000	14000	50000	1K15010	EPA 8260D	11/15/21 15:50	nmc	
Bromodichloromethane [75-27-4]^	10000	U	ug/L	20000	10000	50000	1K15010	EPA 8260D	11/15/21 15:50	nmc	
Bromoform [75-25-2]^	15000	U	ug/L	20000	15000	50000	1K15010	EPA 8260D	11/15/21 15:50	nmc	
Bromomethane [74-83-9]^	19000	U	ug/L	20000	19000	50000	1K15010	EPA 8260D	11/15/21 15:50	nmc	QV-01
Carbon disulfide [75-15-0]^	50000	U	ug/L	20000	50000	250000	1K15010	EPA 8260D	11/15/21 15:50	nmc	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	19000	U	ug/L	20000	19000	50000	1K15010	EPA 8260D	11/15/21 15:50	nmc	
Chlorobenzene [108-90-7]^	14000	U	ug/L	20000	14000	50000	1K15010	EPA 8260D	11/15/21 15:50	nmc	
Chloroethane [75-00-3]^	20000	U	ug/L	20000	20000	50000	1K15010	EPA 8260D	11/15/21 15:50	nmc	QV-01
Chloroform [67-66-3]^	16000	U	ug/L	20000	16000	50000	1K15010	EPA 8260D	11/15/21 15:50	nmc	
Chloromethane [74-87-3]^	16000	U	ug/L	20000	16000	50000	1K15010	EPA 8260D	11/15/21 15:50	nmc	
cis-1,2-Dichloroethene [156-59-2]^	**44000**	I	ug/L	20000	11000	50000	1K15010	EPA 8260D	11/15/21 15:50	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	12000	U	ug/L	20000	12000	50000	1K15010	EPA 8260D	11/15/21 15:50	nmc	
Cyclohexane [110-82-7]^	19000	U	ug/L	20000	19000	50000	1K15010	EPA 8260D	11/15/21 15:50	nmc	QL-02
Dibromochloromethane [124-48-1]^	10000	U	ug/L	20000	10000	50000	1K15010	EPA 8260D	11/15/21 15:50	nmc	
Dichlorodifluoromethane [75-71-8]^	15000	U	ug/L	20000	15000	50000	1K15010	EPA 8260D	11/15/21 15:50	nmc	
Ethylbenzene [100-41-4]^	14000	U	ug/L	20000	14000	50000	1K15010	EPA 8260D	11/15/21 15:50	nmc	
Freon 113 [76-13-1]^	15000	U	ug/L	20000	15000	50000	1K15010	EPA 8260D	11/15/21 15:50	nmc	
Isopropylbenzene [98-82-8]^	13000	U	ug/L	20000	13000	50000	1K15010	EPA 8260D	11/15/21 15:50	nmc	
Methyl acetate [79-20-9]^	19000	U	ug/L	20000	19000	50000	1K15010	EPA 8260D	11/15/21 15:50	nmc	
Methylene Chloride [75-09-2]^	50000	U	ug/L	20000	50000	250000	1K15010	EPA 8260D	11/15/21 15:50	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	12000	U	ug/L	20000	12000	50000	1K15010	EPA 8260D	11/15/21 15:50	nmc	
Styrene [100-42-5]^	12000	U	ug/L	20000	12000	50000	1K15010	EPA 8260D	11/15/21 15:50	nmc	
Tetrachloroethene [127-18-4]^	15000	U	ug/L	20000	15000	50000	1K15010	EPA 8260D	11/15/21 15:50	nmc	
Toluene [108-88-3]^	14000	U	ug/L	20000	14000	50000	1K15010	EPA 8260D	11/15/21 15:50	nmc	
trans-1,2-Dichloroethene [156-60-5]^	15000	U	ug/L	20000	15000	50000	1K15010	EPA 8260D	11/15/21 15:50	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	15000	U	ug/L	20000	15000	50000	1K15010	EPA 8260D	11/15/21 15:50	nmc	
Trichloroethene [79-01-6]^	**1000000**		ug/L	20000	18000	50000	1K15010	EPA 8260D	11/15/21 15:50	nmc	
Trichlorofluoromethane [75-69-4]^	19000	U	ug/L	20000	19000	50000	1K15010	EPA 8260D	11/15/21 15:50	nmc	QV-01
Vinyl chloride [75-01-4]^	14000	U	ug/L	20000	14000	50000	1K15010	EPA 8260D	11/15/21 15:50	nmc	

ANALYTICAL RESULTS

Description: LC34PS-PZF-050.0-20211111 **Lab Sample ID:** AE07280-34 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 12:02 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*41*	*1*	*50.0*	*82 %*	*41-142*	*1K15010*	*EPA 8260D*	*11/15/21 15:50*	*nmc*	
Dibromofluoromethane	*47*	*1*	*50.0*	*94 %*	*53-146*	*1K15010*	*EPA 8260D*	*11/15/21 15:50*	*nmc*	
Toluene-d8	*46*	*1*	*50.0*	*91 %*	*41-146*	*1K15010*	*EPA 8260D*	*11/15/21 15:50*	*nmc*	

ANALYTICAL RESULTS

Description: LC34PS-PZF-058.0-20211111 **Lab Sample ID:** AE07280-35 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 12:04 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	2000	U	ug/L	2500	2000	6200	1K16004	EPA 8260D	11/16/21 18:15	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	1400	U	ug/L	2500	1400	6200	1K16004	EPA 8260D	11/16/21 18:15	nmc	
1,1,2-Trichloroethane [79-00-5]^	1900	U	ug/L	2500	1900	6200	1K16004	EPA 8260D	11/16/21 18:15	nmc	
1,1-Dichloroethane [75-34-3]^	1600	U	ug/L	2500	1600	6200	1K16004	EPA 8260D	11/16/21 18:15	nmc	
1,1-Dichloroethene [75-35-4]^	2400	U	ug/L	2500	2400	6200	1K16004	EPA 8260D	11/16/21 18:15	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	1800	U	ug/L	2500	1800	6200	1K16004	EPA 8260D	11/16/21 18:15	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	2400	U	ug/L	2500	2400	6200	1K16004	EPA 8260D	11/16/21 18:15	nmc	
1,2-Dibromoethane [106-93-4]^	2000	U	ug/L	2500	2000	6200	1K16004	EPA 8260D	11/16/21 18:15	nmc	
1,2-Dichlorobenzene [95-50-1]^	1800	U	ug/L	2500	1800	6200	1K16004	EPA 8260D	11/16/21 18:15	nmc	
1,2-Dichloroethane [107-06-2]^	1600	U	ug/L	2500	1600	6200	1K16004	EPA 8260D	11/16/21 18:15	nmc	QV-01
1,2-Dichloropropane [78-87-5]^	2000	U	ug/L	2500	2000	6200	1K16004	EPA 8260D	11/16/21 18:15	nmc	
1,3-Dichlorobenzene [541-73-1]^	1900	U	ug/L	2500	1900	6200	1K16004	EPA 8260D	11/16/21 18:15	nmc	
1,4-Dichlorobenzene [106-46-7]^	1900	U	ug/L	2500	1900	6200	1K16004	EPA 8260D	11/16/21 18:15	nmc	
2-Butanone [78-93-3]^	11000	U	ug/L	2500	11000	31000	1K16004	EPA 8260D	11/16/21 18:15	nmc	
2-Hexanone [591-78-6]^	6200	U	ug/L	2500	6200	31000	1K16004	EPA 8260D	11/16/21 18:15	nmc	
4-Methyl-2-pentanone [108-10-1]^	6200	U	ug/L	2500	6200	31000	1K16004	EPA 8260D	11/16/21 18:15	nmc	
Acetone [67-64-1]^	25000	U	ug/L	2500	25000	62000	1K16004	EPA 8260D	11/16/21 18:15	nmc	QV-01
Benzene [71-43-2]^	1800	U	ug/L	2500	1800	6200	1K16004	EPA 8260D	11/16/21 18:15	nmc	
Bromodichloromethane [75-27-4]^	1300	U	ug/L	2500	1300	6200	1K16004	EPA 8260D	11/16/21 18:15	nmc	
Bromoform [75-25-2]^	1900	U	ug/L	2500	1900	6200	1K16004	EPA 8260D	11/16/21 18:15	nmc	
Bromomethane [74-83-9]^	2400	U	ug/L	2500	2400	6200	1K16004	EPA 8260D	11/16/21 18:15	nmc	QV-01
Carbon disulfide [75-15-0]^	6200	U	ug/L	2500	6200	31000	1K16004	EPA 8260D	11/16/21 18:15	nmc	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	2400	U	ug/L	2500	2400	6200	1K16004	EPA 8260D	11/16/21 18:15	nmc	
Chlorobenzene [108-90-7]^	1800	U	ug/L	2500	1800	6200	1K16004	EPA 8260D	11/16/21 18:15	nmc	
Chloroethane [75-00-3]^	2400	U	ug/L	2500	2400	6200	1K16004	EPA 8260D	11/16/21 18:15	nmc	QV-01
Chloroform [67-66-3]^	2000	U	ug/L	2500	2000	6200	1K16004	EPA 8260D	11/16/21 18:15	nmc	
Chloromethane [74-87-3]^	2000	U	ug/L	2500	2000	6200	1K16004	EPA 8260D	11/16/21 18:15	nmc	
cis-1,2-Dichloroethene [156-59-2]^	**12000**		ug/L	2500	1300	6200	1K16004	EPA 8260D	11/16/21 18:15	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	1500	U	ug/L	2500	1500	6200	1K16004	EPA 8260D	11/16/21 18:15	nmc	
Cyclohexane [110-82-7]^	2300	U	ug/L	2500	2300	6200	1K16004	EPA 8260D	11/16/21 18:15	nmc	QL-02
Dibromochloromethane [124-48-1]^	1200	U	ug/L	2500	1200	6200	1K16004	EPA 8260D	11/16/21 18:15	nmc	
Dichlorodifluoromethane [75-71-8]^	1800	U	ug/L	2500	1800	6200	1K16004	EPA 8260D	11/16/21 18:15	nmc	
Ethylbenzene [100-41-4]^	1700	U	ug/L	2500	1700	6200	1K16004	EPA 8260D	11/16/21 18:15	nmc	
Freon 113 [76-13-1]^	1800	U	ug/L	2500	1800	6200	1K16004	EPA 8260D	11/16/21 18:15	nmc	
Isopropylbenzene [98-82-8]^	1700	U	ug/L	2500	1700	6200	1K16004	EPA 8260D	11/16/21 18:15	nmc	
Methyl acetate [79-20-9]^	2400	U	ug/L	2500	2400	6200	1K16004	EPA 8260D	11/16/21 18:15	nmc	
Methylene Chloride [75-09-2]^	6200	U	ug/L	2500	6200	31000	1K16004	EPA 8260D	11/16/21 18:15	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	1500	U	ug/L	2500	1500	6200	1K16004	EPA 8260D	11/16/21 18:15	nmc	
Styrene [100-42-5]^	1500	U	ug/L	2500	1500	6200	1K16004	EPA 8260D	11/16/21 18:15	nmc	
Tetrachloroethene [127-18-4]^	1900	U	ug/L	2500	1900	6200	1K16004	EPA 8260D	11/16/21 18:15	nmc	
Toluene [108-88-3]^	1800	U	ug/L	2500	1800	6200	1K16004	EPA 8260D	11/16/21 18:15	nmc	
trans-1,2-Dichloroethene [156-60-5]^	1800	U	ug/L	2500	1800	6200	1K16004	EPA 8260D	11/16/21 18:15	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	1800	U	ug/L	2500	1800	6200	1K16004	EPA 8260D	11/16/21 18:15	nmc	
Trichloroethene [79-01-6]^	**240000**		ug/L	2500	2200	6200	1K16004	EPA 8260D	11/16/21 18:15	nmc	
Trichlorofluoromethane [75-69-4]^	2400	U	ug/L	2500	2400	6200	1K16004	EPA 8260D	11/16/21 18:15	nmc	
Vinyl chloride [75-01-4]^	1800	U	ug/L	2500	1800	6200	1K16004	EPA 8260D	11/16/21 18:15	nmc	

ANALYTICAL RESULTS

Description: LC34PS-PZF-058.0-20211111 **Lab Sample ID:** AE07280-35 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 12:04 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*40*	*1*	*50.0*	*81 %*	*41-142*	*1K16004*	*EPA 8260D*	*11/16/21 18:15*	*nmc*	
Dibromofluoromethane	*45*	*1*	*50.0*	*90 %*	*53-146*	*1K16004*	*EPA 8260D*	*11/16/21 18:15*	*nmc*	
Toluene-d8	*44*	*1*	*50.0*	*89 %*	*41-146*	*1K16004*	*EPA 8260D*	*11/16/21 18:15*	*nmc*	

ANALYTICAL RESULTS

Description: LC34PS-PZF-073.0-20211111 **Lab Sample ID:** AE07280-36 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 12:06 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	1K12031	EPA 8260D	11/13/21 00:39	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	1K12031	EPA 8260D	11/13/21 00:39	nmc	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	1K12031	EPA 8260D	11/13/21 00:39	nmc	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	1K12031	EPA 8260D	11/13/21 00:39	nmc	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	1K12031	EPA 8260D	11/13/21 00:39	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	1K12031	EPA 8260D	11/13/21 00:39	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	1K12031	EPA 8260D	11/13/21 00:39	nmc	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	1K12031	EPA 8260D	11/13/21 00:39	nmc	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	1K12031	EPA 8260D	11/13/21 00:39	nmc	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	1K12031	EPA 8260D	11/13/21 00:39	nmc	QV-01
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	1K12031	EPA 8260D	11/13/21 00:39	nmc	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	1K12031	EPA 8260D	11/13/21 00:39	nmc	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	1K12031	EPA 8260D	11/13/21 00:39	nmc	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	1K12031	EPA 8260D	11/13/21 00:39	nmc	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	1K12031	EPA 8260D	11/13/21 00:39	nmc	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	1K12031	EPA 8260D	11/13/21 00:39	nmc	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	1K12031	EPA 8260D	11/13/21 00:39	nmc	QV-01
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	1K12031	EPA 8260D	11/13/21 00:39	nmc	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	1K12031	EPA 8260D	11/13/21 00:39	nmc	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	1K12031	EPA 8260D	11/13/21 00:39	nmc	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	1K12031	EPA 8260D	11/13/21 00:39	nmc	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	1K12031	EPA 8260D	11/13/21 00:39	nmc	QL-02, QM-19, QV-01
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	1K12031	EPA 8260D	11/13/21 00:39	nmc	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	1K12031	EPA 8260D	11/13/21 00:39	nmc	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	1K12031	EPA 8260D	11/13/21 00:39	nmc	QV-01
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	1K12031	EPA 8260D	11/13/21 00:39	nmc	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	1K12031	EPA 8260D	11/13/21 00:39	nmc	
cis-1,2-Dichloroethene [156-59-2]^	0.53	U	ug/L	1	0.53	2.5	1K12031	EPA 8260D	11/13/21 00:39	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	1K12031	EPA 8260D	11/13/21 00:39	nmc	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	1K12031	EPA 8260D	11/13/21 00:39	nmc	QM-07
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	1K12031	EPA 8260D	11/13/21 00:39	nmc	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	1K12031	EPA 8260D	11/13/21 00:39	nmc	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	1K12031	EPA 8260D	11/13/21 00:39	nmc	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	1K12031	EPA 8260D	11/13/21 00:39	nmc	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	1K12031	EPA 8260D	11/13/21 00:39	nmc	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	1K12031	EPA 8260D	11/13/21 00:39	nmc	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	1K12031	EPA 8260D	11/13/21 00:39	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	1K12031	EPA 8260D	11/13/21 00:39	nmc	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	1K12031	EPA 8260D	11/13/21 00:39	nmc	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	1K12031	EPA 8260D	11/13/21 00:39	nmc	QV-01
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	1K12031	EPA 8260D	11/13/21 00:39	nmc	
trans-1,2-Dichloroethene [156-60-5]^	0.73	U	ug/L	1	0.73	2.5	1K12031	EPA 8260D	11/13/21 00:39	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	1K12031	EPA 8260D	11/13/21 00:39	nmc	
Trichloroethene [79-01-6]^	**23**		ug/L	1	0.89	2.5	1K12031	EPA 8260D	11/13/21 00:39	nmc	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	1K12031	EPA 8260D	11/13/21 00:39	nmc	QL-02, QV-01

ANALYTICAL RESULTS

Description: LC34PS-PZF-073.0-20211111 **Lab Sample ID:** AE07280-36 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 12:06 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Vinyl chloride [75-01-4]^	0.71	U	ug/L	1	0.71	2.5	1K12031	EPA 8260D	11/13/21 00:39	nmc	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*40*	*1*	*50.0*	*81 %*	*41-142*	*1K12031*	*EPA 8260D*	*11/13/21 00:39*	*nmc*	
Dibromofluoromethane	*45*	*1*	*50.0*	*90 %*	*53-146*	*1K12031*	*EPA 8260D*	*11/13/21 00:39*	*nmc*	
Toluene-d8	*46*	*1*	*50.0*	*91 %*	*41-146*	*1K12031*	*EPA 8260D*	*11/13/21 00:39*	*nmc*	

ANALYTICAL RESULTS

Description: LC34PS-PZF-080.0-20211111 **Lab Sample ID:** AE07280-37 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 12:08 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	1K12031	EPA 8260D	11/13/21 02:05	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	1K12031	EPA 8260D	11/13/21 02:05	nmc	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	1K12031	EPA 8260D	11/13/21 02:05	nmc	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	1K12031	EPA 8260D	11/13/21 02:05	nmc	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	1K12031	EPA 8260D	11/13/21 02:05	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	1K12031	EPA 8260D	11/13/21 02:05	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	1K12031	EPA 8260D	11/13/21 02:05	nmc	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	1K12031	EPA 8260D	11/13/21 02:05	nmc	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	1K12031	EPA 8260D	11/13/21 02:05	nmc	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	1K12031	EPA 8260D	11/13/21 02:05	nmc	QV-01
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	1K12031	EPA 8260D	11/13/21 02:05	nmc	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	1K12031	EPA 8260D	11/13/21 02:05	nmc	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	1K12031	EPA 8260D	11/13/21 02:05	nmc	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	1K12031	EPA 8260D	11/13/21 02:05	nmc	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	1K12031	EPA 8260D	11/13/21 02:05	nmc	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	1K12031	EPA 8260D	11/13/21 02:05	nmc	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	1K12031	EPA 8260D	11/13/21 02:05	nmc	QV-01
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	1K12031	EPA 8260D	11/13/21 02:05	nmc	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	1K12031	EPA 8260D	11/13/21 02:05	nmc	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	1K12031	EPA 8260D	11/13/21 02:05	nmc	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	1K12031	EPA 8260D	11/13/21 02:05	nmc	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	1K12031	EPA 8260D	11/13/21 02:05	nmc	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	1K12031	EPA 8260D	11/13/21 02:05	nmc	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	1K12031	EPA 8260D	11/13/21 02:05	nmc	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	1K12031	EPA 8260D	11/13/21 02:05	nmc	QV-01
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	1K12031	EPA 8260D	11/13/21 02:05	nmc	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	1K12031	EPA 8260D	11/13/21 02:05	nmc	
cis-1,2-Dichloroethene [156-59-2]^	**32**		ug/L	1	0.53	2.5	1K12031	EPA 8260D	11/13/21 02:05	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	1K12031	EPA 8260D	11/13/21 02:05	nmc	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	1K12031	EPA 8260D	11/13/21 02:05	nmc	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	1K12031	EPA 8260D	11/13/21 02:05	nmc	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	1K12031	EPA 8260D	11/13/21 02:05	nmc	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	1K12031	EPA 8260D	11/13/21 02:05	nmc	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	1K12031	EPA 8260D	11/13/21 02:05	nmc	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	1K12031	EPA 8260D	11/13/21 02:05	nmc	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	1K12031	EPA 8260D	11/13/21 02:05	nmc	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	1K12031	EPA 8260D	11/13/21 02:05	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	1K12031	EPA 8260D	11/13/21 02:05	nmc	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	1K12031	EPA 8260D	11/13/21 02:05	nmc	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	1K12031	EPA 8260D	11/13/21 02:05	nmc	QV-01
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	1K12031	EPA 8260D	11/13/21 02:05	nmc	
trans-1,2-Dichloroethene [156-60-5]^	**4.5**		ug/L	1	0.73	2.5	1K12031	EPA 8260D	11/13/21 02:05	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	1K12031	EPA 8260D	11/13/21 02:05	nmc	
Trichloroethene [79-01-6]^	**11**		ug/L	1	0.89	2.5	1K12031	EPA 8260D	11/13/21 02:05	nmc	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	1K12031	EPA 8260D	11/13/21 02:05	nmc	QL-02, QV-01

ANALYTICAL RESULTS

Description: LC34PS-PZF-080.0-20211111 **Lab Sample ID:** AE07280-37 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 12:08 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Vinyl chloride [75-01-4]^	**28**		ug/L	1	0.71	2.5	1K12031	EPA 8260D	11/13/21 02:05	nmc	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*40*	*1*	*50.0*	*80 %*	*41-142*	*1K12031*	*EPA 8260D*	*11/13/21 02:05*	*nmc*	
Dibromofluoromethane	*44*	*1*	*50.0*	*88 %*	*53-146*	*1K12031*	*EPA 8260D*	*11/13/21 02:05*	*nmc*	
Toluene-d8	*44*	*1*	*50.0*	*88 %*	*41-146*	*1K12031*	*EPA 8260D*	*11/13/21 02:05*	*nmc*	

ANALYTICAL RESULTS

Description: LC34PS-PZA-040.0-20211111 **Lab Sample ID:** AE07280-38 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 12:30 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	4000	U	ug/L	5000	4000	12000	1K15010	EPA 8260D	11/15/21 16:47	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	2700	U	ug/L	5000	2700	12000	1K15010	EPA 8260D	11/15/21 16:47	nmc	
1,1,2-Trichloroethane [79-00-5]^	3800	U	ug/L	5000	3800	12000	1K15010	EPA 8260D	11/15/21 16:47	nmc	
1,1-Dichloroethane [75-34-3]^	3100	U	ug/L	5000	3100	12000	1K15010	EPA 8260D	11/15/21 16:47	nmc	QV-01
1,1-Dichloroethene [75-35-4]^	4700	U	ug/L	5000	4700	12000	1K15010	EPA 8260D	11/15/21 16:47	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	3500	U	ug/L	5000	3500	12000	1K15010	EPA 8260D	11/15/21 16:47	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	4800	U	ug/L	5000	4800	12000	1K15010	EPA 8260D	11/15/21 16:47	nmc	
1,2-Dibromoethane [106-93-4]^	3900	U	ug/L	5000	3900	12000	1K15010	EPA 8260D	11/15/21 16:47	nmc	
1,2-Dichlorobenzene [95-50-1]^	3600	U	ug/L	5000	3600	12000	1K15010	EPA 8260D	11/15/21 16:47	nmc	
1,2-Dichloroethane [107-06-2]^	3200	U	ug/L	5000	3200	12000	1K15010	EPA 8260D	11/15/21 16:47	nmc	QV-01
1,2-Dichloropropane [78-87-5]^	4000	U	ug/L	5000	4000	12000	1K15010	EPA 8260D	11/15/21 16:47	nmc	
1,3-Dichlorobenzene [541-73-1]^	3800	U	ug/L	5000	3800	12000	1K15010	EPA 8260D	11/15/21 16:47	nmc	
1,4-Dichlorobenzene [106-46-7]^	3800	U	ug/L	5000	3800	12000	1K15010	EPA 8260D	11/15/21 16:47	nmc	
2-Butanone [78-93-3]^	22000	U	ug/L	5000	22000	62000	1K15010	EPA 8260D	11/15/21 16:47	nmc	
2-Hexanone [591-78-6]^	12000	U	ug/L	5000	12000	62000	1K15010	EPA 8260D	11/15/21 16:47	nmc	QV-01
4-Methyl-2-pentanone [108-10-1]^	12000	U	ug/L	5000	12000	62000	1K15010	EPA 8260D	11/15/21 16:47	nmc	
Acetone [67-64-1]^	50000	U	ug/L	5000	50000	120000	1K15010	EPA 8260D	11/15/21 16:47	nmc	QV-01
Benzene [71-43-2]^	3600	U	ug/L	5000	3600	12000	1K15010	EPA 8260D	11/15/21 16:47	nmc	
Bromodichloromethane [75-27-4]^	2600	U	ug/L	5000	2600	12000	1K15010	EPA 8260D	11/15/21 16:47	nmc	
Bromoform [75-25-2]^	3800	U	ug/L	5000	3800	12000	1K15010	EPA 8260D	11/15/21 16:47	nmc	
Bromomethane [74-83-9]^	4800	U	ug/L	5000	4800	12000	1K15010	EPA 8260D	11/15/21 16:47	nmc	QV-01
Carbon disulfide [75-15-0]^	12000	U	ug/L	5000	12000	62000	1K15010	EPA 8260D	11/15/21 16:47	nmc	QV-01, QL-02
Carbon Tetrachloride [56-23-5]^	4700	U	ug/L	5000	4700	12000	1K15010	EPA 8260D	11/15/21 16:47	nmc	
Chlorobenzene [108-90-7]^	3600	U	ug/L	5000	3600	12000	1K15010	EPA 8260D	11/15/21 16:47	nmc	
Chloroethane [75-00-3]^	4900	U	ug/L	5000	4900	12000	1K15010	EPA 8260D	11/15/21 16:47	nmc	QV-01
Chloroform [67-66-3]^	4000	U	ug/L	5000	4000	12000	1K15010	EPA 8260D	11/15/21 16:47	nmc	
Chloromethane [74-87-3]^	4100	U	ug/L	5000	4100	12000	1K15010	EPA 8260D	11/15/21 16:47	nmc	
cis-1,2-Dichloroethene [156-59-2]^	**14000**		ug/L	5000	2600	12000	1K15010	EPA 8260D	11/15/21 16:47	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	3000	U	ug/L	5000	3000	12000	1K15010	EPA 8260D	11/15/21 16:47	nmc	
Cyclohexane [110-82-7]^	4600	U	ug/L	5000	4600	12000	1K15010	EPA 8260D	11/15/21 16:47	nmc	QL-02
Dibromochloromethane [124-48-1]^	2500	U	ug/L	5000	2500	12000	1K15010	EPA 8260D	11/15/21 16:47	nmc	
Dichlorodifluoromethane [75-71-8]^	3700	U	ug/L	5000	3700	12000	1K15010	EPA 8260D	11/15/21 16:47	nmc	
Ethylbenzene [100-41-4]^	3400	U	ug/L	5000	3400	12000	1K15010	EPA 8260D	11/15/21 16:47	nmc	
Freon 113 [76-13-1]^	3600	U	ug/L	5000	3600	12000	1K15010	EPA 8260D	11/15/21 16:47	nmc	
Isopropylbenzene [98-82-8]^	3400	U	ug/L	5000	3400	12000	1K15010	EPA 8260D	11/15/21 16:47	nmc	
Methyl acetate [79-20-9]^	4800	U	ug/L	5000	4800	12000	1K15010	EPA 8260D	11/15/21 16:47	nmc	
Methylene Chloride [75-09-2]^	12000	U	ug/L	5000	12000	62000	1K15010	EPA 8260D	11/15/21 16:47	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	3000	U	ug/L	5000	3000	12000	1K15010	EPA 8260D	11/15/21 16:47	nmc	
Styrene [100-42-5]^	3000	U	ug/L	5000	3000	12000	1K15010	EPA 8260D	11/15/21 16:47	nmc	
Tetrachloroethene [127-18-4]^	3800	U	ug/L	5000	3800	12000	1K15010	EPA 8260D	11/15/21 16:47	nmc	
Toluene [108-88-3]^	3600	U	ug/L	5000	3600	12000	1K15010	EPA 8260D	11/15/21 16:47	nmc	
trans-1,2-Dichloroethene [156-60-5]^	3600	U	ug/L	5000	3600	12000	1K15010	EPA 8260D	11/15/21 16:47	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	3600	U	ug/L	5000	3600	12000	1K15010	EPA 8260D	11/15/21 16:47	nmc	
Trichloroethene [79-01-6]^	**420000**		ug/L	5000	4400	12000	1K15010	EPA 8260D	11/15/21 16:47	nmc	
Trichlorofluoromethane [75-69-4]^	4700	U	ug/L	5000	4700	12000	1K15010	EPA 8260D	11/15/21 16:47	nmc	QV-01
Vinyl chloride [75-01-4]^	3600	U	ug/L	5000	3600	12000	1K15010	EPA 8260D	11/15/21 16:47	nmc	

ANALYTICAL RESULTS

Description: LC34PS-PZA-040.0-20211111 **Lab Sample ID:** AE07280-38 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 12:30 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*42*	*1*	*50.0*	*84 %*	*41-142*	*1K15010*	*EPA 8260D*	*11/15/21 16:47*	*nmc*	
Dibromofluoromethane	*47*	*1*	*50.0*	*93 %*	*53-146*	*1K15010*	*EPA 8260D*	*11/15/21 16:47*	*nmc*	
Toluene-d8	*46*	*1*	*50.0*	*92 %*	*41-146*	*1K15010*	*EPA 8260D*	*11/15/21 16:47*	*nmc*	

ANALYTICAL RESULTS

Description: LC34PS-PZA-050.0-20211111 **Lab Sample ID:** AE07280-39 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 12:32 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	16000	U	ug/L	20000	16000	50000	1K15010	EPA 8260D	11/15/21 17:16	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	11000	U	ug/L	20000	11000	50000	1K15010	EPA 8260D	11/15/21 17:16	nmc	
1,1,2-Trichloroethane [79-00-5]^	15000	U	ug/L	20000	15000	50000	1K15010	EPA 8260D	11/15/21 17:16	nmc	
1,1-Dichloroethane [75-34-3]^	12000	U	ug/L	20000	12000	50000	1K15010	EPA 8260D	11/15/21 17:16	nmc	QV-01
1,1-Dichloroethene [75-35-4]^	19000	U	ug/L	20000	19000	50000	1K15010	EPA 8260D	11/15/21 17:16	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	14000	U	ug/L	20000	14000	50000	1K15010	EPA 8260D	11/15/21 17:16	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	19000	U	ug/L	20000	19000	50000	1K15010	EPA 8260D	11/15/21 17:16	nmc	
1,2-Dibromoethane [106-93-4]^	16000	U	ug/L	20000	16000	50000	1K15010	EPA 8260D	11/15/21 17:16	nmc	
1,2-Dichlorobenzene [95-50-1]^	15000	U	ug/L	20000	15000	50000	1K15010	EPA 8260D	11/15/21 17:16	nmc	
1,2-Dichloroethane [107-06-2]^	13000	U	ug/L	20000	13000	50000	1K15010	EPA 8260D	11/15/21 17:16	nmc	QV-01
1,2-Dichloropropane [78-87-5]^	16000	U	ug/L	20000	16000	50000	1K15010	EPA 8260D	11/15/21 17:16	nmc	
1,3-Dichlorobenzene [541-73-1]^	15000	U	ug/L	20000	15000	50000	1K15010	EPA 8260D	11/15/21 17:16	nmc	
1,4-Dichlorobenzene [106-46-7]^	15000	U	ug/L	20000	15000	50000	1K15010	EPA 8260D	11/15/21 17:16	nmc	
2-Butanone [78-93-3]^	90000	U	ug/L	20000	90000	250000	1K15010	EPA 8260D	11/15/21 17:16	nmc	
2-Hexanone [591-78-6]^	50000	U	ug/L	20000	50000	250000	1K15010	EPA 8260D	11/15/21 17:16	nmc	QV-01
4-Methyl-2-pentanone [108-10-1]^	50000	U	ug/L	20000	50000	250000	1K15010	EPA 8260D	11/15/21 17:16	nmc	
Acetone [67-64-1]^	200000	U	ug/L	20000	200000	500000	1K15010	EPA 8260D	11/15/21 17:16	nmc	QV-01
Benzene [71-43-2]^	14000	U	ug/L	20000	14000	50000	1K15010	EPA 8260D	11/15/21 17:16	nmc	
Bromodichloromethane [75-27-4]^	10000	U	ug/L	20000	10000	50000	1K15010	EPA 8260D	11/15/21 17:16	nmc	
Bromoform [75-25-2]^	15000	U	ug/L	20000	15000	50000	1K15010	EPA 8260D	11/15/21 17:16	nmc	
Bromomethane [74-83-9]^	19000	U	ug/L	20000	19000	50000	1K15010	EPA 8260D	11/15/21 17:16	nmc	QV-01
Carbon disulfide [75-15-0]^	50000	U	ug/L	20000	50000	250000	1K15010	EPA 8260D	11/15/21 17:16	nmc	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	19000	U	ug/L	20000	19000	50000	1K15010	EPA 8260D	11/15/21 17:16	nmc	
Chlorobenzene [108-90-7]^	14000	U	ug/L	20000	14000	50000	1K15010	EPA 8260D	11/15/21 17:16	nmc	
Chloroethane [75-00-3]^	20000	U	ug/L	20000	20000	50000	1K15010	EPA 8260D	11/15/21 17:16	nmc	QV-01
Chloroform [67-66-3]^	16000	U	ug/L	20000	16000	50000	1K15010	EPA 8260D	11/15/21 17:16	nmc	
Chloromethane [74-87-3]^	16000	U	ug/L	20000	16000	50000	1K15010	EPA 8260D	11/15/21 17:16	nmc	
cis-1,2-Dichloroethene [156-59-2]^	**32000**	I	ug/L	20000	11000	50000	1K15010	EPA 8260D	11/15/21 17:16	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	12000	U	ug/L	20000	12000	50000	1K15010	EPA 8260D	11/15/21 17:16	nmc	
Cyclohexane [110-82-7]^	19000	U	ug/L	20000	19000	50000	1K15010	EPA 8260D	11/15/21 17:16	nmc	QL-02
Dibromochloromethane [124-48-1]^	10000	U	ug/L	20000	10000	50000	1K15010	EPA 8260D	11/15/21 17:16	nmc	
Dichlorodifluoromethane [75-71-8]^	15000	U	ug/L	20000	15000	50000	1K15010	EPA 8260D	11/15/21 17:16	nmc	
Ethylbenzene [100-41-4]^	14000	U	ug/L	20000	14000	50000	1K15010	EPA 8260D	11/15/21 17:16	nmc	
Freon 113 [76-13-1]^	15000	U	ug/L	20000	15000	50000	1K15010	EPA 8260D	11/15/21 17:16	nmc	
Isopropylbenzene [98-82-8]^	13000	U	ug/L	20000	13000	50000	1K15010	EPA 8260D	11/15/21 17:16	nmc	
Methyl acetate [79-20-9]^	19000	U	ug/L	20000	19000	50000	1K15010	EPA 8260D	11/15/21 17:16	nmc	
Methylene Chloride [75-09-2]^	50000	U	ug/L	20000	50000	250000	1K15010	EPA 8260D	11/15/21 17:16	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	12000	U	ug/L	20000	12000	50000	1K15010	EPA 8260D	11/15/21 17:16	nmc	
Styrene [100-42-5]^	12000	U	ug/L	20000	12000	50000	1K15010	EPA 8260D	11/15/21 17:16	nmc	
Tetrachloroethene [127-18-4]^	15000	U	ug/L	20000	15000	50000	1K15010	EPA 8260D	11/15/21 17:16	nmc	
Toluene [108-88-3]^	14000	U	ug/L	20000	14000	50000	1K15010	EPA 8260D	11/15/21 17:16	nmc	
trans-1,2-Dichloroethene [156-60-5]^	15000	U	ug/L	20000	15000	50000	1K15010	EPA 8260D	11/15/21 17:16	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	15000	U	ug/L	20000	15000	50000	1K15010	EPA 8260D	11/15/21 17:16	nmc	
Trichloroethene [79-01-6]^	**1000000**		ug/L	20000	18000	50000	1K15010	EPA 8260D	11/15/21 17:16	nmc	
Trichlorofluoromethane [75-69-4]^	19000	U	ug/L	20000	19000	50000	1K15010	EPA 8260D	11/15/21 17:16	nmc	QV-01
Vinyl chloride [75-01-4]^	14000	U	ug/L	20000	14000	50000	1K15010	EPA 8260D	11/15/21 17:16	nmc	

ANALYTICAL RESULTS

Description: LC34PS-PZA-050.0-20211111 **Lab Sample ID:** AE07280-39 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 12:32 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*41*	*1*	*50.0*	*81 %*	*41-142*	*1K15010*	*EPA 8260D*	*11/15/21 17:16*	*nmc*	
Dibromofluoromethane	*46*	*1*	*50.0*	*93 %*	*53-146*	*1K15010*	*EPA 8260D*	*11/15/21 17:16*	*nmc*	
Toluene-d8	*44*	*1*	*50.0*	*89 %*	*41-146*	*1K15010*	*EPA 8260D*	*11/15/21 17:16*	*nmc*	

ANALYTICAL RESULTS

Description: LC34PS-PZA-058.0-20211111 **Lab Sample ID:** AE07280-40 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 12:34 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	1600	U	ug/L	2000	1600	5000	1K16004	EPA 8260D	11/16/21 18:44	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	1100	U	ug/L	2000	1100	5000	1K16004	EPA 8260D	11/16/21 18:44	nmc	
1,1,2-Trichloroethane [79-00-5]^	1500	U	ug/L	2000	1500	5000	1K16004	EPA 8260D	11/16/21 18:44	nmc	
1,1-Dichloroethane [75-34-3]^	1200	U	ug/L	2000	1200	5000	1K16004	EPA 8260D	11/16/21 18:44	nmc	
1,1-Dichloroethene [75-35-4]^	1900	U	ug/L	2000	1900	5000	1K16004	EPA 8260D	11/16/21 18:44	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	1400	U	ug/L	2000	1400	5000	1K16004	EPA 8260D	11/16/21 18:44	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	1900	U	ug/L	2000	1900	5000	1K16004	EPA 8260D	11/16/21 18:44	nmc	
1,2-Dibromoethane [106-93-4]^	1600	U	ug/L	2000	1600	5000	1K16004	EPA 8260D	11/16/21 18:44	nmc	
1,2-Dichlorobenzene [95-50-1]^	1500	U	ug/L	2000	1500	5000	1K16004	EPA 8260D	11/16/21 18:44	nmc	
1,2-Dichloroethane [107-06-2]^	1300	U	ug/L	2000	1300	5000	1K16004	EPA 8260D	11/16/21 18:44	nmc	QV-01
1,2-Dichloropropane [78-87-5]^	1600	U	ug/L	2000	1600	5000	1K16004	EPA 8260D	11/16/21 18:44	nmc	
1,3-Dichlorobenzene [541-73-1]^	1500	U	ug/L	2000	1500	5000	1K16004	EPA 8260D	11/16/21 18:44	nmc	
1,4-Dichlorobenzene [106-46-7]^	1500	U	ug/L	2000	1500	5000	1K16004	EPA 8260D	11/16/21 18:44	nmc	
2-Butanone [78-93-3]^	9000	U	ug/L	2000	9000	25000	1K16004	EPA 8260D	11/16/21 18:44	nmc	
2-Hexanone [591-78-6]^	5000	U	ug/L	2000	5000	25000	1K16004	EPA 8260D	11/16/21 18:44	nmc	
4-Methyl-2-pentanone [108-10-1]^	5000	U	ug/L	2000	5000	25000	1K16004	EPA 8260D	11/16/21 18:44	nmc	
Acetone [67-64-1]^	20000	U	ug/L	2000	20000	50000	1K16004	EPA 8260D	11/16/21 18:44	nmc	QV-01
Benzene [71-43-2]^	1400	U	ug/L	2000	1400	5000	1K16004	EPA 8260D	11/16/21 18:44	nmc	
Bromodichloromethane [75-27-4]^	1000	U	ug/L	2000	1000	5000	1K16004	EPA 8260D	11/16/21 18:44	nmc	
Bromoform [75-25-2]^	1500	U	ug/L	2000	1500	5000	1K16004	EPA 8260D	11/16/21 18:44	nmc	
Bromomethane [74-83-9]^	1900	U	ug/L	2000	1900	5000	1K16004	EPA 8260D	11/16/21 18:44	nmc	QV-01
Carbon disulfide [75-15-0]^	5000	U	ug/L	2000	5000	25000	1K16004	EPA 8260D	11/16/21 18:44	nmc	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	1900	U	ug/L	2000	1900	5000	1K16004	EPA 8260D	11/16/21 18:44	nmc	
Chlorobenzene [108-90-7]^	1400	U	ug/L	2000	1400	5000	1K16004	EPA 8260D	11/16/21 18:44	nmc	
Chloroethane [75-00-3]^	2000	U	ug/L	2000	2000	5000	1K16004	EPA 8260D	11/16/21 18:44	nmc	QV-01
Chloroform [67-66-3]^	1600	U	ug/L	2000	1600	5000	1K16004	EPA 8260D	11/16/21 18:44	nmc	
Chloromethane [74-87-3]^	1600	U	ug/L	2000	1600	5000	1K16004	EPA 8260D	11/16/21 18:44	nmc	
cis-1,2-Dichloroethene [156-59-2]^	**22000**		ug/L	2000	1100	5000	1K16004	EPA 8260D	11/16/21 18:44	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	1200	U	ug/L	2000	1200	5000	1K16004	EPA 8260D	11/16/21 18:44	nmc	
Cyclohexane [110-82-7]^	1900	U	ug/L	2000	1900	5000	1K16004	EPA 8260D	11/16/21 18:44	nmc	QL-02
Dibromochloromethane [124-48-1]^	1000	U	ug/L	2000	1000	5000	1K16004	EPA 8260D	11/16/21 18:44	nmc	
Dichlorodifluoromethane [75-71-8]^	1500	U	ug/L	2000	1500	5000	1K16004	EPA 8260D	11/16/21 18:44	nmc	
Ethylbenzene [100-41-4]^	1400	U	ug/L	2000	1400	5000	1K16004	EPA 8260D	11/16/21 18:44	nmc	
Freon 113 [76-13-1]^	1500	U	ug/L	2000	1500	5000	1K16004	EPA 8260D	11/16/21 18:44	nmc	
Isopropylbenzene [98-82-8]^	1300	U	ug/L	2000	1300	5000	1K16004	EPA 8260D	11/16/21 18:44	nmc	
Methyl acetate [79-20-9]^	1900	U	ug/L	2000	1900	5000	1K16004	EPA 8260D	11/16/21 18:44	nmc	
Methylene Chloride [75-09-2]^	5000	U	ug/L	2000	5000	25000	1K16004	EPA 8260D	11/16/21 18:44	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	1200	U	ug/L	2000	1200	5000	1K16004	EPA 8260D	11/16/21 18:44	nmc	
Styrene [100-42-5]^	1200	U	ug/L	2000	1200	5000	1K16004	EPA 8260D	11/16/21 18:44	nmc	
Tetrachloroethene [127-18-4]^	1500	U	ug/L	2000	1500	5000	1K16004	EPA 8260D	11/16/21 18:44	nmc	
Toluene [108-88-3]^	1400	U	ug/L	2000	1400	5000	1K16004	EPA 8260D	11/16/21 18:44	nmc	
trans-1,2-Dichloroethene [156-60-5]^	1500	U	ug/L	2000	1500	5000	1K16004	EPA 8260D	11/16/21 18:44	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	1500	U	ug/L	2000	1500	5000	1K16004	EPA 8260D	11/16/21 18:44	nmc	
Trichloroethene [79-01-6]^	**170000**		ug/L	2000	1800	5000	1K16004	EPA 8260D	11/16/21 18:44	nmc	
Trichlorofluoromethane [75-69-4]^	1900	U	ug/L	2000	1900	5000	1K16004	EPA 8260D	11/16/21 18:44	nmc	
Vinyl chloride [75-01-4]^	1400	U	ug/L	2000	1400	5000	1K16004	EPA 8260D	11/16/21 18:44	nmc	

ANALYTICAL RESULTS

Description: LC34PS-PZA-058.0-20211111 **Lab Sample ID:** AE07280-40 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 12:34 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*39*	*1*	*50.0*	*79 %*	*41-142*	*1K16004*	*EPA 8260D*	*11/16/21 18:44*	*nmc*	
Dibromofluoromethane	*44*	*1*	*50.0*	*88 %*	*53-146*	*1K16004*	*EPA 8260D*	*11/16/21 18:44*	*nmc*	
Toluene-d8	*44*	*1*	*50.0*	*88 %*	*41-146*	*1K16004*	*EPA 8260D*	*11/16/21 18:44*	*nmc*	

ANALYTICAL RESULTS

Description: LC34PS-PZA-073.0-20211111 **Lab Sample ID:** AE07280-41 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 12:36 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	40	U	ug/L	50	40	120	1K17014	EPA 8260D	11/17/21 15:51	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	27	U	ug/L	50	27	120	1K17014	EPA 8260D	11/17/21 15:51	KKW	
1,1,2-Trichloroethane [79-00-5]^	38	U	ug/L	50	38	120	1K17014	EPA 8260D	11/17/21 15:51	KKW	
1,1-Dichloroethane [75-34-3]^	31	U	ug/L	50	31	120	1K17014	EPA 8260D	11/17/21 15:51	KKW	
1,1-Dichloroethene [75-35-4]^	47	U	ug/L	50	47	120	1K17014	EPA 8260D	11/17/21 15:51	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	35	U	ug/L	50	35	120	1K17014	EPA 8260D	11/17/21 15:51	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	48	U	ug/L	50	48	120	1K17014	EPA 8260D	11/17/21 15:51	KKW	
1,2-Dibromoethane [106-93-4]^	39	U	ug/L	50	39	120	1K17014	EPA 8260D	11/17/21 15:51	KKW	
1,2-Dichlorobenzene [95-50-1]^	36	U	ug/L	50	36	120	1K17014	EPA 8260D	11/17/21 15:51	KKW	
1,2-Dichloroethane [107-06-2]^	32	U	ug/L	50	32	120	1K17014	EPA 8260D	11/17/21 15:51	KKW	
1,2-Dichloropropane [78-87-5]^	40	U	ug/L	50	40	120	1K17014	EPA 8260D	11/17/21 15:51	KKW	
1,3-Dichlorobenzene [541-73-1]^	38	U	ug/L	50	38	120	1K17014	EPA 8260D	11/17/21 15:51	KKW	
1,4-Dichlorobenzene [106-46-7]^	38	U	ug/L	50	38	120	1K17014	EPA 8260D	11/17/21 15:51	KKW	
2-Butanone [78-93-3]^	220	U	ug/L	50	220	620	1K17014	EPA 8260D	11/17/21 15:51	KKW	
2-Hexanone [591-78-6]^	120	U	ug/L	50	120	620	1K17014	EPA 8260D	11/17/21 15:51	KKW	
4-Methyl-2-pentanone [108-10-1]^	120	U	ug/L	50	120	620	1K17014	EPA 8260D	11/17/21 15:51	KKW	
Acetone [67-64-1]^	500	U	ug/L	50	500	1200	1K17014	EPA 8260D	11/17/21 15:51	KKW	
Benzene [71-43-2]^	36	U	ug/L	50	36	120	1K17014	EPA 8260D	11/17/21 15:51	KKW	
Bromodichloromethane [75-27-4]^	26	U	ug/L	50	26	120	1K17014	EPA 8260D	11/17/21 15:51	KKW	
Bromoform [75-25-2]^	38	U	ug/L	50	38	120	1K17014	EPA 8260D	11/17/21 15:51	KKW	
Bromomethane [74-83-9]^	48	U	ug/L	50	48	120	1K17014	EPA 8260D	11/17/21 15:51	KKW	
Carbon disulfide [75-15-0]^	120	U	ug/L	50	120	620	1K17014	EPA 8260D	11/17/21 15:51	KKW	
Carbon Tetrachloride [56-23-5]^	47	U	ug/L	50	47	120	1K17014	EPA 8260D	11/17/21 15:51	KKW	
Chlorobenzene [108-90-7]^	36	U	ug/L	50	36	120	1K17014	EPA 8260D	11/17/21 15:51	KKW	
Chloroethane [75-00-3]^	49	U	ug/L	50	49	120	1K17014	EPA 8260D	11/17/21 15:51	KKW	
Chloroform [67-66-3]^	40	U	ug/L	50	40	120	1K17014	EPA 8260D	11/17/21 15:51	KKW	
Chloromethane [74-87-3]^	41	U	ug/L	50	41	120	1K17014	EPA 8260D	11/17/21 15:51	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**3700**		ug/L	50	26	120	1K17014	EPA 8260D	11/17/21 15:51	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	30	U	ug/L	50	30	120	1K17014	EPA 8260D	11/17/21 15:51	KKW	
Cyclohexane [110-82-7]^	46	U	ug/L	50	46	120	1K17014	EPA 8260D	11/17/21 15:51	KKW	
Dibromochloromethane [124-48-1]^	25	U	ug/L	50	25	120	1K17014	EPA 8260D	11/17/21 15:51	KKW	
Dichlorodifluoromethane [75-71-8]^	37	U	ug/L	50	37	120	1K17014	EPA 8260D	11/17/21 15:51	KKW	
Ethylbenzene [100-41-4]^	34	U	ug/L	50	34	120	1K17014	EPA 8260D	11/17/21 15:51	KKW	
Freon 113 [76-13-1]^	36	U	ug/L	50	36	120	1K17014	EPA 8260D	11/17/21 15:51	KKW	
Isopropylbenzene [98-82-8]^	34	U	ug/L	50	34	120	1K17014	EPA 8260D	11/17/21 15:51	KKW	
Methyl acetate [79-20-9]^	48	U	ug/L	50	48	120	1K17014	EPA 8260D	11/17/21 15:51	KKW	
Methylene Chloride [75-09-2]^	120	U	ug/L	50	120	620	1K17014	EPA 8260D	11/17/21 15:51	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	30	U	ug/L	50	30	120	1K17014	EPA 8260D	11/17/21 15:51	KKW	
Styrene [100-42-5]^	30	U	ug/L	50	30	120	1K17014	EPA 8260D	11/17/21 15:51	KKW	
Tetrachloroethene [127-18-4]^	38	U	ug/L	50	38	120	1K17014	EPA 8260D	11/17/21 15:51	KKW	
Toluene [108-88-3]^	36	U	ug/L	50	36	120	1K17014	EPA 8260D	11/17/21 15:51	KKW	
trans-1,2-Dichloroethene [156-60-5]^	36	U	ug/L	50	36	120	1K17014	EPA 8260D	11/17/21 15:51	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	36	U	ug/L	50	36	120	1K17014	EPA 8260D	11/17/21 15:51	KKW	
Trichloroethene [79-01-6]^	**4200**		ug/L	50	44	120	1K17014	EPA 8260D	11/17/21 15:51	KKW	
Trichlorofluoromethane [75-69-4]^	47	U	ug/L	50	47	120	1K17014	EPA 8260D	11/17/21 15:51	KKW	
Vinyl chloride [75-01-4]^	**190**		ug/L	50	36	120	1K17014	EPA 8260D	11/17/21 15:51	KKW	

ANALYTICAL RESULTS

Description: LC34PS-PZA-073.0-20211111 **Lab Sample ID:** AE07280-41 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 12:36 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*52*	*1*	*50.0*	*104 %*	*41-142*	*1K17014*	*EPA 8260D*	*11/17/21 15:51*	*KKW*	
Dibromofluoromethane	*50*	*1*	*50.0*	*100 %*	*53-146*	*1K17014*	*EPA 8260D*	*11/17/21 15:51*	*KKW*	
Toluene-d8	*54*	*1*	*50.0*	*108 %*	*41-146*	*1K17014*	*EPA 8260D*	*11/17/21 15:51*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZA-080.0-20211111 **Lab Sample ID:** AE07280-42 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 12:38 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	1K12031	EPA 8260D	11/13/21 02:34	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	1K12031	EPA 8260D	11/13/21 02:34	nmc	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	1K12031	EPA 8260D	11/13/21 02:34	nmc	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	1K12031	EPA 8260D	11/13/21 02:34	nmc	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	1K12031	EPA 8260D	11/13/21 02:34	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	1K12031	EPA 8260D	11/13/21 02:34	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	1K12031	EPA 8260D	11/13/21 02:34	nmc	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	1K12031	EPA 8260D	11/13/21 02:34	nmc	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	1K12031	EPA 8260D	11/13/21 02:34	nmc	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	1K12031	EPA 8260D	11/13/21 02:34	nmc	QV-01
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	1K12031	EPA 8260D	11/13/21 02:34	nmc	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	1K12031	EPA 8260D	11/13/21 02:34	nmc	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	1K12031	EPA 8260D	11/13/21 02:34	nmc	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	1K12031	EPA 8260D	11/13/21 02:34	nmc	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	1K12031	EPA 8260D	11/13/21 02:34	nmc	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	1K12031	EPA 8260D	11/13/21 02:34	nmc	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	1K12031	EPA 8260D	11/13/21 02:34	nmc	QV-01
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	1K12031	EPA 8260D	11/13/21 02:34	nmc	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	1K12031	EPA 8260D	11/13/21 02:34	nmc	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	1K12031	EPA 8260D	11/13/21 02:34	nmc	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	1K12031	EPA 8260D	11/13/21 02:34	nmc	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	1K12031	EPA 8260D	11/13/21 02:34	nmc	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	1K12031	EPA 8260D	11/13/21 02:34	nmc	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	1K12031	EPA 8260D	11/13/21 02:34	nmc	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	1K12031	EPA 8260D	11/13/21 02:34	nmc	QV-01
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	1K12031	EPA 8260D	11/13/21 02:34	nmc	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	1K12031	EPA 8260D	11/13/21 02:34	nmc	
cis-1,2-Dichloroethene [156-59-2]^	**49**		ug/L	1	0.53	2.5	1K12031	EPA 8260D	11/13/21 02:34	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	1K12031	EPA 8260D	11/13/21 02:34	nmc	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	1K12031	EPA 8260D	11/13/21 02:34	nmc	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	1K12031	EPA 8260D	11/13/21 02:34	nmc	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	1K12031	EPA 8260D	11/13/21 02:34	nmc	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	1K12031	EPA 8260D	11/13/21 02:34	nmc	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	1K12031	EPA 8260D	11/13/21 02:34	nmc	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	1K12031	EPA 8260D	11/13/21 02:34	nmc	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	1K12031	EPA 8260D	11/13/21 02:34	nmc	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	1K12031	EPA 8260D	11/13/21 02:34	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	1K12031	EPA 8260D	11/13/21 02:34	nmc	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	1K12031	EPA 8260D	11/13/21 02:34	nmc	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	1K12031	EPA 8260D	11/13/21 02:34	nmc	QV-01
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	1K12031	EPA 8260D	11/13/21 02:34	nmc	
trans-1,2-Dichloroethene [156-60-5]^	**8.6**		ug/L	1	0.73	2.5	1K12031	EPA 8260D	11/13/21 02:34	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	1K12031	EPA 8260D	11/13/21 02:34	nmc	
Trichloroethene [79-01-6]^	**4.7**		ug/L	1	0.89	2.5	1K12031	EPA 8260D	11/13/21 02:34	nmc	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	1K12031	EPA 8260D	11/13/21 02:34	nmc	QL-02, QV-01

ANALYTICAL RESULTS

Description: LC34PS-PZA-080.0-20211111 **Lab Sample ID:** AE07280-42 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 12:38 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Vinyl chloride [75-01-4]^	**0.94**	I	ug/L	1	0.71	2.5	1K12031	EPA 8260D	11/13/21 02:34	nmc	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*40*	*1*	*50.0*	*79 %*	*41-142*	*1K12031*	*EPA 8260D*	*11/13/21 02:34*	*nmc*	
Dibromofluoromethane	*44*	*1*	*50.0*	*88 %*	*53-146*	*1K12031*	*EPA 8260D*	*11/13/21 02:34*	*nmc*	
Toluene-d8	*45*	*1*	*50.0*	*89 %*	*41-146*	*1K12031*	*EPA 8260D*	*11/13/21 02:34*	*nmc*	

ANALYTICAL RESULTS

Description: LC34PS-PZB-040.0-20211111 **Lab Sample ID:** AE07280-43 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 13:00 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	8000	U	ug/L	10000	8000	25000	1K15010	EPA 8260D	11/15/21 18:42	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	5400	U	ug/L	10000	5400	25000	1K15010	EPA 8260D	11/15/21 18:42	nmc	
1,1,2-Trichloroethane [79-00-5]^	7600	U	ug/L	10000	7600	25000	1K15010	EPA 8260D	11/15/21 18:42	nmc	
1,1-Dichloroethane [75-34-3]^	6200	U	ug/L	10000	6200	25000	1K15010	EPA 8260D	11/15/21 18:42	nmc	QV-01
1,1-Dichloroethene [75-35-4]^	9400	U	ug/L	10000	9400	25000	1K15010	EPA 8260D	11/15/21 18:42	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	7000	U	ug/L	10000	7000	25000	1K15010	EPA 8260D	11/15/21 18:42	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	9600	U	ug/L	10000	9600	25000	1K15010	EPA 8260D	11/15/21 18:42	nmc	
1,2-Dibromoethane [106-93-4]^	7800	U	ug/L	10000	7800	25000	1K15010	EPA 8260D	11/15/21 18:42	nmc	
1,2-Dichlorobenzene [95-50-1]^	7300	U	ug/L	10000	7300	25000	1K15010	EPA 8260D	11/15/21 18:42	nmc	
1,2-Dichloroethane [107-06-2]^	6300	U	ug/L	10000	6300	25000	1K15010	EPA 8260D	11/15/21 18:42	nmc	QV-01
1,2-Dichloropropane [78-87-5]^	8000	U	ug/L	10000	8000	25000	1K15010	EPA 8260D	11/15/21 18:42	nmc	
1,3-Dichlorobenzene [541-73-1]^	7700	U	ug/L	10000	7700	25000	1K15010	EPA 8260D	11/15/21 18:42	nmc	
1,4-Dichlorobenzene [106-46-7]^	7600	U	ug/L	10000	7600	25000	1K15010	EPA 8260D	11/15/21 18:42	nmc	
2-Butanone [78-93-3]^	45000	U	ug/L	10000	45000	120000	1K15010	EPA 8260D	11/15/21 18:42	nmc	
2-Hexanone [591-78-6]^	25000	U	ug/L	10000	25000	120000	1K15010	EPA 8260D	11/15/21 18:42	nmc	QV-01
4-Methyl-2-pentanone [108-10-1]^	25000	U	ug/L	10000	25000	120000	1K15010	EPA 8260D	11/15/21 18:42	nmc	
Acetone [67-64-1]^	100000	U	ug/L	10000	100000	250000	1K15010	EPA 8260D	11/15/21 18:42	nmc	QV-01
Benzene [71-43-2]^	7100	U	ug/L	10000	7100	25000	1K15010	EPA 8260D	11/15/21 18:42	nmc	
Bromodichloromethane [75-27-4]^	5200	U	ug/L	10000	5200	25000	1K15010	EPA 8260D	11/15/21 18:42	nmc	
Bromoform [75-25-2]^	7500	U	ug/L	10000	7500	25000	1K15010	EPA 8260D	11/15/21 18:42	nmc	
Bromomethane [74-83-9]^	9500	U	ug/L	10000	9500	25000	1K15010	EPA 8260D	11/15/21 18:42	nmc	QV-01
Carbon disulfide [75-15-0]^	25000	U	ug/L	10000	25000	120000	1K15010	EPA 8260D	11/15/21 18:42	nmc	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	9400	U	ug/L	10000	9400	25000	1K15010	EPA 8260D	11/15/21 18:42	nmc	
Chlorobenzene [108-90-7]^	7200	U	ug/L	10000	7200	25000	1K15010	EPA 8260D	11/15/21 18:42	nmc	
Chloroethane [75-00-3]^	9800	U	ug/L	10000	9800	25000	1K15010	EPA 8260D	11/15/21 18:42	nmc	QV-01
Chloroform [67-66-3]^	8000	U	ug/L	10000	8000	25000	1K15010	EPA 8260D	11/15/21 18:42	nmc	
Chloromethane [74-87-3]^	8200	U	ug/L	10000	8200	25000	1K15010	EPA 8260D	11/15/21 18:42	nmc	
cis-1,2-Dichloroethene [156-59-2]^	**33000**		ug/L	10000	5300	25000	1K15010	EPA 8260D	11/15/21 18:42	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	5900	U	ug/L	10000	5900	25000	1K15010	EPA 8260D	11/15/21 18:42	nmc	
Cyclohexane [110-82-7]^	9300	U	ug/L	10000	9300	25000	1K15010	EPA 8260D	11/15/21 18:42	nmc	QL-02
Dibromochloromethane [124-48-1]^	5000	U	ug/L	10000	5000	25000	1K15010	EPA 8260D	11/15/21 18:42	nmc	
Dichlorodifluoromethane [75-71-8]^	7400	U	ug/L	10000	7400	25000	1K15010	EPA 8260D	11/15/21 18:42	nmc	
Ethylbenzene [100-41-4]^	6900	U	ug/L	10000	6900	25000	1K15010	EPA 8260D	11/15/21 18:42	nmc	
Freon 113 [76-13-1]^	7300	U	ug/L	10000	7300	25000	1K15010	EPA 8260D	11/15/21 18:42	nmc	
Isopropylbenzene [98-82-8]^	6700	U	ug/L	10000	6700	25000	1K15010	EPA 8260D	11/15/21 18:42	nmc	
Methyl acetate [79-20-9]^	9500	U	ug/L	10000	9500	25000	1K15010	EPA 8260D	11/15/21 18:42	nmc	
Methylene Chloride [75-09-2]^	25000	U	ug/L	10000	25000	120000	1K15010	EPA 8260D	11/15/21 18:42	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	6000	U	ug/L	10000	6000	25000	1K15010	EPA 8260D	11/15/21 18:42	nmc	
Styrene [100-42-5]^	6100	U	ug/L	10000	6100	25000	1K15010	EPA 8260D	11/15/21 18:42	nmc	
Tetrachloroethene [127-18-4]^	7600	U	ug/L	10000	7600	25000	1K15010	EPA 8260D	11/15/21 18:42	nmc	
Toluene [108-88-3]^	7200	U	ug/L	10000	7200	25000	1K15010	EPA 8260D	11/15/21 18:42	nmc	
trans-1,2-Dichloroethene [156-60-5]^	7300	U	ug/L	10000	7300	25000	1K15010	EPA 8260D	11/15/21 18:42	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	7300	U	ug/L	10000	7300	25000	1K15010	EPA 8260D	11/15/21 18:42	nmc	
Trichloroethene [79-01-6]^	**410000**		ug/L	10000	8900	25000	1K15010	EPA 8260D	11/15/21 18:42	nmc	
Trichlorofluoromethane [75-69-4]^	9400	U	ug/L	10000	9400	25000	1K15010	EPA 8260D	11/15/21 18:42	nmc	QV-01
Vinyl chloride [75-01-4]^	7100	U	ug/L	10000	7100	25000	1K15010	EPA 8260D	11/15/21 18:42	nmc	

ANALYTICAL RESULTS

Description: LC34PS-PZB-040.0-20211111 **Lab Sample ID:** AE07280-43 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 13:00 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*40*	*1*	*50.0*	*80 %*	*41-142*	*1K15010*	*EPA 8260D*	*11/15/21 18:42*	*nmc*	
Dibromofluoromethane	*44*	*1*	*50.0*	*88 %*	*53-146*	*1K15010*	*EPA 8260D*	*11/15/21 18:42*	*nmc*	
Toluene-d8	*45*	*1*	*50.0*	*90 %*	*41-146*	*1K15010*	*EPA 8260D*	*11/15/21 18:42*	*nmc*	

ANALYTICAL RESULTS

Description: LC34PS-PZB-050.0-20211111 **Lab Sample ID:** AE07280-44 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 13:02 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	16000	U	ug/L	20000	16000	50000	1K15010	EPA 8260D	11/15/21 19:11	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	11000	U	ug/L	20000	11000	50000	1K15010	EPA 8260D	11/15/21 19:11	nmc	
1,1,2-Trichloroethane [79-00-5]^	15000	U	ug/L	20000	15000	50000	1K15010	EPA 8260D	11/15/21 19:11	nmc	
1,1-Dichloroethane [75-34-3]^	12000	U	ug/L	20000	12000	50000	1K15010	EPA 8260D	11/15/21 19:11	nmc	QV-01
1,1-Dichloroethene [75-35-4]^	19000	U	ug/L	20000	19000	50000	1K15010	EPA 8260D	11/15/21 19:11	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	14000	U	ug/L	20000	14000	50000	1K15010	EPA 8260D	11/15/21 19:11	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	19000	U	ug/L	20000	19000	50000	1K15010	EPA 8260D	11/15/21 19:11	nmc	
1,2-Dibromoethane [106-93-4]^	16000	U	ug/L	20000	16000	50000	1K15010	EPA 8260D	11/15/21 19:11	nmc	
1,2-Dichlorobenzene [95-50-1]^	15000	U	ug/L	20000	15000	50000	1K15010	EPA 8260D	11/15/21 19:11	nmc	
1,2-Dichloroethane [107-06-2]^	13000	U	ug/L	20000	13000	50000	1K15010	EPA 8260D	11/15/21 19:11	nmc	QV-01
1,2-Dichloropropane [78-87-5]^	16000	U	ug/L	20000	16000	50000	1K15010	EPA 8260D	11/15/21 19:11	nmc	
1,3-Dichlorobenzene [541-73-1]^	15000	U	ug/L	20000	15000	50000	1K15010	EPA 8260D	11/15/21 19:11	nmc	
1,4-Dichlorobenzene [106-46-7]^	15000	U	ug/L	20000	15000	50000	1K15010	EPA 8260D	11/15/21 19:11	nmc	
2-Butanone [78-93-3]^	90000	U	ug/L	20000	90000	250000	1K15010	EPA 8260D	11/15/21 19:11	nmc	
2-Hexanone [591-78-6]^	50000	U	ug/L	20000	50000	250000	1K15010	EPA 8260D	11/15/21 19:11	nmc	QV-01
4-Methyl-2-pentanone [108-10-1]^	50000	U	ug/L	20000	50000	250000	1K15010	EPA 8260D	11/15/21 19:11	nmc	
Acetone [67-64-1]^	200000	U	ug/L	20000	200000	500000	1K15010	EPA 8260D	11/15/21 19:11	nmc	QV-01
Benzene [71-43-2]^	14000	U	ug/L	20000	14000	50000	1K15010	EPA 8260D	11/15/21 19:11	nmc	
Bromodichloromethane [75-27-4]^	10000	U	ug/L	20000	10000	50000	1K15010	EPA 8260D	11/15/21 19:11	nmc	
Bromoform [75-25-2]^	15000	U	ug/L	20000	15000	50000	1K15010	EPA 8260D	11/15/21 19:11	nmc	
Bromomethane [74-83-9]^	19000	U	ug/L	20000	19000	50000	1K15010	EPA 8260D	11/15/21 19:11	nmc	QV-01
Carbon disulfide [75-15-0]^	50000	U	ug/L	20000	50000	250000	1K15010	EPA 8260D	11/15/21 19:11	nmc	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	19000	U	ug/L	20000	19000	50000	1K15010	EPA 8260D	11/15/21 19:11	nmc	
Chlorobenzene [108-90-7]^	14000	U	ug/L	20000	14000	50000	1K15010	EPA 8260D	11/15/21 19:11	nmc	
Chloroethane [75-00-3]^	20000	U	ug/L	20000	20000	50000	1K15010	EPA 8260D	11/15/21 19:11	nmc	QV-01
Chloroform [67-66-3]^	16000	U	ug/L	20000	16000	50000	1K15010	EPA 8260D	11/15/21 19:11	nmc	
Chloromethane [74-87-3]^	16000	U	ug/L	20000	16000	50000	1K15010	EPA 8260D	11/15/21 19:11	nmc	
cis-1,2-Dichloroethene [156-59-2]^	**41000**	I	ug/L	20000	11000	50000	1K15010	EPA 8260D	11/15/21 19:11	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	12000	U	ug/L	20000	12000	50000	1K15010	EPA 8260D	11/15/21 19:11	nmc	
Cyclohexane [110-82-7]^	19000	U	ug/L	20000	19000	50000	1K15010	EPA 8260D	11/15/21 19:11	nmc	QL-02
Dibromochloromethane [124-48-1]^	10000	U	ug/L	20000	10000	50000	1K15010	EPA 8260D	11/15/21 19:11	nmc	
Dichlorodifluoromethane [75-71-8]^	15000	U	ug/L	20000	15000	50000	1K15010	EPA 8260D	11/15/21 19:11	nmc	
Ethylbenzene [100-41-4]^	14000	U	ug/L	20000	14000	50000	1K15010	EPA 8260D	11/15/21 19:11	nmc	
Freon 113 [76-13-1]^	15000	U	ug/L	20000	15000	50000	1K15010	EPA 8260D	11/15/21 19:11	nmc	
Isopropylbenzene [98-82-8]^	13000	U	ug/L	20000	13000	50000	1K15010	EPA 8260D	11/15/21 19:11	nmc	
Methyl acetate [79-20-9]^	19000	U	ug/L	20000	19000	50000	1K15010	EPA 8260D	11/15/21 19:11	nmc	
Methylene Chloride [75-09-2]^	50000	U	ug/L	20000	50000	250000	1K15010	EPA 8260D	11/15/21 19:11	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	12000	U	ug/L	20000	12000	50000	1K15010	EPA 8260D	11/15/21 19:11	nmc	
Styrene [100-42-5]^	12000	U	ug/L	20000	12000	50000	1K15010	EPA 8260D	11/15/21 19:11	nmc	
Tetrachloroethene [127-18-4]^	15000	U	ug/L	20000	15000	50000	1K15010	EPA 8260D	11/15/21 19:11	nmc	
Toluene [108-88-3]^	14000	U	ug/L	20000	14000	50000	1K15010	EPA 8260D	11/15/21 19:11	nmc	
trans-1,2-Dichloroethene [156-60-5]^	15000	U	ug/L	20000	15000	50000	1K15010	EPA 8260D	11/15/21 19:11	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	15000	U	ug/L	20000	15000	50000	1K15010	EPA 8260D	11/15/21 19:11	nmc	
Trichloroethene [79-01-6]^	**950000**		ug/L	20000	18000	50000	1K15010	EPA 8260D	11/15/21 19:11	nmc	
Trichlorofluoromethane [75-69-4]^	19000	U	ug/L	20000	19000	50000	1K15010	EPA 8260D	11/15/21 19:11	nmc	QV-01
Vinyl chloride [75-01-4]^	14000	U	ug/L	20000	14000	50000	1K15010	EPA 8260D	11/15/21 19:11	nmc	

ANALYTICAL RESULTS

Description: LC34PS-PZB-050.0-20211111 **Lab Sample ID:** AE07280-44 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 13:02 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*41*	*1*	*50.0*	*82 %*	*41-142*	*1K15010*	*EPA 8260D*	*11/15/21 19:11*	*nmc*	
Dibromofluoromethane	*46*	*1*	*50.0*	*92 %*	*53-146*	*1K15010*	*EPA 8260D*	*11/15/21 19:11*	*nmc*	
Toluene-d8	*45*	*1*	*50.0*	*90 %*	*41-146*	*1K15010*	*EPA 8260D*	*11/15/21 19:11*	*nmc*	

ANALYTICAL RESULTS

Description: LC34PS-PZB-058.0-20211111 **Lab Sample ID:** AE07280-45 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 13:04 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	8000	U	ug/L	10000	8000	25000	1K16004	EPA 8260D	11/16/21 11:03	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	5400	U	ug/L	10000	5400	25000	1K16004	EPA 8260D	11/16/21 11:03	nmc	
1,1,2-Trichloroethane [79-00-5]^	7600	U	ug/L	10000	7600	25000	1K16004	EPA 8260D	11/16/21 11:03	nmc	
1,1-Dichloroethane [75-34-3]^	6200	U	ug/L	10000	6200	25000	1K16004	EPA 8260D	11/16/21 11:03	nmc	
1,1-Dichloroethene [75-35-4]^	9400	U	ug/L	10000	9400	25000	1K16004	EPA 8260D	11/16/21 11:03	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	7000	U	ug/L	10000	7000	25000	1K16004	EPA 8260D	11/16/21 11:03	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	9600	U	ug/L	10000	9600	25000	1K16004	EPA 8260D	11/16/21 11:03	nmc	
1,2-Dibromoethane [106-93-4]^	7800	U	ug/L	10000	7800	25000	1K16004	EPA 8260D	11/16/21 11:03	nmc	
1,2-Dichlorobenzene [95-50-1]^	7300	U	ug/L	10000	7300	25000	1K16004	EPA 8260D	11/16/21 11:03	nmc	
1,2-Dichloroethane [107-06-2]^	6300	U	ug/L	10000	6300	25000	1K16004	EPA 8260D	11/16/21 11:03	nmc	QV-01
1,2-Dichloropropane [78-87-5]^	8000	U	ug/L	10000	8000	25000	1K16004	EPA 8260D	11/16/21 11:03	nmc	
1,3-Dichlorobenzene [541-73-1]^	7700	U	ug/L	10000	7700	25000	1K16004	EPA 8260D	11/16/21 11:03	nmc	
1,4-Dichlorobenzene [106-46-7]^	7600	U	ug/L	10000	7600	25000	1K16004	EPA 8260D	11/16/21 11:03	nmc	
2-Butanone [78-93-3]^	45000	U	ug/L	10000	45000	120000	1K16004	EPA 8260D	11/16/21 11:03	nmc	
2-Hexanone [591-78-6]^	25000	U	ug/L	10000	25000	120000	1K16004	EPA 8260D	11/16/21 11:03	nmc	
4-Methyl-2-pentanone [108-10-1]^	25000	U	ug/L	10000	25000	120000	1K16004	EPA 8260D	11/16/21 11:03	nmc	
Acetone [67-64-1]^	100000	U	ug/L	10000	100000	250000	1K16004	EPA 8260D	11/16/21 11:03	nmc	QV-01
Benzene [71-43-2]^	7100	U	ug/L	10000	7100	25000	1K16004	EPA 8260D	11/16/21 11:03	nmc	
Bromodichloromethane [75-27-4]^	5200	U	ug/L	10000	5200	25000	1K16004	EPA 8260D	11/16/21 11:03	nmc	
Bromoform [75-25-2]^	7500	U	ug/L	10000	7500	25000	1K16004	EPA 8260D	11/16/21 11:03	nmc	
Bromomethane [74-83-9]^	9500	U	ug/L	10000	9500	25000	1K16004	EPA 8260D	11/16/21 11:03	nmc	QV-01
Carbon disulfide [75-15-0]^	25000	U	ug/L	10000	25000	120000	1K16004	EPA 8260D	11/16/21 11:03	nmc	QL-02, QM-19, QV-01
Carbon Tetrachloride [56-23-5]^	9400	U	ug/L	10000	9400	25000	1K16004	EPA 8260D	11/16/21 11:03	nmc	
Chlorobenzene [108-90-7]^	7200	U	ug/L	10000	7200	25000	1K16004	EPA 8260D	11/16/21 11:03	nmc	
Chloroethane [75-00-3]^	9800	U	ug/L	10000	9800	25000	1K16004	EPA 8260D	11/16/21 11:03	nmc	QM-07, QV-01
Chloroform [67-66-3]^	8000	U	ug/L	10000	8000	25000	1K16004	EPA 8260D	11/16/21 11:03	nmc	
Chloromethane [74-87-3]^	8200	U	ug/L	10000	8200	25000	1K16004	EPA 8260D	11/16/21 11:03	nmc	
cis-1,2-Dichloroethene [156-59-2]^	**28000**		ug/L	10000	5300	25000	1K16004	EPA 8260D	11/16/21 11:03	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	5900	U	ug/L	10000	5900	25000	1K16004	EPA 8260D	11/16/21 11:03	nmc	
Cyclohexane [110-82-7]^	9300	U	ug/L	10000	9300	25000	1K16004	EPA 8260D	11/16/21 11:03	nmc	QL-02, QM-19
Dibromochloromethane [124-48-1]^	5000	U	ug/L	10000	5000	25000	1K16004	EPA 8260D	11/16/21 11:03	nmc	
Dichlorodifluoromethane [75-71-8]^	7400	U	ug/L	10000	7400	25000	1K16004	EPA 8260D	11/16/21 11:03	nmc	
Ethylbenzene [100-41-4]^	6900	U	ug/L	10000	6900	25000	1K16004	EPA 8260D	11/16/21 11:03	nmc	
Freon 113 [76-13-1]^	7300	U	ug/L	10000	7300	25000	1K16004	EPA 8260D	11/16/21 11:03	nmc	
Isopropylbenzene [98-82-8]^	6700	U	ug/L	10000	6700	25000	1K16004	EPA 8260D	11/16/21 11:03	nmc	
Methyl acetate [79-20-9]^	9500	U	ug/L	10000	9500	25000	1K16004	EPA 8260D	11/16/21 11:03	nmc	
Methylene Chloride [75-09-2]^	25000	U	ug/L	10000	25000	120000	1K16004	EPA 8260D	11/16/21 11:03	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	6000	U	ug/L	10000	6000	25000	1K16004	EPA 8260D	11/16/21 11:03	nmc	
Styrene [100-42-5]^	6100	U	ug/L	10000	6100	25000	1K16004	EPA 8260D	11/16/21 11:03	nmc	
Tetrachloroethene [127-18-4]^	7600	U	ug/L	10000	7600	25000	1K16004	EPA 8260D	11/16/21 11:03	nmc	
Toluene [108-88-3]^	7200	U	ug/L	10000	7200	25000	1K16004	EPA 8260D	11/16/21 11:03	nmc	
trans-1,2-Dichloroethene [156-60-5]^	7300	U	ug/L	10000	7300	25000	1K16004	EPA 8260D	11/16/21 11:03	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	7300	U	ug/L	10000	7300	25000	1K16004	EPA 8260D	11/16/21 11:03	nmc	
Trichloroethene [79-01-6]^	**340000**		ug/L	10000	8900	25000	1K16004	EPA 8260D	11/16/21 11:03	nmc	

ANALYTICAL RESULTS

Description: LC34PS-PZB-058.0-20211111 **Lab Sample ID:** AE07280-45 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 13:04 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Trichlorofluoromethane [75-69-4]^	9400	U	ug/L	10000	9400	25000	1K16004	EPA 8260D	11/16/21 11:03	nmc	QM-07
Vinyl chloride [75-01-4]^	7100	U	ug/L	10000	7100	25000	1K16004	EPA 8260D	11/16/21 11:03	nmc	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*41*	*1*	*50.0*	*82 %*	*41-142*	*1K16004*	*EPA 8260D*	*11/16/21 11:03*	*nmc*	
Dibromofluoromethane	*45*	*1*	*50.0*	*90 %*	*53-146*	*1K16004*	*EPA 8260D*	*11/16/21 11:03*	*nmc*	
Toluene-d8	*45*	*1*	*50.0*	*91 %*	*41-146*	*1K16004*	*EPA 8260D*	*11/16/21 11:03*	*nmc*	

ANALYTICAL RESULTS

Description: LC34PS-PZB-073.0-20211111 **Lab Sample ID:** AE07280-46 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 13:06 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	4.0	U	ug/L	5	4.0	12	1K17014	EPA 8260D	11/17/21 16:19	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	2.7	U	ug/L	5	2.7	12	1K17014	EPA 8260D	11/17/21 16:19	KKW	
1,1,2-Trichloroethane [79-00-5]^	3.8	U	ug/L	5	3.8	12	1K17014	EPA 8260D	11/17/21 16:19	KKW	
1,1-Dichloroethane [75-34-3]^	3.1	U	ug/L	5	3.1	12	1K17014	EPA 8260D	11/17/21 16:19	KKW	
1,1-Dichloroethene [75-35-4]^	4.7	U	ug/L	5	4.7	12	1K17014	EPA 8260D	11/17/21 16:19	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	3.5	U	ug/L	5	3.5	12	1K17014	EPA 8260D	11/17/21 16:19	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	4.8	U	ug/L	5	4.8	12	1K17014	EPA 8260D	11/17/21 16:19	KKW	
1,2-Dibromoethane [106-93-4]^	3.9	U	ug/L	5	3.9	12	1K17014	EPA 8260D	11/17/21 16:19	KKW	
1,2-Dichlorobenzene [95-50-1]^	3.6	U	ug/L	5	3.6	12	1K17014	EPA 8260D	11/17/21 16:19	KKW	
1,2-Dichloroethane [107-06-2]^	3.2	U	ug/L	5	3.2	12	1K17014	EPA 8260D	11/17/21 16:19	KKW	
1,2-Dichloropropane [78-87-5]^	4.0	U	ug/L	5	4.0	12	1K17014	EPA 8260D	11/17/21 16:19	KKW	
1,3-Dichlorobenzene [541-73-1]^	3.8	U	ug/L	5	3.8	12	1K17014	EPA 8260D	11/17/21 16:19	KKW	
1,4-Dichlorobenzene [106-46-7]^	3.8	U	ug/L	5	3.8	12	1K17014	EPA 8260D	11/17/21 16:19	KKW	
2-Butanone [78-93-3]^	22	U	ug/L	5	22	62	1K17014	EPA 8260D	11/17/21 16:19	KKW	
2-Hexanone [591-78-6]^	12	U	ug/L	5	12	62	1K17014	EPA 8260D	11/17/21 16:19	KKW	
4-Methyl-2-pentanone [108-10-1]^	12	U	ug/L	5	12	62	1K17014	EPA 8260D	11/17/21 16:19	KKW	
Acetone [67-64-1]^	50	U	ug/L	5	50	120	1K17014	EPA 8260D	11/17/21 16:19	KKW	
Benzene [71-43-2]^	3.6	U	ug/L	5	3.6	12	1K17014	EPA 8260D	11/17/21 16:19	KKW	
Bromodichloromethane [75-27-4]^	2.6	U	ug/L	5	2.6	12	1K17014	EPA 8260D	11/17/21 16:19	KKW	
Bromoform [75-25-2]^	3.8	U	ug/L	5	3.8	12	1K17014	EPA 8260D	11/17/21 16:19	KKW	
Bromomethane [74-83-9]^	4.8	U	ug/L	5	4.8	12	1K17014	EPA 8260D	11/17/21 16:19	KKW	
Carbon disulfide [75-15-0]^	12	U	ug/L	5	12	62	1K17014	EPA 8260D	11/17/21 16:19	KKW	
Carbon Tetrachloride [56-23-5]^	4.7	U	ug/L	5	4.7	12	1K17014	EPA 8260D	11/17/21 16:19	KKW	
Chlorobenzene [108-90-7]^	3.6	U	ug/L	5	3.6	12	1K17014	EPA 8260D	11/17/21 16:19	KKW	
Chloroethane [75-00-3]^	4.9	U	ug/L	5	4.9	12	1K17014	EPA 8260D	11/17/21 16:19	KKW	
Chloroform [67-66-3]^	4.0	U	ug/L	5	4.0	12	1K17014	EPA 8260D	11/17/21 16:19	KKW	
Chloromethane [74-87-3]^	4.1	U	ug/L	5	4.1	12	1K17014	EPA 8260D	11/17/21 16:19	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**15**		ug/L	5	2.6	12	1K17014	EPA 8260D	11/17/21 16:19	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	3.0	U	ug/L	5	3.0	12	1K17014	EPA 8260D	11/17/21 16:19	KKW	
Cyclohexane [110-82-7]^	4.6	U	ug/L	5	4.6	12	1K17014	EPA 8260D	11/17/21 16:19	KKW	
Dibromochloromethane [124-48-1]^	2.5	U	ug/L	5	2.5	12	1K17014	EPA 8260D	11/17/21 16:19	KKW	
Dichlorodifluoromethane [75-71-8]^	3.7	U	ug/L	5	3.7	12	1K17014	EPA 8260D	11/17/21 16:19	KKW	
Ethylbenzene [100-41-4]^	3.4	U	ug/L	5	3.4	12	1K17014	EPA 8260D	11/17/21 16:19	KKW	
Freon 113 [76-13-1]^	3.6	U	ug/L	5	3.6	12	1K17014	EPA 8260D	11/17/21 16:19	KKW	
Isopropylbenzene [98-82-8]^	3.4	U	ug/L	5	3.4	12	1K17014	EPA 8260D	11/17/21 16:19	KKW	
Methyl acetate [79-20-9]^	4.8	U	ug/L	5	4.8	12	1K17014	EPA 8260D	11/17/21 16:19	KKW	
Methylene Chloride [75-09-2]^	12	U	ug/L	5	12	62	1K17014	EPA 8260D	11/17/21 16:19	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	3.0	U	ug/L	5	3.0	12	1K17014	EPA 8260D	11/17/21 16:19	KKW	
Styrene [100-42-5]^	3.0	U	ug/L	5	3.0	12	1K17014	EPA 8260D	11/17/21 16:19	KKW	
Tetrachloroethene [127-18-4]^	3.8	U	ug/L	5	3.8	12	1K17014	EPA 8260D	11/17/21 16:19	KKW	
Toluene [108-88-3]^	3.6	U	ug/L	5	3.6	12	1K17014	EPA 8260D	11/17/21 16:19	KKW	
trans-1,2-Dichloroethene [156-60-5]^	3.6	U	ug/L	5	3.6	12	1K17014	EPA 8260D	11/17/21 16:19	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	3.6	U	ug/L	5	3.6	12	1K17014	EPA 8260D	11/17/21 16:19	KKW	
Trichloroethene [79-01-6]^	**270**		ug/L	5	4.4	12	1K17014	EPA 8260D	11/17/21 16:19	KKW	
Trichlorofluoromethane [75-69-4]^	4.7	U	ug/L	5	4.7	12	1K17014	EPA 8260D	11/17/21 16:19	KKW	
Vinyl chloride [75-01-4]^	3.6	U	ug/L	5	3.6	12	1K17014	EPA 8260D	11/17/21 16:19	KKW	

ANALYTICAL RESULTS

Description: LC34PS-PZB-073.0-20211111 **Lab Sample ID:** AE07280-46 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 13:06 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*52*	*1*	*50.0*	*103 %*	*41-142*	*1K17014*	*EPA 8260D*	*11/17/21 16:19*	*KKW*	
Dibromofluoromethane	*51*	*1*	*50.0*	*101 %*	*53-146*	*1K17014*	*EPA 8260D*	*11/17/21 16:19*	*KKW*	
Toluene-d8	*54*	*1*	*50.0*	*107 %*	*41-146*	*1K17014*	*EPA 8260D*	*11/17/21 16:19*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZB-080.0-20211111 **Lab Sample ID:** AE07280-47 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 13:08 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	1.6	U	ug/L	2	1.6	5.0	1K16004	EPA 8260D	11/16/21 12:01	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	1.1	U	ug/L	2	1.1	5.0	1K16004	EPA 8260D	11/16/21 12:01	nmc	
1,1,2-Trichloroethane [79-00-5]^	1.5	U	ug/L	2	1.5	5.0	1K16004	EPA 8260D	11/16/21 12:01	nmc	
1,1-Dichloroethane [75-34-3]^	1.2	U	ug/L	2	1.2	5.0	1K16004	EPA 8260D	11/16/21 12:01	nmc	
1,1-Dichloroethene [75-35-4]^	1.9	U	ug/L	2	1.9	5.0	1K16004	EPA 8260D	11/16/21 12:01	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	1.4	U	ug/L	2	1.4	5.0	1K16004	EPA 8260D	11/16/21 12:01	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	1.9	U	ug/L	2	1.9	5.0	1K16004	EPA 8260D	11/16/21 12:01	nmc	
1,2-Dibromoethane [106-93-4]^	1.6	U	ug/L	2	1.6	5.0	1K16004	EPA 8260D	11/16/21 12:01	nmc	
1,2-Dichlorobenzene [95-50-1]^	1.5	U	ug/L	2	1.5	5.0	1K16004	EPA 8260D	11/16/21 12:01	nmc	
1,2-Dichloroethane [107-06-2]^	1.3	U	ug/L	2	1.3	5.0	1K16004	EPA 8260D	11/16/21 12:01	nmc	QV-01
1,2-Dichloropropane [78-87-5]^	1.6	U	ug/L	2	1.6	5.0	1K16004	EPA 8260D	11/16/21 12:01	nmc	
1,3-Dichlorobenzene [541-73-1]^	1.5	U	ug/L	2	1.5	5.0	1K16004	EPA 8260D	11/16/21 12:01	nmc	
1,4-Dichlorobenzene [106-46-7]^	1.5	U	ug/L	2	1.5	5.0	1K16004	EPA 8260D	11/16/21 12:01	nmc	
2-Butanone [78-93-3]^	9.0	U	ug/L	2	9.0	25	1K16004	EPA 8260D	11/16/21 12:01	nmc	
2-Hexanone [591-78-6]^	5.0	U	ug/L	2	5.0	25	1K16004	EPA 8260D	11/16/21 12:01	nmc	
4-Methyl-2-pentanone [108-10-1]^	5.0	U	ug/L	2	5.0	25	1K16004	EPA 8260D	11/16/21 12:01	nmc	
Acetone [67-64-1]^	20	U	ug/L	2	20	50	1K16004	EPA 8260D	11/16/21 12:01	nmc	QV-01
Benzene [71-43-2]^	1.4	U	ug/L	2	1.4	5.0	1K16004	EPA 8260D	11/16/21 12:01	nmc	
Bromodichloromethane [75-27-4]^	1.0	U	ug/L	2	1.0	5.0	1K16004	EPA 8260D	11/16/21 12:01	nmc	
Bromoform [75-25-2]^	1.5	U	ug/L	2	1.5	5.0	1K16004	EPA 8260D	11/16/21 12:01	nmc	
Bromomethane [74-83-9]^	1.9	U	ug/L	2	1.9	5.0	1K16004	EPA 8260D	11/16/21 12:01	nmc	QV-01
Carbon disulfide [75-15-0]^	5.0	U	ug/L	2	5.0	25	1K16004	EPA 8260D	11/16/21 12:01	nmc	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	1.9	U	ug/L	2	1.9	5.0	1K16004	EPA 8260D	11/16/21 12:01	nmc	
Chlorobenzene [108-90-7]^	1.4	U	ug/L	2	1.4	5.0	1K16004	EPA 8260D	11/16/21 12:01	nmc	
Chloroethane [75-00-3]^	2.0	U	ug/L	2	2.0	5.0	1K16004	EPA 8260D	11/16/21 12:01	nmc	QV-01
Chloroform [67-66-3]^	1.6	U	ug/L	2	1.6	5.0	1K16004	EPA 8260D	11/16/21 12:01	nmc	
Chloromethane [74-87-3]^	1.6	U	ug/L	2	1.6	5.0	1K16004	EPA 8260D	11/16/21 12:01	nmc	
cis-1,2-Dichloroethene [156-59-2]^	**140**		ug/L	2	1.1	5.0	1K16004	EPA 8260D	11/16/21 12:01	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	1.2	U	ug/L	2	1.2	5.0	1K16004	EPA 8260D	11/16/21 12:01	nmc	
Cyclohexane [110-82-7]^	1.9	U	ug/L	2	1.9	5.0	1K16004	EPA 8260D	11/16/21 12:01	nmc	QL-02
Dibromochloromethane [124-48-1]^	1.0	U	ug/L	2	1.0	5.0	1K16004	EPA 8260D	11/16/21 12:01	nmc	
Dichlorodifluoromethane [75-71-8]^	1.5	U	ug/L	2	1.5	5.0	1K16004	EPA 8260D	11/16/21 12:01	nmc	
Ethylbenzene [100-41-4]^	1.4	U	ug/L	2	1.4	5.0	1K16004	EPA 8260D	11/16/21 12:01	nmc	
Freon 113 [76-13-1]^	1.5	U	ug/L	2	1.5	5.0	1K16004	EPA 8260D	11/16/21 12:01	nmc	
Isopropylbenzene [98-82-8]^	1.3	U	ug/L	2	1.3	5.0	1K16004	EPA 8260D	11/16/21 12:01	nmc	
Methyl acetate [79-20-9]^	1.9	U	ug/L	2	1.9	5.0	1K16004	EPA 8260D	11/16/21 12:01	nmc	
Methylene Chloride [75-09-2]^	5.0	U	ug/L	2	5.0	25	1K16004	EPA 8260D	11/16/21 12:01	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	1.2	U	ug/L	2	1.2	5.0	1K16004	EPA 8260D	11/16/21 12:01	nmc	
Styrene [100-42-5]^	1.2	U	ug/L	2	1.2	5.0	1K16004	EPA 8260D	11/16/21 12:01	nmc	
Tetrachloroethene [127-18-4]^	1.5	U	ug/L	2	1.5	5.0	1K16004	EPA 8260D	11/16/21 12:01	nmc	
Toluene [108-88-3]^	1.4	U	ug/L	2	1.4	5.0	1K16004	EPA 8260D	11/16/21 12:01	nmc	
trans-1,2-Dichloroethene [156-60-5]^	**24**		ug/L	2	1.5	5.0	1K16004	EPA 8260D	11/16/21 12:01	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	1.5	U	ug/L	2	1.5	5.0	1K16004	EPA 8260D	11/16/21 12:01	nmc	
Trichloroethene [79-01-6]^	**12**		ug/L	2	1.8	5.0	1K16004	EPA 8260D	11/16/21 12:01	nmc	
Trichlorofluoromethane [75-69-4]^	1.9	U	ug/L	2	1.9	5.0	1K16004	EPA 8260D	11/16/21 12:01	nmc	
Vinyl chloride [75-01-4]^	1.4	U	ug/L	2	1.4	5.0	1K16004	EPA 8260D	11/16/21 12:01	nmc	

ANALYTICAL RESULTS

Description: LC34PS-PZB-080.0-20211111 **Lab Sample ID:** AE07280-47 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 13:08 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*42*	*1*	*50.0*	*85 %*	*41-142*	*1K16004*	*EPA 8260D*	*11/16/21 12:01*	*nmc*	
Dibromofluoromethane	*48*	*1*	*50.0*	*96 %*	*53-146*	*1K16004*	*EPA 8260D*	*11/16/21 12:01*	*nmc*	
Toluene-d8	*46*	*1*	*50.0*	*93 %*	*41-146*	*1K16004*	*EPA 8260D*	*11/16/21 12:01*	*nmc*	

ANALYTICAL RESULTS

Description: LC34PS-PZC-040.0-20211111 **Lab Sample ID:** AE07280-48 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 13:30 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	16000	U	ug/L	20000	16000	50000	1K16004	EPA 8260D	11/16/21 12:30	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	11000	U	ug/L	20000	11000	50000	1K16004	EPA 8260D	11/16/21 12:30	nmc	
1,1,2-Trichloroethane [79-00-5]^	15000	U	ug/L	20000	15000	50000	1K16004	EPA 8260D	11/16/21 12:30	nmc	
1,1-Dichloroethane [75-34-3]^	12000	U	ug/L	20000	12000	50000	1K16004	EPA 8260D	11/16/21 12:30	nmc	
1,1-Dichloroethene [75-35-4]^	19000	U	ug/L	20000	19000	50000	1K16004	EPA 8260D	11/16/21 12:30	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	14000	U	ug/L	20000	14000	50000	1K16004	EPA 8260D	11/16/21 12:30	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	19000	U	ug/L	20000	19000	50000	1K16004	EPA 8260D	11/16/21 12:30	nmc	
1,2-Dibromoethane [106-93-4]^	16000	U	ug/L	20000	16000	50000	1K16004	EPA 8260D	11/16/21 12:30	nmc	
1,2-Dichlorobenzene [95-50-1]^	15000	U	ug/L	20000	15000	50000	1K16004	EPA 8260D	11/16/21 12:30	nmc	
1,2-Dichloroethane [107-06-2]^	13000	U	ug/L	20000	13000	50000	1K16004	EPA 8260D	11/16/21 12:30	nmc	QV-01
1,2-Dichloropropane [78-87-5]^	16000	U	ug/L	20000	16000	50000	1K16004	EPA 8260D	11/16/21 12:30	nmc	
1,3-Dichlorobenzene [541-73-1]^	15000	U	ug/L	20000	15000	50000	1K16004	EPA 8260D	11/16/21 12:30	nmc	
1,4-Dichlorobenzene [106-46-7]^	15000	U	ug/L	20000	15000	50000	1K16004	EPA 8260D	11/16/21 12:30	nmc	
2-Butanone [78-93-3]^	90000	U	ug/L	20000	90000	250000	1K16004	EPA 8260D	11/16/21 12:30	nmc	
2-Hexanone [591-78-6]^	50000	U	ug/L	20000	50000	250000	1K16004	EPA 8260D	11/16/21 12:30	nmc	
4-Methyl-2-pentanone [108-10-1]^	50000	U	ug/L	20000	50000	250000	1K16004	EPA 8260D	11/16/21 12:30	nmc	
Acetone [67-64-1]^	200000	U	ug/L	20000	200000	500000	1K16004	EPA 8260D	11/16/21 12:30	nmc	QV-01
Benzene [71-43-2]^	14000	U	ug/L	20000	14000	50000	1K16004	EPA 8260D	11/16/21 12:30	nmc	
Bromodichloromethane [75-27-4]^	10000	U	ug/L	20000	10000	50000	1K16004	EPA 8260D	11/16/21 12:30	nmc	
Bromoform [75-25-2]^	15000	U	ug/L	20000	15000	50000	1K16004	EPA 8260D	11/16/21 12:30	nmc	
Bromomethane [74-83-9]^	19000	U	ug/L	20000	19000	50000	1K16004	EPA 8260D	11/16/21 12:30	nmc	QV-01
Carbon disulfide [75-15-0]^	50000	U	ug/L	20000	50000	250000	1K16004	EPA 8260D	11/16/21 12:30	nmc	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	19000	U	ug/L	20000	19000	50000	1K16004	EPA 8260D	11/16/21 12:30	nmc	
Chlorobenzene [108-90-7]^	14000	U	ug/L	20000	14000	50000	1K16004	EPA 8260D	11/16/21 12:30	nmc	
Chloroethane [75-00-3]^	20000	U	ug/L	20000	20000	50000	1K16004	EPA 8260D	11/16/21 12:30	nmc	QV-01
Chloroform [67-66-3]^	16000	U	ug/L	20000	16000	50000	1K16004	EPA 8260D	11/16/21 12:30	nmc	
Chloromethane [74-87-3]^	16000	U	ug/L	20000	16000	50000	1K16004	EPA 8260D	11/16/21 12:30	nmc	
cis-1,2-Dichloroethene [156-59-2]^	**27000**	I	ug/L	20000	11000	50000	1K16004	EPA 8260D	11/16/21 12:30	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	12000	U	ug/L	20000	12000	50000	1K16004	EPA 8260D	11/16/21 12:30	nmc	
Cyclohexane [110-82-7]^	19000	U	ug/L	20000	19000	50000	1K16004	EPA 8260D	11/16/21 12:30	nmc	QL-02
Dibromochloromethane [124-48-1]^	10000	U	ug/L	20000	10000	50000	1K16004	EPA 8260D	11/16/21 12:30	nmc	
Dichlorodifluoromethane [75-71-8]^	15000	U	ug/L	20000	15000	50000	1K16004	EPA 8260D	11/16/21 12:30	nmc	
Ethylbenzene [100-41-4]^	14000	U	ug/L	20000	14000	50000	1K16004	EPA 8260D	11/16/21 12:30	nmc	
Freon 113 [76-13-1]^	15000	U	ug/L	20000	15000	50000	1K16004	EPA 8260D	11/16/21 12:30	nmc	
Isopropylbenzene [98-82-8]^	13000	U	ug/L	20000	13000	50000	1K16004	EPA 8260D	11/16/21 12:30	nmc	
Methyl acetate [79-20-9]^	19000	U	ug/L	20000	19000	50000	1K16004	EPA 8260D	11/16/21 12:30	nmc	
Methylene Chloride [75-09-2]^	50000	U	ug/L	20000	50000	250000	1K16004	EPA 8260D	11/16/21 12:30	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	12000	U	ug/L	20000	12000	50000	1K16004	EPA 8260D	11/16/21 12:30	nmc	
Styrene [100-42-5]^	12000	U	ug/L	20000	12000	50000	1K16004	EPA 8260D	11/16/21 12:30	nmc	
Tetrachloroethene [127-18-4]^	15000	U	ug/L	20000	15000	50000	1K16004	EPA 8260D	11/16/21 12:30	nmc	
Toluene [108-88-3]^	14000	U	ug/L	20000	14000	50000	1K16004	EPA 8260D	11/16/21 12:30	nmc	
trans-1,2-Dichloroethene [156-60-5]^	15000	U	ug/L	20000	15000	50000	1K16004	EPA 8260D	11/16/21 12:30	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	15000	U	ug/L	20000	15000	50000	1K16004	EPA 8260D	11/16/21 12:30	nmc	
Trichloroethene [79-01-6]^	**620000**		ug/L	20000	18000	50000	1K16004	EPA 8260D	11/16/21 12:30	nmc	
Trichlorofluoromethane [75-69-4]^	19000	U	ug/L	20000	19000	50000	1K16004	EPA 8260D	11/16/21 12:30	nmc	
Vinyl chloride [75-01-4]^	14000	U	ug/L	20000	14000	50000	1K16004	EPA 8260D	11/16/21 12:30	nmc	

ANALYTICAL RESULTS

Description: LC34PS-PZC-040.0-20211111 **Lab Sample ID:** AE07280-48 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 13:30 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*40*	*1*	*50.0*	*79 %*	*41-142*	*1K16004*	*EPA 8260D*	*11/16/21 12:30*	*nmc*	
Dibromofluoromethane	*45*	*1*	*50.0*	*89 %*	*53-146*	*1K16004*	*EPA 8260D*	*11/16/21 12:30*	*nmc*	
Toluene-d8	*43*	*1*	*50.0*	*87 %*	*41-146*	*1K16004*	*EPA 8260D*	*11/16/21 12:30*	*nmc*	

ANALYTICAL RESULTS

Description: LC34PS-PZC-050.0-20211111 **Lab Sample ID:** AE07280-49 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 13:32 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	16000	U	ug/L	20000	16000	50000	1K16004	EPA 8260D	11/16/21 12:58	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	11000	U	ug/L	20000	11000	50000	1K16004	EPA 8260D	11/16/21 12:58	nmc	
1,1,2-Trichloroethane [79-00-5]^	15000	U	ug/L	20000	15000	50000	1K16004	EPA 8260D	11/16/21 12:58	nmc	
1,1-Dichloroethane [75-34-3]^	12000	U	ug/L	20000	12000	50000	1K16004	EPA 8260D	11/16/21 12:58	nmc	
1,1-Dichloroethene [75-35-4]^	19000	U	ug/L	20000	19000	50000	1K16004	EPA 8260D	11/16/21 12:58	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	14000	U	ug/L	20000	14000	50000	1K16004	EPA 8260D	11/16/21 12:58	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	19000	U	ug/L	20000	19000	50000	1K16004	EPA 8260D	11/16/21 12:58	nmc	
1,2-Dibromoethane [106-93-4]^	16000	U	ug/L	20000	16000	50000	1K16004	EPA 8260D	11/16/21 12:58	nmc	
1,2-Dichlorobenzene [95-50-1]^	15000	U	ug/L	20000	15000	50000	1K16004	EPA 8260D	11/16/21 12:58	nmc	
1,2-Dichloroethane [107-06-2]^	13000	U	ug/L	20000	13000	50000	1K16004	EPA 8260D	11/16/21 12:58	nmc	QV-01
1,2-Dichloropropane [78-87-5]^	16000	U	ug/L	20000	16000	50000	1K16004	EPA 8260D	11/16/21 12:58	nmc	
1,3-Dichlorobenzene [541-73-1]^	15000	U	ug/L	20000	15000	50000	1K16004	EPA 8260D	11/16/21 12:58	nmc	
1,4-Dichlorobenzene [106-46-7]^	15000	U	ug/L	20000	15000	50000	1K16004	EPA 8260D	11/16/21 12:58	nmc	
2-Butanone [78-93-3]^	90000	U	ug/L	20000	90000	250000	1K16004	EPA 8260D	11/16/21 12:58	nmc	
2-Hexanone [591-78-6]^	50000	U	ug/L	20000	50000	250000	1K16004	EPA 8260D	11/16/21 12:58	nmc	
4-Methyl-2-pentanone [108-10-1]^	50000	U	ug/L	20000	50000	250000	1K16004	EPA 8260D	11/16/21 12:58	nmc	
Acetone [67-64-1]^	200000	U	ug/L	20000	200000	500000	1K16004	EPA 8260D	11/16/21 12:58	nmc	QV-01
Benzene [71-43-2]^	14000	U	ug/L	20000	14000	50000	1K16004	EPA 8260D	11/16/21 12:58	nmc	
Bromodichloromethane [75-27-4]^	10000	U	ug/L	20000	10000	50000	1K16004	EPA 8260D	11/16/21 12:58	nmc	
Bromoform [75-25-2]^	15000	U	ug/L	20000	15000	50000	1K16004	EPA 8260D	11/16/21 12:58	nmc	
Bromomethane [74-83-9]^	19000	U	ug/L	20000	19000	50000	1K16004	EPA 8260D	11/16/21 12:58	nmc	QV-01
Carbon disulfide [75-15-0]^	50000	U	ug/L	20000	50000	250000	1K16004	EPA 8260D	11/16/21 12:58	nmc	QV-01, QL-02
Carbon Tetrachloride [56-23-5]^	19000	U	ug/L	20000	19000	50000	1K16004	EPA 8260D	11/16/21 12:58	nmc	
Chlorobenzene [108-90-7]^	14000	U	ug/L	20000	14000	50000	1K16004	EPA 8260D	11/16/21 12:58	nmc	
Chloroethane [75-00-3]^	20000	U	ug/L	20000	20000	50000	1K16004	EPA 8260D	11/16/21 12:58	nmc	QV-01
Chloroform [67-66-3]^	16000	U	ug/L	20000	16000	50000	1K16004	EPA 8260D	11/16/21 12:58	nmc	
Chloromethane [74-87-3]^	16000	U	ug/L	20000	16000	50000	1K16004	EPA 8260D	11/16/21 12:58	nmc	
cis-1,2-Dichloroethene [156-59-2]^	**39000**	I	ug/L	20000	11000	50000	1K16004	EPA 8260D	11/16/21 12:58	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	12000	U	ug/L	20000	12000	50000	1K16004	EPA 8260D	11/16/21 12:58	nmc	
Cyclohexane [110-82-7]^	19000	U	ug/L	20000	19000	50000	1K16004	EPA 8260D	11/16/21 12:58	nmc	QL-02
Dibromochloromethane [124-48-1]^	10000	U	ug/L	20000	10000	50000	1K16004	EPA 8260D	11/16/21 12:58	nmc	
Dichlorodifluoromethane [75-71-8]^	15000	U	ug/L	20000	15000	50000	1K16004	EPA 8260D	11/16/21 12:58	nmc	
Ethylbenzene [100-41-4]^	14000	U	ug/L	20000	14000	50000	1K16004	EPA 8260D	11/16/21 12:58	nmc	
Freon 113 [76-13-1]^	15000	U	ug/L	20000	15000	50000	1K16004	EPA 8260D	11/16/21 12:58	nmc	
Isopropylbenzene [98-82-8]^	13000	U	ug/L	20000	13000	50000	1K16004	EPA 8260D	11/16/21 12:58	nmc	
Methyl acetate [79-20-9]^	19000	U	ug/L	20000	19000	50000	1K16004	EPA 8260D	11/16/21 12:58	nmc	
Methylene Chloride [75-09-2]^	50000	U	ug/L	20000	50000	250000	1K16004	EPA 8260D	11/16/21 12:58	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	12000	U	ug/L	20000	12000	50000	1K16004	EPA 8260D	11/16/21 12:58	nmc	
Styrene [100-42-5]^	12000	U	ug/L	20000	12000	50000	1K16004	EPA 8260D	11/16/21 12:58	nmc	
Tetrachloroethene [127-18-4]^	15000	U	ug/L	20000	15000	50000	1K16004	EPA 8260D	11/16/21 12:58	nmc	
Toluene [108-88-3]^	14000	U	ug/L	20000	14000	50000	1K16004	EPA 8260D	11/16/21 12:58	nmc	
trans-1,2-Dichloroethene [156-60-5]^	15000	U	ug/L	20000	15000	50000	1K16004	EPA 8260D	11/16/21 12:58	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	15000	U	ug/L	20000	15000	50000	1K16004	EPA 8260D	11/16/21 12:58	nmc	
Trichloroethene [79-01-6]^	**700000**		ug/L	20000	18000	50000	1K16004	EPA 8260D	11/16/21 12:58	nmc	
Trichlorofluoromethane [75-69-4]^	19000	U	ug/L	20000	19000	50000	1K16004	EPA 8260D	11/16/21 12:58	nmc	
Vinyl chloride [75-01-4]^	14000	U	ug/L	20000	14000	50000	1K16004	EPA 8260D	11/16/21 12:58	nmc	

ANALYTICAL RESULTS

Description: LC34PS-PZC-050.0-20211111 **Lab Sample ID:** AE07280-49 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 13:32 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*41*	*1*	*50.0*	*82 %*	*41-142*	*1K16004*	*EPA 8260D*	*11/16/21 12:58*	*nmc*	
Dibromofluoromethane	*46*	*1*	*50.0*	*92 %*	*53-146*	*1K16004*	*EPA 8260D*	*11/16/21 12:58*	*nmc*	
Toluene-d8	*45*	*1*	*50.0*	*91 %*	*41-146*	*1K16004*	*EPA 8260D*	*11/16/21 12:58*	*nmc*	

ANALYTICAL RESULTS

Description: LC34PS-PZC-058.0-20211111 **Lab Sample ID:** AE07280-50 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 13:34 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	8000	U	ug/L	10000	8000	25000	1K16004	EPA 8260D	11/16/21 13:27	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	5400	U	ug/L	10000	5400	25000	1K16004	EPA 8260D	11/16/21 13:27	nmc	
1,1,2-Trichloroethane [79-00-5]^	7600	U	ug/L	10000	7600	25000	1K16004	EPA 8260D	11/16/21 13:27	nmc	
1,1-Dichloroethane [75-34-3]^	6200	U	ug/L	10000	6200	25000	1K16004	EPA 8260D	11/16/21 13:27	nmc	
1,1-Dichloroethene [75-35-4]^	9400	U	ug/L	10000	9400	25000	1K16004	EPA 8260D	11/16/21 13:27	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	7000	U	ug/L	10000	7000	25000	1K16004	EPA 8260D	11/16/21 13:27	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	9600	U	ug/L	10000	9600	25000	1K16004	EPA 8260D	11/16/21 13:27	nmc	
1,2-Dibromoethane [106-93-4]^	7800	U	ug/L	10000	7800	25000	1K16004	EPA 8260D	11/16/21 13:27	nmc	
1,2-Dichlorobenzene [95-50-1]^	7300	U	ug/L	10000	7300	25000	1K16004	EPA 8260D	11/16/21 13:27	nmc	
1,2-Dichloroethane [107-06-2]^	6300	U	ug/L	10000	6300	25000	1K16004	EPA 8260D	11/16/21 13:27	nmc	QV-01
1,2-Dichloropropane [78-87-5]^	8000	U	ug/L	10000	8000	25000	1K16004	EPA 8260D	11/16/21 13:27	nmc	
1,3-Dichlorobenzene [541-73-1]^	7700	U	ug/L	10000	7700	25000	1K16004	EPA 8260D	11/16/21 13:27	nmc	
1,4-Dichlorobenzene [106-46-7]^	7600	U	ug/L	10000	7600	25000	1K16004	EPA 8260D	11/16/21 13:27	nmc	
2-Butanone [78-93-3]^	45000	U	ug/L	10000	45000	120000	1K16004	EPA 8260D	11/16/21 13:27	nmc	
2-Hexanone [591-78-6]^	25000	U	ug/L	10000	25000	120000	1K16004	EPA 8260D	11/16/21 13:27	nmc	
4-Methyl-2-pentanone [108-10-1]^	25000	U	ug/L	10000	25000	120000	1K16004	EPA 8260D	11/16/21 13:27	nmc	
Acetone [67-64-1]^	100000	U	ug/L	10000	100000	250000	1K16004	EPA 8260D	11/16/21 13:27	nmc	QV-01
Benzene [71-43-2]^	7100	U	ug/L	10000	7100	25000	1K16004	EPA 8260D	11/16/21 13:27	nmc	
Bromodichloromethane [75-27-4]^	5200	U	ug/L	10000	5200	25000	1K16004	EPA 8260D	11/16/21 13:27	nmc	
Bromoform [75-25-2]^	7500	U	ug/L	10000	7500	25000	1K16004	EPA 8260D	11/16/21 13:27	nmc	
Bromomethane [74-83-9]^	9500	U	ug/L	10000	9500	25000	1K16004	EPA 8260D	11/16/21 13:27	nmc	QV-01
Carbon disulfide [75-15-0]^	25000	U	ug/L	10000	25000	120000	1K16004	EPA 8260D	11/16/21 13:27	nmc	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	9400	U	ug/L	10000	9400	25000	1K16004	EPA 8260D	11/16/21 13:27	nmc	
Chlorobenzene [108-90-7]^	7200	U	ug/L	10000	7200	25000	1K16004	EPA 8260D	11/16/21 13:27	nmc	
Chloroethane [75-00-3]^	9800	U	ug/L	10000	9800	25000	1K16004	EPA 8260D	11/16/21 13:27	nmc	QV-01
Chloroform [67-66-3]^	8000	U	ug/L	10000	8000	25000	1K16004	EPA 8260D	11/16/21 13:27	nmc	
Chloromethane [74-87-3]^	8200	U	ug/L	10000	8200	25000	1K16004	EPA 8260D	11/16/21 13:27	nmc	
cis-1,2-Dichloroethene [156-59-2]^	**29000**		ug/L	10000	5300	25000	1K16004	EPA 8260D	11/16/21 13:27	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	5900	U	ug/L	10000	5900	25000	1K16004	EPA 8260D	11/16/21 13:27	nmc	
Cyclohexane [110-82-7]^	9300	U	ug/L	10000	9300	25000	1K16004	EPA 8260D	11/16/21 13:27	nmc	QL-02
Dibromochloromethane [124-48-1]^	5000	U	ug/L	10000	5000	25000	1K16004	EPA 8260D	11/16/21 13:27	nmc	
Dichlorodifluoromethane [75-71-8]^	7400	U	ug/L	10000	7400	25000	1K16004	EPA 8260D	11/16/21 13:27	nmc	
Ethylbenzene [100-41-4]^	6900	U	ug/L	10000	6900	25000	1K16004	EPA 8260D	11/16/21 13:27	nmc	
Freon 113 [76-13-1]^	7300	U	ug/L	10000	7300	25000	1K16004	EPA 8260D	11/16/21 13:27	nmc	
Isopropylbenzene [98-82-8]^	6700	U	ug/L	10000	6700	25000	1K16004	EPA 8260D	11/16/21 13:27	nmc	
Methyl acetate [79-20-9]^	9500	U	ug/L	10000	9500	25000	1K16004	EPA 8260D	11/16/21 13:27	nmc	
Methylene Chloride [75-09-2]^	25000	U	ug/L	10000	25000	120000	1K16004	EPA 8260D	11/16/21 13:27	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	6000	U	ug/L	10000	6000	25000	1K16004	EPA 8260D	11/16/21 13:27	nmc	
Styrene [100-42-5]^	6100	U	ug/L	10000	6100	25000	1K16004	EPA 8260D	11/16/21 13:27	nmc	
Tetrachloroethene [127-18-4]^	7600	U	ug/L	10000	7600	25000	1K16004	EPA 8260D	11/16/21 13:27	nmc	
Toluene [108-88-3]^	7200	U	ug/L	10000	7200	25000	1K16004	EPA 8260D	11/16/21 13:27	nmc	
trans-1,2-Dichloroethene [156-60-5]^	7300	U	ug/L	10000	7300	25000	1K16004	EPA 8260D	11/16/21 13:27	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	7300	U	ug/L	10000	7300	25000	1K16004	EPA 8260D	11/16/21 13:27	nmc	
Trichloroethene [79-01-6]^	**490000**		ug/L	10000	8900	25000	1K16004	EPA 8260D	11/16/21 13:27	nmc	
Trichlorofluoromethane [75-69-4]^	9400	U	ug/L	10000	9400	25000	1K16004	EPA 8260D	11/16/21 13:27	nmc	
Vinyl chloride [75-01-4]^	7100	U	ug/L	10000	7100	25000	1K16004	EPA 8260D	11/16/21 13:27	nmc	

ANALYTICAL RESULTS

Description: LC34PS-PZC-058.0-20211111 **Lab Sample ID:** AE07280-50 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 13:34 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*42*	*1*	*50.0*	*83 %*	*41-142*	*1K16004*	*EPA 8260D*	*11/16/21 13:27*	*nmc*	
Dibromofluoromethane	*46*	*1*	*50.0*	*93 %*	*53-146*	*1K16004*	*EPA 8260D*	*11/16/21 13:27*	*nmc*	
Toluene-d8	*46*	*1*	*50.0*	*91 %*	*41-146*	*1K16004*	*EPA 8260D*	*11/16/21 13:27*	*nmc*	

ANALYTICAL RESULTS

Description: LC34PS-PZC-073.0-20211111 **Lab Sample ID:** AE07280-51 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 13:36 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	4.0	U	ug/L	5	4.0	12	1K16004	EPA 8260D	11/16/21 13:56	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	2.7	U	ug/L	5	2.7	12	1K16004	EPA 8260D	11/16/21 13:56	nmc	
1,1,2-Trichloroethane [79-00-5]^	3.8	U	ug/L	5	3.8	12	1K16004	EPA 8260D	11/16/21 13:56	nmc	
1,1-Dichloroethane [75-34-3]^	3.1	U	ug/L	5	3.1	12	1K16004	EPA 8260D	11/16/21 13:56	nmc	
1,1-Dichloroethene [75-35-4]^	4.7	U	ug/L	5	4.7	12	1K16004	EPA 8260D	11/16/21 13:56	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	3.5	U	ug/L	5	3.5	12	1K16004	EPA 8260D	11/16/21 13:56	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	4.8	U	ug/L	5	4.8	12	1K16004	EPA 8260D	11/16/21 13:56	nmc	
1,2-Dibromoethane [106-93-4]^	3.9	U	ug/L	5	3.9	12	1K16004	EPA 8260D	11/16/21 13:56	nmc	
1,2-Dichlorobenzene [95-50-1]^	3.6	U	ug/L	5	3.6	12	1K16004	EPA 8260D	11/16/21 13:56	nmc	
1,2-Dichloroethane [107-06-2]^	3.2	U	ug/L	5	3.2	12	1K16004	EPA 8260D	11/16/21 13:56	nmc	QV-01
1,2-Dichloropropane [78-87-5]^	4.0	U	ug/L	5	4.0	12	1K16004	EPA 8260D	11/16/21 13:56	nmc	
1,3-Dichlorobenzene [541-73-1]^	3.8	U	ug/L	5	3.8	12	1K16004	EPA 8260D	11/16/21 13:56	nmc	
1,4-Dichlorobenzene [106-46-7]^	3.8	U	ug/L	5	3.8	12	1K16004	EPA 8260D	11/16/21 13:56	nmc	
2-Butanone [78-93-3]^	22	U	ug/L	5	22	62	1K16004	EPA 8260D	11/16/21 13:56	nmc	
2-Hexanone [591-78-6]^	12	U	ug/L	5	12	62	1K16004	EPA 8260D	11/16/21 13:56	nmc	
4-Methyl-2-pentanone [108-10-1]^	12	U	ug/L	5	12	62	1K16004	EPA 8260D	11/16/21 13:56	nmc	
Acetone [67-64-1]^	50	U	ug/L	5	50	120	1K16004	EPA 8260D	11/16/21 13:56	nmc	QV-01
Benzene [71-43-2]^	3.6	U	ug/L	5	3.6	12	1K16004	EPA 8260D	11/16/21 13:56	nmc	
Bromodichloromethane [75-27-4]^	2.6	U	ug/L	5	2.6	12	1K16004	EPA 8260D	11/16/21 13:56	nmc	
Bromoform [75-25-2]^	3.8	U	ug/L	5	3.8	12	1K16004	EPA 8260D	11/16/21 13:56	nmc	
Bromomethane [74-83-9]^	4.8	U	ug/L	5	4.8	12	1K16004	EPA 8260D	11/16/21 13:56	nmc	QV-01
Carbon disulfide [75-15-0]^	12	U	ug/L	5	12	62	1K16004	EPA 8260D	11/16/21 13:56	nmc	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	4.7	U	ug/L	5	4.7	12	1K16004	EPA 8260D	11/16/21 13:56	nmc	
Chlorobenzene [108-90-7]^	3.6	U	ug/L	5	3.6	12	1K16004	EPA 8260D	11/16/21 13:56	nmc	
Chloroethane [75-00-3]^	4.9	U	ug/L	5	4.9	12	1K16004	EPA 8260D	11/16/21 13:56	nmc	QV-01
Chloroform [67-66-3]^	4.0	U	ug/L	5	4.0	12	1K16004	EPA 8260D	11/16/21 13:56	nmc	
Chloromethane [74-87-3]^	4.1	U	ug/L	5	4.1	12	1K16004	EPA 8260D	11/16/21 13:56	nmc	
cis-1,2-Dichloroethene [156-59-2]^	**10**	I	ug/L	5	2.6	12	1K16004	EPA 8260D	11/16/21 13:56	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	3.0	U	ug/L	5	3.0	12	1K16004	EPA 8260D	11/16/21 13:56	nmc	
Cyclohexane [110-82-7]^	4.6	U	ug/L	5	4.6	12	1K16004	EPA 8260D	11/16/21 13:56	nmc	QL-02
Dibromochloromethane [124-48-1]^	2.5	U	ug/L	5	2.5	12	1K16004	EPA 8260D	11/16/21 13:56	nmc	
Dichlorodifluoromethane [75-71-8]^	3.7	U	ug/L	5	3.7	12	1K16004	EPA 8260D	11/16/21 13:56	nmc	
Ethylbenzene [100-41-4]^	3.4	U	ug/L	5	3.4	12	1K16004	EPA 8260D	11/16/21 13:56	nmc	
Freon 113 [76-13-1]^	3.6	U	ug/L	5	3.6	12	1K16004	EPA 8260D	11/16/21 13:56	nmc	
Isopropylbenzene [98-82-8]^	3.4	U	ug/L	5	3.4	12	1K16004	EPA 8260D	11/16/21 13:56	nmc	
Methyl acetate [79-20-9]^	4.8	U	ug/L	5	4.8	12	1K16004	EPA 8260D	11/16/21 13:56	nmc	
Methylene Chloride [75-09-2]^	12	U	ug/L	5	12	62	1K16004	EPA 8260D	11/16/21 13:56	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	3.0	U	ug/L	5	3.0	12	1K16004	EPA 8260D	11/16/21 13:56	nmc	
Styrene [100-42-5]^	3.0	U	ug/L	5	3.0	12	1K16004	EPA 8260D	11/16/21 13:56	nmc	
Tetrachloroethene [127-18-4]^	3.8	U	ug/L	5	3.8	12	1K16004	EPA 8260D	11/16/21 13:56	nmc	
Toluene [108-88-3]^	3.6	U	ug/L	5	3.6	12	1K16004	EPA 8260D	11/16/21 13:56	nmc	
trans-1,2-Dichloroethene [156-60-5]^	3.6	U	ug/L	5	3.6	12	1K16004	EPA 8260D	11/16/21 13:56	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	3.6	U	ug/L	5	3.6	12	1K16004	EPA 8260D	11/16/21 13:56	nmc	
Trichloroethene [79-01-6]^	**470**		ug/L	5	4.4	12	1K16004	EPA 8260D	11/16/21 13:56	nmc	
Trichlorofluoromethane [75-69-4]^	4.7	U	ug/L	5	4.7	12	1K16004	EPA 8260D	11/16/21 13:56	nmc	
Vinyl chloride [75-01-4]^	3.6	U	ug/L	5	3.6	12	1K16004	EPA 8260D	11/16/21 13:56	nmc	

ANALYTICAL RESULTS

Description: LC34PS-PZC-073.0-20211111 **Lab Sample ID:** AE07280-51 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 13:36 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*41*	*1*	*50.0*	*81 %*	*41-142*	*1K16004*	*EPA 8260D*	*11/16/21 13:56*	*nmc*	
Dibromofluoromethane	*46*	*1*	*50.0*	*93 %*	*53-146*	*1K16004*	*EPA 8260D*	*11/16/21 13:56*	*nmc*	
Toluene-d8	*44*	*1*	*50.0*	*88 %*	*41-146*	*1K16004*	*EPA 8260D*	*11/16/21 13:56*	*nmc*	

ANALYTICAL RESULTS

Description: LC34PS-PZC-080.0-20211111 **Lab Sample ID:** AE07280-52 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 13:38 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	1K12031	EPA 8260D	11/13/21 03:03	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	1K12031	EPA 8260D	11/13/21 03:03	nmc	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	1K12031	EPA 8260D	11/13/21 03:03	nmc	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	1K12031	EPA 8260D	11/13/21 03:03	nmc	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	1K12031	EPA 8260D	11/13/21 03:03	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	1K12031	EPA 8260D	11/13/21 03:03	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	1K12031	EPA 8260D	11/13/21 03:03	nmc	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	1K12031	EPA 8260D	11/13/21 03:03	nmc	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	1K12031	EPA 8260D	11/13/21 03:03	nmc	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	1K12031	EPA 8260D	11/13/21 03:03	nmc	QV-01
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	1K12031	EPA 8260D	11/13/21 03:03	nmc	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	1K12031	EPA 8260D	11/13/21 03:03	nmc	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	1K12031	EPA 8260D	11/13/21 03:03	nmc	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	1K12031	EPA 8260D	11/13/21 03:03	nmc	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	1K12031	EPA 8260D	11/13/21 03:03	nmc	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	1K12031	EPA 8260D	11/13/21 03:03	nmc	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	1K12031	EPA 8260D	11/13/21 03:03	nmc	QV-01
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	1K12031	EPA 8260D	11/13/21 03:03	nmc	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	1K12031	EPA 8260D	11/13/21 03:03	nmc	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	1K12031	EPA 8260D	11/13/21 03:03	nmc	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	1K12031	EPA 8260D	11/13/21 03:03	nmc	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	1K12031	EPA 8260D	11/13/21 03:03	nmc	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	1K12031	EPA 8260D	11/13/21 03:03	nmc	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	1K12031	EPA 8260D	11/13/21 03:03	nmc	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	1K12031	EPA 8260D	11/13/21 03:03	nmc	QV-01
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	1K12031	EPA 8260D	11/13/21 03:03	nmc	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	1K12031	EPA 8260D	11/13/21 03:03	nmc	
cis-1,2-Dichloroethene [156-59-2]^	**78**		ug/L	1	0.53	2.5	1K12031	EPA 8260D	11/13/21 03:03	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	1K12031	EPA 8260D	11/13/21 03:03	nmc	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	1K12031	EPA 8260D	11/13/21 03:03	nmc	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	1K12031	EPA 8260D	11/13/21 03:03	nmc	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	1K12031	EPA 8260D	11/13/21 03:03	nmc	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	1K12031	EPA 8260D	11/13/21 03:03	nmc	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	1K12031	EPA 8260D	11/13/21 03:03	nmc	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	1K12031	EPA 8260D	11/13/21 03:03	nmc	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	1K12031	EPA 8260D	11/13/21 03:03	nmc	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	1K12031	EPA 8260D	11/13/21 03:03	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	1K12031	EPA 8260D	11/13/21 03:03	nmc	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	1K12031	EPA 8260D	11/13/21 03:03	nmc	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	1K12031	EPA 8260D	11/13/21 03:03	nmc	QV-01
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	1K12031	EPA 8260D	11/13/21 03:03	nmc	
trans-1,2-Dichloroethene [156-60-5]^	**14**		ug/L	1	0.73	2.5	1K12031	EPA 8260D	11/13/21 03:03	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	1K12031	EPA 8260D	11/13/21 03:03	nmc	
Trichloroethene [79-01-6]^	**3.0**		ug/L	1	0.89	2.5	1K12031	EPA 8260D	11/13/21 03:03	nmc	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	1K12031	EPA 8260D	11/13/21 03:03	nmc	QL-02, QV-01

ANALYTICAL RESULTS

Description: LC34PS-PZC-080.0-20211111 **Lab Sample ID:** AE07280-52 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 13:38 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Vinyl chloride [75-01-4]^	**0.93**	I	ug/L	1	0.71	2.5	1K12031	EPA 8260D	11/13/21 03:03	nmc	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*40*	*1*	*50.0*	*81 %*	*41-142*	*1K12031*	*EPA 8260D*	*11/13/21 03:03*	*nmc*	
Dibromofluoromethane	*45*	*1*	*50.0*	*90 %*	*53-146*	*1K12031*	*EPA 8260D*	*11/13/21 03:03*	*nmc*	
Toluene-d8	*45*	*1*	*50.0*	*90 %*	*41-146*	*1K12031*	*EPA 8260D*	*11/13/21 03:03*	*nmc*	

ANALYTICAL RESULTS

Description: LC34PS-PZD-040.0-20211111 **Lab Sample ID:** AE07280-53 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 14:00 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	4000	U	ug/L	5000	4000	12000	1K16004	EPA 8260D	11/16/21 14:25	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	2700	U	ug/L	5000	2700	12000	1K16004	EPA 8260D	11/16/21 14:25	nmc	
1,1,2-Trichloroethane [79-00-5]^	3800	U	ug/L	5000	3800	12000	1K16004	EPA 8260D	11/16/21 14:25	nmc	
1,1-Dichloroethane [75-34-3]^	3100	U	ug/L	5000	3100	12000	1K16004	EPA 8260D	11/16/21 14:25	nmc	
1,1-Dichloroethene [75-35-4]^	4700	U	ug/L	5000	4700	12000	1K16004	EPA 8260D	11/16/21 14:25	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	3500	U	ug/L	5000	3500	12000	1K16004	EPA 8260D	11/16/21 14:25	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	4800	U	ug/L	5000	4800	12000	1K16004	EPA 8260D	11/16/21 14:25	nmc	
1,2-Dibromoethane [106-93-4]^	3900	U	ug/L	5000	3900	12000	1K16004	EPA 8260D	11/16/21 14:25	nmc	
1,2-Dichlorobenzene [95-50-1]^	3600	U	ug/L	5000	3600	12000	1K16004	EPA 8260D	11/16/21 14:25	nmc	
1,2-Dichloroethane [107-06-2]^	3200	U	ug/L	5000	3200	12000	1K16004	EPA 8260D	11/16/21 14:25	nmc	QV-01
1,2-Dichloropropane [78-87-5]^	4000	U	ug/L	5000	4000	12000	1K16004	EPA 8260D	11/16/21 14:25	nmc	
1,3-Dichlorobenzene [541-73-1]^	3800	U	ug/L	5000	3800	12000	1K16004	EPA 8260D	11/16/21 14:25	nmc	
1,4-Dichlorobenzene [106-46-7]^	3800	U	ug/L	5000	3800	12000	1K16004	EPA 8260D	11/16/21 14:25	nmc	
2-Butanone [78-93-3]^	22000	U	ug/L	5000	22000	62000	1K16004	EPA 8260D	11/16/21 14:25	nmc	
2-Hexanone [591-78-6]^	12000	U	ug/L	5000	12000	62000	1K16004	EPA 8260D	11/16/21 14:25	nmc	
4-Methyl-2-pentanone [108-10-1]^	12000	U	ug/L	5000	12000	62000	1K16004	EPA 8260D	11/16/21 14:25	nmc	
Acetone [67-64-1]^	50000	U	ug/L	5000	50000	120000	1K16004	EPA 8260D	11/16/21 14:25	nmc	QV-01
Benzene [71-43-2]^	3600	U	ug/L	5000	3600	12000	1K16004	EPA 8260D	11/16/21 14:25	nmc	
Bromodichloromethane [75-27-4]^	2600	U	ug/L	5000	2600	12000	1K16004	EPA 8260D	11/16/21 14:25	nmc	
Bromoform [75-25-2]^	3800	U	ug/L	5000	3800	12000	1K16004	EPA 8260D	11/16/21 14:25	nmc	
Bromomethane [74-83-9]^	4800	U	ug/L	5000	4800	12000	1K16004	EPA 8260D	11/16/21 14:25	nmc	QV-01
Carbon disulfide [75-15-0]^	12000	U	ug/L	5000	12000	62000	1K16004	EPA 8260D	11/16/21 14:25	nmc	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	4700	U	ug/L	5000	4700	12000	1K16004	EPA 8260D	11/16/21 14:25	nmc	
Chlorobenzene [108-90-7]^	3600	U	ug/L	5000	3600	12000	1K16004	EPA 8260D	11/16/21 14:25	nmc	
Chloroethane [75-00-3]^	4900	U	ug/L	5000	4900	12000	1K16004	EPA 8260D	11/16/21 14:25	nmc	QV-01
Chloroform [67-66-3]^	4000	U	ug/L	5000	4000	12000	1K16004	EPA 8260D	11/16/21 14:25	nmc	
Chloromethane [74-87-3]^	4100	U	ug/L	5000	4100	12000	1K16004	EPA 8260D	11/16/21 14:25	nmc	
cis-1,2-Dichloroethene [156-59-2]^	**43000**		ug/L	5000	2600	12000	1K16004	EPA 8260D	11/16/21 14:25	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	3000	U	ug/L	5000	3000	12000	1K16004	EPA 8260D	11/16/21 14:25	nmc	
Cyclohexane [110-82-7]^	4600	U	ug/L	5000	4600	12000	1K16004	EPA 8260D	11/16/21 14:25	nmc	QL-02
Dibromochloromethane [124-48-1]^	2500	U	ug/L	5000	2500	12000	1K16004	EPA 8260D	11/16/21 14:25	nmc	
Dichlorodifluoromethane [75-71-8]^	3700	U	ug/L	5000	3700	12000	1K16004	EPA 8260D	11/16/21 14:25	nmc	
Ethylbenzene [100-41-4]^	3400	U	ug/L	5000	3400	12000	1K16004	EPA 8260D	11/16/21 14:25	nmc	
Freon 113 [76-13-1]^	3600	U	ug/L	5000	3600	12000	1K16004	EPA 8260D	11/16/21 14:25	nmc	
Isopropylbenzene [98-82-8]^	3400	U	ug/L	5000	3400	12000	1K16004	EPA 8260D	11/16/21 14:25	nmc	
Methyl acetate [79-20-9]^	4800	U	ug/L	5000	4800	12000	1K16004	EPA 8260D	11/16/21 14:25	nmc	
Methylene Chloride [75-09-2]^	12000	U	ug/L	5000	12000	62000	1K16004	EPA 8260D	11/16/21 14:25	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	3000	U	ug/L	5000	3000	12000	1K16004	EPA 8260D	11/16/21 14:25	nmc	
Styrene [100-42-5]^	3000	U	ug/L	5000	3000	12000	1K16004	EPA 8260D	11/16/21 14:25	nmc	
Tetrachloroethene [127-18-4]^	3800	U	ug/L	5000	3800	12000	1K16004	EPA 8260D	11/16/21 14:25	nmc	
Toluene [108-88-3]^	3600	U	ug/L	5000	3600	12000	1K16004	EPA 8260D	11/16/21 14:25	nmc	
trans-1,2-Dichloroethene [156-60-5]^	3600	U	ug/L	5000	3600	12000	1K16004	EPA 8260D	11/16/21 14:25	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	3600	U	ug/L	5000	3600	12000	1K16004	EPA 8260D	11/16/21 14:25	nmc	
Trichloroethene [79-01-6]^	**240000**		ug/L	5000	4400	12000	1K16004	EPA 8260D	11/16/21 14:25	nmc	
Trichlorofluoromethane [75-69-4]^	4700	U	ug/L	5000	4700	12000	1K16004	EPA 8260D	11/16/21 14:25	nmc	
Vinyl chloride [75-01-4]^	3600	U	ug/L	5000	3600	12000	1K16004	EPA 8260D	11/16/21 14:25	nmc	

ANALYTICAL RESULTS

Description: LC34PS-PZD-040.0-20211111 **Lab Sample ID:** AE07280-53 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 14:00 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*40*	*1*	*50.0*	*80 %*	*41-142*	*1K16004*	*EPA 8260D*	*11/16/21 14:25*	*nmc*	
Dibromofluoromethane	*46*	*1*	*50.0*	*93 %*	*53-146*	*1K16004*	*EPA 8260D*	*11/16/21 14:25*	*nmc*	
Toluene-d8	*45*	*1*	*50.0*	*90 %*	*41-146*	*1K16004*	*EPA 8260D*	*11/16/21 14:25*	*nmc*	

ANALYTICAL RESULTS

Description: LC34PS-PZD-050.0-20211111 **Lab Sample ID:** AE07280-54 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 14:02 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	16000	U	ug/L	20000	16000	50000	1K16004	EPA 8260D	11/16/21 14:54	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	11000	U	ug/L	20000	11000	50000	1K16004	EPA 8260D	11/16/21 14:54	nmc	
1,1,2-Trichloroethane [79-00-5]^	15000	U	ug/L	20000	15000	50000	1K16004	EPA 8260D	11/16/21 14:54	nmc	
1,1-Dichloroethane [75-34-3]^	12000	U	ug/L	20000	12000	50000	1K16004	EPA 8260D	11/16/21 14:54	nmc	
1,1-Dichloroethene [75-35-4]^	19000	U	ug/L	20000	19000	50000	1K16004	EPA 8260D	11/16/21 14:54	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	14000	U	ug/L	20000	14000	50000	1K16004	EPA 8260D	11/16/21 14:54	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	19000	U	ug/L	20000	19000	50000	1K16004	EPA 8260D	11/16/21 14:54	nmc	
1,2-Dibromoethane [106-93-4]^	16000	U	ug/L	20000	16000	50000	1K16004	EPA 8260D	11/16/21 14:54	nmc	
1,2-Dichlorobenzene [95-50-1]^	15000	U	ug/L	20000	15000	50000	1K16004	EPA 8260D	11/16/21 14:54	nmc	
1,2-Dichloroethane [107-06-2]^	13000	U	ug/L	20000	13000	50000	1K16004	EPA 8260D	11/16/21 14:54	nmc	QV-01
1,2-Dichloropropane [78-87-5]^	16000	U	ug/L	20000	16000	50000	1K16004	EPA 8260D	11/16/21 14:54	nmc	
1,3-Dichlorobenzene [541-73-1]^	15000	U	ug/L	20000	15000	50000	1K16004	EPA 8260D	11/16/21 14:54	nmc	
1,4-Dichlorobenzene [106-46-7]^	15000	U	ug/L	20000	15000	50000	1K16004	EPA 8260D	11/16/21 14:54	nmc	
2-Butanone [78-93-3]^	90000	U	ug/L	20000	90000	250000	1K16004	EPA 8260D	11/16/21 14:54	nmc	
2-Hexanone [591-78-6]^	50000	U	ug/L	20000	50000	250000	1K16004	EPA 8260D	11/16/21 14:54	nmc	
4-Methyl-2-pentanone [108-10-1]^	50000	U	ug/L	20000	50000	250000	1K16004	EPA 8260D	11/16/21 14:54	nmc	
Acetone [67-64-1]^	200000	U	ug/L	20000	200000	500000	1K16004	EPA 8260D	11/16/21 14:54	nmc	QV-01
Benzene [71-43-2]^	14000	U	ug/L	20000	14000	50000	1K16004	EPA 8260D	11/16/21 14:54	nmc	
Bromodichloromethane [75-27-4]^	10000	U	ug/L	20000	10000	50000	1K16004	EPA 8260D	11/16/21 14:54	nmc	
Bromoform [75-25-2]^	15000	U	ug/L	20000	15000	50000	1K16004	EPA 8260D	11/16/21 14:54	nmc	
Bromomethane [74-83-9]^	19000	U	ug/L	20000	19000	50000	1K16004	EPA 8260D	11/16/21 14:54	nmc	QV-01
Carbon disulfide [75-15-0]^	50000	U	ug/L	20000	50000	250000	1K16004	EPA 8260D	11/16/21 14:54	nmc	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	19000	U	ug/L	20000	19000	50000	1K16004	EPA 8260D	11/16/21 14:54	nmc	
Chlorobenzene [108-90-7]^	14000	U	ug/L	20000	14000	50000	1K16004	EPA 8260D	11/16/21 14:54	nmc	
Chloroethane [75-00-3]^	20000	U	ug/L	20000	20000	50000	1K16004	EPA 8260D	11/16/21 14:54	nmc	QV-01
Chloroform [67-66-3]^	16000	U	ug/L	20000	16000	50000	1K16004	EPA 8260D	11/16/21 14:54	nmc	
Chloromethane [74-87-3]^	16000	U	ug/L	20000	16000	50000	1K16004	EPA 8260D	11/16/21 14:54	nmc	
cis-1,2-Dichloroethene [156-59-2]^	**67000**		ug/L	20000	11000	50000	1K16004	EPA 8260D	11/16/21 14:54	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	12000	U	ug/L	20000	12000	50000	1K16004	EPA 8260D	11/16/21 14:54	nmc	
Cyclohexane [110-82-7]^	19000	U	ug/L	20000	19000	50000	1K16004	EPA 8260D	11/16/21 14:54	nmc	QL-02
Dibromochloromethane [124-48-1]^	10000	U	ug/L	20000	10000	50000	1K16004	EPA 8260D	11/16/21 14:54	nmc	
Dichlorodifluoromethane [75-71-8]^	15000	U	ug/L	20000	15000	50000	1K16004	EPA 8260D	11/16/21 14:54	nmc	
Ethylbenzene [100-41-4]^	14000	U	ug/L	20000	14000	50000	1K16004	EPA 8260D	11/16/21 14:54	nmc	
Freon 113 [76-13-1]^	15000	U	ug/L	20000	15000	50000	1K16004	EPA 8260D	11/16/21 14:54	nmc	
Isopropylbenzene [98-82-8]^	13000	U	ug/L	20000	13000	50000	1K16004	EPA 8260D	11/16/21 14:54	nmc	
Methyl acetate [79-20-9]^	19000	U	ug/L	20000	19000	50000	1K16004	EPA 8260D	11/16/21 14:54	nmc	
Methylene Chloride [75-09-2]^	50000	U	ug/L	20000	50000	250000	1K16004	EPA 8260D	11/16/21 14:54	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	12000	U	ug/L	20000	12000	50000	1K16004	EPA 8260D	11/16/21 14:54	nmc	
Styrene [100-42-5]^	12000	U	ug/L	20000	12000	50000	1K16004	EPA 8260D	11/16/21 14:54	nmc	
Tetrachloroethene [127-18-4]^	15000	U	ug/L	20000	15000	50000	1K16004	EPA 8260D	11/16/21 14:54	nmc	
Toluene [108-88-3]^	14000	U	ug/L	20000	14000	50000	1K16004	EPA 8260D	11/16/21 14:54	nmc	
trans-1,2-Dichloroethene [156-60-5]^	15000	U	ug/L	20000	15000	50000	1K16004	EPA 8260D	11/16/21 14:54	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	15000	U	ug/L	20000	15000	50000	1K16004	EPA 8260D	11/16/21 14:54	nmc	
Trichloroethene [79-01-6]^	**790000**		ug/L	20000	18000	50000	1K16004	EPA 8260D	11/16/21 14:54	nmc	
Trichlorofluoromethane [75-69-4]^	19000	U	ug/L	20000	19000	50000	1K16004	EPA 8260D	11/16/21 14:54	nmc	
Vinyl chloride [75-01-4]^	14000	U	ug/L	20000	14000	50000	1K16004	EPA 8260D	11/16/21 14:54	nmc	

ANALYTICAL RESULTS

Description: LC34PS-PZD-050.0-20211111 **Lab Sample ID:** AE07280-54 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 14:02 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*41*	*1*	*50.0*	*82 %*	*41-142*	*1K16004*	*EPA 8260D*	*11/16/21 14:54*	*nmc*	
Dibromofluoromethane	*47*	*1*	*50.0*	*94 %*	*53-146*	*1K16004*	*EPA 8260D*	*11/16/21 14:54*	*nmc*	
Toluene-d8	*47*	*1*	*50.0*	*93 %*	*41-146*	*1K16004*	*EPA 8260D*	*11/16/21 14:54*	*nmc*	

ANALYTICAL RESULTS

Description: LC34PS-PZD-058.0-20211111 **Lab Sample ID:** AE07280-55 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 14:04 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	16000	U	ug/L	20000	16000	50000	1K16004	EPA 8260D	11/16/21 15:22	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	11000	U	ug/L	20000	11000	50000	1K16004	EPA 8260D	11/16/21 15:22	nmc	
1,1,2-Trichloroethane [79-00-5]^	15000	U	ug/L	20000	15000	50000	1K16004	EPA 8260D	11/16/21 15:22	nmc	
1,1-Dichloroethane [75-34-3]^	12000	U	ug/L	20000	12000	50000	1K16004	EPA 8260D	11/16/21 15:22	nmc	
1,1-Dichloroethene [75-35-4]^	19000	U	ug/L	20000	19000	50000	1K16004	EPA 8260D	11/16/21 15:22	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	14000	U	ug/L	20000	14000	50000	1K16004	EPA 8260D	11/16/21 15:22	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	19000	U	ug/L	20000	19000	50000	1K16004	EPA 8260D	11/16/21 15:22	nmc	
1,2-Dibromoethane [106-93-4]^	16000	U	ug/L	20000	16000	50000	1K16004	EPA 8260D	11/16/21 15:22	nmc	
1,2-Dichlorobenzene [95-50-1]^	15000	U	ug/L	20000	15000	50000	1K16004	EPA 8260D	11/16/21 15:22	nmc	
1,2-Dichloroethane [107-06-2]^	13000	U	ug/L	20000	13000	50000	1K16004	EPA 8260D	11/16/21 15:22	nmc	QV-01
1,2-Dichloropropane [78-87-5]^	16000	U	ug/L	20000	16000	50000	1K16004	EPA 8260D	11/16/21 15:22	nmc	
1,3-Dichlorobenzene [541-73-1]^	15000	U	ug/L	20000	15000	50000	1K16004	EPA 8260D	11/16/21 15:22	nmc	
1,4-Dichlorobenzene [106-46-7]^	15000	U	ug/L	20000	15000	50000	1K16004	EPA 8260D	11/16/21 15:22	nmc	
2-Butanone [78-93-3]^	90000	U	ug/L	20000	90000	250000	1K16004	EPA 8260D	11/16/21 15:22	nmc	
2-Hexanone [591-78-6]^	50000	U	ug/L	20000	50000	250000	1K16004	EPA 8260D	11/16/21 15:22	nmc	
4-Methyl-2-pentanone [108-10-1]^	50000	U	ug/L	20000	50000	250000	1K16004	EPA 8260D	11/16/21 15:22	nmc	
Acetone [67-64-1]^	200000	U	ug/L	20000	200000	500000	1K16004	EPA 8260D	11/16/21 15:22	nmc	QV-01
Benzene [71-43-2]^	14000	U	ug/L	20000	14000	50000	1K16004	EPA 8260D	11/16/21 15:22	nmc	
Bromodichloromethane [75-27-4]^	10000	U	ug/L	20000	10000	50000	1K16004	EPA 8260D	11/16/21 15:22	nmc	
Bromoform [75-25-2]^	15000	U	ug/L	20000	15000	50000	1K16004	EPA 8260D	11/16/21 15:22	nmc	
Bromomethane [74-83-9]^	19000	U	ug/L	20000	19000	50000	1K16004	EPA 8260D	11/16/21 15:22	nmc	QV-01
Carbon disulfide [75-15-0]^	50000	U	ug/L	20000	50000	250000	1K16004	EPA 8260D	11/16/21 15:22	nmc	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	19000	U	ug/L	20000	19000	50000	1K16004	EPA 8260D	11/16/21 15:22	nmc	
Chlorobenzene [108-90-7]^	14000	U	ug/L	20000	14000	50000	1K16004	EPA 8260D	11/16/21 15:22	nmc	
Chloroethane [75-00-3]^	20000	U	ug/L	20000	20000	50000	1K16004	EPA 8260D	11/16/21 15:22	nmc	QV-01
Chloroform [67-66-3]^	16000	U	ug/L	20000	16000	50000	1K16004	EPA 8260D	11/16/21 15:22	nmc	
Chloromethane [74-87-3]^	16000	U	ug/L	20000	16000	50000	1K16004	EPA 8260D	11/16/21 15:22	nmc	
cis-1,2-Dichloroethene [156-59-2]^	**58000**		ug/L	20000	11000	50000	1K16004	EPA 8260D	11/16/21 15:22	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	12000	U	ug/L	20000	12000	50000	1K16004	EPA 8260D	11/16/21 15:22	nmc	
Cyclohexane [110-82-7]^	19000	U	ug/L	20000	19000	50000	1K16004	EPA 8260D	11/16/21 15:22	nmc	QL-02
Dibromochloromethane [124-48-1]^	10000	U	ug/L	20000	10000	50000	1K16004	EPA 8260D	11/16/21 15:22	nmc	
Dichlorodifluoromethane [75-71-8]^	15000	U	ug/L	20000	15000	50000	1K16004	EPA 8260D	11/16/21 15:22	nmc	
Ethylbenzene [100-41-4]^	14000	U	ug/L	20000	14000	50000	1K16004	EPA 8260D	11/16/21 15:22	nmc	
Freon 113 [76-13-1]^	15000	U	ug/L	20000	15000	50000	1K16004	EPA 8260D	11/16/21 15:22	nmc	
Isopropylbenzene [98-82-8]^	13000	U	ug/L	20000	13000	50000	1K16004	EPA 8260D	11/16/21 15:22	nmc	
Methyl acetate [79-20-9]^	19000	U	ug/L	20000	19000	50000	1K16004	EPA 8260D	11/16/21 15:22	nmc	
Methylene Chloride [75-09-2]^	50000	U	ug/L	20000	50000	250000	1K16004	EPA 8260D	11/16/21 15:22	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	12000	U	ug/L	20000	12000	50000	1K16004	EPA 8260D	11/16/21 15:22	nmc	
Styrene [100-42-5]^	12000	U	ug/L	20000	12000	50000	1K16004	EPA 8260D	11/16/21 15:22	nmc	
Tetrachloroethene [127-18-4]^	15000	U	ug/L	20000	15000	50000	1K16004	EPA 8260D	11/16/21 15:22	nmc	
Toluene [108-88-3]^	14000	U	ug/L	20000	14000	50000	1K16004	EPA 8260D	11/16/21 15:22	nmc	
trans-1,2-Dichloroethene [156-60-5]^	15000	U	ug/L	20000	15000	50000	1K16004	EPA 8260D	11/16/21 15:22	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	15000	U	ug/L	20000	15000	50000	1K16004	EPA 8260D	11/16/21 15:22	nmc	
Trichloroethene [79-01-6]^	**690000**		ug/L	20000	18000	50000	1K16004	EPA 8260D	11/16/21 15:22	nmc	
Trichlorofluoromethane [75-69-4]^	19000	U	ug/L	20000	19000	50000	1K16004	EPA 8260D	11/16/21 15:22	nmc	
Vinyl chloride [75-01-4]^	14000	U	ug/L	20000	14000	50000	1K16004	EPA 8260D	11/16/21 15:22	nmc	

ANALYTICAL RESULTS

Description: LC34PS-PZD-058.0-20211111 **Lab Sample ID:** AE07280-55 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 14:04 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*40*	*1*	*50.0*	*81 %*	*41-142*	*1K16004*	*EPA 8260D*	*11/16/21 15:22*	*nmc*	
Dibromofluoromethane	*46*	*1*	*50.0*	*91 %*	*53-146*	*1K16004*	*EPA 8260D*	*11/16/21 15:22*	*nmc*	
Toluene-d8	*45*	*1*	*50.0*	*90 %*	*41-146*	*1K16004*	*EPA 8260D*	*11/16/21 15:22*	*nmc*	

ANALYTICAL RESULTS

Description: LC34PS-PZD-073.0-20211111 **Lab Sample ID:** AE07280-56 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 14:06 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	1K16004	EPA 8260D	11/16/21 15:51	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	1K16004	EPA 8260D	11/16/21 15:51	nmc	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	1K16004	EPA 8260D	11/16/21 15:51	nmc	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	1K16004	EPA 8260D	11/16/21 15:51	nmc	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	1K16004	EPA 8260D	11/16/21 15:51	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	1K16004	EPA 8260D	11/16/21 15:51	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	1K16004	EPA 8260D	11/16/21 15:51	nmc	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	1K16004	EPA 8260D	11/16/21 15:51	nmc	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	1K16004	EPA 8260D	11/16/21 15:51	nmc	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	1K16004	EPA 8260D	11/16/21 15:51	nmc	QV-01
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	1K16004	EPA 8260D	11/16/21 15:51	nmc	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	1K16004	EPA 8260D	11/16/21 15:51	nmc	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	1K16004	EPA 8260D	11/16/21 15:51	nmc	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	1K16004	EPA 8260D	11/16/21 15:51	nmc	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	1K16004	EPA 8260D	11/16/21 15:51	nmc	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	1K16004	EPA 8260D	11/16/21 15:51	nmc	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	1K16004	EPA 8260D	11/16/21 15:51	nmc	QV-01
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	1K16004	EPA 8260D	11/16/21 15:51	nmc	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	1K16004	EPA 8260D	11/16/21 15:51	nmc	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	1K16004	EPA 8260D	11/16/21 15:51	nmc	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	1K16004	EPA 8260D	11/16/21 15:51	nmc	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	1K16004	EPA 8260D	11/16/21 15:51	nmc	QV-01, QL-02
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	1K16004	EPA 8260D	11/16/21 15:51	nmc	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	1K16004	EPA 8260D	11/16/21 15:51	nmc	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	1K16004	EPA 8260D	11/16/21 15:51	nmc	QV-01
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	1K16004	EPA 8260D	11/16/21 15:51	nmc	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	1K16004	EPA 8260D	11/16/21 15:51	nmc	
cis-1,2-Dichloroethene [156-59-2]^	**6.4**		ug/L	1	0.53	2.5	1K16004	EPA 8260D	11/16/21 15:51	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	1K16004	EPA 8260D	11/16/21 15:51	nmc	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	1K16004	EPA 8260D	11/16/21 15:51	nmc	QL-02
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	1K16004	EPA 8260D	11/16/21 15:51	nmc	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	1K16004	EPA 8260D	11/16/21 15:51	nmc	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	1K16004	EPA 8260D	11/16/21 15:51	nmc	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	1K16004	EPA 8260D	11/16/21 15:51	nmc	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	1K16004	EPA 8260D	11/16/21 15:51	nmc	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	1K16004	EPA 8260D	11/16/21 15:51	nmc	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	1K16004	EPA 8260D	11/16/21 15:51	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	1K16004	EPA 8260D	11/16/21 15:51	nmc	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	1K16004	EPA 8260D	11/16/21 15:51	nmc	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	1K16004	EPA 8260D	11/16/21 15:51	nmc	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	1K16004	EPA 8260D	11/16/21 15:51	nmc	
trans-1,2-Dichloroethene [156-60-5]^	0.73	U	ug/L	1	0.73	2.5	1K16004	EPA 8260D	11/16/21 15:51	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	1K16004	EPA 8260D	11/16/21 15:51	nmc	
Trichloroethene [79-01-6]^	**260**		ug/L	10	8.9	25	1K17014	EPA 8260D	11/17/21 16:47	KKW	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	1K16004	EPA 8260D	11/16/21 15:51	nmc	
Vinyl chloride [75-01-4]^	**3.0**		ug/L	1	0.71	2.5	1K16004	EPA 8260D	11/16/21 15:51	nmc	

ANALYTICAL RESULTS

Description: LC34PS-PZD-073.0-20211111 **Lab Sample ID:** AE07280-56 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 14:06 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*41*	*1*	*50.0*	*81 %*	*41-142*	*1K16004*	*EPA 8260D*	*11/16/21 15:51*	*nmc*	
4-Bromofluorobenzene	*51*	*1*	*50.0*	*102 %*	*41-142*	*1K17014*	*EPA 8260D*	*11/17/21 16:47*	*KKW*	
Dibromofluoromethane	*46*	*1*	*50.0*	*92 %*	*53-146*	*1K16004*	*EPA 8260D*	*11/16/21 15:51*	*nmc*	
Dibromofluoromethane	*49*	*1*	*50.0*	*98 %*	*53-146*	*1K17014*	*EPA 8260D*	*11/17/21 16:47*	*KKW*	
Toluene-d8	*44*	*1*	*50.0*	*89 %*	*41-146*	*1K16004*	*EPA 8260D*	*11/16/21 15:51*	*nmc*	
Toluene-d8	*52*	*1*	*50.0*	*104 %*	*41-146*	*1K17014*	*EPA 8260D*	*11/17/21 16:47*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZD-080.0-20211111 **Lab Sample ID:** AE07280-57 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 14:08 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	1K12031	EPA 8260D	11/13/21 03:32	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	1K12031	EPA 8260D	11/13/21 03:32	nmc	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	1K12031	EPA 8260D	11/13/21 03:32	nmc	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	1K12031	EPA 8260D	11/13/21 03:32	nmc	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	1K12031	EPA 8260D	11/13/21 03:32	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	1K12031	EPA 8260D	11/13/21 03:32	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	1K12031	EPA 8260D	11/13/21 03:32	nmc	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	1K12031	EPA 8260D	11/13/21 03:32	nmc	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	1K12031	EPA 8260D	11/13/21 03:32	nmc	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	1K12031	EPA 8260D	11/13/21 03:32	nmc	QV-01
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	1K12031	EPA 8260D	11/13/21 03:32	nmc	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	1K12031	EPA 8260D	11/13/21 03:32	nmc	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	1K12031	EPA 8260D	11/13/21 03:32	nmc	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	1K12031	EPA 8260D	11/13/21 03:32	nmc	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	1K12031	EPA 8260D	11/13/21 03:32	nmc	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	1K12031	EPA 8260D	11/13/21 03:32	nmc	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	1K12031	EPA 8260D	11/13/21 03:32	nmc	QV-01
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	1K12031	EPA 8260D	11/13/21 03:32	nmc	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	1K12031	EPA 8260D	11/13/21 03:32	nmc	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	1K12031	EPA 8260D	11/13/21 03:32	nmc	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	1K12031	EPA 8260D	11/13/21 03:32	nmc	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	1K12031	EPA 8260D	11/13/21 03:32	nmc	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	1K12031	EPA 8260D	11/13/21 03:32	nmc	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	1K12031	EPA 8260D	11/13/21 03:32	nmc	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	1K12031	EPA 8260D	11/13/21 03:32	nmc	QV-01
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	1K12031	EPA 8260D	11/13/21 03:32	nmc	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	1K12031	EPA 8260D	11/13/21 03:32	nmc	
cis-1,2-Dichloroethene [156-59-2]^	**54**		ug/L	1	0.53	2.5	1K12031	EPA 8260D	11/13/21 03:32	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	1K12031	EPA 8260D	11/13/21 03:32	nmc	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	1K12031	EPA 8260D	11/13/21 03:32	nmc	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	1K12031	EPA 8260D	11/13/21 03:32	nmc	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	1K12031	EPA 8260D	11/13/21 03:32	nmc	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	1K12031	EPA 8260D	11/13/21 03:32	nmc	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	1K12031	EPA 8260D	11/13/21 03:32	nmc	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	1K12031	EPA 8260D	11/13/21 03:32	nmc	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	1K12031	EPA 8260D	11/13/21 03:32	nmc	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	1K12031	EPA 8260D	11/13/21 03:32	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	1K12031	EPA 8260D	11/13/21 03:32	nmc	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	1K12031	EPA 8260D	11/13/21 03:32	nmc	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	1K12031	EPA 8260D	11/13/21 03:32	nmc	QV-01
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	1K12031	EPA 8260D	11/13/21 03:32	nmc	
trans-1,2-Dichloroethene [156-60-5]^	**13**		ug/L	1	0.73	2.5	1K12031	EPA 8260D	11/13/21 03:32	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	1K12031	EPA 8260D	11/13/21 03:32	nmc	
Trichloroethene [79-01-6]^	**7.0**		ug/L	1	0.89	2.5	1K12031	EPA 8260D	11/13/21 03:32	nmc	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	1K12031	EPA 8260D	11/13/21 03:32	nmc	QL-02, QV-01

ANALYTICAL RESULTS

Description: LC34PS-PZD-080.0-20211111 **Lab Sample ID:** AE07280-57 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 14:08 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Vinyl chloride [75-01-4]^	0.71	U	ug/L	1	0.71	2.5	1K12031	EPA 8260D	11/13/21 03:32	nmc	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*41*	*1*	*50.0*	*82 %*	*41-142*	*1K12031*	*EPA 8260D*	*11/13/21 03:32*	*nmc*	
Dibromofluoromethane	*45*	*1*	*50.0*	*91 %*	*53-146*	*1K12031*	*EPA 8260D*	*11/13/21 03:32*	*nmc*	
Toluene-d8	*45*	*1*	*50.0*	*90 %*	*41-146*	*1K12031*	*EPA 8260D*	*11/13/21 03:32*	*nmc*	

ANALYTICAL RESULTS

Description: LC34PS-PZE-040.0-20211111 **Lab Sample ID:** AE07280-58 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 14:30 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	8000	U	ug/L	10000	8000	25000	1K16004	EPA 8260D	11/16/21 16:20	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	5400	U	ug/L	10000	5400	25000	1K16004	EPA 8260D	11/16/21 16:20	nmc	
1,1,2-Trichloroethane [79-00-5]^	7600	U	ug/L	10000	7600	25000	1K16004	EPA 8260D	11/16/21 16:20	nmc	
1,1-Dichloroethane [75-34-3]^	6200	U	ug/L	10000	6200	25000	1K16004	EPA 8260D	11/16/21 16:20	nmc	
1,1-Dichloroethene [75-35-4]^	9400	U	ug/L	10000	9400	25000	1K16004	EPA 8260D	11/16/21 16:20	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	7000	U	ug/L	10000	7000	25000	1K16004	EPA 8260D	11/16/21 16:20	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	9600	U	ug/L	10000	9600	25000	1K16004	EPA 8260D	11/16/21 16:20	nmc	
1,2-Dibromoethane [106-93-4]^	7800	U	ug/L	10000	7800	25000	1K16004	EPA 8260D	11/16/21 16:20	nmc	
1,2-Dichlorobenzene [95-50-1]^	7300	U	ug/L	10000	7300	25000	1K16004	EPA 8260D	11/16/21 16:20	nmc	
1,2-Dichloroethane [107-06-2]^	6300	U	ug/L	10000	6300	25000	1K16004	EPA 8260D	11/16/21 16:20	nmc	QV-01
1,2-Dichloropropane [78-87-5]^	8000	U	ug/L	10000	8000	25000	1K16004	EPA 8260D	11/16/21 16:20	nmc	
1,3-Dichlorobenzene [541-73-1]^	7700	U	ug/L	10000	7700	25000	1K16004	EPA 8260D	11/16/21 16:20	nmc	
1,4-Dichlorobenzene [106-46-7]^	7600	U	ug/L	10000	7600	25000	1K16004	EPA 8260D	11/16/21 16:20	nmc	
2-Butanone [78-93-3]^	45000	U	ug/L	10000	45000	120000	1K16004	EPA 8260D	11/16/21 16:20	nmc	
2-Hexanone [591-78-6]^	25000	U	ug/L	10000	25000	120000	1K16004	EPA 8260D	11/16/21 16:20	nmc	
4-Methyl-2-pentanone [108-10-1]^	25000	U	ug/L	10000	25000	120000	1K16004	EPA 8260D	11/16/21 16:20	nmc	
Acetone [67-64-1]^	100000	U	ug/L	10000	100000	250000	1K16004	EPA 8260D	11/16/21 16:20	nmc	QV-01
Benzene [71-43-2]^	7100	U	ug/L	10000	7100	25000	1K16004	EPA 8260D	11/16/21 16:20	nmc	
Bromodichloromethane [75-27-4]^	5200	U	ug/L	10000	5200	25000	1K16004	EPA 8260D	11/16/21 16:20	nmc	
Bromoform [75-25-2]^	7500	U	ug/L	10000	7500	25000	1K16004	EPA 8260D	11/16/21 16:20	nmc	
Bromomethane [74-83-9]^	9500	U	ug/L	10000	9500	25000	1K16004	EPA 8260D	11/16/21 16:20	nmc	QV-01
Carbon disulfide [75-15-0]^	25000	U	ug/L	10000	25000	120000	1K16004	EPA 8260D	11/16/21 16:20	nmc	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	9400	U	ug/L	10000	9400	25000	1K16004	EPA 8260D	11/16/21 16:20	nmc	
Chlorobenzene [108-90-7]^	7200	U	ug/L	10000	7200	25000	1K16004	EPA 8260D	11/16/21 16:20	nmc	
Chloroethane [75-00-3]^	9800	U	ug/L	10000	9800	25000	1K16004	EPA 8260D	11/16/21 16:20	nmc	QV-01
Chloroform [67-66-3]^	8000	U	ug/L	10000	8000	25000	1K16004	EPA 8260D	11/16/21 16:20	nmc	
Chloromethane [74-87-3]^	8200	U	ug/L	10000	8200	25000	1K16004	EPA 8260D	11/16/21 16:20	nmc	
cis-1,2-Dichloroethene [156-59-2]^	**18000**	I	ug/L	10000	5300	25000	1K16004	EPA 8260D	11/16/21 16:20	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	5900	U	ug/L	10000	5900	25000	1K16004	EPA 8260D	11/16/21 16:20	nmc	
Cyclohexane [110-82-7]^	9300	U	ug/L	10000	9300	25000	1K16004	EPA 8260D	11/16/21 16:20	nmc	QL-02
Dibromochloromethane [124-48-1]^	5000	U	ug/L	10000	5000	25000	1K16004	EPA 8260D	11/16/21 16:20	nmc	
Dichlorodifluoromethane [75-71-8]^	7400	U	ug/L	10000	7400	25000	1K16004	EPA 8260D	11/16/21 16:20	nmc	
Ethylbenzene [100-41-4]^	6900	U	ug/L	10000	6900	25000	1K16004	EPA 8260D	11/16/21 16:20	nmc	
Freon 113 [76-13-1]^	7300	U	ug/L	10000	7300	25000	1K16004	EPA 8260D	11/16/21 16:20	nmc	
Isopropylbenzene [98-82-8]^	6700	U	ug/L	10000	6700	25000	1K16004	EPA 8260D	11/16/21 16:20	nmc	
Methyl acetate [79-20-9]^	9500	U	ug/L	10000	9500	25000	1K16004	EPA 8260D	11/16/21 16:20	nmc	
Methylene Chloride [75-09-2]^	25000	U	ug/L	10000	25000	120000	1K16004	EPA 8260D	11/16/21 16:20	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	6000	U	ug/L	10000	6000	25000	1K16004	EPA 8260D	11/16/21 16:20	nmc	
Styrene [100-42-5]^	6100	U	ug/L	10000	6100	25000	1K16004	EPA 8260D	11/16/21 16:20	nmc	
Tetrachloroethene [127-18-4]^	7600	U	ug/L	10000	7600	25000	1K16004	EPA 8260D	11/16/21 16:20	nmc	
Toluene [108-88-3]^	7200	U	ug/L	10000	7200	25000	1K16004	EPA 8260D	11/16/21 16:20	nmc	
trans-1,2-Dichloroethene [156-60-5]^	7300	U	ug/L	10000	7300	25000	1K16004	EPA 8260D	11/16/21 16:20	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	7300	U	ug/L	10000	7300	25000	1K16004	EPA 8260D	11/16/21 16:20	nmc	
Trichloroethene [79-01-6]^	**670000**		ug/L	10000	8900	25000	1K16004	EPA 8260D	11/16/21 16:20	nmc	
Trichlorofluoromethane [75-69-4]^	9400	U	ug/L	10000	9400	25000	1K16004	EPA 8260D	11/16/21 16:20	nmc	
Vinyl chloride [75-01-4]^	7100	U	ug/L	10000	7100	25000	1K16004	EPA 8260D	11/16/21 16:20	nmc	

ANALYTICAL RESULTS

Description: LC34PS-PZE-040.0-20211111 **Lab Sample ID:** AE07280-58 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 14:30 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*41*	*1*	*50.0*	*83 %*	*41-142*	*1K16004*	*EPA 8260D*	*11/16/21 16:20*	*nmc*	
Dibromofluoromethane	*47*	*1*	*50.0*	*93 %*	*53-146*	*1K16004*	*EPA 8260D*	*11/16/21 16:20*	*nmc*	
Toluene-d8	*46*	*1*	*50.0*	*93 %*	*41-146*	*1K16004*	*EPA 8260D*	*11/16/21 16:20*	*nmc*	

ANALYTICAL RESULTS

Description: LC34PS-PZE-050.0-20211111 **Lab Sample ID:** AE07280-59 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 14:32 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	8000	U	ug/L	10000	8000	25000	1K16004	EPA 8260D	11/16/21 16:49	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	5400	U	ug/L	10000	5400	25000	1K16004	EPA 8260D	11/16/21 16:49	nmc	
1,1,2-Trichloroethane [79-00-5]^	7600	U	ug/L	10000	7600	25000	1K16004	EPA 8260D	11/16/21 16:49	nmc	
1,1-Dichloroethane [75-34-3]^	6200	U	ug/L	10000	6200	25000	1K16004	EPA 8260D	11/16/21 16:49	nmc	
1,1-Dichloroethene [75-35-4]^	9400	U	ug/L	10000	9400	25000	1K16004	EPA 8260D	11/16/21 16:49	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	7000	U	ug/L	10000	7000	25000	1K16004	EPA 8260D	11/16/21 16:49	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	9600	U	ug/L	10000	9600	25000	1K16004	EPA 8260D	11/16/21 16:49	nmc	
1,2-Dibromoethane [106-93-4]^	7800	U	ug/L	10000	7800	25000	1K16004	EPA 8260D	11/16/21 16:49	nmc	
1,2-Dichlorobenzene [95-50-1]^	7300	U	ug/L	10000	7300	25000	1K16004	EPA 8260D	11/16/21 16:49	nmc	
1,2-Dichloroethane [107-06-2]^	6300	U	ug/L	10000	6300	25000	1K16004	EPA 8260D	11/16/21 16:49	nmc	QV-01
1,2-Dichloropropane [78-87-5]^	8000	U	ug/L	10000	8000	25000	1K16004	EPA 8260D	11/16/21 16:49	nmc	
1,3-Dichlorobenzene [541-73-1]^	7700	U	ug/L	10000	7700	25000	1K16004	EPA 8260D	11/16/21 16:49	nmc	
1,4-Dichlorobenzene [106-46-7]^	7600	U	ug/L	10000	7600	25000	1K16004	EPA 8260D	11/16/21 16:49	nmc	
2-Butanone [78-93-3]^	45000	U	ug/L	10000	45000	120000	1K16004	EPA 8260D	11/16/21 16:49	nmc	
2-Hexanone [591-78-6]^	25000	U	ug/L	10000	25000	120000	1K16004	EPA 8260D	11/16/21 16:49	nmc	
4-Methyl-2-pentanone [108-10-1]^	25000	U	ug/L	10000	25000	120000	1K16004	EPA 8260D	11/16/21 16:49	nmc	
Acetone [67-64-1]^	100000	U	ug/L	10000	100000	250000	1K16004	EPA 8260D	11/16/21 16:49	nmc	QV-01
Benzene [71-43-2]^	7100	U	ug/L	10000	7100	25000	1K16004	EPA 8260D	11/16/21 16:49	nmc	
Bromodichloromethane [75-27-4]^	5200	U	ug/L	10000	5200	25000	1K16004	EPA 8260D	11/16/21 16:49	nmc	
Bromoform [75-25-2]^	7500	U	ug/L	10000	7500	25000	1K16004	EPA 8260D	11/16/21 16:49	nmc	
Bromomethane [74-83-9]^	9500	U	ug/L	10000	9500	25000	1K16004	EPA 8260D	11/16/21 16:49	nmc	QV-01
Carbon disulfide [75-15-0]^	25000	U	ug/L	10000	25000	120000	1K16004	EPA 8260D	11/16/21 16:49	nmc	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	9400	U	ug/L	10000	9400	25000	1K16004	EPA 8260D	11/16/21 16:49	nmc	
Chlorobenzene [108-90-7]^	7200	U	ug/L	10000	7200	25000	1K16004	EPA 8260D	11/16/21 16:49	nmc	
Chloroethane [75-00-3]^	9800	U	ug/L	10000	9800	25000	1K16004	EPA 8260D	11/16/21 16:49	nmc	QV-01
Chloroform [67-66-3]^	8000	U	ug/L	10000	8000	25000	1K16004	EPA 8260D	11/16/21 16:49	nmc	
Chloromethane [74-87-3]^	8200	U	ug/L	10000	8200	25000	1K16004	EPA 8260D	11/16/21 16:49	nmc	
cis-1,2-Dichloroethene [156-59-2]^	**52000**		ug/L	10000	5300	25000	1K16004	EPA 8260D	11/16/21 16:49	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	5900	U	ug/L	10000	5900	25000	1K16004	EPA 8260D	11/16/21 16:49	nmc	
Cyclohexane [110-82-7]^	9300	U	ug/L	10000	9300	25000	1K16004	EPA 8260D	11/16/21 16:49	nmc	QL-02
Dibromochloromethane [124-48-1]^	5000	U	ug/L	10000	5000	25000	1K16004	EPA 8260D	11/16/21 16:49	nmc	
Dichlorodifluoromethane [75-71-8]^	7400	U	ug/L	10000	7400	25000	1K16004	EPA 8260D	11/16/21 16:49	nmc	
Ethylbenzene [100-41-4]^	6900	U	ug/L	10000	6900	25000	1K16004	EPA 8260D	11/16/21 16:49	nmc	
Freon 113 [76-13-1]^	7300	U	ug/L	10000	7300	25000	1K16004	EPA 8260D	11/16/21 16:49	nmc	
Isopropylbenzene [98-82-8]^	6700	U	ug/L	10000	6700	25000	1K16004	EPA 8260D	11/16/21 16:49	nmc	
Methyl acetate [79-20-9]^	9500	U	ug/L	10000	9500	25000	1K16004	EPA 8260D	11/16/21 16:49	nmc	
Methylene Chloride [75-09-2]^	25000	U	ug/L	10000	25000	120000	1K16004	EPA 8260D	11/16/21 16:49	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	6000	U	ug/L	10000	6000	25000	1K16004	EPA 8260D	11/16/21 16:49	nmc	
Styrene [100-42-5]^	6100	U	ug/L	10000	6100	25000	1K16004	EPA 8260D	11/16/21 16:49	nmc	
Tetrachloroethene [127-18-4]^	7600	U	ug/L	10000	7600	25000	1K16004	EPA 8260D	11/16/21 16:49	nmc	
Toluene [108-88-3]^	7200	U	ug/L	10000	7200	25000	1K16004	EPA 8260D	11/16/21 16:49	nmc	
trans-1,2-Dichloroethene [156-60-5]^	7300	U	ug/L	10000	7300	25000	1K16004	EPA 8260D	11/16/21 16:49	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	7300	U	ug/L	10000	7300	25000	1K16004	EPA 8260D	11/16/21 16:49	nmc	
Trichloroethene [79-01-6]^	**600000**		ug/L	10000	8900	25000	1K16004	EPA 8260D	11/16/21 16:49	nmc	
Trichlorofluoromethane [75-69-4]^	9400	U	ug/L	10000	9400	25000	1K16004	EPA 8260D	11/16/21 16:49	nmc	
Vinyl chloride [75-01-4]^	**7400**	I	ug/L	10000	7100	25000	1K16004	EPA 8260D	11/16/21 16:49	nmc	

ANALYTICAL RESULTS

Description: LC34PS-PZE-050.0-20211111 **Lab Sample ID:** AE07280-59 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 14:32 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*40*	*1*	*50.0*	*79 %*	*41-142*	*1K16004*	*EPA 8260D*	*11/16/21 16:49*	*nmc*	
Dibromofluoromethane	*45*	*1*	*50.0*	*90 %*	*53-146*	*1K16004*	*EPA 8260D*	*11/16/21 16:49*	*nmc*	
Toluene-d8	*43*	*1*	*50.0*	*86 %*	*41-146*	*1K16004*	*EPA 8260D*	*11/16/21 16:49*	*nmc*	

ANALYTICAL RESULTS

Description: LC34PS-PZE-058.0-20211111 **Lab Sample ID:** AE07280-60 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 14:34 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	8000	U	ug/L	10000	8000	25000	1K16004	EPA 8260D	11/16/21 17:18	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	5400	U	ug/L	10000	5400	25000	1K16004	EPA 8260D	11/16/21 17:18	nmc	
1,1,2-Trichloroethane [79-00-5]^	7600	U	ug/L	10000	7600	25000	1K16004	EPA 8260D	11/16/21 17:18	nmc	
1,1-Dichloroethane [75-34-3]^	6200	U	ug/L	10000	6200	25000	1K16004	EPA 8260D	11/16/21 17:18	nmc	
1,1-Dichloroethene [75-35-4]^	9400	U	ug/L	10000	9400	25000	1K16004	EPA 8260D	11/16/21 17:18	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	7000	U	ug/L	10000	7000	25000	1K16004	EPA 8260D	11/16/21 17:18	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	9600	U	ug/L	10000	9600	25000	1K16004	EPA 8260D	11/16/21 17:18	nmc	
1,2-Dibromoethane [106-93-4]^	7800	U	ug/L	10000	7800	25000	1K16004	EPA 8260D	11/16/21 17:18	nmc	
1,2-Dichlorobenzene [95-50-1]^	7300	U	ug/L	10000	7300	25000	1K16004	EPA 8260D	11/16/21 17:18	nmc	
1,2-Dichloroethane [107-06-2]^	6300	U	ug/L	10000	6300	25000	1K16004	EPA 8260D	11/16/21 17:18	nmc	QV-01
1,2-Dichloropropane [78-87-5]^	8000	U	ug/L	10000	8000	25000	1K16004	EPA 8260D	11/16/21 17:18	nmc	
1,3-Dichlorobenzene [541-73-1]^	7700	U	ug/L	10000	7700	25000	1K16004	EPA 8260D	11/16/21 17:18	nmc	
1,4-Dichlorobenzene [106-46-7]^	7600	U	ug/L	10000	7600	25000	1K16004	EPA 8260D	11/16/21 17:18	nmc	
2-Butanone [78-93-3]^	45000	U	ug/L	10000	45000	120000	1K16004	EPA 8260D	11/16/21 17:18	nmc	
2-Hexanone [591-78-6]^	25000	U	ug/L	10000	25000	120000	1K16004	EPA 8260D	11/16/21 17:18	nmc	
4-Methyl-2-pentanone [108-10-1]^	25000	U	ug/L	10000	25000	120000	1K16004	EPA 8260D	11/16/21 17:18	nmc	
Acetone [67-64-1]^	100000	U	ug/L	10000	100000	250000	1K16004	EPA 8260D	11/16/21 17:18	nmc	QV-01
Benzene [71-43-2]^	7100	U	ug/L	10000	7100	25000	1K16004	EPA 8260D	11/16/21 17:18	nmc	
Bromodichloromethane [75-27-4]^	5200	U	ug/L	10000	5200	25000	1K16004	EPA 8260D	11/16/21 17:18	nmc	
Bromoform [75-25-2]^	7500	U	ug/L	10000	7500	25000	1K16004	EPA 8260D	11/16/21 17:18	nmc	
Bromomethane [74-83-9]^	9500	U	ug/L	10000	9500	25000	1K16004	EPA 8260D	11/16/21 17:18	nmc	QV-01
Carbon disulfide [75-15-0]^	25000	U	ug/L	10000	25000	120000	1K16004	EPA 8260D	11/16/21 17:18	nmc	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	9400	U	ug/L	10000	9400	25000	1K16004	EPA 8260D	11/16/21 17:18	nmc	
Chlorobenzene [108-90-7]^	7200	U	ug/L	10000	7200	25000	1K16004	EPA 8260D	11/16/21 17:18	nmc	
Chloroethane [75-00-3]^	9800	U	ug/L	10000	9800	25000	1K16004	EPA 8260D	11/16/21 17:18	nmc	QV-01
Chloroform [67-66-3]^	8000	U	ug/L	10000	8000	25000	1K16004	EPA 8260D	11/16/21 17:18	nmc	
Chloromethane [74-87-3]^	8200	U	ug/L	10000	8200	25000	1K16004	EPA 8260D	11/16/21 17:18	nmc	
cis-1,2-Dichloroethene [156-59-2]^	**40000**		ug/L	10000	5300	25000	1K16004	EPA 8260D	11/16/21 17:18	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	5900	U	ug/L	10000	5900	25000	1K16004	EPA 8260D	11/16/21 17:18	nmc	
Cyclohexane [110-82-7]^	9300	U	ug/L	10000	9300	25000	1K16004	EPA 8260D	11/16/21 17:18	nmc	QL-02
Dibromochloromethane [124-48-1]^	5000	U	ug/L	10000	5000	25000	1K16004	EPA 8260D	11/16/21 17:18	nmc	
Dichlorodifluoromethane [75-71-8]^	7400	U	ug/L	10000	7400	25000	1K16004	EPA 8260D	11/16/21 17:18	nmc	
Ethylbenzene [100-41-4]^	6900	U	ug/L	10000	6900	25000	1K16004	EPA 8260D	11/16/21 17:18	nmc	
Freon 113 [76-13-1]^	7300	U	ug/L	10000	7300	25000	1K16004	EPA 8260D	11/16/21 17:18	nmc	
Isopropylbenzene [98-82-8]^	6700	U	ug/L	10000	6700	25000	1K16004	EPA 8260D	11/16/21 17:18	nmc	
Methyl acetate [79-20-9]^	9500	U	ug/L	10000	9500	25000	1K16004	EPA 8260D	11/16/21 17:18	nmc	
Methylene Chloride [75-09-2]^	25000	U	ug/L	10000	25000	120000	1K16004	EPA 8260D	11/16/21 17:18	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	6000	U	ug/L	10000	6000	25000	1K16004	EPA 8260D	11/16/21 17:18	nmc	
Styrene [100-42-5]^	6100	U	ug/L	10000	6100	25000	1K16004	EPA 8260D	11/16/21 17:18	nmc	
Tetrachloroethene [127-18-4]^	7600	U	ug/L	10000	7600	25000	1K16004	EPA 8260D	11/16/21 17:18	nmc	
Toluene [108-88-3]^	7200	U	ug/L	10000	7200	25000	1K16004	EPA 8260D	11/16/21 17:18	nmc	
trans-1,2-Dichloroethene [156-60-5]^	7300	U	ug/L	10000	7300	25000	1K16004	EPA 8260D	11/16/21 17:18	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	7300	U	ug/L	10000	7300	25000	1K16004	EPA 8260D	11/16/21 17:18	nmc	
Trichloroethene [79-01-6]^	**500000**		ug/L	10000	8900	25000	1K16004	EPA 8260D	11/16/21 17:18	nmc	
Trichlorofluoromethane [75-69-4]^	9400	U	ug/L	10000	9400	25000	1K16004	EPA 8260D	11/16/21 17:18	nmc	
Vinyl chloride [75-01-4]^	7100	U	ug/L	10000	7100	25000	1K16004	EPA 8260D	11/16/21 17:18	nmc	

ANALYTICAL RESULTS

Description: LC34PS-PZE-058.0-20211111 **Lab Sample ID:** AE07280-60 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 14:34 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*38*	*1*	*50.0*	*77 %*	*41-142*	*1K16004*	*EPA 8260D*	*11/16/21 17:18*	*nmc*	
Dibromofluoromethane	*44*	*1*	*50.0*	*88 %*	*53-146*	*1K16004*	*EPA 8260D*	*11/16/21 17:18*	*nmc*	
Toluene-d8	*43*	*1*	*50.0*	*87 %*	*41-146*	*1K16004*	*EPA 8260D*	*11/16/21 17:18*	*nmc*	

ANALYTICAL RESULTS

Description: LC34PS-PZE-073.0-20211111 **Lab Sample ID:** AE07280-61 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 14:36 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	1K12031	EPA 8260D	11/13/21 04:00	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	1K12031	EPA 8260D	11/13/21 04:00	nmc	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	1K12031	EPA 8260D	11/13/21 04:00	nmc	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	1K12031	EPA 8260D	11/13/21 04:00	nmc	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	1K12031	EPA 8260D	11/13/21 04:00	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	1K12031	EPA 8260D	11/13/21 04:00	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	1K12031	EPA 8260D	11/13/21 04:00	nmc	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	1K12031	EPA 8260D	11/13/21 04:00	nmc	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	1K12031	EPA 8260D	11/13/21 04:00	nmc	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	1K12031	EPA 8260D	11/13/21 04:00	nmc	QV-01
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	1K12031	EPA 8260D	11/13/21 04:00	nmc	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	1K12031	EPA 8260D	11/13/21 04:00	nmc	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	1K12031	EPA 8260D	11/13/21 04:00	nmc	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	1K12031	EPA 8260D	11/13/21 04:00	nmc	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	1K12031	EPA 8260D	11/13/21 04:00	nmc	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	1K12031	EPA 8260D	11/13/21 04:00	nmc	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	1K12031	EPA 8260D	11/13/21 04:00	nmc	QV-01
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	1K12031	EPA 8260D	11/13/21 04:00	nmc	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	1K12031	EPA 8260D	11/13/21 04:00	nmc	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	1K12031	EPA 8260D	11/13/21 04:00	nmc	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	1K12031	EPA 8260D	11/13/21 04:00	nmc	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	1K12031	EPA 8260D	11/13/21 04:00	nmc	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	1K12031	EPA 8260D	11/13/21 04:00	nmc	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	1K12031	EPA 8260D	11/13/21 04:00	nmc	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	1K12031	EPA 8260D	11/13/21 04:00	nmc	QV-01
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	1K12031	EPA 8260D	11/13/21 04:00	nmc	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	1K12031	EPA 8260D	11/13/21 04:00	nmc	
cis-1,2-Dichloroethene [156-59-2]^	**4.4**		ug/L	1	0.53	2.5	1K12031	EPA 8260D	11/13/21 04:00	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	1K12031	EPA 8260D	11/13/21 04:00	nmc	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	1K12031	EPA 8260D	11/13/21 04:00	nmc	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	1K12031	EPA 8260D	11/13/21 04:00	nmc	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	1K12031	EPA 8260D	11/13/21 04:00	nmc	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	1K12031	EPA 8260D	11/13/21 04:00	nmc	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	1K12031	EPA 8260D	11/13/21 04:00	nmc	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	1K12031	EPA 8260D	11/13/21 04:00	nmc	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	1K12031	EPA 8260D	11/13/21 04:00	nmc	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	1K12031	EPA 8260D	11/13/21 04:00	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	1K12031	EPA 8260D	11/13/21 04:00	nmc	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	1K12031	EPA 8260D	11/13/21 04:00	nmc	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	1K12031	EPA 8260D	11/13/21 04:00	nmc	QV-01
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	1K12031	EPA 8260D	11/13/21 04:00	nmc	
trans-1,2-Dichloroethene [156-60-5]^	0.73	U	ug/L	1	0.73	2.5	1K12031	EPA 8260D	11/13/21 04:00	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	1K12031	EPA 8260D	11/13/21 04:00	nmc	
Trichloroethene [79-01-6]^	**64**		ug/L	1	0.89	2.5	1K12031	EPA 8260D	11/13/21 04:00	nmc	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	1K12031	EPA 8260D	11/13/21 04:00	nmc	QL-02, QV-01

ANALYTICAL RESULTS

Description: LC34PS-PZE-073.0-20211111 **Lab Sample ID:** AE07280-61 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 14:36 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Vinyl chloride [75-01-4]^	0.71	U	ug/L	1	0.71	2.5	1K12031	EPA 8260D	11/13/21 04:00	nmc	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*41*	*1*	*50.0*	*82 %*	*41-142*	*1K12031*	*EPA 8260D*	*11/13/21 04:00*	*nmc*	
Dibromofluoromethane	*46*	*1*	*50.0*	*92 %*	*53-146*	*1K12031*	*EPA 8260D*	*11/13/21 04:00*	*nmc*	
Toluene-d8	*45*	*1*	*50.0*	*90 %*	*41-146*	*1K12031*	*EPA 8260D*	*11/13/21 04:00*	*nmc*	

ANALYTICAL RESULTS

Description: LC34PS-PZE-080.0-20211111 **Lab Sample ID:** AE07280-62 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 14:38 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	1K17014	EPA 8260D	11/17/21 17:14	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	1K17014	EPA 8260D	11/17/21 17:14	KKW	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	1K17014	EPA 8260D	11/17/21 17:14	KKW	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	1K17014	EPA 8260D	11/17/21 17:14	KKW	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	1K17014	EPA 8260D	11/17/21 17:14	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	1K17014	EPA 8260D	11/17/21 17:14	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	1K17014	EPA 8260D	11/17/21 17:14	KKW	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	1K17014	EPA 8260D	11/17/21 17:14	KKW	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	1K17014	EPA 8260D	11/17/21 17:14	KKW	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	1K17014	EPA 8260D	11/17/21 17:14	KKW	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	1K17014	EPA 8260D	11/17/21 17:14	KKW	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	1K17014	EPA 8260D	11/17/21 17:14	KKW	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	1K17014	EPA 8260D	11/17/21 17:14	KKW	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	1K17014	EPA 8260D	11/17/21 17:14	KKW	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	1K17014	EPA 8260D	11/17/21 17:14	KKW	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	1K17014	EPA 8260D	11/17/21 17:14	KKW	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	1K17014	EPA 8260D	11/17/21 17:14	KKW	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	1K17014	EPA 8260D	11/17/21 17:14	KKW	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	1K17014	EPA 8260D	11/17/21 17:14	KKW	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	1K17014	EPA 8260D	11/17/21 17:14	KKW	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	1K17014	EPA 8260D	11/17/21 17:14	KKW	
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	1K17014	EPA 8260D	11/17/21 17:14	KKW	
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	1K17014	EPA 8260D	11/17/21 17:14	KKW	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	1K17014	EPA 8260D	11/17/21 17:14	KKW	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	1K17014	EPA 8260D	11/17/21 17:14	KKW	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	1K17014	EPA 8260D	11/17/21 17:14	KKW	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	1K17014	EPA 8260D	11/17/21 17:14	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**84**		ug/L	1	0.53	2.5	1K17014	EPA 8260D	11/17/21 17:14	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	1K17014	EPA 8260D	11/17/21 17:14	KKW	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	1K17014	EPA 8260D	11/17/21 17:14	KKW	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	1K17014	EPA 8260D	11/17/21 17:14	KKW	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	1K17014	EPA 8260D	11/17/21 17:14	KKW	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	1K17014	EPA 8260D	11/17/21 17:14	KKW	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	1K17014	EPA 8260D	11/17/21 17:14	KKW	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	1K17014	EPA 8260D	11/17/21 17:14	KKW	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	1K17014	EPA 8260D	11/17/21 17:14	KKW	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	1K17014	EPA 8260D	11/17/21 17:14	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	1K17014	EPA 8260D	11/17/21 17:14	KKW	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	1K17014	EPA 8260D	11/17/21 17:14	KKW	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	1K17014	EPA 8260D	11/17/21 17:14	KKW	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	1K17014	EPA 8260D	11/17/21 17:14	KKW	
trans-1,2-Dichloroethene [156-60-5]^	**18**		ug/L	1	0.73	2.5	1K17014	EPA 8260D	11/17/21 17:14	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	1K17014	EPA 8260D	11/17/21 17:14	KKW	
Trichloroethene [79-01-6]^	**22**		ug/L	1	0.89	2.5	1K17014	EPA 8260D	11/17/21 17:14	KKW	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	1K17014	EPA 8260D	11/17/21 17:14	KKW	
Vinyl chloride [75-01-4]^	0.71	U	ug/L	1	0.71	2.5	1K17014	EPA 8260D	11/17/21 17:14	KKW	

ANALYTICAL RESULTS

Description: LC34PS-PZE-080.0-20211111 **Lab Sample ID:** AE07280-62 **Received:** 11/11/21 15:25

Matrix: Ground Water **Sampled:** 11/11/21 14:38 **Work Order:** AE07280

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*53*	*1*	*50.0*	*106 %*	*41-142*	*1K17014*	*EPA 8260D*	*11/17/21 17:14*	*KKW*	
Dibromofluoromethane	*50*	*1*	*50.0*	*100 %*	*53-146*	*1K17014*	*EPA 8260D*	*11/17/21 17:14*	*KKW*	
Toluene-d8	*54*	*1*	*50.0*	*107 %*	*41-146*	*1K17014*	*EPA 8260D*	*11/17/21 17:14*	*KKW*	

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1K12010 - EPA 5030B_MS

Blank (1K12010-BLK1) Prepared: 11/12/2021 00:00 Analyzed: 11/12/2021 10:46

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	0.80	U	2.5	ug/L							
1,1,2,2-Tetrachloroethane	0.54	U	2.5	ug/L							
1,1,2-Trichloroethane	0.76	U	2.5	ug/L							
1,1-Dichloroethane	0.62	U	2.5	ug/L							
1,1-Dichloroethene	0.94	U	2.5	ug/L							
1,2,4-Trichlorobenzene	0.70	U	2.5	ug/L							
1,2-Dibromo-3-chloropropane	0.96	U	2.5	ug/L							
1,2-Dibromoethane	0.78	U	2.5	ug/L							
1,2-Dichlorobenzene	0.73	U	2.5	ug/L							
1,2-Dichloroethane	0.63	U	2.5	ug/L							
1,2-Dichloropropane	0.80	U	2.5	ug/L							
1,3-Dichlorobenzene	0.77	U	2.5	ug/L							
1,4-Dichlorobenzene	0.76	U	2.5	ug/L							
2-Butanone	4.5	U	12	ug/L							
2-Hexanone	2.5	U	12	ug/L							
4-Methyl-2-pentanone	2.5	U	12	ug/L							
Acetone	10	U	25	ug/L							
Benzene	0.71	U	2.5	ug/L							
Bromodichloromethane	0.52	U	2.5	ug/L							
Bromoform	0.75	U	2.5	ug/L							
Bromomethane	0.95	U	2.5	ug/L							
Carbon disulfide	2.5	U	12	ug/L							
Carbon Tetrachloride	0.94	U	2.5	ug/L							
Chlorobenzene	0.72	U	2.5	ug/L							
Chloroethane	0.98	U	2.5	ug/L							
Chloroform	0.80	U	2.5	ug/L							
Chloromethane	0.82	U	2.5	ug/L							
cis-1,2-Dichloroethene	0.53	U	2.5	ug/L							
cis-1,3-Dichloropropene	0.59	U	2.5	ug/L							
Cyclohexane	0.93	U	2.5	ug/L							
Dibromochloromethane	0.50	U	2.5	ug/L							
Dichlorodifluoromethane	0.74	U	2.5	ug/L							
Ethylbenzene	0.69	U	2.5	ug/L							
Freon 113	0.73	U	2.5	ug/L							
Isopropylbenzene	0.67	U	2.5	ug/L							
Methyl acetate	0.95	U	2.5	ug/L							
Methylene Chloride	2.5	U	12	ug/L							
Methyl-tert-Butyl Ether	0.60	U	2.5	ug/L							
Styrene	0.61	U	2.5	ug/L							
Tetrachloroethene	0.76	U	2.5	ug/L							
Toluene	0.72	U	2.5	ug/L							
trans-1,2-Dichloroethene	0.73	U	2.5	ug/L							
trans-1,3-Dichloropropene	0.73	U	2.5	ug/L							
Trichloroethene	0.89	U	2.5	ug/L							
Trichlorofluoromethane	0.94	U	2.5	ug/L							
Vinyl chloride	0.71	U	2.5	ug/L							
4-Bromofluorobenzene	*42*	*I*		*ug/L*	*50.0*		*84*	*41-142*			
Dibromofluoromethane	*45*	*I*		*ug/L*	*50.0*		*90*	*53-146*			
Toluene-d8	*45*	*I*		*ug/L*	*50.0*		*91*	*41-146*			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1K12010 - EPA 5030B_MS - Continued

LCS (1K12010-BS1) Prepared: 11/12/2021 00:00 Analyzed: 11/12/2021 08:48

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	23		2.5	ug/L	20.0		115	57-148			
1,1,2,2-Tetrachloroethane	16		2.5	ug/L	20.0		82	60-139			
1,1,2-Trichloroethane	17		2.5	ug/L	20.0		84	57-141			
1,1-Dichloroethane	25		2.5	ug/L	20.0		123	57-142			
1,1-Dichloroethene	23		2.5	ug/L	20.0		115	47-139			
1,2,4-Trichlorobenzene	20		2.5	ug/L	20.0		100	52-159			
1,2-Dibromo-3-chloropropane	18		2.5	ug/L	20.0		91	48-150			
1,2-Dibromoethane	16		2.5	ug/L	20.0		82	57-140			
1,2-Dichlorobenzene	19		2.5	ug/L	20.0		95	63-131			
1,2-Dichloroethane	24		2.5	ug/L	20.0		121	50-156			
1,2-Dichloropropane	22		2.5	ug/L	20.0		110	61-133			
1,3-Dichlorobenzene	19		2.5	ug/L	20.0		94	66-129			
1,4-Dichlorobenzene	19		2.5	ug/L	20.0		96	65-133			
2-Butanone	140		12	ug/L	100		136	10-180			
2-Hexanone	120		12	ug/L	100		117	12-180			
4-Methyl-2-pentanone	89		12	ug/L	100		89	19-180			
Acetone	120		25	ug/L	100		117	10-180			
Benzene	23		2.5	ug/L	20.0		113	56-136			
Bromodichloromethane	23		2.5	ug/L	20.0		113	58-135			
Bromoform	16		2.5	ug/L	20.0		80	46-148			
Bromomethane	16		2.5	ug/L	20.0		79	10-173			
Carbon disulfide	41		12	ug/L	20.0		206	43-153			QL-02
Carbon Tetrachloride	21		2.5	ug/L	20.0		105	54-156			
Chlorobenzene	18		2.5	ug/L	20.0		89	51-139			
Chloroethane	30		2.5	ug/L	20.0		150	27-180			
Chloroform	23		2.5	ug/L	20.0		117	58-139			
Chloromethane	19		2.5	ug/L	20.0		95	33-154			
cis-1,2-Dichloroethene	20		2.5	ug/L	20.0		102	56-128			
cis-1,3-Dichloropropene	20		2.5	ug/L	20.0		102	64-128			
Cyclohexane	26		2.5	ug/L	20.0		131	70-130			QL-02
Dibromochloromethane	15		2.5	ug/L	20.0		75	50-140			
Dichlorodifluoromethane	24		2.5	ug/L	20.0		121	10-180			
Ethylbenzene	18		2.5	ug/L	20.0		88	63-133			
Freon 113	23		2.5	ug/L	20.0		115	47-173			
Isopropylbenzene	18		2.5	ug/L	20.0		88	60-132			
m,p-Xylenes	36		5.0	ug/L	40.0		89	64-133			
Methyl acetate	20		2.5	ug/L	20.0		102	70-130			
Methylene Chloride	21		12	ug/L	20.0		107	43-142			
Methyl-tert-Butyl Ether	23		2.5	ug/L	20.0		117	51-145			
o-Xylene	18		2.5	ug/L	20.0		88	61-129			
Styrene	18		2.5	ug/L	20.0		89	59-136			
Tetrachloroethene	17		2.5	ug/L	20.0		83	60-147			
Toluene	18		2.5	ug/L	20.0		89	64-131			
trans-1,2-Dichloroethene	21		2.5	ug/L	20.0		105	54-134			
trans-1,3-Dichloropropene	18		2.5	ug/L	20.0		92	65-149			
Trichloroethene	21		2.5	ug/L	20.0		107	62-135			
Trichlorofluoromethane	29		2.5	ug/L	20.0		145	56-155			
Vinyl chloride	25		2.5	ug/L	20.0		125	20-167			
4-Bromofluorobenzene	*45*	*I*		*ug/L*	*50.0*		*89*	*41-142*			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1K12010 - EPA 5030B_MS - Continued

LCS (1K12010-BS1) Continued Prepared: 11/12/2021 00:00 Analyzed: 11/12/2021 08:48

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Dibromofluoromethane	*47*	*I*		*ug/L*	*50.0*		*93*	*53-146*			
Toluene-d8	*49*	*I*		*ug/L*	*50.0*		*97*	*41-146*			

Matrix Spike (1K12010-MS1) Prepared: 11/12/2021 00:00 Analyzed: 11/12/2021 09:19

Source: AE07280-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	25		2.5	ug/L	20.0	0.80 U	123	57-148			
1,1,2,2-Tetrachloroethane	16		2.5	ug/L	20.0	0.54 U	81	60-139			
1,1,2-Trichloroethane	17		2.5	ug/L	20.0	0.76 U	84	57-141			
1,1-Dichloroethane	26		2.5	ug/L	20.0	0.62 U	130	57-142			
1,1-Dichloroethene	25		2.5	ug/L	20.0	0.94 U	123	47-139			
1,2,4-Trichlorobenzene	19		2.5	ug/L	20.0	0.70 U	95	52-159			
1,2-Dibromo-3-chloropropane	18		2.5	ug/L	20.0	0.96 U	90	48-150			
1,2-Dibromoethane	16		2.5	ug/L	20.0	0.78 U	82	57-140			
1,2-Dichlorobenzene	19		2.5	ug/L	20.0	0.73 U	93	63-131			
1,2-Dichloroethane	25		2.5	ug/L	20.0	0.63 U	124	50-156			
1,2-Dichloropropane	22		2.5	ug/L	20.0	0.80 U	110	61-133			
1,3-Dichlorobenzene	19		2.5	ug/L	20.0	0.77 U	95	66-129			
1,4-Dichlorobenzene	19		2.5	ug/L	20.0	0.76 U	96	65-133			
2-Butanone	130		12	ug/L	100	4.5 U	134	10-180			
2-Hexanone	110		12	ug/L	100	2.5 U	111	12-180			
4-Methyl-2-pentanone	85		12	ug/L	100	2.5 U	85	19-180			
Acetone	110		25	ug/L	100	10 U	113	10-180			
Benzene	23		2.5	ug/L	20.0	0.71 U	117	56-136			
Bromodichloromethane	23		2.5	ug/L	20.0	0.52 U	115	58-135			
Bromoform	16		2.5	ug/L	20.0	0.75 U	78	46-148			
Bromomethane	29		2.5	ug/L	20.0	0.95 U	144	10-173			
Carbon disulfide	40		12	ug/L	20.0	2.5 U	201	43-153			QM-19
Carbon Tetrachloride	22		2.5	ug/L	20.0	0.94 U	112	54-156			
Chlorobenzene	18		2.5	ug/L	20.0	0.72 U	91	51-139			
Chloroethane	41		2.5	ug/L	20.0	0.98 U	203	27-180			QM-07
Chloroform	24		2.5	ug/L	20.0	0.80 U	120	58-139			
Chloromethane	25		2.5	ug/L	20.0	0.82 U	125	33-154			
cis-1,2-Dichloroethene	21		2.5	ug/L	20.0	0.53 U	107	56-128			
cis-1,3-Dichloropropene	20		2.5	ug/L	20.0	0.59 U	102	64-128			
Cyclohexane	29		2.5	ug/L	20.0	0.93 U	144	70-130			QM-19
Dibromochloromethane	15		2.5	ug/L	20.0	0.50 U	77	50-140			
Dichlorodifluoromethane	33		2.5	ug/L	20.0	0.74 U	165	10-180			
Ethylbenzene	18		2.5	ug/L	20.0	0.69 U	90	63-133			
Freon 113	25		2.5	ug/L	20.0	0.73 U	124	47-173			
Isopropylbenzene	19		2.5	ug/L	20.0	0.67 U	93	60-132			
m,p-Xylenes	37		5.0	ug/L	40.0	1.3 U	92	64-133			
Methyl acetate	21		2.5	ug/L	20.0	0.95 U	103	70-130			
Methylene Chloride	22		12	ug/L	20.0	2.5 U	110	43-142			
Methyl-tert-Butyl Ether	23		2.5	ug/L	20.0	0.60 U	117	51-145			
o-Xylene	18		2.5	ug/L	20.0	0.53 U	90	61-129			
Styrene	18		2.5	ug/L	20.0	0.61 U	90	59-136			
Tetrachloroethene	18		2.5	ug/L	20.0	0.76 U	89	60-147			
Toluene	19		2.5	ug/L	20.0	0.72 U	94	64-131			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1K12010 - EPA 5030B_MS - Continued

Matrix Spike (1K12010-MS1) Continued Prepared: 11/12/2021 00:00 Analyzed: 11/12/2021 09:19

Source: AE07280-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
trans-1,2-Dichloroethene	22		2.5	ug/L	20.0	0.73 U	111	54-134			
trans-1,3-Dichloropropene	19		2.5	ug/L	20.0	0.73 U	93	65-149			
Trichloroethene	22		2.5	ug/L	20.0	0.89 U	111	62-135			
Trichlorofluoromethane	38		2.5	ug/L	20.0	0.94 U	192	56-155			QM-07
Vinyl chloride	32		2.5	ug/L	20.0	0.71 U	161	20-167			
4-Bromofluorobenzene	*40*	*I*		*ug/L*	*50.0*		*80*	*41-142*			
Dibromofluoromethane	*43*	*I*		*ug/L*	*50.0*		*85*	*53-146*			
Toluene-d8	*43*	*I*		*ug/L*	*50.0*		*87*	*41-146*			

Matrix Spike Dup (1K12010-MSD1) Prepared: 11/12/2021 00:00 Analyzed: 11/12/2021 09:48

Source: AE07280-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	24		2.5	ug/L	20.0	0.80 U	121	57-148	1	25	
1,1,2,2-Tetrachloroethane	16		2.5	ug/L	20.0	0.54 U	80	60-139	0.4	17	
1,1,2-Trichloroethane	17		2.5	ug/L	20.0	0.76 U	86	57-141	2	16	
1,1-Dichloroethane	26		2.5	ug/L	20.0	0.62 U	128	57-142	1	24	
1,1-Dichloroethene	24		2.5	ug/L	20.0	0.94 U	118	47-139	4	16	
1,2,4-Trichlorobenzene	19		2.5	ug/L	20.0	0.70 U	93	52-159	2	24	
1,2-Dibromo-3-chloropropane	17		2.5	ug/L	20.0	0.96 U	85	48-150	5	21	
1,2-Dibromoethane	16		2.5	ug/L	20.0	0.78 U	81	57-140	1	16	
1,2-Dichlorobenzene	19		2.5	ug/L	20.0	0.73 U	93	63-131	0.6	25	
1,2-Dichloroethane	25		2.5	ug/L	20.0	0.63 U	123	50-156	0.8	18	
1,2-Dichloropropane	22		2.5	ug/L	20.0	0.80 U	111	61-133	0.9	26	
1,3-Dichlorobenzene	19		2.5	ug/L	20.0	0.77 U	94	66-129	1	23	
1,4-Dichlorobenzene	19		2.5	ug/L	20.0	0.76 U	97	65-133	0.8	23	
2-Butanone	140		12	ug/L	100	4.5 U	138	10-180	3	29	
2-Hexanone	110		12	ug/L	100	2.5 U	111	12-180	0.2	28	
4-Methyl-2-pentanone	89		12	ug/L	100	2.5 U	89	19-180	5	24	
Acetone	110		25	ug/L	100	10 U	111	10-180	2	19	
Benzene	23		2.5	ug/L	20.0	0.71 U	115	56-136	2	14	
Bromodichloromethane	23		2.5	ug/L	20.0	0.52 U	114	58-135	1	19	
Bromoform	16		2.5	ug/L	20.0	0.75 U	79	46-148	1	18	
Bromomethane	34		2.5	ug/L	20.0	0.95 U	172	10-173	18	29	
Carbon disulfide	38		12	ug/L	20.0	2.5 U	191	43-153	5	26	QM-19
Carbon Tetrachloride	22		2.5	ug/L	20.0	0.94 U	112	54-156	0.4	27	
Chlorobenzene	18		2.5	ug/L	20.0	0.72 U	90	51-139	0.2	13	
Chloroethane	39		2.5	ug/L	20.0	0.98 U	196	27-180	3	22	QM-07
Chloroform	24		2.5	ug/L	20.0	0.80 U	120	58-139	0.3	17	
Chloromethane	26		2.5	ug/L	20.0	0.82 U	128	33-154	3	31	
cis-1,2-Dichloroethene	21		2.5	ug/L	20.0	0.53 U	106	56-128	0.8	17	
cis-1,3-Dichloropropene	21		2.5	ug/L	20.0	0.59 U	105	64-128	2	20	
Cyclohexane	28		2.5	ug/L	20.0	0.93 U	141	70-130	2	20	QM-19
Dibromochloromethane	15		2.5	ug/L	20.0	0.50 U	76	50-140	2	18	
Dichlorodifluoromethane	32		2.5	ug/L	20.0	0.74 U	161	10-180	2	26	
Ethylbenzene	18		2.5	ug/L	20.0	0.69 U	90	63-133	0.5	18	
Freon 113	24		2.5	ug/L	20.0	0.73 U	122	47-173	2	30	
Isopropylbenzene	18		2.5	ug/L	20.0	0.67 U	92	60-132	1	23	
m,p-Xylenes	36		5.0	ug/L	40.0	1.3 U	90	64-133	2	18	

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1K12010 - EPA 5030B_MS - Continued

Matrix Spike Dup (1K12010-MSD1) Continued Prepared: 11/12/2021 00:00 Analyzed: 11/12/2021 09:48

Source: AE07280-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Methyl acetate	21		2.5	ug/L	20.0	0.95 U	103	70-130	0.1	20	
Methylene Chloride	22		12	ug/L	20.0	2.5 U	110	43-142	0.2	23	
Methyl-tert-Butyl Ether	23		2.5	ug/L	20.0	0.60 U	117	51-145	0.4	22	
o-Xylene	18		2.5	ug/L	20.0	0.53 U	89	61-129	0.8	16	
Styrene	18		2.5	ug/L	20.0	0.61 U	88	59-136	2	32	
Tetrachloroethene	17		2.5	ug/L	20.0	0.76 U	87	60-147	2	21	
Toluene	19		2.5	ug/L	20.0	0.72 U	93	64-131	1	16	
trans-1,2-Dichloroethene	21		2.5	ug/L	20.0	0.73 U	107	54-134	4	20	
trans-1,3-Dichloropropene	19		2.5	ug/L	20.0	0.73 U	93	65-149	0.2	17	
Trichloroethene	22		2.5	ug/L	20.0	0.89 U	109	62-135	1	20	
Trichlorofluoromethane	38		2.5	ug/L	20.0	0.94 U	188	56-155	2	22	QM-07
Vinyl chloride	32		2.5	ug/L	20.0	0.71 U	159	20-167	1	24	
4-Bromofluorobenzene	*43*	*I*		*ug/L*	*50.0*		*86*	*41-142*			
Dibromofluoromethane	*45*	*I*		*ug/L*	*50.0*		*91*	*53-146*			
Toluene-d8	*47*	*I*		*ug/L*	*50.0*		*94*	*41-146*			

Batch 1K12013 - EPA 5030B_MS

Blank (1K12013-BLK1) Prepared: 11/12/2021 00:00 Analyzed: 11/12/2021 09:27

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	0.80	U	2.5	ug/L							
1,1,2,2-Tetrachloroethane	0.54	U	2.5	ug/L							
1,1,2-Trichloroethane	0.76	U	2.5	ug/L							
1,1-Dichloroethane	0.62	U	2.5	ug/L							
1,1-Dichloroethene	0.94	U	2.5	ug/L							
1,2,4-Trichlorobenzene	0.70	U	2.5	ug/L							
1,2-Dibromo-3-chloropropane	0.96	U	2.5	ug/L							
1,2-Dibromoethane	0.78	U	2.5	ug/L							
1,2-Dichlorobenzene	0.73	U	2.5	ug/L							
1,2-Dichloroethane	0.63	U	2.5	ug/L							
1,2-Dichloropropane	0.80	U	2.5	ug/L							
1,3-Dichlorobenzene	0.77	U	2.5	ug/L							
1,4-Dichlorobenzene	0.76	U	2.5	ug/L							
2-Butanone	4.5	U	12	ug/L							
2-Hexanone	2.5	U	12	ug/L							
4-Methyl-2-pentanone	2.5	U	12	ug/L							
Acetone	10	U	25	ug/L							
Benzene	0.71	U	2.5	ug/L							
Bromodichloromethane	0.52	U	2.5	ug/L							
Bromoform	0.75	U	2.5	ug/L							
Bromomethane	0.95	U	2.5	ug/L							
Carbon disulfide	2.5	U	12	ug/L							
Carbon Tetrachloride	0.94	U	2.5	ug/L							
Chlorobenzene	0.72	U	2.5	ug/L							
Chloroethane	0.98	U	2.5	ug/L							
Chloroform	0.80	U	2.5	ug/L							
Chloromethane	0.82	U	2.5	ug/L							
cis-1,2-Dichloroethene	0.53	U	2.5	ug/L							

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1K12013 - EPA 5030B_MS - Continued

Blank (1K12013-BLK1) Continued Prepared: 11/12/2021 00:00 Analyzed: 11/12/2021 09:27

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
cis-1,3-Dichloropropene	0.59	U	2.5	ug/L							
Cyclohexane	0.93	U	2.5	ug/L							
Dibromochloromethane	0.50	U	2.5	ug/L							
Dichlorodifluoromethane	0.74	U	2.5	ug/L							
Ethylbenzene	0.69	U	2.5	ug/L							
Freon 113	0.73	U	2.5	ug/L							
Isopropylbenzene	0.67	U	2.5	ug/L							
Methyl acetate	0.95	U	2.5	ug/L							
Methylene Chloride	2.5	U	12	ug/L							
Methyl-tert-Butyl Ether	0.60	U	2.5	ug/L							
Styrene	0.61	U	2.5	ug/L							
Tetrachloroethene	0.76	U	2.5	ug/L							
Toluene	0.72	U	2.5	ug/L							
trans-1,2-Dichloroethene	0.73	U	2.5	ug/L							
trans-1,3-Dichloropropene	0.73	U	2.5	ug/L							
Trichloroethene	0.89	U	2.5	ug/L							
Trichlorofluoromethane	0.94	U	2.5	ug/L							
Vinyl chloride	0.71	U	2.5	ug/L							
4-Bromofluorobenzene	*51*			*ug/L*	*50.0*		*102*	*41-142*			
Dibromofluoromethane	*48*	*I*		*ug/L*	*50.0*		*96*	*53-146*			
Toluene-d8	*51*			*ug/L*	*50.0*		*103*	*41-146*			

LCS (1K12013-BS1) Prepared: 11/12/2021 00:00 Analyzed: 11/12/2021 08:31

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	19		2.5	ug/L	20.0		95	57-148			
1,1,2,2-Tetrachloroethane	19		2.5	ug/L	20.0		94	60-139			
1,1,2-Trichloroethane	21		2.5	ug/L	20.0		103	57-141			
1,1-Dichloroethane	19		2.5	ug/L	20.0		93	57-142			
1,1-Dichloroethene	19		2.5	ug/L	20.0		96	47-139			
1,2,4-Trichlorobenzene	21		2.5	ug/L	20.0		106	52-159			
1,2-Dibromo-3-chloropropane	19		2.5	ug/L	20.0		94	48-150			
1,2-Dibromoethane	20		2.5	ug/L	20.0		100	57-140			
1,2-Dichlorobenzene	20		2.5	ug/L	20.0		102	63-131			
1,2-Dichloroethane	18		2.5	ug/L	20.0		92	50-156			
1,2-Dichloropropane	19		2.5	ug/L	20.0		97	61-133			
1,3-Dichlorobenzene	20		2.5	ug/L	20.0		102	66-129			
1,4-Dichlorobenzene	18		2.5	ug/L	20.0		92	65-133			
2-Butanone	87		12	ug/L	100		87	10-180			
2-Hexanone	87		12	ug/L	100		87	12-180			
4-Methyl-2-pentanone	89		12	ug/L	100		89	19-180			
Acetone	77		25	ug/L	100		77	10-180			
Benzene	20		2.5	ug/L	20.0		99	56-136			
Bromodichloromethane	17		2.5	ug/L	20.0		85	58-135			
Bromoform	21		2.5	ug/L	20.0		104	46-148			
Bromomethane	8.8		2.5	ug/L	20.0		44	10-173			
Carbon disulfide	20		12	ug/L	20.0		102	43-153			
Carbon Tetrachloride	26		2.5	ug/L	20.0		128	54-156			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1K12013 - EPA 5030B_MS - Continued

LCS (1K12013-BS1) Continued Prepared: 11/12/2021 00:00 Analyzed: 11/12/2021 08:31

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Chlorobenzene	21		2.5	ug/L	20.0		105	51-139			
Chloroethane	21		2.5	ug/L	20.0		106	27-180			
Chloroform	18		2.5	ug/L	20.0		90	58-139			
Chloromethane	16		2.5	ug/L	20.0		78	33-154			
cis-1,2-Dichloroethene	19		2.5	ug/L	20.0		94	56-128			
cis-1,3-Dichloropropene	16		2.5	ug/L	20.0		82	64-128			
Cyclohexane	21		2.5	ug/L	20.0		107	70-130			
Dibromochloromethane	17		2.5	ug/L	20.0		86	50-140			
Dichlorodifluoromethane	17		2.5	ug/L	20.0		84	10-180			
Ethylbenzene	21		2.5	ug/L	20.0		104	63-133			
Freon 113	19		2.5	ug/L	20.0		94	47-173			
Isopropylbenzene	21		2.5	ug/L	20.0		103	60-132			
m,p-Xylenes	41		5.0	ug/L	40.0		103	64-133			
Methyl acetate	20		2.5	ug/L	20.0		98	70-130			
Methylene Chloride	19		12	ug/L	20.0		96	43-142			
Methyl-tert-Butyl Ether	19		2.5	ug/L	20.0		94	51-145			
o-Xylene	21		2.5	ug/L	20.0		105	61-129			
Styrene	19		2.5	ug/L	20.0		97	59-136			
Tetrachloroethene	20		2.5	ug/L	20.0		98	60-147			
Toluene	20		2.5	ug/L	20.0		100	64-131			
trans-1,2-Dichloroethene	20		2.5	ug/L	20.0		102	54-134			
trans-1,3-Dichloropropene	18		2.5	ug/L	20.0		92	65-149			
Trichloroethene	18		2.5	ug/L	20.0		92	62-135			
Trichlorofluoromethane	17		2.5	ug/L	20.0		84	56-155			
Vinyl chloride	17		2.5	ug/L	20.0		84	20-167			
4-Bromofluorobenzene	*52*			*ug/L*	*50.0*		*104*	*41-142*			
Dibromofluoromethane	*50*			*ug/L*	*50.0*		*99*	*53-146*			
Toluene-d8	*52*			*ug/L*	*50.0*		*103*	*41-146*			

Matrix Spike (1K12013-MS1) Prepared: 11/12/2021 00:00 Analyzed: 11/12/2021 18:40

Source: AE07280-16

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	22		2.5	ug/L	20.0	0.80 U	111	57-148			
1,1,2,2-Tetrachloroethane	21		2.5	ug/L	20.0	0.54 U	107	60-139			
1,1,2-Trichloroethane	23		2.5	ug/L	20.0	0.76 U	113	57-141			
1,1-Dichloroethane	22		2.5	ug/L	20.0	0.62 U	109	57-142			
1,1-Dichloroethene	22		2.5	ug/L	20.0	0.94 U	109	47-139			
1,2,4-Trichlorobenzene	23		2.5	ug/L	20.0	0.70 U	115	52-159			
1,2-Dibromo-3-chloropropane	20		2.5	ug/L	20.0	0.96 U	99	48-150			
1,2-Dibromoethane	22		2.5	ug/L	20.0	0.78 U	108	57-140			
1,2-Dichlorobenzene	23		2.5	ug/L	20.0	0.73 U	113	63-131			
1,2-Dichloroethane	24		2.5	ug/L	20.0	0.63 U	121	50-156			
1,2-Dichloropropane	26		2.5	ug/L	20.0	0.80 U	128	61-133			
1,3-Dichlorobenzene	22		2.5	ug/L	20.0	0.77 U	112	66-129			
1,4-Dichlorobenzene	20		2.5	ug/L	20.0	0.76 U	102	65-133			
2-Butanone	100		12	ug/L	100	4.5 U	100	10-180			
2-Hexanone	94		12	ug/L	100	2.5 U	94	12-180			
4-Methyl-2-pentanone	130		12	ug/L	100	2.5 U	131	19-180			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1K12013 - EPA 5030B_MS - Continued

Matrix Spike (1K12013-MS1) Continued Prepared: 11/12/2021 00:00 Analyzed: 11/12/2021 18:40

Source: AE07280-16

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Acetone	84		25	ug/L	100	10 U	84	10-180			
Benzene	27		2.5	ug/L	20.0	0.71 U	136	56-136			
Bromodichloromethane	23		2.5	ug/L	20.0	0.52 U	115	58-135			
Bromoform	24		2.5	ug/L	20.0	0.75 U	122	46-148			
Bromomethane	12		2.5	ug/L	20.0	0.95 U	60	10-173			
Carbon disulfide	24		12	ug/L	20.0	2.5 U	119	43-153			
Carbon Tetrachloride	33		2.5	ug/L	20.0	0.94 U	165	54-156			QM-07
Chlorobenzene	23		2.5	ug/L	20.0	0.72 U	117	51-139			
Chloroethane	21		2.5	ug/L	20.0	0.98 U	104	27-180			
Chloroform	20		2.5	ug/L	20.0	0.80 U	102	58-139			
Chloromethane	17		2.5	ug/L	20.0	0.82 U	85	33-154			
cis-1,2-Dichloroethene	33		2.5	ug/L	20.0	11	107	56-128			
cis-1,3-Dichloropropene	21		2.5	ug/L	20.0	0.59 U	106	64-128			
Cyclohexane	23		2.5	ug/L	20.0	0.93 U	116	70-130			
Dibromochloromethane	19		2.5	ug/L	20.0	0.50 U	94	50-140			
Dichlorodifluoromethane	17		2.5	ug/L	20.0	0.74 U	86	10-180			
Ethylbenzene	24		2.5	ug/L	20.0	0.69 U	118	63-133			
Freon 113	22		2.5	ug/L	20.0	0.73 U	109	47-173			
Isopropylbenzene	23		2.5	ug/L	20.0	0.67 U	117	60-132			
m,p-Xylenes	47		5.0	ug/L	40.0	1.3 U	118	64-133			
Methyl acetate	20		2.5	ug/L	20.0	0.95 U	100	70-130			
Methylene Chloride	21		12	ug/L	20.0	2.5 U	107	43-142			
Methyl-tert-Butyl Ether	21		2.5	ug/L	20.0	0.60 U	104	51-145			
o-Xylene	23		2.5	ug/L	20.0	0.53 U	117	61-129			
Styrene	21		2.5	ug/L	20.0	0.61 U	106	59-136			
Tetrachloroethene	23		2.5	ug/L	20.0	0.76 U	114	60-147			
Toluene	23		2.5	ug/L	20.0	0.72 U	113	64-131			
trans-1,2-Dichloroethene	22		2.5	ug/L	20.0	0.73 U	112	54-134			
trans-1,3-Dichloropropene	20		2.5	ug/L	20.0	0.73 U	98	65-149			
Trichloroethene	580	L	2.5	ug/L	20.0	620	NR	62-135			QM-17
Trichlorofluoromethane	18		2.5	ug/L	20.0	0.94 U	91	56-155			
Vinyl chloride	19		2.5	ug/L	20.0	0.71 U	94	20-167			
4-Bromofluorobenzene	*52*			*ug/L*	*50.0*		*104*	*41-142*			
Dibromofluoromethane	*49*	*I*		*ug/L*	*50.0*		*99*	*53-146*			
Toluene-d8	*64*			*ug/L*	*50.0*		*129*	*41-146*			

Matrix Spike Dup (1K12013-MSD1) Prepared: 11/12/2021 00:00 Analyzed: 11/12/2021 19:08

Source: AE07280-16

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	21		2.5	ug/L	20.0	0.80 U	107	57-148	4	25	
1,1,2,2-Tetrachloroethane	20		2.5	ug/L	20.0	0.54 U	102	60-139	6	17	
1,1,2-Trichloroethane	22		2.5	ug/L	20.0	0.76 U	111	57-141	2	16	
1,1-Dichloroethane	21		2.5	ug/L	20.0	0.62 U	105	57-142	4	24	
1,1-Dichloroethene	21		2.5	ug/L	20.0	0.94 U	105	47-139	4	16	
1,2,4-Trichlorobenzene	23		2.5	ug/L	20.0	0.70 U	114	52-159	1	24	
1,2-Dibromo-3-chloropropane	19		2.5	ug/L	20.0	0.96 U	94	48-150	5	21	
1,2-Dibromoethane	21		2.5	ug/L	20.0	0.78 U	106	57-140	2	16	
1,2-Dichlorobenzene	23		2.5	ug/L	20.0	0.73 U	113	63-131	0	25	

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1K12013 - EPA 5030B_MS - Continued

Matrix Spike Dup (1K12013-MSD1) Continued Prepared: 11/12/2021 00:00 Analyzed: 11/12/2021 19:08

Source: AE07280-16

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,2-Dichloroethane	23		2.5	ug/L	20.0	0.63 U	115	50-156	5	18	
1,2-Dichloropropane	26		2.5	ug/L	20.0	0.80 U	132	61-133	3	26	
1,3-Dichlorobenzene	22		2.5	ug/L	20.0	0.77 U	111	66-129	1	23	
1,4-Dichlorobenzene	21		2.5	ug/L	20.0	0.76 U	104	65-133	1	23	
2-Butanone	92		12	ug/L	100	4.5 U	92	10-180	8	29	
2-Hexanone	88		12	ug/L	100	2.5 U	88	12-180	6	28	
4-Methyl-2-pentanone	130		12	ug/L	100	2.5 U	127	19-180	3	24	
Acetone	76		25	ug/L	100	10 U	76	10-180	11	19	
Benzene	27		2.5	ug/L	20.0	0.71 U	136	56-136	0.2	14	
Bromodichloromethane	23		2.5	ug/L	20.0	0.52 U	115	58-135	0.04	19	
Bromoform	23		2.5	ug/L	20.0	0.75 U	115	46-148	5	18	
Bromomethane	13		2.5	ug/L	20.0	0.95 U	66	10-173	11	29	
Carbon disulfide	22		12	ug/L	20.0	2.5 U	112	43-153	6	26	
Carbon Tetrachloride	34		2.5	ug/L	20.0	0.94 U	168	54-156	2	27	QM-07
Chlorobenzene	23		2.5	ug/L	20.0	0.72 U	117	51-139	0.04	13	
Chloroethane	22		2.5	ug/L	20.0	0.98 U	109	27-180	5	22	
Chloroform	20		2.5	ug/L	20.0	0.80 U	99	58-139	3	17	
Chloromethane	17		2.5	ug/L	20.0	0.82 U	83	33-154	2	31	
cis-1,2-Dichloroethene	31		2.5	ug/L	20.0	11	101	56-128	3	17	
cis-1,3-Dichloropropene	21		2.5	ug/L	20.0	0.59 U	105	64-128	0.8	20	
Cyclohexane	23		2.5	ug/L	20.0	0.93 U	115	70-130	1	20	
Dibromochloromethane	19		2.5	ug/L	20.0	0.50 U	95	50-140	0.4	18	
Dichlorodifluoromethane	17		2.5	ug/L	20.0	0.74 U	83	10-180	4	26	
Ethylbenzene	23		2.5	ug/L	20.0	0.69 U	117	63-133	0.6	18	
Freon 113	22		2.5	ug/L	20.0	0.73 U	108	47-173	0.4	30	
Isopropylbenzene	23		2.5	ug/L	20.0	0.67 U	117	60-132	0.09	23	
m,p-Xylenes	46		5.0	ug/L	40.0	1.3 U	114	64-133	3	18	
Methyl acetate	18		2.5	ug/L	20.0	0.95 U	92	70-130	8	20	
Methylene Chloride	21		12	ug/L	20.0	2.5 U	104	43-142	2	23	
Methyl-tert-Butyl Ether	20		2.5	ug/L	20.0	0.60 U	101	51-145	2	22	
o-Xylene	23		2.5	ug/L	20.0	0.53 U	117	61-129	0.6	16	
Styrene	21		2.5	ug/L	20.0	0.61 U	103	59-136	3	32	
Tetrachloroethene	21		2.5	ug/L	20.0	0.76 U	106	60-147	7	21	
Toluene	22		2.5	ug/L	20.0	0.72 U	112	64-131	1	16	
trans-1,2-Dichloroethene	23		2.5	ug/L	20.0	0.73 U	113	54-134	1	20	
trans-1,3-Dichloropropene	20		2.5	ug/L	20.0	0.73 U	99	65-149	0.9	17	
Trichloroethene	570	L	2.5	ug/L	20.0	620	NR	62-135	2	20	QM-17
Trichlorofluoromethane	18		2.5	ug/L	20.0	0.94 U	90	56-155	1	22	
Vinyl chloride	18		2.5	ug/L	20.0	0.71 U	90	20-167	4	24	
4-Bromofluorobenzene	*52*			*ug/L*	*50.0*		*104*	*41-142*			
Dibromofluoromethane	*49*	*I*		*ug/L*	*50.0*		*99*	*53-146*			
Toluene-d8	*64*			*ug/L*	*50.0*		*128*	*41-146*			

Batch 1K12031 - EPA 5030B_MS

Blank (1K12031-BLK1) Prepared: 11/12/2021 12:20 Analyzed: 11/12/2021 23:41

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	0.80	U	2.5	ug/L							

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1K12031 - EPA 5030B_MS - Continued

Blank (1K12031-BLK1) Continued Prepared: 11/12/2021 12:20 Analyzed: 11/12/2021 23:41

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,2,2-Tetrachloroethane	0.54	U	2.5	ug/L							
1,1,2-Trichloroethane	0.76	U	2.5	ug/L							
1,1-Dichloroethane	0.62	U	2.5	ug/L							
1,1-Dichloroethene	0.94	U	2.5	ug/L							
1,2,4-Trichlorobenzene	0.70	U	2.5	ug/L							
1,2-Dibromo-3-chloropropane	0.96	U	2.5	ug/L							
1,2-Dibromoethane	0.78	U	2.5	ug/L							
1,2-Dichlorobenzene	0.73	U	2.5	ug/L							
1,2-Dichloroethane	0.63	U	2.5	ug/L							
1,2-Dichloropropane	0.80	U	2.5	ug/L							
1,3-Dichlorobenzene	0.77	U	2.5	ug/L							
1,4-Dichlorobenzene	0.76	U	2.5	ug/L							
2-Butanone	4.5	U	12	ug/L							
2-Hexanone	2.5	U	12	ug/L							
4-Methyl-2-pentanone	2.5	U	12	ug/L							
Acetone	10	U	25	ug/L							
Benzene	0.71	U	2.5	ug/L							
Bromodichloromethane	0.52	U	2.5	ug/L							
Bromoform	0.75	U	2.5	ug/L							
Bromomethane	0.95	U	2.5	ug/L							
Carbon disulfide	2.5	U	12	ug/L							
Carbon Tetrachloride	0.94	U	2.5	ug/L							
Chlorobenzene	0.72	U	2.5	ug/L							
Chloroethane	0.98	U	2.5	ug/L							
Chloroform	0.80	U	2.5	ug/L							
Chloromethane	0.82	U	2.5	ug/L							
cis-1,2-Dichloroethene	0.53	U	2.5	ug/L							
cis-1,3-Dichloropropene	0.59	U	2.5	ug/L							
Cyclohexane	0.93	U	2.5	ug/L							
Dibromochloromethane	0.50	U	2.5	ug/L							
Dichlorodifluoromethane	0.74	U	2.5	ug/L							
Ethylbenzene	0.69	U	2.5	ug/L							
Freon 113	0.73	U	2.5	ug/L							
Isopropylbenzene	0.67	U	2.5	ug/L							
Methyl acetate	0.95	U	2.5	ug/L							
Methylene Chloride	2.5	U	12	ug/L							
Methyl-tert-Butyl Ether	0.60	U	2.5	ug/L							
Styrene	0.61	U	2.5	ug/L							
Tetrachloroethene	0.76	U	2.5	ug/L							
Toluene	0.72	U	2.5	ug/L							
trans-1,2-Dichloroethene	0.73	U	2.5	ug/L							
trans-1,3-Dichloropropene	0.73	U	2.5	ug/L							
Trichloroethene	0.89	U	2.5	ug/L							
Trichlorofluoromethane	0.94	U	2.5	ug/L							
Vinyl chloride	0.71	U	2.5	ug/L							
4-Bromofluorobenzene	*41*	*I*		*ug/L*	*50.0*		*82*	*41-142*			
Dibromofluoromethane	*45*	*I*		*ug/L*	*50.0*		*89*	*53-146*			
Toluene-d8	*45*	*I*		*ug/L*	*50.0*		*91*	*41-146*			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1K12031 - EPA 5030B_MS - Continued

LCS (1K12031-BS1) Prepared: 11/12/2021 12:20 Analyzed: 11/12/2021 21:18

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	21		2.5	ug/L	20.0		106	57-148			
1,1,2,2-Tetrachloroethane	15		2.5	ug/L	20.0		74	60-139			
1,1,2-Trichloroethane	16		2.5	ug/L	20.0		79	57-141			
1,1-Dichloroethane	23		2.5	ug/L	20.0		116	57-142			
1,1-Dichloroethene	21		2.5	ug/L	20.0		106	47-139			
1,2,4-Trichlorobenzene	17		2.5	ug/L	20.0		87	52-159			
1,2-Dibromo-3-chloropropane	18		2.5	ug/L	20.0		89	48-150			
1,2-Dibromoethane	15		2.5	ug/L	20.0		76	57-140			
1,2-Dichlorobenzene	17		2.5	ug/L	20.0		86	63-131			
1,2-Dichloroethane	23		2.5	ug/L	20.0		117	50-156			
1,2-Dichloropropane	20		2.5	ug/L	20.0		102	61-133			
1,3-Dichlorobenzene	17		2.5	ug/L	20.0		85	66-129			
1,4-Dichlorobenzene	17		2.5	ug/L	20.0		86	65-133			
2-Butanone	130		12	ug/L	100		134	10-180			
2-Hexanone	110		12	ug/L	100		113	12-180			
4-Methyl-2-pentanone	86		12	ug/L	100		86	19-180			
Acetone	120		25	ug/L	100		119	10-180			
Benzene	21		2.5	ug/L	20.0		105	56-136			
Bromodichloromethane	21		2.5	ug/L	20.0		103	58-135			
Bromoform	14		2.5	ug/L	20.0		72	46-148			
Bromomethane	20		2.5	ug/L	20.0		99	10-173			
Carbon disulfide	39		12	ug/L	20.0		196	43-153			QL-02
Carbon Tetrachloride	19		2.5	ug/L	20.0		96	54-156			
Chlorobenzene	16		2.5	ug/L	20.0		81	51-139			
Chloroethane	36		2.5	ug/L	20.0		178	27-180			
Chloroform	22		2.5	ug/L	20.0		109	58-139			
Chloromethane	23		2.5	ug/L	20.0		114	33-154			
cis-1,2-Dichloroethene	19		2.5	ug/L	20.0		96	56-128			
cis-1,3-Dichloropropene	18		2.5	ug/L	20.0		92	64-128			
Cyclohexane	25		2.5	ug/L	20.0		124	70-130			
Dibromochloromethane	14		2.5	ug/L	20.0		69	50-140			
Dichlorodifluoromethane	27		2.5	ug/L	20.0		137	10-180			
Ethylbenzene	16		2.5	ug/L	20.0		79	63-133			
Freon 113	21		2.5	ug/L	20.0		106	47-173			
Isopropylbenzene	16		2.5	ug/L	20.0		81	60-132			
m,p-Xylenes	32		5.0	ug/L	40.0		80	64-133			
Methyl acetate	20		2.5	ug/L	20.0		102	70-130			
Methylene Chloride	22		12	ug/L	20.0		110	43-142			
Methyl-tert-Butyl Ether	22		2.5	ug/L	20.0		109	51-145			
o-Xylene	16		2.5	ug/L	20.0		80	61-129			
Styrene	16		2.5	ug/L	20.0		79	59-136			
Tetrachloroethene	26		2.5	ug/L	20.0		131	60-147			
Toluene	17		2.5	ug/L	20.0		83	64-131			
trans-1,2-Dichloroethene	19		2.5	ug/L	20.0		97	54-134			
trans-1,3-Dichloropropene	16		2.5	ug/L	20.0		82	65-149			
Trichloroethene	20		2.5	ug/L	20.0		99	62-135			
Trichlorofluoromethane	33		2.5	ug/L	20.0		165	56-155			QL-02
Vinyl chloride	28		2.5	ug/L	20.0		140	20-167			
4-Bromofluorobenzene	*42*	*I*		*ug/L*	*50.0*		*84*	*41-142*			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1K12031 - EPA 5030B_MS - Continued

LCS (1K12031-BS1) Continued Prepared: 11/12/2021 12:20 Analyzed: 11/12/2021 21:18

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Dibromofluoromethane	*44*	*I*		*ug/L*	*50.0*		*87*	*53-146*			
Toluene-d8	*45*	*I*		*ug/L*	*50.0*		*90*	*41-146*			

Matrix Spike (1K12031-MS1) Prepared: 11/12/2021 12:20 Analyzed: 11/12/2021 21:46

Source: AE07280-36

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	26		2.5	ug/L	20.0	0.80 U	129	57-148			
1,1,2,2-Tetrachloroethane	17		2.5	ug/L	20.0	0.54 U	84	60-139			
1,1,2-Trichloroethane	17		2.5	ug/L	20.0	0.76 U	87	57-141			
1,1-Dichloroethane	27		2.5	ug/L	20.0	0.62 U	135	57-142			
1,1-Dichloroethene	25		2.5	ug/L	20.0	0.94 U	126	47-139			
1,2,4-Trichlorobenzene	18		2.5	ug/L	20.0	0.70 U	90	52-159			
1,2-Dibromo-3-chloropropane	19		2.5	ug/L	20.0	0.96 U	95	48-150			
1,2-Dibromoethane	17		2.5	ug/L	20.0	0.78 U	84	57-140			
1,2-Dichlorobenzene	19		2.5	ug/L	20.0	0.73 U	95	63-131			
1,2-Dichloroethane	26		2.5	ug/L	20.0	0.63 U	131	50-156			
1,2-Dichloropropane	23		2.5	ug/L	20.0	0.80 U	116	61-133			
1,3-Dichlorobenzene	19		2.5	ug/L	20.0	0.77 U	95	66-129			
1,4-Dichlorobenzene	19		2.5	ug/L	20.0	0.76 U	97	65-133			
2-Butanone	150		12	ug/L	100	4.5 U	148	10-180			
2-Hexanone	130		12	ug/L	100	2.5 U	125	12-180			
4-Methyl-2-pentanone	95		12	ug/L	100	2.5 U	95	19-180			
Acetone	130		25	ug/L	100	10 U	128	10-180			
Benzene	24		2.5	ug/L	20.0	0.71 U	121	56-136			
Bromodichloromethane	24		2.5	ug/L	20.0	0.52 U	118	58-135			
Bromoform	16		2.5	ug/L	20.0	0.75 U	80	46-148			
Bromomethane	22		2.5	ug/L	20.0	0.95 U	108	10-173			
Carbon disulfide	41		12	ug/L	20.0	2.5 U	206	43-153			QM-19
Carbon Tetrachloride	23		2.5	ug/L	20.0	0.94 U	115	54-156			
Chlorobenzene	18		2.5	ug/L	20.0	0.72 U	92	51-139			
Chloroethane	31		2.5	ug/L	20.0	0.98 U	157	27-180			
Chloroform	25		2.5	ug/L	20.0	0.80 U	125	58-139			
Chloromethane	21		2.5	ug/L	20.0	0.82 U	105	33-154			
cis-1,2-Dichloroethene	22		2.5	ug/L	20.0	0.53 U	111	56-128			
cis-1,3-Dichloropropene	21		2.5	ug/L	20.0	0.59 U	105	64-128			
Cyclohexane	29		2.5	ug/L	20.0	0.93 U	146	70-130			QM-07
Dibromochloromethane	15		2.5	ug/L	20.0	0.50 U	77	50-140			
Dichlorodifluoromethane	24		2.5	ug/L	20.0	0.74 U	122	10-180			
Ethylbenzene	18		2.5	ug/L	20.0	0.69 U	92	63-133			
Freon 113	25		2.5	ug/L	20.0	0.73 U	125	47-173			
Isopropylbenzene	19		2.5	ug/L	20.0	0.67 U	94	60-132			
m,p-Xylenes	37		5.0	ug/L	40.0	1.3 U	92	64-133			
Methyl acetate	22		2.5	ug/L	20.0	0.95 U	109	70-130			
Methylene Chloride	23		12	ug/L	20.0	2.5 U	116	43-142			
Methyl-tert-Butyl Ether	24		2.5	ug/L	20.0	0.60 U	122	51-145			
o-Xylene	18		2.5	ug/L	20.0	0.53 U	90	61-129			
Styrene	18		2.5	ug/L	20.0	0.61 U	89	59-136			
Tetrachloroethene	18		2.5	ug/L	20.0	0.76 U	88	60-147			
Toluene	19		2.5	ug/L	20.0	0.72 U	94	64-131			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1K12031 - EPA 5030B_MS - Continued

Matrix Spike (1K12031-MS1) Continued Prepared: 11/12/2021 12:20 Analyzed: 11/12/2021 21:46

Source: AE07280-36

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
trans-1,2-Dichloroethene	23		2.5	ug/L	20.0	0.73 U	117	54-134			
trans-1,3-Dichloropropene	18		2.5	ug/L	20.0	0.73 U	89	65-149			
Trichloroethene	48		2.5	ug/L	20.0	23	125	62-135			
Trichlorofluoromethane	30		2.5	ug/L	20.0	0.94 U	148	56-155			
Vinyl chloride	25		2.5	ug/L	20.0	0.71 U	126	20-167			
4-Bromofluorobenzene	*40*	*I*		*ug/L*	*50.0*		*80*	*41-142*			
Dibromofluoromethane	*43*	*I*		*ug/L*	*50.0*		*86*	*53-146*			
Toluene-d8	*45*	*I*		*ug/L*	*50.0*		*89*	*41-146*			

Matrix Spike Dup (1K12031-MSD1) Prepared: 11/12/2021 12:20 Analyzed: 11/12/2021 22:15

Source: AE07280-36

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	26		2.5	ug/L	20.0	0.80 U	129	57-148	0.04	25	
1,1,2,2-Tetrachloroethane	17		2.5	ug/L	20.0	0.54 U	85	60-139	2	17	
1,1,2-Trichloroethane	18		2.5	ug/L	20.0	0.76 U	88	57-141	1	16	
1,1-Dichloroethane	27		2.5	ug/L	20.0	0.62 U	136	57-142	0.6	24	
1,1-Dichloroethene	26		2.5	ug/L	20.0	0.94 U	128	47-139	1	16	
1,2,4-Trichlorobenzene	18		2.5	ug/L	20.0	0.70 U	91	52-159	1	24	
1,2-Dibromo-3-chloropropane	19		2.5	ug/L	20.0	0.96 U	94	48-150	0.8	21	
1,2-Dibromoethane	17		2.5	ug/L	20.0	0.78 U	86	57-140	2	16	
1,2-Dichlorobenzene	19		2.5	ug/L	20.0	0.73 U	97	63-131	2	25	
1,2-Dichloroethane	26		2.5	ug/L	20.0	0.63 U	132	50-156	0.9	18	
1,2-Dichloropropane	24		2.5	ug/L	20.0	0.80 U	118	61-133	2	26	
1,3-Dichlorobenzene	20		2.5	ug/L	20.0	0.77 U	98	66-129	2	23	
1,4-Dichlorobenzene	20		2.5	ug/L	20.0	0.76 U	99	65-133	3	23	
2-Butanone	150		12	ug/L	100	4.5 U	149	10-180	0.7	29	
2-Hexanone	130		12	ug/L	100	2.5 U	128	12-180	2	28	
4-Methyl-2-pentanone	96		12	ug/L	100	2.5 U	96	19-180	0.9	24	
Acetone	130		25	ug/L	100	10 U	130	10-180	1	19	
Benzene	25		2.5	ug/L	20.0	0.71 U	123	56-136	1	14	
Bromodichloromethane	24		2.5	ug/L	20.0	0.52 U	119	58-135	1	19	
Bromoform	16		2.5	ug/L	20.0	0.75 U	81	46-148	2	18	
Bromomethane	24		2.5	ug/L	20.0	0.95 U	122	10-173	13	29	
Carbon disulfide	41		12	ug/L	20.0	2.5 U	204	43-153	1	26	QM-19
Carbon Tetrachloride	23		2.5	ug/L	20.0	0.94 U	116	54-156	2	27	
Chlorobenzene	19		2.5	ug/L	20.0	0.72 U	94	51-139	2	13	
Chloroethane	32		2.5	ug/L	20.0	0.98 U	162	27-180	3	22	
Chloroform	26		2.5	ug/L	20.0	0.80 U	129	58-139	3	17	
Chloromethane	21		2.5	ug/L	20.0	0.82 U	107	33-154	2	31	
cis-1,2-Dichloroethene	23		2.5	ug/L	20.0	0.53 U	113	56-128	2	17	
cis-1,3-Dichloropropene	21		2.5	ug/L	20.0	0.59 U	107	64-128	2	20	
Cyclohexane	30		2.5	ug/L	20.0	0.93 U	150	70-130	3	20	QM-07
Dibromochloromethane	16		2.5	ug/L	20.0	0.50 U	79	50-140	3	18	
Dichlorodifluoromethane	24		2.5	ug/L	20.0	0.74 U	121	10-180	0.8	26	
Ethylbenzene	19		2.5	ug/L	20.0	0.69 U	95	63-133	3	18	
Freon 113	25		2.5	ug/L	20.0	0.73 U	126	47-173	0.4	30	
Isopropylbenzene	19		2.5	ug/L	20.0	0.67 U	96	60-132	2	23	
m,p-Xylenes	38		5.0	ug/L	40.0	1.3 U	95	64-133	3	18	

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1K12031 - EPA 5030B_MS - Continued

Matrix Spike Dup (1K12031-MSD1) Continued Prepared: 11/12/2021 12:20 Analyzed: 11/12/2021 22:15

Source: AE07280-36

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Methyl acetate	22		2.5	ug/L	20.0	0.95 U	109	70-130	0.5	20	
Methylene Chloride	24		12	ug/L	20.0	2.5 U	118	43-142	2	23	
Methyl-tert-Butyl Ether	25		2.5	ug/L	20.0	0.60 U	124	51-145	2	22	
o-Xylene	18		2.5	ug/L	20.0	0.53 U	92	61-129	2	16	
Styrene	18		2.5	ug/L	20.0	0.61 U	91	59-136	2	32	
Tetrachloroethene	18		2.5	ug/L	20.0	0.76 U	90	60-147	2	21	
Toluene	19		2.5	ug/L	20.0	0.72 U	97	64-131	3	16	
trans-1,2-Dichloroethene	23		2.5	ug/L	20.0	0.73 U	115	54-134	2	20	
trans-1,3-Dichloropropene	19		2.5	ug/L	20.0	0.73 U	94	65-149	5	17	
Trichloroethene	49		2.5	ug/L	20.0	23	130	62-135	2	20	
Trichlorofluoromethane	30		2.5	ug/L	20.0	0.94 U	149	56-155	0.9	22	
Vinyl chloride	26		2.5	ug/L	20.0	0.71 U	129	20-167	2	24	
4-Bromofluorobenzene	*41*	*I*		*ug/L*	*50.0*		*83*	*41-142*			
Dibromofluoromethane	*44*	*I*		*ug/L*	*50.0*		*88*	*53-146*			
Toluene-d8	*45*	*I*		*ug/L*	*50.0*		*90*	*41-146*			

Batch 1K15010 - EPA 5030B_MS

Blank (1K15010-BLK1) Prepared: 11/15/2021 00:00 Analyzed: 11/15/2021 10:33

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	0.80	U	2.5	ug/L							
1,1,2,2-Tetrachloroethane	0.54	U	2.5	ug/L							
1,1,2-Trichloroethane	0.76	U	2.5	ug/L							
1,1-Dichloroethane	0.62	U	2.5	ug/L							
1,1-Dichloroethene	0.94	U	2.5	ug/L							
1,2,4-Trichlorobenzene	0.70	U	2.5	ug/L							
1,2-Dibromo-3-chloropropane	0.96	U	2.5	ug/L							
1,2-Dibromoethane	0.78	U	2.5	ug/L							
1,2-Dichlorobenzene	0.73	U	2.5	ug/L							
1,2-Dichloroethane	0.63	U	2.5	ug/L							
1,2-Dichloropropane	0.80	U	2.5	ug/L							
1,3-Dichlorobenzene	0.77	U	2.5	ug/L							
1,4-Dichlorobenzene	0.76	U	2.5	ug/L							
2-Butanone	4.5	U	12	ug/L							
2-Hexanone	2.5	U	12	ug/L							
4-Methyl-2-pentanone	2.5	U	12	ug/L							
Acetone	10	U	25	ug/L							
Benzene	0.71	U	2.5	ug/L							
Bromodichloromethane	0.52	U	2.5	ug/L							
Bromoform	0.75	U	2.5	ug/L							
Bromomethane	0.95	U	2.5	ug/L							
Carbon disulfide	2.5	U	12	ug/L							
Carbon Tetrachloride	0.94	U	2.5	ug/L							
Chlorobenzene	0.72	U	2.5	ug/L							
Chloroethane	0.98	U	2.5	ug/L							
Chloroform	0.80	U	2.5	ug/L							
Chloromethane	0.82	U	2.5	ug/L							
cis-1,2-Dichloroethene	0.53	U	2.5	ug/L							

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1K15010 - EPA 5030B_MS - Continued

Blank (1K15010-BLK1) Continued Prepared: 11/15/2021 00:00 Analyzed: 11/15/2021 10:33

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
cis-1,3-Dichloropropene	0.59	U	2.5	ug/L							
Cyclohexane	0.93	U	2.5	ug/L							
Dibromochloromethane	0.50	U	2.5	ug/L							
Dichlorodifluoromethane	0.74	U	2.5	ug/L							
Ethylbenzene	0.69	U	2.5	ug/L							
Freon 113	0.73	U	2.5	ug/L							
Isopropylbenzene	0.67	U	2.5	ug/L							
Methyl acetate	0.95	U	2.5	ug/L							
Methylene Chloride	2.5	U	12	ug/L							
Methyl-tert-Butyl Ether	0.60	U	2.5	ug/L							
Styrene	0.61	U	2.5	ug/L							
Tetrachloroethene	0.76	U	2.5	ug/L							
Toluene	0.72	U	2.5	ug/L							
trans-1,2-Dichloroethene	0.73	U	2.5	ug/L							
trans-1,3-Dichloropropene	0.73	U	2.5	ug/L							
Trichloroethene	0.89	U	2.5	ug/L							
Trichlorofluoromethane	0.94	U	2.5	ug/L							
Vinyl chloride	0.71	U	2.5	ug/L							
4-Bromofluorobenzene	*41*	*I*		*ug/L*	*50.0*		*82*	*41-142*			
Dibromofluoromethane	*46*	*I*		*ug/L*	*50.0*		*92*	*53-146*			
Toluene-d8	*45*	*I*		*ug/L*	*50.0*		*90*	*41-146*			

LCS (1K15010-BS1) Prepared: 11/15/2021 00:00 Analyzed: 11/15/2021 08:36

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	24		2.5	ug/L	20.0		118	57-148			
1,1,2,2-Tetrachloroethane	16		2.5	ug/L	20.0		82	60-139			
1,1,2-Trichloroethane	17		2.5	ug/L	20.0		84	57-141			
1,1-Dichloroethane	25		2.5	ug/L	20.0		126	57-142			
1,1-Dichloroethene	23		2.5	ug/L	20.0		113	47-139			
1,2,4-Trichlorobenzene	20		2.5	ug/L	20.0		98	52-159			
1,2-Dibromo-3-chloropropane	20		2.5	ug/L	20.0		102	48-150			
1,2-Dibromoethane	16		2.5	ug/L	20.0		82	57-140			
1,2-Dichlorobenzene	18		2.5	ug/L	20.0		92	63-131			
1,2-Dichloroethane	25		2.5	ug/L	20.0		126	50-156			
1,2-Dichloropropane	22		2.5	ug/L	20.0		109	61-133			
1,3-Dichlorobenzene	19		2.5	ug/L	20.0		94	66-129			
1,4-Dichlorobenzene	19		2.5	ug/L	20.0		95	65-133			
2-Butanone	150		12	ug/L	100		153	10-180			
2-Hexanone	120		12	ug/L	100		125	12-180			
4-Methyl-2-pentanone	96		12	ug/L	100		96	19-180			
Acetone	130		25	ug/L	100		128	10-180			
Benzene	23		2.5	ug/L	20.0		114	56-136			
Bromodichloromethane	23		2.5	ug/L	20.0		114	58-135			
Bromoform	16		2.5	ug/L	20.0		81	46-148			
Bromomethane	19		2.5	ug/L	20.0		95	10-173			
Carbon disulfide	43		12	ug/L	20.0		215	43-153			QL-02
Carbon Tetrachloride	22		2.5	ug/L	20.0		108	54-156			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1K15010 - EPA 5030B_MS - Continued

LCS (1K15010-BS1) Continued Prepared: 11/15/2021 00:00 Analyzed: 11/15/2021 08:36

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Chlorobenzene	18		2.5	ug/L	20.0		88	51-139			
Chloroethane	31		2.5	ug/L	20.0		155	27-180			
Chloroform	24		2.5	ug/L	20.0		119	58-139			
Chloromethane	22		2.5	ug/L	20.0		108	33-154			
cis-1,2-Dichloroethene	21		2.5	ug/L	20.0		103	56-128			
cis-1,3-Dichloropropene	21		2.5	ug/L	20.0		105	64-128			
Cyclohexane	27		2.5	ug/L	20.0		135	70-130			QL-02
Dibromochloromethane	15		2.5	ug/L	20.0		76	50-140			
Dichlorodifluoromethane	24		2.5	ug/L	20.0		119	10-180			
Ethylbenzene	17		2.5	ug/L	20.0		87	63-133			
Freon 113	24		2.5	ug/L	20.0		118	47-173			
Isopropylbenzene	18		2.5	ug/L	20.0		88	60-132			
m,p-Xylenes	35		5.0	ug/L	40.0		88	64-133			
Methyl acetate	23		2.5	ug/L	20.0		117	70-130			
Methylene Chloride	22		12	ug/L	20.0		108	43-142			
Methyl-tert-Butyl Ether	24		2.5	ug/L	20.0		118	51-145			
o-Xylene	17		2.5	ug/L	20.0		86	61-129			
Styrene	16		2.5	ug/L	20.0		80	59-136			
Tetrachloroethene	17		2.5	ug/L	20.0		84	60-147			
Toluene	18		2.5	ug/L	20.0		89	64-131			
trans-1,2-Dichloroethene	21		2.5	ug/L	20.0		106	54-134			
trans-1,3-Dichloropropene	18		2.5	ug/L	20.0		92	65-149			
Trichloroethene	21		2.5	ug/L	20.0		105	62-135			
Trichlorofluoromethane	29		2.5	ug/L	20.0		146	56-155			
Vinyl chloride	25		2.5	ug/L	20.0		124	20-167			
4-Bromofluorobenzene	*42*	*I*		*ug/L*	*50.0*		*85*	*41-142*			
Dibromofluoromethane	*45*	*I*		*ug/L*	*50.0*		*90*	*53-146*			
Toluene-d8	*47*	*I*		*ug/L*	*50.0*		*94*	*41-146*			

Matrix Spike (1K15010-MS1) Prepared: 11/15/2021 00:00 Analyzed: 11/15/2021 09:07

Source: AE07280-15RE1

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	63000		6200	ug/L	50000	2000 U	127	57-148			
1,1,2,2-Tetrachloroethane	42000		6200	ug/L	50000	1400 U	84	60-139			
1,1,2-Trichloroethane	43000		6200	ug/L	50000	1900 U	86	57-141			
1,1-Dichloroethane	67000		6200	ug/L	50000	1600 U	135	57-142			
1,1-Dichloroethene	64000		6200	ug/L	50000	2400 U	127	47-139			
1,2,4-Trichlorobenzene	48000		6200	ug/L	50000	1800 U	97	52-159			
1,2-Dibromo-3-chloropropane	48000		6200	ug/L	50000	2400 U	97	48-150			
1,2-Dibromoethane	42000		6200	ug/L	50000	2000 U	84	57-140			
1,2-Dichlorobenzene	47000		6200	ug/L	50000	1800 U	94	63-131			
1,2-Dichloroethane	64000		6200	ug/L	50000	1600 U	127	50-156			
1,2-Dichloropropane	57000		6200	ug/L	50000	2000 U	114	61-133			
1,3-Dichlorobenzene	48000		6200	ug/L	50000	1900 U	97	66-129			
1,4-Dichlorobenzene	49000		6200	ug/L	50000	1900 U	97	65-133			
2-Butanone	380000		31000	ug/L	250000	11000 U	154	10-180			
2-Hexanone	310000		31000	ug/L	250000	6200 U	123	12-180			
4-Methyl-2-pentanone	240000		31000	ug/L	250000	6200 U	94	19-180			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1K15010 - EPA 5030B_MS - Continued

Matrix Spike (1K15010-MS1) Continued Prepared: 11/15/2021 00:00 Analyzed: 11/15/2021 09:07

Source: AE07280-15RE1

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Acetone	320000		62000	ug/L	250000	25000 U	127	10-180			
Benzene	61000		6200	ug/L	50000	1800 U	121	56-136			
Bromodichloromethane	58000		6200	ug/L	50000	1300 U	117	58-135			
Bromoform	42000		6200	ug/L	50000	1900 U	85	46-148			
Bromomethane	70000		6200	ug/L	50000	2400 U	139	10-173			
Carbon disulfide	110000		31000	ug/L	50000	6200 U	212	43-153			QM-19
Carbon Tetrachloride	58000		6200	ug/L	50000	2400 U	116	54-156			
Chlorobenzene	46000		6200	ug/L	50000	1800 U	92	51-139			
Chloroethane	89000		6200	ug/L	50000	2400 U	179	27-180			
Chloroform	63000		6200	ug/L	50000	2000 U	127	58-139			
Chloromethane	63000		6200	ug/L	50000	2000 U	126	33-154			
cis-1,2-Dichloroethene	72000		6200	ug/L	50000	18000	108	56-128			
cis-1,3-Dichloropropene	54000		6200	ug/L	50000	1500 U	109	64-128			
Cyclohexane	74000		6200	ug/L	50000	2300 U	147	70-130			QM-19
Dibromochloromethane	40000		6200	ug/L	50000	1200 U	79	50-140			
Dichlorodifluoromethane	70000		6200	ug/L	50000	1800 U	141	10-180			
Ethylbenzene	46000		6200	ug/L	50000	1700 U	93	63-133			
Freon 113	64000		6200	ug/L	50000	1800 U	128	47-173			
Isopropylbenzene	47000		6200	ug/L	50000	1700 U	95	60-132			
m,p-Xylenes	93000		12000	ug/L	100000	3200 U	93	64-133			
Methyl acetate	58000		6200	ug/L	50000	2400 U	116	70-130			
Methylene Chloride	57000		31000	ug/L	50000	6200 U	114	43-142			
Methyl-tert-Butyl Ether	61000		6200	ug/L	50000	1500 U	121	51-145			
o-Xylene	46000		6200	ug/L	50000	1300 U	91	61-129			
Styrene	43000		6200	ug/L	50000	1500 U	86	59-136			
Tetrachloroethene	46000		6200	ug/L	50000	1900 U	92	60-147			
Toluene	48000		6200	ug/L	50000	1800 U	96	64-131			
trans-1,2-Dichloroethene	58000		6200	ug/L	50000	1800 U	116	54-134			
trans-1,3-Dichloropropene	48000		6200	ug/L	50000	1800 U	95	65-149			
Trichloroethene	300000	L	6200	ug/L	50000	230000	127	62-135			
Trichlorofluoromethane	86000		6200	ug/L	50000	2400 U	172	56-155			QM-07
Vinyl chloride	73000		6200	ug/L	50000	1800 U	147	20-167			
4-Bromofluorobenzene	*110000*	*I*		*ug/L*	*125000*		*85*	*41-142*			
Dibromofluoromethane	*110000*	*I*		*ug/L*	*125000*		*92*	*53-146*			
Toluene-d8	*120000*			*ug/L*	*125000*		*94*	*41-146*			

Matrix Spike Dup (1K15010-MSD1) Prepared: 11/15/2021 00:00 Analyzed: 11/15/2021 09:36

Source: AE07280-15RE1

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	64000		6200	ug/L	50000	2000 U	128	57-148	1	25	
1,1,2,2-Tetrachloroethane	44000		6200	ug/L	50000	1400 U	88	60-139	5	17	
1,1,2-Trichloroethane	44000		6200	ug/L	50000	1900 U	87	57-141	2	16	
1,1-Dichloroethane	68000		6200	ug/L	50000	1600 U	136	57-142	1	24	
1,1-Dichloroethene	63000		6200	ug/L	50000	2400 U	127	47-139	0.2	16	
1,2,4-Trichlorobenzene	47000		6200	ug/L	50000	1800 U	94	52-159	3	24	
1,2-Dibromo-3-chloropropane	49000		6200	ug/L	50000	2400 U	98	48-150	0.8	21	
1,2-Dibromoethane	43000		6200	ug/L	50000	2000 U	85	57-140	1	16	
1,2-Dichlorobenzene	48000		6200	ug/L	50000	1800 U	95	63-131	1	25	

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1K15010 - EPA 5030B_MS - Continued

Matrix Spike Dup (1K15010-MSD1) Continued Prepared: 11/15/2021 00:00 Analyzed: 11/15/2021 09:36

Source: AE07280-15RE1

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,2-Dichloroethane	64000		6200	ug/L	50000	1600 U	127	50-156	0.04	18	
1,2-Dichloropropane	57000		6200	ug/L	50000	2000 U	115	61-133	0.5	26	
1,3-Dichlorobenzene	48000		6200	ug/L	50000	1900 U	95	66-129	2	23	
1,4-Dichlorobenzene	48000		6200	ug/L	50000	1900 U	97	65-133	0.6	23	
2-Butanone	400000		31000	ug/L	250000	11000 U	159	10-180	3	29	
2-Hexanone	310000		31000	ug/L	250000	6200 U	124	12-180	0.5	28	
4-Methyl-2-pentanone	250000		31000	ug/L	250000	6200 U	99	19-180	4	24	
Acetone	340000		62000	ug/L	250000	25000 U	135	10-180	6	19	
Benzene	60000		6200	ug/L	50000	1800 U	121	56-136	0.6	14	
Bromodichloromethane	59000		6200	ug/L	50000	1300 U	118	58-135	1	19	
Bromoform	44000		6200	ug/L	50000	1900 U	88	46-148	3	18	
Bromomethane	78000		6200	ug/L	50000	2400 U	156	10-173	11	29	
Carbon disulfide	100000		31000	ug/L	50000	6200 U	205	43-153	3	26	QM-19
Carbon Tetrachloride	58000		6200	ug/L	50000	2400 U	116	54-156	0.4	27	
Chlorobenzene	46000		6200	ug/L	50000	1800 U	92	51-139	0.7	13	
Chloroethane	93000		6200	ug/L	50000	2400 U	187	27-180	4	22	QM-07
Chloroform	63000		6200	ug/L	50000	2000 U	126	58-139	0.5	17	
Chloromethane	69000		6200	ug/L	50000	2000 U	138	33-154	9	31	
cis-1,2-Dichloroethene	73000		6200	ug/L	50000	18000	111	56-128	2	17	
cis-1,3-Dichloropropene	55000		6200	ug/L	50000	1500 U	111	64-128	2	20	
Cyclohexane	75000		6200	ug/L	50000	2300 U	150	70-130	2	20	QM-19
Dibromochloromethane	40000		6200	ug/L	50000	1200 U	80	50-140	0.9	18	
Dichlorodifluoromethane	70000		6200	ug/L	50000	1800 U	139	10-180	1	26	
Ethylbenzene	46000		6200	ug/L	50000	1700 U	91	63-133	2	18	
Freon 113	65000		6200	ug/L	50000	1800 U	130	47-173	1	30	
Isopropylbenzene	47000		6200	ug/L	50000	1700 U	94	60-132	1	23	
m,p-Xylenes	91000		12000	ug/L	100000	3200 U	91	64-133	3	18	
Methyl acetate	58000		6200	ug/L	50000	2400 U	116	70-130	0.3	20	
Methylene Chloride	58000		31000	ug/L	50000	6200 U	116	43-142	2	23	
Methyl-tert-Butyl Ether	62000		6200	ug/L	50000	1500 U	124	51-145	2	22	
o-Xylene	45000		6200	ug/L	50000	1300 U	90	61-129	1	16	
Styrene	44000		6200	ug/L	50000	1500 U	88	59-136	2	32	
Tetrachloroethene	46000		6200	ug/L	50000	1900 U	93	60-147	2	21	
Toluene	47000		6200	ug/L	50000	1800 U	94	64-131	3	16	
trans-1,2-Dichloroethene	58000		6200	ug/L	50000	1800 U	115	54-134	0.7	20	
trans-1,3-Dichloropropene	49000		6200	ug/L	50000	1800 U	97	65-149	2	17	
Trichloroethene	300000	L	6200	ug/L	50000	230000	129	62-135	0.5	20	
Trichlorofluoromethane	86000		6200	ug/L	50000	2400 U	173	56-155	0.8	22	QM-07
Vinyl chloride	73000		6200	ug/L	50000	1800 U	146	20-167	1	24	
4-Bromofluorobenzene	*110000*	*I*		*ug/L*	*125000*		*86*	*41-142*			
Dibromofluoromethane	*120000*			*ug/L*	*125000*		*95*	*53-146*			
Toluene-d8	*120000*			*ug/L*	*125000*		*94*	*41-146*			

Batch 1K16004 - EPA 5030B_MS

Blank (1K16004-BLK1) Prepared: 11/16/2021 08:00 Analyzed: 11/16/2021 10:06

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	0.80	U	2.5	ug/L							

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1K16004 - EPA 5030B_MS - Continued

Blank (1K16004-BLK1) Continued Prepared: 11/16/2021 08:00 Analyzed: 11/16/2021 10:06

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,2,2-Tetrachloroethane	0.54	U	2.5	ug/L							
1,1,2-Trichloroethane	0.76	U	2.5	ug/L							
1,1-Dichloroethane	0.62	U	2.5	ug/L							
1,1-Dichloroethene	0.94	U	2.5	ug/L							
1,2,4-Trichlorobenzene	0.70	U	2.5	ug/L							
1,2-Dibromo-3-chloropropane	0.96	U	2.5	ug/L							
1,2-Dibromoethane	0.78	U	2.5	ug/L							
1,2-Dichlorobenzene	0.73	U	2.5	ug/L							
1,2-Dichloroethane	0.63	U	2.5	ug/L							
1,2-Dichloropropane	0.80	U	2.5	ug/L							
1,3-Dichlorobenzene	0.77	U	2.5	ug/L							
1,4-Dichlorobenzene	0.76	U	2.5	ug/L							
2-Butanone	4.5	U	12	ug/L							
2-Hexanone	2.5	U	12	ug/L							
4-Methyl-2-pentanone	2.5	U	12	ug/L							
Acetone	10	U	25	ug/L							
Benzene	0.71	U	2.5	ug/L							
Bromodichloromethane	0.52	U	2.5	ug/L							
Bromoform	0.75	U	2.5	ug/L							
Bromomethane	0.95	U	2.5	ug/L							
Carbon disulfide	2.5	U	12	ug/L							
Carbon Tetrachloride	0.94	U	2.5	ug/L							
Chlorobenzene	0.72	U	2.5	ug/L							
Chloroethane	0.98	U	2.5	ug/L							
Chloroform	0.80	U	2.5	ug/L							
Chloromethane	0.82	U	2.5	ug/L							
cis-1,2-Dichloroethene	0.53	U	2.5	ug/L							
cis-1,3-Dichloropropene	0.59	U	2.5	ug/L							
Cyclohexane	0.93	U	2.5	ug/L							
Dibromochloromethane	0.50	U	2.5	ug/L							
Dichlorodifluoromethane	0.74	U	2.5	ug/L							
Ethylbenzene	0.69	U	2.5	ug/L							
Freon 113	0.73	U	2.5	ug/L							
Isopropylbenzene	0.67	U	2.5	ug/L							
Methyl acetate	0.95	U	2.5	ug/L							
Methylene Chloride	2.5	U	12	ug/L							
Methyl-tert-Butyl Ether	0.60	U	2.5	ug/L							
Styrene	0.61	U	2.5	ug/L							
Tetrachloroethene	0.76	U	2.5	ug/L							
Toluene	0.72	U	2.5	ug/L							
trans-1,2-Dichloroethene	0.73	U	2.5	ug/L							
trans-1,3-Dichloropropene	0.73	U	2.5	ug/L							
Trichloroethene	0.89	U	2.5	ug/L							
Trichlorofluoromethane	0.94	U	2.5	ug/L							
Vinyl chloride	0.71	U	2.5	ug/L							
4-Bromofluorobenzene	*42*	*I*		*ug/L*	*50.0*		*84*	*41-142*			
Dibromofluoromethane	*47*	*I*		*ug/L*	*50.0*		*94*	*53-146*			
Toluene-d8	*46*	*I*		*ug/L*	*50.0*		*91*	*41-146*			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1K16004 - EPA 5030B_MS - Continued

LCS (1K16004-BS1) Prepared: 11/16/2021 08:00 Analyzed: 11/16/2021 08:09

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	25		2.5	ug/L	20.0		125	57-148			
1,1,2,2-Tetrachloroethane	17		2.5	ug/L	20.0		87	60-139			
1,1,2-Trichloroethane	17		2.5	ug/L	20.0		87	57-141			
1,1-Dichloroethane	26		2.5	ug/L	20.0		131	57-142			
1,1-Dichloroethene	24		2.5	ug/L	20.0		121	47-139			
1,2,4-Trichlorobenzene	20		2.5	ug/L	20.0		101	52-159			
1,2-Dibromo-3-chloropropane	20		2.5	ug/L	20.0		99	48-150			
1,2-Dibromoethane	17		2.5	ug/L	20.0		86	57-140			
1,2-Dichlorobenzene	19		2.5	ug/L	20.0		95	63-131			
1,2-Dichloroethane	26		2.5	ug/L	20.0		129	50-156			
1,2-Dichloropropane	23		2.5	ug/L	20.0		115	61-133			
1,3-Dichlorobenzene	19		2.5	ug/L	20.0		96	66-129			
1,4-Dichlorobenzene	19		2.5	ug/L	20.0		97	65-133			
2-Butanone	160		12	ug/L	100		158	10-180			
2-Hexanone	130		12	ug/L	100		130	12-180			
4-Methyl-2-pentanone	98		12	ug/L	100		98	19-180			
Acetone	140		25	ug/L	100		137	10-180			
Benzene	24		2.5	ug/L	20.0		120	56-136			
Bromodichloromethane	24		2.5	ug/L	20.0		118	58-135			
Bromoform	17		2.5	ug/L	20.0		85	46-148			
Bromomethane	19		2.5	ug/L	20.0		97	10-173			
Carbon disulfide	44		12	ug/L	20.0		221	43-153			QL-02
Carbon Tetrachloride	23		2.5	ug/L	20.0		113	54-156			
Chlorobenzene	18		2.5	ug/L	20.0		91	51-139			
Chloroethane	35		2.5	ug/L	20.0		173	27-180			
Chloroform	25		2.5	ug/L	20.0		124	58-139			
Chloromethane	22		2.5	ug/L	20.0		111	33-154			
cis-1,2-Dichloroethene	22		2.5	ug/L	20.0		109	56-128			
cis-1,3-Dichloropropene	22		2.5	ug/L	20.0		109	64-128			
Cyclohexane	29		2.5	ug/L	20.0		143	70-130			QL-02
Dibromochloromethane	16		2.5	ug/L	20.0		80	50-140			
Dichlorodifluoromethane	24		2.5	ug/L	20.0		121	10-180			
Ethylbenzene	18		2.5	ug/L	20.0		89	63-133			
Freon 113	25		2.5	ug/L	20.0		124	47-173			
Isopropylbenzene	18		2.5	ug/L	20.0		92	60-132			
m,p-Xylenes	36		5.0	ug/L	40.0		90	64-133			
Methyl acetate	23		2.5	ug/L	20.0		115	70-130			
Methylene Chloride	23		12	ug/L	20.0		116	43-142			
Methyl-tert-Butyl Ether	25		2.5	ug/L	20.0		124	51-145			
o-Xylene	18		2.5	ug/L	20.0		89	61-129			
Styrene	17		2.5	ug/L	20.0		84	59-136			
Tetrachloroethene	17		2.5	ug/L	20.0		84	60-147			
Toluene	18		2.5	ug/L	20.0		91	64-131			
trans-1,2-Dichloroethene	22		2.5	ug/L	20.0		110	54-134			
trans-1,3-Dichloropropene	19		2.5	ug/L	20.0		93	65-149			
Trichloroethene	23		2.5	ug/L	20.0		113	62-135			
Trichlorofluoromethane	30		2.5	ug/L	20.0		152	56-155			
Vinyl chloride	26		2.5	ug/L	20.0		130	20-167			
4-Bromofluorobenzene	*43*	*I*		*ug/L*	*50.0*		*86*	*41-142*			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1K16004 - EPA 5030B_MS - Continued

LCS (1K16004-BS1) Continued Prepared: 11/16/2021 08:00 Analyzed: 11/16/2021 08:09

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Dibromofluoromethane	*46*	*I*		*ug/L*	*50.0*		*93*	*53-146*			
Toluene-d8	*48*	*I*		*ug/L*	*50.0*		*95*	*41-146*			

Matrix Spike (1K16004-MS1) Prepared: 11/16/2021 08:00 Analyzed: 11/16/2021 08:40

Source: AE07280-45

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	270000		25000	ug/L	200000	8000 U	137	57-148			
1,1,2,2-Tetrachloroethane	180000		25000	ug/L	200000	5400 U	90	60-139			
1,1,2-Trichloroethane	180000		25000	ug/L	200000	7600 U	90	57-141			
1,1-Dichloroethane	280000		25000	ug/L	200000	6200 U	142	57-142			
1,1-Dichloroethene	270000		25000	ug/L	200000	9400 U	134	47-139			
1,2,4-Trichlorobenzene	200000		25000	ug/L	200000	7000 U	98	52-159			
1,2-Dibromo-3-chloropropane	210000		25000	ug/L	200000	9600 U	105	48-150			
1,2-Dibromoethane	170000		25000	ug/L	200000	7800 U	87	57-140			
1,2-Dichlorobenzene	200000		25000	ug/L	200000	7300 U	99	63-131			
1,2-Dichloroethane	260000		25000	ug/L	200000	6300 U	132	50-156			
1,2-Dichloropropane	240000		25000	ug/L	200000	8000 U	122	61-133			
1,3-Dichlorobenzene	200000		25000	ug/L	200000	7700 U	101	66-129			
1,4-Dichlorobenzene	200000		25000	ug/L	200000	7600 U	101	65-133			
2-Butanone	1600000		120000	ug/L	1000000	45000 U	163	10-180			
2-Hexanone	1300000		120000	ug/L	1000000	25000 U	130	12-180			
4-Methyl-2-pentanone	1000000		120000	ug/L	1000000	25000 U	100	19-180			
Acetone	1400000		250000	ug/L	1000000	100000 U	142	10-180			
Benzene	260000		25000	ug/L	200000	7100 U	128	56-136			
Bromodichloromethane	250000		25000	ug/L	200000	5200 U	123	58-135			
Bromoform	180000		25000	ug/L	200000	7500 U	91	46-148			
Bromomethane	280000		25000	ug/L	200000	9500 U	139	10-173			
Carbon disulfide	440000		120000	ug/L	200000	25000 U	220	43-153			QM-19
Carbon Tetrachloride	240000		25000	ug/L	200000	9400 U	121	54-156			
Chlorobenzene	190000		25000	ug/L	200000	7200 U	95	51-139			
Chloroethane	380000		25000	ug/L	200000	9800 U	190	27-180			QM-07
Chloroform	270000		25000	ug/L	200000	8000 U	134	58-139			
Chloromethane	280000		25000	ug/L	200000	8200 U	138	33-154			
cis-1,2-Dichloroethene	260000		25000	ug/L	200000	28000	117	56-128			
cis-1,3-Dichloropropene	230000		25000	ug/L	200000	5900 U	113	64-128			
Cyclohexane	300000		25000	ug/L	200000	9300 U	151	70-130			QM-19
Dibromochloromethane	170000		25000	ug/L	200000	5000 U	83	50-140			
Dichlorodifluoromethane	250000		25000	ug/L	200000	7400 U	123	10-180			
Ethylbenzene	190000		25000	ug/L	200000	6900 U	93	63-133			
Freon 113	250000		25000	ug/L	200000	7300 U	126	47-173			
Isopropylbenzene	200000		25000	ug/L	200000	6700 U	99	60-132			
m,p-Xylenes	380000		50000	ug/L	400000	13000 U	96	64-133			
Methyl acetate	230000		25000	ug/L	200000	9500 U	117	70-130			
Methylene Chloride	240000		120000	ug/L	200000	25000 U	122	43-142			
Methyl-tert-Butyl Ether	260000		25000	ug/L	200000	6000 U	128	51-145			
o-Xylene	190000		25000	ug/L	200000	5300 U	94	61-129			
Styrene	180000		25000	ug/L	200000	6100 U	92	59-136			
Tetrachloroethene	190000		25000	ug/L	200000	7600 U	93	60-147			
Toluene	190000		25000	ug/L	200000	7200 U	97	64-131			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1K16004 - EPA 5030B_MS - Continued

Matrix Spike (1K16004-MS1) Continued Prepared: 11/16/2021 08:00 Analyzed: 11/16/2021 08:40

Source: AE07280-45

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
trans-1,2-Dichloroethene	240000		25000	ug/L	200000	7300 U	120	54-134			
trans-1,3-Dichloropropene	200000		25000	ug/L	200000	7300 U	100	65-149			
Trichloroethene	530000		25000	ug/L	200000	340000	92	62-135			
Trichlorofluoromethane	340000		25000	ug/L	200000	9400 U	168	56-155			QM-07
Vinyl chloride	290000		25000	ug/L	200000	7100 U	146	20-167			
4-Bromofluorobenzene	*430000*	*I*		*ug/L*	*500000*		*87*	*41-142*			
Dibromofluoromethane	*470000*	*I*		*ug/L*	*500000*		*95*	*53-146*			
Toluene-d8	*470000*	*I*		*ug/L*	*500000*		*93*	*41-146*			

Matrix Spike Dup (1K16004-MSD1) Prepared: 11/16/2021 08:00 Analyzed: 11/16/2021 09:08

Source: AE07280-45

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	260000		25000	ug/L	200000	8000 U	132	57-148	4	25	
1,1,2,2-Tetrachloroethane	180000		25000	ug/L	200000	5400 U	88	60-139	1	17	
1,1,2-Trichloroethane	180000		25000	ug/L	200000	7600 U	92	57-141	2	16	
1,1-Dichloroethane	280000		25000	ug/L	200000	6200 U	138	57-142	3	24	
1,1-Dichloroethene	260000		25000	ug/L	200000	9400 U	129	47-139	4	16	
1,2,4-Trichlorobenzene	200000		25000	ug/L	200000	7000 U	99	52-159	1	24	
1,2-Dibromo-3-chloropropane	200000		25000	ug/L	200000	9600 U	99	48-150	6	21	
1,2-Dibromoethane	180000		25000	ug/L	200000	7800 U	88	57-140	0.6	16	
1,2-Dichlorobenzene	200000		25000	ug/L	200000	7300 U	98	63-131	1	25	
1,2-Dichloroethane	270000		25000	ug/L	200000	6300 U	134	50-156	1	18	
1,2-Dichloropropane	240000		25000	ug/L	200000	8000 U	121	61-133	0.9	26	
1,3-Dichlorobenzene	200000		25000	ug/L	200000	7700 U	98	66-129	2	23	
1,4-Dichlorobenzene	200000		25000	ug/L	200000	7600 U	101	65-133	0.4	23	
2-Butanone	1600000		120000	ug/L	1000000	45000 U	164	10-180	0.3	29	
2-Hexanone	1300000		120000	ug/L	1000000	25000 U	134	12-180	3	28	
4-Methyl-2-pentanone	1000000		120000	ug/L	1000000	25000 U	105	19-180	4	24	
Acetone	1400000		250000	ug/L	1000000	100000 U	142	10-180	0.3	19	
Benzene	250000		25000	ug/L	200000	7100 U	126	56-136	1	14	
Bromodichloromethane	250000		25000	ug/L	200000	5200 U	124	58-135	0.4	19	
Bromoform	170000		25000	ug/L	200000	7500 U	85	46-148	6	18	
Bromomethane	300000		25000	ug/L	200000	9500 U	151	10-173	8	29	
Carbon disulfide	420000		120000	ug/L	200000	25000 U	210	43-153	5	26	QM-19
Carbon Tetrachloride	240000		25000	ug/L	200000	9400 U	120	54-156	1	27	
Chlorobenzene	190000		25000	ug/L	200000	7200 U	96	51-139	0.7	13	
Chloroethane	370000		25000	ug/L	200000	9800 U	185	27-180	3	22	QM-07
Chloroform	260000		25000	ug/L	200000	8000 U	132	58-139	1	17	
Chloromethane	240000		25000	ug/L	200000	8200 U	120	33-154	14	31	
cis-1,2-Dichloroethene	250000		25000	ug/L	200000	28000	112	56-128	4	17	
cis-1,3-Dichloropropene	230000		25000	ug/L	200000	5900 U	114	64-128	1	20	
Cyclohexane	300000		25000	ug/L	200000	9300 U	148	70-130	2	20	QM-19
Dibromochloromethane	160000		25000	ug/L	200000	5000 U	81	50-140	3	18	
Dichlorodifluoromethane	240000		25000	ug/L	200000	7400 U	118	10-180	4	26	
Ethylbenzene	190000		25000	ug/L	200000	6900 U	95	63-133	1	18	
Freon 113	250000		25000	ug/L	200000	7300 U	125	47-173	1	30	
Isopropylbenzene	200000		25000	ug/L	200000	6700 U	98	60-132	1	23	
m,p-Xylenes	380000		50000	ug/L	400000	13000 U	96	64-133	0.5	18	

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1K16004 - EPA 5030B_MS - Continued

Matrix Spike Dup (1K16004-MSD1) Continued Prepared: 11/16/2021 08:00 Analyzed: 11/16/2021 09:08

Source: AE07280-45

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Methyl acetate	240000		25000	ug/L	200000	9500 U	120	70-130	2	20	
Methylene Chloride	240000		120000	ug/L	200000	25000 U	121	43-142	0.9	23	
Methyl-tert-Butyl Ether	260000		25000	ug/L	200000	6000 U	128	51-145	0.5	22	
o-Xylene	190000		25000	ug/L	200000	5300 U	94	61-129	0.6	16	
Styrene	180000		25000	ug/L	200000	6100 U	90	59-136	1	32	
Tetrachloroethene	200000		25000	ug/L	200000	7600 U	99	60-147	5	21	
Toluene	190000		25000	ug/L	200000	7200 U	97	64-131	0.2	16	
trans-1,2-Dichloroethene	240000		25000	ug/L	200000	7300 U	118	54-134	2	20	
trans-1,3-Dichloropropene	200000		25000	ug/L	200000	7300 U	98	65-149	2	17	
Trichloroethene	530000		25000	ug/L	200000	340000	92	62-135	0.09	20	
Trichlorofluoromethane	320000		25000	ug/L	200000	9400 U	162	56-155	3	22	QM-07
Vinyl chloride	280000		25000	ug/L	200000	7100 U	138	20-167	5	24	
4-Bromofluorobenzene	*440000*	*I*		*ug/L*	*500000*		*87*	*41-142*			
Dibromofluoromethane	*460000*	*I*		*ug/L*	*500000*		*92*	*53-146*			
Toluene-d8	*480000*	*I*		*ug/L*	*500000*		*95*	*41-146*			

Batch 1K17007 - EPA 5030B_MS

Blank (1K17007-BLK1) Prepared: 11/17/2021 08:07 Analyzed: 11/17/2021 10:34

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	0.80	U	2.5	ug/L							
1,1,2,2-Tetrachloroethane	0.54	U	2.5	ug/L							
1,1,2-Trichloroethane	0.76	U	2.5	ug/L							
1,1-Dichloroethane	0.62	U	2.5	ug/L							
1,1-Dichloroethene	0.94	U	2.5	ug/L							
1,2,4-Trichlorobenzene	0.70	U	2.5	ug/L							
1,2-Dibromo-3-chloropropane	0.96	U	2.5	ug/L							
1,2-Dibromoethane	0.78	U	2.5	ug/L							
1,2-Dichlorobenzene	0.73	U	2.5	ug/L							
1,2-Dichloroethane	0.63	U	2.5	ug/L							
1,2-Dichloropropane	0.80	U	2.5	ug/L							
1,3-Dichlorobenzene	0.77	U	2.5	ug/L							
1,4-Dichlorobenzene	0.76	U	2.5	ug/L							
2-Butanone	4.5	U	12	ug/L							
2-Hexanone	2.5	U	12	ug/L							
4-Methyl-2-pentanone	2.5	U	12	ug/L							
Acetone	10	U	25	ug/L							
Benzene	0.71	U	2.5	ug/L							
Bromodichloromethane	0.52	U	2.5	ug/L							
Bromoform	0.75	U	2.5	ug/L							
Bromomethane	0.95	U	2.5	ug/L							
Carbon disulfide	2.5	U	12	ug/L							
Carbon Tetrachloride	0.94	U	2.5	ug/L							
Chlorobenzene	0.72	U	2.5	ug/L							
Chloroethane	0.98	U	2.5	ug/L							
Chloroform	0.80	U	2.5	ug/L							
Chloromethane	0.82	U	2.5	ug/L							
cis-1,2-Dichloroethene	0.53	U	2.5	ug/L							

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1K17007 - EPA 5030B_MS - Continued

Blank (1K17007-BLK1) Continued Prepared: 11/17/2021 08:07 Analyzed: 11/17/2021 10:34

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
cis-1,3-Dichloropropene	0.59	U	2.5	ug/L							
Cyclohexane	0.93	U	2.5	ug/L							
Dibromochloromethane	0.50	U	2.5	ug/L							
Dichlorodifluoromethane	0.74	U	2.5	ug/L							
Ethylbenzene	0.69	U	2.5	ug/L							
Freon 113	0.73	U	2.5	ug/L							
Isopropylbenzene	0.67	U	2.5	ug/L							
Methyl acetate	0.95	U	2.5	ug/L							
Methylene Chloride	2.5	U	12	ug/L							
Methyl-tert-Butyl Ether	0.60	U	2.5	ug/L							
Styrene	0.61	U	2.5	ug/L							
Tetrachloroethene	0.76	U	2.5	ug/L							
Toluene	0.72	U	2.5	ug/L							
trans-1,2-Dichloroethene	0.73	U	2.5	ug/L							
trans-1,3-Dichloropropene	0.73	U	2.5	ug/L							
Trichloroethene	0.89	U	2.5	ug/L							
Trichlorofluoromethane	0.94	U	2.5	ug/L							
Vinyl chloride	0.71	U	2.5	ug/L							
4-Bromofluorobenzene	*40*	*I*		*ug/L*	*50.0*		*79*	*41-142*			
Dibromofluoromethane	*44*	*I*		*ug/L*	*50.0*		*88*	*53-146*			
Toluene-d8	*44*	*I*		*ug/L*	*50.0*		*89*	*41-146*			

LCS (1K17007-BS1) Prepared: 11/17/2021 08:07 Analyzed: 11/17/2021 08:09

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	25		2.5	ug/L	20.0		123	57-148			
1,1,2,2-Tetrachloroethane	17		2.5	ug/L	20.0		83	60-139			
1,1,2-Trichloroethane	17		2.5	ug/L	20.0		84	57-141			
1,1-Dichloroethane	26		2.5	ug/L	20.0		130	57-142			
1,1-Dichloroethene	24		2.5	ug/L	20.0		119	47-139			
1,2,4-Trichlorobenzene	19		2.5	ug/L	20.0		96	52-159			
1,2-Dibromo-3-chloropropane	20		2.5	ug/L	20.0		100	48-150			
1,2-Dibromoethane	17		2.5	ug/L	20.0		83	57-140			
1,2-Dichlorobenzene	19		2.5	ug/L	20.0		94	63-131			
1,2-Dichloroethane	26		2.5	ug/L	20.0		129	50-156			
1,2-Dichloropropane	23		2.5	ug/L	20.0		113	61-133			
1,3-Dichlorobenzene	19		2.5	ug/L	20.0		93	66-129			
1,4-Dichlorobenzene	19		2.5	ug/L	20.0		96	65-133			
2-Butanone	160		12	ug/L	100		165	10-180			
2-Hexanone	130		12	ug/L	100		131	12-180			
4-Methyl-2-pentanone	99		12	ug/L	100		99	19-180			
Acetone	140		25	ug/L	100		138	10-180			
Benzene	24		2.5	ug/L	20.0		118	56-136			
Bromodichloromethane	24		2.5	ug/L	20.0		118	58-135			
Bromoform	17		2.5	ug/L	20.0		84	46-148			
Bromomethane	20		2.5	ug/L	20.0		100	10-173			
Carbon disulfide	44		12	ug/L	20.0		219	43-153			QL-02
Carbon Tetrachloride	22		2.5	ug/L	20.0		108	54-156			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1K17007 - EPA 5030B_MS - Continued

LCS (1K17007-BS1) Continued Prepared: 11/17/2021 08:07 Analyzed: 11/17/2021 08:09

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Chlorobenzene	18		2.5	ug/L	20.0		88	51-139			
Chloroethane	35		2.5	ug/L	20.0		173	27-180			
Chloroform	25		2.5	ug/L	20.0		123	58-139			
Chloromethane	23		2.5	ug/L	20.0		113	33-154			
cis-1,2-Dichloroethene	22		2.5	ug/L	20.0		108	56-128			
cis-1,3-Dichloropropene	22		2.5	ug/L	20.0		108	64-128			
Cyclohexane	28		2.5	ug/L	20.0		138	70-130			QL-02
Dibromochloromethane	15		2.5	ug/L	20.0		77	50-140			
Dichlorodifluoromethane	24		2.5	ug/L	20.0		120	10-180			
Ethylbenzene	17		2.5	ug/L	20.0		87	63-133			
Freon 113	24		2.5	ug/L	20.0		121	47-173			
Isopropylbenzene	18		2.5	ug/L	20.0		88	60-132			
m,p-Xylenes	35		5.0	ug/L	40.0		88	64-133			
Methyl acetate	24		2.5	ug/L	20.0		122	70-130			
Methylene Chloride	23		12	ug/L	20.0		114	43-142			
Methyl-tert-Butyl Ether	25		2.5	ug/L	20.0		124	51-145			
o-Xylene	17		2.5	ug/L	20.0		86	61-129			
Styrene	16		2.5	ug/L	20.0		81	59-136			
Tetrachloroethene	18		2.5	ug/L	20.0		89	60-147			
Toluene	18		2.5	ug/L	20.0		90	64-131			
trans-1,2-Dichloroethene	22		2.5	ug/L	20.0		111	54-134			
trans-1,3-Dichloropropene	18		2.5	ug/L	20.0		90	65-149			
Trichloroethene	22		2.5	ug/L	20.0		109	62-135			
Trichlorofluoromethane	31		2.5	ug/L	20.0		155	56-155			
Vinyl chloride	27		2.5	ug/L	20.0		134	20-167			
4-Bromofluorobenzene	*42*	*I*		*ug/L*	*50.0*		*84*	*41-142*			
Dibromofluoromethane	*46*	*I*		*ug/L*	*50.0*		*91*	*53-146*			
Toluene-d8	*47*	*I*		*ug/L*	*50.0*		*93*	*41-146*			

Matrix Spike (1K17007-MS1) Prepared: 11/17/2021 08:07 Analyzed: 11/17/2021 08:39

Source: AE08844-03

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	26		2.5	ug/L	20.0	0.80 U	132	57-148			
1,1,2,2-Tetrachloroethane	17		2.5	ug/L	20.0	0.54 U	86	60-139			
1,1,2-Trichloroethane	17		2.5	ug/L	20.0	0.76 U	85	57-141			
1,1-Dichloroethane	28		2.5	ug/L	20.0	0.62 U	139	57-142			
1,1-Dichloroethene	25		2.5	ug/L	20.0	0.94 U	127	47-139			
1,2,4-Trichlorobenzene	19		2.5	ug/L	20.0	0.70 U	97	52-159			
1,2-Dibromo-3-chloropropane	19		2.5	ug/L	20.0	0.96 U	97	48-150			
1,2-Dibromoethane	17		2.5	ug/L	20.0	0.78 U	86	57-140			
1,2-Dichlorobenzene	19		2.5	ug/L	20.0	0.73 U	96	63-131			
1,2-Dichloroethane	26		2.5	ug/L	20.0	0.63 U	130	50-156			
1,2-Dichloropropane	24		2.5	ug/L	20.0	0.80 U	119	61-133			
1,3-Dichlorobenzene	20		2.5	ug/L	20.0	0.77 U	98	66-129			
1,4-Dichlorobenzene	19		2.5	ug/L	20.0	0.76 U	97	65-133			
2-Butanone	160		12	ug/L	100	4.5 U	157	10-180			
2-Hexanone	140		12	ug/L	100	2.5 U	141	12-180			
4-Methyl-2-pentanone	100		12	ug/L	100	2.5 U	103	19-180			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1K17007 - EPA 5030B_MS - Continued

Matrix Spike (1K17007-MS1) Continued Prepared: 11/17/2021 08:07 Analyzed: 11/17/2021 08:39

Source: AE08844-03

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Acetone	140		25	ug/L	100	10 U	138	10-180			
Benzene	25		2.5	ug/L	20.0	0.71 U	123	56-136			
Bromodichloromethane	24		2.5	ug/L	20.0	0.52 U	121	58-135			
Bromoform	17		2.5	ug/L	20.0	0.75 U	87	46-148			
Bromomethane	25		2.5	ug/L	20.0	0.95 U	127	10-173			
Carbon disulfide	43		12	ug/L	20.0	2.5 U	215	43-153			QM-19
Carbon Tetrachloride	24		2.5	ug/L	20.0	0.94 U	119	54-156			
Chlorobenzene	19		2.5	ug/L	20.0	0.72 U	93	51-139			
Chloroethane	36		2.5	ug/L	20.0	0.98 U	178	27-180			
Chloroform	26		2.5	ug/L	20.0	0.80 U	130	58-139			
Chloromethane	23		2.5	ug/L	20.0	0.82 U	117	33-154			
cis-1,2-Dichloroethene	23		2.5	ug/L	20.0	0.53 U	114	56-128			
cis-1,3-Dichloropropene	22		2.5	ug/L	20.0	0.59 U	111	64-128			
Cyclohexane	30		2.5	ug/L	20.0	0.93 U	148	70-130			QM-19
Dibromochloromethane	16		2.5	ug/L	20.0	0.50 U	80	50-140			
Dichlorodifluoromethane	23		2.5	ug/L	20.0	0.74 U	117	10-180			
Ethylbenzene	19		2.5	ug/L	20.0	0.69 U	94	63-133			
Freon 113	25		2.5	ug/L	20.0	0.73 U	124	47-173			
Isopropylbenzene	19		2.5	ug/L	20.0	0.67 U	96	60-132			
m,p-Xylenes	37		5.0	ug/L	40.0	1.3 U	93	64-133			
Methyl acetate	24		2.5	ug/L	20.0	0.95 U	120	70-130			
Methylene Chloride	24		12	ug/L	20.0	2.5 U	118	43-142			
Methyl-tert-Butyl Ether	24		2.5	ug/L	20.0	0.60 U	121	51-145			
o-Xylene	18		2.5	ug/L	20.0	0.53 U	91	61-129			
Styrene	18		2.5	ug/L	20.0	0.61 U	92	59-136			
Tetrachloroethene	18		2.5	ug/L	20.0	0.76 U	90	60-147			
Toluene	19		2.5	ug/L	20.0	0.72 U	96	64-131			
trans-1,2-Dichloroethene	23		2.5	ug/L	20.0	0.73 U	117	54-134			
trans-1,3-Dichloropropene	19		2.5	ug/L	20.0	0.73 U	95	65-149			
Trichloroethene	24		2.5	ug/L	20.0	0.89 U	118	62-135			
Trichlorofluoromethane	32		2.5	ug/L	20.0	0.94 U	158	56-155			QM-07
Vinyl chloride	27		2.5	ug/L	20.0	0.71 U	135	20-167			
4-Bromofluorobenzene	*41*	*I*		*ug/L*	*50.0*		*82*	*41-142*			
Dibromofluoromethane	*43*	*I*		*ug/L*	*50.0*		*87*	*53-146*			
Toluene-d8	*45*	*I*		*ug/L*	*50.0*		*91*	*41-146*			

Matrix Spike Dup (1K17007-MSD1) Prepared: 11/17/2021 08:07 Analyzed: 11/17/2021 09:08

Source: AE08844-03

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	26		2.5	ug/L	20.0	0.80 U	131	57-148	0.3	25	
1,1,2,2-Tetrachloroethane	17		2.5	ug/L	20.0	0.54 U	85	60-139	1	17	
1,1,2-Trichloroethane	16		2.5	ug/L	20.0	0.76 U	82	57-141	4	16	
1,1-Dichloroethane	28		2.5	ug/L	20.0	0.62 U	138	57-142	0.4	24	
1,1-Dichloroethene	25		2.5	ug/L	20.0	0.94 U	126	47-139	0.5	16	
1,2,4-Trichlorobenzene	19		2.5	ug/L	20.0	0.70 U	97	52-159	0	24	
1,2-Dibromo-3-chloropropane	18		2.5	ug/L	20.0	0.96 U	92	48-150	5	21	
1,2-Dibromoethane	17		2.5	ug/L	20.0	0.78 U	85	57-140	0.5	16	
1,2-Dichlorobenzene	19		2.5	ug/L	20.0	0.73 U	96	63-131	0.2	25	

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1K17007 - EPA 5030B_MS - Continued

Matrix Spike Dup (1K17007-MSD1) Continued Prepared: 11/17/2021 08:07 Analyzed: 11/17/2021 09:08

Source: AE08844-03

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,2-Dichloroethane	26		2.5	ug/L	20.0	0.63 U	132	50-156	2	18	
1,2-Dichloropropane	24		2.5	ug/L	20.0	0.80 U	118	61-133	0.8	26	
1,3-Dichlorobenzene	19		2.5	ug/L	20.0	0.77 U	96	66-129	1	23	
1,4-Dichlorobenzene	19		2.5	ug/L	20.0	0.76 U	96	65-133	1	23	
2-Butanone	160		12	ug/L	100	4.5 U	160	10-180	2	29	
2-Hexanone	140		12	ug/L	100	2.5 U	139	12-180	1	28	
4-Methyl-2-pentanone	110		12	ug/L	100	2.5 U	106	19-180	3	24	
Acetone	140		25	ug/L	100	10 U	140	10-180	0.8	19	
Benzene	25		2.5	ug/L	20.0	0.71 U	125	56-136	1	14	
Bromodichloromethane	24		2.5	ug/L	20.0	0.52 U	120	58-135	0.5	19	
Bromoform	17		2.5	ug/L	20.0	0.75 U	84	46-148	3	18	
Bromomethane	28		2.5	ug/L	20.0	0.95 U	139	10-173	9	29	
Carbon disulfide	42		12	ug/L	20.0	2.5 U	209	43-153	3	26	QM-19
Carbon Tetrachloride	24		2.5	ug/L	20.0	0.94 U	118	54-156	1	27	
Chlorobenzene	18		2.5	ug/L	20.0	0.72 U	92	51-139	0.8	13	
Chloroethane	36		2.5	ug/L	20.0	0.98 U	180	27-180	1	22	
Chloroform	26		2.5	ug/L	20.0	0.80 U	131	58-139	0.8	17	
Chloromethane	24		2.5	ug/L	20.0	0.82 U	121	33-154	3	31	
cis-1,2-Dichloroethene	23		2.5	ug/L	20.0	0.53 U	114	56-128	0.6	17	
cis-1,3-Dichloropropene	22		2.5	ug/L	20.0	0.59 U	108	64-128	3	20	
Cyclohexane	30		2.5	ug/L	20.0	0.93 U	150	70-130	1	20	QM-19
Dibromochloromethane	16		2.5	ug/L	20.0	0.50 U	80	50-140	0.3	18	
Dichlorodifluoromethane	23		2.5	ug/L	20.0	0.74 U	117	10-180	0.04	26	
Ethylbenzene	18		2.5	ug/L	20.0	0.69 U	91	63-133	3	18	
Freon 113	25		2.5	ug/L	20.0	0.73 U	125	47-173	1	30	
Isopropylbenzene	19		2.5	ug/L	20.0	0.67 U	95	60-132	1	23	
m,p-Xylenes	37		5.0	ug/L	40.0	1.3 U	93	64-133	0.08	18	
Methyl acetate	25		2.5	ug/L	20.0	0.95 U	124	70-130	3	20	
Methylene Chloride	24		12	ug/L	20.0	2.5 U	118	43-142	0.1	23	
Methyl-tert-Butyl Ether	24		2.5	ug/L	20.0	0.60 U	121	51-145	0	22	
o-Xylene	18		2.5	ug/L	20.0	0.53 U	91	61-129	0.7	16	
Styrene	18		2.5	ug/L	20.0	0.61 U	88	59-136	5	32	
Tetrachloroethene	18		2.5	ug/L	20.0	0.76 U	91	60-147	1	21	
Toluene	19		2.5	ug/L	20.0	0.72 U	94	64-131	1	16	
trans-1,2-Dichloroethene	23		2.5	ug/L	20.0	0.73 U	117	54-134	0.3	20	
trans-1,3-Dichloropropene	18		2.5	ug/L	20.0	0.73 U	92	65-149	3	17	
Trichloroethene	23		2.5	ug/L	20.0	0.89 U	117	62-135	0.3	20	
Trichlorofluoromethane	31		2.5	ug/L	20.0	0.94 U	157	56-155	0.4	22	QM-07
Vinyl chloride	27		2.5	ug/L	20.0	0.71 U	134	20-167	0.9	24	
4-Bromofluorobenzene	*40*	*I*		*ug/L*	*50.0*		*81*	*41-142*			
Dibromofluoromethane	*44*	*I*		*ug/L*	*50.0*		*88*	*53-146*			
Toluene-d8	*46*	*I*		*ug/L*	*50.0*		*91*	*41-146*			

Batch 1K17014 - EPA 5030B_MS

Blank (1K17014-BLK1) Prepared: 11/17/2021 00:00 Analyzed: 11/17/2021 09:51

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	0.80	U	2.5	ug/L							

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1K17014 - EPA 5030B_MS - Continued

Blank (1K17014-BLK1) Continued Prepared: 11/17/2021 00:00 Analyzed: 11/17/2021 09:51

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,2,2-Tetrachloroethane	0.54	U	2.5	ug/L							
1,1,2-Trichloroethane	0.76	U	2.5	ug/L							
1,1-Dichloroethane	0.62	U	2.5	ug/L							
1,1-Dichloroethene	0.94	U	2.5	ug/L							
1,2,4-Trichlorobenzene	0.70	U	2.5	ug/L							
1,2-Dibromo-3-chloropropane	0.96	U	2.5	ug/L							
1,2-Dibromoethane	0.78	U	2.5	ug/L							
1,2-Dichlorobenzene	0.73	U	2.5	ug/L							
1,2-Dichloroethane	0.63	U	2.5	ug/L							
1,2-Dichloropropane	0.80	U	2.5	ug/L							
1,3-Dichlorobenzene	0.77	U	2.5	ug/L							
1,4-Dichlorobenzene	0.76	U	2.5	ug/L							
2-Butanone	4.5	U	12	ug/L							
2-Hexanone	2.5	U	12	ug/L							
4-Methyl-2-pentanone	2.5	U	12	ug/L							
Acetone	10	U	25	ug/L							
Benzene	0.71	U	2.5	ug/L							
Bromodichloromethane	0.52	U	2.5	ug/L							
Bromoform	0.75	U	2.5	ug/L							
Bromomethane	0.95	U	2.5	ug/L							
Carbon disulfide	2.5	U	12	ug/L							
Carbon Tetrachloride	0.94	U	2.5	ug/L							
Chlorobenzene	0.72	U	2.5	ug/L							
Chloroethane	0.98	U	2.5	ug/L							
Chloroform	0.80	U	2.5	ug/L							
Chloromethane	0.82	U	2.5	ug/L							
cis-1,2-Dichloroethene	0.53	U	2.5	ug/L							
cis-1,3-Dichloropropene	0.59	U	2.5	ug/L							
Cyclohexane	0.93	U	2.5	ug/L							
Dibromochloromethane	0.50	U	2.5	ug/L							
Dichlorodifluoromethane	0.74	U	2.5	ug/L							
Ethylbenzene	0.69	U	2.5	ug/L							
Freon 113	0.73	U	2.5	ug/L							
Isopropylbenzene	0.67	U	2.5	ug/L							
Methyl acetate	0.95	U	2.5	ug/L							
Methylene Chloride	2.5	U	12	ug/L							
Methyl-tert-Butyl Ether	0.60	U	2.5	ug/L							
Styrene	0.61	U	2.5	ug/L							
Tetrachloroethene	0.76	U	2.5	ug/L							
Toluene	0.72	U	2.5	ug/L							
trans-1,2-Dichloroethene	0.73	U	2.5	ug/L							
trans-1,3-Dichloropropene	0.73	U	2.5	ug/L							
Trichloroethene	0.89	U	2.5	ug/L							
Trichlorofluoromethane	0.94	U	2.5	ug/L							
Vinyl chloride	0.71	U	2.5	ug/L							
4-Bromofluorobenzene	*52*			*ug/L*	*50.0*		*104*	*41-142*			
Dibromofluoromethane	*49*	*I*		*ug/L*	*50.0*		*98*	*53-146*			
Toluene-d8	*52*			*ug/L*	*50.0*		*105*	*41-146*			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1K17014 - EPA 5030B_MS - Continued

LCS (1K17014-BS1) Prepared: 11/17/2021 00:00 Analyzed: 11/17/2021 08:56

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	21		2.5	ug/L	20.0		104	57-148			
1,1,2,2-Tetrachloroethane	20		2.5	ug/L	20.0		102	60-139			
1,1,2-Trichloroethane	21		2.5	ug/L	20.0		105	57-141			
1,1-Dichloroethane	20		2.5	ug/L	20.0		101	57-142			
1,1-Dichloroethene	20		2.5	ug/L	20.0		100	47-139			
1,2,4-Trichlorobenzene	21		2.5	ug/L	20.0		104	52-159			
1,2-Dibromo-3-chloropropane	20		2.5	ug/L	20.0		99	48-150			
1,2-Dibromoethane	20		2.5	ug/L	20.0		102	57-140			
1,2-Dichlorobenzene	20		2.5	ug/L	20.0		101	63-131			
1,2-Dichloroethane	18		2.5	ug/L	20.0		89	50-156			
1,2-Dichloropropane	20		2.5	ug/L	20.0		101	61-133			
1,3-Dichlorobenzene	20		2.5	ug/L	20.0		101	66-129			
1,4-Dichlorobenzene	19		2.5	ug/L	20.0		96	65-133			
2-Butanone	96		12	ug/L	100		96	10-180			
2-Hexanone	86		12	ug/L	100		86	12-180			
4-Methyl-2-pentanone	100		12	ug/L	100		102	19-180			
Acetone	83		25	ug/L	100		83	10-180			
Benzene	21		2.5	ug/L	20.0		104	56-136			
Bromodichloromethane	17		2.5	ug/L	20.0		87	58-135			
Bromoform	23		2.5	ug/L	20.0		114	46-148			
Bromomethane	6.5		2.5	ug/L	20.0		32	10-173			
Carbon disulfide	22		12	ug/L	20.0		108	43-153			
Carbon Tetrachloride	21		2.5	ug/L	20.0		106	54-156			
Chlorobenzene	21		2.5	ug/L	20.0		107	51-139			
Chloroethane	21		2.5	ug/L	20.0		105	27-180			
Chloroform	19		2.5	ug/L	20.0		93	58-139			
Chloromethane	16		2.5	ug/L	20.0		82	33-154			
cis-1,2-Dichloroethene	20		2.5	ug/L	20.0		99	56-128			
cis-1,3-Dichloropropene	17		2.5	ug/L	20.0		86	64-128			
Cyclohexane	23		2.5	ug/L	20.0		113	70-130			
Dibromochloromethane	18		2.5	ug/L	20.0		90	50-140			
Dichlorodifluoromethane	15		2.5	ug/L	20.0		76	10-180			
Ethylbenzene	21		2.5	ug/L	20.0		106	63-133			
Freon 113	20		2.5	ug/L	20.0		102	47-173			
Isopropylbenzene	21		2.5	ug/L	20.0		107	60-132			
m,p-Xylenes	42		5.0	ug/L	40.0		105	64-133			
Methyl acetate	20		2.5	ug/L	20.0		102	70-130			
Methylene Chloride	20		12	ug/L	20.0		102	43-142			
Methyl-tert-Butyl Ether	21		2.5	ug/L	20.0		103	51-145			
o-Xylene	22		2.5	ug/L	20.0		108	61-129			
Styrene	19		2.5	ug/L	20.0		96	59-136			
Tetrachloroethene	21		2.5	ug/L	20.0		106	60-147			
Toluene	20		2.5	ug/L	20.0		101	64-131			
trans-1,2-Dichloroethene	21		2.5	ug/L	20.0		106	54-134			
trans-1,3-Dichloropropene	19		2.5	ug/L	20.0		93	65-149			
Trichloroethene	20		2.5	ug/L	20.0		101	62-135			
Trichlorofluoromethane	18		2.5	ug/L	20.0		89	56-155			
Vinyl chloride	17		2.5	ug/L	20.0		85	20-167			
4-Bromofluorobenzene	*52*			*ug/L*	*50.0*		*104*	*41-142*			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1K17014 - EPA 5030B_MS - Continued

LCS (1K17014-BS1) Continued Prepared: 11/17/2021 00:00 Analyzed: 11/17/2021 08:56

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Dibromofluoromethane	*52*			*ug/L*	*50.0*		*104*	*53-146*			
Toluene-d8	*54*			*ug/L*	*50.0*		*107*	*41-146*			

Matrix Spike (1K17014-MS1) Prepared: 11/17/2021 00:00 Analyzed: 11/17/2021 19:05

Source: AE09032-02

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	22		2.5	ug/L	20.0	0.80 U	111	57-148			
1,1,2,2-Tetrachloroethane	21		2.5	ug/L	20.0	0.54 U	105	60-139			
1,1,2-Trichloroethane	22		2.5	ug/L	20.0	0.76 U	111	57-141			
1,1-Dichloroethane	21		2.5	ug/L	20.0	0.62 U	106	57-142			
1,1-Dichloroethene	22		2.5	ug/L	20.0	0.94 U	110	47-139			
1,2,4-Trichlorobenzene	22		2.5	ug/L	20.0	0.70 U	109	52-159			
1,2-Dibromo-3-chloropropane	20		2.5	ug/L	20.0	0.96 U	98	48-150			
1,2-Dibromoethane	20		2.5	ug/L	20.0	0.78 U	101	57-140			
1,2-Dichlorobenzene	21		2.5	ug/L	20.0	0.73 U	107	63-131			
1,2-Dichloroethane	19		2.5	ug/L	20.0	0.63 U	96	50-156			
1,2-Dichloropropane	21		2.5	ug/L	20.0	0.80 U	107	61-133			
1,3-Dichlorobenzene	22		2.5	ug/L	20.0	0.77 U	110	66-129			
1,4-Dichlorobenzene	20		2.5	ug/L	20.0	0.76 U	102	65-133			
2-Butanone	110		12	ug/L	100	4.5 U	107	10-180			
2-Hexanone	94		12	ug/L	100	2.5 U	94	12-180			
4-Methyl-2-pentanone	120		12	ug/L	100	2.5 U	116	19-180			
Acetone	100		25	ug/L	100	25	77	10-180			
Benzene	23		2.5	ug/L	20.0	0.71 U	116	56-136			
Bromodichloromethane	19		2.5	ug/L	20.0	0.52 U	93	58-135			
Bromoform	23		2.5	ug/L	20.0	0.75 U	113	46-148			
Bromomethane	13		2.5	ug/L	20.0	0.95 U	67	10-173			
Carbon disulfide	24		12	ug/L	20.0	2.5 U	120	43-153			
Carbon Tetrachloride	28		2.5	ug/L	20.0	0.94 U	142	54-156			
Chlorobenzene	23		2.5	ug/L	20.0	0.72 U	116	51-139			
Chloroethane	19		2.5	ug/L	20.0	0.98 U	97	27-180			
Chloroform	21		2.5	ug/L	20.0	0.80 U	104	58-139			
Chloromethane	78		2.5	ug/L	20.0	39	197	33-154			QM-07
cis-1,2-Dichloroethene	21		2.5	ug/L	20.0	0.53 U	107	56-128			
cis-1,3-Dichloropropene	17		2.5	ug/L	20.0	0.59 U	87	64-128			
Cyclohexane	24		2.5	ug/L	20.0	0.93 U	119	70-130			
Dibromochloromethane	18		2.5	ug/L	20.0	0.50 U	90	50-140			
Dichlorodifluoromethane	18		2.5	ug/L	20.0	0.74 U	90	10-180			
Ethylbenzene	23		2.5	ug/L	20.0	0.69 U	113	63-133			
Freon 113	23		2.5	ug/L	20.0	0.73 U	115	47-173			
Isopropylbenzene	23		2.5	ug/L	20.0	0.67 U	117	60-132			
m,p-Xylenes	47		5.0	ug/L	40.0	1.3 U	118	64-133			
Methyl acetate	21		2.5	ug/L	20.0	5.5	80	70-130			
Methylene Chloride	21		12	ug/L	20.0	2.5 U	106	43-142			
Methyl-tert-Butyl Ether	20		2.5	ug/L	20.0	0.60 U	102	51-145			
o-Xylene	59		2.5	ug/L	20.0	16	213	61-129			QM-07
Styrene	20		2.5	ug/L	20.0	0.61 U	101	59-136			
Tetrachloroethene	22		2.5	ug/L	20.0	0.76 U	109	60-147			
Toluene	22		2.5	ug/L	20.0	0.72 U	110	64-131			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1K17014 - EPA 5030B_MS - Continued

Matrix Spike (1K17014-MS1) Continued Prepared: 11/17/2021 00:00 Analyzed: 11/17/2021 19:05

Source: AE09032-02

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
trans-1,2-Dichloroethene	24		2.5	ug/L	20.0	0.73 U	121	54-134			
trans-1,3-Dichloropropene	18		2.5	ug/L	20.0	0.73 U	90	65-149			
Trichloroethene	21		2.5	ug/L	20.0	0.89 U	107	62-135			
Trichlorofluoromethane	20		2.5	ug/L	20.0	0.94 U	98	56-155			
Vinyl chloride	23		2.5	ug/L	20.0	3.0	103	20-167			
4-Bromofluorobenzene	*53*			*ug/L*	*50.0*		*106*	*41-142*			
Dibromofluoromethane	*51*			*ug/L*	*50.0*		*102*	*53-146*			
Toluene-d8	*53*			*ug/L*	*50.0*		*107*	*41-146*			

Matrix Spike Dup (1K17014-MSD1) Prepared: 11/17/2021 00:00 Analyzed: 11/17/2021 19:33

Source: AE09032-02

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	22		2.5	ug/L	20.0	0.80 U	108	57-148	3	25	
1,1,2,2-Tetrachloroethane	21		2.5	ug/L	20.0	0.54 U	104	60-139	0.4	17	
1,1,2-Trichloroethane	22		2.5	ug/L	20.0	0.76 U	109	57-141	2	16	
1,1-Dichloroethane	21		2.5	ug/L	20.0	0.62 U	105	57-142	0.7	24	
1,1-Dichloroethene	22		2.5	ug/L	20.0	0.94 U	109	47-139	0.7	16	
1,2,4-Trichlorobenzene	22		2.5	ug/L	20.0	0.70 U	110	52-159	0.9	24	
1,2-Dibromo-3-chloropropane	20		2.5	ug/L	20.0	0.96 U	98	48-150	0.2	21	
1,2-Dibromoethane	21		2.5	ug/L	20.0	0.78 U	104	57-140	3	16	
1,2-Dichlorobenzene	21		2.5	ug/L	20.0	0.73 U	106	63-131	1	25	
1,2-Dichloroethane	19		2.5	ug/L	20.0	0.63 U	95	50-156	2	18	
1,2-Dichloropropane	21		2.5	ug/L	20.0	0.80 U	106	61-133	0.8	26	
1,3-Dichlorobenzene	22		2.5	ug/L	20.0	0.77 U	108	66-129	2	23	
1,4-Dichlorobenzene	20		2.5	ug/L	20.0	0.76 U	99	65-133	2	23	
2-Butanone	100		12	ug/L	100	4.5 U	102	10-180	5	29	
2-Hexanone	95		12	ug/L	100	2.5 U	95	12-180	1	28	
4-Methyl-2-pentanone	110		12	ug/L	100	2.5 U	108	19-180	7	24	
Acetone	100		25	ug/L	100	25	75	10-180	1	19	
Benzene	23		2.5	ug/L	20.0	0.71 U	114	56-136	2	14	
Bromodichloromethane	18		2.5	ug/L	20.0	0.52 U	90	58-135	3	19	
Bromoform	22		2.5	ug/L	20.0	0.75 U	112	46-148	1	18	
Bromomethane	16		2.5	ug/L	20.0	0.95 U	80	10-173	18	29	
Carbon disulfide	23		12	ug/L	20.0	2.5 U	114	43-153	5	26	
Carbon Tetrachloride	29		2.5	ug/L	20.0	0.94 U	143	54-156	0.7	27	
Chlorobenzene	22		2.5	ug/L	20.0	0.72 U	112	51-139	3	13	
Chloroethane	22		2.5	ug/L	20.0	0.98 U	108	27-180	11	22	
Chloroform	20		2.5	ug/L	20.0	0.80 U	102	58-139	1	17	
Chloromethane	78		2.5	ug/L	20.0	39	194	33-154	0.8	31	QM-07
cis-1,2-Dichloroethene	21		2.5	ug/L	20.0	0.53 U	107	56-128	0.7	17	
cis-1,3-Dichloropropene	17		2.5	ug/L	20.0	0.59 U	85	64-128	2	20	
Cyclohexane	24		2.5	ug/L	20.0	0.93 U	121	70-130	2	20	
Dibromochloromethane	18		2.5	ug/L	20.0	0.50 U	91	50-140	1	18	
Dichlorodifluoromethane	18		2.5	ug/L	20.0	0.74 U	90	10-180	0.1	26	
Ethylbenzene	22		2.5	ug/L	20.0	0.69 U	111	63-133	2	18	
Freon 113	21		2.5	ug/L	20.0	0.73 U	104	47-173	10	30	
Isopropylbenzene	23		2.5	ug/L	20.0	0.67 U	114	60-132	3	23	
m,p-Xylenes	46		5.0	ug/L	40.0	1.3 U	116	64-133	2	18	

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1K17014 - EPA 5030B_MS - Continued

Matrix Spike Dup (1K17014-MSD1) Continued Prepared: 11/17/2021 00:00 Analyzed: 11/17/2021 19:33

Source: AE09032-02

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Methyl acetate	20		2.5	ug/L	20.0	5.5	75	70-130	5	20	
Methylene Chloride	22		12	ug/L	20.0	2.5 U	108	43-142	1	23	
Methyl-tert-Butyl Ether	20		2.5	ug/L	20.0	0.60 U	101	51-145	0.8	22	
o-Xylene	58		2.5	ug/L	20.0	16	208	61-129	2	16	QM-07
Styrene	20		2.5	ug/L	20.0	0.61 U	99	59-136	2	32	
Tetrachloroethene	21		2.5	ug/L	20.0	0.76 U	105	60-147	4	21	
Toluene	22		2.5	ug/L	20.0	0.72 U	109	64-131	0.4	16	
trans-1,2-Dichloroethene	23		2.5	ug/L	20.0	0.73 U	117	54-134	3	20	
trans-1,3-Dichloropropene	18		2.5	ug/L	20.0	0.73 U	92	65-149	2	17	
Trichloroethene	21		2.5	ug/L	20.0	0.89 U	105	62-135	1	20	
Trichlorofluoromethane	19		2.5	ug/L	20.0	0.94 U	96	56-155	2	22	
Vinyl chloride	22		2.5	ug/L	20.0	3.0	98	20-167	4	24	
4-Bromofluorobenzene	*53*			*ug/L*	*50.0*		*105*	*41-142*			
Dibromofluoromethane	*50*			*ug/L*	*50.0*		*100*	*53-146*			
Toluene-d8	*53*			*ug/L*	*50.0*		*106*	*41-146*			

FLAGS/NOTES AND DEFINITIONS

PQL	PQL: Practical Quantitation Limit. The PQL presented is the laboratory MRL.
B	Results are based upon membrane filter colony counts that are outside the method indicated ideal range.
I	The reported value is between the laboratory method detection limit (MDL) and the practical quantitation limit (PQL).
J	Estimated value.
K	Off-scale low; Actual value is known to be less than the value given.
L	Off-scale high; Actual value is known to be greater than value given.
M	Presence of analyte is verified but not quantified; the actual value is less than the MRL but greater than the MDL.
N	Presumptive evidence of presence of material.
O	Sampled, but analysis lost or not performed.
Q	Sample exceeded the accepted holding time.
T	Value reported is less than the laboratory method detection limit. The value is reported for informational purposes only and shall not be used in statistical analysis.
U	Indicates that the compound was analyzed for but not detected.
V	Indicates that the analyte was detected in both the sample and the associated method blank.
Y	The laboratory analysis was from an improperly preserved sample. The data may not be accurate.
Z	Too many colonies were present (TNTC); the numeric value represents the filtration volume.
?	Data are rejected and should not be used. Some or all of the quality control data for the analyte were outside criteria, and the presence or absence of the analyte cannot be determined from the data.
*	Not reported due to interference.
[CALC]	Calculated analyte - MDL/MRL reported to the highest reporting limit of the component analyses.
QL-02	The associated laboratory control sample exhibited high bias; since the result is ND, there is no impact.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
QM-17	Matrix spike recovery was outside acceptance limits due to high concentrations of analyte in source sample.
QM-19	The spike recovery was outside acceptance limits for the MS and/or MSD.
QV-01	The associated continuing calibration verification standard exhibited high bias; since the result is ND, there is no impact.

AGO7280

Tetra Tech, Inc. CHAIN OF CUSTODY | NUMBER No. 3196 | PAGE 1 OF 5

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112908925	LC34 & LC34PS	MARK JONNET	412 921 8622	ENCO
SAMPLERS (SIGNATURE)		**FIELD OPERATIONS LEADER**	**PHONE NUMBER**	**ADDRESS**
		DAN FORESTER	304 780 1426	
		CARRIER/WAYBILL NUMBER		**CITY, STATE**
				ORLANDO, FL

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR 2021	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	CONTAINER TYPE PLASTIC (P) or GLASS (G): G	PRESERVATIVE USED: HCL	TYPE OF ANALYSIS: 8260 & TCL SOM01	COMMENTS: COOLED ON ICE
10 NOV	0800	LC34 - GAC - 20211110	LC34	/	/	GW	G	3			X	
	0810	LC34 - AS1 - 20211110		/	/							
	0820	LC34 - AS2 - 20211110		/	/							
	0830	LC34 - RW17C - 20211110		/	/							
	0840	LC34 - RW18C - 20211110		/	/							
	0850	LC34 - RW19C - 20211110		/	/							
/	0900	LC34 - RW20C - 20211110	/	/	/							
11 NOV	0900	LC34PS - PZI - 040.0 - 20211111	LC34PS	30	40							
	0902	LC34PS - PZI - 050.0 - 20211111		45	50							
	0904	LC34PS - PZI - 058.0 - 20211111		53	58							
	0906	LC34PS - PZI - 073.0 - 20211111		68	73							
	0908	LC34PS - PZI - 080.0 - 20211111		75	80							
/	0930	LC34PS - PZH - 040.0 - 20211111	/	30	40	/	/	/	/	/	/	

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	11/11/21	1525	1. RECEIVED BY James W Gregory	11/11/21	1525
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS: LOB1 4.3°C, Med383 2.8°C, C-2101 4.5°C

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

AC07280

Tetra Tech, Inc. CHAIN OF CUSTODY | NUMBER No. 3197 | PAGE 2 OF 5

PROJECT NO: 112G08985	FACILITY: LC34 PS	PROJECT MANAGER MARK JANNEY	PHONE NUMBER 412 921 8622	LABORATORY NAME AND CONTACT: ENCO
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER DAN FORESTER	PHONE NUMBER 304-780-1426	ADDRESS
		CARRIER/WAYBILL NUMBER		CITY, STATE ORLANDO, FL

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS: 8260 VOC TCL Semi	CONTAINER TYPE PLASTIC (P) or GLASS (G): G	PRESERVATIVE USED: HCL	(COOLED) ON ICE	COMMENTS
11 NOV 2021	0932	LC34PS-PZH-050.0-20211111	LC34PS	45	50	GW	G	3	X				
	0934	LC34PS-PZH-058.0-20211111		53	58								
	0936	LC34PS-PZH-073.0-20211111		68	73								
	0938	LC34PS-PZH-080.0-20211111		75	80								
	1000	LC34PS-PZK-040.0-20211111		30	40								
	1002	LC34PS-PZK-050.0-20211111		45	50								
	1004	LC34PS-PZK-058.0-20211111		53	58								
	1006	LC34PS-PZK-073.0-20211111		68	73								
	1008	LC34PS-PZK-080.0-20211111		75	80								
	1030	LC34PS-PZJ-040.0-20211111		30	40								
	1032	LC34PS-PZJ-050.0-20211111		45	50								
	1034	LC34PS-PZJ-058.0-20211111		53	58								
	1036	LC34PS-PZJ-073.0-20211111		68	73								

1. RELINQUISHED BY	DATE 11/11/21	TIME 1525	RECEIVED BY	DATE 11/11/21	TIME 1525
2. RELINQUISHED BY	DATE	TIME	RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

AC07280

Tetra Tech, Inc. CHAIN OF CUSTODY | NUMBER No. 3198 | PAGE 3 OF 5

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G08905	LC34PS	MARK JONNET	412-921-8	ENCO
SAMPLERS (SIGNATURE)		**FIELD OPERATIONS LEADER**	**PHONE NUMBER**	**ADDRESS**
		DAN FORESTER	304-780-1426	
		CARRIER/WAYBILL NUMBER		**CITY, STATE**
				ORLANDO, FL

STANDARD TAT ☑
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR 21	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	CONTAINER TYPE PLASTIC (P) or GLASS (G)									
									PRESERVATIVE USED									
									TYPE OF ANALYSIS	8260 TCL Semi								COOLED ON ICE
																		COMMENTS
11 Nov	1038	LC34PS-PZJ-080.0-20211111	LC34PS	75	80	GW	G	3	X									
	1130	LC34PS-PZG-040.0-20211111		30	40													
	1132	LC34PS-PZG-050.0-20211111		45	50													
	1134	LC34PS-PZG-058.0-20211111		53	58													
	1136	LC34PS-PZG-073.0-20211111		68	73													
	1138	LC34PS-PZG-080.0-20211111		75	80													
	1200	LC34PS-PZF-040.0-20211111		30	40													
	1202	LC34PS-PZF-050.0-20211111		45	50													
	1204	LC34PS-PZF-058.0-20211111		53	58													
	1206	LC34PS-PZF-073.0-20211111		68	73													
	1208	LC34PS-PZF-080.0-20211111		75	80													
	1230	LC34PS-PZA-040.0-20211111		30	40													
	1232	LC34PS-PZA-050.0-20211111		45	50													

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	11/11/21	1525	1. RECEIVED BY		
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	11/11/21	1525
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

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FORM NO. TtNUS-001

AE07280

Tetra Tech, Inc. CHAIN OF CUSTODY | NUMBER No. 3199 | PAGE 4 OF 5

PROJECT NO: 112G08885	FACILITY: LC34PS	PROJECT MANAGER MARK SONNET	PHONE NUMBER 412-721-8622	LABORATORY NAME AND CONTACT: ENCO
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER DAN FORESTER	PHONE NUMBER 304-780-1426	ADDRESS
		CARRIER/WAYBILL NUMBER		CITY, STATE ORLANDO, FL

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	CONTAINER TYPE PLASTIC (P) or GLASS (G): G	PRESERVATIVE USED: HCl	TYPE OF ANALYSIS: 8260 Basic Semi	COMMENTS: Cooled on ice
11 NOV 2021	1234	LC34PS-PZA-058.0-20211111	LC34PS	53	58	GW	G	3			X	
	1236	LC34PS-PZA-073.0-20211111		68	73							
	1238	LC34PS-PZA-080.0-20211111		75	80							
	1300	LC34PS-PZB-040.0-20211111		30	40							
	1302	LC34PS-PZB-050.0-20211111		45	50							
	1304	LC34PS-PZB-058.0-20211111		53	58							
	1306	LC34PS-PZB-073.0-20211111		68	73							
	1308	LC34PS-PZB-080.0-20211111		75	80							
	1330	LC34PS-PZC-040.0-20211111		30	40							
	1332	LC34PS-PZC-050.0-20211111		45	50							
	1334	LC34PS-PZC-058.0-20211111		53	58							
	1336	LC34PS-PZC-073.0-20211111		68	73							
	1338	LC34PS-PZC-080.0-20211111		75	80							

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	11/11/21	1525	1. RECEIVED BY Jamesa Gregory	11/11/21	1525
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

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Tetra Tech, Inc. CHAIN OF CUSTODY | NUMBER No. 3200 | PAGE 5 OF 5

PROJECT NO: 112G08985	FACILITY: LC34 PS	PROJECT MANAGER MARK JOHNET	PHONE NUMBER 412 921 8622	LABORATORY NAME AND CONTACT: ENCO
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER DAN FORESTER	PHONE NUMBER 304 780 1426	ADDRESS
		CARRIER/WAYBILL NUMBER		CITY, STATE ORLANDO, FL

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR 2021	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	CONTAINER TYPE PLASTIC (P) or GLASS (G): G	PRESERVATIVE USED: HCL	TYPE OF ANALYSIS: 8260 (TCL Some)	COOLED ON ICE	COMMENTS
11 NOV	1400	LC34PS-PZD-050.0-20211111	LC34PS	30	40	GW	G	3			X		
	1402	LC34PS-PZD-050.0-20211111		45	50								
	1404	LC34PS-PZD-058.0-20211111		53	58								
	1406	LC34PS-PZD-073.0-20211111		68	73								
	1408	LC34PS-PZD-080.0-20211111		75	80								
	1430	LC34PS-PZE-040.0-20211111		30	40								
	1432	LC34PS-PZE-050.0-20211111		45	50								
	1434	LC34PS-PZE-058.0-20211111		53	58								
	1436	LC34PS-PZE-073.0-20211111		68	73								
	1438	LC34PS-PZE-080.0-20211111		75	80								

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	11/11/21	1525	1. RECEIVED BY James W Gregory	11/11/21	1525
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

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ENCO Laboratories

Accurate. Timely. Responsive. Innovative.

10775 Central Port Drive
Orlando FL, 32824
Phone: 407.826.5314 FAX: 407.850.6945

Wednesday, December 22, 2021
Tetra Tech NUS, Inc. (TE015)
Attn: Mark Jonnet
Foster Plaza 7, 661 Anderson Drive
Pittsburgh, PA 15220

RE: Laboratory Results for
Project Number: 112G08985, Project Name/Desc: NASA KSC LC34
ENCO Workorder(s): AE09872

Dear Mark Jonnet,

Enclosed is a copy of your laboratory report for test samples received by our laboratory on Tuesday, December 14, 2021.

Unless otherwise noted in an attached project narrative, all samples were received in acceptable condition and processed in accordance with the referenced methods/procedures. Results for these procedures apply only to the samples as submitted.

The analytical results contained in this report are in compliance with NELAC standards, except as noted in the project narrative if applicable. This report shall not be reproduced except in full, without the written approval of the Laboratory.

This report contains only those analyses performed by Environmental Conservation Laboratories. Unless otherwise noted, all analyses were performed at ENCO Orlando. Data from outside organizations will be reported under separate cover.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

Kaitlin Dylnicki

Project Manager

Enclosure(s)

SAMPLE SUMMARY/LABORATORY CHRONICLE

Client ID: LC34-GAC-20211214	Lab ID: AE09872-01	Sampled: 12/14/21 09:00	Received: 12/14/21 15:12
Parameter	**Preparation**	**Hold Date/Time(s)**	**Prep Date/Time(s)**	**Analysis Date/Time(s)**
EPA 8260D	EPA 5030B_MS	12/28/21	12/15/21 00:00	12/15/21 09:51

Client ID: LC34-AS1-20211214	Lab ID: AE09872-02	Sampled: 12/14/21 09:10	Received: 12/14/21 15:12
Parameter	**Preparation**	**Hold Date/Time(s)**	**Prep Date/Time(s)**	**Analysis Date/Time(s)**
EPA 8260D	EPA 5030B_MS	12/28/21	12/15/21 00:00	12/15/21 14:38

Client ID: LC34-AS2-20211214	Lab ID: AE09872-03	Sampled: 12/14/21 09:20	Received: 12/14/21 15:12
Parameter	**Preparation**	**Hold Date/Time(s)**	**Prep Date/Time(s)**	**Analysis Date/Time(s)**
EPA 8260D	EPA 5030B_MS	12/28/21	12/15/21 00:00	12/15/21 15:06

Client ID: LC34-AS2-20211214	Lab ID: AE09872-03RE1	Sampled: 12/14/21 09:20	Received: 12/14/21 15:12
Parameter	**Preparation**	**Hold Date/Time(s)**	**Prep Date/Time(s)**	**Analysis Date/Time(s)**
EPA 8260D	EPA 5030B_MS	12/28/21	12/16/21 09:03	12/16/21 10:22

Client ID: LC34-INFLUENT-20211214	Lab ID: AE09872-04	Sampled: 12/14/21 09:30	Received: 12/14/21 15:12
Parameter	**Preparation**	**Hold Date/Time(s)**	**Prep Date/Time(s)**	**Analysis Date/Time(s)**
EPA 8260D	EPA 5030B_MS	12/28/21	12/15/21 00:00	12/15/21 15:35

Client ID: LC34-RW02A-20211214	Lab ID: AE09872-05	Sampled: 12/14/21 09:40	Received: 12/14/21 15:12
Parameter	**Preparation**	**Hold Date/Time(s)**	**Prep Date/Time(s)**	**Analysis Date/Time(s)**
EPA 8260D	EPA 5030B_MS	12/28/21	12/15/21 00:00	12/15/21 16:04

Client ID: LC34-RW02B-20211214	Lab ID: AE09872-06	Sampled: 12/14/21 09:50	Received: 12/14/21 15:12
Parameter	**Preparation**	**Hold Date/Time(s)**	**Prep Date/Time(s)**	**Analysis Date/Time(s)**
EPA 8260D	EPA 5030B_MS	12/28/21	12/15/21 00:00	12/15/21 16:33

Client ID: LC34-RW05B-20211214	Lab ID: AE09872-07	Sampled: 12/14/21 10:00	Received: 12/14/21 15:12
Parameter	**Preparation**	**Hold Date/Time(s)**	**Prep Date/Time(s)**	**Analysis Date/Time(s)**
EPA 8260D	EPA 5030B_MS	12/28/21	12/15/21 00:00	12/15/21 17:02

Client ID: LC34-RW05B-20211214	Lab ID: AE09872-07RE1	Sampled: 12/14/21 10:00	Received: 12/14/21 15:12
Parameter	**Preparation**	**Hold Date/Time(s)**	**Prep Date/Time(s)**	**Analysis Date/Time(s)**
EPA 8260D	EPA 5030B_MS	12/28/21	12/16/21 09:03	12/16/21 11:45

Client ID: LC34-RW09A-20211214	Lab ID: AE09872-08	Sampled: 12/14/21 10:10	Received: 12/14/21 15:12
Parameter	**Preparation**	**Hold Date/Time(s)**	**Prep Date/Time(s)**	**Analysis Date/Time(s)**
EPA 8260D	EPA 5030B_MS	12/28/21	12/15/21 00:00	12/15/21 17:30

Client ID: LC34-RW10A-20211214	Lab ID: AE09872-09	Sampled: 12/14/21 10:20	Received: 12/14/21 15:12
Parameter	**Preparation**	**Hold Date/Time(s)**	**Prep Date/Time(s)**	**Analysis Date/Time(s)**
EPA 8260D	EPA 5030B_MS	12/28/21	12/15/21 00:00	12/15/21 17:59

Client ID: LC34-RW12A-20211214	Lab ID: AE09872-10	Sampled: 12/14/21 10:30	Received: 12/14/21 15:12
Parameter	**Preparation**	**Hold Date/Time(s)**	**Prep Date/Time(s)**	**Analysis Date/Time(s)**
EPA 8260D	EPA 5030B_MS	12/28/21	12/15/21 09:03	12/15/21 14:58

Client ID: LC34-RW13A-20211214	Lab ID: AE09872-11	Sampled: 12/14/21 10:40	Received: 12/14/21 15:12
Parameter	**Preparation**	**Hold Date/Time(s)**	**Prep Date/Time(s)**	**Analysis Date/Time(s)**
EPA 8260D	EPA 5030B_MS	12/28/21	12/15/21 09:03	12/15/21 15:26

Client ID: LC34-RW14A-20211214	Lab ID: AE09872-12	Sampled: 12/14/21 10:50	Received: 12/14/21 15:12
Parameter	**Preparation**	**Hold Date/Time(s)**	**Prep Date/Time(s)**	**Analysis Date/Time(s)**
EPA 8260D	EPA 5030B_MS	12/28/21	12/15/21 09:03	12/15/21 15:53

SAMPLE SUMMARY/LABORATORY CHRONICLE

Client ID: LC34-RW15A-20211214 **Lab ID: AE09872-13** **Sampled: 12/14/21 11:00** **Received: 12/14/21 15:12**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	12/28/21	12/15/21 09:03	12/15/21 09:53

Client ID: LC34-RW16B-20211214 **Lab ID: AE09872-14** **Sampled: 12/14/21 11:10** **Received: 12/14/21 15:12**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	12/28/21	12/15/21 09:03	12/15/21 16:21

Client ID: LC34-RW16B-20211214 **Lab ID: AE09872-14RE1** **Sampled: 12/14/21 11:10** **Received: 12/14/21 15:12**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	12/28/21	12/16/21 09:03	12/16/21 12:13

Client ID: LC34-RW17C-20211214 **Lab ID: AE09872-15** **Sampled: 12/14/21 11:20** **Received: 12/14/21 15:12**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	12/28/21	12/15/21 09:03	12/15/21 16:49

Client ID: LC34-RW18C-20211214 **Lab ID: AE09872-16** **Sampled: 12/14/21 11:30** **Received: 12/14/21 15:12**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	12/28/21	12/15/21 09:03	12/15/21 17:17

Client ID: LC34-RW18C-20211214 **Lab ID: AE09872-16RE1** **Sampled: 12/14/21 11:30** **Received: 12/14/21 15:12**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	12/28/21	12/16/21 09:03	12/16/21 12:41

Client ID: LC34-RW19C-20211214 **Lab ID: AE09872-17** **Sampled: 12/14/21 11:40** **Received: 12/14/21 15:12**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	12/28/21	12/15/21 09:03	12/15/21 17:44

Client ID: LC34-RW20C-20211214 **Lab ID: AE09872-18** **Sampled: 12/14/21 11:50** **Received: 12/14/21 15:12**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	12/28/21	12/15/21 09:03	12/15/21 18:12

SAMPLE DETECTION SUMMARY

Client ID: LC34-AS1-20211214 **Lab ID: AE09872-02**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	0.58	I	0.53	2.5	ug/L	EPA 8260D	
Trichloroethene	1.2	I	0.89	2.5	ug/L	EPA 8260D	

Client ID: LC34-AS2-20211214 **Lab ID: AE09872-03**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Trichloroethene	96		1.8	5.0	ug/L	EPA 8260D	

Client ID: LC34-AS2-20211214 **Lab ID: AE09872-03RE1**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	52		0.53	2.5	ug/L	EPA 8260D	
Vinyl chloride	0.92	I	0.71	2.5	ug/L	EPA 8260D	

Client ID: LC34-INFLUENT-20211214 **Lab ID: AE09872-04**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	3400		130	620	ug/L	EPA 8260D	
Trichloroethene	19000		220	620	ug/L	EPA 8260D	
Vinyl chloride	630		180	620	ug/L	EPA 8260D	

Client ID: LC34-RW02A-20211214 **Lab ID: AE09872-05**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	7700		260	1200	ug/L	EPA 8260D	
Trichloroethene	45000		440	1200	ug/L	EPA 8260D	
Vinyl chloride	820	I	360	1200	ug/L	EPA 8260D	

Client ID: LC34-RW02B-20211214 **Lab ID: AE09872-06**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	2300		260	1200	ug/L	EPA 8260D	
Trichloroethene	27000		440	1200	ug/L	EPA 8260D	
Vinyl chloride	360	I	360	1200	ug/L	EPA 8260D	

Client ID: LC34-RW05B-20211214 **Lab ID: AE09872-07**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
trans-1,2-Dichloroethene	5.0		0.73	2.5	ug/L	EPA 8260D	
Trichloroethene	6.8		0.89	2.5	ug/L	EPA 8260D	
Vinyl chloride	15		0.71	2.5	ug/L	EPA 8260D	

Client ID: LC34-RW05B-20211214 **Lab ID: AE09872-07RE1**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	76		2.6	12	ug/L	EPA 8260D	

Client ID: LC34-RW09A-20211214 **Lab ID: AE09872-08**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	4400		26	120	ug/L	EPA 8260D	
trans-1,2-Dichloroethene	94	I	36	120	ug/L	EPA 8260D	
Vinyl chloride	1500		36	120	ug/L	EPA 8260D	

Client ID: LC34-RW10A-20211214 **Lab ID: AE09872-09**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	1400		11	50	ug/L	EPA 8260D	
trans-1,2-Dichloroethene	55		15	50	ug/L	EPA 8260D	
Vinyl chloride	730		14	50	ug/L	EPA 8260D	

Client ID: LC34-RW12A-20211214 **Lab ID: AE09872-10**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	4300		26	120	ug/L	EPA 8260D	
trans-1,2-Dichloroethene	99	I	36	120	ug/L	EPA 8260D	
Vinyl chloride	810		36	120	ug/L	EPA 8260D	

Client ID: LC34-RW13A-20211214 **Lab ID: AE09872-11**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	7000		53	250	ug/L	EPA 8260D	
trans-1,2-Dichloroethene	130	I	73	250	ug/L	EPA 8260D	
Vinyl chloride	1600		71	250	ug/L	EPA 8260D	

SAMPLE DETECTION SUMMARY

Client ID: LC34-RW14A-20211214 **Lab ID: AE09872-12**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	3900		26	120	ug/L	EPA 8260D	
trans-1,2-Dichloroethene	82	I	36	120	ug/L	EPA 8260D	
Vinyl chloride	850		36	120	ug/L	EPA 8260D	

Client ID: LC34-RW15A-20211214 **Lab ID: AE09872-13**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	2000		13	62	ug/L	EPA 8260D	
trans-1,2-Dichloroethene	44	I	18	62	ug/L	EPA 8260D	
Vinyl chloride	440		18	62	ug/L	EPA 8260D	

Client ID: LC34-RW16B-20211214 **Lab ID: AE09872-14**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	220		1.3	6.2	ug/L	EPA 8260D	
trans-1,2-Dichloroethene	6.6		1.8	6.2	ug/L	EPA 8260D	
Vinyl chloride	20		1.8	6.2	ug/L	EPA 8260D	

Client ID: LC34-RW16B-20211214 **Lab ID: AE09872-14RE1**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Trichloroethene	340		8.9	25	ug/L	EPA 8260D	

Client ID: LC34-RW17C-20211214 **Lab ID: AE09872-15**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	3700	I	1300	6200	ug/L	EPA 8260D	
Trichloroethene	130000		2200	6200	ug/L	EPA 8260D	

Client ID: LC34-RW18C-20211214 **Lab ID: AE09872-16**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	3100	I	1100	5000	ug/L	EPA 8260D	
Freon 113	2600	I	1500	5000	ug/L	EPA 8260D	

Client ID: LC34-RW18C-20211214 **Lab ID: AE09872-16RE1**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Trichloroethene	510000		18000	50000	ug/L	EPA 8260D	

Client ID: LC34-RW19C-20211214 **Lab ID: AE09872-17**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	5700	I	5300	25000	ug/L	EPA 8260D	
Trichloroethene	550000		8900	25000	ug/L	EPA 8260D	

Client ID: LC34-RW20C-20211214 **Lab ID: AE09872-18**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	4000	I	2600	12000	ug/L	EPA 8260D	
Trichloroethene	410000		4400	12000	ug/L	EPA 8260D	

ANALYTICAL RESULTS

Description: LC34-GAC-20211214 | **Lab Sample ID:** AE09872-01 | **Received:** 12/14/21 15:12
Matrix: Ground Water | **Sampled:** 12/14/21 09:00 | **Work Order:** AE09872
Project: NASA KSC LC34 | **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	1L15004	EPA 8260D	12/15/21 09:51	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	1L15004	EPA 8260D	12/15/21 09:51	nmc	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	1L15004	EPA 8260D	12/15/21 09:51	nmc	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	1L15004	EPA 8260D	12/15/21 09:51	nmc	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	1L15004	EPA 8260D	12/15/21 09:51	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	1L15004	EPA 8260D	12/15/21 09:51	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	1L15004	EPA 8260D	12/15/21 09:51	nmc	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	1L15004	EPA 8260D	12/15/21 09:51	nmc	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	1L15004	EPA 8260D	12/15/21 09:51	nmc	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	1L15004	EPA 8260D	12/15/21 09:51	nmc	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	1L15004	EPA 8260D	12/15/21 09:51	nmc	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	1L15004	EPA 8260D	12/15/21 09:51	nmc	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	1L15004	EPA 8260D	12/15/21 09:51	nmc	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	1L15004	EPA 8260D	12/15/21 09:51	nmc	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	1L15004	EPA 8260D	12/15/21 09:51	nmc	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	1L15004	EPA 8260D	12/15/21 09:51	nmc	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	1L15004	EPA 8260D	12/15/21 09:51	nmc	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	1L15004	EPA 8260D	12/15/21 09:51	nmc	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	1L15004	EPA 8260D	12/15/21 09:51	nmc	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	1L15004	EPA 8260D	12/15/21 09:51	nmc	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	1L15004	EPA 8260D	12/15/21 09:51	nmc	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	1L15004	EPA 8260D	12/15/21 09:51	nmc	
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	1L15004	EPA 8260D	12/15/21 09:51	nmc	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	1L15004	EPA 8260D	12/15/21 09:51	nmc	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	1L15004	EPA 8260D	12/15/21 09:51	nmc	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	1L15004	EPA 8260D	12/15/21 09:51	nmc	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	1L15004	EPA 8260D	12/15/21 09:51	nmc	QV-01
cis-1,2-Dichloroethene [156-59-2]^	0.53	U	ug/L	1	0.53	2.5	1L15004	EPA 8260D	12/15/21 09:51	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	1L15004	EPA 8260D	12/15/21 09:51	nmc	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	1L15004	EPA 8260D	12/15/21 09:51	nmc	QM-07
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	1L15004	EPA 8260D	12/15/21 09:51	nmc	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	1L15004	EPA 8260D	12/15/21 09:51	nmc	QV-01
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	1L15004	EPA 8260D	12/15/21 09:51	nmc	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	1L15004	EPA 8260D	12/15/21 09:51	nmc	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	1L15004	EPA 8260D	12/15/21 09:51	nmc	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	1L15004	EPA 8260D	12/15/21 09:51	nmc	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	1L15004	EPA 8260D	12/15/21 09:51	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	1L15004	EPA 8260D	12/15/21 09:51	nmc	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	1L15004	EPA 8260D	12/15/21 09:51	nmc	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	1L15004	EPA 8260D	12/15/21 09:51	nmc	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	1L15004	EPA 8260D	12/15/21 09:51	nmc	
trans-1,2-Dichloroethene [156-60-5]^	0.73	U	ug/L	1	0.73	2.5	1L15004	EPA 8260D	12/15/21 09:51	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	1L15004	EPA 8260D	12/15/21 09:51	nmc	
Trichloroethene [79-01-6]^	0.89	U	ug/L	1	0.89	2.5	1L15004	EPA 8260D	12/15/21 09:51	nmc	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	1L15004	EPA 8260D	12/15/21 09:51	nmc	
Vinyl chloride [75-01-4]^	0.71	U	ug/L	1	0.71	2.5	1L15004	EPA 8260D	12/15/21 09:51	nmc	

ANALYTICAL RESULTS

Description: LC34-GAC-20211214 **Lab Sample ID:** AE09872-01 **Received:** 12/14/21 15:12

Matrix: Ground Water **Sampled:** 12/14/21 09:00 **Work Order:** AE09872

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*45*	*1*	*50.0*	*90 %*	*41-142*	*1L15004*	*EPA 8260D*	*12/15/21 09:51*	*nmc*	
Dibromofluoromethane	*52*	*1*	*50.0*	*104 %*	*53-146*	*1L15004*	*EPA 8260D*	*12/15/21 09:51*	*nmc*	
Toluene-d8	*46*	*1*	*50.0*	*92 %*	*41-146*	*1L15004*	*EPA 8260D*	*12/15/21 09:51*	*nmc*	

ANALYTICAL RESULTS

Description: LC34-AS1-20211214 **Lab Sample ID:** AE09872-02 **Received:** 12/14/21 15:12

Matrix: Ground Water **Sampled:** 12/14/21 09:10 **Work Order:** AE09872

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	1L15004	EPA 8260D	12/15/21 14:38	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	1L15004	EPA 8260D	12/15/21 14:38	nmc	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	1L15004	EPA 8260D	12/15/21 14:38	nmc	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	1L15004	EPA 8260D	12/15/21 14:38	nmc	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	1L15004	EPA 8260D	12/15/21 14:38	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	1L15004	EPA 8260D	12/15/21 14:38	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	1L15004	EPA 8260D	12/15/21 14:38	nmc	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	1L15004	EPA 8260D	12/15/21 14:38	nmc	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	1L15004	EPA 8260D	12/15/21 14:38	nmc	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	1L15004	EPA 8260D	12/15/21 14:38	nmc	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	1L15004	EPA 8260D	12/15/21 14:38	nmc	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	1L15004	EPA 8260D	12/15/21 14:38	nmc	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	1L15004	EPA 8260D	12/15/21 14:38	nmc	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	1L15004	EPA 8260D	12/15/21 14:38	nmc	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	1L15004	EPA 8260D	12/15/21 14:38	nmc	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	1L15004	EPA 8260D	12/15/21 14:38	nmc	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	1L15004	EPA 8260D	12/15/21 14:38	nmc	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	1L15004	EPA 8260D	12/15/21 14:38	nmc	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	1L15004	EPA 8260D	12/15/21 14:38	nmc	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	1L15004	EPA 8260D	12/15/21 14:38	nmc	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	1L15004	EPA 8260D	12/15/21 14:38	nmc	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	1L15004	EPA 8260D	12/15/21 14:38	nmc	
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	1L15004	EPA 8260D	12/15/21 14:38	nmc	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	1L15004	EPA 8260D	12/15/21 14:38	nmc	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	1L15004	EPA 8260D	12/15/21 14:38	nmc	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	1L15004	EPA 8260D	12/15/21 14:38	nmc	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	1L15004	EPA 8260D	12/15/21 14:38	nmc	QV-01
cis-1,2-Dichloroethene [156-59-2]^	**0.58**	I	ug/L	1	0.53	2.5	1L15004	EPA 8260D	12/15/21 14:38	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	1L15004	EPA 8260D	12/15/21 14:38	nmc	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	1L15004	EPA 8260D	12/15/21 14:38	nmc	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	1L15004	EPA 8260D	12/15/21 14:38	nmc	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	1L15004	EPA 8260D	12/15/21 14:38	nmc	QV-01
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	1L15004	EPA 8260D	12/15/21 14:38	nmc	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	1L15004	EPA 8260D	12/15/21 14:38	nmc	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	1L15004	EPA 8260D	12/15/21 14:38	nmc	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	1L15004	EPA 8260D	12/15/21 14:38	nmc	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	1L15004	EPA 8260D	12/15/21 14:38	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	1L15004	EPA 8260D	12/15/21 14:38	nmc	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	1L15004	EPA 8260D	12/15/21 14:38	nmc	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	1L15004	EPA 8260D	12/15/21 14:38	nmc	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	1L15004	EPA 8260D	12/15/21 14:38	nmc	
trans-1,2-Dichloroethene [156-60-5]^	0.73	U	ug/L	1	0.73	2.5	1L15004	EPA 8260D	12/15/21 14:38	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	1L15004	EPA 8260D	12/15/21 14:38	nmc	
Trichloroethene [79-01-6]^	**1.2**	I	ug/L	1	0.89	2.5	1L15004	EPA 8260D	12/15/21 14:38	nmc	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	1L15004	EPA 8260D	12/15/21 14:38	nmc	
Vinyl chloride [75-01-4]^	0.71	U	ug/L	1	0.71	2.5	1L15004	EPA 8260D	12/15/21 14:38	nmc	

ANALYTICAL RESULTS

Description: LC34-AS1-20211214 **Lab Sample ID:** AE09872-02 **Received:** 12/14/21 15:12

Matrix: Ground Water **Sampled:** 12/14/21 09:10 **Work Order:** AE09872

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*47*	*1*	*50.0*	*94 %*	*41-142*	*1L15004*	*EPA 8260D*	*12/15/21 14:38*	*nmc*	
Dibromofluoromethane	*53*	*1*	*50.0*	*107 %*	*53-146*	*1L15004*	*EPA 8260D*	*12/15/21 14:38*	*nmc*	
Toluene-d8	*48*	*1*	*50.0*	*96 %*	*41-146*	*1L15004*	*EPA 8260D*	*12/15/21 14:38*	*nmc*	

ANALYTICAL RESULTS

Description: LC34-AS2-20211214 **Lab Sample ID:** AE09872-03 **Received:** 12/14/21 15:12

Matrix: Ground Water **Sampled:** 12/14/21 09:20 **Work Order:** AE09872

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	1L16010	EPA 8260D	12/16/21 10:22	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	1L16010	EPA 8260D	12/16/21 10:22	KKW	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	1L16010	EPA 8260D	12/16/21 10:22	KKW	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	1L16010	EPA 8260D	12/16/21 10:22	KKW	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	1L16010	EPA 8260D	12/16/21 10:22	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	1L16010	EPA 8260D	12/16/21 10:22	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	1L16010	EPA 8260D	12/16/21 10:22	KKW	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	1L16010	EPA 8260D	12/16/21 10:22	KKW	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	1L16010	EPA 8260D	12/16/21 10:22	KKW	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	1L16010	EPA 8260D	12/16/21 10:22	KKW	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	1L16010	EPA 8260D	12/16/21 10:22	KKW	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	1L16010	EPA 8260D	12/16/21 10:22	KKW	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	1L16010	EPA 8260D	12/16/21 10:22	KKW	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	1L16010	EPA 8260D	12/16/21 10:22	KKW	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	1L16010	EPA 8260D	12/16/21 10:22	KKW	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	1L16010	EPA 8260D	12/16/21 10:22	KKW	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	1L16010	EPA 8260D	12/16/21 10:22	KKW	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	1L16010	EPA 8260D	12/16/21 10:22	KKW	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	1L16010	EPA 8260D	12/16/21 10:22	KKW	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	1L16010	EPA 8260D	12/16/21 10:22	KKW	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	1L16010	EPA 8260D	12/16/21 10:22	KKW	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	1L16010	EPA 8260D	12/16/21 10:22	KKW	
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	1L16010	EPA 8260D	12/16/21 10:22	KKW	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	1L16010	EPA 8260D	12/16/21 10:22	KKW	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	1L16010	EPA 8260D	12/16/21 10:22	KKW	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	1L16010	EPA 8260D	12/16/21 10:22	KKW	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	1L16010	EPA 8260D	12/16/21 10:22	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**52**		ug/L	1	0.53	2.5	1L16010	EPA 8260D	12/16/21 10:22	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	1L16010	EPA 8260D	12/16/21 10:22	KKW	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	1L16010	EPA 8260D	12/16/21 10:22	KKW	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	1L16010	EPA 8260D	12/16/21 10:22	KKW	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	1L16010	EPA 8260D	12/16/21 10:22	KKW	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	1L16010	EPA 8260D	12/16/21 10:22	KKW	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	1L16010	EPA 8260D	12/16/21 10:22	KKW	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	1L16010	EPA 8260D	12/16/21 10:22	KKW	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	1L16010	EPA 8260D	12/16/21 10:22	KKW	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	1L16010	EPA 8260D	12/16/21 10:22	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	1L16010	EPA 8260D	12/16/21 10:22	KKW	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	1L16010	EPA 8260D	12/16/21 10:22	KKW	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	1L16010	EPA 8260D	12/16/21 10:22	KKW	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	1L16010	EPA 8260D	12/16/21 10:22	KKW	
trans-1,2-Dichloroethene [156-60-5]^	0.73	U	ug/L	1	0.73	2.5	1L16010	EPA 8260D	12/16/21 10:22	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	1L16010	EPA 8260D	12/16/21 10:22	KKW	
Trichloroethene [79-01-6]^	**96**		ug/L	2	1.8	5.0	1L15004	EPA 8260D	12/15/21 15:06	nmc	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	1L16010	EPA 8260D	12/16/21 10:22	KKW	
Vinyl chloride [75-01-4]^	**0.92**	I	ug/L	1	0.71	2.5	1L16010	EPA 8260D	12/16/21 10:22	KKW	

ANALYTICAL RESULTS

Description: LC34-AS2-20211214 **Lab Sample ID:** AE09872-03 **Received:** 12/14/21 15:12

Matrix: Ground Water **Sampled:** 12/14/21 09:20 **Work Order:** AE09872

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*46*	*1*	*50.0*	*93 %*	*41-142*	*1L15004*	*EPA 8260D*	*12/15/21 15:06*	*nmc*	
4-Bromofluorobenzene	*53*	*1*	*50.0*	*105 %*	*41-142*	*1L16010*	*EPA 8260D*	*12/16/21 10:22*	*KKW*	
Dibromofluoromethane	*54*	*1*	*50.0*	*107 %*	*53-146*	*1L15004*	*EPA 8260D*	*12/15/21 15:06*	*nmc*	
Dibromofluoromethane	*51*	*1*	*50.0*	*103 %*	*53-146*	*1L16010*	*EPA 8260D*	*12/16/21 10:22*	*KKW*	
Toluene-d8	*47*	*1*	*50.0*	*94 %*	*41-146*	*1L15004*	*EPA 8260D*	*12/15/21 15:06*	*nmc*	
Toluene-d8	*53*	*1*	*50.0*	*106 %*	*41-146*	*1L16010*	*EPA 8260D*	*12/16/21 10:22*	*KKW*	

ANALYTICAL RESULTS

Description: LC34-INFLUENT-20211214 **Lab Sample ID:** AE09872-04 **Received:** 12/14/21 15:12

Matrix: Ground Water **Sampled:** 12/14/21 09:30 **Work Order:** AE09872

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	200	U	ug/L	250	200	620	1L15004	EPA 8260D	12/15/21 15:35	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	140	U	ug/L	250	140	620	1L15004	EPA 8260D	12/15/21 15:35	nmc	
1,1,2-Trichloroethane [79-00-5]^	190	U	ug/L	250	190	620	1L15004	EPA 8260D	12/15/21 15:35	nmc	
1,1-Dichloroethane [75-34-3]^	160	U	ug/L	250	160	620	1L15004	EPA 8260D	12/15/21 15:35	nmc	
1,1-Dichloroethene [75-35-4]^	240	U	ug/L	250	240	620	1L15004	EPA 8260D	12/15/21 15:35	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	180	U	ug/L	250	180	620	1L15004	EPA 8260D	12/15/21 15:35	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	240	U	ug/L	250	240	620	1L15004	EPA 8260D	12/15/21 15:35	nmc	
1,2-Dibromoethane [106-93-4]^	200	U	ug/L	250	200	620	1L15004	EPA 8260D	12/15/21 15:35	nmc	
1,2-Dichlorobenzene [95-50-1]^	180	U	ug/L	250	180	620	1L15004	EPA 8260D	12/15/21 15:35	nmc	
1,2-Dichloroethane [107-06-2]^	160	U	ug/L	250	160	620	1L15004	EPA 8260D	12/15/21 15:35	nmc	
1,2-Dichloropropane [78-87-5]^	200	U	ug/L	250	200	620	1L15004	EPA 8260D	12/15/21 15:35	nmc	
1,3-Dichlorobenzene [541-73-1]^	190	U	ug/L	250	190	620	1L15004	EPA 8260D	12/15/21 15:35	nmc	
1,4-Dichlorobenzene [106-46-7]^	190	U	ug/L	250	190	620	1L15004	EPA 8260D	12/15/21 15:35	nmc	
2-Butanone [78-93-3]^	1100	U	ug/L	250	1100	3100	1L15004	EPA 8260D	12/15/21 15:35	nmc	
2-Hexanone [591-78-6]^	620	U	ug/L	250	620	3100	1L15004	EPA 8260D	12/15/21 15:35	nmc	
4-Methyl-2-pentanone [108-10-1]^	620	U	ug/L	250	620	3100	1L15004	EPA 8260D	12/15/21 15:35	nmc	
Acetone [67-64-1]^	2500	U	ug/L	250	2500	6200	1L15004	EPA 8260D	12/15/21 15:35	nmc	
Benzene [71-43-2]^	180	U	ug/L	250	180	620	1L15004	EPA 8260D	12/15/21 15:35	nmc	
Bromodichloromethane [75-27-4]^	130	U	ug/L	250	130	620	1L15004	EPA 8260D	12/15/21 15:35	nmc	
Bromoform [75-25-2]^	190	U	ug/L	250	190	620	1L15004	EPA 8260D	12/15/21 15:35	nmc	
Bromomethane [74-83-9]^	240	U	ug/L	250	240	620	1L15004	EPA 8260D	12/15/21 15:35	nmc	QV-01
Carbon disulfide [75-15-0]^	620	U	ug/L	250	620	3100	1L15004	EPA 8260D	12/15/21 15:35	nmc	
Carbon Tetrachloride [56-23-5]^	240	U	ug/L	250	240	620	1L15004	EPA 8260D	12/15/21 15:35	nmc	
Chlorobenzene [108-90-7]^	180	U	ug/L	250	180	620	1L15004	EPA 8260D	12/15/21 15:35	nmc	
Chloroethane [75-00-3]^	240	U	ug/L	250	240	620	1L15004	EPA 8260D	12/15/21 15:35	nmc	
Chloroform [67-66-3]^	200	U	ug/L	250	200	620	1L15004	EPA 8260D	12/15/21 15:35	nmc	
Chloromethane [74-87-3]^	200	U	ug/L	250	200	620	1L15004	EPA 8260D	12/15/21 15:35	nmc	QV-01
cis-1,2-Dichloroethene [156-59-2]^	**3400**		ug/L	250	130	620	1L15004	EPA 8260D	12/15/21 15:35	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	150	U	ug/L	250	150	620	1L15004	EPA 8260D	12/15/21 15:35	nmc	
Cyclohexane [110-82-7]^	230	U	ug/L	250	230	620	1L15004	EPA 8260D	12/15/21 15:35	nmc	
Dibromochloromethane [124-48-1]^	120	U	ug/L	250	120	620	1L15004	EPA 8260D	12/15/21 15:35	nmc	
Dichlorodifluoromethane [75-71-8]^	180	U	ug/L	250	180	620	1L15004	EPA 8260D	12/15/21 15:35	nmc	QV-01
Ethylbenzene [100-41-4]^	170	U	ug/L	250	170	620	1L15004	EPA 8260D	12/15/21 15:35	nmc	
Freon 113 [76-13-1]^	180	U	ug/L	250	180	620	1L15004	EPA 8260D	12/15/21 15:35	nmc	
Isopropylbenzene [98-82-8]^	170	U	ug/L	250	170	620	1L15004	EPA 8260D	12/15/21 15:35	nmc	
Methyl acetate [79-20-9]^	240	U	ug/L	250	240	620	1L15004	EPA 8260D	12/15/21 15:35	nmc	
Methylene Chloride [75-09-2]^	620	U	ug/L	250	620	3100	1L15004	EPA 8260D	12/15/21 15:35	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	150	U	ug/L	250	150	620	1L15004	EPA 8260D	12/15/21 15:35	nmc	
Styrene [100-42-5]^	150	U	ug/L	250	150	620	1L15004	EPA 8260D	12/15/21 15:35	nmc	
Tetrachloroethene [127-18-4]^	190	U	ug/L	250	190	620	1L15004	EPA 8260D	12/15/21 15:35	nmc	
Toluene [108-88-3]^	180	U	ug/L	250	180	620	1L15004	EPA 8260D	12/15/21 15:35	nmc	
trans-1,2-Dichloroethene [156-60-5]^	180	U	ug/L	250	180	620	1L15004	EPA 8260D	12/15/21 15:35	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	180	U	ug/L	250	180	620	1L15004	EPA 8260D	12/15/21 15:35	nmc	
Trichloroethene [79-01-6]^	**19000**		ug/L	250	220	620	1L15004	EPA 8260D	12/15/21 15:35	nmc	
Trichlorofluoromethane [75-69-4]^	240	U	ug/L	250	240	620	1L15004	EPA 8260D	12/15/21 15:35	nmc	
Vinyl chloride [75-01-4]^	**630**		ug/L	250	180	620	1L15004	EPA 8260D	12/15/21 15:35	nmc	

ANALYTICAL RESULTS

Description: LC34-INFLUENT-20211214 **Lab Sample ID:** AE09872-04 **Received:** 12/14/21 15:12

Matrix: Ground Water **Sampled:** 12/14/21 09:30 **Work Order:** AE09872

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*47*	*1*	*50.0*	*94 %*	*41-142*	*1L15004*	*EPA 8260D*	*12/15/21 15:35*	*nmc*	
Dibromofluoromethane	*54*	*1*	*50.0*	*108 %*	*53-146*	*1L15004*	*EPA 8260D*	*12/15/21 15:35*	*nmc*	
Toluene-d8	*47*	*1*	*50.0*	*95 %*	*41-146*	*1L15004*	*EPA 8260D*	*12/15/21 15:35*	*nmc*	

ANALYTICAL RESULTS

Description: LC34-RW02A-20211214 **Lab Sample ID:** AE09872-05 **Received:** 12/14/21 15:12

Matrix: Ground Water **Sampled:** 12/14/21 09:40 **Work Order:** AE09872

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	400	U	ug/L	500	400	1200	1L15004	EPA 8260D	12/15/21 16:04	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	270	U	ug/L	500	270	1200	1L15004	EPA 8260D	12/15/21 16:04	nmc	
1,1,2-Trichloroethane [79-00-5]^	380	U	ug/L	500	380	1200	1L15004	EPA 8260D	12/15/21 16:04	nmc	
1,1-Dichloroethane [75-34-3]^	310	U	ug/L	500	310	1200	1L15004	EPA 8260D	12/15/21 16:04	nmc	
1,1-Dichloroethene [75-35-4]^	470	U	ug/L	500	470	1200	1L15004	EPA 8260D	12/15/21 16:04	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	350	U	ug/L	500	350	1200	1L15004	EPA 8260D	12/15/21 16:04	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	480	U	ug/L	500	480	1200	1L15004	EPA 8260D	12/15/21 16:04	nmc	
1,2-Dibromoethane [106-93-4]^	390	U	ug/L	500	390	1200	1L15004	EPA 8260D	12/15/21 16:04	nmc	
1,2-Dichlorobenzene [95-50-1]^	360	U	ug/L	500	360	1200	1L15004	EPA 8260D	12/15/21 16:04	nmc	
1,2-Dichloroethane [107-06-2]^	320	U	ug/L	500	320	1200	1L15004	EPA 8260D	12/15/21 16:04	nmc	
1,2-Dichloropropane [78-87-5]^	400	U	ug/L	500	400	1200	1L15004	EPA 8260D	12/15/21 16:04	nmc	
1,3-Dichlorobenzene [541-73-1]^	380	U	ug/L	500	380	1200	1L15004	EPA 8260D	12/15/21 16:04	nmc	
1,4-Dichlorobenzene [106-46-7]^	380	U	ug/L	500	380	1200	1L15004	EPA 8260D	12/15/21 16:04	nmc	
2-Butanone [78-93-3]^	2200	U	ug/L	500	2200	6200	1L15004	EPA 8260D	12/15/21 16:04	nmc	
2-Hexanone [591-78-6]^	1200	U	ug/L	500	1200	6200	1L15004	EPA 8260D	12/15/21 16:04	nmc	
4-Methyl-2-pentanone [108-10-1]^	1200	U	ug/L	500	1200	6200	1L15004	EPA 8260D	12/15/21 16:04	nmc	
Acetone [67-64-1]^	5000	U	ug/L	500	5000	12000	1L15004	EPA 8260D	12/15/21 16:04	nmc	
Benzene [71-43-2]^	360	U	ug/L	500	360	1200	1L15004	EPA 8260D	12/15/21 16:04	nmc	
Bromodichloromethane [75-27-4]^	260	U	ug/L	500	260	1200	1L15004	EPA 8260D	12/15/21 16:04	nmc	
Bromoform [75-25-2]^	380	U	ug/L	500	380	1200	1L15004	EPA 8260D	12/15/21 16:04	nmc	
Bromomethane [74-83-9]^	480	U	ug/L	500	480	1200	1L15004	EPA 8260D	12/15/21 16:04	nmc	QV-01
Carbon disulfide [75-15-0]^	1200	U	ug/L	500	1200	6200	1L15004	EPA 8260D	12/15/21 16:04	nmc	
Carbon Tetrachloride [56-23-5]^	470	U	ug/L	500	470	1200	1L15004	EPA 8260D	12/15/21 16:04	nmc	
Chlorobenzene [108-90-7]^	360	U	ug/L	500	360	1200	1L15004	EPA 8260D	12/15/21 16:04	nmc	
Chloroethane [75-00-3]^	490	U	ug/L	500	490	1200	1L15004	EPA 8260D	12/15/21 16:04	nmc	
Chloroform [67-66-3]^	400	U	ug/L	500	400	1200	1L15004	EPA 8260D	12/15/21 16:04	nmc	
Chloromethane [74-87-3]^	410	U	ug/L	500	410	1200	1L15004	EPA 8260D	12/15/21 16:04	nmc	QV-01
cis-1,2-Dichloroethene [156-59-2]^	**7700**		ug/L	500	260	1200	1L15004	EPA 8260D	12/15/21 16:04	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	300	U	ug/L	500	300	1200	1L15004	EPA 8260D	12/15/21 16:04	nmc	
Cyclohexane [110-82-7]^	460	U	ug/L	500	460	1200	1L15004	EPA 8260D	12/15/21 16:04	nmc	
Dibromochloromethane [124-48-1]^	250	U	ug/L	500	250	1200	1L15004	EPA 8260D	12/15/21 16:04	nmc	
Dichlorodifluoromethane [75-71-8]^	370	U	ug/L	500	370	1200	1L15004	EPA 8260D	12/15/21 16:04	nmc	QV-01
Ethylbenzene [100-41-4]^	340	U	ug/L	500	340	1200	1L15004	EPA 8260D	12/15/21 16:04	nmc	
Freon 113 [76-13-1]^	360	U	ug/L	500	360	1200	1L15004	EPA 8260D	12/15/21 16:04	nmc	
Isopropylbenzene [98-82-8]^	340	U	ug/L	500	340	1200	1L15004	EPA 8260D	12/15/21 16:04	nmc	
Methyl acetate [79-20-9]^	480	U	ug/L	500	480	1200	1L15004	EPA 8260D	12/15/21 16:04	nmc	
Methylene Chloride [75-09-2]^	1200	U	ug/L	500	1200	6200	1L15004	EPA 8260D	12/15/21 16:04	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	300	U	ug/L	500	300	1200	1L15004	EPA 8260D	12/15/21 16:04	nmc	
Styrene [100-42-5]^	300	U	ug/L	500	300	1200	1L15004	EPA 8260D	12/15/21 16:04	nmc	
Tetrachloroethene [127-18-4]^	380	U	ug/L	500	380	1200	1L15004	EPA 8260D	12/15/21 16:04	nmc	
Toluene [108-88-3]^	360	U	ug/L	500	360	1200	1L15004	EPA 8260D	12/15/21 16:04	nmc	
trans-1,2-Dichloroethene [156-60-5]^	360	U	ug/L	500	360	1200	1L15004	EPA 8260D	12/15/21 16:04	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	360	U	ug/L	500	360	1200	1L15004	EPA 8260D	12/15/21 16:04	nmc	
Trichloroethene [79-01-6]^	**45000**		ug/L	500	440	1200	1L15004	EPA 8260D	12/15/21 16:04	nmc	
Trichlorofluoromethane [75-69-4]^	470	U	ug/L	500	470	1200	1L15004	EPA 8260D	12/15/21 16:04	nmc	
Vinyl chloride [75-01-4]^	**820**	I	ug/L	500	360	1200	1L15004	EPA 8260D	12/15/21 16:04	nmc	

ANALYTICAL RESULTS

Description: LC34-RW02A-20211214 **Lab Sample ID:** AE09872-05 **Received:** 12/14/21 15:12

Matrix: Ground Water **Sampled:** 12/14/21 09:40 **Work Order:** AE09872

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*47*	*1*	*50.0*	*94 %*	*41-142*	*1L15004*	*EPA 8260D*	*12/15/21 16:04*	*nmc*	
Dibromofluoromethane	*53*	*1*	*50.0*	*105 %*	*53-146*	*1L15004*	*EPA 8260D*	*12/15/21 16:04*	*nmc*	
Toluene-d8	*46*	*1*	*50.0*	*93 %*	*41-146*	*1L15004*	*EPA 8260D*	*12/15/21 16:04*	*nmc*	

ANALYTICAL RESULTS

Description: LC34-RW02B-20211214 **Lab Sample ID:** AE09872-06 **Received:** 12/14/21 15:12

Matrix: Ground Water **Sampled:** 12/14/21 09:50 **Work Order:** AE09872

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	400	U	ug/L	500	400	1200	1L15004	EPA 8260D	12/15/21 16:33	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	270	U	ug/L	500	270	1200	1L15004	EPA 8260D	12/15/21 16:33	nmc	
1,1,2-Trichloroethane [79-00-5]^	380	U	ug/L	500	380	1200	1L15004	EPA 8260D	12/15/21 16:33	nmc	
1,1-Dichloroethane [75-34-3]^	310	U	ug/L	500	310	1200	1L15004	EPA 8260D	12/15/21 16:33	nmc	
1,1-Dichloroethene [75-35-4]^	470	U	ug/L	500	470	1200	1L15004	EPA 8260D	12/15/21 16:33	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	350	U	ug/L	500	350	1200	1L15004	EPA 8260D	12/15/21 16:33	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	480	U	ug/L	500	480	1200	1L15004	EPA 8260D	12/15/21 16:33	nmc	
1,2-Dibromoethane [106-93-4]^	390	U	ug/L	500	390	1200	1L15004	EPA 8260D	12/15/21 16:33	nmc	
1,2-Dichlorobenzene [95-50-1]^	360	U	ug/L	500	360	1200	1L15004	EPA 8260D	12/15/21 16:33	nmc	
1,2-Dichloroethane [107-06-2]^	320	U	ug/L	500	320	1200	1L15004	EPA 8260D	12/15/21 16:33	nmc	
1,2-Dichloropropane [78-87-5]^	400	U	ug/L	500	400	1200	1L15004	EPA 8260D	12/15/21 16:33	nmc	
1,3-Dichlorobenzene [541-73-1]^	380	U	ug/L	500	380	1200	1L15004	EPA 8260D	12/15/21 16:33	nmc	
1,4-Dichlorobenzene [106-46-7]^	380	U	ug/L	500	380	1200	1L15004	EPA 8260D	12/15/21 16:33	nmc	
2-Butanone [78-93-3]^	2200	U	ug/L	500	2200	6200	1L15004	EPA 8260D	12/15/21 16:33	nmc	
2-Hexanone [591-78-6]^	1200	U	ug/L	500	1200	6200	1L15004	EPA 8260D	12/15/21 16:33	nmc	
4-Methyl-2-pentanone [108-10-1]^	1200	U	ug/L	500	1200	6200	1L15004	EPA 8260D	12/15/21 16:33	nmc	
Acetone [67-64-1]^	5000	U	ug/L	500	5000	12000	1L15004	EPA 8260D	12/15/21 16:33	nmc	
Benzene [71-43-2]^	360	U	ug/L	500	360	1200	1L15004	EPA 8260D	12/15/21 16:33	nmc	
Bromodichloromethane [75-27-4]^	260	U	ug/L	500	260	1200	1L15004	EPA 8260D	12/15/21 16:33	nmc	
Bromoform [75-25-2]^	380	U	ug/L	500	380	1200	1L15004	EPA 8260D	12/15/21 16:33	nmc	
Bromomethane [74-83-9]^	480	U	ug/L	500	480	1200	1L15004	EPA 8260D	12/15/21 16:33	nmc	QV-01
Carbon disulfide [75-15-0]^	1200	U	ug/L	500	1200	6200	1L15004	EPA 8260D	12/15/21 16:33	nmc	
Carbon Tetrachloride [56-23-5]^	470	U	ug/L	500	470	1200	1L15004	EPA 8260D	12/15/21 16:33	nmc	
Chlorobenzene [108-90-7]^	360	U	ug/L	500	360	1200	1L15004	EPA 8260D	12/15/21 16:33	nmc	
Chloroethane [75-00-3]^	490	U	ug/L	500	490	1200	1L15004	EPA 8260D	12/15/21 16:33	nmc	
Chloroform [67-66-3]^	400	U	ug/L	500	400	1200	1L15004	EPA 8260D	12/15/21 16:33	nmc	
Chloromethane [74-87-3]^	410	U	ug/L	500	410	1200	1L15004	EPA 8260D	12/15/21 16:33	nmc	QV-01
cis-1,2-Dichloroethene [156-59-2]^	**2300**		ug/L	500	260	1200	1L15004	EPA 8260D	12/15/21 16:33	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	300	U	ug/L	500	300	1200	1L15004	EPA 8260D	12/15/21 16:33	nmc	
Cyclohexane [110-82-7]^	460	U	ug/L	500	460	1200	1L15004	EPA 8260D	12/15/21 16:33	nmc	
Dibromochloromethane [124-48-1]^	250	U	ug/L	500	250	1200	1L15004	EPA 8260D	12/15/21 16:33	nmc	
Dichlorodifluoromethane [75-71-8]^	370	U	ug/L	500	370	1200	1L15004	EPA 8260D	12/15/21 16:33	nmc	QV-01
Ethylbenzene [100-41-4]^	340	U	ug/L	500	340	1200	1L15004	EPA 8260D	12/15/21 16:33	nmc	
Freon 113 [76-13-1]^	360	U	ug/L	500	360	1200	1L15004	EPA 8260D	12/15/21 16:33	nmc	
Isopropylbenzene [98-82-8]^	340	U	ug/L	500	340	1200	1L15004	EPA 8260D	12/15/21 16:33	nmc	
Methyl acetate [79-20-9]^	480	U	ug/L	500	480	1200	1L15004	EPA 8260D	12/15/21 16:33	nmc	
Methylene Chloride [75-09-2]^	1200	U	ug/L	500	1200	6200	1L15004	EPA 8260D	12/15/21 16:33	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	300	U	ug/L	500	300	1200	1L15004	EPA 8260D	12/15/21 16:33	nmc	
Styrene [100-42-5]^	300	U	ug/L	500	300	1200	1L15004	EPA 8260D	12/15/21 16:33	nmc	
Tetrachloroethene [127-18-4]^	380	U	ug/L	500	380	1200	1L15004	EPA 8260D	12/15/21 16:33	nmc	
Toluene [108-88-3]^	360	U	ug/L	500	360	1200	1L15004	EPA 8260D	12/15/21 16:33	nmc	
trans-1,2-Dichloroethene [156-60-5]^	360	U	ug/L	500	360	1200	1L15004	EPA 8260D	12/15/21 16:33	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	360	U	ug/L	500	360	1200	1L15004	EPA 8260D	12/15/21 16:33	nmc	
Trichloroethene [79-01-6]^	**27000**		ug/L	500	440	1200	1L15004	EPA 8260D	12/15/21 16:33	nmc	
Trichlorofluoromethane [75-69-4]^	470	U	ug/L	500	470	1200	1L15004	EPA 8260D	12/15/21 16:33	nmc	
Vinyl chloride [75-01-4]^	**360**	I	ug/L	500	360	1200	1L15004	EPA 8260D	12/15/21 16:33	nmc	

ANALYTICAL RESULTS

Description: LC34-RW02B-20211214 **Lab Sample ID:** AE09872-06 **Received:** 12/14/21 15:12

Matrix: Ground Water **Sampled:** 12/14/21 09:50 **Work Order:** AE09872

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*45*	*1*	*50.0*	*90 %*	*41-142*	*1L15004*	*EPA 8260D*	*12/15/21 16:33*	*nmc*	
Dibromofluoromethane	*52*	*1*	*50.0*	*103 %*	*53-146*	*1L15004*	*EPA 8260D*	*12/15/21 16:33*	*nmc*	
Toluene-d8	*47*	*1*	*50.0*	*93 %*	*41-146*	*1L15004*	*EPA 8260D*	*12/15/21 16:33*	*nmc*	

ANALYTICAL RESULTS

Description: LC34-RW05B-20211214 **Lab Sample ID:** AE09872-07 **Received:** 12/14/21 15:12

Matrix: Ground Water **Sampled:** 12/14/21 10:00 **Work Order:** AE09872

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	1L15004	EPA 8260D	12/15/21 17:02	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	1L15004	EPA 8260D	12/15/21 17:02	nmc	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	1L15004	EPA 8260D	12/15/21 17:02	nmc	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	1L15004	EPA 8260D	12/15/21 17:02	nmc	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	1L15004	EPA 8260D	12/15/21 17:02	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	1L15004	EPA 8260D	12/15/21 17:02	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	1L15004	EPA 8260D	12/15/21 17:02	nmc	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	1L15004	EPA 8260D	12/15/21 17:02	nmc	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	1L15004	EPA 8260D	12/15/21 17:02	nmc	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	1L15004	EPA 8260D	12/15/21 17:02	nmc	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	1L15004	EPA 8260D	12/15/21 17:02	nmc	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	1L15004	EPA 8260D	12/15/21 17:02	nmc	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	1L15004	EPA 8260D	12/15/21 17:02	nmc	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	1L15004	EPA 8260D	12/15/21 17:02	nmc	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	1L15004	EPA 8260D	12/15/21 17:02	nmc	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	1L15004	EPA 8260D	12/15/21 17:02	nmc	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	1L15004	EPA 8260D	12/15/21 17:02	nmc	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	1L15004	EPA 8260D	12/15/21 17:02	nmc	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	1L15004	EPA 8260D	12/15/21 17:02	nmc	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	1L15004	EPA 8260D	12/15/21 17:02	nmc	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	1L15004	EPA 8260D	12/15/21 17:02	nmc	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	1L15004	EPA 8260D	12/15/21 17:02	nmc	
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	1L15004	EPA 8260D	12/15/21 17:02	nmc	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	1L15004	EPA 8260D	12/15/21 17:02	nmc	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	1L15004	EPA 8260D	12/15/21 17:02	nmc	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	1L15004	EPA 8260D	12/15/21 17:02	nmc	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	1L15004	EPA 8260D	12/15/21 17:02	nmc	QV-01
cis-1,2-Dichloroethene [156-59-2]^	**76**		ug/L	5	2.6	12	1L16010	EPA 8260D	12/16/21 11:45	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	1L15004	EPA 8260D	12/15/21 17:02	nmc	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	1L15004	EPA 8260D	12/15/21 17:02	nmc	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	1L15004	EPA 8260D	12/15/21 17:02	nmc	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	1L15004	EPA 8260D	12/15/21 17:02	nmc	QV-01
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	1L15004	EPA 8260D	12/15/21 17:02	nmc	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	1L15004	EPA 8260D	12/15/21 17:02	nmc	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	1L15004	EPA 8260D	12/15/21 17:02	nmc	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	1L15004	EPA 8260D	12/15/21 17:02	nmc	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	1L15004	EPA 8260D	12/15/21 17:02	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	1L15004	EPA 8260D	12/15/21 17:02	nmc	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	1L15004	EPA 8260D	12/15/21 17:02	nmc	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	1L15004	EPA 8260D	12/15/21 17:02	nmc	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	1L15004	EPA 8260D	12/15/21 17:02	nmc	
trans-1,2-Dichloroethene [156-60-5]^	**5.0**		ug/L	1	0.73	2.5	1L15004	EPA 8260D	12/15/21 17:02	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	1L15004	EPA 8260D	12/15/21 17:02	nmc	
Trichloroethene [79-01-6]^	**6.8**		ug/L	1	0.89	2.5	1L15004	EPA 8260D	12/15/21 17:02	nmc	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	1L15004	EPA 8260D	12/15/21 17:02	nmc	
Vinyl chloride [75-01-4]^	**15**		ug/L	1	0.71	2.5	1L15004	EPA 8260D	12/15/21 17:02	nmc	

ANALYTICAL RESULTS

Description: LC34-RW05B-20211214 **Lab Sample ID:** AE09872-07 **Received:** 12/14/21 15:12

Matrix: Ground Water **Sampled:** 12/14/21 10:00 **Work Order:** AE09872

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*47*	*1*	*50.0*	*93 %*	*41-142*	*1L15004*	*EPA 8260D*	*12/15/21 17:02*	*nmc*	
4-Bromofluorobenzene	*51*	*1*	*50.0*	*101 %*	*41-142*	*1L16010*	*EPA 8260D*	*12/16/21 11:45*	*KKW*	
Dibromofluoromethane	*53*	*1*	*50.0*	*106 %*	*53-146*	*1L15004*	*EPA 8260D*	*12/15/21 17:02*	*nmc*	
Dibromofluoromethane	*50*	*1*	*50.0*	*100 %*	*53-146*	*1L16010*	*EPA 8260D*	*12/16/21 11:45*	*KKW*	
Toluene-d8	*49*	*1*	*50.0*	*98 %*	*41-146*	*1L15004*	*EPA 8260D*	*12/15/21 17:02*	*nmc*	
Toluene-d8	*51*	*1*	*50.0*	*102 %*	*41-146*	*1L16010*	*EPA 8260D*	*12/16/21 11:45*	*KKW*	

ANALYTICAL RESULTS

Description: LC34-RW09A-20211214 **Lab Sample ID:** AE09872-08 **Received:** 12/14/21 15:12

Matrix: Ground Water **Sampled:** 12/14/21 10:10 **Work Order:** AE09872

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	40	U	ug/L	50	40	120	1L15004	EPA 8260D	12/15/21 17:30	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	27	U	ug/L	50	27	120	1L15004	EPA 8260D	12/15/21 17:30	nmc	
1,1,2-Trichloroethane [79-00-5]^	38	U	ug/L	50	38	120	1L15004	EPA 8260D	12/15/21 17:30	nmc	
1,1-Dichloroethane [75-34-3]^	31	U	ug/L	50	31	120	1L15004	EPA 8260D	12/15/21 17:30	nmc	
1,1-Dichloroethene [75-35-4]^	47	U	ug/L	50	47	120	1L15004	EPA 8260D	12/15/21 17:30	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	35	U	ug/L	50	35	120	1L15004	EPA 8260D	12/15/21 17:30	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	48	U	ug/L	50	48	120	1L15004	EPA 8260D	12/15/21 17:30	nmc	
1,2-Dibromoethane [106-93-4]^	39	U	ug/L	50	39	120	1L15004	EPA 8260D	12/15/21 17:30	nmc	
1,2-Dichlorobenzene [95-50-1]^	36	U	ug/L	50	36	120	1L15004	EPA 8260D	12/15/21 17:30	nmc	
1,2-Dichloroethane [107-06-2]^	32	U	ug/L	50	32	120	1L15004	EPA 8260D	12/15/21 17:30	nmc	
1,2-Dichloropropane [78-87-5]^	40	U	ug/L	50	40	120	1L15004	EPA 8260D	12/15/21 17:30	nmc	
1,3-Dichlorobenzene [541-73-1]^	38	U	ug/L	50	38	120	1L15004	EPA 8260D	12/15/21 17:30	nmc	
1,4-Dichlorobenzene [106-46-7]^	38	U	ug/L	50	38	120	1L15004	EPA 8260D	12/15/21 17:30	nmc	
2-Butanone [78-93-3]^	220	U	ug/L	50	220	620	1L15004	EPA 8260D	12/15/21 17:30	nmc	
2-Hexanone [591-78-6]^	120	U	ug/L	50	120	620	1L15004	EPA 8260D	12/15/21 17:30	nmc	
4-Methyl-2-pentanone [108-10-1]^	120	U	ug/L	50	120	620	1L15004	EPA 8260D	12/15/21 17:30	nmc	
Acetone [67-64-1]^	500	U	ug/L	50	500	1200	1L15004	EPA 8260D	12/15/21 17:30	nmc	
Benzene [71-43-2]^	36	U	ug/L	50	36	120	1L15004	EPA 8260D	12/15/21 17:30	nmc	
Bromodichloromethane [75-27-4]^	26	U	ug/L	50	26	120	1L15004	EPA 8260D	12/15/21 17:30	nmc	
Bromoform [75-25-2]^	38	U	ug/L	50	38	120	1L15004	EPA 8260D	12/15/21 17:30	nmc	
Bromomethane [74-83-9]^	48	U	ug/L	50	48	120	1L15004	EPA 8260D	12/15/21 17:30	nmc	QV-01
Carbon disulfide [75-15-0]^	120	U	ug/L	50	120	620	1L15004	EPA 8260D	12/15/21 17:30	nmc	
Carbon Tetrachloride [56-23-5]^	47	U	ug/L	50	47	120	1L15004	EPA 8260D	12/15/21 17:30	nmc	
Chlorobenzene [108-90-7]^	36	U	ug/L	50	36	120	1L15004	EPA 8260D	12/15/21 17:30	nmc	
Chloroethane [75-00-3]^	49	U	ug/L	50	49	120	1L15004	EPA 8260D	12/15/21 17:30	nmc	
Chloroform [67-66-3]^	40	U	ug/L	50	40	120	1L15004	EPA 8260D	12/15/21 17:30	nmc	
Chloromethane [74-87-3]^	41	U	ug/L	50	41	120	1L15004	EPA 8260D	12/15/21 17:30	nmc	QV-01
cis-1,2-Dichloroethene [156-59-2]^	**4400**		ug/L	50	26	120	1L15004	EPA 8260D	12/15/21 17:30	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	30	U	ug/L	50	30	120	1L15004	EPA 8260D	12/15/21 17:30	nmc	
Cyclohexane [110-82-7]^	46	U	ug/L	50	46	120	1L15004	EPA 8260D	12/15/21 17:30	nmc	
Dibromochloromethane [124-48-1]^	25	U	ug/L	50	25	120	1L15004	EPA 8260D	12/15/21 17:30	nmc	
Dichlorodifluoromethane [75-71-8]^	37	U	ug/L	50	37	120	1L15004	EPA 8260D	12/15/21 17:30	nmc	QV-01
Ethylbenzene [100-41-4]^	34	U	ug/L	50	34	120	1L15004	EPA 8260D	12/15/21 17:30	nmc	
Freon 113 [76-13-1]^	36	U	ug/L	50	36	120	1L15004	EPA 8260D	12/15/21 17:30	nmc	
Isopropylbenzene [98-82-8]^	34	U	ug/L	50	34	120	1L15004	EPA 8260D	12/15/21 17:30	nmc	
Methyl acetate [79-20-9]^	48	U	ug/L	50	48	120	1L15004	EPA 8260D	12/15/21 17:30	nmc	
Methylene Chloride [75-09-2]^	120	U	ug/L	50	120	620	1L15004	EPA 8260D	12/15/21 17:30	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	30	U	ug/L	50	30	120	1L15004	EPA 8260D	12/15/21 17:30	nmc	
Styrene [100-42-5]^	30	U	ug/L	50	30	120	1L15004	EPA 8260D	12/15/21 17:30	nmc	
Tetrachloroethene [127-18-4]^	38	U	ug/L	50	38	120	1L15004	EPA 8260D	12/15/21 17:30	nmc	
Toluene [108-88-3]^	36	U	ug/L	50	36	120	1L15004	EPA 8260D	12/15/21 17:30	nmc	
trans-1,2-Dichloroethene [156-60-5]^	**94**	I	ug/L	50	36	120	1L15004	EPA 8260D	12/15/21 17:30	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	36	U	ug/L	50	36	120	1L15004	EPA 8260D	12/15/21 17:30	nmc	
Trichloroethene [79-01-6]^	44	U	ug/L	50	44	120	1L15004	EPA 8260D	12/15/21 17:30	nmc	
Trichlorofluoromethane [75-69-4]^	47	U	ug/L	50	47	120	1L15004	EPA 8260D	12/15/21 17:30	nmc	
Vinyl chloride [75-01-4]^	**1500**		ug/L	50	36	120	1L15004	EPA 8260D	12/15/21 17:30	nmc	

ANALYTICAL RESULTS

Description: LC34-RW09A-20211214 **Lab Sample ID:** AE09872-08 **Received:** 12/14/21 15:12

Matrix: Ground Water **Sampled:** 12/14/21 10:10 **Work Order:** AE09872

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*45*	*1*	*50.0*	*91 %*	*41-142*	*1L15004*	*EPA 8260D*	*12/15/21 17:30*	*nmc*	
Dibromofluoromethane	*53*	*1*	*50.0*	*105 %*	*53-146*	*1L15004*	*EPA 8260D*	*12/15/21 17:30*	*nmc*	
Toluene-d8	*48*	*1*	*50.0*	*95 %*	*41-146*	*1L15004*	*EPA 8260D*	*12/15/21 17:30*	*nmc*	

ANALYTICAL RESULTS

Description: LC34-RW10A-20211214 **Lab Sample ID:** AE09872-09 **Received:** 12/14/21 15:12

Matrix: Ground Water **Sampled:** 12/14/21 10:20 **Work Order:** AE09872

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	16	U	ug/L	20	16	50	1L15004	EPA 8260D	12/15/21 17:59	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	11	U	ug/L	20	11	50	1L15004	EPA 8260D	12/15/21 17:59	nmc	
1,1,2-Trichloroethane [79-00-5]^	15	U	ug/L	20	15	50	1L15004	EPA 8260D	12/15/21 17:59	nmc	
1,1-Dichloroethane [75-34-3]^	12	U	ug/L	20	12	50	1L15004	EPA 8260D	12/15/21 17:59	nmc	
1,1-Dichloroethene [75-35-4]^	19	U	ug/L	20	19	50	1L15004	EPA 8260D	12/15/21 17:59	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	14	U	ug/L	20	14	50	1L15004	EPA 8260D	12/15/21 17:59	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	19	U	ug/L	20	19	50	1L15004	EPA 8260D	12/15/21 17:59	nmc	
1,2-Dibromoethane [106-93-4]^	16	U	ug/L	20	16	50	1L15004	EPA 8260D	12/15/21 17:59	nmc	
1,2-Dichlorobenzene [95-50-1]^	15	U	ug/L	20	15	50	1L15004	EPA 8260D	12/15/21 17:59	nmc	
1,2-Dichloroethane [107-06-2]^	13	U	ug/L	20	13	50	1L15004	EPA 8260D	12/15/21 17:59	nmc	
1,2-Dichloropropane [78-87-5]^	16	U	ug/L	20	16	50	1L15004	EPA 8260D	12/15/21 17:59	nmc	
1,3-Dichlorobenzene [541-73-1]^	15	U	ug/L	20	15	50	1L15004	EPA 8260D	12/15/21 17:59	nmc	
1,4-Dichlorobenzene [106-46-7]^	15	U	ug/L	20	15	50	1L15004	EPA 8260D	12/15/21 17:59	nmc	
2-Butanone [78-93-3]^	90	U	ug/L	20	90	250	1L15004	EPA 8260D	12/15/21 17:59	nmc	
2-Hexanone [591-78-6]^	50	U	ug/L	20	50	250	1L15004	EPA 8260D	12/15/21 17:59	nmc	
4-Methyl-2-pentanone [108-10-1]^	50	U	ug/L	20	50	250	1L15004	EPA 8260D	12/15/21 17:59	nmc	
Acetone [67-64-1]^	200	U	ug/L	20	200	500	1L15004	EPA 8260D	12/15/21 17:59	nmc	
Benzene [71-43-2]^	14	U	ug/L	20	14	50	1L15004	EPA 8260D	12/15/21 17:59	nmc	
Bromodichloromethane [75-27-4]^	10	U	ug/L	20	10	50	1L15004	EPA 8260D	12/15/21 17:59	nmc	
Bromoform [75-25-2]^	15	U	ug/L	20	15	50	1L15004	EPA 8260D	12/15/21 17:59	nmc	
Bromomethane [74-83-9]^	19	U	ug/L	20	19	50	1L15004	EPA 8260D	12/15/21 17:59	nmc	QV-01
Carbon disulfide [75-15-0]^	50	U	ug/L	20	50	250	1L15004	EPA 8260D	12/15/21 17:59	nmc	
Carbon Tetrachloride [56-23-5]^	19	U	ug/L	20	19	50	1L15004	EPA 8260D	12/15/21 17:59	nmc	
Chlorobenzene [108-90-7]^	14	U	ug/L	20	14	50	1L15004	EPA 8260D	12/15/21 17:59	nmc	
Chloroethane [75-00-3]^	20	U	ug/L	20	20	50	1L15004	EPA 8260D	12/15/21 17:59	nmc	
Chloroform [67-66-3]^	16	U	ug/L	20	16	50	1L15004	EPA 8260D	12/15/21 17:59	nmc	
Chloromethane [74-87-3]^	16	U	ug/L	20	16	50	1L15004	EPA 8260D	12/15/21 17:59	nmc	QV-01
cis-1,2-Dichloroethene [156-59-2]^	**1400**		ug/L	20	11	50	1L15004	EPA 8260D	12/15/21 17:59	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	12	U	ug/L	20	12	50	1L15004	EPA 8260D	12/15/21 17:59	nmc	
Cyclohexane [110-82-7]^	19	U	ug/L	20	19	50	1L15004	EPA 8260D	12/15/21 17:59	nmc	
Dibromochloromethane [124-48-1]^	10	U	ug/L	20	10	50	1L15004	EPA 8260D	12/15/21 17:59	nmc	
Dichlorodifluoromethane [75-71-8]^	15	U	ug/L	20	15	50	1L15004	EPA 8260D	12/15/21 17:59	nmc	QV-01
Ethylbenzene [100-41-4]^	14	U	ug/L	20	14	50	1L15004	EPA 8260D	12/15/21 17:59	nmc	
Freon 113 [76-13-1]^	15	U	ug/L	20	15	50	1L15004	EPA 8260D	12/15/21 17:59	nmc	
Isopropylbenzene [98-82-8]^	13	U	ug/L	20	13	50	1L15004	EPA 8260D	12/15/21 17:59	nmc	
Methyl acetate [79-20-9]^	19	U	ug/L	20	19	50	1L15004	EPA 8260D	12/15/21 17:59	nmc	
Methylene Chloride [75-09-2]^	50	U	ug/L	20	50	250	1L15004	EPA 8260D	12/15/21 17:59	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	12	U	ug/L	20	12	50	1L15004	EPA 8260D	12/15/21 17:59	nmc	
Styrene [100-42-5]^	12	U	ug/L	20	12	50	1L15004	EPA 8260D	12/15/21 17:59	nmc	
Tetrachloroethene [127-18-4]^	15	U	ug/L	20	15	50	1L15004	EPA 8260D	12/15/21 17:59	nmc	
Toluene [108-88-3]^	14	U	ug/L	20	14	50	1L15004	EPA 8260D	12/15/21 17:59	nmc	
trans-1,2-Dichloroethene [156-60-5]^	**55**		ug/L	20	15	50	1L15004	EPA 8260D	12/15/21 17:59	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	15	U	ug/L	20	15	50	1L15004	EPA 8260D	12/15/21 17:59	nmc	
Trichloroethene [79-01-6]^	18	U	ug/L	20	18	50	1L15004	EPA 8260D	12/15/21 17:59	nmc	
Trichlorofluoromethane [75-69-4]^	19	U	ug/L	20	19	50	1L15004	EPA 8260D	12/15/21 17:59	nmc	
Vinyl chloride [75-01-4]^	**730**		ug/L	20	14	50	1L15004	EPA 8260D	12/15/21 17:59	nmc	

ANALYTICAL RESULTS

Description: LC34-RW10A-20211214 **Lab Sample ID:** AE09872-09 **Received:** 12/14/21 15:12

Matrix: Ground Water **Sampled:** 12/14/21 10:20 **Work Order:** AE09872

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*47*	*1*	*50.0*	*94 %*	*41-142*	*1L15004*	*EPA 8260D*	*12/15/21 17:59*	*nmc*	
Dibromofluoromethane	*53*	*1*	*50.0*	*106 %*	*53-146*	*1L15004*	*EPA 8260D*	*12/15/21 17:59*	*nmc*	
Toluene-d8	*49*	*1*	*50.0*	*98 %*	*41-146*	*1L15004*	*EPA 8260D*	*12/15/21 17:59*	*nmc*	

ANALYTICAL RESULTS

Description: LC34-RW12A-20211214 **Lab Sample ID:** AE09872-10 **Received:** 12/14/21 15:12

Matrix: Ground Water **Sampled:** 12/14/21 10:30 **Work Order:** AE09872

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	40	U	ug/L	50	40	120	1L15016	EPA 8260D	12/15/21 14:58	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	27	U	ug/L	50	27	120	1L15016	EPA 8260D	12/15/21 14:58	KKW	
1,1,2-Trichloroethane [79-00-5]^	38	U	ug/L	50	38	120	1L15016	EPA 8260D	12/15/21 14:58	KKW	
1,1-Dichloroethane [75-34-3]^	31	U	ug/L	50	31	120	1L15016	EPA 8260D	12/15/21 14:58	KKW	
1,1-Dichloroethene [75-35-4]^	47	U	ug/L	50	47	120	1L15016	EPA 8260D	12/15/21 14:58	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	35	U	ug/L	50	35	120	1L15016	EPA 8260D	12/15/21 14:58	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	48	U	ug/L	50	48	120	1L15016	EPA 8260D	12/15/21 14:58	KKW	
1,2-Dibromoethane [106-93-4]^	39	U	ug/L	50	39	120	1L15016	EPA 8260D	12/15/21 14:58	KKW	
1,2-Dichlorobenzene [95-50-1]^	36	U	ug/L	50	36	120	1L15016	EPA 8260D	12/15/21 14:58	KKW	
1,2-Dichloroethane [107-06-2]^	32	U	ug/L	50	32	120	1L15016	EPA 8260D	12/15/21 14:58	KKW	
1,2-Dichloropropane [78-87-5]^	40	U	ug/L	50	40	120	1L15016	EPA 8260D	12/15/21 14:58	KKW	
1,3-Dichlorobenzene [541-73-1]^	38	U	ug/L	50	38	120	1L15016	EPA 8260D	12/15/21 14:58	KKW	
1,4-Dichlorobenzene [106-46-7]^	38	U	ug/L	50	38	120	1L15016	EPA 8260D	12/15/21 14:58	KKW	
2-Butanone [78-93-3]^	220	U	ug/L	50	220	620	1L15016	EPA 8260D	12/15/21 14:58	KKW	
2-Hexanone [591-78-6]^	120	U	ug/L	50	120	620	1L15016	EPA 8260D	12/15/21 14:58	KKW	
4-Methyl-2-pentanone [108-10-1]^	120	U	ug/L	50	120	620	1L15016	EPA 8260D	12/15/21 14:58	KKW	
Acetone [67-64-1]^	500	U	ug/L	50	500	1200	1L15016	EPA 8260D	12/15/21 14:58	KKW	
Benzene [71-43-2]^	36	U	ug/L	50	36	120	1L15016	EPA 8260D	12/15/21 14:58	KKW	
Bromodichloromethane [75-27-4]^	26	U	ug/L	50	26	120	1L15016	EPA 8260D	12/15/21 14:58	KKW	
Bromoform [75-25-2]^	38	U	ug/L	50	38	120	1L15016	EPA 8260D	12/15/21 14:58	KKW	
Bromomethane [74-83-9]^	48	U	ug/L	50	48	120	1L15016	EPA 8260D	12/15/21 14:58	KKW	QV-01
Carbon disulfide [75-15-0]^	120	U	ug/L	50	120	620	1L15016	EPA 8260D	12/15/21 14:58	KKW	
Carbon Tetrachloride [56-23-5]^	47	U	ug/L	50	47	120	1L15016	EPA 8260D	12/15/21 14:58	KKW	QV-01
Chlorobenzene [108-90-7]^	36	U	ug/L	50	36	120	1L15016	EPA 8260D	12/15/21 14:58	KKW	
Chloroethane [75-00-3]^	49	U	ug/L	50	49	120	1L15016	EPA 8260D	12/15/21 14:58	KKW	
Chloroform [67-66-3]^	40	U	ug/L	50	40	120	1L15016	EPA 8260D	12/15/21 14:58	KKW	
Chloromethane [74-87-3]^	41	U	ug/L	50	41	120	1L15016	EPA 8260D	12/15/21 14:58	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**4300**		ug/L	50	26	120	1L15016	EPA 8260D	12/15/21 14:58	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	30	U	ug/L	50	30	120	1L15016	EPA 8260D	12/15/21 14:58	KKW	
Cyclohexane [110-82-7]^	46	U	ug/L	50	46	120	1L15016	EPA 8260D	12/15/21 14:58	KKW	
Dibromochloromethane [124-48-1]^	25	U	ug/L	50	25	120	1L15016	EPA 8260D	12/15/21 14:58	KKW	
Dichlorodifluoromethane [75-71-8]^	37	U	ug/L	50	37	120	1L15016	EPA 8260D	12/15/21 14:58	KKW	
Ethylbenzene [100-41-4]^	34	U	ug/L	50	34	120	1L15016	EPA 8260D	12/15/21 14:58	KKW	
Freon 113 [76-13-1]^	36	U	ug/L	50	36	120	1L15016	EPA 8260D	12/15/21 14:58	KKW	
Isopropylbenzene [98-82-8]^	34	U	ug/L	50	34	120	1L15016	EPA 8260D	12/15/21 14:58	KKW	
Methyl acetate [79-20-9]^	48	U	ug/L	50	48	120	1L15016	EPA 8260D	12/15/21 14:58	KKW	
Methylene Chloride [75-09-2]^	120	U	ug/L	50	120	620	1L15016	EPA 8260D	12/15/21 14:58	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	30	U	ug/L	50	30	120	1L15016	EPA 8260D	12/15/21 14:58	KKW	
Styrene [100-42-5]^	30	U	ug/L	50	30	120	1L15016	EPA 8260D	12/15/21 14:58	KKW	
Tetrachloroethene [127-18-4]^	38	U	ug/L	50	38	120	1L15016	EPA 8260D	12/15/21 14:58	KKW	
Toluene [108-88-3]^	36	U	ug/L	50	36	120	1L15016	EPA 8260D	12/15/21 14:58	KKW	
trans-1,2-Dichloroethene [156-60-5]^	**99**	I	ug/L	50	36	120	1L15016	EPA 8260D	12/15/21 14:58	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	36	U	ug/L	50	36	120	1L15016	EPA 8260D	12/15/21 14:58	KKW	
Trichloroethene [79-01-6]^	44	U	ug/L	50	44	120	1L15016	EPA 8260D	12/15/21 14:58	KKW	
Trichlorofluoromethane [75-69-4]^	47	U	ug/L	50	47	120	1L15016	EPA 8260D	12/15/21 14:58	KKW	
Vinyl chloride [75-01-4]^	**810**		ug/L	50	36	120	1L15016	EPA 8260D	12/15/21 14:58	KKW	

ANALYTICAL RESULTS

Description: LC34-RW12A-20211214 **Lab Sample ID:** AE09872-10 **Received:** 12/14/21 15:12

Matrix: Ground Water **Sampled:** 12/14/21 10:30 **Work Order:** AE09872

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*53*	*1*	*50.0*	*105 %*	*41-142*	*1L15016*	*EPA 8260D*	*12/15/21 14:58*	*KKW*	
Dibromofluoromethane	*49*	*1*	*50.0*	*99 %*	*53-146*	*1L15016*	*EPA 8260D*	*12/15/21 14:58*	*KKW*	
Toluene-d8	*50*	*1*	*50.0*	*100 %*	*41-146*	*1L15016*	*EPA 8260D*	*12/15/21 14:58*	*KKW*	

ANALYTICAL RESULTS

Description: LC34-RW13A-20211214 **Lab Sample ID:** AE09872-11 **Received:** 12/14/21 15:12

Matrix: Ground Water **Sampled:** 12/14/21 10:40 **Work Order:** AE09872

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	80	U	ug/L	100	80	250	1L15016	EPA 8260D	12/15/21 15:26	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	54	U	ug/L	100	54	250	1L15016	EPA 8260D	12/15/21 15:26	KKW	
1,1,2-Trichloroethane [79-00-5]^	76	U	ug/L	100	76	250	1L15016	EPA 8260D	12/15/21 15:26	KKW	
1,1-Dichloroethane [75-34-3]^	62	U	ug/L	100	62	250	1L15016	EPA 8260D	12/15/21 15:26	KKW	
1,1-Dichloroethene [75-35-4]^	94	U	ug/L	100	94	250	1L15016	EPA 8260D	12/15/21 15:26	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	70	U	ug/L	100	70	250	1L15016	EPA 8260D	12/15/21 15:26	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	96	U	ug/L	100	96	250	1L15016	EPA 8260D	12/15/21 15:26	KKW	
1,2-Dibromoethane [106-93-4]^	78	U	ug/L	100	78	250	1L15016	EPA 8260D	12/15/21 15:26	KKW	
1,2-Dichlorobenzene [95-50-1]^	73	U	ug/L	100	73	250	1L15016	EPA 8260D	12/15/21 15:26	KKW	
1,2-Dichloroethane [107-06-2]^	63	U	ug/L	100	63	250	1L15016	EPA 8260D	12/15/21 15:26	KKW	
1,2-Dichloropropane [78-87-5]^	80	U	ug/L	100	80	250	1L15016	EPA 8260D	12/15/21 15:26	KKW	
1,3-Dichlorobenzene [541-73-1]^	77	U	ug/L	100	77	250	1L15016	EPA 8260D	12/15/21 15:26	KKW	
1,4-Dichlorobenzene [106-46-7]^	76	U	ug/L	100	76	250	1L15016	EPA 8260D	12/15/21 15:26	KKW	
2-Butanone [78-93-3]^	450	U	ug/L	100	450	1200	1L15016	EPA 8260D	12/15/21 15:26	KKW	
2-Hexanone [591-78-6]^	250	U	ug/L	100	250	1200	1L15016	EPA 8260D	12/15/21 15:26	KKW	
4-Methyl-2-pentanone [108-10-1]^	250	U	ug/L	100	250	1200	1L15016	EPA 8260D	12/15/21 15:26	KKW	
Acetone [67-64-1]^	1000	U	ug/L	100	1000	2500	1L15016	EPA 8260D	12/15/21 15:26	KKW	
Benzene [71-43-2]^	71	U	ug/L	100	71	250	1L15016	EPA 8260D	12/15/21 15:26	KKW	
Bromodichloromethane [75-27-4]^	52	U	ug/L	100	52	250	1L15016	EPA 8260D	12/15/21 15:26	KKW	
Bromoform [75-25-2]^	75	U	ug/L	100	75	250	1L15016	EPA 8260D	12/15/21 15:26	KKW	
Bromomethane [74-83-9]^	95	U	ug/L	100	95	250	1L15016	EPA 8260D	12/15/21 15:26	KKW	QV-01
Carbon disulfide [75-15-0]^	250	U	ug/L	100	250	1200	1L15016	EPA 8260D	12/15/21 15:26	KKW	
Carbon Tetrachloride [56-23-5]^	94	U	ug/L	100	94	250	1L15016	EPA 8260D	12/15/21 15:26	KKW	QV-01
Chlorobenzene [108-90-7]^	72	U	ug/L	100	72	250	1L15016	EPA 8260D	12/15/21 15:26	KKW	
Chloroethane [75-00-3]^	98	U	ug/L	100	98	250	1L15016	EPA 8260D	12/15/21 15:26	KKW	
Chloroform [67-66-3]^	80	U	ug/L	100	80	250	1L15016	EPA 8260D	12/15/21 15:26	KKW	
Chloromethane [74-87-3]^	82	U	ug/L	100	82	250	1L15016	EPA 8260D	12/15/21 15:26	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**7000**		ug/L	100	53	250	1L15016	EPA 8260D	12/15/21 15:26	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	59	U	ug/L	100	59	250	1L15016	EPA 8260D	12/15/21 15:26	KKW	
Cyclohexane [110-82-7]^	93	U	ug/L	100	93	250	1L15016	EPA 8260D	12/15/21 15:26	KKW	
Dibromochloromethane [124-48-1]^	50	U	ug/L	100	50	250	1L15016	EPA 8260D	12/15/21 15:26	KKW	
Dichlorodifluoromethane [75-71-8]^	74	U	ug/L	100	74	250	1L15016	EPA 8260D	12/15/21 15:26	KKW	
Ethylbenzene [100-41-4]^	69	U	ug/L	100	69	250	1L15016	EPA 8260D	12/15/21 15:26	KKW	
Freon 113 [76-13-1]^	73	U	ug/L	100	73	250	1L15016	EPA 8260D	12/15/21 15:26	KKW	
Isopropylbenzene [98-82-8]^	67	U	ug/L	100	67	250	1L15016	EPA 8260D	12/15/21 15:26	KKW	
Methyl acetate [79-20-9]^	95	U	ug/L	100	95	250	1L15016	EPA 8260D	12/15/21 15:26	KKW	
Methylene Chloride [75-09-2]^	250	U	ug/L	100	250	1200	1L15016	EPA 8260D	12/15/21 15:26	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	60	U	ug/L	100	60	250	1L15016	EPA 8260D	12/15/21 15:26	KKW	
Styrene [100-42-5]^	61	U	ug/L	100	61	250	1L15016	EPA 8260D	12/15/21 15:26	KKW	
Tetrachloroethene [127-18-4]^	76	U	ug/L	100	76	250	1L15016	EPA 8260D	12/15/21 15:26	KKW	
Toluene [108-88-3]^	72	U	ug/L	100	72	250	1L15016	EPA 8260D	12/15/21 15:26	KKW	
trans-1,2-Dichloroethene [156-60-5]^	**130**	I	ug/L	100	73	250	1L15016	EPA 8260D	12/15/21 15:26	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	73	U	ug/L	100	73	250	1L15016	EPA 8260D	12/15/21 15:26	KKW	
Trichloroethene [79-01-6]^	89	U	ug/L	100	89	250	1L15016	EPA 8260D	12/15/21 15:26	KKW	
Trichlorofluoromethane [75-69-4]^	94	U	ug/L	100	94	250	1L15016	EPA 8260D	12/15/21 15:26	KKW	
Vinyl chloride [75-01-4]^	**1600**		ug/L	100	71	250	1L15016	EPA 8260D	12/15/21 15:26	KKW	

ANALYTICAL RESULTS

Description: LC34-RW13A-20211214 **Lab Sample ID:** AE09872-11 **Received:** 12/14/21 15:12

Matrix: Ground Water **Sampled:** 12/14/21 10:40 **Work Order:** AE09872

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*53*	*1*	*50.0*	*106 %*	*41-142*	*1L15016*	*EPA 8260D*	*12/15/21 15:26*	*KKW*	
Dibromofluoromethane	*50*	*1*	*50.0*	*100 %*	*53-146*	*1L15016*	*EPA 8260D*	*12/15/21 15:26*	*KKW*	
Toluene-d8	*51*	*1*	*50.0*	*102 %*	*41-146*	*1L15016*	*EPA 8260D*	*12/15/21 15:26*	*KKW*	

ANALYTICAL RESULTS

Description: LC34-RW14A-20211214 **Lab Sample ID:** AE09872-12 **Received:** 12/14/21 15:12

Matrix: Ground Water **Sampled:** 12/14/21 10:50 **Work Order:** AE09872

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	40	U	ug/L	50	40	120	1L15016	EPA 8260D	12/15/21 15:53	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	27	U	ug/L	50	27	120	1L15016	EPA 8260D	12/15/21 15:53	KKW	
1,1,2-Trichloroethane [79-00-5]^	38	U	ug/L	50	38	120	1L15016	EPA 8260D	12/15/21 15:53	KKW	
1,1-Dichloroethane [75-34-3]^	31	U	ug/L	50	31	120	1L15016	EPA 8260D	12/15/21 15:53	KKW	
1,1-Dichloroethene [75-35-4]^	47	U	ug/L	50	47	120	1L15016	EPA 8260D	12/15/21 15:53	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	35	U	ug/L	50	35	120	1L15016	EPA 8260D	12/15/21 15:53	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	48	U	ug/L	50	48	120	1L15016	EPA 8260D	12/15/21 15:53	KKW	
1,2-Dibromoethane [106-93-4]^	39	U	ug/L	50	39	120	1L15016	EPA 8260D	12/15/21 15:53	KKW	
1,2-Dichlorobenzene [95-50-1]^	36	U	ug/L	50	36	120	1L15016	EPA 8260D	12/15/21 15:53	KKW	
1,2-Dichloroethane [107-06-2]^	32	U	ug/L	50	32	120	1L15016	EPA 8260D	12/15/21 15:53	KKW	
1,2-Dichloropropane [78-87-5]^	40	U	ug/L	50	40	120	1L15016	EPA 8260D	12/15/21 15:53	KKW	
1,3-Dichlorobenzene [541-73-1]^	38	U	ug/L	50	38	120	1L15016	EPA 8260D	12/15/21 15:53	KKW	
1,4-Dichlorobenzene [106-46-7]^	38	U	ug/L	50	38	120	1L15016	EPA 8260D	12/15/21 15:53	KKW	
2-Butanone [78-93-3]^	220	U	ug/L	50	220	620	1L15016	EPA 8260D	12/15/21 15:53	KKW	
2-Hexanone [591-78-6]^	120	U	ug/L	50	120	620	1L15016	EPA 8260D	12/15/21 15:53	KKW	
4-Methyl-2-pentanone [108-10-1]^	120	U	ug/L	50	120	620	1L15016	EPA 8260D	12/15/21 15:53	KKW	
Acetone [67-64-1]^	500	U	ug/L	50	500	1200	1L15016	EPA 8260D	12/15/21 15:53	KKW	
Benzene [71-43-2]^	36	U	ug/L	50	36	120	1L15016	EPA 8260D	12/15/21 15:53	KKW	
Bromodichloromethane [75-27-4]^	26	U	ug/L	50	26	120	1L15016	EPA 8260D	12/15/21 15:53	KKW	
Bromoform [75-25-2]^	38	U	ug/L	50	38	120	1L15016	EPA 8260D	12/15/21 15:53	KKW	
Bromomethane [74-83-9]^	48	U	ug/L	50	48	120	1L15016	EPA 8260D	12/15/21 15:53	KKW	QV-01
Carbon disulfide [75-15-0]^	120	U	ug/L	50	120	620	1L15016	EPA 8260D	12/15/21 15:53	KKW	
Carbon Tetrachloride [56-23-5]^	47	U	ug/L	50	47	120	1L15016	EPA 8260D	12/15/21 15:53	KKW	QV-01
Chlorobenzene [108-90-7]^	36	U	ug/L	50	36	120	1L15016	EPA 8260D	12/15/21 15:53	KKW	
Chloroethane [75-00-3]^	49	U	ug/L	50	49	120	1L15016	EPA 8260D	12/15/21 15:53	KKW	
Chloroform [67-66-3]^	40	U	ug/L	50	40	120	1L15016	EPA 8260D	12/15/21 15:53	KKW	
Chloromethane [74-87-3]^	41	U	ug/L	50	41	120	1L15016	EPA 8260D	12/15/21 15:53	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**3900**		ug/L	50	26	120	1L15016	EPA 8260D	12/15/21 15:53	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	30	U	ug/L	50	30	120	1L15016	EPA 8260D	12/15/21 15:53	KKW	
Cyclohexane [110-82-7]^	46	U	ug/L	50	46	120	1L15016	EPA 8260D	12/15/21 15:53	KKW	
Dibromochloromethane [124-48-1]^	25	U	ug/L	50	25	120	1L15016	EPA 8260D	12/15/21 15:53	KKW	
Dichlorodifluoromethane [75-71-8]^	37	U	ug/L	50	37	120	1L15016	EPA 8260D	12/15/21 15:53	KKW	
Ethylbenzene [100-41-4]^	34	U	ug/L	50	34	120	1L15016	EPA 8260D	12/15/21 15:53	KKW	
Freon 113 [76-13-1]^	36	U	ug/L	50	36	120	1L15016	EPA 8260D	12/15/21 15:53	KKW	
Isopropylbenzene [98-82-8]^	34	U	ug/L	50	34	120	1L15016	EPA 8260D	12/15/21 15:53	KKW	
Methyl acetate [79-20-9]^	48	U	ug/L	50	48	120	1L15016	EPA 8260D	12/15/21 15:53	KKW	
Methylene Chloride [75-09-2]^	120	U	ug/L	50	120	620	1L15016	EPA 8260D	12/15/21 15:53	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	30	U	ug/L	50	30	120	1L15016	EPA 8260D	12/15/21 15:53	KKW	
Styrene [100-42-5]^	30	U	ug/L	50	30	120	1L15016	EPA 8260D	12/15/21 15:53	KKW	
Tetrachloroethene [127-18-4]^	38	U	ug/L	50	38	120	1L15016	EPA 8260D	12/15/21 15:53	KKW	
Toluene [108-88-3]^	36	U	ug/L	50	36	120	1L15016	EPA 8260D	12/15/21 15:53	KKW	
trans-1,2-Dichloroethene [156-60-5]^	**82**	I	ug/L	50	36	120	1L15016	EPA 8260D	12/15/21 15:53	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	36	U	ug/L	50	36	120	1L15016	EPA 8260D	12/15/21 15:53	KKW	
Trichloroethene [79-01-6]^	44	U	ug/L	50	44	120	1L15016	EPA 8260D	12/15/21 15:53	KKW	
Trichlorofluoromethane [75-69-4]^	47	U	ug/L	50	47	120	1L15016	EPA 8260D	12/15/21 15:53	KKW	
Vinyl chloride [75-01-4]^	**850**		ug/L	50	36	120	1L15016	EPA 8260D	12/15/21 15:53	KKW	

ANALYTICAL RESULTS

Description: LC34-RW14A-20211214 **Lab Sample ID:** AE09872-12 **Received:** 12/14/21 15:12

Matrix: Ground Water **Sampled:** 12/14/21 10:50 **Work Order:** AE09872

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*53*	*1*	*50.0*	*106 %*	*41-142*	*1L15016*	*EPA 8260D*	*12/15/21 15:53*	*KKW*	
Dibromofluoromethane	*49*	*1*	*50.0*	*97 %*	*53-146*	*1L15016*	*EPA 8260D*	*12/15/21 15:53*	*KKW*	
Toluene-d8	*51*	*1*	*50.0*	*101 %*	*41-146*	*1L15016*	*EPA 8260D*	*12/15/21 15:53*	*KKW*	

ANALYTICAL RESULTS

Description: LC34-RW15A-20211214 **Lab Sample ID:** AE09872-13 **Received:** 12/14/21 15:12

Matrix: Ground Water **Sampled:** 12/14/21 11:00 **Work Order:** AE09872

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	20	U	ug/L	25	20	62	1L15016	EPA 8260D	12/15/21 09:53	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	14	U	ug/L	25	14	62	1L15016	EPA 8260D	12/15/21 09:53	KKW	
1,1,2-Trichloroethane [79-00-5]^	19	U	ug/L	25	19	62	1L15016	EPA 8260D	12/15/21 09:53	KKW	
1,1-Dichloroethane [75-34-3]^	16	U	ug/L	25	16	62	1L15016	EPA 8260D	12/15/21 09:53	KKW	
1,1-Dichloroethene [75-35-4]^	24	U	ug/L	25	24	62	1L15016	EPA 8260D	12/15/21 09:53	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	18	U	ug/L	25	18	62	1L15016	EPA 8260D	12/15/21 09:53	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	24	U	ug/L	25	24	62	1L15016	EPA 8260D	12/15/21 09:53	KKW	
1,2-Dibromoethane [106-93-4]^	20	U	ug/L	25	20	62	1L15016	EPA 8260D	12/15/21 09:53	KKW	
1,2-Dichlorobenzene [95-50-1]^	18	U	ug/L	25	18	62	1L15016	EPA 8260D	12/15/21 09:53	KKW	
1,2-Dichloroethane [107-06-2]^	16	U	ug/L	25	16	62	1L15016	EPA 8260D	12/15/21 09:53	KKW	
1,2-Dichloropropane [78-87-5]^	20	U	ug/L	25	20	62	1L15016	EPA 8260D	12/15/21 09:53	KKW	
1,3-Dichlorobenzene [541-73-1]^	19	U	ug/L	25	19	62	1L15016	EPA 8260D	12/15/21 09:53	KKW	
1,4-Dichlorobenzene [106-46-7]^	19	U	ug/L	25	19	62	1L15016	EPA 8260D	12/15/21 09:53	KKW	
2-Butanone [78-93-3]^	110	U	ug/L	25	110	310	1L15016	EPA 8260D	12/15/21 09:53	KKW	
2-Hexanone [591-78-6]^	62	U	ug/L	25	62	310	1L15016	EPA 8260D	12/15/21 09:53	KKW	
4-Methyl-2-pentanone [108-10-1]^	62	U	ug/L	25	62	310	1L15016	EPA 8260D	12/15/21 09:53	KKW	
Acetone [67-64-1]^	250	U	ug/L	25	250	620	1L15016	EPA 8260D	12/15/21 09:53	KKW	
Benzene [71-43-2]^	18	U	ug/L	25	18	62	1L15016	EPA 8260D	12/15/21 09:53	KKW	
Bromodichloromethane [75-27-4]^	13	U	ug/L	25	13	62	1L15016	EPA 8260D	12/15/21 09:53	KKW	
Bromoform [75-25-2]^	19	U	ug/L	25	19	62	1L15016	EPA 8260D	12/15/21 09:53	KKW	
Bromomethane [74-83-9]^	24	U	ug/L	25	24	62	1L15016	EPA 8260D	12/15/21 09:53	KKW	QV-01
Carbon disulfide [75-15-0]^	62	U	ug/L	25	62	310	1L15016	EPA 8260D	12/15/21 09:53	KKW	
Carbon Tetrachloride [56-23-5]^	24	U	ug/L	25	24	62	1L15016	EPA 8260D	12/15/21 09:53	KKW	QV-01
Chlorobenzene [108-90-7]^	18	U	ug/L	25	18	62	1L15016	EPA 8260D	12/15/21 09:53	KKW	
Chloroethane [75-00-3]^	24	U	ug/L	25	24	62	1L15016	EPA 8260D	12/15/21 09:53	KKW	
Chloroform [67-66-3]^	20	U	ug/L	25	20	62	1L15016	EPA 8260D	12/15/21 09:53	KKW	
Chloromethane [74-87-3]^	20	U	ug/L	25	20	62	1L15016	EPA 8260D	12/15/21 09:53	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**2000**		ug/L	25	13	62	1L15016	EPA 8260D	12/15/21 09:53	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	15	U	ug/L	25	15	62	1L15016	EPA 8260D	12/15/21 09:53	KKW	
Cyclohexane [110-82-7]^	23	U	ug/L	25	23	62	1L15016	EPA 8260D	12/15/21 09:53	KKW	
Dibromochloromethane [124-48-1]^	12	U	ug/L	25	12	62	1L15016	EPA 8260D	12/15/21 09:53	KKW	
Dichlorodifluoromethane [75-71-8]^	18	U	ug/L	25	18	62	1L15016	EPA 8260D	12/15/21 09:53	KKW	
Ethylbenzene [100-41-4]^	17	U	ug/L	25	17	62	1L15016	EPA 8260D	12/15/21 09:53	KKW	
Freon 113 [76-13-1]^	18	U	ug/L	25	18	62	1L15016	EPA 8260D	12/15/21 09:53	KKW	
Isopropylbenzene [98-82-8]^	17	U	ug/L	25	17	62	1L15016	EPA 8260D	12/15/21 09:53	KKW	
Methyl acetate [79-20-9]^	24	U	ug/L	25	24	62	1L15016	EPA 8260D	12/15/21 09:53	KKW	
Methylene Chloride [75-09-2]^	62	U	ug/L	25	62	310	1L15016	EPA 8260D	12/15/21 09:53	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	15	U	ug/L	25	15	62	1L15016	EPA 8260D	12/15/21 09:53	KKW	
Styrene [100-42-5]^	15	U	ug/L	25	15	62	1L15016	EPA 8260D	12/15/21 09:53	KKW	
Tetrachloroethene [127-18-4]^	19	U	ug/L	25	19	62	1L15016	EPA 8260D	12/15/21 09:53	KKW	
Toluene [108-88-3]^	18	U	ug/L	25	18	62	1L15016	EPA 8260D	12/15/21 09:53	KKW	
trans-1,2-Dichloroethene [156-60-5]^	**44**	I	ug/L	25	18	62	1L15016	EPA 8260D	12/15/21 09:53	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	18	U	ug/L	25	18	62	1L15016	EPA 8260D	12/15/21 09:53	KKW	
Trichloroethene [79-01-6]^	22	U	ug/L	25	22	62	1L15016	EPA 8260D	12/15/21 09:53	KKW	
Trichlorofluoromethane [75-69-4]^	24	U	ug/L	25	24	62	1L15016	EPA 8260D	12/15/21 09:53	KKW	
Vinyl chloride [75-01-4]^	**440**		ug/L	25	18	62	1L15016	EPA 8260D	12/15/21 09:53	KKW	

ANALYTICAL RESULTS

Description: LC34-RW16B-20211214 **Lab Sample ID:** AE09872-14 **Received:** 12/14/21 15:12

Matrix: Ground Water **Sampled:** 12/14/21 11:10 **Work Order:** AE09872

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	2.0	U	ug/L	2.5	2.0	6.2	1L15016	EPA 8260D	12/15/21 16:21	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	1.4	U	ug/L	2.5	1.4	6.2	1L15016	EPA 8260D	12/15/21 16:21	KKW	
1,1,2-Trichloroethane [79-00-5]^	1.9	U	ug/L	2.5	1.9	6.2	1L15016	EPA 8260D	12/15/21 16:21	KKW	
1,1-Dichloroethane [75-34-3]^	1.6	U	ug/L	2.5	1.6	6.2	1L15016	EPA 8260D	12/15/21 16:21	KKW	
1,1-Dichloroethene [75-35-4]^	2.4	U	ug/L	2.5	2.4	6.2	1L15016	EPA 8260D	12/15/21 16:21	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	1.8	U	ug/L	2.5	1.8	6.2	1L15016	EPA 8260D	12/15/21 16:21	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	2.4	U	ug/L	2.5	2.4	6.2	1L15016	EPA 8260D	12/15/21 16:21	KKW	
1,2-Dibromoethane [106-93-4]^	2.0	U	ug/L	2.5	2.0	6.2	1L15016	EPA 8260D	12/15/21 16:21	KKW	
1,2-Dichlorobenzene [95-50-1]^	1.8	U	ug/L	2.5	1.8	6.2	1L15016	EPA 8260D	12/15/21 16:21	KKW	
1,2-Dichloroethane [107-06-2]^	1.6	U	ug/L	2.5	1.6	6.2	1L15016	EPA 8260D	12/15/21 16:21	KKW	
1,2-Dichloropropane [78-87-5]^	2.0	U	ug/L	2.5	2.0	6.2	1L15016	EPA 8260D	12/15/21 16:21	KKW	
1,3-Dichlorobenzene [541-73-1]^	1.9	U	ug/L	2.5	1.9	6.2	1L15016	EPA 8260D	12/15/21 16:21	KKW	
1,4-Dichlorobenzene [106-46-7]^	1.9	U	ug/L	2.5	1.9	6.2	1L15016	EPA 8260D	12/15/21 16:21	KKW	
2-Butanone [78-93-3]^	11	U	ug/L	2.5	11	31	1L15016	EPA 8260D	12/15/21 16:21	KKW	
2-Hexanone [591-78-6]^	6.2	U	ug/L	2.5	6.2	31	1L15016	EPA 8260D	12/15/21 16:21	KKW	
4-Methyl-2-pentanone [108-10-1]^	6.2	U	ug/L	2.5	6.2	31	1L15016	EPA 8260D	12/15/21 16:21	KKW	
Acetone [67-64-1]^	25	U	ug/L	2.5	25	62	1L15016	EPA 8260D	12/15/21 16:21	KKW	
Benzene [71-43-2]^	1.8	U	ug/L	2.5	1.8	6.2	1L15016	EPA 8260D	12/15/21 16:21	KKW	
Bromodichloromethane [75-27-4]^	1.3	U	ug/L	2.5	1.3	6.2	1L15016	EPA 8260D	12/15/21 16:21	KKW	
Bromoform [75-25-2]^	1.9	U	ug/L	2.5	1.9	6.2	1L15016	EPA 8260D	12/15/21 16:21	KKW	
Bromomethane [74-83-9]^	2.4	U	ug/L	2.5	2.4	6.2	1L15016	EPA 8260D	12/15/21 16:21	KKW	QV-01
Carbon disulfide [75-15-0]^	6.2	U	ug/L	2.5	6.2	31	1L15016	EPA 8260D	12/15/21 16:21	KKW	
Carbon Tetrachloride [56-23-5]^	2.4	U	ug/L	2.5	2.4	6.2	1L15016	EPA 8260D	12/15/21 16:21	KKW	QV-01
Chlorobenzene [108-90-7]^	1.8	U	ug/L	2.5	1.8	6.2	1L15016	EPA 8260D	12/15/21 16:21	KKW	
Chloroethane [75-00-3]^	2.4	U	ug/L	2.5	2.4	6.2	1L15016	EPA 8260D	12/15/21 16:21	KKW	
Chloroform [67-66-3]^	2.0	U	ug/L	2.5	2.0	6.2	1L15016	EPA 8260D	12/15/21 16:21	KKW	
Chloromethane [74-87-3]^	2.0	U	ug/L	2.5	2.0	6.2	1L15016	EPA 8260D	12/15/21 16:21	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**220**		ug/L	2.5	1.3	6.2	1L15016	EPA 8260D	12/15/21 16:21	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	1.5	U	ug/L	2.5	1.5	6.2	1L15016	EPA 8260D	12/15/21 16:21	KKW	
Cyclohexane [110-82-7]^	2.3	U	ug/L	2.5	2.3	6.2	1L15016	EPA 8260D	12/15/21 16:21	KKW	
Dibromochloromethane [124-48-1]^	1.2	U	ug/L	2.5	1.2	6.2	1L15016	EPA 8260D	12/15/21 16:21	KKW	
Dichlorodifluoromethane [75-71-8]^	1.8	U	ug/L	2.5	1.8	6.2	1L15016	EPA 8260D	12/15/21 16:21	KKW	
Ethylbenzene [100-41-4]^	1.7	U	ug/L	2.5	1.7	6.2	1L15016	EPA 8260D	12/15/21 16:21	KKW	
Freon 113 [76-13-1]^	1.8	U	ug/L	2.5	1.8	6.2	1L15016	EPA 8260D	12/15/21 16:21	KKW	
Isopropylbenzene [98-82-8]^	1.7	U	ug/L	2.5	1.7	6.2	1L15016	EPA 8260D	12/15/21 16:21	KKW	
Methyl acetate [79-20-9]^	2.4	U	ug/L	2.5	2.4	6.2	1L15016	EPA 8260D	12/15/21 16:21	KKW	
Methylene Chloride [75-09-2]^	6.2	U	ug/L	2.5	6.2	31	1L15016	EPA 8260D	12/15/21 16:21	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	1.5	U	ug/L	2.5	1.5	6.2	1L15016	EPA 8260D	12/15/21 16:21	KKW	
Styrene [100-42-5]^	1.5	U	ug/L	2.5	1.5	6.2	1L15016	EPA 8260D	12/15/21 16:21	KKW	
Tetrachloroethene [127-18-4]^	1.9	U	ug/L	2.5	1.9	6.2	1L15016	EPA 8260D	12/15/21 16:21	KKW	
Toluene [108-88-3]^	1.8	U	ug/L	2.5	1.8	6.2	1L15016	EPA 8260D	12/15/21 16:21	KKW	
trans-1,2-Dichloroethene [156-60-5]^	**6.6**		ug/L	2.5	1.8	6.2	1L15016	EPA 8260D	12/15/21 16:21	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	1.8	U	ug/L	2.5	1.8	6.2	1L15016	EPA 8260D	12/15/21 16:21	KKW	
Trichloroethene [79-01-6]^	**340**		ug/L	10	8.9	25	1L16010	EPA 8260D	12/16/21 12:13	KKW	
Trichlorofluoromethane [75-69-4]^	2.4	U	ug/L	2.5	2.4	6.2	1L15016	EPA 8260D	12/15/21 16:21	KKW	
Vinyl chloride [75-01-4]^	**20**		ug/L	2.5	1.8	6.2	1L15016	EPA 8260D	12/15/21 16:21	KKW	

ANALYTICAL RESULTS

Description: LC34-RW16B-20211214 **Lab Sample ID:** AE09872-14 **Received:** 12/14/21 15:12

Matrix: Ground Water **Sampled:** 12/14/21 11:10 **Work Order:** AE09872

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*54*	*1*	*50.0*	*108 %*	*41-142*	*1L15016*	*EPA 8260D*	*12/15/21 16:21*	*KKW*	
4-Bromofluorobenzene	*52*	*1*	*50.0*	*104 %*	*41-142*	*1L16010*	*EPA 8260D*	*12/16/21 12:13*	*KKW*	
Dibromofluoromethane	*49*	*1*	*50.0*	*98 %*	*53-146*	*1L15016*	*EPA 8260D*	*12/15/21 16:21*	*KKW*	
Dibromofluoromethane	*50*	*1*	*50.0*	*100 %*	*53-146*	*1L16010*	*EPA 8260D*	*12/16/21 12:13*	*KKW*	
Toluene-d8	*54*	*1*	*50.0*	*107 %*	*41-146*	*1L15016*	*EPA 8260D*	*12/15/21 16:21*	*KKW*	
Toluene-d8	*52*	*1*	*50.0*	*105 %*	*41-146*	*1L16010*	*EPA 8260D*	*12/16/21 12:13*	*KKW*	

ANALYTICAL RESULTS

Description: LC34-RW17C-20211214 **Lab Sample ID:** AE09872-15 **Received:** 12/14/21 15:12

Matrix: Ground Water **Sampled:** 12/14/21 11:20 **Work Order:** AE09872

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	2000	U	ug/L	2500	2000	6200	1L15016	EPA 8260D	12/15/21 16:49	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	1400	U	ug/L	2500	1400	6200	1L15016	EPA 8260D	12/15/21 16:49	KKW	
1,1,2-Trichloroethane [79-00-5]^	1900	U	ug/L	2500	1900	6200	1L15016	EPA 8260D	12/15/21 16:49	KKW	
1,1-Dichloroethane [75-34-3]^	1600	U	ug/L	2500	1600	6200	1L15016	EPA 8260D	12/15/21 16:49	KKW	
1,1-Dichloroethene [75-35-4]^	2400	U	ug/L	2500	2400	6200	1L15016	EPA 8260D	12/15/21 16:49	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	1800	U	ug/L	2500	1800	6200	1L15016	EPA 8260D	12/15/21 16:49	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	2400	U	ug/L	2500	2400	6200	1L15016	EPA 8260D	12/15/21 16:49	KKW	
1,2-Dibromoethane [106-93-4]^	2000	U	ug/L	2500	2000	6200	1L15016	EPA 8260D	12/15/21 16:49	KKW	
1,2-Dichlorobenzene [95-50-1]^	1800	U	ug/L	2500	1800	6200	1L15016	EPA 8260D	12/15/21 16:49	KKW	
1,2-Dichloroethane [107-06-2]^	1600	U	ug/L	2500	1600	6200	1L15016	EPA 8260D	12/15/21 16:49	KKW	
1,2-Dichloropropane [78-87-5]^	2000	U	ug/L	2500	2000	6200	1L15016	EPA 8260D	12/15/21 16:49	KKW	
1,3-Dichlorobenzene [541-73-1]^	1900	U	ug/L	2500	1900	6200	1L15016	EPA 8260D	12/15/21 16:49	KKW	
1,4-Dichlorobenzene [106-46-7]^	1900	U	ug/L	2500	1900	6200	1L15016	EPA 8260D	12/15/21 16:49	KKW	
2-Butanone [78-93-3]^	11000	U	ug/L	2500	11000	31000	1L15016	EPA 8260D	12/15/21 16:49	KKW	
2-Hexanone [591-78-6]^	6200	U	ug/L	2500	6200	31000	1L15016	EPA 8260D	12/15/21 16:49	KKW	
4-Methyl-2-pentanone [108-10-1]^	6200	U	ug/L	2500	6200	31000	1L15016	EPA 8260D	12/15/21 16:49	KKW	
Acetone [67-64-1]^	25000	U	ug/L	2500	25000	62000	1L15016	EPA 8260D	12/15/21 16:49	KKW	
Benzene [71-43-2]^	1800	U	ug/L	2500	1800	6200	1L15016	EPA 8260D	12/15/21 16:49	KKW	
Bromodichloromethane [75-27-4]^	1300	U	ug/L	2500	1300	6200	1L15016	EPA 8260D	12/15/21 16:49	KKW	
Bromoform [75-25-2]^	1900	U	ug/L	2500	1900	6200	1L15016	EPA 8260D	12/15/21 16:49	KKW	
Bromomethane [74-83-9]^	2400	U	ug/L	2500	2400	6200	1L15016	EPA 8260D	12/15/21 16:49	KKW	QV-01
Carbon disulfide [75-15-0]^	6200	U	ug/L	2500	6200	31000	1L15016	EPA 8260D	12/15/21 16:49	KKW	
Carbon Tetrachloride [56-23-5]^	2400	U	ug/L	2500	2400	6200	1L15016	EPA 8260D	12/15/21 16:49	KKW	QV-01
Chlorobenzene [108-90-7]^	1800	U	ug/L	2500	1800	6200	1L15016	EPA 8260D	12/15/21 16:49	KKW	
Chloroethane [75-00-3]^	2400	U	ug/L	2500	2400	6200	1L15016	EPA 8260D	12/15/21 16:49	KKW	
Chloroform [67-66-3]^	2000	U	ug/L	2500	2000	6200	1L15016	EPA 8260D	12/15/21 16:49	KKW	
Chloromethane [74-87-3]^	2000	U	ug/L	2500	2000	6200	1L15016	EPA 8260D	12/15/21 16:49	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**3700**	I	ug/L	2500	1300	6200	1L15016	EPA 8260D	12/15/21 16:49	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	1500	U	ug/L	2500	1500	6200	1L15016	EPA 8260D	12/15/21 16:49	KKW	
Cyclohexane [110-82-7]^	2300	U	ug/L	2500	2300	6200	1L15016	EPA 8260D	12/15/21 16:49	KKW	
Dibromochloromethane [124-48-1]^	1200	U	ug/L	2500	1200	6200	1L15016	EPA 8260D	12/15/21 16:49	KKW	
Dichlorodifluoromethane [75-71-8]^	1800	U	ug/L	2500	1800	6200	1L15016	EPA 8260D	12/15/21 16:49	KKW	
Ethylbenzene [100-41-4]^	1700	U	ug/L	2500	1700	6200	1L15016	EPA 8260D	12/15/21 16:49	KKW	
Freon 113 [76-13-1]^	1800	U	ug/L	2500	1800	6200	1L15016	EPA 8260D	12/15/21 16:49	KKW	
Isopropylbenzene [98-82-8]^	1700	U	ug/L	2500	1700	6200	1L15016	EPA 8260D	12/15/21 16:49	KKW	
Methyl acetate [79-20-9]^	2400	U	ug/L	2500	2400	6200	1L15016	EPA 8260D	12/15/21 16:49	KKW	
Methylene Chloride [75-09-2]^	6200	U	ug/L	2500	6200	31000	1L15016	EPA 8260D	12/15/21 16:49	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	1500	U	ug/L	2500	1500	6200	1L15016	EPA 8260D	12/15/21 16:49	KKW	
Styrene [100-42-5]^	1500	U	ug/L	2500	1500	6200	1L15016	EPA 8260D	12/15/21 16:49	KKW	
Tetrachloroethene [127-18-4]^	1900	U	ug/L	2500	1900	6200	1L15016	EPA 8260D	12/15/21 16:49	KKW	
Toluene [108-88-3]^	1800	U	ug/L	2500	1800	6200	1L15016	EPA 8260D	12/15/21 16:49	KKW	
trans-1,2-Dichloroethene [156-60-5]^	1800	U	ug/L	2500	1800	6200	1L15016	EPA 8260D	12/15/21 16:49	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	1800	U	ug/L	2500	1800	6200	1L15016	EPA 8260D	12/15/21 16:49	KKW	
Trichloroethene [79-01-6]^	**130000**		ug/L	2500	2200	6200	1L15016	EPA 8260D	12/15/21 16:49	KKW	
Trichlorofluoromethane [75-69-4]^	2400	U	ug/L	2500	2400	6200	1L15016	EPA 8260D	12/15/21 16:49	KKW	
Vinyl chloride [75-01-4]^	1800	U	ug/L	2500	1800	6200	1L15016	EPA 8260D	12/15/21 16:49	KKW	

ANALYTICAL RESULTS

Description: LC34-RW17C-20211214 **Lab Sample ID:** AE09872-15 **Received:** 12/14/21 15:12

Matrix: Ground Water **Sampled:** 12/14/21 11:20 **Work Order:** AE09872

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*54*	*1*	*50.0*	*109 %*	*41-142*	*1L15016*	*EPA 8260D*	*12/15/21 16:49*	*KKW*	
Dibromofluoromethane	*49*	*1*	*50.0*	*98 %*	*53-146*	*1L15016*	*EPA 8260D*	*12/15/21 16:49*	*KKW*	
Toluene-d8	*53*	*1*	*50.0*	*106 %*	*41-146*	*1L15016*	*EPA 8260D*	*12/15/21 16:49*	*KKW*	

ANALYTICAL RESULTS

Description: LC34-RW18C-20211214 **Lab Sample ID:** AE09872-16 **Received:** 12/14/21 15:12

Matrix: Ground Water **Sampled:** 12/14/21 11:30 **Work Order:** AE09872

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	1600	U	ug/L	2000	1600	5000	1L15016	EPA 8260D	12/15/21 17:17	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	1100	U	ug/L	2000	1100	5000	1L15016	EPA 8260D	12/15/21 17:17	KKW	
1,1,2-Trichloroethane [79-00-5]^	1500	U	ug/L	2000	1500	5000	1L15016	EPA 8260D	12/15/21 17:17	KKW	
1,1-Dichloroethane [75-34-3]^	1200	U	ug/L	2000	1200	5000	1L15016	EPA 8260D	12/15/21 17:17	KKW	
1,1-Dichloroethene [75-35-4]^	1900	U	ug/L	2000	1900	5000	1L15016	EPA 8260D	12/15/21 17:17	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	1400	U	ug/L	2000	1400	5000	1L15016	EPA 8260D	12/15/21 17:17	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	1900	U	ug/L	2000	1900	5000	1L15016	EPA 8260D	12/15/21 17:17	KKW	
1,2-Dibromoethane [106-93-4]^	1600	U	ug/L	2000	1600	5000	1L15016	EPA 8260D	12/15/21 17:17	KKW	
1,2-Dichlorobenzene [95-50-1]^	1500	U	ug/L	2000	1500	5000	1L15016	EPA 8260D	12/15/21 17:17	KKW	
1,2-Dichloroethane [107-06-2]^	1300	U	ug/L	2000	1300	5000	1L15016	EPA 8260D	12/15/21 17:17	KKW	
1,2-Dichloropropane [78-87-5]^	1600	U	ug/L	2000	1600	5000	1L15016	EPA 8260D	12/15/21 17:17	KKW	
1,3-Dichlorobenzene [541-73-1]^	1500	U	ug/L	2000	1500	5000	1L15016	EPA 8260D	12/15/21 17:17	KKW	
1,4-Dichlorobenzene [106-46-7]^	1500	U	ug/L	2000	1500	5000	1L15016	EPA 8260D	12/15/21 17:17	KKW	
2-Butanone [78-93-3]^	9000	U	ug/L	2000	9000	25000	1L15016	EPA 8260D	12/15/21 17:17	KKW	
2-Hexanone [591-78-6]^	5000	U	ug/L	2000	5000	25000	1L15016	EPA 8260D	12/15/21 17:17	KKW	
4-Methyl-2-pentanone [108-10-1]^	5000	U	ug/L	2000	5000	25000	1L15016	EPA 8260D	12/15/21 17:17	KKW	
Acetone [67-64-1]^	20000	U	ug/L	2000	20000	50000	1L15016	EPA 8260D	12/15/21 17:17	KKW	
Benzene [71-43-2]^	1400	U	ug/L	2000	1400	5000	1L15016	EPA 8260D	12/15/21 17:17	KKW	
Bromodichloromethane [75-27-4]^	1000	U	ug/L	2000	1000	5000	1L15016	EPA 8260D	12/15/21 17:17	KKW	
Bromoform [75-25-2]^	1500	U	ug/L	2000	1500	5000	1L15016	EPA 8260D	12/15/21 17:17	KKW	
Bromomethane [74-83-9]^	1900	U	ug/L	2000	1900	5000	1L15016	EPA 8260D	12/15/21 17:17	KKW	QV-01
Carbon disulfide [75-15-0]^	5000	U	ug/L	2000	5000	25000	1L15016	EPA 8260D	12/15/21 17:17	KKW	
Carbon Tetrachloride [56-23-5]^	1900	U	ug/L	2000	1900	5000	1L15016	EPA 8260D	12/15/21 17:17	KKW	QV-01
Chlorobenzene [108-90-7]^	1400	U	ug/L	2000	1400	5000	1L15016	EPA 8260D	12/15/21 17:17	KKW	
Chloroethane [75-00-3]^	2000	U	ug/L	2000	2000	5000	1L15016	EPA 8260D	12/15/21 17:17	KKW	
Chloroform [67-66-3]^	1600	U	ug/L	2000	1600	5000	1L15016	EPA 8260D	12/15/21 17:17	KKW	
Chloromethane [74-87-3]^	1600	U	ug/L	2000	1600	5000	1L15016	EPA 8260D	12/15/21 17:17	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**3100**	I	ug/L	2000	1100	5000	1L15016	EPA 8260D	12/15/21 17:17	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	1200	U	ug/L	2000	1200	5000	1L15016	EPA 8260D	12/15/21 17:17	KKW	
Cyclohexane [110-82-7]^	1900	U	ug/L	2000	1900	5000	1L15016	EPA 8260D	12/15/21 17:17	KKW	
Dibromochloromethane [124-48-1]^	1000	U	ug/L	2000	1000	5000	1L15016	EPA 8260D	12/15/21 17:17	KKW	
Dichlorodifluoromethane [75-71-8]^	1500	U	ug/L	2000	1500	5000	1L15016	EPA 8260D	12/15/21 17:17	KKW	
Ethylbenzene [100-41-4]^	1400	U	ug/L	2000	1400	5000	1L15016	EPA 8260D	12/15/21 17:17	KKW	
Freon 113 [76-13-1]^	**2600**	I	ug/L	2000	1500	5000	1L15016	EPA 8260D	12/15/21 17:17	KKW	
Isopropylbenzene [98-82-8]^	1300	U	ug/L	2000	1300	5000	1L15016	EPA 8260D	12/15/21 17:17	KKW	
Methyl acetate [79-20-9]^	1900	U	ug/L	2000	1900	5000	1L15016	EPA 8260D	12/15/21 17:17	KKW	
Methylene Chloride [75-09-2]^	5000	U	ug/L	2000	5000	25000	1L15016	EPA 8260D	12/15/21 17:17	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	1200	U	ug/L	2000	1200	5000	1L15016	EPA 8260D	12/15/21 17:17	KKW	
Styrene [100-42-5]^	1200	U	ug/L	2000	1200	5000	1L15016	EPA 8260D	12/15/21 17:17	KKW	
Tetrachloroethene [127-18-4]^	1500	U	ug/L	2000	1500	5000	1L15016	EPA 8260D	12/15/21 17:17	KKW	
Toluene [108-88-3]^	1400	U	ug/L	2000	1400	5000	1L15016	EPA 8260D	12/15/21 17:17	KKW	
trans-1,2-Dichloroethene [156-60-5]^	1500	U	ug/L	2000	1500	5000	1L15016	EPA 8260D	12/15/21 17:17	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	1500	U	ug/L	2000	1500	5000	1L15016	EPA 8260D	12/15/21 17:17	KKW	
Trichloroethene [79-01-6]^	**510000**		ug/L	20000	18000	50000	1L16010	EPA 8260D	12/16/21 12:41	KKW	
Trichlorofluoromethane [75-69-4]^	1900	U	ug/L	2000	1900	5000	1L15016	EPA 8260D	12/15/21 17:17	KKW	
Vinyl chloride [75-01-4]^	1400	U	ug/L	2000	1400	5000	1L15016	EPA 8260D	12/15/21 17:17	KKW	

ANALYTICAL RESULTS

Description: LC34-RW18C-20211214 **Lab Sample ID:** AE09872-16 **Received:** 12/14/21 15:12

Matrix: Ground Water **Sampled:** 12/14/21 11:30 **Work Order:** AE09872

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*54*	*1*	*50.0*	*107 %*	*41-142*	*1L15016*	*EPA 8260D*	*12/15/21 17:17*	*KKW*	
4-Bromofluorobenzene	*51*	*1*	*50.0*	*102 %*	*41-142*	*1L16010*	*EPA 8260D*	*12/16/21 12:41*	*KKW*	
Dibromofluoromethane	*48*	*1*	*50.0*	*96 %*	*53-146*	*1L15016*	*EPA 8260D*	*12/15/21 17:17*	*KKW*	
Dibromofluoromethane	*49*	*1*	*50.0*	*99 %*	*53-146*	*1L16010*	*EPA 8260D*	*12/16/21 12:41*	*KKW*	
Toluene-d8	*55*	*1*	*50.0*	*109 %*	*41-146*	*1L15016*	*EPA 8260D*	*12/15/21 17:17*	*KKW*	
Toluene-d8	*52*	*1*	*50.0*	*103 %*	*41-146*	*1L16010*	*EPA 8260D*	*12/16/21 12:41*	*KKW*	

ANALYTICAL RESULTS

Description: LC34-RW19C-20211214 **Lab Sample ID:** AE09872-17 **Received:** 12/14/21 15:12

Matrix: Ground Water **Sampled:** 12/14/21 11:40 **Work Order:** AE09872

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	8000	U	ug/L	10000	8000	25000	1L15016	EPA 8260D	12/15/21 17:44	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	5400	U	ug/L	10000	5400	25000	1L15016	EPA 8260D	12/15/21 17:44	KKW	
1,1,2-Trichloroethane [79-00-5]^	7600	U	ug/L	10000	7600	25000	1L15016	EPA 8260D	12/15/21 17:44	KKW	
1,1-Dichloroethane [75-34-3]^	6200	U	ug/L	10000	6200	25000	1L15016	EPA 8260D	12/15/21 17:44	KKW	
1,1-Dichloroethene [75-35-4]^	9400	U	ug/L	10000	9400	25000	1L15016	EPA 8260D	12/15/21 17:44	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	7000	U	ug/L	10000	7000	25000	1L15016	EPA 8260D	12/15/21 17:44	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	9600	U	ug/L	10000	9600	25000	1L15016	EPA 8260D	12/15/21 17:44	KKW	
1,2-Dibromoethane [106-93-4]^	7800	U	ug/L	10000	7800	25000	1L15016	EPA 8260D	12/15/21 17:44	KKW	
1,2-Dichlorobenzene [95-50-1]^	7300	U	ug/L	10000	7300	25000	1L15016	EPA 8260D	12/15/21 17:44	KKW	
1,2-Dichloroethane [107-06-2]^	6300	U	ug/L	10000	6300	25000	1L15016	EPA 8260D	12/15/21 17:44	KKW	
1,2-Dichloropropane [78-87-5]^	8000	U	ug/L	10000	8000	25000	1L15016	EPA 8260D	12/15/21 17:44	KKW	
1,3-Dichlorobenzene [541-73-1]^	7700	U	ug/L	10000	7700	25000	1L15016	EPA 8260D	12/15/21 17:44	KKW	
1,4-Dichlorobenzene [106-46-7]^	7600	U	ug/L	10000	7600	25000	1L15016	EPA 8260D	12/15/21 17:44	KKW	
2-Butanone [78-93-3]^	45000	U	ug/L	10000	45000	120000	1L15016	EPA 8260D	12/15/21 17:44	KKW	
2-Hexanone [591-78-6]^	25000	U	ug/L	10000	25000	120000	1L15016	EPA 8260D	12/15/21 17:44	KKW	
4-Methyl-2-pentanone [108-10-1]^	25000	U	ug/L	10000	25000	120000	1L15016	EPA 8260D	12/15/21 17:44	KKW	
Acetone [67-64-1]^	100000	U	ug/L	10000	100000	250000	1L15016	EPA 8260D	12/15/21 17:44	KKW	
Benzene [71-43-2]^	7100	U	ug/L	10000	7100	25000	1L15016	EPA 8260D	12/15/21 17:44	KKW	
Bromodichloromethane [75-27-4]^	5200	U	ug/L	10000	5200	25000	1L15016	EPA 8260D	12/15/21 17:44	KKW	
Bromoform [75-25-2]^	7500	U	ug/L	10000	7500	25000	1L15016	EPA 8260D	12/15/21 17:44	KKW	
Bromomethane [74-83-9]^	9500	U	ug/L	10000	9500	25000	1L15016	EPA 8260D	12/15/21 17:44	KKW	QV-01
Carbon disulfide [75-15-0]^	25000	U	ug/L	10000	25000	120000	1L15016	EPA 8260D	12/15/21 17:44	KKW	
Carbon Tetrachloride [56-23-5]^	9400	U	ug/L	10000	9400	25000	1L15016	EPA 8260D	12/15/21 17:44	KKW	QV-01
Chlorobenzene [108-90-7]^	7200	U	ug/L	10000	7200	25000	1L15016	EPA 8260D	12/15/21 17:44	KKW	
Chloroethane [75-00-3]^	9800	U	ug/L	10000	9800	25000	1L15016	EPA 8260D	12/15/21 17:44	KKW	
Chloroform [67-66-3]^	8000	U	ug/L	10000	8000	25000	1L15016	EPA 8260D	12/15/21 17:44	KKW	
Chloromethane [74-87-3]^	8200	U	ug/L	10000	8200	25000	1L15016	EPA 8260D	12/15/21 17:44	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**5700**	I	ug/L	10000	5300	25000	1L15016	EPA 8260D	12/15/21 17:44	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	5900	U	ug/L	10000	5900	25000	1L15016	EPA 8260D	12/15/21 17:44	KKW	
Cyclohexane [110-82-7]^	9300	U	ug/L	10000	9300	25000	1L15016	EPA 8260D	12/15/21 17:44	KKW	
Dibromochloromethane [124-48-1]^	5000	U	ug/L	10000	5000	25000	1L15016	EPA 8260D	12/15/21 17:44	KKW	
Dichlorodifluoromethane [75-71-8]^	7400	U	ug/L	10000	7400	25000	1L15016	EPA 8260D	12/15/21 17:44	KKW	
Ethylbenzene [100-41-4]^	6900	U	ug/L	10000	6900	25000	1L15016	EPA 8260D	12/15/21 17:44	KKW	
Freon 113 [76-13-1]^	7300	U	ug/L	10000	7300	25000	1L15016	EPA 8260D	12/15/21 17:44	KKW	
Isopropylbenzene [98-82-8]^	6700	U	ug/L	10000	6700	25000	1L15016	EPA 8260D	12/15/21 17:44	KKW	
Methyl acetate [79-20-9]^	9500	U	ug/L	10000	9500	25000	1L15016	EPA 8260D	12/15/21 17:44	KKW	
Methylene Chloride [75-09-2]^	25000	U	ug/L	10000	25000	120000	1L15016	EPA 8260D	12/15/21 17:44	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	6000	U	ug/L	10000	6000	25000	1L15016	EPA 8260D	12/15/21 17:44	KKW	
Styrene [100-42-5]^	6100	U	ug/L	10000	6100	25000	1L15016	EPA 8260D	12/15/21 17:44	KKW	
Tetrachloroethene [127-18-4]^	7600	U	ug/L	10000	7600	25000	1L15016	EPA 8260D	12/15/21 17:44	KKW	
Toluene [108-88-3]^	7200	U	ug/L	10000	7200	25000	1L15016	EPA 8260D	12/15/21 17:44	KKW	
trans-1,2-Dichloroethene [156-60-5]^	7300	U	ug/L	10000	7300	25000	1L15016	EPA 8260D	12/15/21 17:44	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	7300	U	ug/L	10000	7300	25000	1L15016	EPA 8260D	12/15/21 17:44	KKW	
Trichloroethene [79-01-6]^	**550000**		ug/L	10000	8900	25000	1L15016	EPA 8260D	12/15/21 17:44	KKW	
Trichlorofluoromethane [75-69-4]^	9400	U	ug/L	10000	9400	25000	1L15016	EPA 8260D	12/15/21 17:44	KKW	
Vinyl chloride [75-01-4]^	7100	U	ug/L	10000	7100	25000	1L15016	EPA 8260D	12/15/21 17:44	KKW	

ANALYTICAL RESULTS

Description: LC34-RW19C-20211214 **Lab Sample ID:** AE09872-17 **Received:** 12/14/21 15:12

Matrix: Ground Water **Sampled:** 12/14/21 11:40 **Work Order:** AE09872

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*54*	*1*	*50.0*	*107 %*	*41-142*	*1L15016*	*EPA 8260D*	*12/15/21 17:44*	*KKW*	
Dibromofluoromethane	*48*	*1*	*50.0*	*97 %*	*53-146*	*1L15016*	*EPA 8260D*	*12/15/21 17:44*	*KKW*	
Toluene-d8	*52*	*1*	*50.0*	*104 %*	*41-146*	*1L15016*	*EPA 8260D*	*12/15/21 17:44*	*KKW*	

ANALYTICAL RESULTS

Description: LC34-RW20C-20211214 **Lab Sample ID:** AE09872-18 **Received:** 12/14/21 15:12

Matrix: Ground Water **Sampled:** 12/14/21 11:50 **Work Order:** AE09872

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	4000	U	ug/L	5000	4000	12000	1L15016	EPA 8260D	12/15/21 18:12	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	2700	U	ug/L	5000	2700	12000	1L15016	EPA 8260D	12/15/21 18:12	KKW	
1,1,2-Trichloroethane [79-00-5]^	3800	U	ug/L	5000	3800	12000	1L15016	EPA 8260D	12/15/21 18:12	KKW	
1,1-Dichloroethane [75-34-3]^	3100	U	ug/L	5000	3100	12000	1L15016	EPA 8260D	12/15/21 18:12	KKW	
1,1-Dichloroethene [75-35-4]^	4700	U	ug/L	5000	4700	12000	1L15016	EPA 8260D	12/15/21 18:12	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	3500	U	ug/L	5000	3500	12000	1L15016	EPA 8260D	12/15/21 18:12	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	4800	U	ug/L	5000	4800	12000	1L15016	EPA 8260D	12/15/21 18:12	KKW	
1,2-Dibromoethane [106-93-4]^	3900	U	ug/L	5000	3900	12000	1L15016	EPA 8260D	12/15/21 18:12	KKW	
1,2-Dichlorobenzene [95-50-1]^	3600	U	ug/L	5000	3600	12000	1L15016	EPA 8260D	12/15/21 18:12	KKW	
1,2-Dichloroethane [107-06-2]^	3200	U	ug/L	5000	3200	12000	1L15016	EPA 8260D	12/15/21 18:12	KKW	
1,2-Dichloropropane [78-87-5]^	4000	U	ug/L	5000	4000	12000	1L15016	EPA 8260D	12/15/21 18:12	KKW	
1,3-Dichlorobenzene [541-73-1]^	3800	U	ug/L	5000	3800	12000	1L15016	EPA 8260D	12/15/21 18:12	KKW	
1,4-Dichlorobenzene [106-46-7]^	3800	U	ug/L	5000	3800	12000	1L15016	EPA 8260D	12/15/21 18:12	KKW	
2-Butanone [78-93-3]^	22000	U	ug/L	5000	22000	62000	1L15016	EPA 8260D	12/15/21 18:12	KKW	
2-Hexanone [591-78-6]^	12000	U	ug/L	5000	12000	62000	1L15016	EPA 8260D	12/15/21 18:12	KKW	
4-Methyl-2-pentanone [108-10-1]^	12000	U	ug/L	5000	12000	62000	1L15016	EPA 8260D	12/15/21 18:12	KKW	
Acetone [67-64-1]^	50000	U	ug/L	5000	50000	120000	1L15016	EPA 8260D	12/15/21 18:12	KKW	
Benzene [71-43-2]^	3600	U	ug/L	5000	3600	12000	1L15016	EPA 8260D	12/15/21 18:12	KKW	
Bromodichloromethane [75-27-4]^	2600	U	ug/L	5000	2600	12000	1L15016	EPA 8260D	12/15/21 18:12	KKW	
Bromoform [75-25-2]^	3800	U	ug/L	5000	3800	12000	1L15016	EPA 8260D	12/15/21 18:12	KKW	
Bromomethane [74-83-9]^	4800	U	ug/L	5000	4800	12000	1L15016	EPA 8260D	12/15/21 18:12	KKW	QV-01
Carbon disulfide [75-15-0]^	12000	U	ug/L	5000	12000	62000	1L15016	EPA 8260D	12/15/21 18:12	KKW	
Carbon Tetrachloride [56-23-5]^	4700	U	ug/L	5000	4700	12000	1L15016	EPA 8260D	12/15/21 18:12	KKW	QV-01
Chlorobenzene [108-90-7]^	3600	U	ug/L	5000	3600	12000	1L15016	EPA 8260D	12/15/21 18:12	KKW	
Chloroethane [75-00-3]^	4900	U	ug/L	5000	4900	12000	1L15016	EPA 8260D	12/15/21 18:12	KKW	
Chloroform [67-66-3]^	4000	U	ug/L	5000	4000	12000	1L15016	EPA 8260D	12/15/21 18:12	KKW	
Chloromethane [74-87-3]^	4100	U	ug/L	5000	4100	12000	1L15016	EPA 8260D	12/15/21 18:12	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**4000**	I	ug/L	5000	2600	12000	1L15016	EPA 8260D	12/15/21 18:12	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	3000	U	ug/L	5000	3000	12000	1L15016	EPA 8260D	12/15/21 18:12	KKW	
Cyclohexane [110-82-7]^	4600	U	ug/L	5000	4600	12000	1L15016	EPA 8260D	12/15/21 18:12	KKW	
Dibromochloromethane [124-48-1]^	2500	U	ug/L	5000	2500	12000	1L15016	EPA 8260D	12/15/21 18:12	KKW	
Dichlorodifluoromethane [75-71-8]^	3700	U	ug/L	5000	3700	12000	1L15016	EPA 8260D	12/15/21 18:12	KKW	
Ethylbenzene [100-41-4]^	3400	U	ug/L	5000	3400	12000	1L15016	EPA 8260D	12/15/21 18:12	KKW	
Freon 113 [76-13-1]^	3600	U	ug/L	5000	3600	12000	1L15016	EPA 8260D	12/15/21 18:12	KKW	
Isopropylbenzene [98-82-8]^	3400	U	ug/L	5000	3400	12000	1L15016	EPA 8260D	12/15/21 18:12	KKW	
Methyl acetate [79-20-9]^	4800	U	ug/L	5000	4800	12000	1L15016	EPA 8260D	12/15/21 18:12	KKW	
Methylene Chloride [75-09-2]^	12000	U	ug/L	5000	12000	62000	1L15016	EPA 8260D	12/15/21 18:12	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	3000	U	ug/L	5000	3000	12000	1L15016	EPA 8260D	12/15/21 18:12	KKW	
Styrene [100-42-5]^	3000	U	ug/L	5000	3000	12000	1L15016	EPA 8260D	12/15/21 18:12	KKW	
Tetrachloroethene [127-18-4]^	3800	U	ug/L	5000	3800	12000	1L15016	EPA 8260D	12/15/21 18:12	KKW	
Toluene [108-88-3]^	3600	U	ug/L	5000	3600	12000	1L15016	EPA 8260D	12/15/21 18:12	KKW	
trans-1,2-Dichloroethene [156-60-5]^	3600	U	ug/L	5000	3600	12000	1L15016	EPA 8260D	12/15/21 18:12	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	3600	U	ug/L	5000	3600	12000	1L15016	EPA 8260D	12/15/21 18:12	KKW	
Trichloroethene [79-01-6]^	**410000**		ug/L	5000	4400	12000	1L15016	EPA 8260D	12/15/21 18:12	KKW	
Trichlorofluoromethane [75-69-4]^	4700	U	ug/L	5000	4700	12000	1L15016	EPA 8260D	12/15/21 18:12	KKW	
Vinyl chloride [75-01-4]^	3600	U	ug/L	5000	3600	12000	1L15016	EPA 8260D	12/15/21 18:12	KKW	

ANALYTICAL RESULTS

Description: LC34-RW20C-20211214 **Lab Sample ID:** AE09872-18 **Received:** 12/14/21 15:12

Matrix: Ground Water **Sampled:** 12/14/21 11:50 **Work Order:** AE09872

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*53*	*1*	*50.0*	*105 %*	*41-142*	*1L15016*	*EPA 8260D*	*12/15/21 18:12*	*KKW*	
Dibromofluoromethane	*49*	*1*	*50.0*	*97 %*	*53-146*	*1L15016*	*EPA 8260D*	*12/15/21 18:12*	*KKW*	
Toluene-d8	*52*	*1*	*50.0*	*103 %*	*41-146*	*1L15016*	*EPA 8260D*	*12/15/21 18:12*	*KKW*	

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1L15004 - EPA 5030B_MS

Blank (1L15004-BLK1) Prepared: 12/15/2021 00:00 Analyzed: 12/15/2021 09:22

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	0.80	U	2.5	ug/L							
1,1,2,2-Tetrachloroethane	0.54	U	2.5	ug/L							
1,1,2-Trichloroethane	0.76	U	2.5	ug/L							
1,1-Dichloroethane	0.62	U	2.5	ug/L							
1,1-Dichloroethene	0.94	U	2.5	ug/L							
1,2,4-Trichlorobenzene	0.70	U	2.5	ug/L							
1,2-Dibromo-3-chloropropane	0.96	U	2.5	ug/L							
1,2-Dibromoethane	0.78	U	2.5	ug/L							
1,2-Dichlorobenzene	0.73	U	2.5	ug/L							
1,2-Dichloroethane	0.63	U	2.5	ug/L							
1,2-Dichloropropane	0.80	U	2.5	ug/L							
1,3-Dichlorobenzene	0.77	U	2.5	ug/L							
1,4-Dichlorobenzene	0.76	U	2.5	ug/L							
2-Butanone	4.5	U	12	ug/L							
2-Hexanone	2.5	U	12	ug/L							
4-Methyl-2-pentanone	2.5	U	12	ug/L							
Acetone	10	U	25	ug/L							
Benzene	0.71	U	2.5	ug/L							
Bromodichloromethane	0.52	U	2.5	ug/L							
Bromoform	0.75	U	2.5	ug/L							
Bromomethane	0.95	U	2.5	ug/L							
Carbon disulfide	2.5	U	12	ug/L							
Carbon Tetrachloride	0.94	U	2.5	ug/L							
Chlorobenzene	0.72	U	2.5	ug/L							
Chloroethane	0.98	U	2.5	ug/L							
Chloroform	0.80	U	2.5	ug/L							
Chloromethane	0.82	U	2.5	ug/L							
cis-1,2-Dichloroethene	0.53	U	2.5	ug/L							
cis-1,3-Dichloropropene	0.59	U	2.5	ug/L							
Cyclohexane	0.93	U	2.5	ug/L							
Dibromochloromethane	0.50	U	2.5	ug/L							
Dichlorodifluoromethane	0.74	U	2.5	ug/L							
Ethylbenzene	0.69	U	2.5	ug/L							
Freon 113	0.73	U	2.5	ug/L							
Isopropylbenzene	0.67	U	2.5	ug/L							
Methyl acetate	0.95	U	2.5	ug/L							
Methylene Chloride	2.5	U	12	ug/L							
Methyl-tert-Butyl Ether	0.60	U	2.5	ug/L							
Styrene	0.61	U	2.5	ug/L							
Tetrachloroethene	0.76	U	2.5	ug/L							
Toluene	0.72	U	2.5	ug/L							
trans-1,2-Dichloroethene	0.73	U	2.5	ug/L							
trans-1,3-Dichloropropene	0.73	U	2.5	ug/L							
Trichloroethene	0.89	U	2.5	ug/L							
Trichlorofluoromethane	0.94	U	2.5	ug/L							
Vinyl chloride	0.71	U	2.5	ug/L							
4-Bromofluorobenzene	*45*	*I*		*ug/L*	*50.0*		*90*	*41-142*			
Dibromofluoromethane	*50*			*ug/L*	*50.0*		*101*	*53-146*			
Toluene-d8	*46*	*I*		*ug/L*	*50.0*		*92*	*41-146*			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1L15004 - EPA 5030B_MS - Continued

LCS (1L15004-BS1) Prepared: 12/15/2021 00:00 Analyzed: 12/15/2021 07:27

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	24		2.5	ug/L	20.0		118	57-148			
1,1,2,2-Tetrachloroethane	19		2.5	ug/L	20.0		97	60-139			
1,1,2-Trichloroethane	19		2.5	ug/L	20.0		95	57-141			
1,1-Dichloroethane	24		2.5	ug/L	20.0		118	57-142			
1,1-Dichloroethene	23		2.5	ug/L	20.0		114	47-139			
1,2,4-Trichlorobenzene	23		2.5	ug/L	20.0		117	52-159			
1,2-Dibromo-3-chloropropane	21		2.5	ug/L	20.0		105	48-150			
1,2-Dibromoethane	20		2.5	ug/L	20.0		100	57-140			
1,2-Dichlorobenzene	21		2.5	ug/L	20.0		106	63-131			
1,2-Dichloroethane	21		2.5	ug/L	20.0		105	50-156			
1,2-Dichloropropane	20		2.5	ug/L	20.0		100	61-133			
1,3-Dichlorobenzene	21		2.5	ug/L	20.0		104	66-129			
1,4-Dichlorobenzene	20		2.5	ug/L	20.0		100	65-133			
2-Butanone	150		12	ug/L	100		151	10-180			
2-Hexanone	110		12	ug/L	100		106	12-180			
4-Methyl-2-pentanone	100		12	ug/L	100		100	19-180			
Acetone	110		25	ug/L	100		111	10-180			
Benzene	21		2.5	ug/L	20.0		105	56-136			
Bromodichloromethane	21		2.5	ug/L	20.0		107	58-135			
Bromoform	20		2.5	ug/L	20.0		102	46-148			
Bromomethane	14		2.5	ug/L	20.0		68	10-173			
Carbon disulfide	27		12	ug/L	20.0		137	43-153			
Carbon Tetrachloride	22		2.5	ug/L	20.0		109	54-156			
Chlorobenzene	21		2.5	ug/L	20.0		104	51-139			
Chloroethane	21		2.5	ug/L	20.0		104	27-180			
Chloroform	23		2.5	ug/L	20.0		116	58-139			
Chloromethane	20		2.5	ug/L	20.0		101	33-154			
cis-1,2-Dichloroethene	22		2.5	ug/L	20.0		110	56-128			
cis-1,3-Dichloropropene	20		2.5	ug/L	20.0		99	64-128			
Cyclohexane	24		2.5	ug/L	20.0		119	70-130			
Dibromochloromethane	20		2.5	ug/L	20.0		100	50-140			
Dichlorodifluoromethane	24		2.5	ug/L	20.0		118	10-180			
Ethylbenzene	20		2.5	ug/L	20.0		100	63-133			
Freon 113	22		2.5	ug/L	20.0		112	47-173			
Isopropylbenzene	21		2.5	ug/L	20.0		104	60-132			
m,p-Xylenes	40		5.0	ug/L	40.0		100	64-133			
Methyl acetate	22		2.5	ug/L	20.0		112	70-130			
Methylene Chloride	22		12	ug/L	20.0		109	43-142			
Methyl-tert-Butyl Ether	22		2.5	ug/L	20.0		109	51-145			
o-Xylene	20		2.5	ug/L	20.0		102	61-129			
Styrene	21		2.5	ug/L	20.0		106	59-136			
Tetrachloroethene	19		2.5	ug/L	20.0		97	60-147			
Toluene	20		2.5	ug/L	20.0		100	64-131			
trans-1,2-Dichloroethene	23		2.5	ug/L	20.0		116	54-134			
trans-1,3-Dichloropropene	20		2.5	ug/L	20.0		101	65-149			
Trichloroethene	22		2.5	ug/L	20.0		109	62-135			
Trichlorofluoromethane	22		2.5	ug/L	20.0		111	56-155			
Vinyl chloride	22		2.5	ug/L	20.0		110	20-167			
4-Bromofluorobenzene	*46*	*I*		*ug/L*	*50.0*		*93*	*41-142*			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1L15004 - EPA 5030B_MS - Continued

LCS (1L15004-BS1) Continued Prepared: 12/15/2021 00:00 Analyzed: 12/15/2021 07:27

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Dibromofluoromethane	*49*	*I*		*ug/L*	*50.0*		*98*	*53-146*			
Toluene-d8	*46*	*I*		*ug/L*	*50.0*		*92*	*41-146*			

Matrix Spike (1L15004-MS1) Prepared: 12/15/2021 00:00 Analyzed: 12/15/2021 07:55

Source: AE09872-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	26		2.5	ug/L	20.0	0.80 U	132	57-148			
1,1,2,2-Tetrachloroethane	20		2.5	ug/L	20.0	0.54 U	99	60-139			
1,1,2-Trichloroethane	21		2.5	ug/L	20.0	0.76 U	104	57-141			
1,1-Dichloroethane	26		2.5	ug/L	20.0	0.62 U	129	57-142			
1,1-Dichloroethene	25		2.5	ug/L	20.0	0.94 U	124	47-139			
1,2,4-Trichlorobenzene	23		2.5	ug/L	20.0	0.70 U	113	52-159			
1,2-Dibromo-3-chloropropane	20		2.5	ug/L	20.0	0.96 U	102	48-150			
1,2-Dibromoethane	20		2.5	ug/L	20.0	0.78 U	102	57-140			
1,2-Dichlorobenzene	22		2.5	ug/L	20.0	0.73 U	108	63-131			
1,2-Dichloroethane	23		2.5	ug/L	20.0	0.63 U	115	50-156			
1,2-Dichloropropane	21		2.5	ug/L	20.0	0.80 U	106	61-133			
1,3-Dichlorobenzene	22		2.5	ug/L	20.0	0.77 U	108	66-129			
1,4-Dichlorobenzene	21		2.5	ug/L	20.0	0.76 U	103	65-133			
2-Butanone	160		12	ug/L	100	4.5 U	156	10-180			
2-Hexanone	100		12	ug/L	100	2.5 U	101	12-180			
4-Methyl-2-pentanone	100		12	ug/L	100	2.5 U	100	19-180			
Acetone	110		25	ug/L	100	10 U	109	10-180			
Benzene	22		2.5	ug/L	20.0	0.71 U	112	56-136			
Bromodichloromethane	23		2.5	ug/L	20.0	0.52 U	115	58-135			
Bromoform	21		2.5	ug/L	20.0	0.75 U	104	46-148			
Bromomethane	17		2.5	ug/L	20.0	0.95 U	83	10-173			
Carbon disulfide	28		12	ug/L	20.0	2.5 U	140	43-153			
Carbon Tetrachloride	24		2.5	ug/L	20.0	0.94 U	120	54-156			
Chlorobenzene	22		2.5	ug/L	20.0	0.72 U	109	51-139			
Chloroethane	21		2.5	ug/L	20.0	0.98 U	106	27-180			
Chloroform	25		2.5	ug/L	20.0	0.80 U	124	58-139			
Chloromethane	24		2.5	ug/L	20.0	0.82 U	118	33-154			
cis-1,2-Dichloroethene	24		2.5	ug/L	20.0	0.53 U	122	56-128			
cis-1,3-Dichloropropene	21		2.5	ug/L	20.0	0.59 U	105	64-128			
Cyclohexane	26		2.5	ug/L	20.0	0.93 U	132	70-130			QM-07
Dibromochloromethane	21		2.5	ug/L	20.0	0.50 U	104	50-140			
Dichlorodifluoromethane	23		2.5	ug/L	20.0	0.74 U	113	10-180			
Ethylbenzene	22		2.5	ug/L	20.0	0.69 U	108	63-133			
Freon 113	23		2.5	ug/L	20.0	0.73 U	117	47-173			
Isopropylbenzene	22		2.5	ug/L	20.0	0.67 U	111	60-132			
m,p-Xylenes	42		5.0	ug/L	40.0	1.3 U	106	64-133			
Methyl acetate	22		2.5	ug/L	20.0	0.95 U	110	70-130			
Methylene Chloride	23		12	ug/L	20.0	2.5 U	116	43-142			
Methyl-tert-Butyl Ether	22		2.5	ug/L	20.0	0.60 U	112	51-145			
o-Xylene	21		2.5	ug/L	20.0	0.53 U	107	61-129			
Styrene	22		2.5	ug/L	20.0	0.61 U	109	59-136			
Tetrachloroethene	20		2.5	ug/L	20.0	0.76 U	101	60-147			
Toluene	21		2.5	ug/L	20.0	0.72 U	106	64-131			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1L15004 - EPA 5030B_MS - Continued

Matrix Spike (1L15004-MS1) Continued Prepared: 12/15/2021 00:00 Analyzed: 12/15/2021 07:55

Source: AE09872-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
trans-1,2-Dichloroethene	25		2.5	ug/L	20.0	0.73 U	124	54-134			
trans-1,3-Dichloropropene	22		2.5	ug/L	20.0	0.73 U	108	65-149			
Trichloroethene	23		2.5	ug/L	20.0	0.89 U	115	62-135			
Trichlorofluoromethane	23		2.5	ug/L	20.0	0.94 U	116	56-155			
Vinyl chloride	23		2.5	ug/L	20.0	0.71 U	116	20-167			
4-Bromofluorobenzene	*46*	*I*		*ug/L*	*50.0*		*92*	*41-142*			
Dibromofluoromethane	*51*			*ug/L*	*50.0*		*102*	*53-146*			
Toluene-d8	*46*	*I*		*ug/L*	*50.0*		*92*	*41-146*			

Matrix Spike Dup (1L15004-MSD1) Prepared: 12/15/2021 00:00 Analyzed: 12/15/2021 08:24

Source: AE09872-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	24		2.5	ug/L	20.0	0.80 U	121	57-148	9	25	
1,1,2,2-Tetrachloroethane	19		2.5	ug/L	20.0	0.54 U	94	60-139	5	17	
1,1,2-Trichloroethane	20		2.5	ug/L	20.0	0.76 U	98	57-141	6	16	
1,1-Dichloroethane	24		2.5	ug/L	20.0	0.62 U	119	57-142	8	24	
1,1-Dichloroethene	23		2.5	ug/L	20.0	0.94 U	116	47-139	7	16	
1,2,4-Trichlorobenzene	22		2.5	ug/L	20.0	0.70 U	108	52-159	5	24	
1,2-Dibromo-3-chloropropane	19		2.5	ug/L	20.0	0.96 U	96	48-150	6	21	
1,2-Dibromoethane	19		2.5	ug/L	20.0	0.78 U	94	57-140	8	16	
1,2-Dichlorobenzene	21		2.5	ug/L	20.0	0.73 U	104	63-131	4	25	
1,2-Dichloroethane	22		2.5	ug/L	20.0	0.63 U	109	50-156	5	18	
1,2-Dichloropropane	20		2.5	ug/L	20.0	0.80 U	101	61-133	5	26	
1,3-Dichlorobenzene	21		2.5	ug/L	20.0	0.77 U	104	66-129	4	23	
1,4-Dichlorobenzene	20		2.5	ug/L	20.0	0.76 U	101	65-133	2	23	
2-Butanone	150		12	ug/L	100	4.5 U	148	10-180	5	29	
2-Hexanone	100		12	ug/L	100	2.5 U	103	12-180	2	28	
4-Methyl-2-pentanone	97		12	ug/L	100	2.5 U	97	19-180	2	24	
Acetone	110		25	ug/L	100	10 U	106	10-180	3	19	
Benzene	21		2.5	ug/L	20.0	0.71 U	107	56-136	5	14	
Bromodichloromethane	22		2.5	ug/L	20.0	0.52 U	110	58-135	5	19	
Bromoform	20		2.5	ug/L	20.0	0.75 U	98	46-148	6	18	
Bromomethane	16		2.5	ug/L	20.0	0.95 U	79	10-173	5	29	
Carbon disulfide	25		12	ug/L	20.0	2.5 U	127	43-153	10	26	
Carbon Tetrachloride	23		2.5	ug/L	20.0	0.94 U	114	54-156	5	27	
Chlorobenzene	21		2.5	ug/L	20.0	0.72 U	103	51-139	6	13	
Chloroethane	20		2.5	ug/L	20.0	0.98 U	98	27-180	8	22	
Chloroform	23		2.5	ug/L	20.0	0.80 U	117	58-139	5	17	
Chloromethane	20		2.5	ug/L	20.0	0.82 U	99	33-154	17	31	
cis-1,2-Dichloroethene	23		2.5	ug/L	20.0	0.53 U	113	56-128	7	17	
cis-1,3-Dichloropropene	20		2.5	ug/L	20.0	0.59 U	100	64-128	5	20	
Cyclohexane	24		2.5	ug/L	20.0	0.93 U	122	70-130	8	20	
Dibromochloromethane	20		2.5	ug/L	20.0	0.50 U	99	50-140	5	18	
Dichlorodifluoromethane	21		2.5	ug/L	20.0	0.74 U	104	10-180	8	26	
Ethylbenzene	20		2.5	ug/L	20.0	0.69 U	101	63-133	6	18	
Freon 113	22		2.5	ug/L	20.0	0.73 U	109	47-173	7	30	
Isopropylbenzene	21		2.5	ug/L	20.0	0.67 U	105	60-132	5	23	
m,p-Xylenes	40		5.0	ug/L	40.0	1.3 U	101	64-133	5	18	

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1L15004 - EPA 5030B_MS - Continued

Matrix Spike Dup (1L15004-MSD1) Continued Prepared: 12/15/2021 00:00 Analyzed: 12/15/2021 08:24

Source: AE09872-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Methyl acetate	22		2.5	ug/L	20.0	0.95 U	110	70-130	0.2	20	
Methylene Chloride	22		12	ug/L	20.0	2.5 U	108	43-142	7	23	
Methyl-tert-Butyl Ether	22		2.5	ug/L	20.0	0.60 U	108	51-145	4	22	
o-Xylene	20		2.5	ug/L	20.0	0.53 U	100	61-129	7	16	
Styrene	21		2.5	ug/L	20.0	0.61 U	104	59-136	5	32	
Tetrachloroethene	19		2.5	ug/L	20.0	0.76 U	96	60-147	6	21	
Toluene	20		2.5	ug/L	20.0	0.72 U	101	64-131	4	16	
trans-1,2-Dichloroethene	23		2.5	ug/L	20.0	0.73 U	115	54-134	7	20	
trans-1,3-Dichloropropene	20		2.5	ug/L	20.0	0.73 U	101	65-149	7	17	
Trichloroethene	22		2.5	ug/L	20.0	0.89 U	112	62-135	2	20	
Trichlorofluoromethane	22		2.5	ug/L	20.0	0.94 U	108	56-155	8	22	
Vinyl chloride	21		2.5	ug/L	20.0	0.71 U	106	20-167	9	24	
4-Bromofluorobenzene	*45*	*I*		*ug/L*	*50.0*		*91*	*41-142*			
Dibromofluoromethane	*48*	*I*		*ug/L*	*50.0*		*96*	*53-146*			
Toluene-d8	*46*	*I*		*ug/L*	*50.0*		*93*	*41-146*			

Batch 1L15016 - EPA 5030B_MS

Blank (1L15016-BLK1) Prepared: 12/15/2021 00:00 Analyzed: 12/15/2021 08:30

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	0.80	U	2.5	ug/L							
1,1,2,2-Tetrachloroethane	0.54	U	2.5	ug/L							
1,1,2-Trichloroethane	0.76	U	2.5	ug/L							
1,1-Dichloroethane	0.62	U	2.5	ug/L							
1,1-Dichloroethene	0.94	U	2.5	ug/L							
1,2,4-Trichlorobenzene	0.70	U	2.5	ug/L							
1,2-Dibromo-3-chloropropane	0.96	U	2.5	ug/L							
1,2-Dibromoethane	0.78	U	2.5	ug/L							
1,2-Dichlorobenzene	0.73	U	2.5	ug/L							
1,2-Dichloroethane	0.63	U	2.5	ug/L							
1,2-Dichloropropane	0.80	U	2.5	ug/L							
1,3-Dichlorobenzene	0.77	U	2.5	ug/L							
1,4-Dichlorobenzene	0.76	U	2.5	ug/L							
2-Butanone	4.5	U	12	ug/L							
2-Hexanone	2.5	U	12	ug/L							
4-Methyl-2-pentanone	2.5	U	12	ug/L							
Acetone	10	U	25	ug/L							
Benzene	0.71	U	2.5	ug/L							
Bromodichloromethane	0.52	U	2.5	ug/L							
Bromoform	0.75	U	2.5	ug/L							
Bromomethane	0.95	U	2.5	ug/L							
Carbon disulfide	2.5	U	12	ug/L							
Carbon Tetrachloride	0.94	U	2.5	ug/L							
Chlorobenzene	0.72	U	2.5	ug/L							
Chloroethane	0.98	U	2.5	ug/L							
Chloroform	0.80	U	2.5	ug/L							
Chloromethane	0.82	U	2.5	ug/L							
cis-1,2-Dichloroethene	0.53	U	2.5	ug/L							

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1L15016 - EPA 5030B_MS - Continued

Blank (1L15016-BLK1) Continued Prepared: 12/15/2021 00:00 Analyzed: 12/15/2021 08:30

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
cis-1,3-Dichloropropene	0.59	U	2.5	ug/L							
Cyclohexane	0.93	U	2.5	ug/L							
Dibromochloromethane	0.50	U	2.5	ug/L							
Dichlorodifluoromethane	0.74	U	2.5	ug/L							
Ethylbenzene	0.69	U	2.5	ug/L							
Freon 113	0.73	U	2.5	ug/L							
Isopropylbenzene	0.67	U	2.5	ug/L							
Methyl acetate	0.95	U	2.5	ug/L							
Methylene Chloride	2.5	U	12	ug/L							
Methyl-tert-Butyl Ether	0.60	U	2.5	ug/L							
Styrene	0.61	U	2.5	ug/L							
Tetrachloroethene	0.76	U	2.5	ug/L							
Toluene	0.72	U	2.5	ug/L							
trans-1,2-Dichloroethene	0.73	U	2.5	ug/L							
trans-1,3-Dichloropropene	0.73	U	2.5	ug/L							
Trichloroethene	0.89	U	2.5	ug/L							
Trichlorofluoromethane	0.94	U	2.5	ug/L							
Vinyl chloride	0.71	U	2.5	ug/L							
4-Bromofluorobenzene	*52*			*ug/L*	*50.0*		*104*	*41-142*			
Dibromofluoromethane	*48*	*I*		*ug/L*	*50.0*		*95*	*53-146*			
Toluene-d8	*50*			*ug/L*	*50.0*		*101*	*41-146*			

LCS (1L15016-BS1) Prepared: 12/15/2021 00:00 Analyzed: 12/15/2021 08:58

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	21		2.5	ug/L	20.0		105	57-148			
1,1,2,2-Tetrachloroethane	21		2.5	ug/L	20.0		105	60-139			
1,1,2-Trichloroethane	21		2.5	ug/L	20.0		106	57-141			
1,1-Dichloroethane	21		2.5	ug/L	20.0		104	57-142			
1,1-Dichloroethene	21		2.5	ug/L	20.0		103	47-139			
1,2,4-Trichlorobenzene	21		2.5	ug/L	20.0		103	52-159			
1,2-Dibromo-3-chloropropane	19		2.5	ug/L	20.0		93	48-150			
1,2-Dibromoethane	21		2.5	ug/L	20.0		103	57-140			
1,2-Dichlorobenzene	20		2.5	ug/L	20.0		102	63-131			
1,2-Dichloroethane	19		2.5	ug/L	20.0		93	50-156			
1,2-Dichloropropane	20		2.5	ug/L	20.0		99	61-133			
1,3-Dichlorobenzene	21		2.5	ug/L	20.0		105	66-129			
1,4-Dichlorobenzene	19		2.5	ug/L	20.0		97	65-133			
2-Butanone	98		12	ug/L	100		98	10-180			
2-Hexanone	81		12	ug/L	100		81	12-180			
4-Methyl-2-pentanone	93		12	ug/L	100		93	19-180			
Acetone	82		25	ug/L	100		82	10-180			
Benzene	21		2.5	ug/L	20.0		106	56-136			
Bromodichloromethane	17		2.5	ug/L	20.0		85	58-135			
Bromoform	24		2.5	ug/L	20.0		120	46-148			
Bromomethane	12		2.5	ug/L	20.0		61	10-173			
Carbon disulfide	21		12	ug/L	20.0		104	43-153			
Carbon Tetrachloride	26		2.5	ug/L	20.0		129	54-156			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1L15016 - EPA 5030B_MS - Continued

LCS (1L15016-BS1) Continued Prepared: 12/15/2021 00:00 Analyzed: 12/15/2021 08:58

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Chlorobenzene	21		2.5	ug/L	20.0		107	51-139			
Chloroethane	23		2.5	ug/L	20.0		117	27-180			
Chloroform	20		2.5	ug/L	20.0		101	58-139			
Chloromethane	19		2.5	ug/L	20.0		93	33-154			
cis-1,2-Dichloroethene	21		2.5	ug/L	20.0		104	56-128			
cis-1,3-Dichloropropene	17		2.5	ug/L	20.0		86	64-128			
Cyclohexane	21		2.5	ug/L	20.0		107	70-130			
Dibromochloromethane	18		2.5	ug/L	20.0		90	50-140			
Dichlorodifluoromethane	18		2.5	ug/L	20.0		92	10-180			
Ethylbenzene	21		2.5	ug/L	20.0		106	63-133			
Freon 113	21		2.5	ug/L	20.0		104	47-173			
Isopropylbenzene	22		2.5	ug/L	20.0		110	60-132			
m,p-Xylenes	43		5.0	ug/L	40.0		106	64-133			
Methyl acetate	19		2.5	ug/L	20.0		93	70-130			
Methylene Chloride	20		12	ug/L	20.0		100	43-142			
Methyl-tert-Butyl Ether	20		2.5	ug/L	20.0		100	51-145			
o-Xylene	22		2.5	ug/L	20.0		109	61-129			
Styrene	19		2.5	ug/L	20.0		97	59-136			
Tetrachloroethene	22		2.5	ug/L	20.0		108	60-147			
Toluene	20		2.5	ug/L	20.0		100	64-131			
trans-1,2-Dichloroethene	21		2.5	ug/L	20.0		107	54-134			
trans-1,3-Dichloropropene	19		2.5	ug/L	20.0		94	65-149			
Trichloroethene	20		2.5	ug/L	20.0		100	62-135			
Trichlorofluoromethane	19		2.5	ug/L	20.0		94	56-155			
Vinyl chloride	19		2.5	ug/L	20.0		95	20-167			
4-Bromofluorobenzene	*55*			*ug/L*	*50.0*		*111*	*41-142*			
Dibromofluoromethane	*50*			*ug/L*	*50.0*		*100*	*53-146*			
Toluene-d8	*53*			*ug/L*	*50.0*		*106*	*41-146*			

Matrix Spike (1L15016-MS1) Prepared: 12/15/2021 00:00 Analyzed: 12/15/2021 10:49

Source: AE09872-13

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	560		62	ug/L	500	20 U	113	57-148			
1,1,2,2-Tetrachloroethane	530		62	ug/L	500	14 U	106	60-139			
1,1,2-Trichloroethane	540		62	ug/L	500	19 U	108	57-141			
1,1-Dichloroethane	550		62	ug/L	500	16 U	109	57-142			
1,1-Dichloroethene	540		62	ug/L	500	24 U	109	47-139			
1,2,4-Trichlorobenzene	550		62	ug/L	500	18 U	110	52-159			
1,2-Dibromo-3-chloropropane	470		62	ug/L	500	24 U	93	48-150			
1,2-Dibromoethane	500		62	ug/L	500	20 U	100	57-140			
1,2-Dichlorobenzene	540		62	ug/L	500	18 U	108	63-131			
1,2-Dichloroethane	460		62	ug/L	500	16 U	92	50-156			
1,2-Dichloropropane	510		62	ug/L	500	20 U	101	61-133			
1,3-Dichlorobenzene	530		62	ug/L	500	19 U	106	66-129			
1,4-Dichlorobenzene	490		62	ug/L	500	19 U	98	65-133			
2-Butanone	2400		310	ug/L	2500	110 U	98	10-180			
2-Hexanone	2100		310	ug/L	2500	62 U	83	12-180			
4-Methyl-2-pentanone	2400		310	ug/L	2500	62 U	95	19-180			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1L15016 - EPA 5030B_MS - Continued

Matrix Spike (1L15016-MS1) Continued Prepared: 12/15/2021 00:00 Analyzed: 12/15/2021 10:49

Source: AE09872-13

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Acetone	2000		620	ug/L	2500	250 U	79	10-180			
Benzene	540		62	ug/L	500	18 U	108	56-136			
Bromodichloromethane	430		62	ug/L	500	13 U	87	58-135			
Bromoform	560		62	ug/L	500	19 U	113	46-148			
Bromomethane	390		62	ug/L	500	24 U	79	10-173			
Carbon disulfide	590		310	ug/L	500	62 U	119	43-153			
Carbon Tetrachloride	590		62	ug/L	500	24 U	119	54-156			
Chlorobenzene	560		62	ug/L	500	18 U	112	51-139			
Chloroethane	590		62	ug/L	500	24 U	118	27-180			
Chloroform	530		62	ug/L	500	20 U	105	58-139			
Chloromethane	480		62	ug/L	500	20 U	95	33-154			
cis-1,2-Dichloroethene	2600	L	62	ug/L	500	2000	120	56-128			
cis-1,3-Dichloropropene	420		62	ug/L	500	15 U	85	64-128			
Cyclohexane	610		62	ug/L	500	23 U	121	70-130			
Dibromochloromethane	440		62	ug/L	500	12 U	89	50-140			
Dichlorodifluoromethane	490		62	ug/L	500	18 U	98	10-180			
Ethylbenzene	560		62	ug/L	500	17 U	112	63-133			
Freon 113	530		62	ug/L	500	18 U	107	47-173			
Isopropylbenzene	570		62	ug/L	500	17 U	115	60-132			
m,p-Xylenes	1100		120	ug/L	1000	32 U	111	64-133			
Methyl acetate	490		62	ug/L	500	24 U	97	70-130			
Methylene Chloride	550		310	ug/L	500	62 U	110	43-142			
Methyl-tert-Butyl Ether	510		62	ug/L	500	15 U	101	51-145			
o-Xylene	560		62	ug/L	500	13 U	113	61-129			
Styrene	490		62	ug/L	500	15 U	98	59-136			
Tetrachloroethene	510		62	ug/L	500	19 U	102	60-147			
Toluene	530		62	ug/L	500	18 U	106	64-131			
trans-1,2-Dichloroethene	620		62	ug/L	500	44	115	54-134			
trans-1,3-Dichloropropene	460		62	ug/L	500	18 U	92	65-149			
Trichloroethene	520		62	ug/L	500	22 U	104	62-135			
Trichlorofluoromethane	510		62	ug/L	500	24 U	102	56-155			
Vinyl chloride	960		62	ug/L	500	440	103	20-167			
4-Bromofluorobenzene	*1400*			*ug/L*	*1250*		*110*	*41-142*			
Dibromofluoromethane	*1300*			*ug/L*	*1250*		*102*	*53-146*			
Toluene-d8	*1300*			*ug/L*	*1250*		*102*	*41-146*			

Matrix Spike Dup (1L15016-MSD1) Prepared: 12/15/2021 00:00 Analyzed: 12/15/2021 11:17

Source: AE09872-13

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	540		62	ug/L	500	20 U	107	57-148	5	25	
1,1,2,2-Tetrachloroethane	540		62	ug/L	500	14 U	108	60-139	2	17	
1,1,2-Trichloroethane	560		62	ug/L	500	19 U	112	57-141	3	16	
1,1-Dichloroethane	530		62	ug/L	500	16 U	106	57-142	3	24	
1,1-Dichloroethene	530		62	ug/L	500	24 U	106	47-139	3	16	
1,2,4-Trichlorobenzene	590		62	ug/L	500	18 U	118	52-159	7	24	
1,2-Dibromo-3-chloropropane	490		62	ug/L	500	24 U	98	48-150	5	21	
1,2-Dibromoethane	520		62	ug/L	500	20 U	104	57-140	4	16	
1,2-Dichlorobenzene	540		62	ug/L	500	18 U	109	63-131	0.5	25	

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1L15016 - EPA 5030B_MS - Continued

Matrix Spike Dup (1L15016-MSD1) Continued Prepared: 12/15/2021 00:00 Analyzed: 12/15/2021 11:17

Source: AE09872-13

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,2-Dichloroethane	440		62	ug/L	500	16 U	88	50-156	4	18	
1,2-Dichloropropane	500		62	ug/L	500	20 U	101	61-133	0.4	26	
1,3-Dichlorobenzene	560		62	ug/L	500	19 U	113	66-129	6	23	
1,4-Dichlorobenzene	520		62	ug/L	500	19 U	104	65-133	6	23	
2-Butanone	2600		310	ug/L	2500	110 U	104	10-180	6	29	
2-Hexanone	2200		310	ug/L	2500	62 U	87	12-180	5	28	
4-Methyl-2-pentanone	2500		310	ug/L	2500	62 U	99	19-180	4	24	
Acetone	2100		620	ug/L	2500	250 U	83	10-180	5	19	
Benzene	530		62	ug/L	500	18 U	106	56-136	2	14	
Bromodichloromethane	440		62	ug/L	500	13 U	88	58-135	2	19	
Bromoform	590		62	ug/L	500	19 U	119	46-148	5	18	
Bromomethane	440		62	ug/L	500	24 U	88	10-173	11	29	
Carbon disulfide	540		310	ug/L	500	62 U	109	43-153	9	26	
Carbon Tetrachloride	700		62	ug/L	500	24 U	140	54-156	16	27	
Chlorobenzene	560		62	ug/L	500	18 U	112	51-139	0.3	13	
Chloroethane	510		62	ug/L	500	24 U	102	27-180	14	22	
Chloroform	510		62	ug/L	500	20 U	103	58-139	2	17	
Chloromethane	470		62	ug/L	500	20 U	94	33-154	1	31	
cis-1,2-Dichloroethene	2600	L	62	ug/L	500	2000	105	56-128	3	17	
cis-1,3-Dichloropropene	420		62	ug/L	500	15 U	84	64-128	0.5	20	
Cyclohexane	580		62	ug/L	500	23 U	116	70-130	4	20	
Dibromochloromethane	470		62	ug/L	500	12 U	93	50-140	4	18	
Dichlorodifluoromethane	470		62	ug/L	500	18 U	94	10-180	4	26	
Ethylbenzene	560		62	ug/L	500	17 U	112	63-133	0.3	18	
Freon 113	520		62	ug/L	500	18 U	104	47-173	2	30	
Isopropylbenzene	570		62	ug/L	500	17 U	114	60-132	1	23	
m,p-Xylenes	1100		120	ug/L	1000	32 U	113	64-133	2	18	
Methyl acetate	520		62	ug/L	500	24 U	104	70-130	7	20	
Methylene Chloride	530		310	ug/L	500	62 U	105	43-142	4	23	
Methyl-tert-Butyl Ether	520		62	ug/L	500	15 U	103	51-145	2	22	
o-Xylene	570		62	ug/L	500	13 U	113	61-129	0.3	16	
Styrene	500		62	ug/L	500	15 U	100	59-136	1	32	
Tetrachloroethene	510		62	ug/L	500	19 U	102	60-147	0.4	21	
Toluene	520		62	ug/L	500	18 U	105	64-131	1	16	
trans-1,2-Dichloroethene	590		62	ug/L	500	44	110	54-134	4	20	
trans-1,3-Dichloropropene	490		62	ug/L	500	18 U	98	65-149	6	17	
Trichloroethene	490		62	ug/L	500	22 U	99	62-135	6	20	
Trichlorofluoromethane	480		62	ug/L	500	24 U	96	56-155	6	22	
Vinyl chloride	920		62	ug/L	500	440	96	20-167	4	24	
4-Bromofluorobenzene	*1400*			*ug/L*	*1250*		*111*	*41-142*			
Dibromofluoromethane	*1200*			*ug/L*	*1250*		*97*	*53-146*			
Toluene-d8	*1300*			*ug/L*	*1250*		*102*	*41-146*			

Batch 1L16010 - EPA 5030B_MS

Blank (1L16010-BLK1) Prepared: 12/16/2021 00:00 Analyzed: 12/16/2021 09:27

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	0.80	U	2.5	ug/L							

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1L16010 - EPA 5030B_MS - Continued

Blank (1L16010-BLK1) Continued Prepared: 12/16/2021 00:00 Analyzed: 12/16/2021 09:27

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,2,2-Tetrachloroethane	0.54	U	2.5	ug/L							
1,1,2-Trichloroethane	0.76	U	2.5	ug/L							
1,1-Dichloroethane	0.62	U	2.5	ug/L							
1,1-Dichloroethene	0.94	U	2.5	ug/L							
1,2,4-Trichlorobenzene	0.70	U	2.5	ug/L							
1,2-Dibromo-3-chloropropane	0.96	U	2.5	ug/L							
1,2-Dibromoethane	0.78	U	2.5	ug/L							
1,2-Dichlorobenzene	0.73	U	2.5	ug/L							
1,2-Dichloroethane	0.63	U	2.5	ug/L							
1,2-Dichloropropane	0.80	U	2.5	ug/L							
1,3-Dichlorobenzene	0.77	U	2.5	ug/L							
1,4-Dichlorobenzene	0.76	U	2.5	ug/L							
2-Butanone	4.5	U	12	ug/L							
2-Hexanone	2.5	U	12	ug/L							
4-Methyl-2-pentanone	2.5	U	12	ug/L							
Acetone	10	U	25	ug/L							
Benzene	0.71	U	2.5	ug/L							
Bromodichloromethane	0.52	U	2.5	ug/L							
Bromoform	0.75	U	2.5	ug/L							
Bromomethane	0.95	U	2.5	ug/L							
Carbon disulfide	2.5	U	12	ug/L							
Carbon Tetrachloride	0.94	U	2.5	ug/L							
Chlorobenzene	0.72	U	2.5	ug/L							
Chloroethane	0.98	U	2.5	ug/L							
Chloroform	0.80	U	2.5	ug/L							
Chloromethane	0.82	U	2.5	ug/L							
cis-1,2-Dichloroethene	0.53	U	2.5	ug/L							
cis-1,3-Dichloropropene	0.59	U	2.5	ug/L							
Cyclohexane	0.93	U	2.5	ug/L							
Dibromochloromethane	0.50	U	2.5	ug/L							
Dichlorodifluoromethane	0.74	U	2.5	ug/L							
Ethylbenzene	0.69	U	2.5	ug/L							
Freon 113	0.73	U	2.5	ug/L							
Isopropylbenzene	0.67	U	2.5	ug/L							
Methyl acetate	0.95	U	2.5	ug/L							
Methylene Chloride	2.5	U	12	ug/L							
Methyl-tert-Butyl Ether	0.60	U	2.5	ug/L							
Styrene	0.61	U	2.5	ug/L							
Tetrachloroethene	0.76	U	2.5	ug/L							
Toluene	0.72	U	2.5	ug/L							
trans-1,2-Dichloroethene	0.73	U	2.5	ug/L							
trans-1,3-Dichloropropene	0.73	U	2.5	ug/L							
Trichloroethene	0.89	U	2.5	ug/L							
Trichlorofluoromethane	0.94	U	2.5	ug/L							
Vinyl chloride	0.71	U	2.5	ug/L							
4-Bromofluorobenzene	*52*			*ug/L*	*50.0*		*104*	*41-142*			
Dibromofluoromethane	*51*			*ug/L*	*50.0*		*102*	*53-146*			
Toluene-d8	*52*			*ug/L*	*50.0*		*104*	*41-146*			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1L16010 - EPA 5030B_MS - Continued

LCS (1L16010-BS1) Prepared: 12/16/2021 00:00 Analyzed: 12/16/2021 08:31

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	21		2.5	ug/L	20.0		105	57-148			
1,1,2,2-Tetrachloroethane	22		2.5	ug/L	20.0		110	60-139			
1,1,2-Trichloroethane	22		2.5	ug/L	20.0		109	57-141			
1,1-Dichloroethane	21		2.5	ug/L	20.0		103	57-142			
1,1-Dichloroethene	20		2.5	ug/L	20.0		100	47-139			
1,2,4-Trichlorobenzene	24		2.5	ug/L	20.0		122	52-159			
1,2-Dibromo-3-chloropropane	21		2.5	ug/L	20.0		107	48-150			
1,2-Dibromoethane	22		2.5	ug/L	20.0		110	57-140			
1,2-Dichlorobenzene	23		2.5	ug/L	20.0		116	63-131			
1,2-Dichloroethane	19		2.5	ug/L	20.0		96	50-156			
1,2-Dichloropropane	21		2.5	ug/L	20.0		105	61-133			
1,3-Dichlorobenzene	23		2.5	ug/L	20.0		116	66-129			
1,4-Dichlorobenzene	22		2.5	ug/L	20.0		109	65-133			
2-Butanone	99		12	ug/L	100		99	10-180			
2-Hexanone	90		12	ug/L	100		90	12-180			
4-Methyl-2-pentanone	110		12	ug/L	100		105	19-180			
Acetone	86		25	ug/L	100		86	10-180			
Benzene	21		2.5	ug/L	20.0		107	56-136			
Bromodichloromethane	18		2.5	ug/L	20.0		89	58-135			
Bromoform	25		2.5	ug/L	20.0		124	46-148			
Bromomethane	9.2		2.5	ug/L	20.0		46	10-173			
Carbon disulfide	22		12	ug/L	20.0		109	43-153			
Carbon Tetrachloride	28		2.5	ug/L	20.0		138	54-156			
Chlorobenzene	22		2.5	ug/L	20.0		111	51-139			
Chloroethane	22		2.5	ug/L	20.0		109	27-180			
Chloroform	19		2.5	ug/L	20.0		97	58-139			
Chloromethane	18		2.5	ug/L	20.0		90	33-154			
cis-1,2-Dichloroethene	22		2.5	ug/L	20.0		109	56-128			
cis-1,3-Dichloropropene	18		2.5	ug/L	20.0		91	64-128			
Cyclohexane	22		2.5	ug/L	20.0		110	70-130			
Dibromochloromethane	20		2.5	ug/L	20.0		98	50-140			
Dichlorodifluoromethane	18		2.5	ug/L	20.0		90	10-180			
Ethylbenzene	22		2.5	ug/L	20.0		109	63-133			
Freon 113	20		2.5	ug/L	20.0		101	47-173			
Isopropylbenzene	23		2.5	ug/L	20.0		114	60-132			
m,p-Xylenes	44		5.0	ug/L	40.0		111	64-133			
Methyl acetate	21		2.5	ug/L	20.0		103	70-130			
Methylene Chloride	21		12	ug/L	20.0		105	43-142			
Methyl-tert-Butyl Ether	22		2.5	ug/L	20.0		108	51-145			
o-Xylene	23		2.5	ug/L	20.0		115	61-129			
Styrene	20		2.5	ug/L	20.0		101	59-136			
Tetrachloroethene	21		2.5	ug/L	20.0		106	60-147			
Toluene	21		2.5	ug/L	20.0		105	64-131			
trans-1,2-Dichloroethene	22		2.5	ug/L	20.0		111	54-134			
trans-1,3-Dichloropropene	20		2.5	ug/L	20.0		98	65-149			
Trichloroethene	21		2.5	ug/L	20.0		104	62-135			
Trichlorofluoromethane	19		2.5	ug/L	20.0		93	56-155			
Vinyl chloride	19		2.5	ug/L	20.0		97	20-167			
4-Bromofluorobenzene	*54*			*ug/L*	*50.0*		*107*	*41-142*			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1L16010 - EPA 5030B_MS - Continued

LCS (1L16010-BS1) Continued Prepared: 12/16/2021 00:00 Analyzed: 12/16/2021 08:31

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Dibromofluoromethane	*52*			*ug/L*	*50.0*		*104*	*53-146*			
Toluene-d8	*53*			*ug/L*	*50.0*		*107*	*41-146*			

Matrix Spike (1L16010-MS1) Prepared: 12/16/2021 00:00 Analyzed: 12/16/2021 10:50

Source: AE09632-11

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	22		2.5	ug/L	20.0	0.80 U	108	57-148			
1,1,2,2-Tetrachloroethane	21		2.5	ug/L	20.0	0.54 U	104	60-139			
1,1,2-Trichloroethane	23		2.5	ug/L	20.0	0.76 U	113	57-141			
1,1-Dichloroethane	21		2.5	ug/L	20.0	0.62 U	107	57-142			
1,1-Dichloroethene	21		2.5	ug/L	20.0	0.94 U	103	47-139			
1,2,4-Trichlorobenzene	22		2.5	ug/L	20.0	0.70 U	112	52-159			
1,2-Dibromo-3-chloropropane	18		2.5	ug/L	20.0	0.96 U	92	48-150			
1,2-Dibromoethane	20		2.5	ug/L	20.0	0.78 U	102	57-140			
1,2-Dichlorobenzene	22		2.5	ug/L	20.0	0.73 U	112	63-131			
1,2-Dichloroethane	18		2.5	ug/L	20.0	0.63 U	91	50-156			
1,2-Dichloropropane	21		2.5	ug/L	20.0	0.80 U	105	61-133			
1,3-Dichlorobenzene	23		2.5	ug/L	20.0	0.77 U	113	66-129			
1,4-Dichlorobenzene	21		2.5	ug/L	20.0	0.76 U	103	65-133			
2-Butanone	92		12	ug/L	100	4.5 U	92	10-180			
2-Hexanone	81		12	ug/L	100	2.5 U	81	12-180			
4-Methyl-2-pentanone	90		12	ug/L	100	2.5 U	90	19-180			
Acetone	76		25	ug/L	100	10 U	76	10-180			
Benzene	21		2.5	ug/L	20.0	0.71 U	107	56-136			
Bromodichloromethane	18		2.5	ug/L	20.0	0.52 U	88	58-135			
Bromoform	24		2.5	ug/L	20.0	0.75 U	119	46-148			
Bromomethane	13		2.5	ug/L	20.0	0.95 U	66	10-173			
Carbon disulfide	23		12	ug/L	20.0	2.5 U	116	43-153			
Carbon Tetrachloride	29		2.5	ug/L	20.0	0.94 U	144	54-156			
Chlorobenzene	23		2.5	ug/L	20.0	0.72 U	115	51-139			
Chloroethane	24		2.5	ug/L	20.0	0.98 U	119	27-180			
Chloroform	20		2.5	ug/L	20.0	0.80 U	102	58-139			
Chloromethane	17		2.5	ug/L	20.0	0.82 U	86	33-154			
cis-1,2-Dichloroethene	21		2.5	ug/L	20.0	0.53 U	104	56-128			
cis-1,3-Dichloropropene	17		2.5	ug/L	20.0	0.59 U	87	64-128			
Cyclohexane	23		2.5	ug/L	20.0	0.93 U	115	70-130			
Dibromochloromethane	19		2.5	ug/L	20.0	0.50 U	95	50-140			
Dichlorodifluoromethane	18		2.5	ug/L	20.0	0.74 U	91	10-180			
Ethylbenzene	23		2.5	ug/L	20.0	0.69 U	114	63-133			
Freon 113	21		2.5	ug/L	20.0	0.73 U	107	47-173			
Isopropylbenzene	24		2.5	ug/L	20.0	0.67 U	119	60-132			
m,p-Xylenes	46		5.0	ug/L	40.0	1.3 U	115	64-133			
Methyl acetate	18		2.5	ug/L	20.0	0.95 U	88	70-130			
Methylene Chloride	21		12	ug/L	20.0	2.5 U	104	43-142			
Methyl-tert-Butyl Ether	20		2.5	ug/L	20.0	0.60 U	99	51-145			
o-Xylene	24		2.5	ug/L	20.0	0.53 U	118	61-129			
Styrene	21		2.5	ug/L	20.0	0.61 U	105	59-136			
Tetrachloroethene	22		2.5	ug/L	20.0	0.76 U	110	60-147			
Toluene	22		2.5	ug/L	20.0	0.72 U	110	64-131			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1L16010 - EPA 5030B_MS - Continued

Matrix Spike (1L16010-MS1) Continued Prepared: 12/16/2021 00:00 Analyzed: 12/16/2021 10:50

Source: AE09632-11

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
trans-1,2-Dichloroethene	23		2.5	ug/L	20.0	0.73 U	114	54-134			
trans-1,3-Dichloropropene	20		2.5	ug/L	20.0	0.73 U	102	65-149			
Trichloroethene	20		2.5	ug/L	20.0	0.89 U	101	62-135			
Trichlorofluoromethane	19		2.5	ug/L	20.0	0.94 U	94	56-155			
Vinyl chloride	19		2.5	ug/L	20.0	0.71 U	93	20-167			
4-Bromofluorobenzene	*54*			*ug/L*	*50.0*		*107*	*41-142*			
Dibromofluoromethane	*51*			*ug/L*	*50.0*		*103*	*53-146*			
Toluene-d8	*52*			*ug/L*	*50.0*		*104*	*41-146*			

Matrix Spike Dup (1L16010-MSD1) Prepared: 12/16/2021 00:00 Analyzed: 12/16/2021 11:17

Source: AE09632-11

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	22		2.5	ug/L	20.0	0.80 U	110	57-148	2	25	
1,1,2,2-Tetrachloroethane	22		2.5	ug/L	20.0	0.54 U	112	60-139	7	17	
1,1,2-Trichloroethane	21		2.5	ug/L	20.0	0.76 U	107	57-141	5	16	
1,1-Dichloroethane	21		2.5	ug/L	20.0	0.62 U	106	57-142	0.6	24	
1,1-Dichloroethene	20		2.5	ug/L	20.0	0.94 U	102	47-139	0.6	16	
1,2,4-Trichlorobenzene	24		2.5	ug/L	20.0	0.70 U	118	52-159	5	24	
1,2-Dibromo-3-chloropropane	21		2.5	ug/L	20.0	0.96 U	106	48-150	13	21	
1,2-Dibromoethane	21		2.5	ug/L	20.0	0.78 U	105	57-140	3	16	
1,2-Dichlorobenzene	23		2.5	ug/L	20.0	0.73 U	114	63-131	1	25	
1,2-Dichloroethane	18		2.5	ug/L	20.0	0.63 U	92	50-156	2	18	
1,2-Dichloropropane	21		2.5	ug/L	20.0	0.80 U	104	61-133	1	26	
1,3-Dichlorobenzene	23		2.5	ug/L	20.0	0.77 U	115	66-129	2	23	
1,4-Dichlorobenzene	21		2.5	ug/L	20.0	0.76 U	105	65-133	1	23	
2-Butanone	100		12	ug/L	100	4.5 U	102	10-180	10	29	
2-Hexanone	92		12	ug/L	100	2.5 U	92	12-180	13	28	
4-Methyl-2-pentanone	100		12	ug/L	100	2.5 U	103	19-180	13	24	
Acetone	88		25	ug/L	100	10 U	88	10-180	14	19	
Benzene	21		2.5	ug/L	20.0	0.71 U	106	56-136	0.5	14	
Bromodichloromethane	18		2.5	ug/L	20.0	0.52 U	92	58-135	5	19	
Bromoform	24		2.5	ug/L	20.0	0.75 U	121	46-148	2	18	
Bromomethane	16		2.5	ug/L	20.0	0.95 U	82	10-173	22	29	
Carbon disulfide	22		12	ug/L	20.0	2.5 U	109	43-153	6	26	
Carbon Tetrachloride	28		2.5	ug/L	20.0	0.94 U	142	54-156	1	27	
Chlorobenzene	23		2.5	ug/L	20.0	0.72 U	113	51-139	2	13	
Chloroethane	23		2.5	ug/L	20.0	0.98 U	113	27-180	5	22	
Chloroform	20		2.5	ug/L	20.0	0.80 U	100	58-139	1	17	
Chloromethane	18		2.5	ug/L	20.0	0.82 U	91	33-154	6	31	
cis-1,2-Dichloroethene	21		2.5	ug/L	20.0	0.53 U	107	56-128	4	17	
cis-1,3-Dichloropropene	18		2.5	ug/L	20.0	0.59 U	88	64-128	0.7	20	
Cyclohexane	23		2.5	ug/L	20.0	0.93 U	115	70-130	0.2	20	
Dibromochloromethane	19		2.5	ug/L	20.0	0.50 U	96	50-140	1	18	
Dichlorodifluoromethane	19		2.5	ug/L	20.0	0.74 U	94	10-180	3	26	
Ethylbenzene	23		2.5	ug/L	20.0	0.69 U	114	63-133	0.6	18	
Freon 113	22		2.5	ug/L	20.0	0.73 U	111	47-173	4	30	
Isopropylbenzene	23		2.5	ug/L	20.0	0.67 U	115	60-132	3	23	
m,p-Xylenes	46		5.0	ug/L	40.0	1.3 U	114	64-133	0.5	18	

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1L16010 - EPA 5030B_MS - Continued

Matrix Spike Dup (1L16010-MSD1) Continued Prepared: 12/16/2021 00:00 Analyzed: 12/16/2021 11:17

Source: AE09632-11

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Methyl acetate	21		2.5	ug/L	20.0	0.95 U	106	70-130	19	20	
Methylene Chloride	21		12	ug/L	20.0	2.5 U	105	43-142	0.7	23	
Methyl-tert-Butyl Ether	21		2.5	ug/L	20.0	0.60 U	106	51-145	7	22	
o-Xylene	23		2.5	ug/L	20.0	0.53 U	116	61-129	2	16	
Styrene	20		2.5	ug/L	20.0	0.61 U	102	59-136	3	32	
Tetrachloroethene	20		2.5	ug/L	20.0	0.76 U	102	60-147	7	21	
Toluene	21		2.5	ug/L	20.0	0.72 U	107	64-131	2	16	
trans-1,2-Dichloroethene	23		2.5	ug/L	20.0	0.73 U	113	54-134	1	20	
trans-1,3-Dichloropropene	20		2.5	ug/L	20.0	0.73 U	101	65-149	1	17	
Trichloroethene	21		2.5	ug/L	20.0	0.89 U	103	62-135	2	20	
Trichlorofluoromethane	19		2.5	ug/L	20.0	0.94 U	94	56-155	0.9	22	
Vinyl chloride	19		2.5	ug/L	20.0	0.71 U	96	20-167	3	24	
4-Bromofluorobenzene	*52*			*ug/L*	*50.0*		*104*	*41-142*			
Dibromofluoromethane	*52*			*ug/L*	*50.0*		*104*	*53-146*			
Toluene-d8	*53*			*ug/L*	*50.0*		*106*	*41-146*			

FLAGS/NOTES AND DEFINITIONS

PQL	PQL: Practical Quantitation Limit. The PQL presented is the laboratory MRL.
B	Results are based upon membrane filter colony counts that are outside the method indicated ideal range.
I	The reported value is between the laboratory method detection limit (MDL) and the practical quantitation limit (PQL).
J	Estimated value.
K	Off-scale low; Actual value is known to be less than the value given.
L	Off-scale high; Actual value is known to be greater than value given.
M	Presence of analyte is verified but not quantified; the actual value is less than the MRL but greater than the MDL.
N	Presumptive evidence of presence of material.
O	Sampled, but analysis lost or not performed.
Q	Sample exceeded the accepted holding time.
T	Value reported is less than the laboratory method detection limit. The value is reported for informational purposes only and shall not be used in statistical analysis.
U	Indicates that the compound was analyzed for but not detected.
V	Indicates that the analyte was detected in both the sample and the associated method blank.
Y	The laboratory analysis was from an improperly preserved sample. The data may not be accurate.
Z	Too many colonies were present (TNTC); the numeric value represents the filtration volume.
?	Data are rejected and should not be used. Some or all of the quality control data for the analyte were outside criteria, and the presence or absence of the analyte cannot be determined from the data.
*	Not reported due to interference.
[CALC]	Calculated analyte - MDL/MRL reported to the highest reporting limit of the component analyses.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
QV-01	The associated continuing calibration verification standard exhibited high bias; since the result is ND, there is no impact.

AE02872

Tetra Tech, Inc.

CHAIN OF CUSTODY | **NUMBER** No. 3190 | **PAGE** 1 **OF** 2

PROJECT NO: 112G08985	**FACILITY:** LC 34	**PROJECT MANAGER** MARK JOURET	**PHONE NUMBER** 412 921 8622	**LABORATORY NAME AND CONTACT:** ENCO
SAMPLERS (SIGNATURE)		**FIELD OPERATIONS LEADER** DAN FORESTER	**PHONE NUMBER** 304 780 1426	**ADDRESS**
		CARRIER/WAYBILL NUMBER COURIER		**CITY, STATE** ORLANDO, FL

STANDARD TAT ☒
RUSH TAT ☐ ☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR 2021	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS VOC's 8260D	CONTAINER TYPE PLASTIC (P) or GLASS (G) G	PRESERVATIVE USED HCL	COMMENTS COOLED ON ICE
14 DEC	0900	LC34-GAC-20211214	LC34			GW	G	3	X			
	0910	LC34-AS1-20211214										
	0920	LC34-AS2-20211214										
	0930	LC34-INFLUENT-20211214										
	0940	LC34-RW2A-20211214										
	0950	LC34-RW2B-20211214										
	1000	LC34-RW5B-20211214										
	1010	LC34-RW9A-20211214										
	1020	LC34-RW 10A-20211214										
	1030	LC34-RW 12A-20211214										
	1040	LC34-RW 13A-20211214										
	1050	LC34-RW 14A-20211214										
↓	1100	LC34-RW 15A-20211214	X	X	X	X	X	X	X			

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	14 DEC 21	1512	1. RECEIVED BY James W. Gregory	12/14/21	1512
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS LA 683 5.4°C, C-2273 2.6°C

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

AE09872

Tetra Tech, Inc. CHAIN OF CUSTODY | NUMBER No. 3191 | PAGE 2 OF 2

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112608985	LC34	MARK JENNET	412-921-8622	ENCO
SAMPLERS (SIGNATURE)		**FIELD OPERATIONS LEADER**	**PHONE NUMBER**	**ADDRESS**
		DAN FORESTER	304-780-1426	
		CARRIER/WAYBILL NUMBER		**CITY, STATE**
		COURIER		ORLANDO, FL

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	CONTAINER TYPE PLASTIC (P) or GLASS (G)	PRESERVATIVE USED	TYPE OF ANALYSIS VOCS 8260D	HCL	G	COMMENTS
14 DEC	1110	LC34-RW16B-20211214	LC34	/	/	GW	G	3	X					
	1120	LC34-RW17C-20211214												
	1130	LC34-RW18C-20211214												
	1140	LC34-RW19C-20211214												
	1150	LC34-RW20C-20211214		X	X	X	X	X	X					

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	14 DEC 21	1512	1. RECEIVED BY	12/14/21	1512
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

ENCO Laboratories

Accurate. Timely. Responsive. Innovative.

10775 Central Port Drive
Orlando FL, 32824
Phone: 407.826.5314 FAX: 407.850.6945

Thursday, December 30, 2021
Tetra Tech NUS, Inc. (TE015)
Attn: Mark Jonnet
Foster Plaza 7, 661 Anderson Drive
Pittsburgh, PA 15220

RE: Laboratory Results for
Project Number: 112G08985, Project Name/Desc: NASA KSC LC34
ENCO Workorder(s): AE09870

Dear Mark Jonnet,

Enclosed is a copy of your laboratory report for test samples received by our laboratory on Tuesday, December 21, 2021.

Unless otherwise noted in an attached project narrative, all samples were received in acceptable condition and processed in accordance with the referenced methods/procedures. Results for these procedures apply only to the samples as submitted.

The analytical results contained in this report are in compliance with NELAC standards, except as noted in the project narrative if applicable. This report shall not be reproduced except in full, without the written approval of the Laboratory.

This report contains only those analyses performed by Environmental Conservation Laboratories. Unless otherwise noted, all analyses were performed at ENCO Orlando. Data from outside organizations will be reported under separate cover.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

Kaitlin Dylnicki

Project Manager

Enclosure(s)

SAMPLE SUMMARY/LABORATORY CHRONICLE

Client ID: LC34-VMP-ASEFF-20211220 **Lab ID: AE09870-01RE2** **Sampled: 12/20/21 08:00** **Received: 12/21/21 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
TO-15	NO PREP 2	01/19/22	12/27/21 12:40	12/28/21 11:48

Client ID: LC34-VMP-SCRUB-20211220 **Lab ID: AE09870-02RE3** **Sampled: 12/20/21 08:15** **Received: 12/21/21 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
TO-15	NO PREP 2	01/19/22	12/27/21 12:40	12/28/21 11:09

SAMPLE DETECTION SUMMARY

Client ID: LC34-VMP-ASEFF-20211220 **Lab ID:** AE09870-01RE2

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	65000		2200	14000	ug/m³ Air	TO-15	
Methylene chloride	8700	IV	1000	13000	ug/m³ Air	TO-15	J-01, O-01
Trichloroethene	230000	V	2700	19000	ug/m³ Air	TO-15	QB-01
Vinyl chloride	14000		2100	9300	ug/m³ Air	TO-15	

Client ID: LC34-VMP-SCRUB-20211220 **Lab ID:** AE09870-02RE3

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Acetone	9.8	IV	5.2	37	ug/m³ Air	TO-15	J-01, O-01
cis-1,2-Dichloroethene	21	I	9.3	61	ug/m³ Air	TO-15	
Methylene chloride	39	IV	4.3	54	ug/m³ Air	TO-15	J-01, O-01
trans-1,2-Dichloroethene	9.5	I	7.9	61	ug/m³ Air	TO-15	
Trichloroethene	940	V	12	83	ug/m³ Air	TO-15	QB-01

ANALYTICAL RESULTS

Description: LC34-VMP-ASEFF-20211220 **Lab Sample ID:** AE09870-01 **Received:** 12/21/21 15:30

Matrix: Air **Sampled:** 12/20/21 08:00 **Work Order:** AE09870

Project: NASA KSC LC34 **Sampled By:** Dan Forester **% Solids:**

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	2700	U	ug/m³ Air	1.45	2700	20000	1L27030	TO-15	12/28/21 11:48	rgg	
1,1,2,2-Tetrachloroethane [79-34-5]^	3600	U	ug/m³ Air	1.45	3600	25000	1L27030	TO-15	12/28/21 11:48	rgg	
1,1,2-Trichloroethane [79-00-5]^	2800	U	ug/m³ Air	1.45	2800	20000	1L27030	TO-15	12/28/21 11:48	rgg	
1,1-Dichloroethane [75-34-3]^	2100	U	ug/m³ Air	1.45	2100	15000	1L27030	TO-15	12/28/21 11:48	rgg	
1,1-Dichloroethene [75-35-4]^	2200	U	ug/m³ Air	1.45	2200	14000	1L27030	TO-15	12/28/21 11:48	rgg	
1,2,4-Trichlorobenzene [120-82-1]^	4200	U	ug/m³ Air	1.45	4200	27000	1L27030	TO-15	12/28/21 11:48	rgg	
1,2-Dibromoethane [106-93-4]^	4000	U	ug/m³ Air	1.45	4000	28000	1L27030	TO-15	12/28/21 11:48	rgg	
1,2-Dichlorobenzene [95-50-1]^	2400	U	ug/m³ Air	1.45	2400	22000	1L27030	TO-15	12/28/21 11:48	rgg	
1,2-Dichloroethane [107-06-2]^	2200	U	ug/m³ Air	1.45	2200	15000	1L27030	TO-15	12/28/21 11:48	rgg	
1,2-Dichloropropane [78-87-5]^	2700	U	ug/m³ Air	1.45	2700	17000	1L27030	TO-15	12/28/21 11:48	rgg	
1,3-Dichlorobenzene [541-73-1]^	2400	U	ug/m³ Air	1.45	2400	22000	1L27030	TO-15	12/28/21 11:48	rgg	
1,4-Dichlorobenzene [106-46-7]^	2700	U	ug/m³ Air	1.45	2700	22000	1L27030	TO-15	12/28/21 11:48	rgg	
2-Butanone [78-93-3]^	1400	U	ug/m³ Air	1.45	1400	11000	1L27030	TO-15	12/28/21 11:48	rgg	
2-Hexanone [591-78-6]^	2000	U	ug/m³ Air	1.45	2000	15000	1L27030	TO-15	12/28/21 11:48	rgg	
4-Methyl-2-pentanone [108-10-1]^	2000	U	ug/m³ Air	1.45	2000	15000	1L27030	TO-15	12/28/21 11:48	rgg	
Acetone [67-64-1]^	1200	U	ug/m³ Air	1.45	1200	8600	1L27030	TO-15	12/28/21 11:48	rgg	J-01, O-01
Benzene [71-43-2]^	1700	U	ug/m³ Air	1.45	1700	12000	1L27030	TO-15	12/28/21 11:48	rgg	
Bromodichloromethane [75-27-4]^	3300	U	ug/m³ Air	1.45	3300	24000	1L27030	TO-15	12/28/21 11:48	rgg	
Bromoform [75-25-2]^	5700	U	ug/m³ Air	1.45	5700	37000	1L27030	TO-15	12/28/21 11:48	rgg	
Bromomethane [74-83-9]^	1900	U	ug/m³ Air	1.45	1900	14000	1L27030	TO-15	12/28/21 11:48	rgg	
Carbon disulfide [75-15-0]^	1900	U	ug/m³ Air	1.45	1900	11000	1L27030	TO-15	12/28/21 11:48	rgg	
Carbon tetrachloride [56-23-5]^	2500	U	ug/m³ Air	1.45	2500	23000	1L27030	TO-15	12/28/21 11:48	rgg	
Chlorobenzene [108-90-7]^	2200	U	ug/m³ Air	1.45	2200	17000	1L27030	TO-15	12/28/21 11:48	rgg	
Chloroethane [75-00-3]^	1200	U	ug/m³ Air	1.45	1200	9600	1L27030	TO-15	12/28/21 11:48	rgg	
Chloroform [67-66-3]^	2700	U	ug/m³ Air	1.45	2700	18000	1L27030	TO-15	12/28/21 11:48	rgg	
Chloromethane [74-87-3]^	1400	U	ug/m³ Air	1.45	1400	7500	1L27030	TO-15	12/28/21 11:48	rgg	
cis-1,2-Dichloroethene [156-59-2]^	**65000**		ug/m³ Air	1.45	2200	14000	1L27030	TO-15	12/28/21 11:48	rgg	
cis-1,3-Dichloropropene [10061-01-5]^	2500	U	ug/m³ Air	1.45	2500	16000	1L27030	TO-15	12/28/21 11:48	rgg	
Cyclohexane [110-82-7]^	1700	U	ug/m³ Air	1.45	1700	12000	1L27030	TO-15	12/28/21 11:48	rgg	
Dibromochloromethane [124-48-1]^	4100	U	ug/m³ Air	1.45	4100	31000	1L27030	TO-15	12/28/21 11:48	rgg	
Dichlorodifluoromethane [75-71-8]^	3900	U	ug/m³ Air	1.45	3900	18000	1L27030	TO-15	12/28/21 11:48	rgg	
Ethylbenzene [100-41-4]^	1900	U	ug/m³ Air	1.45	1900	16000	1L27030	TO-15	12/28/21 11:48	rgg	
Freon 113 [76-13-1]^	3600	U	ug/m³ Air	1.45	3600	28000	1L27030	TO-15	12/28/21 11:48	rgg	
Methylene chloride [75-09-2]^	**8700**	IV	ug/m³ Air	1.45	1000	13000	1L27030	TO-15	12/28/21 11:48	rgg	J-01, O-01
Methyl-tert-butyl ether [1634-04-4]^	1900	U	ug/m³ Air	1.45	1900	13000	1L27030	TO-15	12/28/21 11:48	rgg	
Styrene [100-42-5]^	2200	U	ug/m³ Air	1.45	2200	15000	1L27030	TO-15	12/28/21 11:48	rgg	
Tetrachloroethene [127-18-4]^	3000	U	ug/m³ Air	1.45	3000	25000	1L27030	TO-15	12/28/21 11:48	rgg	
Toluene [108-88-3]^	2000	U	ug/m³ Air	1.45	2000	14000	1L27030	TO-15	12/28/21 11:48	rgg	
trans-1,2-Dichloroethene [156-60-5]^	1800	U	ug/m³ Air	1.45	1800	14000	1L27030	TO-15	12/28/21 11:48	rgg	
trans-1,3-Dichloropropene [10061-02-6]^	2200	U	ug/m³ Air	1.45	2200	16000	1L27030	TO-15	12/28/21 11:48	rgg	
Trichloroethene [79-01-6]^	**230000**	V	ug/m³ Air	1.45	2700	19000	1L27030	TO-15	12/28/21 11:48	rgg	QB-01
Trichlorofluoromethane [75-69-4]^	2800	U	ug/m³ Air	1.45	2800	20000	1L27030	TO-15	12/28/21 11:48	rgg	
Vinyl chloride [75-01-4]^	**14000**		ug/m³ Air	1.45	2100	9300	1L27030	TO-15	12/28/21 11:48	rgg	
Xylenes (Total) [1330-20-7]^	4200	U	ug/m³ Air	1.45	4200	16000	1L27030	TO-15	12/28/21 11:48	rgg	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes

ANALYTICAL RESULTS

Description:	LC34-VMP-ASEFF-20211220	**Lab Sample ID:**	AE09870-01	**Received:**	12/21/21 15:30
Matrix:	Air	**Sampled:**	12/20/21 08:00	**Work Order:**	AE09870
Project:	NASA KSC LC34	**Sampled By:**	Dan Forester	**% Solids:**	

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*26*	*1*	*31.0*	*85 %*	*70-130*	*1L27030*	*TO-15*	*12/28/21 11:48*	*rgg*	

ANALYTICAL RESULTS

Description: LC34-VMP-SCRUB-20211220 | **Lab Sample ID:** AE09870-02 | **Received:** 12/21/21 15:30

Matrix: Air | **Sampled:** 12/20/21 08:15 | **Work Order:** AE09870

Project: NASA KSC LC34 | **Sampled By:** Dan Forester | **% Solids:**

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	12	U	ug/m³ Air	1.55	12	85	1L27030	TO-15	12/28/21 11:09	rgg	
1,1,2,2-Tetrachloroethane [79-34-5]^	15	U	ug/m³ Air	1.55	15	110	1L27030	TO-15	12/28/21 11:09	rgg	
1,1,2-Trichloroethane [79-00-5]^	12	U	ug/m³ Air	1.55	12	85	1L27030	TO-15	12/28/21 11:09	rgg	
1,1-Dichloroethane [75-34-3]^	9.0	U	ug/m³ Air	1.55	9.0	63	1L27030	TO-15	12/28/21 11:09	rgg	
1,1-Dichloroethene [75-35-4]^	9.3	U	ug/m³ Air	1.55	9.3	61	1L27030	TO-15	12/28/21 11:09	rgg	
1,2,4-Trichlorobenzene [120-82-1]^	18	U	ug/m³ Air	1.55	18	120	1L27030	TO-15	12/28/21 11:09	rgg	
1,2-Dibromoethane [106-93-4]^	17	U	ug/m³ Air	1.55	17	120	1L27030	TO-15	12/28/21 11:09	rgg	
1,2-Dichlorobenzene [95-50-1]^	10	U	ug/m³ Air	1.55	10	93	1L27030	TO-15	12/28/21 11:09	rgg	
1,2-Dichloroethane [107-06-2]^	9.3	U	ug/m³ Air	1.55	9.3	63	1L27030	TO-15	12/28/21 11:09	rgg	
1,2-Dichloropropane [78-87-5]^	11	U	ug/m³ Air	1.55	11	72	1L27030	TO-15	12/28/21 11:09	rgg	
1,3-Dichlorobenzene [541-73-1]^	10	U	ug/m³ Air	1.55	10	93	1L27030	TO-15	12/28/21 11:09	rgg	
1,4-Dichlorobenzene [106-46-7]^	12	U	ug/m³ Air	1.55	12	93	1L27030	TO-15	12/28/21 11:09	rgg	
2-Butanone [78-93-3]^	5.9	U	ug/m³ Air	1.55	5.9	46	1L27030	TO-15	12/28/21 11:09	rgg	
2-Hexanone [591-78-6]^	8.4	U	ug/m³ Air	1.55	8.4	63	1L27030	TO-15	12/28/21 11:09	rgg	
4-Methyl-2-pentanone [108-10-1]^	8.6	U	ug/m³ Air	1.55	8.6	63	1L27030	TO-15	12/28/21 11:09	rgg	
Acetone [67-64-1]^	**9.8**	IV	ug/m³ Air	1.55	5.2	37	1L27030	TO-15	12/28/21 11:09	rgg	J-01, O-01
Benzene [71-43-2]^	7.1	U	ug/m³ Air	1.55	7.1	50	1L27030	TO-15	12/28/21 11:09	rgg	
Bromodichloromethane [75-27-4]^	14	U	ug/m³ Air	1.55	14	100	1L27030	TO-15	12/28/21 11:09	rgg	
Bromoform [75-25-2]^	24	U	ug/m³ Air	1.55	24	160	1L27030	TO-15	12/28/21 11:09	rgg	
Bromomethane [74-83-9]^	7.9	U	ug/m³ Air	1.55	7.9	60	1L27030	TO-15	12/28/21 11:09	rgg	
Carbon disulfide [75-15-0]^	8.1	U	ug/m³ Air	1.55	8.1	48	1L27030	TO-15	12/28/21 11:09	rgg	
Carbon tetrachloride [56-23-5]^	11	U	ug/m³ Air	1.55	11	98	1L27030	TO-15	12/28/21 11:09	rgg	
Chlorobenzene [108-90-7]^	9.4	U	ug/m³ Air	1.55	9.4	71	1L27030	TO-15	12/28/21 11:09	rgg	
Chloroethane [75-00-3]^	5.2	U	ug/m³ Air	1.55	5.2	41	1L27030	TO-15	12/28/21 11:09	rgg	
Chloroform [67-66-3]^	12	U	ug/m³ Air	1.55	12	76	1L27030	TO-15	12/28/21 11:09	rgg	
Chloromethane [74-87-3]^	6.1	U	ug/m³ Air	1.55	6.1	32	1L27030	TO-15	12/28/21 11:09	rgg	
cis-1,2-Dichloroethene [156-59-2]^	**21**	I	ug/m³ Air	1.55	9.3	61	1L27030	TO-15	12/28/21 11:09	rgg	
cis-1,3-Dichloropropene [10061-01-5]^	11	U	ug/m³ Air	1.55	11	70	1L27030	TO-15	12/28/21 11:09	rgg	
Cyclohexane [110-82-7]^	7.5	U	ug/m³ Air	1.55	7.5	53	1L27030	TO-15	12/28/21 11:09	rgg	
Dibromochloromethane [124-48-1]^	17	U	ug/m³ Air	1.55	17	130	1L27030	TO-15	12/28/21 11:09	rgg	
Dichlorodifluoromethane [75-71-8]^	17	U	ug/m³ Air	1.55	17	77	1L27030	TO-15	12/28/21 11:09	rgg	
Ethylbenzene [100-41-4]^	8.1	U	ug/m³ Air	1.55	8.1	67	1L27030	TO-15	12/28/21 11:09	rgg	
Freon 113 [76-13-1]^	15	U	ug/m³ Air	1.55	15	120	1L27030	TO-15	12/28/21 11:09	rgg	
Methylene chloride [75-09-2]^	**39**	IV	ug/m³ Air	1.55	4.3	54	1L27030	TO-15	12/28/21 11:09	rgg	J-01, O-01
Methyl-tert-butyl ether [1634-04-4]^	8.3	U	ug/m³ Air	1.55	8.3	56	1L27030	TO-15	12/28/21 11:09	rgg	
Styrene [100-42-5]^	9.5	U	ug/m³ Air	1.55	9.5	66	1L27030	TO-15	12/28/21 11:09	rgg	
Tetrachloroethene [127-18-4]^	13	U	ug/m³ Air	1.55	13	110	1L27030	TO-15	12/28/21 11:09	rgg	
Toluene [108-88-3]^	8.6	U	ug/m³ Air	1.55	8.6	58	1L27030	TO-15	12/28/21 11:09	rgg	
trans-1,2-Dichloroethene [156-60-5]^	**9.5**	I	ug/m³ Air	1.55	7.9	61	1L27030	TO-15	12/28/21 11:09	rgg	
trans-1,3-Dichloropropene [10061-02-6]^	9.6	U	ug/m³ Air	1.55	9.6	70	1L27030	TO-15	12/28/21 11:09	rgg	
Trichloroethene [79-01-6]^	**940**	V	ug/m³ Air	1.55	12	83	1L27030	TO-15	12/28/21 11:09	rgg	QB-01
Trichlorofluoromethane [75-69-4]^	12	U	ug/m³ Air	1.55	12	87	1L27030	TO-15	12/28/21 11:09	rgg	
Vinyl chloride [75-01-4]^	8.9	U	ug/m³ Air	1.55	8.9	40	1L27030	TO-15	12/28/21 11:09	rgg	
Xylenes (Total) [1330-20-7]^	18	U	ug/m³ Air	1.55	18	67	1L27030	TO-15	12/28/21 11:09	rgg	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes

ANALYTICAL RESULTS

Description:	LC34-VMP-SCRUB-20211220	**Lab Sample ID:**	AE09870-02	**Received:**	12/21/21 15:30
Matrix:	Air	**Sampled:**	12/20/21 08:15	**Work Order:**	AE09870
Project:	NASA KSC LC34	**Sampled By:**	Dan Forester	**% Solids:**	

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*26*	*1*	*31.0*	*85 %*	*70-130*	*1L27030*	*TO-15*	*12/28/21 11:09*	*rgg*	

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1L22013 - NO PREP 2

Blank (1L22013-BLK1) Prepared: 12/22/2021 09:18 Analyzed: 12/22/2021 22:24

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	1.9	U	14	ug/m³ Air							
1,1,2,2-Tetrachloroethane	2.5	U	17	ug/m³ Air							
1,1,2-Trichloroethane	1.9	U	14	ug/m³ Air							
1,1-Dichloroethane	1.5	U	10	ug/m³ Air							
1,1-Dichloroethene	1.5	U	9.9	ug/m³ Air							
1,2,4-Trichlorobenzene	2.9	U	19	ug/m³ Air							
1,2-Dibromoethane	2.8	U	19	ug/m³ Air							
1,2-Dichlorobenzene	1.6	U	15	ug/m³ Air							
1,2-Dichloroethane	1.5	U	10	ug/m³ Air							
1,2-Dichloropropane	1.8	U	12	ug/m³ Air							
1,3-Dichlorobenzene	1.7	U	15	ug/m³ Air							
1,4-Dichlorobenzene	1.9	U	15	ug/m³ Air							
2-Butanone	0.94	U	7.4	ug/m³ Air							
2-Hexanone	1.4	U	10	ug/m³ Air							
4-Methyl-2-pentanone	1.4	U	10	ug/m³ Air							
Acetone	**1.8**	**I**	5.9	ug/m³ Air							J-01, O-01
Benzene	0.08	U	0.40	ug/m³ Air							
Bromodichloromethane	2.3	U	17	ug/m³ Air							
Bromoform	3.9	U	26	ug/m³ Air							
Bromomethane	1.3	U	9.7	ug/m³ Air							
Carbon disulfide	1.3	U	7.8	ug/m³ Air							
Carbon tetrachloride	1.7	U	16	ug/m³ Air							
Chlorobenzene	1.5	U	12	ug/m³ Air							
Chloroethane	0.84	U	6.6	ug/m³ Air							
Chloroform	1.9	U	12	ug/m³ Air							
Chloromethane	0.99	U	5.2	ug/m³ Air							
cis-1,2-Dichloroethene	1.5	U	9.9	ug/m³ Air							
cis-1,3-Dichloropropene	1.7	U	11	ug/m³ Air							
Cyclohexane	1.2	U	8.6	ug/m³ Air							
Dibromochloromethane	2.8	U	21	ug/m³ Air							
Dichlorodifluoromethane	2.7	U	12	ug/m³ Air							
Ethylbenzene	1.3	U	11	ug/m³ Air							
Freon 113	2.5	U	19	ug/m³ Air							
Methylene chloride	**1.2**	**I**	8.7	ug/m³ Air							J-01, O-01, QE
Methyl-tert-butyl ether	1.3	U	9.0	ug/m³ Air							
Styrene	1.5	U	11	ug/m³ Air							
Tetrachloroethene	2.1	U	17	ug/m³ Air							
Toluene	1.4	U	9.4	ug/m³ Air							
trans-1,2-Dichloroethene	1.3	U	9.9	ug/m³ Air							
trans-1,3-Dichloropropene	1.5	U	11	ug/m³ Air							
Trichloroethene	1.9	U	13	ug/m³ Air							
Trichlorofluoromethane	1.9	U	14	ug/m³ Air							
Vinyl chloride	1.4	U	6.4	ug/m³ Air							
Xylenes (Total)	2.9	U	11	ug/m³ Air							
4-Bromofluorobenzene	*26*			*ppbv*	*31.0*		*84*	*70-130*			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1L22013 - NO PREP 2 - Continued

LCS (1L22013-BS1) Prepared: 12/22/2021 09:18 Analyzed: 12/22/2021 20:12

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	50		14	ug/m³ Air	54.6		91	70-130			
1,1,2,2-Tetrachloroethane	64		17	ug/m³ Air	68.7		94	52-163			
1,1,2-Trichloroethane	49		14	ug/m³ Air	54.6		90	70-134			
1,1-Dichloroethane	40		10	ug/m³ Air	40.5		99	70-130			
1,1-Dichloroethene	41		9.9	ug/m³ Air	39.7		104	67-142			
1,2,4-Trichlorobenzene	53		19	ug/m³ Air	74.2		72	22-180			
1,2-Dibromoethane	68		19	ug/m³ Air	76.8		88	70-141			
1,2-Dichlorobenzene	61		15	ug/m³ Air	60.1		101	37-180			
1,2-Dichloroethane	37		10	ug/m³ Air	40.5		92	70-130			
1,2-Dichloropropane	43		12	ug/m³ Air	46.2		93	70-130			
1,3-Dichlorobenzene	61		15	ug/m³ Air	60.1		101	47-178			
1,4-Dichlorobenzene	60		15	ug/m³ Air	60.1		100	45-180			
2-Butanone	27		7.4	ug/m³ Air	29.5		92	70-130			
2-Hexanone	34		10	ug/m³ Air	41.0		83	68-140			
4-Methyl-2-pentanone	36		10	ug/m³ Air	41.0		87	70-135			
Acetone	24		5.9	ug/m³ Air	23.8		101	65-130			
Benzene	30		0.40	ug/m³ Air	32.0		94	70-133			
Bromodichloromethane	58		17	ug/m³ Air	67.0		86	70-130			
Bromoform	90		26	ug/m³ Air	103		87	62-149			
Bromomethane	33		9.7	ug/m³ Air	38.8		86	69-130			
Carbon disulfide	30		7.8	ug/m³ Air	31.1		95	66-137			
Carbon tetrachloride	50		16	ug/m³ Air	62.9		80	22-166			
Chlorobenzene	42		12	ug/m³ Air	46.0		92	70-134			
Chloroethane	24		6.6	ug/m³ Air	26.4		92	69-131			
Chloroform	45		12	ug/m³ Air	48.8		93	70-130			
Chloromethane	22		5.2	ug/m³ Air	20.7		107	55-142			
cis-1,2-Dichloroethene	39		9.9	ug/m³ Air	39.6		97	70-130			
cis-1,3-Dichloropropene	43		11	ug/m³ Air	45.4		95	70-137			
Cyclohexane	33		8.6	ug/m³ Air	34.4		96	70-130			
Dibromochloromethane	72		21	ug/m³ Air	85.2		84	70-130			
Dichlorodifluoromethane	44		12	ug/m³ Air	49.5		89	61-137			
Ethylbenzene	40		11	ug/m³ Air	43.4		92	70-137			
Freon 113	75		19	ug/m³ Air	76.6		98	67-140			
m,p-Xylenes	83		22	ug/m³ Air	86.8		95	69-142			
Methylene chloride	34		8.7	ug/m³ Air	34.7		98	59-136			
Methyl-tert-butyl ether	32		9.0	ug/m³ Air	36.1		90	67-130			
o-Xylene	42		11	ug/m³ Air	43.4		96	70-140			
Styrene	37		11	ug/m³ Air	42.6		87	56-150			
Tetrachloroethene	60		17	ug/m³ Air	67.8		89	70-141			
Toluene	35		9.4	ug/m³ Air	37.7		92	70-138			
trans-1,2-Dichloroethene	37		9.9	ug/m³ Air	39.6		94	70-130			
trans-1,3-Dichloropropene	39		11	ug/m³ Air	45.4		87	59-166			
Trichloroethene	50		13	ug/m³ Air	53.7		92	70-130			
Trichlorofluoromethane	48		14	ug/m³ Air	56.2		85	46-161			
Vinyl chloride	29		6.4	ug/m³ Air	25.6		112	53-148			
4-Bromofluorobenzene	*30*			*ppbv*	*31.0*		*98*	*70-130*			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1L22013 - NO PREP 2 - Continued

LCS Dup (1L22013-BSD1) Prepared: 12/22/2021 09:18 Analyzed: 12/22/2021 20:53

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	47		14	ug/m³ Air	54.6		86	70-130	6	25	
1,1,2,2-Tetrachloroethane	62		17	ug/m³ Air	68.7		90	52-163	5	25	
1,1,2-Trichloroethane	48		14	ug/m³ Air	54.6		88	70-134	1	25	
1,1-Dichloroethane	38		10	ug/m³ Air	40.5		93	70-130	7	25	
1,1-Dichloroethene	40		9.9	ug/m³ Air	39.7		100	67-142	4	25	
1,2,4-Trichlorobenzene	49		19	ug/m³ Air	74.2		67	22-180	8	25	
1,2-Dibromoethane	65		19	ug/m³ Air	76.8		85	70-141	4	25	
1,2-Dichlorobenzene	59		15	ug/m³ Air	60.1		98	37-180	3	25	
1,2-Dichloroethane	36		10	ug/m³ Air	40.5		89	70-130	4	25	
1,2-Dichloropropane	42		12	ug/m³ Air	46.2		90	70-130	3	25	
1,3-Dichlorobenzene	58		15	ug/m³ Air	60.1		97	47-178	4	25	
1,4-Dichlorobenzene	57		15	ug/m³ Air	60.1		95	45-180	5	25	
2-Butanone	26		7.4	ug/m³ Air	29.5		89	70-130	4	25	
2-Hexanone	32		10	ug/m³ Air	41.0		79	68-140	5	25	
4-Methyl-2-pentanone	34		10	ug/m³ Air	41.0		84	70-135	4	25	
Acetone	23		5.9	ug/m³ Air	23.8		97	65-130	5	25	
Benzene	29		0.40	ug/m³ Air	32.0		90	70-133	4	25	
Bromodichloromethane	56		17	ug/m³ Air	67.0		83	70-130	4	25	
Bromoform	85		26	ug/m³ Air	103		82	62-149	5	25	
Bromomethane	32		9.7	ug/m³ Air	38.8		82	69-130	4	25	
Carbon disulfide	28		7.8	ug/m³ Air	31.1		90	66-137	5	25	
Carbon tetrachloride	48		16	ug/m³ Air	62.9		76	22-166	5	25	
Chlorobenzene	40		12	ug/m³ Air	46.0		87	70-134	5	25	
Chloroethane	23		6.6	ug/m³ Air	26.4		88	69-131	5	25	
Chloroform	43		12	ug/m³ Air	48.8		89	70-130	5	25	
Chloromethane	21		5.2	ug/m³ Air	20.7		102	55-142	4	25	
cis-1,2-Dichloroethene	37		9.9	ug/m³ Air	39.6		93	70-130	4	25	
cis-1,3-Dichloropropene	42		11	ug/m³ Air	45.4		92	70-137	4	25	
Cyclohexane	32		8.6	ug/m³ Air	34.4		92	70-130	5	25	
Dibromochloromethane	70		21	ug/m³ Air	85.2		82	70-130	3	25	
Dichlorodifluoromethane	42		12	ug/m³ Air	49.5		85	61-137	4	25	
Ethylbenzene	38		11	ug/m³ Air	43.4		88	70-137	5	25	
Freon 113	72		19	ug/m³ Air	76.6		93	67-140	5	25	
m,p-Xylenes	78		22	ug/m³ Air	86.8		90	69-142	5	25	
Methylene chloride	33		8.7	ug/m³ Air	34.7		94	59-136	4	25	
Methyl-tert-butyl ether	31		9.0	ug/m³ Air	36.1		85	67-130	5	25	
o-Xylene	39		11	ug/m³ Air	43.4		91	70-140	5	25	
Styrene	35		11	ug/m³ Air	42.6		82	56-150	6	25	
Tetrachloroethene	58		17	ug/m³ Air	67.8		86	70-141	4	25	
Toluene	33		9.4	ug/m³ Air	37.7		88	70-138	4	25	
trans-1,2-Dichloroethene	36		9.9	ug/m³ Air	39.6		90	70-130	4	25	
trans-1,3-Dichloropropene	38		11	ug/m³ Air	45.4		84	59-166	3	25	
Trichloroethene	47		13	ug/m³ Air	53.7		88	70-130	5	25	
Trichlorofluoromethane	46		14	ug/m³ Air	56.2		82	46-161	4	25	
Vinyl chloride	27		6.4	ug/m³ Air	25.6		107	53-148	5	25	
4-Bromofluorobenzene	*30*			*ppbv*	*31.0*		*98*	*70-130*			

Batch 1L27030 - NO PREP 2

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1L27030 - NO PREP 2 - Continued

Blank (1L27030-BLK1) Prepared: 12/27/2021 12:40 Analyzed: 12/27/2021 21:36

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	1.9	U	14	ug/m³ Air							
1,1,2,2-Tetrachloroethane	2.5	U	17	ug/m³ Air							
1,1,2-Trichloroethane	1.9	U	14	ug/m³ Air							
1,1-Dichloroethane	1.5	U	10	ug/m³ Air							
1,1-Dichloroethene	1.5	U	9.9	ug/m³ Air							
1,2,4-Trichlorobenzene	2.9	U	19	ug/m³ Air							
1,2-Dibromoethane	2.8	U	19	ug/m³ Air							
1,2-Dichlorobenzene	1.6	U	15	ug/m³ Air							
1,2-Dichloroethane	1.5	U	10	ug/m³ Air							
1,2-Dichloropropane	1.8	U	12	ug/m³ Air							
1,3-Dichlorobenzene	1.7	U	15	ug/m³ Air							
1,4-Dichlorobenzene	1.9	U	15	ug/m³ Air							
2-Butanone	0.94	U	7.4	ug/m³ Air							
2-Hexanone	1.4	U	10	ug/m³ Air							
4-Methyl-2-pentanone	1.4	U	10	ug/m³ Air							
Acetone	**2.6**	**I**	5.9	ug/m³ Air							J-01, O-01
Benzene	1.2	U	8.0	ug/m³ Air							
Bromodichloromethane	2.3	U	17	ug/m³ Air							
Bromoform	3.9	U	26	ug/m³ Air							
Bromomethane	1.3	U	9.7	ug/m³ Air							
Carbon disulfide	1.3	U	7.8	ug/m³ Air							
Carbon tetrachloride	1.7	U	16	ug/m³ Air							
Chlorobenzene	1.5	U	12	ug/m³ Air							
Chloroethane	0.84	U	6.6	ug/m³ Air							
Chloroform	1.9	U	12	ug/m³ Air							
Chloromethane	0.99	U	5.2	ug/m³ Air							
cis-1,2-Dichloroethene	**1.5**	**I**	9.9	ug/m³ Air							
cis-1,3-Dichloropropene	1.7	U	11	ug/m³ Air							
Cyclohexane	1.2	U	8.6	ug/m³ Air							
Dibromochloromethane	2.8	U	21	ug/m³ Air							
Dichlorodifluoromethane	2.7	U	12	ug/m³ Air							
Ethylbenzene	1.3	U	11	ug/m³ Air							
Freon 113	2.5	U	19	ug/m³ Air							
Methylene chloride	**7.3**	**I**	8.7	ug/m³ Air							J-01, O-01
Methyl-tert-butyl ether	1.3	U	9.0	ug/m³ Air							
Styrene	1.5	U	11	ug/m³ Air							
Tetrachloroethene	2.1	U	17	ug/m³ Air							
Toluene	1.4	U	9.4	ug/m³ Air							
trans-1,2-Dichloroethene	1.3	U	9.9	ug/m³ Air							
trans-1,3-Dichloropropene	1.5	U	11	ug/m³ Air							
Trichloroethene	**5.0**	**I**	13	ug/m³ Air							QB-01
Trichlorofluoromethane	1.9	U	14	ug/m³ Air							
Vinyl chloride	1.4	U	6.4	ug/m³ Air							
Xylenes (Total)	2.9	U	11	ug/m³ Air							
4-Bromofluorobenzene	*26*			*ppbv*	*31.0*		*85*	*70-130*			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1L27030 - NO PREP 2 - Continued

LCS (1L27030-BS1) Prepared: 12/27/2021 12:40 Analyzed: 12/27/2021 19:23

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	55		14	ug/m³ Air	54.6		101	70-130			
1,1,2,2-Tetrachloroethane	66		17	ug/m³ Air	68.7		96	52-163			
1,1,2-Trichloroethane	53		14	ug/m³ Air	54.6		98	70-134			
1,1-Dichloroethane	42		10	ug/m³ Air	40.5		104	70-130			
1,1-Dichloroethene	44		9.9	ug/m³ Air	39.7		111	67-142			
1,2,4-Trichlorobenzene	58		19	ug/m³ Air	74.2		78	22-180			
1,2-Dibromoethane	74		19	ug/m³ Air	76.8		96	70-141			
1,2-Dichlorobenzene	67		15	ug/m³ Air	60.1		112	37-180			
1,2-Dichloroethane	43		10	ug/m³ Air	40.5		105	70-130			
1,2-Dichloropropane	47		12	ug/m³ Air	46.2		102	70-130			
1,3-Dichlorobenzene	61		15	ug/m³ Air	60.1		101	47-178			
1,4-Dichlorobenzene	66		15	ug/m³ Air	60.1		109	45-180			
2-Butanone	30		7.4	ug/m³ Air	29.5		102	70-130			
2-Hexanone	38		10	ug/m³ Air	41.0		94	68-140			
4-Methyl-2-pentanone	40		10	ug/m³ Air	41.0		98	70-135			
Acetone	27		5.9	ug/m³ Air	23.8		113	65-130			
Benzene	32		8.0	ug/m³ Air	32.0		101	70-133			
Bromodichloromethane	66		17	ug/m³ Air	67.0		98	70-130			
Bromoform	96		26	ug/m³ Air	103		92	62-149			
Bromomethane	38		9.7	ug/m³ Air	38.8		97	69-130			
Carbon disulfide	29		7.8	ug/m³ Air	31.1		95	66-137			
Carbon tetrachloride	56		16	ug/m³ Air	62.9		90	22-166			
Chlorobenzene	45		12	ug/m³ Air	46.0		97	70-134			
Chloroethane	28		6.6	ug/m³ Air	26.4		106	69-131			
Chloroform	50		12	ug/m³ Air	48.8		103	70-130			
Chloromethane	24		5.2	ug/m³ Air	20.7		118	55-142			
cis-1,2-Dichloroethene	41		9.9	ug/m³ Air	39.6		103	70-130			
cis-1,3-Dichloropropene	46		11	ug/m³ Air	45.4		102	70-137			
Cyclohexane	36		8.6	ug/m³ Air	34.4		104	70-130			
Dibromochloromethane	77		21	ug/m³ Air	85.2		91	70-130			
Dichlorodifluoromethane	52		12	ug/m³ Air	49.5		106	61-137			
Ethylbenzene	42		11	ug/m³ Air	43.4		98	70-137			
Freon 113	75		19	ug/m³ Air	76.6		98	67-140			
m,p-Xylenes	86		22	ug/m³ Air	86.8		99	69-142			
Methylene chloride	40		8.7	ug/m³ Air	34.7		116	59-136			
Methyl-tert-butyl ether	34		9.0	ug/m³ Air	36.1		93	67-130			
o-Xylene	44		11	ug/m³ Air	43.4		101	70-140			
Styrene	39		11	ug/m³ Air	42.6		91	56-150			
Tetrachloroethene	64		17	ug/m³ Air	67.8		95	70-141			
Toluene	37		9.4	ug/m³ Air	37.7		99	70-138			
trans-1,2-Dichloroethene	40		9.9	ug/m³ Air	39.6		101	70-130			
trans-1,3-Dichloropropene	44		11	ug/m³ Air	45.4		96	59-166			
Trichloroethene	52		13	ug/m³ Air	53.7		98	70-130			
Trichlorofluoromethane	57		14	ug/m³ Air	56.2		101	46-161			
Vinyl chloride	31		6.4	ug/m³ Air	25.6		122	53-148			
4-Bromofluorobenzene	*29*			*ppbv*	*31.0*		*93*	*70-130*			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1L27030 - NO PREP 2 - Continued

LCS Dup (1L27030-BSD1) Prepared: 12/27/2021 12:40 Analyzed: 12/27/2021 20:03

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	54		14	ug/m³ Air	54.6		99	70-130	2	25	
1,1,2,2-Tetrachloroethane	66		17	ug/m³ Air	68.7		96	52-163	0.3	25	
1,1,2-Trichloroethane	54		14	ug/m³ Air	54.6		99	70-134	0.9	25	
1,1-Dichloroethane	42		10	ug/m³ Air	40.5		104	70-130	0.8	25	
1,1-Dichloroethene	44		9.9	ug/m³ Air	39.7		111	67-142	0.5	25	
1,2,4-Trichlorobenzene	56		19	ug/m³ Air	74.2		76	22-180	2	25	
1,2-Dibromoethane	73		19	ug/m³ Air	76.8		95	70-141	1	25	
1,2-Dichlorobenzene	66		15	ug/m³ Air	60.1		109	37-180	2	25	
1,2-Dichloroethane	42		10	ug/m³ Air	40.5		105	70-130	0.4	25	
1,2-Dichloropropane	47		12	ug/m³ Air	46.2		101	70-130	1	25	
1,3-Dichlorobenzene	58		15	ug/m³ Air	60.1		96	47-178	5	25	
1,4-Dichlorobenzene	64		15	ug/m³ Air	60.1		107	45-180	2	25	
2-Butanone	30		7.4	ug/m³ Air	29.5		102	70-130	0.1	25	
2-Hexanone	38		10	ug/m³ Air	41.0		93	68-140	1	25	
4-Methyl-2-pentanone	40		10	ug/m³ Air	41.0		97	70-135	1	25	
Acetone	27		5.9	ug/m³ Air	23.8		113	65-130	0.5	25	
Benzene	32		8.0	ug/m³ Air	32.0		100	70-133	1	25	
Bromodichloromethane	64		17	ug/m³ Air	67.0		96	70-130	2	25	
Bromoform	94		26	ug/m³ Air	103		91	62-149	2	25	
Bromomethane	36		9.7	ug/m³ Air	38.8		93	69-130	4	25	
Carbon disulfide	29		7.8	ug/m³ Air	31.1		93	66-137	1	25	
Carbon tetrachloride	55		16	ug/m³ Air	62.9		88	22-166	2	25	
Chlorobenzene	44		12	ug/m³ Air	46.0		96	70-134	1	25	
Chloroethane	26		6.6	ug/m³ Air	26.4		99	69-131	7	25	
Chloroform	49		12	ug/m³ Air	48.8		100	70-130	3	25	
Chloromethane	24		5.2	ug/m³ Air	20.7		116	55-142	2	25	
cis-1,2-Dichloroethene	40		9.9	ug/m³ Air	39.6		101	70-130	2	25	
cis-1,3-Dichloropropene	46		11	ug/m³ Air	45.4		101	70-137	1	25	
Cyclohexane	35		8.6	ug/m³ Air	34.4		102	70-130	2	25	
Dibromochloromethane	78		21	ug/m³ Air	85.2		92	70-130	2	25	
Dichlorodifluoromethane	52		12	ug/m³ Air	49.5		105	61-137	1	25	
Ethylbenzene	42		11	ug/m³ Air	43.4		97	70-137	0.7	25	
Freon 113	74		19	ug/m³ Air	76.6		97	67-140	1	25	
m,p-Xylenes	86		22	ug/m³ Air	86.8		99	69-142	0.2	25	
Methylene chloride	40		8.7	ug/m³ Air	34.7		116	59-136	0.3	25	
Methyl-tert-butyl ether	33		9.0	ug/m³ Air	36.1		93	67-130	0.2	25	
o-Xylene	43		11	ug/m³ Air	43.4		99	70-140	1	25	
Styrene	38		11	ug/m³ Air	42.6		90	56-150	2	25	
Tetrachloroethene	64		17	ug/m³ Air	67.8		94	70-141	0.3	25	
Toluene	37		9.4	ug/m³ Air	37.7		97	70-138	2	25	
trans-1,2-Dichloroethene	39		9.9	ug/m³ Air	39.6		99	70-130	2	25	
trans-1,3-Dichloropropene	43		11	ug/m³ Air	45.4		94	59-166	2	25	
Trichloroethene	52		13	ug/m³ Air	53.7		97	70-130	0.3	25	
Trichlorofluoromethane	55		14	ug/m³ Air	56.2		98	46-161	3	25	
Vinyl chloride	30		6.4	ug/m³ Air	25.6		119	53-148	3	25	
4-Bromofluorobenzene	*29*			*ppbv*	*31.0*		*93*	*70-130*			

FLAGS/NOTES AND DEFINITIONS

PQL	PQL: Practical Quantitation Limit. The PQL presented is the laboratory MRL.
B	Results are based upon membrane filter colony counts that are outside the method indicated ideal range.
I	The reported value is between the laboratory method detection limit (MDL) and the practical quantitation limit (PQL).
J	Estimated value.
K	Off-scale low; Actual value is known to be less than the value given.
L	Off-scale high; Actual value is known to be greater than value given.
M	Presence of analyte is verified but not quantified; the actual value is less than the MRL but greater than the MDL.
N	Presumptive evidence of presence of material.
O	Sampled, but analysis lost or not performed.
Q	Sample exceeded the accepted holding time.
T	Value reported is less than the laboratory method detection limit. The value is reported for informational purposes only and shall not be used in statistical analysis.
U	Indicates that the compound was analyzed for but not detected.
V	Indicates that the analyte was detected in both the sample and the associated method blank.
Y	The laboratory analysis was from an improperly preserved sample. The data may not be accurate.
Z	Too many colonies were present (TNTC); the numeric value represents the filtration volume.
?	Data are rejected and should not be used. Some or all of the quality control data for the analyte were outside criteria, and the presence or absence of the analyte cannot be determined from the data.
*****	Not reported due to interference.
[CALC]	Calculated analyte - MDL/MRL reported to the highest reporting limit of the component analyses.
J-01	Result may be biased high due to positive results in the associated method blank at a concentration above the MDL and/or greater than one-half the MRL.
O-01	This compound is a common laboratory contaminant.
QB-01	The method blank had a positive result for the analyte; however, the concentration in the method blank is less than 10% of the sample result. There is minimal impact to the data.

Tetra Tech, Inc.

CHAIN OF CUSTODY NUMBER No. 3161 (#E09870) PAGE 1 OF 1

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G08985	LC34	MARK JENNET	412 921 8622	ENCO
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER	PHONE NUMBER	ADDRESS
DAN FORESTER		DAN FORESTER	304-780-1426	
		CARRIER/WAYBILL NUMBER		CITY, STATE
		COURIER		ORLANDO, FL

STANDARD TAT ☑
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR 2021	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	CONTAINER TYPE PLASTIC (P) or GLASS (G)	PRESERVATIVE USED	TYPE OF ANALYSIS: 10-15 AZR						COMMENTS
									METAL	NA							
20 DEC	0800	LC34-VMP-ASEFF-20211220LC34		✓	✓	AIR	G	1	X						JS	047	G#9
20 DEC	0815	LC34-VMP-SCRUB-20211220LC34		✓	✓	AIR	G	1	X						JS	080	G#2

1. RELINQUISHED BY		DATE 12/21/21	TIME 0800	1. RECEIVED BY		DATE 12/21/21	TIME 0800
2. RELINQUISHED BY		DATE 12/21/21	TIME 1530	2. RECEIVED BY	James W Gregory	DATE 12/21/21	TIME 1080
3. RELINQUISHED BY		DATE	TIME	3. RECEIVED BY		DATE	TIME

COMMENTS: COOLER 24.8°C

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

AE09870

Environmental Conservation Laboratories, Inc.
10775 Central Port Drive, Orlando, FL 32824
4810 Executive Park Court, Suite 211,Jacksonville, FL 32216
102-A Woodwinds Industrial Ct, Cary, NC 27511

www.encolabs.com

COMPENDIUM METHOD TO-14A/COMPENDIUM METHOD TO-15 CANISTER SAMPLING FIELD TEST DATA SHEET

General Sampling Information should be recorded for each SUMMA canister used to collect samples.

General Information

SITE LOCATION:	LC 34
SITE ADDRESS:	CCSFS
SAMPLER ID:	LC34 - VMP- ASEFF - 2021/220
SAMPLING DATE:	20 DEC 21
OPERATOR:	DANFORTIER
SHIPPING DATE:	12.15.2021
CANISTER SERIAL NO.:	JS-047
CANISTER LEAK CHECK DATE:	Laboratory information on file.
REGULATOR SERIAL NO.:	GH4

Sampling Information

	Temperature	Canister Pressure	Local Time	Regulator Flow Rate
START	70	-30 in Hg	0800	GRAB
STOP	70	-4 in Hg	0801	

Signature/Title: _____

AEO9876

Environmental Conservation Laboratories, Inc.
10775 Central Port Drive, Orlando, FL 32824
4810 Executive Park Court, Suite 211,Jacksonville, FL 32216
102-A Woodwinds Industrial Ct, Cary, NC 27511

www.encolabs.com

COMPENDIUM METHOD TO-14A/COMPENDIUM METHOD TO-15 CANISTER SAMPLING FIELD TEST DATA SHEET

General Sampling Information should be recorded for each SUMMA canister used to collect samples.

General Information

SITE LOCATION:	LC34
SITE ADDRESS:	CCSFS
SAMPLER ID:	LC34 - UMP-SCRUB - 20211220
SAMPLING DATE:	20 DEC 21
OPERATOR:	DAN FORSTER
SHIPPING DATE:	12-15-2021
CANISTER SERIAL NO.:	JS-080
CANISTER LEAK CHECK DATE:	Laboratory information on file.
REGULATOR SERIAL NO.:	6#2

Sampling Information

	Temperature	Canister Pressure	Local Time	Regulator Flow Rate
START	70	-30 in Hg	0815	6 L/M
STOP		-4 in Hg	0816	

Signature/Title: _____

ENCO Laboratories

Accurate. Timely. Responsive. Innovative.

10775 Central Port Drive
Orlando FL, 32824
Phone: 407.826.5314 FAX: 407.850.6945

Tuesday, January 25, 2022
Tetra Tech NUS, Inc. (TE015)
Attn: Mark Jonnet
Foster Plaza 7, 661 Anderson Drive
Pittsburgh, PA 15220

RE: Laboratory Results for
Project Number: 112G08985, Project Name/Desc: NASA KSC LC34
ENCO Workorder(s): AE10221

Dear Mark Jonnet,

Enclosed is a copy of your laboratory report for test samples received by our laboratory on Monday, January 17, 2022.

Unless otherwise noted in an attached project narrative, all samples were received in acceptable condition and processed in accordance with the referenced methods/procedures. Results for these procedures apply only to the samples as submitted.

The analytical results contained in this report are in compliance with NELAC standards, except as noted in the project narrative if applicable. This report shall not be reproduced except in full, without the written approval of the Laboratory.

This report contains only those analyses performed by Environmental Conservation Laboratories. Unless otherwise noted, all analyses were performed at ENCO Orlando. Data from outside organizations will be reported under separate cover.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

Kaitlin Dylnicki

Project Manager

Enclosure(s)

SAMPLE SUMMARY/LABORATORY CHRONICLE

Client ID: LC34-GAC-20220117 | **Lab ID: AE10221-01** | **Sampled: 01/17/22 07:00** | **Received: 01/17/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	01/31/22	01/18/22 00:00	01/18/22 10:05

Client ID: LC34-AS1-20220117 | **Lab ID: AE10221-02** | **Sampled: 01/17/22 07:10** | **Received: 01/17/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	01/31/22	01/18/22 00:00	01/18/22 13:55

Client ID: LC34-AS2-20220117 | **Lab ID: AE10221-03** | **Sampled: 01/17/22 07:20** | **Received: 01/17/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	01/31/22	01/18/22 00:00	01/18/22 14:24

Client ID: LC34-AS2-20220117 | **Lab ID: AE10221-03RE1** | **Sampled: 01/17/22 07:20** | **Received: 01/17/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	01/31/22	01/19/22 07:47	01/19/22 15:34

Client ID: LC34-RW17C-20220117 | **Lab ID: AE10221-04** | **Sampled: 01/17/22 07:30** | **Received: 01/17/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	01/31/22	01/18/22 00:00	01/18/22 14:53

Client ID: LC34-RW18C-20220117 | **Lab ID: AE10221-05** | **Sampled: 01/17/22 07:40** | **Received: 01/17/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	01/31/22	01/18/22 00:00	01/18/22 15:21

Client ID: LC34-RW19C-20220117 | **Lab ID: AE10221-06** | **Sampled: 01/17/22 07:50** | **Received: 01/17/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	01/31/22	01/18/22 00:00	01/18/22 15:50

Client ID: LC34-RW20C-20220117 | **Lab ID: AE10221-07** | **Sampled: 01/17/22 08:00** | **Received: 01/17/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	01/31/22	01/18/22 00:00	01/18/22 16:19

Client ID: LC34PS-PZI-040.0-20220117 | **Lab ID: AE10221-08** | **Sampled: 01/17/22 08:00** | **Received: 01/17/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	01/31/22	01/18/22 00:00	01/18/22 16:48

Client ID: LC34PS-PZI-050.0-20220117 | **Lab ID: AE10221-09** | **Sampled: 01/17/22 08:02** | **Received: 01/17/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	01/31/22	01/18/22 00:00	01/18/22 17:17

Client ID: LC34PS-PZI-058.0-20220117 | **Lab ID: AE10221-10** | **Sampled: 01/17/22 08:04** | **Received: 01/17/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	01/31/22	01/18/22 00:00	01/18/22 17:45

Client ID: LC34PS-PZI-073.0-20220117 | **Lab ID: AE10221-11** | **Sampled: 01/17/22 08:36** | **Received: 01/17/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	01/31/22	01/18/22 00:00	01/18/22 18:14

Client ID: LC34PS-PZI-080.0-20220117 | **Lab ID: AE10221-12** | **Sampled: 01/17/22 08:08** | **Received: 01/17/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	01/31/22	01/18/22 09:43	01/18/22 10:30

Client ID: LC34PS-PZH-040.0-20220117 | **Lab ID: AE10221-13** | **Sampled: 01/17/22 08:30** | **Received: 01/17/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	01/31/22	01/18/22 09:43	01/18/22 14:11

SAMPLE SUMMARY/LABORATORY CHRONICLE

Client ID: LC34PS-PZH-050.0-20220117 **Lab ID: AE10221-14** **Sampled: 01/17/22 08:32** **Received: 01/17/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	01/31/22	01/18/22 09:43	01/18/22 14:39

Client ID: LC34PS-PZH-058.0-20220117 **Lab ID: AE10221-15** **Sampled: 01/17/22 08:34** **Received: 01/17/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	01/31/22	01/18/22 09:43	01/18/22 15:07

Client ID: LC34PS-PZH-073.0-20220117 **Lab ID: AE10221-16** **Sampled: 01/17/22 08:36** **Received: 01/17/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	01/31/22	01/18/22 09:43	01/18/22 15:34

Client ID: LC34PS-PZH-080.0-20220117 **Lab ID: AE10221-17** **Sampled: 01/17/22 08:38** **Received: 01/17/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	01/31/22	01/18/22 09:43	01/18/22 10:58

Client ID: LC34PS-PZK-040.0-20220117 **Lab ID: AE10221-18** **Sampled: 01/17/22 09:00** **Received: 01/17/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	01/31/22	01/18/22 09:43	01/18/22 16:02

Client ID: LC34PS-PZK-040.0-20220117 **Lab ID: AE10221-18RE1** **Sampled: 01/17/22 09:00** **Received: 01/17/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	01/31/22	01/19/22 09:05	01/19/22 13:00

Client ID: LC34PS-PZK-050.0-20220117 **Lab ID: AE10221-19** **Sampled: 01/17/22 09:02** **Received: 01/17/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	01/31/22	01/18/22 09:43	01/18/22 16:30

Client ID: LC34PS-PZK-058.0-20220117 **Lab ID: AE10221-20** **Sampled: 01/17/22 09:04** **Received: 01/17/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	01/31/22	01/18/22 09:43	01/18/22 16:58

Client ID: LC34PS-PZK-073.0-20220117 **Lab ID: AE10221-21RE1** **Sampled: 01/17/22 09:06** **Received: 01/17/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	01/31/22	01/19/22 09:05	01/19/22 14:23

Client ID: LC34PS-PZK-080.0-20220117 **Lab ID: AE10221-22** **Sampled: 01/17/22 09:08** **Received: 01/17/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	01/31/22	01/18/22 09:43	01/18/22 17:53

Client ID: LC34PS-PZJ-040.0-20220117 **Lab ID: AE10221-23** **Sampled: 01/17/22 09:30** **Received: 01/17/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	01/31/22	01/18/22 09:43	01/18/22 18:21

Client ID: LC34PS-PZJ-040.0-20220117 **Lab ID: AE10221-23RE1** **Sampled: 01/17/22 09:30** **Received: 01/17/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	01/31/22	01/19/22 09:05	01/19/22 13:28

Client ID: LC34PS-PZJ-050.0-20220117 **Lab ID: AE10221-24** **Sampled: 01/17/22 09:32** **Received: 01/17/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	01/31/22	01/18/22 09:43	01/18/22 18:48

Client ID: LC34PS-PZJ-058.0-20220117 **Lab ID: AE10221-25** **Sampled: 01/17/22 09:34** **Received: 01/17/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	01/31/22	01/18/22 09:43	01/18/22 19:16

SAMPLE SUMMARY/LABORATORY CHRONICLE

Client ID: LC34PS-PZJ-073.0-20220117	Lab ID: AE10221-26	Sampled: 01/17/22 09:36	Received: 01/17/22 15:30
Parameter	**Preparation**	**Hold Date/Time(s)**	**Prep Date/Time(s)**	**Analysis Date/Time(s)**
EPA 8260D	EPA 5030B_MS	01/31/22	01/18/22 09:43	01/18/22 11:25

Client ID: LC34PS-PZJ-073.0-20220117	Lab ID: AE10221-26RE1	Sampled: 01/17/22 09:36	Received: 01/17/22 15:30
Parameter	**Preparation**	**Hold Date/Time(s)**	**Prep Date/Time(s)**	**Analysis Date/Time(s)**
EPA 8260D	EPA 5030B_MS	01/31/22	01/19/22 09:05	01/19/22 13:56

Client ID: LC34PS-PZJ-080.0-20220117	Lab ID: AE10221-27	Sampled: 01/17/22 09:38	Received: 01/17/22 15:30
Parameter	**Preparation**	**Hold Date/Time(s)**	**Prep Date/Time(s)**	**Analysis Date/Time(s)**
EPA 8260D	EPA 5030B_MS	01/31/22	01/19/22 07:47	01/19/22 10:18

Client ID: LC34PS-PZG-040.0-20220117	Lab ID: AE10221-28	Sampled: 01/17/22 10:00	Received: 01/17/22 15:30
Parameter	**Preparation**	**Hold Date/Time(s)**	**Prep Date/Time(s)**	**Analysis Date/Time(s)**
EPA 8260D	EPA 5030B_MS	01/31/22	01/19/22 07:47	01/19/22 16:03

Client ID: LC34PS-PZG-050.0-20220117	Lab ID: AE10221-29	Sampled: 01/17/22 10:02	Received: 01/17/22 15:30
Parameter	**Preparation**	**Hold Date/Time(s)**	**Prep Date/Time(s)**	**Analysis Date/Time(s)**
EPA 8260D	EPA 5030B_MS	01/31/22	01/19/22 07:47	01/19/22 16:32

Client ID: LC34PS-PZG-058.0-20220117	Lab ID: AE10221-30	Sampled: 01/17/22 10:04	Received: 01/17/22 15:30
Parameter	**Preparation**	**Hold Date/Time(s)**	**Prep Date/Time(s)**	**Analysis Date/Time(s)**
EPA 8260D	EPA 5030B_MS	01/31/22	01/19/22 07:47	01/19/22 17:01

Client ID: LC34PS-PZG-073.0-20220117	Lab ID: AE10221-31	Sampled: 01/17/22 10:06	Received: 01/17/22 15:30
Parameter	**Preparation**	**Hold Date/Time(s)**	**Prep Date/Time(s)**	**Analysis Date/Time(s)**
EPA 8260D	EPA 5030B_MS	01/31/22	01/19/22 07:47	01/19/22 17:30

Client ID: LC34PS-PZG-080.0-20220117	Lab ID: AE10221-32	Sampled: 01/17/22 10:08	Received: 01/17/22 15:30
Parameter	**Preparation**	**Hold Date/Time(s)**	**Prep Date/Time(s)**	**Analysis Date/Time(s)**
EPA 8260D	EPA 5030B_MS	01/31/22	01/19/22 07:47	01/19/22 17:58

Client ID: LC34PS-PZF-040.0-20220117	Lab ID: AE10221-33	Sampled: 01/17/22 10:30	Received: 01/17/22 15:30
Parameter	**Preparation**	**Hold Date/Time(s)**	**Prep Date/Time(s)**	**Analysis Date/Time(s)**
EPA 8260D	EPA 5030B_MS	01/31/22	01/19/22 07:47	01/19/22 18:27

Client ID: LC34PS-PZF-050.0-20220117	Lab ID: AE10221-34	Sampled: 01/17/22 10:32	Received: 01/17/22 15:30
Parameter	**Preparation**	**Hold Date/Time(s)**	**Prep Date/Time(s)**	**Analysis Date/Time(s)**
EPA 8260D	EPA 5030B_MS	01/31/22	01/19/22 07:47	01/19/22 18:56

Client ID: LC34PS-PZF-058.0-20220117	Lab ID: AE10221-35	Sampled: 01/17/22 10:34	Received: 01/17/22 15:30
Parameter	**Preparation**	**Hold Date/Time(s)**	**Prep Date/Time(s)**	**Analysis Date/Time(s)**
EPA 8260D	EPA 5030B_MS	01/31/22	01/19/22 09:05	01/19/22 14:51

Client ID: LC34PS-PZF-073.0-20220117	Lab ID: AE10221-36	Sampled: 01/17/22 10:36	Received: 01/17/22 15:30
Parameter	**Preparation**	**Hold Date/Time(s)**	**Prep Date/Time(s)**	**Analysis Date/Time(s)**
EPA 8260D	EPA 5030B_MS	01/31/22	01/19/22 09:05	01/19/22 10:14

Client ID: LC34PS-PZF-080.0-20220117	Lab ID: AE10221-37	Sampled: 01/17/22 10:38	Received: 01/17/22 15:30
Parameter	**Preparation**	**Hold Date/Time(s)**	**Prep Date/Time(s)**	**Analysis Date/Time(s)**
EPA 8260D	EPA 5030B_MS	01/31/22	01/19/22 09:05	01/19/22 10:42

Client ID: LC34PS-PZA-040.0-20220117	Lab ID: AE10221-38	Sampled: 01/17/22 11:00	Received: 01/17/22 15:30
Parameter	**Preparation**	**Hold Date/Time(s)**	**Prep Date/Time(s)**	**Analysis Date/Time(s)**
EPA 8260D	EPA 5030B_MS	01/31/22	01/19/22 09:05	01/19/22 15:19

SAMPLE SUMMARY/LABORATORY CHRONICLE

Client ID: LC34PS-PZA-050.0-20220117 **Lab ID: AE10221-39** **Sampled: 01/17/22 11:02** **Received: 01/17/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	01/31/22	01/19/22 09:05	01/19/22 15:47

Client ID: LC34PS-PZA-058.0-20220117 **Lab ID: AE10221-40** **Sampled: 01/17/22 11:04** **Received: 01/17/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	01/31/22	01/19/22 09:05	01/19/22 16:14

Client ID: LC34PS-PZA-073.0-20220117 **Lab ID: AE10221-41** **Sampled: 01/17/22 11:06** **Received: 01/17/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	01/31/22	01/19/22 09:05	01/19/22 16:42

Client ID: LC34PS-PZA-080.0-20220117 **Lab ID: AE10221-42** **Sampled: 01/17/22 11:08** **Received: 01/17/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	01/31/22	01/19/22 09:05	01/19/22 11:09

Client ID: LC34PS-PZB-040.0-20220117 **Lab ID: AE10221-43** **Sampled: 01/17/22 11:30** **Received: 01/17/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	01/31/22	01/19/22 09:05	01/19/22 17:10

Client ID: LC34PS-PZB-050.0-20220117 **Lab ID: AE10221-44** **Sampled: 01/17/22 11:32** **Received: 01/17/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	01/31/22	01/19/22 09:05	01/19/22 17:37

Client ID: LC34PS-PZB-058.0-20220117 **Lab ID: AE10221-45** **Sampled: 01/17/22 11:34** **Received: 01/17/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	01/31/22	01/19/22 09:05	01/19/22 18:05

Client ID: LC34PS-PZB-073.0-20220117 **Lab ID: AE10221-46RE1** **Sampled: 01/17/22 11:36** **Received: 01/17/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	01/31/22	01/21/22 07:44	01/21/22 10:51

Client ID: LC34PS-PZB-080.0-20220117 **Lab ID: AE10221-47RE1** **Sampled: 01/17/22 11:38** **Received: 01/17/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	01/31/22	01/21/22 07:44	01/21/22 11:19

Client ID: LC34PS-PZC-040.0-20220117 **Lab ID: AE10221-48** **Sampled: 01/17/22 12:00** **Received: 01/17/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	01/31/22	01/19/22 09:05	01/19/22 19:28

Client ID: LC34PS-PZC-050.0-20220117 **Lab ID: AE10221-49** **Sampled: 01/17/22 12:02** **Received: 01/17/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	01/31/22	01/21/22 07:44	01/21/22 11:48

Client ID: LC34PS-PZC-058.0-20220117 **Lab ID: AE10221-50** **Sampled: 01/17/22 12:04** **Received: 01/17/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	01/31/22	01/21/22 07:44	01/21/22 12:17

Client ID: LC34PS-PZC-073.0-20220117 **Lab ID: AE10221-51RE1** **Sampled: 01/17/22 12:06** **Received: 01/17/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	01/31/22	01/24/22 08:44	01/24/22 10:33

Client ID: LC34PS-PZC-080.0-20220117 **Lab ID: AE10221-52** **Sampled: 01/17/22 12:08** **Received: 01/17/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	01/31/22	01/21/22 07:44	01/21/22 10:22

SAMPLE SUMMARY/LABORATORY CHRONICLE

Client ID: LC34PS-PZD-040.0-20220117 **Lab ID: AE10221-53** **Sampled: 01/17/22 12:30** **Received: 01/17/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	01/31/22	01/21/22 07:44	01/21/22 13:15

Client ID: LC34PS-PZD-050.0-20220117 **Lab ID: AE10221-54** **Sampled: 01/17/22 12:32** **Received: 01/17/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	01/31/22	01/21/22 07:44	01/21/22 13:44

Client ID: LC34PS-PZD-058.0-20220117 **Lab ID: AE10221-55** **Sampled: 01/17/22 12:34** **Received: 01/17/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	01/31/22	01/21/22 07:44	01/21/22 14:12

Client ID: LC34PS-PZD-073.0-20220117 **Lab ID: AE10221-56** **Sampled: 01/17/22 12:36** **Received: 01/17/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	01/31/22	01/21/22 07:44	01/21/22 14:41

Client ID: LC34PS-PZD-080.0-20220117 **Lab ID: AE10221-57** **Sampled: 01/17/22 12:38** **Received: 01/17/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	01/31/22	01/21/22 07:44	01/21/22 15:10

Client ID: LC34PS-PZE-040.0-20220117 **Lab ID: AE10221-58** **Sampled: 01/17/22 13:00** **Received: 01/17/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	01/31/22	01/21/22 07:44	01/21/22 15:39

Client ID: LC34PS-PZE-050.0-20220117 **Lab ID: AE10221-59** **Sampled: 01/17/22 13:02** **Received: 01/17/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	01/31/22	01/21/22 07:44	01/21/22 16:08

Client ID: LC34PS-PZE-058.0-20220117 **Lab ID: AE10221-60** **Sampled: 01/17/22 13:04** **Received: 01/17/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	01/31/22	01/21/22 07:44	01/21/22 16:36

Client ID: LC34PS-PZE-073.0-20220117 **Lab ID: AE10221-61** **Sampled: 01/17/22 13:06** **Received: 01/17/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	01/31/22	01/21/22 07:44	01/21/22 17:05

Client ID: LC34PS-PZE-080.0-20220117 **Lab ID: AE10221-62** **Sampled: 01/17/22 13:08** **Received: 01/17/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	01/31/22	01/21/22 07:44	01/21/22 17:34

SAMPLE DETECTION SUMMARY

Client ID: LC34-AS1-20220117 **Lab ID: AE10221-02**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	1.3	I	0.53	2.5	ug/L	EPA 8260D	

Client ID: LC34-AS2-20220117 **Lab ID: AE10221-03**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	84		0.53	2.5	ug/L	EPA 8260D	
Vinyl chloride	1.4	I	0.71	2.5	ug/L	EPA 8260D	

Client ID: LC34-AS2-20220117 **Lab ID: AE10221-03RE1**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Trichloroethene	120		4.4	12	ug/L	EPA 8260D	

Client ID: LC34-RW17C-20220117 **Lab ID: AE10221-04**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	4100	I	1300	6200	ug/L	EPA 8260D	
Trichloroethene	120000		2200	6200	ug/L	EPA 8260D	

Client ID: LC34-RW18C-20220117 **Lab ID: AE10221-05**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	7600	I	5300	25000	ug/L	EPA 8260D	
Trichloroethene	530000		8900	25000	ug/L	EPA 8260D	

Client ID: LC34-RW19C-20220117 **Lab ID: AE10221-06**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	7200	I	5300	25000	ug/L	EPA 8260D	
Trichloroethene	550000		8900	25000	ug/L	EPA 8260D	

Client ID: LC34-RW20C-20220117 **Lab ID: AE10221-07**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	4400	I	2600	12000	ug/L	EPA 8260D	
Trichloroethene	360000		4400	12000	ug/L	EPA 8260D	

Client ID: LC34PS-PZI-040.0-20220117 **Lab ID: AE10221-08**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	28000		530	2500	ug/L	EPA 8260D	
Trichloroethene	46000		890	2500	ug/L	EPA 8260D	

Client ID: LC34PS-PZI-050.0-20220117 **Lab ID: AE10221-09**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	13000		1300	6200	ug/L	EPA 8260D	
Trichloroethene	110000		2200	6200	ug/L	EPA 8260D	

Client ID: LC34PS-PZI-058.0-20220117 **Lab ID: AE10221-10**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	19000		1300	6200	ug/L	EPA 8260D	
Trichloroethene	100000		2200	6200	ug/L	EPA 8260D	

Client ID: LC34PS-PZI-073.0-20220117 **Lab ID: AE10221-11**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	15		0.53	2.5	ug/L	EPA 8260D	
trans-1,2-Dichloroethene	0.95	I	0.73	2.5	ug/L	EPA 8260D	
Trichloroethene	8.1		0.89	2.5	ug/L	EPA 8260D	
Vinyl chloride	3.2		0.71	2.5	ug/L	EPA 8260D	

Client ID: LC34PS-PZI-080.0-20220117 **Lab ID: AE10221-12**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	9.8		0.53	2.5	ug/L	EPA 8260D	
trans-1,2-Dichloroethene	0.89	I	0.73	2.5	ug/L	EPA 8260D	
Trichloroethene	30		0.89	2.5	ug/L	EPA 8260D	QM-07
Vinyl chloride	2.2	I	0.71	2.5	ug/L	EPA 8260D	

Client ID: LC34PS-PZH-040.0-20220117 **Lab ID: AE10221-13**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	6400		1100	5000	ug/L	EPA 8260D	
Trichloroethene	88000		1800	5000	ug/L	EPA 8260D	

SAMPLE DETECTION SUMMARY

Client ID: LC34PS-PZH-050.0-20220117 **Lab ID:** AE10221-14

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	23000	I	5300	25000	ug/L	EPA 8260D	
Trichloroethene	370000		8900	25000	ug/L	EPA 8260D	

Client ID: LC34PS-PZH-058.0-20220117 **Lab ID:** AE10221-15

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	19000		1300	6200	ug/L	EPA 8260D	
Trichloroethene	100000		2200	6200	ug/L	EPA 8260D	

Client ID: LC34PS-PZH-073.0-20220117 **Lab ID:** AE10221-16

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	18	I	5.3	25	ug/L	EPA 8260D	
Trichloroethene	510		8.9	25	ug/L	EPA 8260D	

Client ID: LC34PS-PZH-080.0-20220117 **Lab ID:** AE10221-17

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	9.3		0.53	2.5	ug/L	EPA 8260D	
trans-1,2-Dichloroethene	1.1	I	0.73	2.5	ug/L	EPA 8260D	
Trichloroethene	5.3		0.89	2.5	ug/L	EPA 8260D	
Vinyl chloride	0.94	I	0.71	2.5	ug/L	EPA 8260D	

Client ID: LC34PS-PZK-040.0-20220117 **Lab ID:** AE10221-18

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	18000		530	2500	ug/L	EPA 8260D	

Client ID: LC34PS-PZK-040.0-20220117 **Lab ID:** AE10221-18RE1

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Trichloroethene	98000		2200	6200	ug/L	EPA 8260D	

Client ID: LC34PS-PZK-050.0-20220117 **Lab ID:** AE10221-19

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	12000		2600	12000	ug/L	EPA 8260D	
Trichloroethene	330000		4400	12000	ug/L	EPA 8260D	

Client ID: LC34PS-PZK-058.0-20220117 **Lab ID:** AE10221-20

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	14000	I	5300	25000	ug/L	EPA 8260D	
Trichloroethene	320000		8900	25000	ug/L	EPA 8260D	

Client ID: LC34PS-PZK-073.0-20220117 **Lab ID:** AE10221-21RE1

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	22		1.1	5.0	ug/L	EPA 8260D	
Trichloroethene	140		1.8	5.0	ug/L	EPA 8260D	
Vinyl chloride	2.8	I	1.4	5.0	ug/L	EPA 8260D	

Client ID: LC34PS-PZK-080.0-20220117 **Lab ID:** AE10221-22

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	46		1.1	5.0	ug/L	EPA 8260D	
trans-1,2-Dichloroethene	7.5		1.5	5.0	ug/L	EPA 8260D	
Trichloroethene	160		1.8	5.0	ug/L	EPA 8260D	
Vinyl chloride	17		1.4	5.0	ug/L	EPA 8260D	

Client ID: LC34PS-PZJ-040.0-20220117 **Lab ID:** AE10221-23

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	42000		260	1200	ug/L	EPA 8260D	
trans-1,2-Dichloroethene	1000	I	360	1200	ug/L	EPA 8260D	
Vinyl chloride	2000		360	1200	ug/L	EPA 8260D	

Client ID: LC34PS-PZJ-040.0-20220117 **Lab ID:** AE10221-23RE1

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Trichloroethene	65000		2200	6200	ug/L	EPA 8260D	

Client ID: LC34PS-PZJ-050.0-20220117 **Lab ID:** AE10221-24

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	27000		1300	6200	ug/L	EPA 8260D	
Trichloroethene	200000		2200	6200	ug/L	EPA 8260D	

SAMPLE DETECTION SUMMARY

Client ID: LC34PS-PZJ-058.0-20220117 **Lab ID:** AE10221-25

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	10000		1300	6200	ug/L	EPA 8260D	
Trichloroethene	110000		2200	6200	ug/L	EPA 8260D	

Client ID: LC34PS-PZJ-073.0-20220117 **Lab ID:** AE10221-26

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	47		0.53	2.5	ug/L	EPA 8260D	
trans-1,2-Dichloroethene	0.81	I	0.73	2.5	ug/L	EPA 8260D	
Vinyl chloride	2.7		0.71	2.5	ug/L	EPA 8260D	

Client ID: LC34PS-PZJ-073.0-20220117 **Lab ID:** AE10221-26RE1

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Trichloroethene	150		4.4	12	ug/L	EPA 8260D	

Client ID: LC34PS-PZJ-080.0-20220117 **Lab ID:** AE10221-27

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	24		0.53	2.5	ug/L	EPA 8260D	
trans-1,2-Dichloroethene	2.2	I	0.73	2.5	ug/L	EPA 8260D	
Trichloroethene	14		0.89	2.5	ug/L	EPA 8260D	

Client ID: LC34PS-PZG-040.0-20220117 **Lab ID:** AE10221-28

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	37000		1300	6200	ug/L	EPA 8260D	
Trichloroethene	200000		2200	6200	ug/L	EPA 8260D	
Vinyl chloride	2000	I	1800	6200	ug/L	EPA 8260D	

Client ID: LC34PS-PZG-050.0-20220117 **Lab ID:** AE10221-29

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	56000		5300	25000	ug/L	EPA 8260D	
Trichloroethene	730000		8900	25000	ug/L	EPA 8260D	

Client ID: LC34PS-PZG-058.0-20220117 **Lab ID:** AE10221-30

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	3800		260	1200	ug/L	EPA 8260D	
Trichloroethene	27000		440	1200	ug/L	EPA 8260D	

Client ID: LC34PS-PZG-073.0-20220117 **Lab ID:** AE10221-31

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	20	I	5.3	25	ug/L	EPA 8260D	
Trichloroethene	400		8.9	25	ug/L	EPA 8260D	

Client ID: LC34PS-PZG-080.0-20220117 **Lab ID:** AE10221-32

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Carbon disulfide	2.5	I	2.5	12	ug/L	EPA 8260D	QV-01
cis-1,2-Dichloroethene	97		0.53	2.5	ug/L	EPA 8260D	
trans-1,2-Dichloroethene	13		0.73	2.5	ug/L	EPA 8260D	
Trichloroethene	22		0.89	2.5	ug/L	EPA 8260D	
Vinyl chloride	41		0.71	2.5	ug/L	EPA 8260D	

Client ID: LC34PS-PZF-040.0-20220117 **Lab ID:** AE10221-33

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	54000		1300	6200	ug/L	EPA 8260D	
Trichloroethene	210000		2200	6200	ug/L	EPA 8260D	
Vinyl chloride	2000	I	1800	6200	ug/L	EPA 8260D	

Client ID: LC34PS-PZF-050.0-20220117 **Lab ID:** AE10221-34

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	39000	I	11000	50000	ug/L	EPA 8260D	
Trichloroethene	930000		18000	50000	ug/L	EPA 8260D	

Client ID: LC34PS-PZF-058.0-20220117 **Lab ID:** AE10221-35

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	3100	I	1100	5000	ug/L	EPA 8260D	
Trichloroethene	73000		1800	5000	ug/L	EPA 8260D	

SAMPLE DETECTION SUMMARY

Client ID: LC34PS-PZF-073.0-20220117 **Lab ID: AE10221-36**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	18		0.53	2.5	ug/L	EPA 8260D	
trans-1,2-Dichloroethene	1.7	I	0.73	2.5	ug/L	EPA 8260D	
Trichloroethene	32		0.89	2.5	ug/L	EPA 8260D	

Client ID: LC34PS-PZF-080.0-20220117 **Lab ID: AE10221-37**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	49		0.53	2.5	ug/L	EPA 8260D	
trans-1,2-Dichloroethene	4.0		0.73	2.5	ug/L	EPA 8260D	
Trichloroethene	11		0.89	2.5	ug/L	EPA 8260D	
Vinyl chloride	11		0.71	2.5	ug/L	EPA 8260D	

Client ID: LC34PS-PZA-040.0-20220117 **Lab ID: AE10221-38**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	25000		2600	12000	ug/L	EPA 8260D	
Trichloroethene	450000		4400	12000	ug/L	EPA 8260D	

Client ID: LC34PS-PZA-050.0-20220117 **Lab ID: AE10221-39**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	20000	I	11000	50000	ug/L	EPA 8260D	
Trichloroethene	770000		18000	50000	ug/L	EPA 8260D	

Client ID: LC34PS-PZA-058.0-20220117 **Lab ID: AE10221-40**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	12000		530	2500	ug/L	EPA 8260D	
Trichloroethene	52000		890	2500	ug/L	EPA 8260D	

Client ID: LC34PS-PZA-073.0-20220117 **Lab ID: AE10221-41**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	1700		13	62	ug/L	EPA 8260D	
Trichloroethene	2000		22	62	ug/L	EPA 8260D	
Vinyl chloride	100		18	62	ug/L	EPA 8260D	

Client ID: LC34PS-PZA-080.0-20220117 **Lab ID: AE10221-42**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	75		0.53	2.5	ug/L	EPA 8260D	
trans-1,2-Dichloroethene	12		0.73	2.5	ug/L	EPA 8260D	
Trichloroethene	18		0.89	2.5	ug/L	EPA 8260D	
Vinyl chloride	1.4	I	0.71	2.5	ug/L	EPA 8260D	

Client ID: LC34PS-PZB-040.0-20220117 **Lab ID: AE10221-43**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	24000	I	5300	25000	ug/L	EPA 8260D	
Trichloroethene	320000		8900	25000	ug/L	EPA 8260D	

Client ID: LC34PS-PZB-050.0-20220117 **Lab ID: AE10221-44**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	39000	I	11000	50000	ug/L	EPA 8260D	
Trichloroethene	970000		18000	50000	ug/L	EPA 8260D	

Client ID: LC34PS-PZB-058.0-20220117 **Lab ID: AE10221-45**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	9800		1100	5000	ug/L	EPA 8260D	
Trichloroethene	90000		1800	5000	ug/L	EPA 8260D	

Client ID: LC34PS-PZB-073.0-20220117 **Lab ID: AE10221-46RE1**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	14		2.6	12	ug/L	EPA 8260D	
Trichloroethene	300		4.4	12	ug/L	EPA 8260D	

Client ID: LC34PS-PZB-080.0-20220117 **Lab ID: AE10221-47RE1**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	64		0.53	2.5	ug/L	EPA 8260D	
trans-1,2-Dichloroethene	15		0.73	2.5	ug/L	EPA 8260D	
Trichloroethene	9.3		0.89	2.5	ug/L	EPA 8260D	

SAMPLE DETECTION SUMMARY

Client ID: LC34PS-PZC-040.0-20220117 **Lab ID: AE10221-48**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	19000	I	5300	25000	ug/L	EPA 8260D	
Trichloroethene	600000		8900	25000	ug/L	EPA 8260D	

Client ID: LC34PS-PZC-050.0-20220117 **Lab ID: AE10221-49**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	49000		5300	25000	ug/L	EPA 8260D	
Trichloroethene	760000		8900	25000	ug/L	EPA 8260D	

Client ID: LC34PS-PZC-058.0-20220117 **Lab ID: AE10221-50**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	25000		2600	12000	ug/L	EPA 8260D	
Trichloroethene	250000		4400	12000	ug/L	EPA 8260D	

Client ID: LC34PS-PZC-073.0-20220117 **Lab ID: AE10221-51RE1**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	6.6	I	2.6	12	ug/L	EPA 8260D	
Trichloroethene	390		4.4	12	ug/L	EPA 8260D	

Client ID: LC34PS-PZC-080.0-20220117 **Lab ID: AE10221-52**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	42		0.53	2.5	ug/L	EPA 8260D	
trans-1,2-Dichloroethene	8.7		0.73	2.5	ug/L	EPA 8260D	
Trichloroethene	3.3		0.89	2.5	ug/L	EPA 8260D	

Client ID: LC34PS-PZD-040.0-20220117 **Lab ID: AE10221-53**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	51000		1300	6200	ug/L	EPA 8260D	
Trichloroethene	170000		2200	6200	ug/L	EPA 8260D	

Client ID: LC34PS-PZD-050.0-20220117 **Lab ID: AE10221-54**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	72000		11000	50000	ug/L	EPA 8260D	
Trichloroethene	830000		18000	50000	ug/L	EPA 8260D	

Client ID: LC34PS-PZD-058.0-20220117 **Lab ID: AE10221-55**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	57000		11000	50000	ug/L	EPA 8260D	
Trichloroethene	640000		18000	50000	ug/L	EPA 8260D	

Client ID: LC34PS-PZD-073.0-20220117 **Lab ID: AE10221-56**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	6.6	I	2.6	12	ug/L	EPA 8260D	
Trichloroethene	410		4.4	12	ug/L	EPA 8260D	

Client ID: LC34PS-PZD-080.0-20220117 **Lab ID: AE10221-57**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	35		0.53	2.5	ug/L	EPA 8260D	
trans-1,2-Dichloroethene	9.8		0.73	2.5	ug/L	EPA 8260D	
Trichloroethene	4.4		0.89	2.5	ug/L	EPA 8260D	

Client ID: LC34PS-PZE-040.0-20220117 **Lab ID: AE10221-58**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	24000	I	5300	25000	ug/L	EPA 8260D	
Trichloroethene	530000		8900	25000	ug/L	EPA 8260D	

Client ID: LC34PS-PZE-050.0-20220117 **Lab ID: AE10221-59**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	66000		5300	25000	ug/L	EPA 8260D	
Trichloroethene	680000		8900	25000	ug/L	EPA 8260D	

Client ID: LC34PS-PZE-058.0-20220117 **Lab ID: AE10221-60**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	40000		5300	25000	ug/L	EPA 8260D	
Trichloroethene	320000		8900	25000	ug/L	EPA 8260D	

SAMPLE DETECTION SUMMARY

Client ID: LC34PS-PZE-073.0-20220117 **Lab ID:** AE10221-61

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	1.4	I	0.53	2.5	ug/L	EPA 8260D	
Trichloroethene	51		0.89	2.5	ug/L	EPA 8260D	

Client ID: LC34PS-PZE-080.0-20220117 **Lab ID:** AE10221-62

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	95		0.53	2.5	ug/L	EPA 8260D	
trans-1,2-Dichloroethene	23		0.73	2.5	ug/L	EPA 8260D	
Trichloroethene	17		0.89	2.5	ug/L	EPA 8260D	
Vinyl chloride	0.73	I	0.71	2.5	ug/L	EPA 8260D	

ANALYTICAL RESULTS

Description: LC34-GAC-20220117 **Lab Sample ID:** AE10221-01 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 07:00 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	2A18006	EPA 8260D	01/18/22 10:05	NMC	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	2A18006	EPA 8260D	01/18/22 10:05	NMC	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	2A18006	EPA 8260D	01/18/22 10:05	NMC	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	2A18006	EPA 8260D	01/18/22 10:05	NMC	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	2A18006	EPA 8260D	01/18/22 10:05	NMC	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	2A18006	EPA 8260D	01/18/22 10:05	NMC	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	2A18006	EPA 8260D	01/18/22 10:05	NMC	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	2A18006	EPA 8260D	01/18/22 10:05	NMC	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	2A18006	EPA 8260D	01/18/22 10:05	NMC	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	2A18006	EPA 8260D	01/18/22 10:05	NMC	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	2A18006	EPA 8260D	01/18/22 10:05	NMC	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	2A18006	EPA 8260D	01/18/22 10:05	NMC	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	2A18006	EPA 8260D	01/18/22 10:05	NMC	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	2A18006	EPA 8260D	01/18/22 10:05	NMC	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	2A18006	EPA 8260D	01/18/22 10:05	NMC	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	2A18006	EPA 8260D	01/18/22 10:05	NMC	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	2A18006	EPA 8260D	01/18/22 10:05	NMC	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	2A18006	EPA 8260D	01/18/22 10:05	NMC	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	2A18006	EPA 8260D	01/18/22 10:05	NMC	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	2A18006	EPA 8260D	01/18/22 10:05	NMC	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	2A18006	EPA 8260D	01/18/22 10:05	NMC	
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	2A18006	EPA 8260D	01/18/22 10:05	NMC	QV-01
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	2A18006	EPA 8260D	01/18/22 10:05	NMC	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	2A18006	EPA 8260D	01/18/22 10:05	NMC	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	2A18006	EPA 8260D	01/18/22 10:05	NMC	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	2A18006	EPA 8260D	01/18/22 10:05	NMC	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	2A18006	EPA 8260D	01/18/22 10:05	NMC	
cis-1,2-Dichloroethene [156-59-2]^	0.53	U	ug/L	1	0.53	2.5	2A18006	EPA 8260D	01/18/22 10:05	NMC	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	2A18006	EPA 8260D	01/18/22 10:05	NMC	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	2A18006	EPA 8260D	01/18/22 10:05	NMC	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	2A18006	EPA 8260D	01/18/22 10:05	NMC	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	2A18006	EPA 8260D	01/18/22 10:05	NMC	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	2A18006	EPA 8260D	01/18/22 10:05	NMC	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	2A18006	EPA 8260D	01/18/22 10:05	NMC	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	2A18006	EPA 8260D	01/18/22 10:05	NMC	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	2A18006	EPA 8260D	01/18/22 10:05	NMC	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	2A18006	EPA 8260D	01/18/22 10:05	NMC	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	2A18006	EPA 8260D	01/18/22 10:05	NMC	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	2A18006	EPA 8260D	01/18/22 10:05	NMC	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	2A18006	EPA 8260D	01/18/22 10:05	NMC	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	2A18006	EPA 8260D	01/18/22 10:05	NMC	
trans-1,2-Dichloroethene [156-60-5]^	0.73	U	ug/L	1	0.73	2.5	2A18006	EPA 8260D	01/18/22 10:05	NMC	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	2A18006	EPA 8260D	01/18/22 10:05	NMC	
Trichloroethene [79-01-6]^	0.89	U	ug/L	1	0.89	2.5	2A18006	EPA 8260D	01/18/22 10:05	NMC	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	2A18006	EPA 8260D	01/18/22 10:05	NMC	
Vinyl chloride [75-01-4]^	0.71	U	ug/L	1	0.71	2.5	2A18006	EPA 8260D	01/18/22 10:05	NMC	
Xylenes (Total) [1330-20-7]	1.3	U	ug/L	1	1.3	5.0	2A18006	EPA 8260D	01/18/22 10:05	NMC	

ANALYTICAL RESULTS

Description: LC34-GAC-20220117 | **Lab Sample ID:** AE10221-01 | **Received:** 01/17/22 15:30

Matrix: Ground Water | **Sampled:** 01/17/22 07:00 | **Work Order:** AE10221

Project: NASA KSC LC34 | **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*50*	*1*	*50.0*	*100 %*	*41-142*	*2A18006*	*EPA 8260D*	*01/18/22 10:05*	*NMC*	
Dibromofluoromethane	*47*	*1*	*50.0*	*93 %*	*53-146*	*2A18006*	*EPA 8260D*	*01/18/22 10:05*	*NMC*	
Toluene-d8	*48*	*1*	*50.0*	*96 %*	*41-146*	*2A18006*	*EPA 8260D*	*01/18/22 10:05*	*NMC*	

ANALYTICAL RESULTS

Description: LC34-AS1-20220117 **Lab Sample ID:** AE10221-02 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 07:10 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	2A18006	EPA 8260D	01/18/22 13:55	NMC	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	2A18006	EPA 8260D	01/18/22 13:55	NMC	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	2A18006	EPA 8260D	01/18/22 13:55	NMC	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	2A18006	EPA 8260D	01/18/22 13:55	NMC	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	2A18006	EPA 8260D	01/18/22 13:55	NMC	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	2A18006	EPA 8260D	01/18/22 13:55	NMC	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	2A18006	EPA 8260D	01/18/22 13:55	NMC	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	2A18006	EPA 8260D	01/18/22 13:55	NMC	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	2A18006	EPA 8260D	01/18/22 13:55	NMC	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	2A18006	EPA 8260D	01/18/22 13:55	NMC	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	2A18006	EPA 8260D	01/18/22 13:55	NMC	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	2A18006	EPA 8260D	01/18/22 13:55	NMC	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	2A18006	EPA 8260D	01/18/22 13:55	NMC	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	2A18006	EPA 8260D	01/18/22 13:55	NMC	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	2A18006	EPA 8260D	01/18/22 13:55	NMC	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	2A18006	EPA 8260D	01/18/22 13:55	NMC	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	2A18006	EPA 8260D	01/18/22 13:55	NMC	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	2A18006	EPA 8260D	01/18/22 13:55	NMC	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	2A18006	EPA 8260D	01/18/22 13:55	NMC	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	2A18006	EPA 8260D	01/18/22 13:55	NMC	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	2A18006	EPA 8260D	01/18/22 13:55	NMC	
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	2A18006	EPA 8260D	01/18/22 13:55	NMC	QV-01
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	2A18006	EPA 8260D	01/18/22 13:55	NMC	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	2A18006	EPA 8260D	01/18/22 13:55	NMC	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	2A18006	EPA 8260D	01/18/22 13:55	NMC	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	2A18006	EPA 8260D	01/18/22 13:55	NMC	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	2A18006	EPA 8260D	01/18/22 13:55	NMC	
cis-1,2-Dichloroethene [156-59-2]^	**1.3**	I	ug/L	1	0.53	2.5	2A18006	EPA 8260D	01/18/22 13:55	NMC	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	2A18006	EPA 8260D	01/18/22 13:55	NMC	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	2A18006	EPA 8260D	01/18/22 13:55	NMC	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	2A18006	EPA 8260D	01/18/22 13:55	NMC	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	2A18006	EPA 8260D	01/18/22 13:55	NMC	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	2A18006	EPA 8260D	01/18/22 13:55	NMC	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	2A18006	EPA 8260D	01/18/22 13:55	NMC	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	2A18006	EPA 8260D	01/18/22 13:55	NMC	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	2A18006	EPA 8260D	01/18/22 13:55	NMC	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	2A18006	EPA 8260D	01/18/22 13:55	NMC	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	2A18006	EPA 8260D	01/18/22 13:55	NMC	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	2A18006	EPA 8260D	01/18/22 13:55	NMC	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	2A18006	EPA 8260D	01/18/22 13:55	NMC	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	2A18006	EPA 8260D	01/18/22 13:55	NMC	
trans-1,2-Dichloroethene [156-60-5]^	0.73	U	ug/L	1	0.73	2.5	2A18006	EPA 8260D	01/18/22 13:55	NMC	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	2A18006	EPA 8260D	01/18/22 13:55	NMC	
Trichloroethene [79-01-6]^	0.89	U	ug/L	1	0.89	2.5	2A18006	EPA 8260D	01/18/22 13:55	NMC	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	2A18006	EPA 8260D	01/18/22 13:55	NMC	
Vinyl chloride [75-01-4]^	0.71	U	ug/L	1	0.71	2.5	2A18006	EPA 8260D	01/18/22 13:55	NMC	
Xylenes (Total) [1330-20-7]	1.3	U	ug/L	1	1.3	5.0	2A18006	EPA 8260D	01/18/22 13:55	NMC	

ANALYTICAL RESULTS

Description: LC34-AS1-20220117 | **Lab Sample ID:** AE10221-02 | **Received:** 01/17/22 15:30

Matrix: Ground Water | **Sampled:** 01/17/22 07:10 | **Work Order:** AE10221

Project: NASA KSC LC34 | **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*45*	*1*	*50.0*	*90 %*	*41-142*	*2A18006*	*EPA 8260D*	*01/18/22 13:55*	*NMC*	
Dibromofluoromethane	*42*	*1*	*50.0*	*84 %*	*53-146*	*2A18006*	*EPA 8260D*	*01/18/22 13:55*	*NMC*	
Toluene-d8	*44*	*1*	*50.0*	*88 %*	*41-146*	*2A18006*	*EPA 8260D*	*01/18/22 13:55*	*NMC*	

ANALYTICAL RESULTS

Description: LC34-AS2-20220117 **Lab Sample ID:** AE10221-03 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 07:20 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	2A18006	EPA 8260D	01/18/22 14:24	NMC	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	2A18006	EPA 8260D	01/18/22 14:24	NMC	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	2A18006	EPA 8260D	01/18/22 14:24	NMC	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	2A18006	EPA 8260D	01/18/22 14:24	NMC	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	2A18006	EPA 8260D	01/18/22 14:24	NMC	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	2A18006	EPA 8260D	01/18/22 14:24	NMC	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	2A18006	EPA 8260D	01/18/22 14:24	NMC	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	2A18006	EPA 8260D	01/18/22 14:24	NMC	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	2A18006	EPA 8260D	01/18/22 14:24	NMC	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	2A18006	EPA 8260D	01/18/22 14:24	NMC	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	2A18006	EPA 8260D	01/18/22 14:24	NMC	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	2A18006	EPA 8260D	01/18/22 14:24	NMC	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	2A18006	EPA 8260D	01/18/22 14:24	NMC	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	2A18006	EPA 8260D	01/18/22 14:24	NMC	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	2A18006	EPA 8260D	01/18/22 14:24	NMC	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	2A18006	EPA 8260D	01/18/22 14:24	NMC	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	2A18006	EPA 8260D	01/18/22 14:24	NMC	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	2A18006	EPA 8260D	01/18/22 14:24	NMC	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	2A18006	EPA 8260D	01/18/22 14:24	NMC	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	2A18006	EPA 8260D	01/18/22 14:24	NMC	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	2A18006	EPA 8260D	01/18/22 14:24	NMC	
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	2A18006	EPA 8260D	01/18/22 14:24	NMC	QV-01
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	2A18006	EPA 8260D	01/18/22 14:24	NMC	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	2A18006	EPA 8260D	01/18/22 14:24	NMC	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	2A18006	EPA 8260D	01/18/22 14:24	NMC	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	2A18006	EPA 8260D	01/18/22 14:24	NMC	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	2A18006	EPA 8260D	01/18/22 14:24	NMC	
cis-1,2-Dichloroethene [156-59-2]^	**84**		ug/L	1	0.53	2.5	2A18006	EPA 8260D	01/18/22 14:24	NMC	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	2A18006	EPA 8260D	01/18/22 14:24	NMC	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	2A18006	EPA 8260D	01/18/22 14:24	NMC	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	2A18006	EPA 8260D	01/18/22 14:24	NMC	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	2A18006	EPA 8260D	01/18/22 14:24	NMC	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	2A18006	EPA 8260D	01/18/22 14:24	NMC	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	2A18006	EPA 8260D	01/18/22 14:24	NMC	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	2A18006	EPA 8260D	01/18/22 14:24	NMC	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	2A18006	EPA 8260D	01/18/22 14:24	NMC	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	2A18006	EPA 8260D	01/18/22 14:24	NMC	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	2A18006	EPA 8260D	01/18/22 14:24	NMC	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	2A18006	EPA 8260D	01/18/22 14:24	NMC	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	2A18006	EPA 8260D	01/18/22 14:24	NMC	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	2A18006	EPA 8260D	01/18/22 14:24	NMC	
trans-1,2-Dichloroethene [156-60-5]^	0.73	U	ug/L	1	0.73	2.5	2A18006	EPA 8260D	01/18/22 14:24	NMC	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	2A18006	EPA 8260D	01/18/22 14:24	NMC	
Trichloroethene [79-01-6]^	**120**		ug/L	5	4.4	12	2A19007	EPA 8260D	01/19/22 15:34	NMC	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	2A18006	EPA 8260D	01/18/22 14:24	NMC	
Vinyl chloride [75-01-4]^	**1.4**	I	ug/L	1	0.71	2.5	2A18006	EPA 8260D	01/18/22 14:24	NMC	
Xylenes (Total) [1330-20-7]	1.3	U	ug/L	1	1.3	5.0	2A18006	EPA 8260D	01/18/22 14:24	NMC	

ANALYTICAL RESULTS

Description: LC34-AS2-20220117 | **Lab Sample ID:** AE10221-03 | **Received:** 01/17/22 15:30

Matrix: Ground Water | **Sampled:** 01/17/22 07:20 | **Work Order:** AE10221

Project: NASA KSC LC34 | **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*45*	*1*	*50.0*	*90 %*	*41-142*	*2A18006*	*EPA 8260D*	*01/18/22 14:24*	*NMC*	
4-Bromofluorobenzene	*47*	*1*	*50.0*	*94 %*	*41-142*	*2A19007*	*EPA 8260D*	*01/19/22 15:34*	*NMC*	
Dibromofluoromethane	*42*	*1*	*50.0*	*85 %*	*53-146*	*2A18006*	*EPA 8260D*	*01/18/22 14:24*	*NMC*	
Dibromofluoromethane	*45*	*1*	*50.0*	*90 %*	*53-146*	*2A19007*	*EPA 8260D*	*01/19/22 15:34*	*NMC*	
Toluene-d8	*46*	*1*	*50.0*	*92 %*	*41-146*	*2A18006*	*EPA 8260D*	*01/18/22 14:24*	*NMC*	
Toluene-d8	*46*	*1*	*50.0*	*93 %*	*41-146*	*2A19007*	*EPA 8260D*	*01/19/22 15:34*	*NMC*	

ANALYTICAL RESULTS

Description: LC34-RW17C-20220117 **Lab Sample ID:** AE10221-04 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 07:30 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	2000	U	ug/L	2500	2000	6200	2A18006	EPA 8260D	01/18/22 14:53	NMC	
1,1,2,2-Tetrachloroethane [79-34-5]^	1400	U	ug/L	2500	1400	6200	2A18006	EPA 8260D	01/18/22 14:53	NMC	
1,1,2-Trichloroethane [79-00-5]^	1900	U	ug/L	2500	1900	6200	2A18006	EPA 8260D	01/18/22 14:53	NMC	
1,1-Dichloroethane [75-34-3]^	1600	U	ug/L	2500	1600	6200	2A18006	EPA 8260D	01/18/22 14:53	NMC	
1,1-Dichloroethene [75-35-4]^	2400	U	ug/L	2500	2400	6200	2A18006	EPA 8260D	01/18/22 14:53	NMC	
1,2,4-Trichlorobenzene [120-82-1]^	1800	U	ug/L	2500	1800	6200	2A18006	EPA 8260D	01/18/22 14:53	NMC	
1,2-Dibromo-3-chloropropane [96-12-8]^	2400	U	ug/L	2500	2400	6200	2A18006	EPA 8260D	01/18/22 14:53	NMC	
1,2-Dibromoethane [106-93-4]^	2000	U	ug/L	2500	2000	6200	2A18006	EPA 8260D	01/18/22 14:53	NMC	
1,2-Dichlorobenzene [95-50-1]^	1800	U	ug/L	2500	1800	6200	2A18006	EPA 8260D	01/18/22 14:53	NMC	
1,2-Dichloroethane [107-06-2]^	1600	U	ug/L	2500	1600	6200	2A18006	EPA 8260D	01/18/22 14:53	NMC	
1,2-Dichloropropane [78-87-5]^	2000	U	ug/L	2500	2000	6200	2A18006	EPA 8260D	01/18/22 14:53	NMC	
1,3-Dichlorobenzene [541-73-1]^	1900	U	ug/L	2500	1900	6200	2A18006	EPA 8260D	01/18/22 14:53	NMC	
1,4-Dichlorobenzene [106-46-7]^	1900	U	ug/L	2500	1900	6200	2A18006	EPA 8260D	01/18/22 14:53	NMC	
2-Butanone [78-93-3]^	11000	U	ug/L	2500	11000	31000	2A18006	EPA 8260D	01/18/22 14:53	NMC	
2-Hexanone [591-78-6]^	6200	U	ug/L	2500	6200	31000	2A18006	EPA 8260D	01/18/22 14:53	NMC	
4-Methyl-2-pentanone [108-10-1]^	6200	U	ug/L	2500	6200	31000	2A18006	EPA 8260D	01/18/22 14:53	NMC	
Acetone [67-64-1]^	25000	U	ug/L	2500	25000	62000	2A18006	EPA 8260D	01/18/22 14:53	NMC	
Benzene [71-43-2]^	1800	U	ug/L	2500	1800	6200	2A18006	EPA 8260D	01/18/22 14:53	NMC	
Bromodichloromethane [75-27-4]^	1300	U	ug/L	2500	1300	6200	2A18006	EPA 8260D	01/18/22 14:53	NMC	
Bromoform [75-25-2]^	1900	U	ug/L	2500	1900	6200	2A18006	EPA 8260D	01/18/22 14:53	NMC	
Bromomethane [74-83-9]^	2400	U	ug/L	2500	2400	6200	2A18006	EPA 8260D	01/18/22 14:53	NMC	
Carbon disulfide [75-15-0]^	6200	U	ug/L	2500	6200	31000	2A18006	EPA 8260D	01/18/22 14:53	NMC	QV-01
Carbon Tetrachloride [56-23-5]^	2400	U	ug/L	2500	2400	6200	2A18006	EPA 8260D	01/18/22 14:53	NMC	
Chlorobenzene [108-90-7]^	1800	U	ug/L	2500	1800	6200	2A18006	EPA 8260D	01/18/22 14:53	NMC	
Chloroethane [75-00-3]^	2400	U	ug/L	2500	2400	6200	2A18006	EPA 8260D	01/18/22 14:53	NMC	
Chloroform [67-66-3]^	2000	U	ug/L	2500	2000	6200	2A18006	EPA 8260D	01/18/22 14:53	NMC	
Chloromethane [74-87-3]^	2000	U	ug/L	2500	2000	6200	2A18006	EPA 8260D	01/18/22 14:53	NMC	
cis-1,2-Dichloroethene [156-59-2]^	**4100**	I	ug/L	2500	1300	6200	2A18006	EPA 8260D	01/18/22 14:53	NMC	
cis-1,3-Dichloropropene [10061-01-5]^	1500	U	ug/L	2500	1500	6200	2A18006	EPA 8260D	01/18/22 14:53	NMC	
Cyclohexane [110-82-7]^	2300	U	ug/L	2500	2300	6200	2A18006	EPA 8260D	01/18/22 14:53	NMC	
Dibromochloromethane [124-48-1]^	1200	U	ug/L	2500	1200	6200	2A18006	EPA 8260D	01/18/22 14:53	NMC	
Dichlorodifluoromethane [75-71-8]^	1800	U	ug/L	2500	1800	6200	2A18006	EPA 8260D	01/18/22 14:53	NMC	
Ethylbenzene [100-41-4]^	1700	U	ug/L	2500	1700	6200	2A18006	EPA 8260D	01/18/22 14:53	NMC	
Freon 113 [76-13-1]^	1800	U	ug/L	2500	1800	6200	2A18006	EPA 8260D	01/18/22 14:53	NMC	
Isopropylbenzene [98-82-8]^	1700	U	ug/L	2500	1700	6200	2A18006	EPA 8260D	01/18/22 14:53	NMC	
Methyl acetate [79-20-9]^	2400	U	ug/L	2500	2400	6200	2A18006	EPA 8260D	01/18/22 14:53	NMC	
Methylene Chloride [75-09-2]^	6200	U	ug/L	2500	6200	31000	2A18006	EPA 8260D	01/18/22 14:53	NMC	
Methyl-tert-Butyl Ether [1634-04-4]^	1500	U	ug/L	2500	1500	6200	2A18006	EPA 8260D	01/18/22 14:53	NMC	
Styrene [100-42-5]^	1500	U	ug/L	2500	1500	6200	2A18006	EPA 8260D	01/18/22 14:53	NMC	
Tetrachloroethene [127-18-4]^	1900	U	ug/L	2500	1900	6200	2A18006	EPA 8260D	01/18/22 14:53	NMC	
Toluene [108-88-3]^	1800	U	ug/L	2500	1800	6200	2A18006	EPA 8260D	01/18/22 14:53	NMC	
trans-1,2-Dichloroethene [156-60-5]^	1800	U	ug/L	2500	1800	6200	2A18006	EPA 8260D	01/18/22 14:53	NMC	
trans-1,3-Dichloropropene [10061-02-6]^	1800	U	ug/L	2500	1800	6200	2A18006	EPA 8260D	01/18/22 14:53	NMC	
Trichloroethene [79-01-6]^	**120000**		ug/L	2500	2200	6200	2A18006	EPA 8260D	01/18/22 14:53	NMC	
Trichlorofluoromethane [75-69-4]^	2400	U	ug/L	2500	2400	6200	2A18006	EPA 8260D	01/18/22 14:53	NMC	
Vinyl chloride [75-01-4]^	1800	U	ug/L	2500	1800	6200	2A18006	EPA 8260D	01/18/22 14:53	NMC	
Xylenes (Total) [1330-20-7]	3200	U	ug/L	2500	3200	12000	2A18006	EPA 8260D	01/18/22 14:53	NMC	

ANALYTICAL RESULTS

Description: LC34-RW17C-20220117 **Lab Sample ID:** AE10221-04 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 07:30 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*46*	*1*	*50.0*	*92 %*	*41-142*	*2A18006*	*EPA 8260D*	*01/18/22 14:53*	*NMC*	
Dibromofluoromethane	*43*	*1*	*50.0*	*86 %*	*53-146*	*2A18006*	*EPA 8260D*	*01/18/22 14:53*	*NMC*	
Toluene-d8	*45*	*1*	*50.0*	*89 %*	*41-146*	*2A18006*	*EPA 8260D*	*01/18/22 14:53*	*NMC*	

ANALYTICAL RESULTS

Description: LC34-RW18C-20220117 **Lab Sample ID:** AE10221-05 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 07:40 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	8000	U	ug/L	10000	8000	25000	2A18006	EPA 8260D	01/18/22 15:21	NMC	
1,1,2,2-Tetrachloroethane [79-34-5]^	5400	U	ug/L	10000	5400	25000	2A18006	EPA 8260D	01/18/22 15:21	NMC	
1,1,2-Trichloroethane [79-00-5]^	7600	U	ug/L	10000	7600	25000	2A18006	EPA 8260D	01/18/22 15:21	NMC	
1,1-Dichloroethane [75-34-3]^	6200	U	ug/L	10000	6200	25000	2A18006	EPA 8260D	01/18/22 15:21	NMC	
1,1-Dichloroethene [75-35-4]^	9400	U	ug/L	10000	9400	25000	2A18006	EPA 8260D	01/18/22 15:21	NMC	
1,2,4-Trichlorobenzene [120-82-1]^	7000	U	ug/L	10000	7000	25000	2A18006	EPA 8260D	01/18/22 15:21	NMC	
1,2-Dibromo-3-chloropropane [96-12-8]^	9600	U	ug/L	10000	9600	25000	2A18006	EPA 8260D	01/18/22 15:21	NMC	
1,2-Dibromoethane [106-93-4]^	7800	U	ug/L	10000	7800	25000	2A18006	EPA 8260D	01/18/22 15:21	NMC	
1,2-Dichlorobenzene [95-50-1]^	7300	U	ug/L	10000	7300	25000	2A18006	EPA 8260D	01/18/22 15:21	NMC	
1,2-Dichloroethane [107-06-2]^	6300	U	ug/L	10000	6300	25000	2A18006	EPA 8260D	01/18/22 15:21	NMC	
1,2-Dichloropropane [78-87-5]^	8000	U	ug/L	10000	8000	25000	2A18006	EPA 8260D	01/18/22 15:21	NMC	
1,3-Dichlorobenzene [541-73-1]^	7700	U	ug/L	10000	7700	25000	2A18006	EPA 8260D	01/18/22 15:21	NMC	
1,4-Dichlorobenzene [106-46-7]^	7600	U	ug/L	10000	7600	25000	2A18006	EPA 8260D	01/18/22 15:21	NMC	
2-Butanone [78-93-3]^	45000	U	ug/L	10000	45000	120000	2A18006	EPA 8260D	01/18/22 15:21	NMC	
2-Hexanone [591-78-6]^	25000	U	ug/L	10000	25000	120000	2A18006	EPA 8260D	01/18/22 15:21	NMC	
4-Methyl-2-pentanone [108-10-1]^	25000	U	ug/L	10000	25000	120000	2A18006	EPA 8260D	01/18/22 15:21	NMC	
Acetone [67-64-1]^	100000	U	ug/L	10000	100000	250000	2A18006	EPA 8260D	01/18/22 15:21	NMC	
Benzene [71-43-2]^	7100	U	ug/L	10000	7100	25000	2A18006	EPA 8260D	01/18/22 15:21	NMC	
Bromodichloromethane [75-27-4]^	5200	U	ug/L	10000	5200	25000	2A18006	EPA 8260D	01/18/22 15:21	NMC	
Bromoform [75-25-2]^	7500	U	ug/L	10000	7500	25000	2A18006	EPA 8260D	01/18/22 15:21	NMC	
Bromomethane [74-83-9]^	9500	U	ug/L	10000	9500	25000	2A18006	EPA 8260D	01/18/22 15:21	NMC	
Carbon disulfide [75-15-0]^	25000	U	ug/L	10000	25000	120000	2A18006	EPA 8260D	01/18/22 15:21	NMC	QV-01
Carbon Tetrachloride [56-23-5]^	9400	U	ug/L	10000	9400	25000	2A18006	EPA 8260D	01/18/22 15:21	NMC	
Chlorobenzene [108-90-7]^	7200	U	ug/L	10000	7200	25000	2A18006	EPA 8260D	01/18/22 15:21	NMC	
Chloroethane [75-00-3]^	9800	U	ug/L	10000	9800	25000	2A18006	EPA 8260D	01/18/22 15:21	NMC	
Chloroform [67-66-3]^	8000	U	ug/L	10000	8000	25000	2A18006	EPA 8260D	01/18/22 15:21	NMC	
Chloromethane [74-87-3]^	8200	U	ug/L	10000	8200	25000	2A18006	EPA 8260D	01/18/22 15:21	NMC	
cis-1,2-Dichloroethene [156-59-2]^	**7600**	I	ug/L	10000	5300	25000	2A18006	EPA 8260D	01/18/22 15:21	NMC	
cis-1,3-Dichloropropene [10061-01-5]^	5900	U	ug/L	10000	5900	25000	2A18006	EPA 8260D	01/18/22 15:21	NMC	
Cyclohexane [110-82-7]^	9300	U	ug/L	10000	9300	25000	2A18006	EPA 8260D	01/18/22 15:21	NMC	
Dibromochloromethane [124-48-1]^	5000	U	ug/L	10000	5000	25000	2A18006	EPA 8260D	01/18/22 15:21	NMC	
Dichlorodifluoromethane [75-71-8]^	7400	U	ug/L	10000	7400	25000	2A18006	EPA 8260D	01/18/22 15:21	NMC	
Ethylbenzene [100-41-4]^	6900	U	ug/L	10000	6900	25000	2A18006	EPA 8260D	01/18/22 15:21	NMC	
Freon 113 [76-13-1]^	7300	U	ug/L	10000	7300	25000	2A18006	EPA 8260D	01/18/22 15:21	NMC	
Isopropylbenzene [98-82-8]^	6700	U	ug/L	10000	6700	25000	2A18006	EPA 8260D	01/18/22 15:21	NMC	
Methyl acetate [79-20-9]^	9500	U	ug/L	10000	9500	25000	2A18006	EPA 8260D	01/18/22 15:21	NMC	
Methylene Chloride [75-09-2]^	25000	U	ug/L	10000	25000	120000	2A18006	EPA 8260D	01/18/22 15:21	NMC	
Methyl-tert-Butyl Ether [1634-04-4]^	6000	U	ug/L	10000	6000	25000	2A18006	EPA 8260D	01/18/22 15:21	NMC	
Styrene [100-42-5]^	6100	U	ug/L	10000	6100	25000	2A18006	EPA 8260D	01/18/22 15:21	NMC	
Tetrachloroethene [127-18-4]^	7600	U	ug/L	10000	7600	25000	2A18006	EPA 8260D	01/18/22 15:21	NMC	
Toluene [108-88-3]^	7200	U	ug/L	10000	7200	25000	2A18006	EPA 8260D	01/18/22 15:21	NMC	
trans-1,2-Dichloroethene [156-60-5]^	7300	U	ug/L	10000	7300	25000	2A18006	EPA 8260D	01/18/22 15:21	NMC	
trans-1,3-Dichloropropene [10061-02-6]^	7300	U	ug/L	10000	7300	25000	2A18006	EPA 8260D	01/18/22 15:21	NMC	
Trichloroethene [79-01-6]^	**530000**		ug/L	10000	8900	25000	2A18006	EPA 8260D	01/18/22 15:21	NMC	
Trichlorofluoromethane [75-69-4]^	9400	U	ug/L	10000	9400	25000	2A18006	EPA 8260D	01/18/22 15:21	NMC	
Vinyl chloride [75-01-4]^	7100	U	ug/L	10000	7100	25000	2A18006	EPA 8260D	01/18/22 15:21	NMC	
Xylenes (Total) [1330-20-7]	13000	U	ug/L	10000	13000	50000	2A18006	EPA 8260D	01/18/22 15:21	NMC	

ANALYTICAL RESULTS

Description: LC34-RW18C-20220117
Matrix: Ground Water
Project: NASA KSC LC34

Lab Sample ID: AE10221-05
Sampled: 01/17/22 07:40
Sampled By: Dan Forester

Received: 01/17/22 15:30
Work Order: AE10221

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*46*	*1*	*50.0*	*91 %*	*41-142*	*2A18006*	*EPA 8260D*	*01/18/22 15:21*	*NMC*	
Dibromofluoromethane	*45*	*1*	*50.0*	*90 %*	*53-146*	*2A18006*	*EPA 8260D*	*01/18/22 15:21*	*NMC*	
Toluene-d8	*45*	*1*	*50.0*	*90 %*	*41-146*	*2A18006*	*EPA 8260D*	*01/18/22 15:21*	*NMC*	

ANALYTICAL RESULTS

Description: LC34-RW19C-20220117 **Lab Sample ID:** AE10221-06 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 07:50 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	8000	U	ug/L	10000	8000	25000	2A18006	EPA 8260D	01/18/22 15:50	NMC	
1,1,2,2-Tetrachloroethane [79-34-5]^	5400	U	ug/L	10000	5400	25000	2A18006	EPA 8260D	01/18/22 15:50	NMC	
1,1,2-Trichloroethane [79-00-5]^	7600	U	ug/L	10000	7600	25000	2A18006	EPA 8260D	01/18/22 15:50	NMC	
1,1-Dichloroethane [75-34-3]^	6200	U	ug/L	10000	6200	25000	2A18006	EPA 8260D	01/18/22 15:50	NMC	
1,1-Dichloroethene [75-35-4]^	9400	U	ug/L	10000	9400	25000	2A18006	EPA 8260D	01/18/22 15:50	NMC	
1,2,4-Trichlorobenzene [120-82-1]^	7000	U	ug/L	10000	7000	25000	2A18006	EPA 8260D	01/18/22 15:50	NMC	
1,2-Dibromo-3-chloropropane [96-12-8]^	9600	U	ug/L	10000	9600	25000	2A18006	EPA 8260D	01/18/22 15:50	NMC	
1,2-Dibromoethane [106-93-4]^	7800	U	ug/L	10000	7800	25000	2A18006	EPA 8260D	01/18/22 15:50	NMC	
1,2-Dichlorobenzene [95-50-1]^	7300	U	ug/L	10000	7300	25000	2A18006	EPA 8260D	01/18/22 15:50	NMC	
1,2-Dichloroethane [107-06-2]^	6300	U	ug/L	10000	6300	25000	2A18006	EPA 8260D	01/18/22 15:50	NMC	
1,2-Dichloropropane [78-87-5]^	8000	U	ug/L	10000	8000	25000	2A18006	EPA 8260D	01/18/22 15:50	NMC	
1,3-Dichlorobenzene [541-73-1]^	7700	U	ug/L	10000	7700	25000	2A18006	EPA 8260D	01/18/22 15:50	NMC	
1,4-Dichlorobenzene [106-46-7]^	7600	U	ug/L	10000	7600	25000	2A18006	EPA 8260D	01/18/22 15:50	NMC	
2-Butanone [78-93-3]^	45000	U	ug/L	10000	45000	120000	2A18006	EPA 8260D	01/18/22 15:50	NMC	
2-Hexanone [591-78-6]^	25000	U	ug/L	10000	25000	120000	2A18006	EPA 8260D	01/18/22 15:50	NMC	
4-Methyl-2-pentanone [108-10-1]^	25000	U	ug/L	10000	25000	120000	2A18006	EPA 8260D	01/18/22 15:50	NMC	
Acetone [67-64-1]^	100000	U	ug/L	10000	100000	250000	2A18006	EPA 8260D	01/18/22 15:50	NMC	
Benzene [71-43-2]^	7100	U	ug/L	10000	7100	25000	2A18006	EPA 8260D	01/18/22 15:50	NMC	
Bromodichloromethane [75-27-4]^	5200	U	ug/L	10000	5200	25000	2A18006	EPA 8260D	01/18/22 15:50	NMC	
Bromoform [75-25-2]^	7500	U	ug/L	10000	7500	25000	2A18006	EPA 8260D	01/18/22 15:50	NMC	
Bromomethane [74-83-9]^	9500	U	ug/L	10000	9500	25000	2A18006	EPA 8260D	01/18/22 15:50	NMC	
Carbon disulfide [75-15-0]^	25000	U	ug/L	10000	25000	120000	2A18006	EPA 8260D	01/18/22 15:50	NMC	QV-01
Carbon Tetrachloride [56-23-5]^	9400	U	ug/L	10000	9400	25000	2A18006	EPA 8260D	01/18/22 15:50	NMC	
Chlorobenzene [108-90-7]^	7200	U	ug/L	10000	7200	25000	2A18006	EPA 8260D	01/18/22 15:50	NMC	
Chloroethane [75-00-3]^	9800	U	ug/L	10000	9800	25000	2A18006	EPA 8260D	01/18/22 15:50	NMC	
Chloroform [67-66-3]^	8000	U	ug/L	10000	8000	25000	2A18006	EPA 8260D	01/18/22 15:50	NMC	
Chloromethane [74-87-3]^	8200	U	ug/L	10000	8200	25000	2A18006	EPA 8260D	01/18/22 15:50	NMC	
cis-1,2-Dichloroethene [156-59-2]^	**7200**	I	ug/L	10000	5300	25000	2A18006	EPA 8260D	01/18/22 15:50	NMC	
cis-1,3-Dichloropropene [10061-01-5]^	5900	U	ug/L	10000	5900	25000	2A18006	EPA 8260D	01/18/22 15:50	NMC	
Cyclohexane [110-82-7]^	9300	U	ug/L	10000	9300	25000	2A18006	EPA 8260D	01/18/22 15:50	NMC	
Dibromochloromethane [124-48-1]^	5000	U	ug/L	10000	5000	25000	2A18006	EPA 8260D	01/18/22 15:50	NMC	
Dichlorodifluoromethane [75-71-8]^	7400	U	ug/L	10000	7400	25000	2A18006	EPA 8260D	01/18/22 15:50	NMC	
Ethylbenzene [100-41-4]^	6900	U	ug/L	10000	6900	25000	2A18006	EPA 8260D	01/18/22 15:50	NMC	
Freon 113 [76-13-1]^	7300	U	ug/L	10000	7300	25000	2A18006	EPA 8260D	01/18/22 15:50	NMC	
Isopropylbenzene [98-82-8]^	6700	U	ug/L	10000	6700	25000	2A18006	EPA 8260D	01/18/22 15:50	NMC	
Methyl acetate [79-20-9]^	9500	U	ug/L	10000	9500	25000	2A18006	EPA 8260D	01/18/22 15:50	NMC	
Methylene Chloride [75-09-2]^	25000	U	ug/L	10000	25000	120000	2A18006	EPA 8260D	01/18/22 15:50	NMC	
Methyl-tert-Butyl Ether [1634-04-4]^	6000	U	ug/L	10000	6000	25000	2A18006	EPA 8260D	01/18/22 15:50	NMC	
Styrene [100-42-5]^	6100	U	ug/L	10000	6100	25000	2A18006	EPA 8260D	01/18/22 15:50	NMC	
Tetrachloroethene [127-18-4]^	7600	U	ug/L	10000	7600	25000	2A18006	EPA 8260D	01/18/22 15:50	NMC	
Toluene [108-88-3]^	7200	U	ug/L	10000	7200	25000	2A18006	EPA 8260D	01/18/22 15:50	NMC	
trans-1,2-Dichloroethene [156-60-5]^	7300	U	ug/L	10000	7300	25000	2A18006	EPA 8260D	01/18/22 15:50	NMC	
trans-1,3-Dichloropropene [10061-02-6]^	7300	U	ug/L	10000	7300	25000	2A18006	EPA 8260D	01/18/22 15:50	NMC	
Trichloroethene [79-01-6]^	**550000**		ug/L	10000	8900	25000	2A18006	EPA 8260D	01/18/22 15:50	NMC	
Trichlorofluoromethane [75-69-4]^	9400	U	ug/L	10000	9400	25000	2A18006	EPA 8260D	01/18/22 15:50	NMC	
Vinyl chloride [75-01-4]^	7100	U	ug/L	10000	7100	25000	2A18006	EPA 8260D	01/18/22 15:50	NMC	
Xylenes (Total) [1330-20-7]	13000	U	ug/L	10000	13000	50000	2A18006	EPA 8260D	01/18/22 15:50	NMC	

ANALYTICAL RESULTS

Description: LC34-RW19C-20220117 **Lab Sample ID:** AE10221-06 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 07:50 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*47*	*1*	*50.0*	*94 %*	*41-142*	*2A18006*	*EPA 8260D*	*01/18/22 15:50*	*NMC*	
Dibromofluoromethane	*45*	*1*	*50.0*	*89 %*	*53-146*	*2A18006*	*EPA 8260D*	*01/18/22 15:50*	*NMC*	
Toluene-d8	*46*	*1*	*50.0*	*93 %*	*41-146*	*2A18006*	*EPA 8260D*	*01/18/22 15:50*	*NMC*	

ANALYTICAL RESULTS

Description: LC34-RW20C-20220117 **Lab Sample ID:** AE10221-07 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 08:00 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	4000	U	ug/L	5000	4000	12000	2A18006	EPA 8260D	01/18/22 16:19	NMC	
1,1,2,2-Tetrachloroethane [79-34-5]^	2700	U	ug/L	5000	2700	12000	2A18006	EPA 8260D	01/18/22 16:19	NMC	
1,1,2-Trichloroethane [79-00-5]^	3800	U	ug/L	5000	3800	12000	2A18006	EPA 8260D	01/18/22 16:19	NMC	
1,1-Dichloroethane [75-34-3]^	3100	U	ug/L	5000	3100	12000	2A18006	EPA 8260D	01/18/22 16:19	NMC	
1,1-Dichloroethene [75-35-4]^	4700	U	ug/L	5000	4700	12000	2A18006	EPA 8260D	01/18/22 16:19	NMC	
1,2,4-Trichlorobenzene [120-82-1]^	3500	U	ug/L	5000	3500	12000	2A18006	EPA 8260D	01/18/22 16:19	NMC	
1,2-Dibromo-3-chloropropane [96-12-8]^	4800	U	ug/L	5000	4800	12000	2A18006	EPA 8260D	01/18/22 16:19	NMC	
1,2-Dibromoethane [106-93-4]^	3900	U	ug/L	5000	3900	12000	2A18006	EPA 8260D	01/18/22 16:19	NMC	
1,2-Dichlorobenzene [95-50-1]^	3600	U	ug/L	5000	3600	12000	2A18006	EPA 8260D	01/18/22 16:19	NMC	
1,2-Dichloroethane [107-06-2]^	3200	U	ug/L	5000	3200	12000	2A18006	EPA 8260D	01/18/22 16:19	NMC	
1,2-Dichloropropane [78-87-5]^	4000	U	ug/L	5000	4000	12000	2A18006	EPA 8260D	01/18/22 16:19	NMC	
1,3-Dichlorobenzene [541-73-1]^	3800	U	ug/L	5000	3800	12000	2A18006	EPA 8260D	01/18/22 16:19	NMC	
1,4-Dichlorobenzene [106-46-7]^	3800	U	ug/L	5000	3800	12000	2A18006	EPA 8260D	01/18/22 16:19	NMC	
2-Butanone [78-93-3]^	22000	U	ug/L	5000	22000	62000	2A18006	EPA 8260D	01/18/22 16:19	NMC	
2-Hexanone [591-78-6]^	12000	U	ug/L	5000	12000	62000	2A18006	EPA 8260D	01/18/22 16:19	NMC	
4-Methyl-2-pentanone [108-10-1]^	12000	U	ug/L	5000	12000	62000	2A18006	EPA 8260D	01/18/22 16:19	NMC	
Acetone [67-64-1]^	50000	U	ug/L	5000	50000	120000	2A18006	EPA 8260D	01/18/22 16:19	NMC	
Benzene [71-43-2]^	3600	U	ug/L	5000	3600	12000	2A18006	EPA 8260D	01/18/22 16:19	NMC	
Bromodichloromethane [75-27-4]^	2600	U	ug/L	5000	2600	12000	2A18006	EPA 8260D	01/18/22 16:19	NMC	
Bromoform [75-25-2]^	3800	U	ug/L	5000	3800	12000	2A18006	EPA 8260D	01/18/22 16:19	NMC	
Bromomethane [74-83-9]^	4800	U	ug/L	5000	4800	12000	2A18006	EPA 8260D	01/18/22 16:19	NMC	
Carbon disulfide [75-15-0]^	12000	U	ug/L	5000	12000	62000	2A18006	EPA 8260D	01/18/22 16:19	NMC	QV-01
Carbon Tetrachloride [56-23-5]^	4700	U	ug/L	5000	4700	12000	2A18006	EPA 8260D	01/18/22 16:19	NMC	
Chlorobenzene [108-90-7]^	3600	U	ug/L	5000	3600	12000	2A18006	EPA 8260D	01/18/22 16:19	NMC	
Chloroethane [75-00-3]^	4900	U	ug/L	5000	4900	12000	2A18006	EPA 8260D	01/18/22 16:19	NMC	
Chloroform [67-66-3]^	4000	U	ug/L	5000	4000	12000	2A18006	EPA 8260D	01/18/22 16:19	NMC	
Chloromethane [74-87-3]^	4100	U	ug/L	5000	4100	12000	2A18006	EPA 8260D	01/18/22 16:19	NMC	
cis-1,2-Dichloroethene [156-59-2]^	**4400**	I	ug/L	5000	2600	12000	2A18006	EPA 8260D	01/18/22 16:19	NMC	
cis-1,3-Dichloropropene [10061-01-5]^	3000	U	ug/L	5000	3000	12000	2A18006	EPA 8260D	01/18/22 16:19	NMC	
Cyclohexane [110-82-7]^	4600	U	ug/L	5000	4600	12000	2A18006	EPA 8260D	01/18/22 16:19	NMC	
Dibromochloromethane [124-48-1]^	2500	U	ug/L	5000	2500	12000	2A18006	EPA 8260D	01/18/22 16:19	NMC	
Dichlorodifluoromethane [75-71-8]^	3700	U	ug/L	5000	3700	12000	2A18006	EPA 8260D	01/18/22 16:19	NMC	
Ethylbenzene [100-41-4]^	3400	U	ug/L	5000	3400	12000	2A18006	EPA 8260D	01/18/22 16:19	NMC	
Freon 113 [76-13-1]^	3600	U	ug/L	5000	3600	12000	2A18006	EPA 8260D	01/18/22 16:19	NMC	
Isopropylbenzene [98-82-8]^	3400	U	ug/L	5000	3400	12000	2A18006	EPA 8260D	01/18/22 16:19	NMC	
Methyl acetate [79-20-9]^	4800	U	ug/L	5000	4800	12000	2A18006	EPA 8260D	01/18/22 16:19	NMC	
Methylene Chloride [75-09-2]^	12000	U	ug/L	5000	12000	62000	2A18006	EPA 8260D	01/18/22 16:19	NMC	
Methyl-tert-Butyl Ether [1634-04-4]^	3000	U	ug/L	5000	3000	12000	2A18006	EPA 8260D	01/18/22 16:19	NMC	
Styrene [100-42-5]^	3000	U	ug/L	5000	3000	12000	2A18006	EPA 8260D	01/18/22 16:19	NMC	
Tetrachloroethene [127-18-4]^	3800	U	ug/L	5000	3800	12000	2A18006	EPA 8260D	01/18/22 16:19	NMC	
Toluene [108-88-3]^	3600	U	ug/L	5000	3600	12000	2A18006	EPA 8260D	01/18/22 16:19	NMC	
trans-1,2-Dichloroethene [156-60-5]^	3600	U	ug/L	5000	3600	12000	2A18006	EPA 8260D	01/18/22 16:19	NMC	
trans-1,3-Dichloropropene [10061-02-6]^	3600	U	ug/L	5000	3600	12000	2A18006	EPA 8260D	01/18/22 16:19	NMC	
Trichloroethene [79-01-6]^	**360000**		ug/L	5000	4400	12000	2A18006	EPA 8260D	01/18/22 16:19	NMC	
Trichlorofluoromethane [75-69-4]^	4700	U	ug/L	5000	4700	12000	2A18006	EPA 8260D	01/18/22 16:19	NMC	
Vinyl chloride [75-01-4]^	3600	U	ug/L	5000	3600	12000	2A18006	EPA 8260D	01/18/22 16:19	NMC	
Xylenes (Total) [1330-20-7]	6500	U	ug/L	5000	6500	25000	2A18006	EPA 8260D	01/18/22 16:19	NMC	

ANALYTICAL RESULTS

Description: LC34-RW20C-20220117 **Lab Sample ID:** AE10221-07 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 08:00 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*43*	*1*	*50.0*	*87 %*	*41-142*	*2A18006*	*EPA 8260D*	*01/18/22 16:19*	*NMC*	
Dibromofluoromethane	*43*	*1*	*50.0*	*85 %*	*53-146*	*2A18006*	*EPA 8260D*	*01/18/22 16:19*	*NMC*	
Toluene-d8	*44*	*1*	*50.0*	*87 %*	*41-146*	*2A18006*	*EPA 8260D*	*01/18/22 16:19*	*NMC*	

ANALYTICAL RESULTS

Description: LC34PS-PZI-040.0-20220117 **Lab Sample ID:** AE10221-08 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 08:00 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	800	U	ug/L	1000	800	2500	2A18006	EPA 8260D	01/18/22 16:48	NMC	
1,1,2,2-Tetrachloroethane [79-34-5]^	540	U	ug/L	1000	540	2500	2A18006	EPA 8260D	01/18/22 16:48	NMC	
1,1,2-Trichloroethane [79-00-5]^	760	U	ug/L	1000	760	2500	2A18006	EPA 8260D	01/18/22 16:48	NMC	
1,1-Dichloroethane [75-34-3]^	620	U	ug/L	1000	620	2500	2A18006	EPA 8260D	01/18/22 16:48	NMC	
1,1-Dichloroethene [75-35-4]^	940	U	ug/L	1000	940	2500	2A18006	EPA 8260D	01/18/22 16:48	NMC	
1,2,4-Trichlorobenzene [120-82-1]^	700	U	ug/L	1000	700	2500	2A18006	EPA 8260D	01/18/22 16:48	NMC	
1,2-Dibromo-3-chloropropane [96-12-8]^	960	U	ug/L	1000	960	2500	2A18006	EPA 8260D	01/18/22 16:48	NMC	
1,2-Dibromoethane [106-93-4]^	780	U	ug/L	1000	780	2500	2A18006	EPA 8260D	01/18/22 16:48	NMC	
1,2-Dichlorobenzene [95-50-1]^	730	U	ug/L	1000	730	2500	2A18006	EPA 8260D	01/18/22 16:48	NMC	
1,2-Dichloroethane [107-06-2]^	630	U	ug/L	1000	630	2500	2A18006	EPA 8260D	01/18/22 16:48	NMC	
1,2-Dichloropropane [78-87-5]^	800	U	ug/L	1000	800	2500	2A18006	EPA 8260D	01/18/22 16:48	NMC	
1,3-Dichlorobenzene [541-73-1]^	770	U	ug/L	1000	770	2500	2A18006	EPA 8260D	01/18/22 16:48	NMC	
1,4-Dichlorobenzene [106-46-7]^	760	U	ug/L	1000	760	2500	2A18006	EPA 8260D	01/18/22 16:48	NMC	
2-Butanone [78-93-3]^	4500	U	ug/L	1000	4500	12000	2A18006	EPA 8260D	01/18/22 16:48	NMC	
2-Hexanone [591-78-6]^	2500	U	ug/L	1000	2500	12000	2A18006	EPA 8260D	01/18/22 16:48	NMC	
4-Methyl-2-pentanone [108-10-1]^	2500	U	ug/L	1000	2500	12000	2A18006	EPA 8260D	01/18/22 16:48	NMC	
Acetone [67-64-1]^	10000	U	ug/L	1000	10000	25000	2A18006	EPA 8260D	01/18/22 16:48	NMC	
Benzene [71-43-2]^	710	U	ug/L	1000	710	2500	2A18006	EPA 8260D	01/18/22 16:48	NMC	
Bromodichloromethane [75-27-4]^	520	U	ug/L	1000	520	2500	2A18006	EPA 8260D	01/18/22 16:48	NMC	
Bromoform [75-25-2]^	750	U	ug/L	1000	750	2500	2A18006	EPA 8260D	01/18/22 16:48	NMC	
Bromomethane [74-83-9]^	950	U	ug/L	1000	950	2500	2A18006	EPA 8260D	01/18/22 16:48	NMC	
Carbon disulfide [75-15-0]^	2500	U	ug/L	1000	2500	12000	2A18006	EPA 8260D	01/18/22 16:48	NMC	QV-01
Carbon Tetrachloride [56-23-5]^	940	U	ug/L	1000	940	2500	2A18006	EPA 8260D	01/18/22 16:48	NMC	
Chlorobenzene [108-90-7]^	720	U	ug/L	1000	720	2500	2A18006	EPA 8260D	01/18/22 16:48	NMC	
Chloroethane [75-00-3]^	980	U	ug/L	1000	980	2500	2A18006	EPA 8260D	01/18/22 16:48	NMC	
Chloroform [67-66-3]^	800	U	ug/L	1000	800	2500	2A18006	EPA 8260D	01/18/22 16:48	NMC	
Chloromethane [74-87-3]^	820	U	ug/L	1000	820	2500	2A18006	EPA 8260D	01/18/22 16:48	NMC	
cis-1,2-Dichloroethene [156-59-2]^	**28000**		ug/L	1000	530	2500	2A18006	EPA 8260D	01/18/22 16:48	NMC	
cis-1,3-Dichloropropene [10061-01-5]^	590	U	ug/L	1000	590	2500	2A18006	EPA 8260D	01/18/22 16:48	NMC	
Cyclohexane [110-82-7]^	930	U	ug/L	1000	930	2500	2A18006	EPA 8260D	01/18/22 16:48	NMC	
Dibromochloromethane [124-48-1]^	500	U	ug/L	1000	500	2500	2A18006	EPA 8260D	01/18/22 16:48	NMC	
Dichlorodifluoromethane [75-71-8]^	740	U	ug/L	1000	740	2500	2A18006	EPA 8260D	01/18/22 16:48	NMC	
Ethylbenzene [100-41-4]^	690	U	ug/L	1000	690	2500	2A18006	EPA 8260D	01/18/22 16:48	NMC	
Freon 113 [76-13-1]^	730	U	ug/L	1000	730	2500	2A18006	EPA 8260D	01/18/22 16:48	NMC	
Isopropylbenzene [98-82-8]^	670	U	ug/L	1000	670	2500	2A18006	EPA 8260D	01/18/22 16:48	NMC	
Methyl acetate [79-20-9]^	950	U	ug/L	1000	950	2500	2A18006	EPA 8260D	01/18/22 16:48	NMC	
Methylene Chloride [75-09-2]^	2500	U	ug/L	1000	2500	12000	2A18006	EPA 8260D	01/18/22 16:48	NMC	
Methyl-tert-Butyl Ether [1634-04-4]^	600	U	ug/L	1000	600	2500	2A18006	EPA 8260D	01/18/22 16:48	NMC	
Styrene [100-42-5]^	610	U	ug/L	1000	610	2500	2A18006	EPA 8260D	01/18/22 16:48	NMC	
Tetrachloroethene [127-18-4]^	760	U	ug/L	1000	760	2500	2A18006	EPA 8260D	01/18/22 16:48	NMC	
Toluene [108-88-3]^	720	U	ug/L	1000	720	2500	2A18006	EPA 8260D	01/18/22 16:48	NMC	
trans-1,2-Dichloroethene [156-60-5]^	730	U	ug/L	1000	730	2500	2A18006	EPA 8260D	01/18/22 16:48	NMC	
trans-1,3-Dichloropropene [10061-02-6]^	730	U	ug/L	1000	730	2500	2A18006	EPA 8260D	01/18/22 16:48	NMC	
Trichloroethene [79-01-6]^	**46000**		ug/L	1000	890	2500	2A18006	EPA 8260D	01/18/22 16:48	NMC	
Trichlorofluoromethane [75-69-4]^	940	U	ug/L	1000	940	2500	2A18006	EPA 8260D	01/18/22 16:48	NMC	
Vinyl chloride [75-01-4]^	710	U	ug/L	1000	710	2500	2A18006	EPA 8260D	01/18/22 16:48	NMC	
Xylenes (Total) [1330-20-7]	1300	U	ug/L	1000	1300	5000	2A18006	EPA 8260D	01/18/22 16:48	NMC	

ANALYTICAL RESULTS

Description: LC34PS-PZI-040.0-20220117 **Lab Sample ID:** AE10221-08 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 08:00 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*45*	*1*	*50.0*	*90 %*	*41-142*	*2A18006*	*EPA 8260D*	*01/18/22 16:48*	*NMC*	
Dibromofluoromethane	*43*	*1*	*50.0*	*86 %*	*53-146*	*2A18006*	*EPA 8260D*	*01/18/22 16:48*	*NMC*	
Toluene-d8	*45*	*1*	*50.0*	*90 %*	*41-146*	*2A18006*	*EPA 8260D*	*01/18/22 16:48*	*NMC*	

ANALYTICAL RESULTS

Description: LC34PS-PZI-050.0-20220117 **Lab Sample ID:** AE10221-09 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 08:02 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	2000	U	ug/L	2500	2000	6200	2A18006	EPA 8260D	01/18/22 17:17	NMC	
1,1,2,2-Tetrachloroethane [79-34-5]^	1400	U	ug/L	2500	1400	6200	2A18006	EPA 8260D	01/18/22 17:17	NMC	
1,1,2-Trichloroethane [79-00-5]^	1900	U	ug/L	2500	1900	6200	2A18006	EPA 8260D	01/18/22 17:17	NMC	
1,1-Dichloroethane [75-34-3]^	1600	U	ug/L	2500	1600	6200	2A18006	EPA 8260D	01/18/22 17:17	NMC	
1,1-Dichloroethene [75-35-4]^	2400	U	ug/L	2500	2400	6200	2A18006	EPA 8260D	01/18/22 17:17	NMC	
1,2,4-Trichlorobenzene [120-82-1]^	1800	U	ug/L	2500	1800	6200	2A18006	EPA 8260D	01/18/22 17:17	NMC	
1,2-Dibromo-3-chloropropane [96-12-8]^	2400	U	ug/L	2500	2400	6200	2A18006	EPA 8260D	01/18/22 17:17	NMC	
1,2-Dibromoethane [106-93-4]^	2000	U	ug/L	2500	2000	6200	2A18006	EPA 8260D	01/18/22 17:17	NMC	
1,2-Dichlorobenzene [95-50-1]^	1800	U	ug/L	2500	1800	6200	2A18006	EPA 8260D	01/18/22 17:17	NMC	
1,2-Dichloroethane [107-06-2]^	1600	U	ug/L	2500	1600	6200	2A18006	EPA 8260D	01/18/22 17:17	NMC	
1,2-Dichloropropane [78-87-5]^	2000	U	ug/L	2500	2000	6200	2A18006	EPA 8260D	01/18/22 17:17	NMC	
1,3-Dichlorobenzene [541-73-1]^	1900	U	ug/L	2500	1900	6200	2A18006	EPA 8260D	01/18/22 17:17	NMC	
1,4-Dichlorobenzene [106-46-7]^	1900	U	ug/L	2500	1900	6200	2A18006	EPA 8260D	01/18/22 17:17	NMC	
2-Butanone [78-93-3]^	11000	U	ug/L	2500	11000	31000	2A18006	EPA 8260D	01/18/22 17:17	NMC	
2-Hexanone [591-78-6]^	6200	U	ug/L	2500	6200	31000	2A18006	EPA 8260D	01/18/22 17:17	NMC	
4-Methyl-2-pentanone [108-10-1]^	6200	U	ug/L	2500	6200	31000	2A18006	EPA 8260D	01/18/22 17:17	NMC	
Acetone [67-64-1]^	25000	U	ug/L	2500	25000	62000	2A18006	EPA 8260D	01/18/22 17:17	NMC	
Benzene [71-43-2]^	1800	U	ug/L	2500	1800	6200	2A18006	EPA 8260D	01/18/22 17:17	NMC	
Bromodichloromethane [75-27-4]^	1300	U	ug/L	2500	1300	6200	2A18006	EPA 8260D	01/18/22 17:17	NMC	
Bromoform [75-25-2]^	1900	U	ug/L	2500	1900	6200	2A18006	EPA 8260D	01/18/22 17:17	NMC	
Bromomethane [74-83-9]^	2400	U	ug/L	2500	2400	6200	2A18006	EPA 8260D	01/18/22 17:17	NMC	
Carbon disulfide [75-15-0]^	6200	U	ug/L	2500	6200	31000	2A18006	EPA 8260D	01/18/22 17:17	NMC	QV-01
Carbon Tetrachloride [56-23-5]^	2400	U	ug/L	2500	2400	6200	2A18006	EPA 8260D	01/18/22 17:17	NMC	
Chlorobenzene [108-90-7]^	1800	U	ug/L	2500	1800	6200	2A18006	EPA 8260D	01/18/22 17:17	NMC	
Chloroethane [75-00-3]^	2400	U	ug/L	2500	2400	6200	2A18006	EPA 8260D	01/18/22 17:17	NMC	
Chloroform [67-66-3]^	2000	U	ug/L	2500	2000	6200	2A18006	EPA 8260D	01/18/22 17:17	NMC	
Chloromethane [74-87-3]^	2000	U	ug/L	2500	2000	6200	2A18006	EPA 8260D	01/18/22 17:17	NMC	
cis-1,2-Dichloroethene [156-59-2]^	**13000**		ug/L	2500	1300	6200	2A18006	EPA 8260D	01/18/22 17:17	NMC	
cis-1,3-Dichloropropene [10061-01-5]^	1500	U	ug/L	2500	1500	6200	2A18006	EPA 8260D	01/18/22 17:17	NMC	
Cyclohexane [110-82-7]^	2300	U	ug/L	2500	2300	6200	2A18006	EPA 8260D	01/18/22 17:17	NMC	
Dibromochloromethane [124-48-1]^	1200	U	ug/L	2500	1200	6200	2A18006	EPA 8260D	01/18/22 17:17	NMC	
Dichlorodifluoromethane [75-71-8]^	1800	U	ug/L	2500	1800	6200	2A18006	EPA 8260D	01/18/22 17:17	NMC	
Ethylbenzene [100-41-4]^	1700	U	ug/L	2500	1700	6200	2A18006	EPA 8260D	01/18/22 17:17	NMC	
Freon 113 [76-13-1]^	1800	U	ug/L	2500	1800	6200	2A18006	EPA 8260D	01/18/22 17:17	NMC	
Isopropylbenzene [98-82-8]^	1700	U	ug/L	2500	1700	6200	2A18006	EPA 8260D	01/18/22 17:17	NMC	
Methyl acetate [79-20-9]^	2400	U	ug/L	2500	2400	6200	2A18006	EPA 8260D	01/18/22 17:17	NMC	
Methylene Chloride [75-09-2]^	6200	U	ug/L	2500	6200	31000	2A18006	EPA 8260D	01/18/22 17:17	NMC	
Methyl-tert-Butyl Ether [1634-04-4]^	1500	U	ug/L	2500	1500	6200	2A18006	EPA 8260D	01/18/22 17:17	NMC	
Styrene [100-42-5]^	1500	U	ug/L	2500	1500	6200	2A18006	EPA 8260D	01/18/22 17:17	NMC	
Tetrachloroethene [127-18-4]^	1900	U	ug/L	2500	1900	6200	2A18006	EPA 8260D	01/18/22 17:17	NMC	
Toluene [108-88-3]^	1800	U	ug/L	2500	1800	6200	2A18006	EPA 8260D	01/18/22 17:17	NMC	
trans-1,2-Dichloroethene [156-60-5]^	1800	U	ug/L	2500	1800	6200	2A18006	EPA 8260D	01/18/22 17:17	NMC	
trans-1,3-Dichloropropene [10061-02-6]^	1800	U	ug/L	2500	1800	6200	2A18006	EPA 8260D	01/18/22 17:17	NMC	
Trichloroethene [79-01-6]^	**110000**		ug/L	2500	2200	6200	2A18006	EPA 8260D	01/18/22 17:17	NMC	
Trichlorofluoromethane [75-69-4]^	2400	U	ug/L	2500	2400	6200	2A18006	EPA 8260D	01/18/22 17:17	NMC	
Vinyl chloride [75-01-4]^	1800	U	ug/L	2500	1800	6200	2A18006	EPA 8260D	01/18/22 17:17	NMC	
Xylenes (Total) [1330-20-7]	3200	U	ug/L	2500	3200	12000	2A18006	EPA 8260D	01/18/22 17:17	NMC	

ANALYTICAL RESULTS

Description: LC34PS-PZI-050.0-20220117 **Lab Sample ID:** AE10221-09 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 08:02 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*45*	*1*	*50.0*	*90 %*	*41-142*	*2A18006*	*EPA 8260D*	*01/18/22 17:17*	*NMC*	
Dibromofluoromethane	*43*	*1*	*50.0*	*87 %*	*53-146*	*2A18006*	*EPA 8260D*	*01/18/22 17:17*	*NMC*	
Toluene-d8	*46*	*1*	*50.0*	*91 %*	*41-146*	*2A18006*	*EPA 8260D*	*01/18/22 17:17*	*NMC*	

ANALYTICAL RESULTS

Description: LC34PS-PZI-058.0-20220117 **Lab Sample ID:** AE10221-10 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 08:04 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	2000	U	ug/L	2500	2000	6200	2A18006	EPA 8260D	01/18/22 17:45	NMC	
1,1,2,2-Tetrachloroethane [79-34-5]^	1400	U	ug/L	2500	1400	6200	2A18006	EPA 8260D	01/18/22 17:45	NMC	
1,1,2-Trichloroethane [79-00-5]^	1900	U	ug/L	2500	1900	6200	2A18006	EPA 8260D	01/18/22 17:45	NMC	
1,1-Dichloroethane [75-34-3]^	1600	U	ug/L	2500	1600	6200	2A18006	EPA 8260D	01/18/22 17:45	NMC	
1,1-Dichloroethene [75-35-4]^	2400	U	ug/L	2500	2400	6200	2A18006	EPA 8260D	01/18/22 17:45	NMC	
1,2,4-Trichlorobenzene [120-82-1]^	1800	U	ug/L	2500	1800	6200	2A18006	EPA 8260D	01/18/22 17:45	NMC	
1,2-Dibromo-3-chloropropane [96-12-8]^	2400	U	ug/L	2500	2400	6200	2A18006	EPA 8260D	01/18/22 17:45	NMC	
1,2-Dibromoethane [106-93-4]^	2000	U	ug/L	2500	2000	6200	2A18006	EPA 8260D	01/18/22 17:45	NMC	
1,2-Dichlorobenzene [95-50-1]^	1800	U	ug/L	2500	1800	6200	2A18006	EPA 8260D	01/18/22 17:45	NMC	
1,2-Dichloroethane [107-06-2]^	1600	U	ug/L	2500	1600	6200	2A18006	EPA 8260D	01/18/22 17:45	NMC	
1,2-Dichloropropane [78-87-5]^	2000	U	ug/L	2500	2000	6200	2A18006	EPA 8260D	01/18/22 17:45	NMC	
1,3-Dichlorobenzene [541-73-1]^	1900	U	ug/L	2500	1900	6200	2A18006	EPA 8260D	01/18/22 17:45	NMC	
1,4-Dichlorobenzene [106-46-7]^	1900	U	ug/L	2500	1900	6200	2A18006	EPA 8260D	01/18/22 17:45	NMC	
2-Butanone [78-93-3]^	11000	U	ug/L	2500	11000	31000	2A18006	EPA 8260D	01/18/22 17:45	NMC	
2-Hexanone [591-78-6]^	6200	U	ug/L	2500	6200	31000	2A18006	EPA 8260D	01/18/22 17:45	NMC	
4-Methyl-2-pentanone [108-10-1]^	6200	U	ug/L	2500	6200	31000	2A18006	EPA 8260D	01/18/22 17:45	NMC	
Acetone [67-64-1]^	25000	U	ug/L	2500	25000	62000	2A18006	EPA 8260D	01/18/22 17:45	NMC	
Benzene [71-43-2]^	1800	U	ug/L	2500	1800	6200	2A18006	EPA 8260D	01/18/22 17:45	NMC	
Bromodichloromethane [75-27-4]^	1300	U	ug/L	2500	1300	6200	2A18006	EPA 8260D	01/18/22 17:45	NMC	
Bromoform [75-25-2]^	1900	U	ug/L	2500	1900	6200	2A18006	EPA 8260D	01/18/22 17:45	NMC	
Bromomethane [74-83-9]^	2400	U	ug/L	2500	2400	6200	2A18006	EPA 8260D	01/18/22 17:45	NMC	
Carbon disulfide [75-15-0]^	6200	U	ug/L	2500	6200	31000	2A18006	EPA 8260D	01/18/22 17:45	NMC	QV-01
Carbon Tetrachloride [56-23-5]^	2400	U	ug/L	2500	2400	6200	2A18006	EPA 8260D	01/18/22 17:45	NMC	
Chlorobenzene [108-90-7]^	1800	U	ug/L	2500	1800	6200	2A18006	EPA 8260D	01/18/22 17:45	NMC	
Chloroethane [75-00-3]^	2400	U	ug/L	2500	2400	6200	2A18006	EPA 8260D	01/18/22 17:45	NMC	
Chloroform [67-66-3]^	2000	U	ug/L	2500	2000	6200	2A18006	EPA 8260D	01/18/22 17:45	NMC	
Chloromethane [74-87-3]^	2000	U	ug/L	2500	2000	6200	2A18006	EPA 8260D	01/18/22 17:45	NMC	
cis-1,2-Dichloroethene [156-59-2]^	**19000**		ug/L	2500	1300	6200	2A18006	EPA 8260D	01/18/22 17:45	NMC	
cis-1,3-Dichloropropene [10061-01-5]^	1500	U	ug/L	2500	1500	6200	2A18006	EPA 8260D	01/18/22 17:45	NMC	
Cyclohexane [110-82-7]^	2300	U	ug/L	2500	2300	6200	2A18006	EPA 8260D	01/18/22 17:45	NMC	
Dibromochloromethane [124-48-1]^	1200	U	ug/L	2500	1200	6200	2A18006	EPA 8260D	01/18/22 17:45	NMC	
Dichlorodifluoromethane [75-71-8]^	1800	U	ug/L	2500	1800	6200	2A18006	EPA 8260D	01/18/22 17:45	NMC	
Ethylbenzene [100-41-4]^	1700	U	ug/L	2500	1700	6200	2A18006	EPA 8260D	01/18/22 17:45	NMC	
Freon 113 [76-13-1]^	1800	U	ug/L	2500	1800	6200	2A18006	EPA 8260D	01/18/22 17:45	NMC	
Isopropylbenzene [98-82-8]^	1700	U	ug/L	2500	1700	6200	2A18006	EPA 8260D	01/18/22 17:45	NMC	
Methyl acetate [79-20-9]^	2400	U	ug/L	2500	2400	6200	2A18006	EPA 8260D	01/18/22 17:45	NMC	
Methylene Chloride [75-09-2]^	6200	U	ug/L	2500	6200	31000	2A18006	EPA 8260D	01/18/22 17:45	NMC	
Methyl-tert-Butyl Ether [1634-04-4]^	1500	U	ug/L	2500	1500	6200	2A18006	EPA 8260D	01/18/22 17:45	NMC	
Styrene [100-42-5]^	1500	U	ug/L	2500	1500	6200	2A18006	EPA 8260D	01/18/22 17:45	NMC	
Tetrachloroethene [127-18-4]^	1900	U	ug/L	2500	1900	6200	2A18006	EPA 8260D	01/18/22 17:45	NMC	
Toluene [108-88-3]^	1800	U	ug/L	2500	1800	6200	2A18006	EPA 8260D	01/18/22 17:45	NMC	
trans-1,2-Dichloroethene [156-60-5]^	1800	U	ug/L	2500	1800	6200	2A18006	EPA 8260D	01/18/22 17:45	NMC	
trans-1,3-Dichloropropene [10061-02-6]^	1800	U	ug/L	2500	1800	6200	2A18006	EPA 8260D	01/18/22 17:45	NMC	
Trichloroethene [79-01-6]^	**100000**		ug/L	2500	2200	6200	2A18006	EPA 8260D	01/18/22 17:45	NMC	
Trichlorofluoromethane [75-69-4]^	2400	U	ug/L	2500	2400	6200	2A18006	EPA 8260D	01/18/22 17:45	NMC	
Vinyl chloride [75-01-4]^	1800	U	ug/L	2500	1800	6200	2A18006	EPA 8260D	01/18/22 17:45	NMC	
Xylenes (Total) [1330-20-7]	3200	U	ug/L	2500	3200	12000	2A18006	EPA 8260D	01/18/22 17:45	NMC	

ANALYTICAL RESULTS

Description: LC34PS-PZI-058.0-20220117
Matrix: Ground Water
Project: NASA KSC LC34

Lab Sample ID: AE10221-10
Sampled: 01/17/22 08:04
Sampled By: Dan Forester / James Lloyd

Received: 01/17/22 15:30
Work Order: AE10221

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*45*	*1*	*50.0*	*91 %*	*41-142*	*2A18006*	*EPA 8260D*	*01/18/22 17:45*	*NMC*	
Dibromofluoromethane	*44*	*1*	*50.0*	*89 %*	*53-146*	*2A18006*	*EPA 8260D*	*01/18/22 17:45*	*NMC*	
Toluene-d8	*45*	*1*	*50.0*	*91 %*	*41-146*	*2A18006*	*EPA 8260D*	*01/18/22 17:45*	*NMC*	

ANALYTICAL RESULTS

Description: LC34PS-PZI-073.0-20220117 **Lab Sample ID:** AE10221-11 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 08:36 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	2A18006	EPA 8260D	01/18/22 18:14	NMC	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	2A18006	EPA 8260D	01/18/22 18:14	NMC	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	2A18006	EPA 8260D	01/18/22 18:14	NMC	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	2A18006	EPA 8260D	01/18/22 18:14	NMC	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	2A18006	EPA 8260D	01/18/22 18:14	NMC	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	2A18006	EPA 8260D	01/18/22 18:14	NMC	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	2A18006	EPA 8260D	01/18/22 18:14	NMC	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	2A18006	EPA 8260D	01/18/22 18:14	NMC	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	2A18006	EPA 8260D	01/18/22 18:14	NMC	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	2A18006	EPA 8260D	01/18/22 18:14	NMC	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	2A18006	EPA 8260D	01/18/22 18:14	NMC	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	2A18006	EPA 8260D	01/18/22 18:14	NMC	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	2A18006	EPA 8260D	01/18/22 18:14	NMC	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	2A18006	EPA 8260D	01/18/22 18:14	NMC	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	2A18006	EPA 8260D	01/18/22 18:14	NMC	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	2A18006	EPA 8260D	01/18/22 18:14	NMC	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	2A18006	EPA 8260D	01/18/22 18:14	NMC	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	2A18006	EPA 8260D	01/18/22 18:14	NMC	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	2A18006	EPA 8260D	01/18/22 18:14	NMC	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	2A18006	EPA 8260D	01/18/22 18:14	NMC	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	2A18006	EPA 8260D	01/18/22 18:14	NMC	
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	2A18006	EPA 8260D	01/18/22 18:14	NMC	QV-01
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	2A18006	EPA 8260D	01/18/22 18:14	NMC	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	2A18006	EPA 8260D	01/18/22 18:14	NMC	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	2A18006	EPA 8260D	01/18/22 18:14	NMC	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	2A18006	EPA 8260D	01/18/22 18:14	NMC	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	2A18006	EPA 8260D	01/18/22 18:14	NMC	
cis-1,2-Dichloroethene [156-59-2]^	**15**		ug/L	1	0.53	2.5	2A18006	EPA 8260D	01/18/22 18:14	NMC	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	2A18006	EPA 8260D	01/18/22 18:14	NMC	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	2A18006	EPA 8260D	01/18/22 18:14	NMC	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	2A18006	EPA 8260D	01/18/22 18:14	NMC	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	2A18006	EPA 8260D	01/18/22 18:14	NMC	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	2A18006	EPA 8260D	01/18/22 18:14	NMC	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	2A18006	EPA 8260D	01/18/22 18:14	NMC	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	2A18006	EPA 8260D	01/18/22 18:14	NMC	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	2A18006	EPA 8260D	01/18/22 18:14	NMC	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	2A18006	EPA 8260D	01/18/22 18:14	NMC	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	2A18006	EPA 8260D	01/18/22 18:14	NMC	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	2A18006	EPA 8260D	01/18/22 18:14	NMC	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	2A18006	EPA 8260D	01/18/22 18:14	NMC	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	2A18006	EPA 8260D	01/18/22 18:14	NMC	
trans-1,2-Dichloroethene [156-60-5]^	**0.95**	I	ug/L	1	0.73	2.5	2A18006	EPA 8260D	01/18/22 18:14	NMC	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	2A18006	EPA 8260D	01/18/22 18:14	NMC	
Trichloroethene [79-01-6]^	**8.1**		ug/L	1	0.89	2.5	2A18006	EPA 8260D	01/18/22 18:14	NMC	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	2A18006	EPA 8260D	01/18/22 18:14	NMC	
Vinyl chloride [75-01-4]^	**3.2**		ug/L	1	0.71	2.5	2A18006	EPA 8260D	01/18/22 18:14	NMC	
Xylenes (Total) [1330-20-7]	1.3	U	ug/L	1	1.3	5.0	2A18006	EPA 8260D	01/18/22 18:14	NMC	

ANALYTICAL RESULTS

Description: LC34PS-PZI-073.0-20220117 **Lab Sample ID:** AE10221-11 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 08:36 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*44*	*1*	*50.0*	*89 %*	*41-142*	*2A18006*	*EPA 8260D*	*01/18/22 18:14*	*NMC*	
Dibromofluoromethane	*42*	*1*	*50.0*	*85 %*	*53-146*	*2A18006*	*EPA 8260D*	*01/18/22 18:14*	*NMC*	
Toluene-d8	*45*	*1*	*50.0*	*90 %*	*41-146*	*2A18006*	*EPA 8260D*	*01/18/22 18:14*	*NMC*	

ANALYTICAL RESULTS

Description: LC34PS-PZI-080.0-20220117 **Lab Sample ID:** AE10221-12 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 08:08 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	2A18016	EPA 8260D	01/18/22 10:30	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	2A18016	EPA 8260D	01/18/22 10:30	KKW	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	2A18016	EPA 8260D	01/18/22 10:30	KKW	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	2A18016	EPA 8260D	01/18/22 10:30	KKW	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	2A18016	EPA 8260D	01/18/22 10:30	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	2A18016	EPA 8260D	01/18/22 10:30	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	2A18016	EPA 8260D	01/18/22 10:30	KKW	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	2A18016	EPA 8260D	01/18/22 10:30	KKW	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	2A18016	EPA 8260D	01/18/22 10:30	KKW	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	2A18016	EPA 8260D	01/18/22 10:30	KKW	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	2A18016	EPA 8260D	01/18/22 10:30	KKW	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	2A18016	EPA 8260D	01/18/22 10:30	KKW	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	2A18016	EPA 8260D	01/18/22 10:30	KKW	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	2A18016	EPA 8260D	01/18/22 10:30	KKW	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	2A18016	EPA 8260D	01/18/22 10:30	KKW	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	2A18016	EPA 8260D	01/18/22 10:30	KKW	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	2A18016	EPA 8260D	01/18/22 10:30	KKW	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	2A18016	EPA 8260D	01/18/22 10:30	KKW	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	2A18016	EPA 8260D	01/18/22 10:30	KKW	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	2A18016	EPA 8260D	01/18/22 10:30	KKW	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	2A18016	EPA 8260D	01/18/22 10:30	KKW	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	2A18016	EPA 8260D	01/18/22 10:30	KKW	QV-01
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	2A18016	EPA 8260D	01/18/22 10:30	KKW	QM-07, QV-01
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	2A18016	EPA 8260D	01/18/22 10:30	KKW	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	2A18016	EPA 8260D	01/18/22 10:30	KKW	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	2A18016	EPA 8260D	01/18/22 10:30	KKW	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	2A18016	EPA 8260D	01/18/22 10:30	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**9.8**		ug/L	1	0.53	2.5	2A18016	EPA 8260D	01/18/22 10:30	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	2A18016	EPA 8260D	01/18/22 10:30	KKW	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	2A18016	EPA 8260D	01/18/22 10:30	KKW	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	2A18016	EPA 8260D	01/18/22 10:30	KKW	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	2A18016	EPA 8260D	01/18/22 10:30	KKW	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	2A18016	EPA 8260D	01/18/22 10:30	KKW	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	2A18016	EPA 8260D	01/18/22 10:30	KKW	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	2A18016	EPA 8260D	01/18/22 10:30	KKW	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	2A18016	EPA 8260D	01/18/22 10:30	KKW	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	2A18016	EPA 8260D	01/18/22 10:30	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	2A18016	EPA 8260D	01/18/22 10:30	KKW	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	2A18016	EPA 8260D	01/18/22 10:30	KKW	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	2A18016	EPA 8260D	01/18/22 10:30	KKW	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	2A18016	EPA 8260D	01/18/22 10:30	KKW	
trans-1,2-Dichloroethene [156-60-5]^	**0.89**	I	ug/L	1	0.73	2.5	2A18016	EPA 8260D	01/18/22 10:30	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	2A18016	EPA 8260D	01/18/22 10:30	KKW	
Trichloroethene [79-01-6]^	**30**		ug/L	1	0.89	2.5	2A18016	EPA 8260D	01/18/22 10:30	KKW	QM-07
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	2A18016	EPA 8260D	01/18/22 10:30	KKW	
Vinyl chloride [75-01-4]^	**2.2**	I	ug/L	1	0.71	2.5	2A18016	EPA 8260D	01/18/22 10:30	KKW	

ANALYTICAL RESULTS

Description: LC34PS-PZI-080.0-20220117 **Lab Sample ID:** AE10221-12 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 08:08 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Xylenes (Total) [1330-20-7]	1.3	U	ug/L	1	1.3	5.0	2A18016	EPA 8260D	01/18/22 10:30	KKW	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*53*	*1*	*50.0*	*106 %*	*41-142*	*2A18016*	*EPA 8260D*	*01/18/22 10:30*	*KKW*	
Dibromofluoromethane	*51*	*1*	*50.0*	*102 %*	*53-146*	*2A18016*	*EPA 8260D*	*01/18/22 10:30*	*KKW*	
Toluene-d8	*51*	*1*	*50.0*	*103 %*	*41-146*	*2A18016*	*EPA 8260D*	*01/18/22 10:30*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZH-040.0-20220117 **Lab Sample ID:** AE10221-13 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 08:30 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	1600	U	ug/L	2000	1600	5000	2A18016	EPA 8260D	01/18/22 14:11	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	1100	U	ug/L	2000	1100	5000	2A18016	EPA 8260D	01/18/22 14:11	KKW	
1,1,2-Trichloroethane [79-00-5]^	1500	U	ug/L	2000	1500	5000	2A18016	EPA 8260D	01/18/22 14:11	KKW	
1,1-Dichloroethane [75-34-3]^	1200	U	ug/L	2000	1200	5000	2A18016	EPA 8260D	01/18/22 14:11	KKW	
1,1-Dichloroethene [75-35-4]^	1900	U	ug/L	2000	1900	5000	2A18016	EPA 8260D	01/18/22 14:11	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	1400	U	ug/L	2000	1400	5000	2A18016	EPA 8260D	01/18/22 14:11	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	1900	U	ug/L	2000	1900	5000	2A18016	EPA 8260D	01/18/22 14:11	KKW	
1,2-Dibromoethane [106-93-4]^	1600	U	ug/L	2000	1600	5000	2A18016	EPA 8260D	01/18/22 14:11	KKW	
1,2-Dichlorobenzene [95-50-1]^	1500	U	ug/L	2000	1500	5000	2A18016	EPA 8260D	01/18/22 14:11	KKW	
1,2-Dichloroethane [107-06-2]^	1300	U	ug/L	2000	1300	5000	2A18016	EPA 8260D	01/18/22 14:11	KKW	
1,2-Dichloropropane [78-87-5]^	1600	U	ug/L	2000	1600	5000	2A18016	EPA 8260D	01/18/22 14:11	KKW	
1,3-Dichlorobenzene [541-73-1]^	1500	U	ug/L	2000	1500	5000	2A18016	EPA 8260D	01/18/22 14:11	KKW	
1,4-Dichlorobenzene [106-46-7]^	1500	U	ug/L	2000	1500	5000	2A18016	EPA 8260D	01/18/22 14:11	KKW	
2-Butanone [78-93-3]^	9000	U	ug/L	2000	9000	25000	2A18016	EPA 8260D	01/18/22 14:11	KKW	
2-Hexanone [591-78-6]^	5000	U	ug/L	2000	5000	25000	2A18016	EPA 8260D	01/18/22 14:11	KKW	
4-Methyl-2-pentanone [108-10-1]^	5000	U	ug/L	2000	5000	25000	2A18016	EPA 8260D	01/18/22 14:11	KKW	
Acetone [67-64-1]^	20000	U	ug/L	2000	20000	50000	2A18016	EPA 8260D	01/18/22 14:11	KKW	
Benzene [71-43-2]^	1400	U	ug/L	2000	1400	5000	2A18016	EPA 8260D	01/18/22 14:11	KKW	
Bromodichloromethane [75-27-4]^	1000	U	ug/L	2000	1000	5000	2A18016	EPA 8260D	01/18/22 14:11	KKW	
Bromoform [75-25-2]^	1500	U	ug/L	2000	1500	5000	2A18016	EPA 8260D	01/18/22 14:11	KKW	
Bromomethane [74-83-9]^	1900	U	ug/L	2000	1900	5000	2A18016	EPA 8260D	01/18/22 14:11	KKW	QV-01
Carbon disulfide [75-15-0]^	5000	U	ug/L	2000	5000	25000	2A18016	EPA 8260D	01/18/22 14:11	KKW	QV-01
Carbon Tetrachloride [56-23-5]^	1900	U	ug/L	2000	1900	5000	2A18016	EPA 8260D	01/18/22 14:11	KKW	QV-01
Chlorobenzene [108-90-7]^	1400	U	ug/L	2000	1400	5000	2A18016	EPA 8260D	01/18/22 14:11	KKW	
Chloroethane [75-00-3]^	2000	U	ug/L	2000	2000	5000	2A18016	EPA 8260D	01/18/22 14:11	KKW	
Chloroform [67-66-3]^	1600	U	ug/L	2000	1600	5000	2A18016	EPA 8260D	01/18/22 14:11	KKW	
Chloromethane [74-87-3]^	1600	U	ug/L	2000	1600	5000	2A18016	EPA 8260D	01/18/22 14:11	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**6400**		ug/L	2000	1100	5000	2A18016	EPA 8260D	01/18/22 14:11	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	1200	U	ug/L	2000	1200	5000	2A18016	EPA 8260D	01/18/22 14:11	KKW	
Cyclohexane [110-82-7]^	1900	U	ug/L	2000	1900	5000	2A18016	EPA 8260D	01/18/22 14:11	KKW	
Dibromochloromethane [124-48-1]^	1000	U	ug/L	2000	1000	5000	2A18016	EPA 8260D	01/18/22 14:11	KKW	
Dichlorodifluoromethane [75-71-8]^	1500	U	ug/L	2000	1500	5000	2A18016	EPA 8260D	01/18/22 14:11	KKW	
Ethylbenzene [100-41-4]^	1400	U	ug/L	2000	1400	5000	2A18016	EPA 8260D	01/18/22 14:11	KKW	
Freon 113 [76-13-1]^	1500	U	ug/L	2000	1500	5000	2A18016	EPA 8260D	01/18/22 14:11	KKW	
Isopropylbenzene [98-82-8]^	1300	U	ug/L	2000	1300	5000	2A18016	EPA 8260D	01/18/22 14:11	KKW	
Methyl acetate [79-20-9]^	1900	U	ug/L	2000	1900	5000	2A18016	EPA 8260D	01/18/22 14:11	KKW	
Methylene Chloride [75-09-2]^	5000	U	ug/L	2000	5000	25000	2A18016	EPA 8260D	01/18/22 14:11	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	1200	U	ug/L	2000	1200	5000	2A18016	EPA 8260D	01/18/22 14:11	KKW	
Styrene [100-42-5]^	1200	U	ug/L	2000	1200	5000	2A18016	EPA 8260D	01/18/22 14:11	KKW	
Tetrachloroethene [127-18-4]^	1500	U	ug/L	2000	1500	5000	2A18016	EPA 8260D	01/18/22 14:11	KKW	
Toluene [108-88-3]^	1400	U	ug/L	2000	1400	5000	2A18016	EPA 8260D	01/18/22 14:11	KKW	
trans-1,2-Dichloroethene [156-60-5]^	1500	U	ug/L	2000	1500	5000	2A18016	EPA 8260D	01/18/22 14:11	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	1500	U	ug/L	2000	1500	5000	2A18016	EPA 8260D	01/18/22 14:11	KKW	
Trichloroethene [79-01-6]^	**88000**		ug/L	2000	1800	5000	2A18016	EPA 8260D	01/18/22 14:11	KKW	
Trichlorofluoromethane [75-69-4]^	1900	U	ug/L	2000	1900	5000	2A18016	EPA 8260D	01/18/22 14:11	KKW	
Vinyl chloride [75-01-4]^	1400	U	ug/L	2000	1400	5000	2A18016	EPA 8260D	01/18/22 14:11	KKW	
Xylenes (Total) [1330-20-7]	2600	U	ug/L	2000	2600	10000	2A18016	EPA 8260D	01/18/22 14:11	KKW	

ANALYTICAL RESULTS

Description: LC34PS-PZH-040.0-20220117 **Lab Sample ID:** AE10221-13 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 08:30 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*52*	*1*	*50.0*	*105 %*	*41-142*	*2A18016*	*EPA 8260D*	*01/18/22 14:11*	*KKW*	
Dibromofluoromethane	*50*	*1*	*50.0*	*100 %*	*53-146*	*2A18016*	*EPA 8260D*	*01/18/22 14:11*	*KKW*	
Toluene-d8	*53*	*1*	*50.0*	*106 %*	*41-146*	*2A18016*	*EPA 8260D*	*01/18/22 14:11*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZH-050.0-20220117 **Lab Sample ID:** AE10221-14 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 08:32 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	8000	U	ug/L	10000	8000	25000	2A18016	EPA 8260D	01/18/22 14:39	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	5400	U	ug/L	10000	5400	25000	2A18016	EPA 8260D	01/18/22 14:39	KKW	
1,1,2-Trichloroethane [79-00-5]^	7600	U	ug/L	10000	7600	25000	2A18016	EPA 8260D	01/18/22 14:39	KKW	
1,1-Dichloroethane [75-34-3]^	6200	U	ug/L	10000	6200	25000	2A18016	EPA 8260D	01/18/22 14:39	KKW	
1,1-Dichloroethene [75-35-4]^	9400	U	ug/L	10000	9400	25000	2A18016	EPA 8260D	01/18/22 14:39	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	7000	U	ug/L	10000	7000	25000	2A18016	EPA 8260D	01/18/22 14:39	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	9600	U	ug/L	10000	9600	25000	2A18016	EPA 8260D	01/18/22 14:39	KKW	
1,2-Dibromoethane [106-93-4]^	7800	U	ug/L	10000	7800	25000	2A18016	EPA 8260D	01/18/22 14:39	KKW	
1,2-Dichlorobenzene [95-50-1]^	7300	U	ug/L	10000	7300	25000	2A18016	EPA 8260D	01/18/22 14:39	KKW	
1,2-Dichloroethane [107-06-2]^	6300	U	ug/L	10000	6300	25000	2A18016	EPA 8260D	01/18/22 14:39	KKW	
1,2-Dichloropropane [78-87-5]^	8000	U	ug/L	10000	8000	25000	2A18016	EPA 8260D	01/18/22 14:39	KKW	
1,3-Dichlorobenzene [541-73-1]^	7700	U	ug/L	10000	7700	25000	2A18016	EPA 8260D	01/18/22 14:39	KKW	
1,4-Dichlorobenzene [106-46-7]^	7600	U	ug/L	10000	7600	25000	2A18016	EPA 8260D	01/18/22 14:39	KKW	
2-Butanone [78-93-3]^	45000	U	ug/L	10000	45000	120000	2A18016	EPA 8260D	01/18/22 14:39	KKW	
2-Hexanone [591-78-6]^	25000	U	ug/L	10000	25000	120000	2A18016	EPA 8260D	01/18/22 14:39	KKW	
4-Methyl-2-pentanone [108-10-1]^	25000	U	ug/L	10000	25000	120000	2A18016	EPA 8260D	01/18/22 14:39	KKW	
Acetone [67-64-1]^	100000	U	ug/L	10000	100000	250000	2A18016	EPA 8260D	01/18/22 14:39	KKW	
Benzene [71-43-2]^	7100	U	ug/L	10000	7100	25000	2A18016	EPA 8260D	01/18/22 14:39	KKW	
Bromodichloromethane [75-27-4]^	5200	U	ug/L	10000	5200	25000	2A18016	EPA 8260D	01/18/22 14:39	KKW	
Bromoform [75-25-2]^	7500	U	ug/L	10000	7500	25000	2A18016	EPA 8260D	01/18/22 14:39	KKW	
Bromomethane [74-83-9]^	9500	U	ug/L	10000	9500	25000	2A18016	EPA 8260D	01/18/22 14:39	KKW	QV-01
Carbon disulfide [75-15-0]^	25000	U	ug/L	10000	25000	120000	2A18016	EPA 8260D	01/18/22 14:39	KKW	QV-01
Carbon Tetrachloride [56-23-5]^	9400	U	ug/L	10000	9400	25000	2A18016	EPA 8260D	01/18/22 14:39	KKW	QV-01
Chlorobenzene [108-90-7]^	7200	U	ug/L	10000	7200	25000	2A18016	EPA 8260D	01/18/22 14:39	KKW	
Chloroethane [75-00-3]^	9800	U	ug/L	10000	9800	25000	2A18016	EPA 8260D	01/18/22 14:39	KKW	
Chloroform [67-66-3]^	8000	U	ug/L	10000	8000	25000	2A18016	EPA 8260D	01/18/22 14:39	KKW	
Chloromethane [74-87-3]^	8200	U	ug/L	10000	8200	25000	2A18016	EPA 8260D	01/18/22 14:39	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**23000**	I	ug/L	10000	5300	25000	2A18016	EPA 8260D	01/18/22 14:39	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	5900	U	ug/L	10000	5900	25000	2A18016	EPA 8260D	01/18/22 14:39	KKW	
Cyclohexane [110-82-7]^	9300	U	ug/L	10000	9300	25000	2A18016	EPA 8260D	01/18/22 14:39	KKW	
Dibromochloromethane [124-48-1]^	5000	U	ug/L	10000	5000	25000	2A18016	EPA 8260D	01/18/22 14:39	KKW	
Dichlorodifluoromethane [75-71-8]^	7400	U	ug/L	10000	7400	25000	2A18016	EPA 8260D	01/18/22 14:39	KKW	
Ethylbenzene [100-41-4]^	6900	U	ug/L	10000	6900	25000	2A18016	EPA 8260D	01/18/22 14:39	KKW	
Freon 113 [76-13-1]^	7300	U	ug/L	10000	7300	25000	2A18016	EPA 8260D	01/18/22 14:39	KKW	
Isopropylbenzene [98-82-8]^	6700	U	ug/L	10000	6700	25000	2A18016	EPA 8260D	01/18/22 14:39	KKW	
Methyl acetate [79-20-9]^	9500	U	ug/L	10000	9500	25000	2A18016	EPA 8260D	01/18/22 14:39	KKW	
Methylene Chloride [75-09-2]^	25000	U	ug/L	10000	25000	120000	2A18016	EPA 8260D	01/18/22 14:39	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	6000	U	ug/L	10000	6000	25000	2A18016	EPA 8260D	01/18/22 14:39	KKW	
Styrene [100-42-5]^	6100	U	ug/L	10000	6100	25000	2A18016	EPA 8260D	01/18/22 14:39	KKW	
Tetrachloroethene [127-18-4]^	7600	U	ug/L	10000	7600	25000	2A18016	EPA 8260D	01/18/22 14:39	KKW	
Toluene [108-88-3]^	7200	U	ug/L	10000	7200	25000	2A18016	EPA 8260D	01/18/22 14:39	KKW	
trans-1,2-Dichloroethene [156-60-5]^	7300	U	ug/L	10000	7300	25000	2A18016	EPA 8260D	01/18/22 14:39	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	7300	U	ug/L	10000	7300	25000	2A18016	EPA 8260D	01/18/22 14:39	KKW	
Trichloroethene [79-01-6]^	**370000**		ug/L	10000	8900	25000	2A18016	EPA 8260D	01/18/22 14:39	KKW	
Trichlorofluoromethane [75-69-4]^	9400	U	ug/L	10000	9400	25000	2A18016	EPA 8260D	01/18/22 14:39	KKW	
Vinyl chloride [75-01-4]^	7100	U	ug/L	10000	7100	25000	2A18016	EPA 8260D	01/18/22 14:39	KKW	
Xylenes (Total) [1330-20-7]	13000	U	ug/L	10000	13000	50000	2A18016	EPA 8260D	01/18/22 14:39	KKW	

ANALYTICAL RESULTS

Description: LC34PS-PZH-050.0-20220117 **Lab Sample ID:** AE10221-14 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 08:32 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*54*	*1*	*50.0*	*109 %*	*41-142*	*2A18016*	*EPA 8260D*	*01/18/22 14:39*	*KKW*	
Dibromofluoromethane	*52*	*1*	*50.0*	*105 %*	*53-146*	*2A18016*	*EPA 8260D*	*01/18/22 14:39*	*KKW*	
Toluene-d8	*53*	*1*	*50.0*	*106 %*	*41-146*	*2A18016*	*EPA 8260D*	*01/18/22 14:39*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZH-058.0-20220117 **Lab Sample ID:** AE10221-15 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 08:34 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	2000	U	ug/L	2500	2000	6200	2A18016	EPA 8260D	01/18/22 15:07	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	1400	U	ug/L	2500	1400	6200	2A18016	EPA 8260D	01/18/22 15:07	KKW	
1,1,2-Trichloroethane [79-00-5]^	1900	U	ug/L	2500	1900	6200	2A18016	EPA 8260D	01/18/22 15:07	KKW	
1,1-Dichloroethane [75-34-3]^	1600	U	ug/L	2500	1600	6200	2A18016	EPA 8260D	01/18/22 15:07	KKW	
1,1-Dichloroethene [75-35-4]^	2400	U	ug/L	2500	2400	6200	2A18016	EPA 8260D	01/18/22 15:07	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	1800	U	ug/L	2500	1800	6200	2A18016	EPA 8260D	01/18/22 15:07	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	2400	U	ug/L	2500	2400	6200	2A18016	EPA 8260D	01/18/22 15:07	KKW	
1,2-Dibromoethane [106-93-4]^	2000	U	ug/L	2500	2000	6200	2A18016	EPA 8260D	01/18/22 15:07	KKW	
1,2-Dichlorobenzene [95-50-1]^	1800	U	ug/L	2500	1800	6200	2A18016	EPA 8260D	01/18/22 15:07	KKW	
1,2-Dichloroethane [107-06-2]^	1600	U	ug/L	2500	1600	6200	2A18016	EPA 8260D	01/18/22 15:07	KKW	
1,2-Dichloropropane [78-87-5]^	2000	U	ug/L	2500	2000	6200	2A18016	EPA 8260D	01/18/22 15:07	KKW	
1,3-Dichlorobenzene [541-73-1]^	1900	U	ug/L	2500	1900	6200	2A18016	EPA 8260D	01/18/22 15:07	KKW	
1,4-Dichlorobenzene [106-46-7]^	1900	U	ug/L	2500	1900	6200	2A18016	EPA 8260D	01/18/22 15:07	KKW	
2-Butanone [78-93-3]^	11000	U	ug/L	2500	11000	31000	2A18016	EPA 8260D	01/18/22 15:07	KKW	
2-Hexanone [591-78-6]^	6200	U	ug/L	2500	6200	31000	2A18016	EPA 8260D	01/18/22 15:07	KKW	
4-Methyl-2-pentanone [108-10-1]^	6200	U	ug/L	2500	6200	31000	2A18016	EPA 8260D	01/18/22 15:07	KKW	
Acetone [67-64-1]^	25000	U	ug/L	2500	25000	62000	2A18016	EPA 8260D	01/18/22 15:07	KKW	
Benzene [71-43-2]^	1800	U	ug/L	2500	1800	6200	2A18016	EPA 8260D	01/18/22 15:07	KKW	
Bromodichloromethane [75-27-4]^	1300	U	ug/L	2500	1300	6200	2A18016	EPA 8260D	01/18/22 15:07	KKW	
Bromoform [75-25-2]^	1900	U	ug/L	2500	1900	6200	2A18016	EPA 8260D	01/18/22 15:07	KKW	
Bromomethane [74-83-9]^	2400	U	ug/L	2500	2400	6200	2A18016	EPA 8260D	01/18/22 15:07	KKW	QV-01
Carbon disulfide [75-15-0]^	6200	U	ug/L	2500	6200	31000	2A18016	EPA 8260D	01/18/22 15:07	KKW	QV-01
Carbon Tetrachloride [56-23-5]^	2400	U	ug/L	2500	2400	6200	2A18016	EPA 8260D	01/18/22 15:07	KKW	QV-01
Chlorobenzene [108-90-7]^	1800	U	ug/L	2500	1800	6200	2A18016	EPA 8260D	01/18/22 15:07	KKW	
Chloroethane [75-00-3]^	2400	U	ug/L	2500	2400	6200	2A18016	EPA 8260D	01/18/22 15:07	KKW	
Chloroform [67-66-3]^	2000	U	ug/L	2500	2000	6200	2A18016	EPA 8260D	01/18/22 15:07	KKW	
Chloromethane [74-87-3]^	2000	U	ug/L	2500	2000	6200	2A18016	EPA 8260D	01/18/22 15:07	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**19000**		ug/L	2500	1300	6200	2A18016	EPA 8260D	01/18/22 15:07	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	1500	U	ug/L	2500	1500	6200	2A18016	EPA 8260D	01/18/22 15:07	KKW	
Cyclohexane [110-82-7]^	2300	U	ug/L	2500	2300	6200	2A18016	EPA 8260D	01/18/22 15:07	KKW	
Dibromochloromethane [124-48-1]^	1200	U	ug/L	2500	1200	6200	2A18016	EPA 8260D	01/18/22 15:07	KKW	
Dichlorodifluoromethane [75-71-8]^	1800	U	ug/L	2500	1800	6200	2A18016	EPA 8260D	01/18/22 15:07	KKW	
Ethylbenzene [100-41-4]^	1700	U	ug/L	2500	1700	6200	2A18016	EPA 8260D	01/18/22 15:07	KKW	
Freon 113 [76-13-1]^	1800	U	ug/L	2500	1800	6200	2A18016	EPA 8260D	01/18/22 15:07	KKW	
Isopropylbenzene [98-82-8]^	1700	U	ug/L	2500	1700	6200	2A18016	EPA 8260D	01/18/22 15:07	KKW	
Methyl acetate [79-20-9]^	2400	U	ug/L	2500	2400	6200	2A18016	EPA 8260D	01/18/22 15:07	KKW	
Methylene Chloride [75-09-2]^	6200	U	ug/L	2500	6200	31000	2A18016	EPA 8260D	01/18/22 15:07	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	1500	U	ug/L	2500	1500	6200	2A18016	EPA 8260D	01/18/22 15:07	KKW	
Styrene [100-42-5]^	1500	U	ug/L	2500	1500	6200	2A18016	EPA 8260D	01/18/22 15:07	KKW	
Tetrachloroethene [127-18-4]^	1900	U	ug/L	2500	1900	6200	2A18016	EPA 8260D	01/18/22 15:07	KKW	
Toluene [108-88-3]^	1800	U	ug/L	2500	1800	6200	2A18016	EPA 8260D	01/18/22 15:07	KKW	
trans-1,2-Dichloroethene [156-60-5]^	1800	U	ug/L	2500	1800	6200	2A18016	EPA 8260D	01/18/22 15:07	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	1800	U	ug/L	2500	1800	6200	2A18016	EPA 8260D	01/18/22 15:07	KKW	
Trichloroethene [79-01-6]^	**100000**		ug/L	2500	2200	6200	2A18016	EPA 8260D	01/18/22 15:07	KKW	
Trichlorofluoromethane [75-69-4]^	2400	U	ug/L	2500	2400	6200	2A18016	EPA 8260D	01/18/22 15:07	KKW	
Vinyl chloride [75-01-4]^	1800	U	ug/L	2500	1800	6200	2A18016	EPA 8260D	01/18/22 15:07	KKW	
Xylenes (Total) [1330-20-7]	3200	U	ug/L	2500	3200	12000	2A18016	EPA 8260D	01/18/22 15:07	KKW	

ANALYTICAL RESULTS

Description: LC34PS-PZH-058.0-20220117 **Lab Sample ID:** AE10221-15 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 08:34 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*54*	*1*	*50.0*	*108 %*	*41-142*	*2A18016*	*EPA 8260D*	*01/18/22 15:07*	*KKW*	
Dibromofluoromethane	*52*	*1*	*50.0*	*104 %*	*53-146*	*2A18016*	*EPA 8260D*	*01/18/22 15:07*	*KKW*	
Toluene-d8	*52*	*1*	*50.0*	*105 %*	*41-146*	*2A18016*	*EPA 8260D*	*01/18/22 15:07*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZH-073.0-20220117 **Lab Sample ID:** AE10221-16 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 08:36 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	8.0	U	ug/L	10	8.0	25	2A18016	EPA 8260D	01/18/22 15:34	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	5.4	U	ug/L	10	5.4	25	2A18016	EPA 8260D	01/18/22 15:34	KKW	
1,1,2-Trichloroethane [79-00-5]^	7.6	U	ug/L	10	7.6	25	2A18016	EPA 8260D	01/18/22 15:34	KKW	
1,1-Dichloroethane [75-34-3]^	6.2	U	ug/L	10	6.2	25	2A18016	EPA 8260D	01/18/22 15:34	KKW	
1,1-Dichloroethene [75-35-4]^	9.4	U	ug/L	10	9.4	25	2A18016	EPA 8260D	01/18/22 15:34	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	7.0	U	ug/L	10	7.0	25	2A18016	EPA 8260D	01/18/22 15:34	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	9.6	U	ug/L	10	9.6	25	2A18016	EPA 8260D	01/18/22 15:34	KKW	
1,2-Dibromoethane [106-93-4]^	7.8	U	ug/L	10	7.8	25	2A18016	EPA 8260D	01/18/22 15:34	KKW	
1,2-Dichlorobenzene [95-50-1]^	7.3	U	ug/L	10	7.3	25	2A18016	EPA 8260D	01/18/22 15:34	KKW	
1,2-Dichloroethane [107-06-2]^	6.3	U	ug/L	10	6.3	25	2A18016	EPA 8260D	01/18/22 15:34	KKW	
1,2-Dichloropropane [78-87-5]^	8.0	U	ug/L	10	8.0	25	2A18016	EPA 8260D	01/18/22 15:34	KKW	
1,3-Dichlorobenzene [541-73-1]^	7.7	U	ug/L	10	7.7	25	2A18016	EPA 8260D	01/18/22 15:34	KKW	
1,4-Dichlorobenzene [106-46-7]^	7.6	U	ug/L	10	7.6	25	2A18016	EPA 8260D	01/18/22 15:34	KKW	
2-Butanone [78-93-3]^	45	U	ug/L	10	45	120	2A18016	EPA 8260D	01/18/22 15:34	KKW	
2-Hexanone [591-78-6]^	25	U	ug/L	10	25	120	2A18016	EPA 8260D	01/18/22 15:34	KKW	
4-Methyl-2-pentanone [108-10-1]^	25	U	ug/L	10	25	120	2A18016	EPA 8260D	01/18/22 15:34	KKW	
Acetone [67-64-1]^	100	U	ug/L	10	100	250	2A18016	EPA 8260D	01/18/22 15:34	KKW	
Benzene [71-43-2]^	7.1	U	ug/L	10	7.1	25	2A18016	EPA 8260D	01/18/22 15:34	KKW	
Bromodichloromethane [75-27-4]^	5.2	U	ug/L	10	5.2	25	2A18016	EPA 8260D	01/18/22 15:34	KKW	
Bromoform [75-25-2]^	7.5	U	ug/L	10	7.5	25	2A18016	EPA 8260D	01/18/22 15:34	KKW	
Bromomethane [74-83-9]^	9.5	U	ug/L	10	9.5	25	2A18016	EPA 8260D	01/18/22 15:34	KKW	QV-01
Carbon disulfide [75-15-0]^	25	U	ug/L	10	25	120	2A18016	EPA 8260D	01/18/22 15:34	KKW	QV-01
Carbon Tetrachloride [56-23-5]^	9.4	U	ug/L	10	9.4	25	2A18016	EPA 8260D	01/18/22 15:34	KKW	QV-01
Chlorobenzene [108-90-7]^	7.2	U	ug/L	10	7.2	25	2A18016	EPA 8260D	01/18/22 15:34	KKW	
Chloroethane [75-00-3]^	9.8	U	ug/L	10	9.8	25	2A18016	EPA 8260D	01/18/22 15:34	KKW	
Chloroform [67-66-3]^	8.0	U	ug/L	10	8.0	25	2A18016	EPA 8260D	01/18/22 15:34	KKW	
Chloromethane [74-87-3]^	8.2	U	ug/L	10	8.2	25	2A18016	EPA 8260D	01/18/22 15:34	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**18**	I	ug/L	10	5.3	25	2A18016	EPA 8260D	01/18/22 15:34	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	5.9	U	ug/L	10	5.9	25	2A18016	EPA 8260D	01/18/22 15:34	KKW	
Cyclohexane [110-82-7]^	9.3	U	ug/L	10	9.3	25	2A18016	EPA 8260D	01/18/22 15:34	KKW	
Dibromochloromethane [124-48-1]^	5.0	U	ug/L	10	5.0	25	2A18016	EPA 8260D	01/18/22 15:34	KKW	
Dichlorodifluoromethane [75-71-8]^	7.4	U	ug/L	10	7.4	25	2A18016	EPA 8260D	01/18/22 15:34	KKW	
Ethylbenzene [100-41-4]^	6.9	U	ug/L	10	6.9	25	2A18016	EPA 8260D	01/18/22 15:34	KKW	
Freon 113 [76-13-1]^	7.3	U	ug/L	10	7.3	25	2A18016	EPA 8260D	01/18/22 15:34	KKW	
Isopropylbenzene [98-82-8]^	6.7	U	ug/L	10	6.7	25	2A18016	EPA 8260D	01/18/22 15:34	KKW	
Methyl acetate [79-20-9]^	9.5	U	ug/L	10	9.5	25	2A18016	EPA 8260D	01/18/22 15:34	KKW	
Methylene Chloride [75-09-2]^	25	U	ug/L	10	25	120	2A18016	EPA 8260D	01/18/22 15:34	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	6.0	U	ug/L	10	6.0	25	2A18016	EPA 8260D	01/18/22 15:34	KKW	
Styrene [100-42-5]^	6.1	U	ug/L	10	6.1	25	2A18016	EPA 8260D	01/18/22 15:34	KKW	
Tetrachloroethene [127-18-4]^	7.6	U	ug/L	10	7.6	25	2A18016	EPA 8260D	01/18/22 15:34	KKW	
Toluene [108-88-3]^	7.2	U	ug/L	10	7.2	25	2A18016	EPA 8260D	01/18/22 15:34	KKW	
trans-1,2-Dichloroethene [156-60-5]^	7.3	U	ug/L	10	7.3	25	2A18016	EPA 8260D	01/18/22 15:34	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	7.3	U	ug/L	10	7.3	25	2A18016	EPA 8260D	01/18/22 15:34	KKW	
Trichloroethene [79-01-6]^	**510**		ug/L	10	8.9	25	2A18016	EPA 8260D	01/18/22 15:34	KKW	
Trichlorofluoromethane [75-69-4]^	9.4	U	ug/L	10	9.4	25	2A18016	EPA 8260D	01/18/22 15:34	KKW	
Vinyl chloride [75-01-4]^	7.1	U	ug/L	10	7.1	25	2A18016	EPA 8260D	01/18/22 15:34	KKW	
Xylenes (Total) [1330-20-7]	13	U	ug/L	10	13	50	2A18016	EPA 8260D	01/18/22 15:34	KKW	

ANALYTICAL RESULTS

Description: LC34PS-PZH-073.0-20220117 **Lab Sample ID:** AE10221-16 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 08:36 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*56*	*1*	*50.0*	*112 %*	*41-142*	*2A18016*	*EPA 8260D*	*01/18/22 15:34*	*KKW*	
Dibromofluoromethane	*53*	*1*	*50.0*	*107 %*	*53-146*	*2A18016*	*EPA 8260D*	*01/18/22 15:34*	*KKW*	
Toluene-d8	*54*	*1*	*50.0*	*107 %*	*41-146*	*2A18016*	*EPA 8260D*	*01/18/22 15:34*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZH-080.0-20220117 **Lab Sample ID:** AE10221-17 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 08:38 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	2A18016	EPA 8260D	01/18/22 10:58	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	2A18016	EPA 8260D	01/18/22 10:58	KKW	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	2A18016	EPA 8260D	01/18/22 10:58	KKW	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	2A18016	EPA 8260D	01/18/22 10:58	KKW	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	2A18016	EPA 8260D	01/18/22 10:58	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	2A18016	EPA 8260D	01/18/22 10:58	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	2A18016	EPA 8260D	01/18/22 10:58	KKW	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	2A18016	EPA 8260D	01/18/22 10:58	KKW	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	2A18016	EPA 8260D	01/18/22 10:58	KKW	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	2A18016	EPA 8260D	01/18/22 10:58	KKW	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	2A18016	EPA 8260D	01/18/22 10:58	KKW	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	2A18016	EPA 8260D	01/18/22 10:58	KKW	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	2A18016	EPA 8260D	01/18/22 10:58	KKW	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	2A18016	EPA 8260D	01/18/22 10:58	KKW	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	2A18016	EPA 8260D	01/18/22 10:58	KKW	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	2A18016	EPA 8260D	01/18/22 10:58	KKW	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	2A18016	EPA 8260D	01/18/22 10:58	KKW	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	2A18016	EPA 8260D	01/18/22 10:58	KKW	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	2A18016	EPA 8260D	01/18/22 10:58	KKW	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	2A18016	EPA 8260D	01/18/22 10:58	KKW	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	2A18016	EPA 8260D	01/18/22 10:58	KKW	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	2A18016	EPA 8260D	01/18/22 10:58	KKW	QV-01
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	2A18016	EPA 8260D	01/18/22 10:58	KKW	QV-01
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	2A18016	EPA 8260D	01/18/22 10:58	KKW	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	2A18016	EPA 8260D	01/18/22 10:58	KKW	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	2A18016	EPA 8260D	01/18/22 10:58	KKW	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	2A18016	EPA 8260D	01/18/22 10:58	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**9.3**		ug/L	1	0.53	2.5	2A18016	EPA 8260D	01/18/22 10:58	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	2A18016	EPA 8260D	01/18/22 10:58	KKW	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	2A18016	EPA 8260D	01/18/22 10:58	KKW	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	2A18016	EPA 8260D	01/18/22 10:58	KKW	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	2A18016	EPA 8260D	01/18/22 10:58	KKW	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	2A18016	EPA 8260D	01/18/22 10:58	KKW	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	2A18016	EPA 8260D	01/18/22 10:58	KKW	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	2A18016	EPA 8260D	01/18/22 10:58	KKW	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	2A18016	EPA 8260D	01/18/22 10:58	KKW	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	2A18016	EPA 8260D	01/18/22 10:58	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	2A18016	EPA 8260D	01/18/22 10:58	KKW	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	2A18016	EPA 8260D	01/18/22 10:58	KKW	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	2A18016	EPA 8260D	01/18/22 10:58	KKW	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	2A18016	EPA 8260D	01/18/22 10:58	KKW	
trans-1,2-Dichloroethene [156-60-5]^	**1.1**	I	ug/L	1	0.73	2.5	2A18016	EPA 8260D	01/18/22 10:58	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	2A18016	EPA 8260D	01/18/22 10:58	KKW	
Trichloroethene [79-01-6]^	**5.3**		ug/L	1	0.89	2.5	2A18016	EPA 8260D	01/18/22 10:58	KKW	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	2A18016	EPA 8260D	01/18/22 10:58	KKW	
Vinyl chloride [75-01-4]^	**0.94**	I	ug/L	1	0.71	2.5	2A18016	EPA 8260D	01/18/22 10:58	KKW	
Xylenes (Total) [1330-20-7]	1.3	U	ug/L	1	1.3	5.0	2A18016	EPA 8260D	01/18/22 10:58	KKW	

ANALYTICAL RESULTS

Description: LC34PS-PZH-080.0-20220117 **Lab Sample ID:** AE10221-17 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 08:38 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*53*	*1*	*50.0*	*106 %*	*41-142*	*2A18016*	*EPA 8260D*	*01/18/22 10:58*	*KKW*	
Dibromofluoromethane	*52*	*1*	*50.0*	*105 %*	*53-146*	*2A18016*	*EPA 8260D*	*01/18/22 10:58*	*KKW*	
Toluene-d8	*53*	*1*	*50.0*	*107 %*	*41-146*	*2A18016*	*EPA 8260D*	*01/18/22 10:58*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZK-040.0-20220117 **Lab Sample ID:** AE10221-18 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 09:00 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyc

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	800	U	ug/L	1000	800	2500	2A18016	EPA 8260D	01/18/22 16:02	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	540	U	ug/L	1000	540	2500	2A18016	EPA 8260D	01/18/22 16:02	KKW	
1,1,2-Trichloroethane [79-00-5]^	760	U	ug/L	1000	760	2500	2A18016	EPA 8260D	01/18/22 16:02	KKW	
1,1-Dichloroethane [75-34-3]^	620	U	ug/L	1000	620	2500	2A18016	EPA 8260D	01/18/22 16:02	KKW	
1,1-Dichloroethene [75-35-4]^	940	U	ug/L	1000	940	2500	2A18016	EPA 8260D	01/18/22 16:02	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	700	U	ug/L	1000	700	2500	2A18016	EPA 8260D	01/18/22 16:02	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	960	U	ug/L	1000	960	2500	2A18016	EPA 8260D	01/18/22 16:02	KKW	
1,2-Dibromoethane [106-93-4]^	780	U	ug/L	1000	780	2500	2A18016	EPA 8260D	01/18/22 16:02	KKW	
1,2-Dichlorobenzene [95-50-1]^	730	U	ug/L	1000	730	2500	2A18016	EPA 8260D	01/18/22 16:02	KKW	
1,2-Dichloroethane [107-06-2]^	630	U	ug/L	1000	630	2500	2A18016	EPA 8260D	01/18/22 16:02	KKW	
1,2-Dichloropropane [78-87-5]^	800	U	ug/L	1000	800	2500	2A18016	EPA 8260D	01/18/22 16:02	KKW	
1,3-Dichlorobenzene [541-73-1]^	770	U	ug/L	1000	770	2500	2A18016	EPA 8260D	01/18/22 16:02	KKW	
1,4-Dichlorobenzene [106-46-7]^	760	U	ug/L	1000	760	2500	2A18016	EPA 8260D	01/18/22 16:02	KKW	
2-Butanone [78-93-3]^	4500	U	ug/L	1000	4500	12000	2A18016	EPA 8260D	01/18/22 16:02	KKW	
2-Hexanone [591-78-6]^	2500	U	ug/L	1000	2500	12000	2A18016	EPA 8260D	01/18/22 16:02	KKW	
4-Methyl-2-pentanone [108-10-1]^	2500	U	ug/L	1000	2500	12000	2A18016	EPA 8260D	01/18/22 16:02	KKW	
Acetone [67-64-1]^	10000	U	ug/L	1000	10000	25000	2A18016	EPA 8260D	01/18/22 16:02	KKW	
Benzene [71-43-2]^	710	U	ug/L	1000	710	2500	2A18016	EPA 8260D	01/18/22 16:02	KKW	
Bromodichloromethane [75-27-4]^	520	U	ug/L	1000	520	2500	2A18016	EPA 8260D	01/18/22 16:02	KKW	
Bromoform [75-25-2]^	750	U	ug/L	1000	750	2500	2A18016	EPA 8260D	01/18/22 16:02	KKW	
Bromomethane [74-83-9]^	950	U	ug/L	1000	950	2500	2A18016	EPA 8260D	01/18/22 16:02	KKW	QV-01
Carbon disulfide [75-15-0]^	2500	U	ug/L	1000	2500	12000	2A18016	EPA 8260D	01/18/22 16:02	KKW	QV-01
Carbon Tetrachloride [56-23-5]^	940	U	ug/L	1000	940	2500	2A18016	EPA 8260D	01/18/22 16:02	KKW	QV-01
Chlorobenzene [108-90-7]^	720	U	ug/L	1000	720	2500	2A18016	EPA 8260D	01/18/22 16:02	KKW	
Chloroethane [75-00-3]^	980	U	ug/L	1000	980	2500	2A18016	EPA 8260D	01/18/22 16:02	KKW	
Chloroform [67-66-3]^	800	U	ug/L	1000	800	2500	2A18016	EPA 8260D	01/18/22 16:02	KKW	
Chloromethane [74-87-3]^	820	U	ug/L	1000	820	2500	2A18016	EPA 8260D	01/18/22 16:02	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**18000**		ug/L	1000	530	2500	2A18016	EPA 8260D	01/18/22 16:02	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	590	U	ug/L	1000	590	2500	2A18016	EPA 8260D	01/18/22 16:02	KKW	
Cyclohexane [110-82-7]^	930	U	ug/L	1000	930	2500	2A18016	EPA 8260D	01/18/22 16:02	KKW	
Dibromochloromethane [124-48-1]^	500	U	ug/L	1000	500	2500	2A18016	EPA 8260D	01/18/22 16:02	KKW	
Dichlorodifluoromethane [75-71-8]^	740	U	ug/L	1000	740	2500	2A18016	EPA 8260D	01/18/22 16:02	KKW	
Ethylbenzene [100-41-4]^	690	U	ug/L	1000	690	2500	2A18016	EPA 8260D	01/18/22 16:02	KKW	
Freon 113 [76-13-1]^	730	U	ug/L	1000	730	2500	2A18016	EPA 8260D	01/18/22 16:02	KKW	
Isopropylbenzene [98-82-8]^	670	U	ug/L	1000	670	2500	2A18016	EPA 8260D	01/18/22 16:02	KKW	
Methyl acetate [79-20-9]^	950	U	ug/L	1000	950	2500	2A18016	EPA 8260D	01/18/22 16:02	KKW	
Methylene Chloride [75-09-2]^	2500	U	ug/L	1000	2500	12000	2A18016	EPA 8260D	01/18/22 16:02	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	600	U	ug/L	1000	600	2500	2A18016	EPA 8260D	01/18/22 16:02	KKW	
Styrene [100-42-5]^	610	U	ug/L	1000	610	2500	2A18016	EPA 8260D	01/18/22 16:02	KKW	
Tetrachloroethene [127-18-4]^	760	U	ug/L	1000	760	2500	2A18016	EPA 8260D	01/18/22 16:02	KKW	
Toluene [108-88-3]^	720	U	ug/L	1000	720	2500	2A18016	EPA 8260D	01/18/22 16:02	KKW	
trans-1,2-Dichloroethene [156-60-5]^	730	U	ug/L	1000	730	2500	2A18016	EPA 8260D	01/18/22 16:02	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	730	U	ug/L	1000	730	2500	2A18016	EPA 8260D	01/18/22 16:02	KKW	
Trichloroethene [79-01-6]^	**98000**		ug/L	2500	2200	6200	2A19017	EPA 8260D	01/19/22 13:00	KKW	
Trichlorofluoromethane [75-69-4]^	940	U	ug/L	1000	940	2500	2A18016	EPA 8260D	01/18/22 16:02	KKW	
Vinyl chloride [75-01-4]^	710	U	ug/L	1000	710	2500	2A18016	EPA 8260D	01/18/22 16:02	KKW	
Xylenes (Total) [1330-20-7]	1300	U	ug/L	1000	1300	5000	2A18016	EPA 8260D	01/18/22 16:02	KKW	

ANALYTICAL RESULTS

Description: LC34PS-PZK-040.0-20220117 | **Lab Sample ID:** AE10221-18 | **Received:** 01/17/22 15:30

Matrix: Ground Water | **Sampled:** 01/17/22 09:00 | **Work Order:** AE10221

Project: NASA KSC LC34 | **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*54*	*1*	*50.0*	*108 %*	*41-142*	*2A18016*	*EPA 8260D*	*01/18/22 16:02*	*KKW*	
4-Bromofluorobenzene	*54*	*1*	*50.0*	*107 %*	*41-142*	*2A19017*	*EPA 8260D*	*01/19/22 13:00*	*KKW*	
Dibromofluoromethane	*53*	*1*	*50.0*	*105 %*	*53-146*	*2A18016*	*EPA 8260D*	*01/18/22 16:02*	*KKW*	
Dibromofluoromethane	*50*	*1*	*50.0*	*99 %*	*53-146*	*2A19017*	*EPA 8260D*	*01/19/22 13:00*	*KKW*	
Toluene-d8	*53*	*1*	*50.0*	*106 %*	*41-146*	*2A18016*	*EPA 8260D*	*01/18/22 16:02*	*KKW*	
Toluene-d8	*53*	*1*	*50.0*	*105 %*	*41-146*	*2A19017*	*EPA 8260D*	*01/19/22 13:00*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZK-050.0-20220117 **Lab Sample ID:** AE10221-19 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 09:02 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	4000	U	ug/L	5000	4000	12000	2A18016	EPA 8260D	01/18/22 16:30	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	2700	U	ug/L	5000	2700	12000	2A18016	EPA 8260D	01/18/22 16:30	KKW	
1,1,2-Trichloroethane [79-00-5]^	3800	U	ug/L	5000	3800	12000	2A18016	EPA 8260D	01/18/22 16:30	KKW	
1,1-Dichloroethane [75-34-3]^	3100	U	ug/L	5000	3100	12000	2A18016	EPA 8260D	01/18/22 16:30	KKW	
1,1-Dichloroethene [75-35-4]^	4700	U	ug/L	5000	4700	12000	2A18016	EPA 8260D	01/18/22 16:30	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	3500	U	ug/L	5000	3500	12000	2A18016	EPA 8260D	01/18/22 16:30	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	4800	U	ug/L	5000	4800	12000	2A18016	EPA 8260D	01/18/22 16:30	KKW	
1,2-Dibromoethane [106-93-4]^	3900	U	ug/L	5000	3900	12000	2A18016	EPA 8260D	01/18/22 16:30	KKW	
1,2-Dichlorobenzene [95-50-1]^	3600	U	ug/L	5000	3600	12000	2A18016	EPA 8260D	01/18/22 16:30	KKW	
1,2-Dichloroethane [107-06-2]^	3200	U	ug/L	5000	3200	12000	2A18016	EPA 8260D	01/18/22 16:30	KKW	
1,2-Dichloropropane [78-87-5]^	4000	U	ug/L	5000	4000	12000	2A18016	EPA 8260D	01/18/22 16:30	KKW	
1,3-Dichlorobenzene [541-73-1]^	3800	U	ug/L	5000	3800	12000	2A18016	EPA 8260D	01/18/22 16:30	KKW	
1,4-Dichlorobenzene [106-46-7]^	3800	U	ug/L	5000	3800	12000	2A18016	EPA 8260D	01/18/22 16:30	KKW	
2-Butanone [78-93-3]^	22000	U	ug/L	5000	22000	62000	2A18016	EPA 8260D	01/18/22 16:30	KKW	
2-Hexanone [591-78-6]^	12000	U	ug/L	5000	12000	62000	2A18016	EPA 8260D	01/18/22 16:30	KKW	
4-Methyl-2-pentanone [108-10-1]^	12000	U	ug/L	5000	12000	62000	2A18016	EPA 8260D	01/18/22 16:30	KKW	
Acetone [67-64-1]^	50000	U	ug/L	5000	50000	120000	2A18016	EPA 8260D	01/18/22 16:30	KKW	
Benzene [71-43-2]^	3600	U	ug/L	5000	3600	12000	2A18016	EPA 8260D	01/18/22 16:30	KKW	
Bromodichloromethane [75-27-4]^	2600	U	ug/L	5000	2600	12000	2A18016	EPA 8260D	01/18/22 16:30	KKW	
Bromoform [75-25-2]^	3800	U	ug/L	5000	3800	12000	2A18016	EPA 8260D	01/18/22 16:30	KKW	
Bromomethane [74-83-9]^	4800	U	ug/L	5000	4800	12000	2A18016	EPA 8260D	01/18/22 16:30	KKW	QV-01
Carbon disulfide [75-15-0]^	12000	U	ug/L	5000	12000	62000	2A18016	EPA 8260D	01/18/22 16:30	KKW	QV-01
Carbon Tetrachloride [56-23-5]^	4700	U	ug/L	5000	4700	12000	2A18016	EPA 8260D	01/18/22 16:30	KKW	QV-01
Chlorobenzene [108-90-7]^	3600	U	ug/L	5000	3600	12000	2A18016	EPA 8260D	01/18/22 16:30	KKW	
Chloroethane [75-00-3]^	4900	U	ug/L	5000	4900	12000	2A18016	EPA 8260D	01/18/22 16:30	KKW	
Chloroform [67-66-3]^	4000	U	ug/L	5000	4000	12000	2A18016	EPA 8260D	01/18/22 16:30	KKW	
Chloromethane [74-87-3]^	4100	U	ug/L	5000	4100	12000	2A18016	EPA 8260D	01/18/22 16:30	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**12000**		ug/L	5000	2600	12000	2A18016	EPA 8260D	01/18/22 16:30	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	3000	U	ug/L	5000	3000	12000	2A18016	EPA 8260D	01/18/22 16:30	KKW	
Cyclohexane [110-82-7]^	4600	U	ug/L	5000	4600	12000	2A18016	EPA 8260D	01/18/22 16:30	KKW	
Dibromochloromethane [124-48-1]^	2500	U	ug/L	5000	2500	12000	2A18016	EPA 8260D	01/18/22 16:30	KKW	
Dichlorodifluoromethane [75-71-8]^	3700	U	ug/L	5000	3700	12000	2A18016	EPA 8260D	01/18/22 16:30	KKW	
Ethylbenzene [100-41-4]^	3400	U	ug/L	5000	3400	12000	2A18016	EPA 8260D	01/18/22 16:30	KKW	
Freon 113 [76-13-1]^	3600	U	ug/L	5000	3600	12000	2A18016	EPA 8260D	01/18/22 16:30	KKW	
Isopropylbenzene [98-82-8]^	3400	U	ug/L	5000	3400	12000	2A18016	EPA 8260D	01/18/22 16:30	KKW	
Methyl acetate [79-20-9]^	4800	U	ug/L	5000	4800	12000	2A18016	EPA 8260D	01/18/22 16:30	KKW	
Methylene Chloride [75-09-2]^	12000	U	ug/L	5000	12000	62000	2A18016	EPA 8260D	01/18/22 16:30	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	3000	U	ug/L	5000	3000	12000	2A18016	EPA 8260D	01/18/22 16:30	KKW	
Styrene [100-42-5]^	3000	U	ug/L	5000	3000	12000	2A18016	EPA 8260D	01/18/22 16:30	KKW	
Tetrachloroethene [127-18-4]^	3800	U	ug/L	5000	3800	12000	2A18016	EPA 8260D	01/18/22 16:30	KKW	
Toluene [108-88-3]^	3600	U	ug/L	5000	3600	12000	2A18016	EPA 8260D	01/18/22 16:30	KKW	
trans-1,2-Dichloroethene [156-60-5]^	3600	U	ug/L	5000	3600	12000	2A18016	EPA 8260D	01/18/22 16:30	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	3600	U	ug/L	5000	3600	12000	2A18016	EPA 8260D	01/18/22 16:30	KKW	
Trichloroethene [79-01-6]^	**330000**		ug/L	5000	4400	12000	2A18016	EPA 8260D	01/18/22 16:30	KKW	
Trichlorofluoromethane [75-69-4]^	4700	U	ug/L	5000	4700	12000	2A18016	EPA 8260D	01/18/22 16:30	KKW	
Vinyl chloride [75-01-4]^	3600	U	ug/L	5000	3600	12000	2A18016	EPA 8260D	01/18/22 16:30	KKW	
Xylenes (Total) [1330-20-7]	6500	U	ug/L	5000	6500	25000	2A18016	EPA 8260D	01/18/22 16:30	KKW	

ANALYTICAL RESULTS

Description: LC34PS-PZK-050.0-20220117 | **Lab Sample ID:** AE10221-19 | **Received:** 01/17/22 15:30

Matrix: Ground Water | **Sampled:** 01/17/22 09:02 | **Work Order:** AE10221

Project: NASA KSC LC34 | **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*55*	*1*	*50.0*	*110 %*	*41-142*	*2A18016*	*EPA 8260D*	*01/18/22 16:30*	*KKW*	
Dibromofluoromethane	*53*	*1*	*50.0*	*107 %*	*53-146*	*2A18016*	*EPA 8260D*	*01/18/22 16:30*	*KKW*	
Toluene-d8	*53*	*1*	*50.0*	*107 %*	*41-146*	*2A18016*	*EPA 8260D*	*01/18/22 16:30*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZK-058.0-20220117 **Lab Sample ID:** AE10221-20 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 09:04 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	8000	U	ug/L	10000	8000	25000	2A18016	EPA 8260D	01/18/22 16:58	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	5400	U	ug/L	10000	5400	25000	2A18016	EPA 8260D	01/18/22 16:58	KKW	
1,1,2-Trichloroethane [79-00-5]^	7600	U	ug/L	10000	7600	25000	2A18016	EPA 8260D	01/18/22 16:58	KKW	
1,1-Dichloroethane [75-34-3]^	6200	U	ug/L	10000	6200	25000	2A18016	EPA 8260D	01/18/22 16:58	KKW	
1,1-Dichloroethene [75-35-4]^	9400	U	ug/L	10000	9400	25000	2A18016	EPA 8260D	01/18/22 16:58	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	7000	U	ug/L	10000	7000	25000	2A18016	EPA 8260D	01/18/22 16:58	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	9600	U	ug/L	10000	9600	25000	2A18016	EPA 8260D	01/18/22 16:58	KKW	
1,2-Dibromoethane [106-93-4]^	7800	U	ug/L	10000	7800	25000	2A18016	EPA 8260D	01/18/22 16:58	KKW	
1,2-Dichlorobenzene [95-50-1]^	7300	U	ug/L	10000	7300	25000	2A18016	EPA 8260D	01/18/22 16:58	KKW	
1,2-Dichloroethane [107-06-2]^	6300	U	ug/L	10000	6300	25000	2A18016	EPA 8260D	01/18/22 16:58	KKW	
1,2-Dichloropropane [78-87-5]^	8000	U	ug/L	10000	8000	25000	2A18016	EPA 8260D	01/18/22 16:58	KKW	
1,3-Dichlorobenzene [541-73-1]^	7700	U	ug/L	10000	7700	25000	2A18016	EPA 8260D	01/18/22 16:58	KKW	
1,4-Dichlorobenzene [106-46-7]^	7600	U	ug/L	10000	7600	25000	2A18016	EPA 8260D	01/18/22 16:58	KKW	
2-Butanone [78-93-3]^	45000	U	ug/L	10000	45000	120000	2A18016	EPA 8260D	01/18/22 16:58	KKW	
2-Hexanone [591-78-6]^	25000	U	ug/L	10000	25000	120000	2A18016	EPA 8260D	01/18/22 16:58	KKW	
4-Methyl-2-pentanone [108-10-1]^	25000	U	ug/L	10000	25000	120000	2A18016	EPA 8260D	01/18/22 16:58	KKW	
Acetone [67-64-1]^	100000	U	ug/L	10000	100000	250000	2A18016	EPA 8260D	01/18/22 16:58	KKW	
Benzene [71-43-2]^	7100	U	ug/L	10000	7100	25000	2A18016	EPA 8260D	01/18/22 16:58	KKW	
Bromodichloromethane [75-27-4]^	5200	U	ug/L	10000	5200	25000	2A18016	EPA 8260D	01/18/22 16:58	KKW	
Bromoform [75-25-2]^	7500	U	ug/L	10000	7500	25000	2A18016	EPA 8260D	01/18/22 16:58	KKW	
Bromomethane [74-83-9]^	9500	U	ug/L	10000	9500	25000	2A18016	EPA 8260D	01/18/22 16:58	KKW	QV-01
Carbon disulfide [75-15-0]^	25000	U	ug/L	10000	25000	120000	2A18016	EPA 8260D	01/18/22 16:58	KKW	QV-01
Carbon Tetrachloride [56-23-5]^	9400	U	ug/L	10000	9400	25000	2A18016	EPA 8260D	01/18/22 16:58	KKW	QV-01
Chlorobenzene [108-90-7]^	7200	U	ug/L	10000	7200	25000	2A18016	EPA 8260D	01/18/22 16:58	KKW	
Chloroethane [75-00-3]^	9800	U	ug/L	10000	9800	25000	2A18016	EPA 8260D	01/18/22 16:58	KKW	
Chloroform [67-66-3]^	8000	U	ug/L	10000	8000	25000	2A18016	EPA 8260D	01/18/22 16:58	KKW	
Chloromethane [74-87-3]^	8200	U	ug/L	10000	8200	25000	2A18016	EPA 8260D	01/18/22 16:58	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**14000**	I	ug/L	10000	5300	25000	2A18016	EPA 8260D	01/18/22 16:58	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	5900	U	ug/L	10000	5900	25000	2A18016	EPA 8260D	01/18/22 16:58	KKW	
Cyclohexane [110-82-7]^	9300	U	ug/L	10000	9300	25000	2A18016	EPA 8260D	01/18/22 16:58	KKW	
Dibromochloromethane [124-48-1]^	5000	U	ug/L	10000	5000	25000	2A18016	EPA 8260D	01/18/22 16:58	KKW	
Dichlorodifluoromethane [75-71-8]^	7400	U	ug/L	10000	7400	25000	2A18016	EPA 8260D	01/18/22 16:58	KKW	
Ethylbenzene [100-41-4]^	6900	U	ug/L	10000	6900	25000	2A18016	EPA 8260D	01/18/22 16:58	KKW	
Freon 113 [76-13-1]^	7300	U	ug/L	10000	7300	25000	2A18016	EPA 8260D	01/18/22 16:58	KKW	
Isopropylbenzene [98-82-8]^	6700	U	ug/L	10000	6700	25000	2A18016	EPA 8260D	01/18/22 16:58	KKW	
Methyl acetate [79-20-9]^	9500	U	ug/L	10000	9500	25000	2A18016	EPA 8260D	01/18/22 16:58	KKW	
Methylene Chloride [75-09-2]^	25000	U	ug/L	10000	25000	120000	2A18016	EPA 8260D	01/18/22 16:58	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	6000	U	ug/L	10000	6000	25000	2A18016	EPA 8260D	01/18/22 16:58	KKW	
Styrene [100-42-5]^	6100	U	ug/L	10000	6100	25000	2A18016	EPA 8260D	01/18/22 16:58	KKW	
Tetrachloroethene [127-18-4]^	7600	U	ug/L	10000	7600	25000	2A18016	EPA 8260D	01/18/22 16:58	KKW	
Toluene [108-88-3]^	7200	U	ug/L	10000	7200	25000	2A18016	EPA 8260D	01/18/22 16:58	KKW	
trans-1,2-Dichloroethene [156-60-5]^	7300	U	ug/L	10000	7300	25000	2A18016	EPA 8260D	01/18/22 16:58	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	7300	U	ug/L	10000	7300	25000	2A18016	EPA 8260D	01/18/22 16:58	KKW	
Trichloroethene [79-01-6]^	**320000**		ug/L	10000	8900	25000	2A18016	EPA 8260D	01/18/22 16:58	KKW	
Trichlorofluoromethane [75-69-4]^	9400	U	ug/L	10000	9400	25000	2A18016	EPA 8260D	01/18/22 16:58	KKW	
Vinyl chloride [75-01-4]^	7100	U	ug/L	10000	7100	25000	2A18016	EPA 8260D	01/18/22 16:58	KKW	
Xylenes (Total) [1330-20-7]	13000	U	ug/L	10000	13000	50000	2A18016	EPA 8260D	01/18/22 16:58	KKW	

ANALYTICAL RESULTS

Description: LC34PS-PZK-058.0-20220117 | **Lab Sample ID:** AE10221-20 | **Received:** 01/17/22 15:30

Matrix: Ground Water | **Sampled:** 01/17/22 09:04 | **Work Order:** AE10221

Project: NASA KSC LC34 | **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*53*	*1*	*50.0*	*105 %*	*41-142*	*2A18016*	*EPA 8260D*	*01/18/22 16:58*	*KKW*	
Dibromofluoromethane	*51*	*1*	*50.0*	*103 %*	*53-146*	*2A18016*	*EPA 8260D*	*01/18/22 16:58*	*KKW*	
Toluene-d8	*52*	*1*	*50.0*	*105 %*	*41-146*	*2A18016*	*EPA 8260D*	*01/18/22 16:58*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZK-073.0-20220117 **Lab Sample ID:** AE10221-21 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 09:06 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	1.6	U	ug/L	2	1.6	5.0	2A19017	EPA 8260D	01/19/22 14:23	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	1.1	U	ug/L	2	1.1	5.0	2A19017	EPA 8260D	01/19/22 14:23	KKW	
1,1,2-Trichloroethane [79-00-5]^	1.5	U	ug/L	2	1.5	5.0	2A19017	EPA 8260D	01/19/22 14:23	KKW	
1,1-Dichloroethane [75-34-3]^	1.2	U	ug/L	2	1.2	5.0	2A19017	EPA 8260D	01/19/22 14:23	KKW	
1,1-Dichloroethene [75-35-4]^	1.9	U	ug/L	2	1.9	5.0	2A19017	EPA 8260D	01/19/22 14:23	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	1.4	U	ug/L	2	1.4	5.0	2A19017	EPA 8260D	01/19/22 14:23	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	1.9	U	ug/L	2	1.9	5.0	2A19017	EPA 8260D	01/19/22 14:23	KKW	
1,2-Dibromoethane [106-93-4]^	1.6	U	ug/L	2	1.6	5.0	2A19017	EPA 8260D	01/19/22 14:23	KKW	
1,2-Dichlorobenzene [95-50-1]^	1.5	U	ug/L	2	1.5	5.0	2A19017	EPA 8260D	01/19/22 14:23	KKW	
1,2-Dichloroethane [107-06-2]^	1.3	U	ug/L	2	1.3	5.0	2A19017	EPA 8260D	01/19/22 14:23	KKW	
1,2-Dichloropropane [78-87-5]^	1.6	U	ug/L	2	1.6	5.0	2A19017	EPA 8260D	01/19/22 14:23	KKW	
1,3-Dichlorobenzene [541-73-1]^	1.5	U	ug/L	2	1.5	5.0	2A19017	EPA 8260D	01/19/22 14:23	KKW	
1,4-Dichlorobenzene [106-46-7]^	1.5	U	ug/L	2	1.5	5.0	2A19017	EPA 8260D	01/19/22 14:23	KKW	
2-Butanone [78-93-3]^	9.0	U	ug/L	2	9.0	25	2A19017	EPA 8260D	01/19/22 14:23	KKW	
2-Hexanone [591-78-6]^	5.0	U	ug/L	2	5.0	25	2A19017	EPA 8260D	01/19/22 14:23	KKW	
4-Methyl-2-pentanone [108-10-1]^	5.0	U	ug/L	2	5.0	25	2A19017	EPA 8260D	01/19/22 14:23	KKW	
Acetone [67-64-1]^	20	U	ug/L	2	20	50	2A19017	EPA 8260D	01/19/22 14:23	KKW	
Benzene [71-43-2]^	1.4	U	ug/L	2	1.4	5.0	2A19017	EPA 8260D	01/19/22 14:23	KKW	
Bromodichloromethane [75-27-4]^	1.0	U	ug/L	2	1.0	5.0	2A19017	EPA 8260D	01/19/22 14:23	KKW	
Bromoform [75-25-2]^	1.5	U	ug/L	2	1.5	5.0	2A19017	EPA 8260D	01/19/22 14:23	KKW	
Bromomethane [74-83-9]^	1.9	U	ug/L	2	1.9	5.0	2A19017	EPA 8260D	01/19/22 14:23	KKW	QV-01
Carbon disulfide [75-15-0]^	5.0	U	ug/L	2	5.0	25	2A19017	EPA 8260D	01/19/22 14:23	KKW	
Carbon Tetrachloride [56-23-5]^	1.9	U	ug/L	2	1.9	5.0	2A19017	EPA 8260D	01/19/22 14:23	KKW	QL-02, QV-01
Chlorobenzene [108-90-7]^	1.4	U	ug/L	2	1.4	5.0	2A19017	EPA 8260D	01/19/22 14:23	KKW	
Chloroethane [75-00-3]^	2.0	U	ug/L	2	2.0	5.0	2A19017	EPA 8260D	01/19/22 14:23	KKW	
Chloroform [67-66-3]^	1.6	U	ug/L	2	1.6	5.0	2A19017	EPA 8260D	01/19/22 14:23	KKW	
Chloromethane [74-87-3]^	1.6	U	ug/L	2	1.6	5.0	2A19017	EPA 8260D	01/19/22 14:23	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**22**		ug/L	2	1.1	5.0	2A19017	EPA 8260D	01/19/22 14:23	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	1.2	U	ug/L	2	1.2	5.0	2A19017	EPA 8260D	01/19/22 14:23	KKW	
Cyclohexane [110-82-7]^	1.9	U	ug/L	2	1.9	5.0	2A19017	EPA 8260D	01/19/22 14:23	KKW	
Dibromochloromethane [124-48-1]^	1.0	U	ug/L	2	1.0	5.0	2A19017	EPA 8260D	01/19/22 14:23	KKW	
Dichlorodifluoromethane [75-71-8]^	1.5	U	ug/L	2	1.5	5.0	2A19017	EPA 8260D	01/19/22 14:23	KKW	
Ethylbenzene [100-41-4]^	1.4	U	ug/L	2	1.4	5.0	2A19017	EPA 8260D	01/19/22 14:23	KKW	
Freon 113 [76-13-1]^	1.5	U	ug/L	2	1.5	5.0	2A19017	EPA 8260D	01/19/22 14:23	KKW	
Isopropylbenzene [98-82-8]^	1.3	U	ug/L	2	1.3	5.0	2A19017	EPA 8260D	01/19/22 14:23	KKW	
Methyl acetate [79-20-9]^	1.9	U	ug/L	2	1.9	5.0	2A19017	EPA 8260D	01/19/22 14:23	KKW	
Methylene Chloride [75-09-2]^	5.0	U	ug/L	2	5.0	25	2A19017	EPA 8260D	01/19/22 14:23	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	1.2	U	ug/L	2	1.2	5.0	2A19017	EPA 8260D	01/19/22 14:23	KKW	
Styrene [100-42-5]^	1.2	U	ug/L	2	1.2	5.0	2A19017	EPA 8260D	01/19/22 14:23	KKW	
Tetrachloroethene [127-18-4]^	1.5	U	ug/L	2	1.5	5.0	2A19017	EPA 8260D	01/19/22 14:23	KKW	
Toluene [108-88-3]^	1.4	U	ug/L	2	1.4	5.0	2A19017	EPA 8260D	01/19/22 14:23	KKW	
trans-1,2-Dichloroethene [156-60-5]^	1.5	U	ug/L	2	1.5	5.0	2A19017	EPA 8260D	01/19/22 14:23	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	1.5	U	ug/L	2	1.5	5.0	2A19017	EPA 8260D	01/19/22 14:23	KKW	
Trichloroethene [79-01-6]^	**140**		ug/L	2	1.8	5.0	2A19017	EPA 8260D	01/19/22 14:23	KKW	
Trichlorofluoromethane [75-69-4]^	1.9	U	ug/L	2	1.9	5.0	2A19017	EPA 8260D	01/19/22 14:23	KKW	
Vinyl chloride [75-01-4]^	**2.8**	I	ug/L	2	1.4	5.0	2A19017	EPA 8260D	01/19/22 14:23	KKW	

ANALYTICAL RESULTS

Description: LC34PS-PZK-073.0-20220117 **Lab Sample ID:** AE10221-21 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 09:06 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Xylenes (Total) [1330-20-7]	2.6	U	ug/L	2	2.6	10	2A19017	EPA 8260D	01/19/22 14:23	KKW	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*52*	*1*	*50.0*	*104 %*	*41-142*	*2A19017*	*EPA 8260D*	*01/19/22 14:23*	*KKW*	
Dibromofluoromethane	*50*	*1*	*50.0*	*101 %*	*53-146*	*2A19017*	*EPA 8260D*	*01/19/22 14:23*	*KKW*	
Toluene-d8	*53*	*1*	*50.0*	*107 %*	*41-146*	*2A19017*	*EPA 8260D*	*01/19/22 14:23*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZK-080.0-20220117 **Lab Sample ID:** AE10221-22 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 09:08 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	1.6	U	ug/L	2	1.6	5.0	2A18016	EPA 8260D	01/18/22 17:53	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	1.1	U	ug/L	2	1.1	5.0	2A18016	EPA 8260D	01/18/22 17:53	KKW	
1,1,2-Trichloroethane [79-00-5]^	1.5	U	ug/L	2	1.5	5.0	2A18016	EPA 8260D	01/18/22 17:53	KKW	
1,1-Dichloroethane [75-34-3]^	1.2	U	ug/L	2	1.2	5.0	2A18016	EPA 8260D	01/18/22 17:53	KKW	
1,1-Dichloroethene [75-35-4]^	1.9	U	ug/L	2	1.9	5.0	2A18016	EPA 8260D	01/18/22 17:53	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	1.4	U	ug/L	2	1.4	5.0	2A18016	EPA 8260D	01/18/22 17:53	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	1.9	U	ug/L	2	1.9	5.0	2A18016	EPA 8260D	01/18/22 17:53	KKW	
1,2-Dibromoethane [106-93-4]^	1.6	U	ug/L	2	1.6	5.0	2A18016	EPA 8260D	01/18/22 17:53	KKW	
1,2-Dichlorobenzene [95-50-1]^	1.5	U	ug/L	2	1.5	5.0	2A18016	EPA 8260D	01/18/22 17:53	KKW	
1,2-Dichloroethane [107-06-2]^	1.3	U	ug/L	2	1.3	5.0	2A18016	EPA 8260D	01/18/22 17:53	KKW	
1,2-Dichloropropane [78-87-5]^	1.6	U	ug/L	2	1.6	5.0	2A18016	EPA 8260D	01/18/22 17:53	KKW	
1,3-Dichlorobenzene [541-73-1]^	1.5	U	ug/L	2	1.5	5.0	2A18016	EPA 8260D	01/18/22 17:53	KKW	
1,4-Dichlorobenzene [106-46-7]^	1.5	U	ug/L	2	1.5	5.0	2A18016	EPA 8260D	01/18/22 17:53	KKW	
2-Butanone [78-93-3]^	9.0	U	ug/L	2	9.0	25	2A18016	EPA 8260D	01/18/22 17:53	KKW	
2-Hexanone [591-78-6]^	5.0	U	ug/L	2	5.0	25	2A18016	EPA 8260D	01/18/22 17:53	KKW	
4-Methyl-2-pentanone [108-10-1]^	5.0	U	ug/L	2	5.0	25	2A18016	EPA 8260D	01/18/22 17:53	KKW	
Acetone [67-64-1]^	20	U	ug/L	2	20	50	2A18016	EPA 8260D	01/18/22 17:53	KKW	
Benzene [71-43-2]^	1.4	U	ug/L	2	1.4	5.0	2A18016	EPA 8260D	01/18/22 17:53	KKW	
Bromodichloromethane [75-27-4]^	1.0	U	ug/L	2	1.0	5.0	2A18016	EPA 8260D	01/18/22 17:53	KKW	
Bromoform [75-25-2]^	1.5	U	ug/L	2	1.5	5.0	2A18016	EPA 8260D	01/18/22 17:53	KKW	
Bromomethane [74-83-9]^	1.9	U	ug/L	2	1.9	5.0	2A18016	EPA 8260D	01/18/22 17:53	KKW	QV-01
Carbon disulfide [75-15-0]^	5.0	U	ug/L	2	5.0	25	2A18016	EPA 8260D	01/18/22 17:53	KKW	QV-01
Carbon Tetrachloride [56-23-5]^	1.9	U	ug/L	2	1.9	5.0	2A18016	EPA 8260D	01/18/22 17:53	KKW	QV-01
Chlorobenzene [108-90-7]^	1.4	U	ug/L	2	1.4	5.0	2A18016	EPA 8260D	01/18/22 17:53	KKW	
Chloroethane [75-00-3]^	2.0	U	ug/L	2	2.0	5.0	2A18016	EPA 8260D	01/18/22 17:53	KKW	
Chloroform [67-66-3]^	1.6	U	ug/L	2	1.6	5.0	2A18016	EPA 8260D	01/18/22 17:53	KKW	
Chloromethane [74-87-3]^	1.6	U	ug/L	2	1.6	5.0	2A18016	EPA 8260D	01/18/22 17:53	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**46**		ug/L	2	1.1	5.0	2A18016	EPA 8260D	01/18/22 17:53	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	1.2	U	ug/L	2	1.2	5.0	2A18016	EPA 8260D	01/18/22 17:53	KKW	
Cyclohexane [110-82-7]^	1.9	U	ug/L	2	1.9	5.0	2A18016	EPA 8260D	01/18/22 17:53	KKW	
Dibromochloromethane [124-48-1]^	1.0	U	ug/L	2	1.0	5.0	2A18016	EPA 8260D	01/18/22 17:53	KKW	
Dichlorodifluoromethane [75-71-8]^	1.5	U	ug/L	2	1.5	5.0	2A18016	EPA 8260D	01/18/22 17:53	KKW	
Ethylbenzene [100-41-4]^	1.4	U	ug/L	2	1.4	5.0	2A18016	EPA 8260D	01/18/22 17:53	KKW	
Freon 113 [76-13-1]^	1.5	U	ug/L	2	1.5	5.0	2A18016	EPA 8260D	01/18/22 17:53	KKW	
Isopropylbenzene [98-82-8]^	1.3	U	ug/L	2	1.3	5.0	2A18016	EPA 8260D	01/18/22 17:53	KKW	
Methyl acetate [79-20-9]^	1.9	U	ug/L	2	1.9	5.0	2A18016	EPA 8260D	01/18/22 17:53	KKW	
Methylene Chloride [75-09-2]^	5.0	U	ug/L	2	5.0	25	2A18016	EPA 8260D	01/18/22 17:53	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	1.2	U	ug/L	2	1.2	5.0	2A18016	EPA 8260D	01/18/22 17:53	KKW	
Styrene [100-42-5]^	1.2	U	ug/L	2	1.2	5.0	2A18016	EPA 8260D	01/18/22 17:53	KKW	
Tetrachloroethene [127-18-4]^	1.5	U	ug/L	2	1.5	5.0	2A18016	EPA 8260D	01/18/22 17:53	KKW	
Toluene [108-88-3]^	1.4	U	ug/L	2	1.4	5.0	2A18016	EPA 8260D	01/18/22 17:53	KKW	
trans-1,2-Dichloroethene [156-60-5]^	**7.5**		ug/L	2	1.5	5.0	2A18016	EPA 8260D	01/18/22 17:53	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	1.5	U	ug/L	2	1.5	5.0	2A18016	EPA 8260D	01/18/22 17:53	KKW	
Trichloroethene [79-01-6]^	**160**		ug/L	2	1.8	5.0	2A18016	EPA 8260D	01/18/22 17:53	KKW	
Trichlorofluoromethane [75-69-4]^	1.9	U	ug/L	2	1.9	5.0	2A18016	EPA 8260D	01/18/22 17:53	KKW	
Vinyl chloride [75-01-4]^	**17**		ug/L	2	1.4	5.0	2A18016	EPA 8260D	01/18/22 17:53	KKW	
Xylenes (Total) [1330-20-7]	2.6	U	ug/L	2	2.6	10	2A18016	EPA 8260D	01/18/22 17:53	KKW	

ANALYTICAL RESULTS

Description: LC34PS-PZK-080.0-20220117 | **Lab Sample ID:** AE10221-22 | **Received:** 01/17/22 15:30

Matrix: Ground Water | **Sampled:** 01/17/22 09:08 | **Work Order:** AE10221

Project: NASA KSC LC34 | **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*54*	*1*	*50.0*	*108 %*	*41-142*	*2A18016*	*EPA 8260D*	*01/18/22 17:53*	*KKW*	
Dibromofluoromethane	*52*	*1*	*50.0*	*103 %*	*53-146*	*2A18016*	*EPA 8260D*	*01/18/22 17:53*	*KKW*	
Toluene-d8	*53*	*1*	*50.0*	*107 %*	*41-146*	*2A18016*	*EPA 8260D*	*01/18/22 17:53*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZJ-040.0-20220117 **Lab Sample ID:** AE10221-23 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 09:30 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	400	U	ug/L	500	400	1200	2A18016	EPA 8260D	01/18/22 18:21	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	270	U	ug/L	500	270	1200	2A18016	EPA 8260D	01/18/22 18:21	KKW	
1,1,2-Trichloroethane [79-00-5]^	380	U	ug/L	500	380	1200	2A18016	EPA 8260D	01/18/22 18:21	KKW	
1,1-Dichloroethane [75-34-3]^	310	U	ug/L	500	310	1200	2A18016	EPA 8260D	01/18/22 18:21	KKW	
1,1-Dichloroethene [75-35-4]^	470	U	ug/L	500	470	1200	2A18016	EPA 8260D	01/18/22 18:21	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	350	U	ug/L	500	350	1200	2A18016	EPA 8260D	01/18/22 18:21	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	480	U	ug/L	500	480	1200	2A18016	EPA 8260D	01/18/22 18:21	KKW	
1,2-Dibromoethane [106-93-4]^	390	U	ug/L	500	390	1200	2A18016	EPA 8260D	01/18/22 18:21	KKW	
1,2-Dichlorobenzene [95-50-1]^	360	U	ug/L	500	360	1200	2A18016	EPA 8260D	01/18/22 18:21	KKW	
1,2-Dichloroethane [107-06-2]^	320	U	ug/L	500	320	1200	2A18016	EPA 8260D	01/18/22 18:21	KKW	
1,2-Dichloropropane [78-87-5]^	400	U	ug/L	500	400	1200	2A18016	EPA 8260D	01/18/22 18:21	KKW	
1,3-Dichlorobenzene [541-73-1]^	380	U	ug/L	500	380	1200	2A18016	EPA 8260D	01/18/22 18:21	KKW	
1,4-Dichlorobenzene [106-46-7]^	380	U	ug/L	500	380	1200	2A18016	EPA 8260D	01/18/22 18:21	KKW	
2-Butanone [78-93-3]^	2200	U	ug/L	500	2200	6200	2A18016	EPA 8260D	01/18/22 18:21	KKW	
2-Hexanone [591-78-6]^	1200	U	ug/L	500	1200	6200	2A18016	EPA 8260D	01/18/22 18:21	KKW	
4-Methyl-2-pentanone [108-10-1]^	1200	U	ug/L	500	1200	6200	2A18016	EPA 8260D	01/18/22 18:21	KKW	
Acetone [67-64-1]^	5000	U	ug/L	500	5000	12000	2A18016	EPA 8260D	01/18/22 18:21	KKW	
Benzene [71-43-2]^	360	U	ug/L	500	360	1200	2A18016	EPA 8260D	01/18/22 18:21	KKW	
Bromodichloromethane [75-27-4]^	260	U	ug/L	500	260	1200	2A18016	EPA 8260D	01/18/22 18:21	KKW	
Bromoform [75-25-2]^	380	U	ug/L	500	380	1200	2A18016	EPA 8260D	01/18/22 18:21	KKW	
Bromomethane [74-83-9]^	480	U	ug/L	500	480	1200	2A18016	EPA 8260D	01/18/22 18:21	KKW	QV-01
Carbon disulfide [75-15-0]^	1200	U	ug/L	500	1200	6200	2A18016	EPA 8260D	01/18/22 18:21	KKW	QV-01
Carbon Tetrachloride [56-23-5]^	470	U	ug/L	500	470	1200	2A18016	EPA 8260D	01/18/22 18:21	KKW	QV-01
Chlorobenzene [108-90-7]^	360	U	ug/L	500	360	1200	2A18016	EPA 8260D	01/18/22 18:21	KKW	
Chloroethane [75-00-3]^	490	U	ug/L	500	490	1200	2A18016	EPA 8260D	01/18/22 18:21	KKW	
Chloroform [67-66-3]^	400	U	ug/L	500	400	1200	2A18016	EPA 8260D	01/18/22 18:21	KKW	
Chloromethane [74-87-3]^	410	U	ug/L	500	410	1200	2A18016	EPA 8260D	01/18/22 18:21	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**42000**		ug/L	500	260	1200	2A18016	EPA 8260D	01/18/22 18:21	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	300	U	ug/L	500	300	1200	2A18016	EPA 8260D	01/18/22 18:21	KKW	
Cyclohexane [110-82-7]^	460	U	ug/L	500	460	1200	2A18016	EPA 8260D	01/18/22 18:21	KKW	
Dibromochloromethane [124-48-1]^	250	U	ug/L	500	250	1200	2A18016	EPA 8260D	01/18/22 18:21	KKW	
Dichlorodifluoromethane [75-71-8]^	370	U	ug/L	500	370	1200	2A18016	EPA 8260D	01/18/22 18:21	KKW	
Ethylbenzene [100-41-4]^	340	U	ug/L	500	340	1200	2A18016	EPA 8260D	01/18/22 18:21	KKW	
Freon 113 [76-13-1]^	360	U	ug/L	500	360	1200	2A18016	EPA 8260D	01/18/22 18:21	KKW	
Isopropylbenzene [98-82-8]^	340	U	ug/L	500	340	1200	2A18016	EPA 8260D	01/18/22 18:21	KKW	
Methyl acetate [79-20-9]^	480	U	ug/L	500	480	1200	2A18016	EPA 8260D	01/18/22 18:21	KKW	
Methylene Chloride [75-09-2]^	1200	U	ug/L	500	1200	6200	2A18016	EPA 8260D	01/18/22 18:21	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	300	U	ug/L	500	300	1200	2A18016	EPA 8260D	01/18/22 18:21	KKW	
Styrene [100-42-5]^	300	U	ug/L	500	300	1200	2A18016	EPA 8260D	01/18/22 18:21	KKW	
Tetrachloroethene [127-18-4]^	380	U	ug/L	500	380	1200	2A18016	EPA 8260D	01/18/22 18:21	KKW	
Toluene [108-88-3]^	360	U	ug/L	500	360	1200	2A18016	EPA 8260D	01/18/22 18:21	KKW	
trans-1,2-Dichloroethene [156-60-5]^	**1000**	I	ug/L	500	360	1200	2A18016	EPA 8260D	01/18/22 18:21	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	360	U	ug/L	500	360	1200	2A18016	EPA 8260D	01/18/22 18:21	KKW	
Trichloroethene [79-01-6]^	**65000**		ug/L	2500	2200	6200	2A19017	EPA 8260D	01/19/22 13:28	KKW	
Trichlorofluoromethane [75-69-4]^	470	U	ug/L	500	470	1200	2A18016	EPA 8260D	01/18/22 18:21	KKW	
Vinyl chloride [75-01-4]^	**2000**		ug/L	500	360	1200	2A18016	EPA 8260D	01/18/22 18:21	KKW	
Xylenes (Total) [1330-20-7]	650	U	ug/L	500	650	2500	2A18016	EPA 8260D	01/18/22 18:21	KKW	

ANALYTICAL RESULTS

Description: LC34PS-PZJ-040.0-20220117 | **Lab Sample ID:** AE10221-23 | **Received:** 01/17/22 15:30

Matrix: Ground Water | **Sampled:** 01/17/22 09:30 | **Work Order:** AE10221

Project: NASA KSC LC34 | **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*54*	*1*	*50.0*	*108 %*	*41-142*	*2A18016*	*EPA 8260D*	*01/18/22 18:21*	*KKW*	
4-Bromofluorobenzene	*53*	*1*	*50.0*	*107 %*	*41-142*	*2A19017*	*EPA 8260D*	*01/19/22 13:28*	*KKW*	
Dibromofluoromethane	*54*	*1*	*50.0*	*108 %*	*53-146*	*2A18016*	*EPA 8260D*	*01/18/22 18:21*	*KKW*	
Dibromofluoromethane	*51*	*1*	*50.0*	*101 %*	*53-146*	*2A19017*	*EPA 8260D*	*01/19/22 13:28*	*KKW*	
Toluene-d8	*54*	*1*	*50.0*	*108 %*	*41-146*	*2A18016*	*EPA 8260D*	*01/18/22 18:21*	*KKW*	
Toluene-d8	*52*	*1*	*50.0*	*105 %*	*41-146*	*2A19017*	*EPA 8260D*	*01/19/22 13:28*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZJ-050.0-20220117 **Lab Sample ID:** AE10221-24 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 09:32 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	2000	U	ug/L	2500	2000	6200	2A18016	EPA 8260D	01/18/22 18:48	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	1400	U	ug/L	2500	1400	6200	2A18016	EPA 8260D	01/18/22 18:48	KKW	
1,1,2-Trichloroethane [79-00-5]^	1900	U	ug/L	2500	1900	6200	2A18016	EPA 8260D	01/18/22 18:48	KKW	
1,1-Dichloroethane [75-34-3]^	1600	U	ug/L	2500	1600	6200	2A18016	EPA 8260D	01/18/22 18:48	KKW	
1,1-Dichloroethene [75-35-4]^	2400	U	ug/L	2500	2400	6200	2A18016	EPA 8260D	01/18/22 18:48	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	1800	U	ug/L	2500	1800	6200	2A18016	EPA 8260D	01/18/22 18:48	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	2400	U	ug/L	2500	2400	6200	2A18016	EPA 8260D	01/18/22 18:48	KKW	
1,2-Dibromoethane [106-93-4]^	2000	U	ug/L	2500	2000	6200	2A18016	EPA 8260D	01/18/22 18:48	KKW	
1,2-Dichlorobenzene [95-50-1]^	1800	U	ug/L	2500	1800	6200	2A18016	EPA 8260D	01/18/22 18:48	KKW	
1,2-Dichloroethane [107-06-2]^	1600	U	ug/L	2500	1600	6200	2A18016	EPA 8260D	01/18/22 18:48	KKW	
1,2-Dichloropropane [78-87-5]^	2000	U	ug/L	2500	2000	6200	2A18016	EPA 8260D	01/18/22 18:48	KKW	
1,3-Dichlorobenzene [541-73-1]^	1900	U	ug/L	2500	1900	6200	2A18016	EPA 8260D	01/18/22 18:48	KKW	
1,4-Dichlorobenzene [106-46-7]^	1900	U	ug/L	2500	1900	6200	2A18016	EPA 8260D	01/18/22 18:48	KKW	
2-Butanone [78-93-3]^	11000	U	ug/L	2500	11000	31000	2A18016	EPA 8260D	01/18/22 18:48	KKW	
2-Hexanone [591-78-6]^	6200	U	ug/L	2500	6200	31000	2A18016	EPA 8260D	01/18/22 18:48	KKW	
4-Methyl-2-pentanone [108-10-1]^	6200	U	ug/L	2500	6200	31000	2A18016	EPA 8260D	01/18/22 18:48	KKW	
Acetone [67-64-1]^	25000	U	ug/L	2500	25000	62000	2A18016	EPA 8260D	01/18/22 18:48	KKW	
Benzene [71-43-2]^	1800	U	ug/L	2500	1800	6200	2A18016	EPA 8260D	01/18/22 18:48	KKW	
Bromodichloromethane [75-27-4]^	1300	U	ug/L	2500	1300	6200	2A18016	EPA 8260D	01/18/22 18:48	KKW	
Bromoform [75-25-2]^	1900	U	ug/L	2500	1900	6200	2A18016	EPA 8260D	01/18/22 18:48	KKW	
Bromomethane [74-83-9]^	2400	U	ug/L	2500	2400	6200	2A18016	EPA 8260D	01/18/22 18:48	KKW	QV-01
Carbon disulfide [75-15-0]^	6200	U	ug/L	2500	6200	31000	2A18016	EPA 8260D	01/18/22 18:48	KKW	QV-01
Carbon Tetrachloride [56-23-5]^	2400	U	ug/L	2500	2400	6200	2A18016	EPA 8260D	01/18/22 18:48	KKW	QV-01
Chlorobenzene [108-90-7]^	1800	U	ug/L	2500	1800	6200	2A18016	EPA 8260D	01/18/22 18:48	KKW	
Chloroethane [75-00-3]^	2400	U	ug/L	2500	2400	6200	2A18016	EPA 8260D	01/18/22 18:48	KKW	
Chloroform [67-66-3]^	2000	U	ug/L	2500	2000	6200	2A18016	EPA 8260D	01/18/22 18:48	KKW	
Chloromethane [74-87-3]^	2000	U	ug/L	2500	2000	6200	2A18016	EPA 8260D	01/18/22 18:48	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**27000**		ug/L	2500	1300	6200	2A18016	EPA 8260D	01/18/22 18:48	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	1500	U	ug/L	2500	1500	6200	2A18016	EPA 8260D	01/18/22 18:48	KKW	
Cyclohexane [110-82-7]^	2300	U	ug/L	2500	2300	6200	2A18016	EPA 8260D	01/18/22 18:48	KKW	
Dibromochloromethane [124-48-1]^	1200	U	ug/L	2500	1200	6200	2A18016	EPA 8260D	01/18/22 18:48	KKW	
Dichlorodifluoromethane [75-71-8]^	1800	U	ug/L	2500	1800	6200	2A18016	EPA 8260D	01/18/22 18:48	KKW	
Ethylbenzene [100-41-4]^	1700	U	ug/L	2500	1700	6200	2A18016	EPA 8260D	01/18/22 18:48	KKW	
Freon 113 [76-13-1]^	1800	U	ug/L	2500	1800	6200	2A18016	EPA 8260D	01/18/22 18:48	KKW	
Isopropylbenzene [98-82-8]^	1700	U	ug/L	2500	1700	6200	2A18016	EPA 8260D	01/18/22 18:48	KKW	
Methyl acetate [79-20-9]^	2400	U	ug/L	2500	2400	6200	2A18016	EPA 8260D	01/18/22 18:48	KKW	
Methylene Chloride [75-09-2]^	6200	U	ug/L	2500	6200	31000	2A18016	EPA 8260D	01/18/22 18:48	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	1500	U	ug/L	2500	1500	6200	2A18016	EPA 8260D	01/18/22 18:48	KKW	
Styrene [100-42-5]^	1500	U	ug/L	2500	1500	6200	2A18016	EPA 8260D	01/18/22 18:48	KKW	
Tetrachloroethene [127-18-4]^	1900	U	ug/L	2500	1900	6200	2A18016	EPA 8260D	01/18/22 18:48	KKW	
Toluene [108-88-3]^	1800	U	ug/L	2500	1800	6200	2A18016	EPA 8260D	01/18/22 18:48	KKW	
trans-1,2-Dichloroethene [156-60-5]^	1800	U	ug/L	2500	1800	6200	2A18016	EPA 8260D	01/18/22 18:48	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	1800	U	ug/L	2500	1800	6200	2A18016	EPA 8260D	01/18/22 18:48	KKW	
Trichloroethene [79-01-6]^	**200000**		ug/L	2500	2200	6200	2A18016	EPA 8260D	01/18/22 18:48	KKW	
Trichlorofluoromethane [75-69-4]^	2400	U	ug/L	2500	2400	6200	2A18016	EPA 8260D	01/18/22 18:48	KKW	
Vinyl chloride [75-01-4]^	1800	U	ug/L	2500	1800	6200	2A18016	EPA 8260D	01/18/22 18:48	KKW	
Xylenes (Total) [1330-20-7]	3200	U	ug/L	2500	3200	12000	2A18016	EPA 8260D	01/18/22 18:48	KKW	

ANALYTICAL RESULTS

Description: LC34PS-PZJ-050.0-20220117
Matrix: Ground Water
Project: NASA KSC LC34

Lab Sample ID: AE10221-24
Sampled: 01/17/22 09:32
Sampled By: Dan Forester / James Lloyd

Received: 01/17/22 15:30
Work Order: AE10221

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*55*	*1*	*50.0*	*111 %*	*41-142*	*2A18016*	*EPA 8260D*	*01/18/22 18:48*	*KKW*	
Dibromofluoromethane	*52*	*1*	*50.0*	*105 %*	*53-146*	*2A18016*	*EPA 8260D*	*01/18/22 18:48*	*KKW*	
Toluene-d8	*53*	*1*	*50.0*	*107 %*	*41-146*	*2A18016*	*EPA 8260D*	*01/18/22 18:48*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZJ-058.0-20220117 **Lab Sample ID:** AE10221-25 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 09:34 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	2000	U	ug/L	2500	2000	6200	2A18016	EPA 8260D	01/18/22 19:16	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	1400	U	ug/L	2500	1400	6200	2A18016	EPA 8260D	01/18/22 19:16	KKW	
1,1,2-Trichloroethane [79-00-5]^	1900	U	ug/L	2500	1900	6200	2A18016	EPA 8260D	01/18/22 19:16	KKW	
1,1-Dichloroethane [75-34-3]^	1600	U	ug/L	2500	1600	6200	2A18016	EPA 8260D	01/18/22 19:16	KKW	
1,1-Dichloroethene [75-35-4]^	2400	U	ug/L	2500	2400	6200	2A18016	EPA 8260D	01/18/22 19:16	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	1800	U	ug/L	2500	1800	6200	2A18016	EPA 8260D	01/18/22 19:16	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	2400	U	ug/L	2500	2400	6200	2A18016	EPA 8260D	01/18/22 19:16	KKW	
1,2-Dibromoethane [106-93-4]^	2000	U	ug/L	2500	2000	6200	2A18016	EPA 8260D	01/18/22 19:16	KKW	
1,2-Dichlorobenzene [95-50-1]^	1800	U	ug/L	2500	1800	6200	2A18016	EPA 8260D	01/18/22 19:16	KKW	
1,2-Dichloroethane [107-06-2]^	1600	U	ug/L	2500	1600	6200	2A18016	EPA 8260D	01/18/22 19:16	KKW	
1,2-Dichloropropane [78-87-5]^	2000	U	ug/L	2500	2000	6200	2A18016	EPA 8260D	01/18/22 19:16	KKW	
1,3-Dichlorobenzene [541-73-1]^	1900	U	ug/L	2500	1900	6200	2A18016	EPA 8260D	01/18/22 19:16	KKW	
1,4-Dichlorobenzene [106-46-7]^	1900	U	ug/L	2500	1900	6200	2A18016	EPA 8260D	01/18/22 19:16	KKW	
2-Butanone [78-93-3]^	11000	U	ug/L	2500	11000	31000	2A18016	EPA 8260D	01/18/22 19:16	KKW	
2-Hexanone [591-78-6]^	6200	U	ug/L	2500	6200	31000	2A18016	EPA 8260D	01/18/22 19:16	KKW	
4-Methyl-2-pentanone [108-10-1]^	6200	U	ug/L	2500	6200	31000	2A18016	EPA 8260D	01/18/22 19:16	KKW	
Acetone [67-64-1]^	25000	U	ug/L	2500	25000	62000	2A18016	EPA 8260D	01/18/22 19:16	KKW	
Benzene [71-43-2]^	1800	U	ug/L	2500	1800	6200	2A18016	EPA 8260D	01/18/22 19:16	KKW	
Bromodichloromethane [75-27-4]^	1300	U	ug/L	2500	1300	6200	2A18016	EPA 8260D	01/18/22 19:16	KKW	
Bromoform [75-25-2]^	1900	U	ug/L	2500	1900	6200	2A18016	EPA 8260D	01/18/22 19:16	KKW	
Bromomethane [74-83-9]^	2400	U	ug/L	2500	2400	6200	2A18016	EPA 8260D	01/18/22 19:16	KKW	QV-01
Carbon disulfide [75-15-0]^	6200	U	ug/L	2500	6200	31000	2A18016	EPA 8260D	01/18/22 19:16	KKW	QV-01
Carbon Tetrachloride [56-23-5]^	2400	U	ug/L	2500	2400	6200	2A18016	EPA 8260D	01/18/22 19:16	KKW	QV-01
Chlorobenzene [108-90-7]^	1800	U	ug/L	2500	1800	6200	2A18016	EPA 8260D	01/18/22 19:16	KKW	
Chloroethane [75-00-3]^	2400	U	ug/L	2500	2400	6200	2A18016	EPA 8260D	01/18/22 19:16	KKW	
Chloroform [67-66-3]^	2000	U	ug/L	2500	2000	6200	2A18016	EPA 8260D	01/18/22 19:16	KKW	
Chloromethane [74-87-3]^	2000	U	ug/L	2500	2000	6200	2A18016	EPA 8260D	01/18/22 19:16	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**10000**		ug/L	2500	1300	6200	2A18016	EPA 8260D	01/18/22 19:16	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	1500	U	ug/L	2500	1500	6200	2A18016	EPA 8260D	01/18/22 19:16	KKW	
Cyclohexane [110-82-7]^	2300	U	ug/L	2500	2300	6200	2A18016	EPA 8260D	01/18/22 19:16	KKW	
Dibromochloromethane [124-48-1]^	1200	U	ug/L	2500	1200	6200	2A18016	EPA 8260D	01/18/22 19:16	KKW	
Dichlorodifluoromethane [75-71-8]^	1800	U	ug/L	2500	1800	6200	2A18016	EPA 8260D	01/18/22 19:16	KKW	
Ethylbenzene [100-41-4]^	1700	U	ug/L	2500	1700	6200	2A18016	EPA 8260D	01/18/22 19:16	KKW	
Freon 113 [76-13-1]^	1800	U	ug/L	2500	1800	6200	2A18016	EPA 8260D	01/18/22 19:16	KKW	
Isopropylbenzene [98-82-8]^	1700	U	ug/L	2500	1700	6200	2A18016	EPA 8260D	01/18/22 19:16	KKW	
Methyl acetate [79-20-9]^	2400	U	ug/L	2500	2400	6200	2A18016	EPA 8260D	01/18/22 19:16	KKW	
Methylene Chloride [75-09-2]^	6200	U	ug/L	2500	6200	31000	2A18016	EPA 8260D	01/18/22 19:16	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	1500	U	ug/L	2500	1500	6200	2A18016	EPA 8260D	01/18/22 19:16	KKW	
Styrene [100-42-5]^	1500	U	ug/L	2500	1500	6200	2A18016	EPA 8260D	01/18/22 19:16	KKW	
Tetrachloroethene [127-18-4]^	1900	U	ug/L	2500	1900	6200	2A18016	EPA 8260D	01/18/22 19:16	KKW	
Toluene [108-88-3]^	1800	U	ug/L	2500	1800	6200	2A18016	EPA 8260D	01/18/22 19:16	KKW	
trans-1,2-Dichloroethene [156-60-5]^	1800	U	ug/L	2500	1800	6200	2A18016	EPA 8260D	01/18/22 19:16	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	1800	U	ug/L	2500	1800	6200	2A18016	EPA 8260D	01/18/22 19:16	KKW	
Trichloroethene [79-01-6]^	**110000**		ug/L	2500	2200	6200	2A18016	EPA 8260D	01/18/22 19:16	KKW	
Trichlorofluoromethane [75-69-4]^	2400	U	ug/L	2500	2400	6200	2A18016	EPA 8260D	01/18/22 19:16	KKW	
Vinyl chloride [75-01-4]^	1800	U	ug/L	2500	1800	6200	2A18016	EPA 8260D	01/18/22 19:16	KKW	
Xylenes (Total) [1330-20-7]	3200	U	ug/L	2500	3200	12000	2A18016	EPA 8260D	01/18/22 19:16	KKW	

ANALYTICAL RESULTS

Description: LC34PS-PZJ-058.0-20220117 **Lab Sample ID:** AE10221-25 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 09:34 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*54*	*1*	*50.0*	*107 %*	*41-142*	*2A18016*	*EPA 8260D*	*01/18/22 19:16*	*KKW*	
Dibromofluoromethane	*54*	*1*	*50.0*	*108 %*	*53-146*	*2A18016*	*EPA 8260D*	*01/18/22 19:16*	*KKW*	
Toluene-d8	*52*	*1*	*50.0*	*105 %*	*41-146*	*2A18016*	*EPA 8260D*	*01/18/22 19:16*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZJ-073.0-20220117 **Lab Sample ID:** AE10221-26 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 09:36 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	2A18016	EPA 8260D	01/18/22 11:25	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	2A18016	EPA 8260D	01/18/22 11:25	KKW	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	2A18016	EPA 8260D	01/18/22 11:25	KKW	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	2A18016	EPA 8260D	01/18/22 11:25	KKW	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	2A18016	EPA 8260D	01/18/22 11:25	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	2A18016	EPA 8260D	01/18/22 11:25	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	2A18016	EPA 8260D	01/18/22 11:25	KKW	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	2A18016	EPA 8260D	01/18/22 11:25	KKW	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	2A18016	EPA 8260D	01/18/22 11:25	KKW	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	2A18016	EPA 8260D	01/18/22 11:25	KKW	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	2A18016	EPA 8260D	01/18/22 11:25	KKW	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	2A18016	EPA 8260D	01/18/22 11:25	KKW	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	2A18016	EPA 8260D	01/18/22 11:25	KKW	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	2A18016	EPA 8260D	01/18/22 11:25	KKW	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	2A18016	EPA 8260D	01/18/22 11:25	KKW	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	2A18016	EPA 8260D	01/18/22 11:25	KKW	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	2A18016	EPA 8260D	01/18/22 11:25	KKW	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	2A18016	EPA 8260D	01/18/22 11:25	KKW	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	2A18016	EPA 8260D	01/18/22 11:25	KKW	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	2A18016	EPA 8260D	01/18/22 11:25	KKW	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	2A18016	EPA 8260D	01/18/22 11:25	KKW	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	2A18016	EPA 8260D	01/18/22 11:25	KKW	QV-01
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	2A18016	EPA 8260D	01/18/22 11:25	KKW	QV-01
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	2A18016	EPA 8260D	01/18/22 11:25	KKW	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	2A18016	EPA 8260D	01/18/22 11:25	KKW	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	2A18016	EPA 8260D	01/18/22 11:25	KKW	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	2A18016	EPA 8260D	01/18/22 11:25	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**47**		ug/L	1	0.53	2.5	2A18016	EPA 8260D	01/18/22 11:25	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	2A18016	EPA 8260D	01/18/22 11:25	KKW	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	2A18016	EPA 8260D	01/18/22 11:25	KKW	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	2A18016	EPA 8260D	01/18/22 11:25	KKW	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	2A18016	EPA 8260D	01/18/22 11:25	KKW	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	2A18016	EPA 8260D	01/18/22 11:25	KKW	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	2A18016	EPA 8260D	01/18/22 11:25	KKW	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	2A18016	EPA 8260D	01/18/22 11:25	KKW	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	2A18016	EPA 8260D	01/18/22 11:25	KKW	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	2A18016	EPA 8260D	01/18/22 11:25	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	2A18016	EPA 8260D	01/18/22 11:25	KKW	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	2A18016	EPA 8260D	01/18/22 11:25	KKW	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	2A18016	EPA 8260D	01/18/22 11:25	KKW	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	2A18016	EPA 8260D	01/18/22 11:25	KKW	
trans-1,2-Dichloroethene [156-60-5]^	**0.81**	I	ug/L	1	0.73	2.5	2A18016	EPA 8260D	01/18/22 11:25	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	2A18016	EPA 8260D	01/18/22 11:25	KKW	
Trichloroethene [79-01-6]^	**150**		ug/L	5	4.4	12	2A19017	EPA 8260D	01/19/22 13:56	KKW	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	2A18016	EPA 8260D	01/18/22 11:25	KKW	
Vinyl chloride [75-01-4]^	**2.7**		ug/L	1	0.71	2.5	2A18016	EPA 8260D	01/18/22 11:25	KKW	
Xylenes (Total) [1330-20-7]	1.3	U	ug/L	1	1.3	5.0	2A18016	EPA 8260D	01/18/22 11:25	KKW	

ANALYTICAL RESULTS

Description: LC34PS-PZJ-073.0-20220117 **Lab Sample ID:** AE10221-26 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 09:36 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*54*	*1*	*50.0*	*108 %*	*41-142*	*2A18016*	*EPA 8260D*	*01/18/22 11:25*	*KKW*	
4-Bromofluorobenzene	*55*	*1*	*50.0*	*109 %*	*41-142*	*2A19017*	*EPA 8260D*	*01/19/22 13:56*	*KKW*	
Dibromofluoromethane	*53*	*1*	*50.0*	*107 %*	*53-146*	*2A18016*	*EPA 8260D*	*01/18/22 11:25*	*KKW*	
Dibromofluoromethane	*51*	*1*	*50.0*	*102 %*	*53-146*	*2A19017*	*EPA 8260D*	*01/19/22 13:56*	*KKW*	
Toluene-d8	*55*	*1*	*50.0*	*110 %*	*41-146*	*2A18016*	*EPA 8260D*	*01/18/22 11:25*	*KKW*	
Toluene-d8	*52*	*1*	*50.0*	*105 %*	*41-146*	*2A19017*	*EPA 8260D*	*01/19/22 13:56*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZJ-080.0-20220117 **Lab Sample ID:** AE10221-27 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 09:38 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	2A19007	EPA 8260D	01/19/22 10:18	NMC	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	2A19007	EPA 8260D	01/19/22 10:18	NMC	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	2A19007	EPA 8260D	01/19/22 10:18	NMC	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	2A19007	EPA 8260D	01/19/22 10:18	NMC	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	2A19007	EPA 8260D	01/19/22 10:18	NMC	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	2A19007	EPA 8260D	01/19/22 10:18	NMC	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	2A19007	EPA 8260D	01/19/22 10:18	NMC	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	2A19007	EPA 8260D	01/19/22 10:18	NMC	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	2A19007	EPA 8260D	01/19/22 10:18	NMC	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	2A19007	EPA 8260D	01/19/22 10:18	NMC	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	2A19007	EPA 8260D	01/19/22 10:18	NMC	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	2A19007	EPA 8260D	01/19/22 10:18	NMC	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	2A19007	EPA 8260D	01/19/22 10:18	NMC	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	2A19007	EPA 8260D	01/19/22 10:18	NMC	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	2A19007	EPA 8260D	01/19/22 10:18	NMC	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	2A19007	EPA 8260D	01/19/22 10:18	NMC	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	2A19007	EPA 8260D	01/19/22 10:18	NMC	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	2A19007	EPA 8260D	01/19/22 10:18	NMC	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	2A19007	EPA 8260D	01/19/22 10:18	NMC	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	2A19007	EPA 8260D	01/19/22 10:18	NMC	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	2A19007	EPA 8260D	01/19/22 10:18	NMC	
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	2A19007	EPA 8260D	01/19/22 10:18	NMC	QV-01
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	2A19007	EPA 8260D	01/19/22 10:18	NMC	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	2A19007	EPA 8260D	01/19/22 10:18	NMC	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	2A19007	EPA 8260D	01/19/22 10:18	NMC	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	2A19007	EPA 8260D	01/19/22 10:18	NMC	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	2A19007	EPA 8260D	01/19/22 10:18	NMC	
cis-1,2-Dichloroethene [156-59-2]^	**24**		ug/L	1	0.53	2.5	2A19007	EPA 8260D	01/19/22 10:18	NMC	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	2A19007	EPA 8260D	01/19/22 10:18	NMC	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	2A19007	EPA 8260D	01/19/22 10:18	NMC	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	2A19007	EPA 8260D	01/19/22 10:18	NMC	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	2A19007	EPA 8260D	01/19/22 10:18	NMC	QV-01
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	2A19007	EPA 8260D	01/19/22 10:18	NMC	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	2A19007	EPA 8260D	01/19/22 10:18	NMC	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	2A19007	EPA 8260D	01/19/22 10:18	NMC	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	2A19007	EPA 8260D	01/19/22 10:18	NMC	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	2A19007	EPA 8260D	01/19/22 10:18	NMC	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	2A19007	EPA 8260D	01/19/22 10:18	NMC	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	2A19007	EPA 8260D	01/19/22 10:18	NMC	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	2A19007	EPA 8260D	01/19/22 10:18	NMC	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	2A19007	EPA 8260D	01/19/22 10:18	NMC	
trans-1,2-Dichloroethene [156-60-5]^	**2.2**	I	ug/L	1	0.73	2.5	2A19007	EPA 8260D	01/19/22 10:18	NMC	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	2A19007	EPA 8260D	01/19/22 10:18	NMC	
Trichloroethene [79-01-6]^	**14**		ug/L	1	0.89	2.5	2A19007	EPA 8260D	01/19/22 10:18	NMC	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	2A19007	EPA 8260D	01/19/22 10:18	NMC	
Vinyl chloride [75-01-4]^	0.71	U	ug/L	1	0.71	2.5	2A19007	EPA 8260D	01/19/22 10:18	NMC	
Xylenes (Total) [1330-20-7]	1.3	U	ug/L	1	1.3	5.0	2A19007	EPA 8260D	01/19/22 10:18	NMC	

ANALYTICAL RESULTS

Description: LC34PS-PZJ-080.0-20220117 **Lab Sample ID:** AE10221-27 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 09:38 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*45*	*1*	*50.0*	*90 %*	*41-142*	*2A19007*	*EPA 8260D*	*01/19/22 10:18*	*NMC*	
Dibromofluoromethane	*44*	*1*	*50.0*	*89 %*	*53-146*	*2A19007*	*EPA 8260D*	*01/19/22 10:18*	*NMC*	
Toluene-d8	*45*	*1*	*50.0*	*89 %*	*41-146*	*2A19007*	*EPA 8260D*	*01/19/22 10:18*	*NMC*	

ANALYTICAL RESULTS

Description: LC34PS-PZG-040.0-20220117 **Lab Sample ID:** AE10221-28 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 10:00 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	2000	U	ug/L	2500	2000	6200	2A19007	EPA 8260D	01/19/22 16:03	NMC	
1,1,2,2-Tetrachloroethane [79-34-5]^	1400	U	ug/L	2500	1400	6200	2A19007	EPA 8260D	01/19/22 16:03	NMC	
1,1,2-Trichloroethane [79-00-5]^	1900	U	ug/L	2500	1900	6200	2A19007	EPA 8260D	01/19/22 16:03	NMC	
1,1-Dichloroethane [75-34-3]^	1600	U	ug/L	2500	1600	6200	2A19007	EPA 8260D	01/19/22 16:03	NMC	
1,1-Dichloroethene [75-35-4]^	2400	U	ug/L	2500	2400	6200	2A19007	EPA 8260D	01/19/22 16:03	NMC	
1,2,4-Trichlorobenzene [120-82-1]^	1800	U	ug/L	2500	1800	6200	2A19007	EPA 8260D	01/19/22 16:03	NMC	
1,2-Dibromo-3-chloropropane [96-12-8]^	2400	U	ug/L	2500	2400	6200	2A19007	EPA 8260D	01/19/22 16:03	NMC	
1,2-Dibromoethane [106-93-4]^	2000	U	ug/L	2500	2000	6200	2A19007	EPA 8260D	01/19/22 16:03	NMC	
1,2-Dichlorobenzene [95-50-1]^	1800	U	ug/L	2500	1800	6200	2A19007	EPA 8260D	01/19/22 16:03	NMC	
1,2-Dichloroethane [107-06-2]^	1600	U	ug/L	2500	1600	6200	2A19007	EPA 8260D	01/19/22 16:03	NMC	
1,2-Dichloropropane [78-87-5]^	2000	U	ug/L	2500	2000	6200	2A19007	EPA 8260D	01/19/22 16:03	NMC	
1,3-Dichlorobenzene [541-73-1]^	1900	U	ug/L	2500	1900	6200	2A19007	EPA 8260D	01/19/22 16:03	NMC	
1,4-Dichlorobenzene [106-46-7]^	1900	U	ug/L	2500	1900	6200	2A19007	EPA 8260D	01/19/22 16:03	NMC	
2-Butanone [78-93-3]^	11000	U	ug/L	2500	11000	31000	2A19007	EPA 8260D	01/19/22 16:03	NMC	
2-Hexanone [591-78-6]^	6200	U	ug/L	2500	6200	31000	2A19007	EPA 8260D	01/19/22 16:03	NMC	
4-Methyl-2-pentanone [108-10-1]^	6200	U	ug/L	2500	6200	31000	2A19007	EPA 8260D	01/19/22 16:03	NMC	
Acetone [67-64-1]^	25000	U	ug/L	2500	25000	62000	2A19007	EPA 8260D	01/19/22 16:03	NMC	
Benzene [71-43-2]^	1800	U	ug/L	2500	1800	6200	2A19007	EPA 8260D	01/19/22 16:03	NMC	
Bromodichloromethane [75-27-4]^	1300	U	ug/L	2500	1300	6200	2A19007	EPA 8260D	01/19/22 16:03	NMC	
Bromoform [75-25-2]^	1900	U	ug/L	2500	1900	6200	2A19007	EPA 8260D	01/19/22 16:03	NMC	
Bromomethane [74-83-9]^	2400	U	ug/L	2500	2400	6200	2A19007	EPA 8260D	01/19/22 16:03	NMC	
Carbon disulfide [75-15-0]^	6200	U	ug/L	2500	6200	31000	2A19007	EPA 8260D	01/19/22 16:03	NMC	QV-01
Carbon Tetrachloride [56-23-5]^	2400	U	ug/L	2500	2400	6200	2A19007	EPA 8260D	01/19/22 16:03	NMC	
Chlorobenzene [108-90-7]^	1800	U	ug/L	2500	1800	6200	2A19007	EPA 8260D	01/19/22 16:03	NMC	
Chloroethane [75-00-3]^	2400	U	ug/L	2500	2400	6200	2A19007	EPA 8260D	01/19/22 16:03	NMC	
Chloroform [67-66-3]^	2000	U	ug/L	2500	2000	6200	2A19007	EPA 8260D	01/19/22 16:03	NMC	
Chloromethane [74-87-3]^	2000	U	ug/L	2500	2000	6200	2A19007	EPA 8260D	01/19/22 16:03	NMC	
cis-1,2-Dichloroethene [156-59-2]^	**37000**		ug/L	2500	1300	6200	2A19007	EPA 8260D	01/19/22 16:03	NMC	
cis-1,3-Dichloropropene [10061-01-5]^	1500	U	ug/L	2500	1500	6200	2A19007	EPA 8260D	01/19/22 16:03	NMC	
Cyclohexane [110-82-7]^	2300	U	ug/L	2500	2300	6200	2A19007	EPA 8260D	01/19/22 16:03	NMC	
Dibromochloromethane [124-48-1]^	1200	U	ug/L	2500	1200	6200	2A19007	EPA 8260D	01/19/22 16:03	NMC	
Dichlorodifluoromethane [75-71-8]^	1800	U	ug/L	2500	1800	6200	2A19007	EPA 8260D	01/19/22 16:03	NMC	QV-01
Ethylbenzene [100-41-4]^	1700	U	ug/L	2500	1700	6200	2A19007	EPA 8260D	01/19/22 16:03	NMC	
Freon 113 [76-13-1]^	1800	U	ug/L	2500	1800	6200	2A19007	EPA 8260D	01/19/22 16:03	NMC	
Isopropylbenzene [98-82-8]^	1700	U	ug/L	2500	1700	6200	2A19007	EPA 8260D	01/19/22 16:03	NMC	
Methyl acetate [79-20-9]^	2400	U	ug/L	2500	2400	6200	2A19007	EPA 8260D	01/19/22 16:03	NMC	
Methylene Chloride [75-09-2]^	6200	U	ug/L	2500	6200	31000	2A19007	EPA 8260D	01/19/22 16:03	NMC	
Methyl-tert-Butyl Ether [1634-04-4]^	1500	U	ug/L	2500	1500	6200	2A19007	EPA 8260D	01/19/22 16:03	NMC	
Styrene [100-42-5]^	1500	U	ug/L	2500	1500	6200	2A19007	EPA 8260D	01/19/22 16:03	NMC	
Tetrachloroethene [127-18-4]^	1900	U	ug/L	2500	1900	6200	2A19007	EPA 8260D	01/19/22 16:03	NMC	
Toluene [108-88-3]^	1800	U	ug/L	2500	1800	6200	2A19007	EPA 8260D	01/19/22 16:03	NMC	
trans-1,2-Dichloroethene [156-60-5]^	1800	U	ug/L	2500	1800	6200	2A19007	EPA 8260D	01/19/22 16:03	NMC	
trans-1,3-Dichloropropene [10061-02-6]^	1800	U	ug/L	2500	1800	6200	2A19007	EPA 8260D	01/19/22 16:03	NMC	
Trichloroethene [79-01-6]^	**200000**		ug/L	2500	2200	6200	2A19007	EPA 8260D	01/19/22 16:03	NMC	
Trichlorofluoromethane [75-69-4]^	2400	U	ug/L	2500	2400	6200	2A19007	EPA 8260D	01/19/22 16:03	NMC	
Vinyl chloride [75-01-4]^	**2000**	I	ug/L	2500	1800	6200	2A19007	EPA 8260D	01/19/22 16:03	NMC	
Xylenes (Total) [1330-20-7]	3200	U	ug/L	2500	3200	12000	2A19007	EPA 8260D	01/19/22 16:03	NMC	

ANALYTICAL RESULTS

Description: LC34PS-PZG-040.0-20220117 **Lab Sample ID:** AE10221-28 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 10:00 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*45*	*1*	*50.0*	*89 %*	*41-142*	*2A19007*	*EPA 8260D*	*01/19/22 16:03*	*NMC*	
Dibromofluoromethane	*44*	*1*	*50.0*	*88 %*	*53-146*	*2A19007*	*EPA 8260D*	*01/19/22 16:03*	*NMC*	
Toluene-d8	*45*	*1*	*50.0*	*89 %*	*41-146*	*2A19007*	*EPA 8260D*	*01/19/22 16:03*	*NMC*	

ANALYTICAL RESULTS

Description: LC34PS-PZG-050.0-20220117 **Lab Sample ID:** AE10221-29 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 10:02 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	8000	U	ug/L	10000	8000	25000	2A19007	EPA 8260D	01/19/22 16:32	NMC	
1,1,2,2-Tetrachloroethane [79-34-5]^	5400	U	ug/L	10000	5400	25000	2A19007	EPA 8260D	01/19/22 16:32	NMC	
1,1,2-Trichloroethane [79-00-5]^	7600	U	ug/L	10000	7600	25000	2A19007	EPA 8260D	01/19/22 16:32	NMC	
1,1-Dichloroethane [75-34-3]^	6200	U	ug/L	10000	6200	25000	2A19007	EPA 8260D	01/19/22 16:32	NMC	
1,1-Dichloroethene [75-35-4]^	9400	U	ug/L	10000	9400	25000	2A19007	EPA 8260D	01/19/22 16:32	NMC	
1,2,4-Trichlorobenzene [120-82-1]^	7000	U	ug/L	10000	7000	25000	2A19007	EPA 8260D	01/19/22 16:32	NMC	
1,2-Dibromo-3-chloropropane [96-12-8]^	9600	U	ug/L	10000	9600	25000	2A19007	EPA 8260D	01/19/22 16:32	NMC	
1,2-Dibromoethane [106-93-4]^	7800	U	ug/L	10000	7800	25000	2A19007	EPA 8260D	01/19/22 16:32	NMC	
1,2-Dichlorobenzene [95-50-1]^	7300	U	ug/L	10000	7300	25000	2A19007	EPA 8260D	01/19/22 16:32	NMC	
1,2-Dichloroethane [107-06-2]^	6300	U	ug/L	10000	6300	25000	2A19007	EPA 8260D	01/19/22 16:32	NMC	
1,2-Dichloropropane [78-87-5]^	8000	U	ug/L	10000	8000	25000	2A19007	EPA 8260D	01/19/22 16:32	NMC	
1,3-Dichlorobenzene [541-73-1]^	7700	U	ug/L	10000	7700	25000	2A19007	EPA 8260D	01/19/22 16:32	NMC	
1,4-Dichlorobenzene [106-46-7]^	7600	U	ug/L	10000	7600	25000	2A19007	EPA 8260D	01/19/22 16:32	NMC	
2-Butanone [78-93-3]^	45000	U	ug/L	10000	45000	120000	2A19007	EPA 8260D	01/19/22 16:32	NMC	
2-Hexanone [591-78-6]^	25000	U	ug/L	10000	25000	120000	2A19007	EPA 8260D	01/19/22 16:32	NMC	
4-Methyl-2-pentanone [108-10-1]^	25000	U	ug/L	10000	25000	120000	2A19007	EPA 8260D	01/19/22 16:32	NMC	
Acetone [67-64-1]^	100000	U	ug/L	10000	100000	250000	2A19007	EPA 8260D	01/19/22 16:32	NMC	
Benzene [71-43-2]^	7100	U	ug/L	10000	7100	25000	2A19007	EPA 8260D	01/19/22 16:32	NMC	
Bromodichloromethane [75-27-4]^	5200	U	ug/L	10000	5200	25000	2A19007	EPA 8260D	01/19/22 16:32	NMC	
Bromoform [75-25-2]^	7500	U	ug/L	10000	7500	25000	2A19007	EPA 8260D	01/19/22 16:32	NMC	
Bromomethane [74-83-9]^	9500	U	ug/L	10000	9500	25000	2A19007	EPA 8260D	01/19/22 16:32	NMC	
Carbon disulfide [75-15-0]^	25000	U	ug/L	10000	25000	120000	2A19007	EPA 8260D	01/19/22 16:32	NMC	QV-01
Carbon Tetrachloride [56-23-5]^	9400	U	ug/L	10000	9400	25000	2A19007	EPA 8260D	01/19/22 16:32	NMC	
Chlorobenzene [108-90-7]^	7200	U	ug/L	10000	7200	25000	2A19007	EPA 8260D	01/19/22 16:32	NMC	
Chloroethane [75-00-3]^	9800	U	ug/L	10000	9800	25000	2A19007	EPA 8260D	01/19/22 16:32	NMC	
Chloroform [67-66-3]^	8000	U	ug/L	10000	8000	25000	2A19007	EPA 8260D	01/19/22 16:32	NMC	
Chloromethane [74-87-3]^	8200	U	ug/L	10000	8200	25000	2A19007	EPA 8260D	01/19/22 16:32	NMC	
cis-1,2-Dichloroethene [156-59-2]^	**56000**		ug/L	10000	5300	25000	2A19007	EPA 8260D	01/19/22 16:32	NMC	
cis-1,3-Dichloropropene [10061-01-5]^	5900	U	ug/L	10000	5900	25000	2A19007	EPA 8260D	01/19/22 16:32	NMC	
Cyclohexane [110-82-7]^	9300	U	ug/L	10000	9300	25000	2A19007	EPA 8260D	01/19/22 16:32	NMC	
Dibromochloromethane [124-48-1]^	5000	U	ug/L	10000	5000	25000	2A19007	EPA 8260D	01/19/22 16:32	NMC	
Dichlorodifluoromethane [75-71-8]^	7400	U	ug/L	10000	7400	25000	2A19007	EPA 8260D	01/19/22 16:32	NMC	QV-01
Ethylbenzene [100-41-4]^	6900	U	ug/L	10000	6900	25000	2A19007	EPA 8260D	01/19/22 16:32	NMC	
Freon 113 [76-13-1]^	7300	U	ug/L	10000	7300	25000	2A19007	EPA 8260D	01/19/22 16:32	NMC	
Isopropylbenzene [98-82-8]^	6700	U	ug/L	10000	6700	25000	2A19007	EPA 8260D	01/19/22 16:32	NMC	
Methyl acetate [79-20-9]^	9500	U	ug/L	10000	9500	25000	2A19007	EPA 8260D	01/19/22 16:32	NMC	
Methylene Chloride [75-09-2]^	25000	U	ug/L	10000	25000	120000	2A19007	EPA 8260D	01/19/22 16:32	NMC	
Methyl-tert-Butyl Ether [1634-04-4]^	6000	U	ug/L	10000	6000	25000	2A19007	EPA 8260D	01/19/22 16:32	NMC	
Styrene [100-42-5]^	6100	U	ug/L	10000	6100	25000	2A19007	EPA 8260D	01/19/22 16:32	NMC	
Tetrachloroethene [127-18-4]^	7600	U	ug/L	10000	7600	25000	2A19007	EPA 8260D	01/19/22 16:32	NMC	
Toluene [108-88-3]^	7200	U	ug/L	10000	7200	25000	2A19007	EPA 8260D	01/19/22 16:32	NMC	
trans-1,2-Dichloroethene [156-60-5]^	7300	U	ug/L	10000	7300	25000	2A19007	EPA 8260D	01/19/22 16:32	NMC	
trans-1,3-Dichloropropene [10061-02-6]^	7300	U	ug/L	10000	7300	25000	2A19007	EPA 8260D	01/19/22 16:32	NMC	
Trichloroethene [79-01-6]^	**730000**		ug/L	10000	8900	25000	2A19007	EPA 8260D	01/19/22 16:32	NMC	
Trichlorofluoromethane [75-69-4]^	9400	U	ug/L	10000	9400	25000	2A19007	EPA 8260D	01/19/22 16:32	NMC	
Vinyl chloride [75-01-4]^	7100	U	ug/L	10000	7100	25000	2A19007	EPA 8260D	01/19/22 16:32	NMC	
Xylenes (Total) [1330-20-7]	13000	U	ug/L	10000	13000	50000	2A19007	EPA 8260D	01/19/22 16:32	NMC	

ANALYTICAL RESULTS

Description: LC34PS-PZG-050.0-20220117 **Lab Sample ID:** AE10221-29 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 10:02 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*46*	*1*	*50.0*	*93 %*	*41-142*	*2A19007*	*EPA 8260D*	*01/19/22 16:32*	*NMC*	
Dibromofluoromethane	*45*	*1*	*50.0*	*90 %*	*53-146*	*2A19007*	*EPA 8260D*	*01/19/22 16:32*	*NMC*	
Toluene-d8	*47*	*1*	*50.0*	*93 %*	*41-146*	*2A19007*	*EPA 8260D*	*01/19/22 16:32*	*NMC*	

ANALYTICAL RESULTS

Description: LC34PS-PZG-058.0-20220117 **Lab Sample ID:** AE10221-30 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 10:04 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	400	U	ug/L	500	400	1200	2A19007	EPA 8260D	01/19/22 17:01	NMC	
1,1,2,2-Tetrachloroethane [79-34-5]^	270	U	ug/L	500	270	1200	2A19007	EPA 8260D	01/19/22 17:01	NMC	
1,1,2-Trichloroethane [79-00-5]^	380	U	ug/L	500	380	1200	2A19007	EPA 8260D	01/19/22 17:01	NMC	
1,1-Dichloroethane [75-34-3]^	310	U	ug/L	500	310	1200	2A19007	EPA 8260D	01/19/22 17:01	NMC	
1,1-Dichloroethene [75-35-4]^	470	U	ug/L	500	470	1200	2A19007	EPA 8260D	01/19/22 17:01	NMC	
1,2,4-Trichlorobenzene [120-82-1]^	350	U	ug/L	500	350	1200	2A19007	EPA 8260D	01/19/22 17:01	NMC	
1,2-Dibromo-3-chloropropane [96-12-8]^	480	U	ug/L	500	480	1200	2A19007	EPA 8260D	01/19/22 17:01	NMC	
1,2-Dibromoethane [106-93-4]^	390	U	ug/L	500	390	1200	2A19007	EPA 8260D	01/19/22 17:01	NMC	
1,2-Dichlorobenzene [95-50-1]^	360	U	ug/L	500	360	1200	2A19007	EPA 8260D	01/19/22 17:01	NMC	
1,2-Dichloroethane [107-06-2]^	320	U	ug/L	500	320	1200	2A19007	EPA 8260D	01/19/22 17:01	NMC	
1,2-Dichloropropane [78-87-5]^	400	U	ug/L	500	400	1200	2A19007	EPA 8260D	01/19/22 17:01	NMC	
1,3-Dichlorobenzene [541-73-1]^	380	U	ug/L	500	380	1200	2A19007	EPA 8260D	01/19/22 17:01	NMC	
1,4-Dichlorobenzene [106-46-7]^	380	U	ug/L	500	380	1200	2A19007	EPA 8260D	01/19/22 17:01	NMC	
2-Butanone [78-93-3]^	2200	U	ug/L	500	2200	6200	2A19007	EPA 8260D	01/19/22 17:01	NMC	
2-Hexanone [591-78-6]^	1200	U	ug/L	500	1200	6200	2A19007	EPA 8260D	01/19/22 17:01	NMC	
4-Methyl-2-pentanone [108-10-1]^	1200	U	ug/L	500	1200	6200	2A19007	EPA 8260D	01/19/22 17:01	NMC	
Acetone [67-64-1]^	5000	U	ug/L	500	5000	12000	2A19007	EPA 8260D	01/19/22 17:01	NMC	
Benzene [71-43-2]^	360	U	ug/L	500	360	1200	2A19007	EPA 8260D	01/19/22 17:01	NMC	
Bromodichloromethane [75-27-4]^	260	U	ug/L	500	260	1200	2A19007	EPA 8260D	01/19/22 17:01	NMC	
Bromoform [75-25-2]^	380	U	ug/L	500	380	1200	2A19007	EPA 8260D	01/19/22 17:01	NMC	
Bromomethane [74-83-9]^	480	U	ug/L	500	480	1200	2A19007	EPA 8260D	01/19/22 17:01	NMC	
Carbon disulfide [75-15-0]^	1200	U	ug/L	500	1200	6200	2A19007	EPA 8260D	01/19/22 17:01	NMC	QV-01
Carbon Tetrachloride [56-23-5]^	470	U	ug/L	500	470	1200	2A19007	EPA 8260D	01/19/22 17:01	NMC	
Chlorobenzene [108-90-7]^	360	U	ug/L	500	360	1200	2A19007	EPA 8260D	01/19/22 17:01	NMC	
Chloroethane [75-00-3]^	490	U	ug/L	500	490	1200	2A19007	EPA 8260D	01/19/22 17:01	NMC	
Chloroform [67-66-3]^	400	U	ug/L	500	400	1200	2A19007	EPA 8260D	01/19/22 17:01	NMC	
Chloromethane [74-87-3]^	410	U	ug/L	500	410	1200	2A19007	EPA 8260D	01/19/22 17:01	NMC	
cis-1,2-Dichloroethene [156-59-2]^	**3800**		ug/L	500	260	1200	2A19007	EPA 8260D	01/19/22 17:01	NMC	
cis-1,3-Dichloropropene [10061-01-5]^	300	U	ug/L	500	300	1200	2A19007	EPA 8260D	01/19/22 17:01	NMC	
Cyclohexane [110-82-7]^	460	U	ug/L	500	460	1200	2A19007	EPA 8260D	01/19/22 17:01	NMC	
Dibromochloromethane [124-48-1]^	250	U	ug/L	500	250	1200	2A19007	EPA 8260D	01/19/22 17:01	NMC	
Dichlorodifluoromethane [75-71-8]^	370	U	ug/L	500	370	1200	2A19007	EPA 8260D	01/19/22 17:01	NMC	QV-01
Ethylbenzene [100-41-4]^	340	U	ug/L	500	340	1200	2A19007	EPA 8260D	01/19/22 17:01	NMC	
Freon 113 [76-13-1]^	360	U	ug/L	500	360	1200	2A19007	EPA 8260D	01/19/22 17:01	NMC	
Isopropylbenzene [98-82-8]^	340	U	ug/L	500	340	1200	2A19007	EPA 8260D	01/19/22 17:01	NMC	
Methyl acetate [79-20-9]^	480	U	ug/L	500	480	1200	2A19007	EPA 8260D	01/19/22 17:01	NMC	
Methylene Chloride [75-09-2]^	1200	U	ug/L	500	1200	6200	2A19007	EPA 8260D	01/19/22 17:01	NMC	
Methyl-tert-Butyl Ether [1634-04-4]^	300	U	ug/L	500	300	1200	2A19007	EPA 8260D	01/19/22 17:01	NMC	
Styrene [100-42-5]^	300	U	ug/L	500	300	1200	2A19007	EPA 8260D	01/19/22 17:01	NMC	
Tetrachloroethene [127-18-4]^	380	U	ug/L	500	380	1200	2A19007	EPA 8260D	01/19/22 17:01	NMC	
Toluene [108-88-3]^	360	U	ug/L	500	360	1200	2A19007	EPA 8260D	01/19/22 17:01	NMC	
trans-1,2-Dichloroethene [156-60-5]^	360	U	ug/L	500	360	1200	2A19007	EPA 8260D	01/19/22 17:01	NMC	
trans-1,3-Dichloropropene [10061-02-6]^	360	U	ug/L	500	360	1200	2A19007	EPA 8260D	01/19/22 17:01	NMC	
Trichloroethene [79-01-6]^	**27000**		ug/L	500	440	1200	2A19007	EPA 8260D	01/19/22 17:01	NMC	
Trichlorofluoromethane [75-69-4]^	470	U	ug/L	500	470	1200	2A19007	EPA 8260D	01/19/22 17:01	NMC	
Vinyl chloride [75-01-4]^	360	U	ug/L	500	360	1200	2A19007	EPA 8260D	01/19/22 17:01	NMC	
Xylenes (Total) [1330-20-7]	650	U	ug/L	500	650	2500	2A19007	EPA 8260D	01/19/22 17:01	NMC	

ANALYTICAL RESULTS

Description: LC34PS-PZG-058.0-20220117 **Lab Sample ID:** AE10221-30 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 10:04 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*46*	*1*	*50.0*	*92 %*	*41-142*	*2A19007*	*EPA 8260D*	*01/19/22 17:01*	*NMC*	
Dibromofluoromethane	*45*	*1*	*50.0*	*90 %*	*53-146*	*2A19007*	*EPA 8260D*	*01/19/22 17:01*	*NMC*	
Toluene-d8	*46*	*1*	*50.0*	*91 %*	*41-146*	*2A19007*	*EPA 8260D*	*01/19/22 17:01*	*NMC*	

ANALYTICAL RESULTS

Description: LC34PS-PZG-073.0-20220117 **Lab Sample ID:** AE10221-31 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 10:06 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	8.0	U	ug/L	10	8.0	25	2A19007	EPA 8260D	01/19/22 17:30	NMC	
1,1,2,2-Tetrachloroethane [79-34-5]^	5.4	U	ug/L	10	5.4	25	2A19007	EPA 8260D	01/19/22 17:30	NMC	
1,1,2-Trichloroethane [79-00-5]^	7.6	U	ug/L	10	7.6	25	2A19007	EPA 8260D	01/19/22 17:30	NMC	
1,1-Dichloroethane [75-34-3]^	6.2	U	ug/L	10	6.2	25	2A19007	EPA 8260D	01/19/22 17:30	NMC	
1,1-Dichloroethene [75-35-4]^	9.4	U	ug/L	10	9.4	25	2A19007	EPA 8260D	01/19/22 17:30	NMC	
1,2,4-Trichlorobenzene [120-82-1]^	7.0	U	ug/L	10	7.0	25	2A19007	EPA 8260D	01/19/22 17:30	NMC	
1,2-Dibromo-3-chloropropane [96-12-8]^	9.6	U	ug/L	10	9.6	25	2A19007	EPA 8260D	01/19/22 17:30	NMC	
1,2-Dibromoethane [106-93-4]^	7.8	U	ug/L	10	7.8	25	2A19007	EPA 8260D	01/19/22 17:30	NMC	
1,2-Dichlorobenzene [95-50-1]^	7.3	U	ug/L	10	7.3	25	2A19007	EPA 8260D	01/19/22 17:30	NMC	
1,2-Dichloroethane [107-06-2]^	6.3	U	ug/L	10	6.3	25	2A19007	EPA 8260D	01/19/22 17:30	NMC	
1,2-Dichloropropane [78-87-5]^	8.0	U	ug/L	10	8.0	25	2A19007	EPA 8260D	01/19/22 17:30	NMC	
1,3-Dichlorobenzene [541-73-1]^	7.7	U	ug/L	10	7.7	25	2A19007	EPA 8260D	01/19/22 17:30	NMC	
1,4-Dichlorobenzene [106-46-7]^	7.6	U	ug/L	10	7.6	25	2A19007	EPA 8260D	01/19/22 17:30	NMC	
2-Butanone [78-93-3]^	45	U	ug/L	10	45	120	2A19007	EPA 8260D	01/19/22 17:30	NMC	
2-Hexanone [591-78-6]^	25	U	ug/L	10	25	120	2A19007	EPA 8260D	01/19/22 17:30	NMC	
4-Methyl-2-pentanone [108-10-1]^	25	U	ug/L	10	25	120	2A19007	EPA 8260D	01/19/22 17:30	NMC	
Acetone [67-64-1]^	100	U	ug/L	10	100	250	2A19007	EPA 8260D	01/19/22 17:30	NMC	
Benzene [71-43-2]^	7.1	U	ug/L	10	7.1	25	2A19007	EPA 8260D	01/19/22 17:30	NMC	
Bromodichloromethane [75-27-4]^	5.2	U	ug/L	10	5.2	25	2A19007	EPA 8260D	01/19/22 17:30	NMC	
Bromoform [75-25-2]^	7.5	U	ug/L	10	7.5	25	2A19007	EPA 8260D	01/19/22 17:30	NMC	
Bromomethane [74-83-9]^	9.5	U	ug/L	10	9.5	25	2A19007	EPA 8260D	01/19/22 17:30	NMC	
Carbon disulfide [75-15-0]^	25	U	ug/L	10	25	120	2A19007	EPA 8260D	01/19/22 17:30	NMC	QV-01
Carbon Tetrachloride [56-23-5]^	9.4	U	ug/L	10	9.4	25	2A19007	EPA 8260D	01/19/22 17:30	NMC	
Chlorobenzene [108-90-7]^	7.2	U	ug/L	10	7.2	25	2A19007	EPA 8260D	01/19/22 17:30	NMC	
Chloroethane [75-00-3]^	9.8	U	ug/L	10	9.8	25	2A19007	EPA 8260D	01/19/22 17:30	NMC	
Chloroform [67-66-3]^	8.0	U	ug/L	10	8.0	25	2A19007	EPA 8260D	01/19/22 17:30	NMC	
Chloromethane [74-87-3]^	8.2	U	ug/L	10	8.2	25	2A19007	EPA 8260D	01/19/22 17:30	NMC	
cis-1,2-Dichloroethene [156-59-2]^	**20**	I	ug/L	10	5.3	25	2A19007	EPA 8260D	01/19/22 17:30	NMC	
cis-1,3-Dichloropropene [10061-01-5]^	5.9	U	ug/L	10	5.9	25	2A19007	EPA 8260D	01/19/22 17:30	NMC	
Cyclohexane [110-82-7]^	9.3	U	ug/L	10	9.3	25	2A19007	EPA 8260D	01/19/22 17:30	NMC	
Dibromochloromethane [124-48-1]^	5.0	U	ug/L	10	5.0	25	2A19007	EPA 8260D	01/19/22 17:30	NMC	
Dichlorodifluoromethane [75-71-8]^	7.4	U	ug/L	10	7.4	25	2A19007	EPA 8260D	01/19/22 17:30	NMC	QV-01
Ethylbenzene [100-41-4]^	6.9	U	ug/L	10	6.9	25	2A19007	EPA 8260D	01/19/22 17:30	NMC	
Freon 113 [76-13-1]^	7.3	U	ug/L	10	7.3	25	2A19007	EPA 8260D	01/19/22 17:30	NMC	
Isopropylbenzene [98-82-8]^	6.7	U	ug/L	10	6.7	25	2A19007	EPA 8260D	01/19/22 17:30	NMC	
Methyl acetate [79-20-9]^	9.5	U	ug/L	10	9.5	25	2A19007	EPA 8260D	01/19/22 17:30	NMC	
Methylene Chloride [75-09-2]^	25	U	ug/L	10	25	120	2A19007	EPA 8260D	01/19/22 17:30	NMC	
Methyl-tert-Butyl Ether [1634-04-4]^	6.0	U	ug/L	10	6.0	25	2A19007	EPA 8260D	01/19/22 17:30	NMC	
Styrene [100-42-5]^	6.1	U	ug/L	10	6.1	25	2A19007	EPA 8260D	01/19/22 17:30	NMC	
Tetrachloroethene [127-18-4]^	7.6	U	ug/L	10	7.6	25	2A19007	EPA 8260D	01/19/22 17:30	NMC	
Toluene [108-88-3]^	7.2	U	ug/L	10	7.2	25	2A19007	EPA 8260D	01/19/22 17:30	NMC	
trans-1,2-Dichloroethene [156-60-5]^	7.3	U	ug/L	10	7.3	25	2A19007	EPA 8260D	01/19/22 17:30	NMC	
trans-1,3-Dichloropropene [10061-02-6]^	7.3	U	ug/L	10	7.3	25	2A19007	EPA 8260D	01/19/22 17:30	NMC	
Trichloroethene [79-01-6]^	**400**		ug/L	10	8.9	25	2A19007	EPA 8260D	01/19/22 17:30	NMC	
Trichlorofluoromethane [75-69-4]^	9.4	U	ug/L	10	9.4	25	2A19007	EPA 8260D	01/19/22 17:30	NMC	
Vinyl chloride [75-01-4]^	7.1	U	ug/L	10	7.1	25	2A19007	EPA 8260D	01/19/22 17:30	NMC	
Xylenes (Total) [1330-20-7]	13	U	ug/L	10	13	50	2A19007	EPA 8260D	01/19/22 17:30	NMC	

ANALYTICAL RESULTS

Description: LC34PS-PZG-073.0-20220117 **Lab Sample ID:** AE10221-31 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 10:06 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*45*	*1*	*50.0*	*90 %*	*41-142*	*2A19007*	*EPA 8260D*	*01/19/22 17:30*	*NMC*	
Dibromofluoromethane	*45*	*1*	*50.0*	*90 %*	*53-146*	*2A19007*	*EPA 8260D*	*01/19/22 17:30*	*NMC*	
Toluene-d8	*45*	*1*	*50.0*	*89 %*	*41-146*	*2A19007*	*EPA 8260D*	*01/19/22 17:30*	*NMC*	

ANALYTICAL RESULTS

Description: LC34PS-PZG-080.0-20220117 **Lab Sample ID:** AE10221-32 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 10:08 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	2A19007	EPA 8260D	01/19/22 17:58	NMC	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	2A19007	EPA 8260D	01/19/22 17:58	NMC	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	2A19007	EPA 8260D	01/19/22 17:58	NMC	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	2A19007	EPA 8260D	01/19/22 17:58	NMC	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	2A19007	EPA 8260D	01/19/22 17:58	NMC	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	2A19007	EPA 8260D	01/19/22 17:58	NMC	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	2A19007	EPA 8260D	01/19/22 17:58	NMC	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	2A19007	EPA 8260D	01/19/22 17:58	NMC	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	2A19007	EPA 8260D	01/19/22 17:58	NMC	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	2A19007	EPA 8260D	01/19/22 17:58	NMC	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	2A19007	EPA 8260D	01/19/22 17:58	NMC	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	2A19007	EPA 8260D	01/19/22 17:58	NMC	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	2A19007	EPA 8260D	01/19/22 17:58	NMC	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	2A19007	EPA 8260D	01/19/22 17:58	NMC	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	2A19007	EPA 8260D	01/19/22 17:58	NMC	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	2A19007	EPA 8260D	01/19/22 17:58	NMC	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	2A19007	EPA 8260D	01/19/22 17:58	NMC	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	2A19007	EPA 8260D	01/19/22 17:58	NMC	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	2A19007	EPA 8260D	01/19/22 17:58	NMC	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	2A19007	EPA 8260D	01/19/22 17:58	NMC	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	2A19007	EPA 8260D	01/19/22 17:58	NMC	
Carbon disulfide [75-15-0]^	**2.5**	I	ug/L	1	2.5	12	2A19007	EPA 8260D	01/19/22 17:58	NMC	QV-01
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	2A19007	EPA 8260D	01/19/22 17:58	NMC	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	2A19007	EPA 8260D	01/19/22 17:58	NMC	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	2A19007	EPA 8260D	01/19/22 17:58	NMC	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	2A19007	EPA 8260D	01/19/22 17:58	NMC	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	2A19007	EPA 8260D	01/19/22 17:58	NMC	
cis-1,2-Dichloroethene [156-59-2]^	**97**		ug/L	1	0.53	2.5	2A19007	EPA 8260D	01/19/22 17:58	NMC	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	2A19007	EPA 8260D	01/19/22 17:58	NMC	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	2A19007	EPA 8260D	01/19/22 17:58	NMC	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	2A19007	EPA 8260D	01/19/22 17:58	NMC	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	2A19007	EPA 8260D	01/19/22 17:58	NMC	QV-01
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	2A19007	EPA 8260D	01/19/22 17:58	NMC	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	2A19007	EPA 8260D	01/19/22 17:58	NMC	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	2A19007	EPA 8260D	01/19/22 17:58	NMC	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	2A19007	EPA 8260D	01/19/22 17:58	NMC	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	2A19007	EPA 8260D	01/19/22 17:58	NMC	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	2A19007	EPA 8260D	01/19/22 17:58	NMC	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	2A19007	EPA 8260D	01/19/22 17:58	NMC	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	2A19007	EPA 8260D	01/19/22 17:58	NMC	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	2A19007	EPA 8260D	01/19/22 17:58	NMC	
trans-1,2-Dichloroethene [156-60-5]^	**13**		ug/L	1	0.73	2.5	2A19007	EPA 8260D	01/19/22 17:58	NMC	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	2A19007	EPA 8260D	01/19/22 17:58	NMC	
Trichloroethene [79-01-6]^	**22**		ug/L	1	0.89	2.5	2A19007	EPA 8260D	01/19/22 17:58	NMC	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	2A19007	EPA 8260D	01/19/22 17:58	NMC	
Vinyl chloride [75-01-4]^	**41**		ug/L	1	0.71	2.5	2A19007	EPA 8260D	01/19/22 17:58	NMC	
Xylenes (Total) [1330-20-7]	1.3	U	ug/L	1	1.3	5.0	2A19007	EPA 8260D	01/19/22 17:58	NMC	

ANALYTICAL RESULTS

Description: LC34PS-PZG-080.0-20220117 **Lab Sample ID:** AE10221-32 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 10:08 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*47*	*1*	*50.0*	*94 %*	*41-142*	*2A19007*	*EPA 8260D*	*01/19/22 17:58*	*NMC*	
Dibromofluoromethane	*46*	*1*	*50.0*	*91 %*	*53-146*	*2A19007*	*EPA 8260D*	*01/19/22 17:58*	*NMC*	
Toluene-d8	*47*	*1*	*50.0*	*93 %*	*41-146*	*2A19007*	*EPA 8260D*	*01/19/22 17:58*	*NMC*	

ANALYTICAL RESULTS

Description: LC34PS-PZF-040.0-20220117 **Lab Sample ID:** AE10221-33 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 10:30 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	2000	U	ug/L	2500	2000	6200	2A19007	EPA 8260D	01/19/22 18:27	NMC	
1,1,2,2-Tetrachloroethane [79-34-5]^	1400	U	ug/L	2500	1400	6200	2A19007	EPA 8260D	01/19/22 18:27	NMC	
1,1,2-Trichloroethane [79-00-5]^	1900	U	ug/L	2500	1900	6200	2A19007	EPA 8260D	01/19/22 18:27	NMC	
1,1-Dichloroethane [75-34-3]^	1600	U	ug/L	2500	1600	6200	2A19007	EPA 8260D	01/19/22 18:27	NMC	
1,1-Dichloroethene [75-35-4]^	2400	U	ug/L	2500	2400	6200	2A19007	EPA 8260D	01/19/22 18:27	NMC	
1,2,4-Trichlorobenzene [120-82-1]^	1800	U	ug/L	2500	1800	6200	2A19007	EPA 8260D	01/19/22 18:27	NMC	
1,2-Dibromo-3-chloropropane [96-12-8]^	2400	U	ug/L	2500	2400	6200	2A19007	EPA 8260D	01/19/22 18:27	NMC	
1,2-Dibromoethane [106-93-4]^	2000	U	ug/L	2500	2000	6200	2A19007	EPA 8260D	01/19/22 18:27	NMC	
1,2-Dichlorobenzene [95-50-1]^	1800	U	ug/L	2500	1800	6200	2A19007	EPA 8260D	01/19/22 18:27	NMC	
1,2-Dichloroethane [107-06-2]^	1600	U	ug/L	2500	1600	6200	2A19007	EPA 8260D	01/19/22 18:27	NMC	
1,2-Dichloropropane [78-87-5]^	2000	U	ug/L	2500	2000	6200	2A19007	EPA 8260D	01/19/22 18:27	NMC	
1,3-Dichlorobenzene [541-73-1]^	1900	U	ug/L	2500	1900	6200	2A19007	EPA 8260D	01/19/22 18:27	NMC	
1,4-Dichlorobenzene [106-46-7]^	1900	U	ug/L	2500	1900	6200	2A19007	EPA 8260D	01/19/22 18:27	NMC	
2-Butanone [78-93-3]^	11000	U	ug/L	2500	11000	31000	2A19007	EPA 8260D	01/19/22 18:27	NMC	
2-Hexanone [591-78-6]^	6200	U	ug/L	2500	6200	31000	2A19007	EPA 8260D	01/19/22 18:27	NMC	
4-Methyl-2-pentanone [108-10-1]^	6200	U	ug/L	2500	6200	31000	2A19007	EPA 8260D	01/19/22 18:27	NMC	
Acetone [67-64-1]^	25000	U	ug/L	2500	25000	62000	2A19007	EPA 8260D	01/19/22 18:27	NMC	
Benzene [71-43-2]^	1800	U	ug/L	2500	1800	6200	2A19007	EPA 8260D	01/19/22 18:27	NMC	
Bromodichloromethane [75-27-4]^	1300	U	ug/L	2500	1300	6200	2A19007	EPA 8260D	01/19/22 18:27	NMC	
Bromoform [75-25-2]^	1900	U	ug/L	2500	1900	6200	2A19007	EPA 8260D	01/19/22 18:27	NMC	
Bromomethane [74-83-9]^	2400	U	ug/L	2500	2400	6200	2A19007	EPA 8260D	01/19/22 18:27	NMC	
Carbon disulfide [75-15-0]^	6200	U	ug/L	2500	6200	31000	2A19007	EPA 8260D	01/19/22 18:27	NMC	QV-01
Carbon Tetrachloride [56-23-5]^	2400	U	ug/L	2500	2400	6200	2A19007	EPA 8260D	01/19/22 18:27	NMC	
Chlorobenzene [108-90-7]^	1800	U	ug/L	2500	1800	6200	2A19007	EPA 8260D	01/19/22 18:27	NMC	
Chloroethane [75-00-3]^	2400	U	ug/L	2500	2400	6200	2A19007	EPA 8260D	01/19/22 18:27	NMC	
Chloroform [67-66-3]^	2000	U	ug/L	2500	2000	6200	2A19007	EPA 8260D	01/19/22 18:27	NMC	
Chloromethane [74-87-3]^	2000	U	ug/L	2500	2000	6200	2A19007	EPA 8260D	01/19/22 18:27	NMC	
cis-1,2-Dichloroethene [156-59-2]^	**54000**		ug/L	2500	1300	6200	2A19007	EPA 8260D	01/19/22 18:27	NMC	
cis-1,3-Dichloropropene [10061-01-5]^	1500	U	ug/L	2500	1500	6200	2A19007	EPA 8260D	01/19/22 18:27	NMC	
Cyclohexane [110-82-7]^	2300	U	ug/L	2500	2300	6200	2A19007	EPA 8260D	01/19/22 18:27	NMC	
Dibromochloromethane [124-48-1]^	1200	U	ug/L	2500	1200	6200	2A19007	EPA 8260D	01/19/22 18:27	NMC	
Dichlorodifluoromethane [75-71-8]^	1800	U	ug/L	2500	1800	6200	2A19007	EPA 8260D	01/19/22 18:27	NMC	QV-01
Ethylbenzene [100-41-4]^	1700	U	ug/L	2500	1700	6200	2A19007	EPA 8260D	01/19/22 18:27	NMC	
Freon 113 [76-13-1]^	1800	U	ug/L	2500	1800	6200	2A19007	EPA 8260D	01/19/22 18:27	NMC	
Isopropylbenzene [98-82-8]^	1700	U	ug/L	2500	1700	6200	2A19007	EPA 8260D	01/19/22 18:27	NMC	
Methyl acetate [79-20-9]^	2400	U	ug/L	2500	2400	6200	2A19007	EPA 8260D	01/19/22 18:27	NMC	
Methylene Chloride [75-09-2]^	6200	U	ug/L	2500	6200	31000	2A19007	EPA 8260D	01/19/22 18:27	NMC	
Methyl-tert-Butyl Ether [1634-04-4]^	1500	U	ug/L	2500	1500	6200	2A19007	EPA 8260D	01/19/22 18:27	NMC	
Styrene [100-42-5]^	1500	U	ug/L	2500	1500	6200	2A19007	EPA 8260D	01/19/22 18:27	NMC	
Tetrachloroethene [127-18-4]^	1900	U	ug/L	2500	1900	6200	2A19007	EPA 8260D	01/19/22 18:27	NMC	
Toluene [108-88-3]^	1800	U	ug/L	2500	1800	6200	2A19007	EPA 8260D	01/19/22 18:27	NMC	
trans-1,2-Dichloroethene [156-60-5]^	1800	U	ug/L	2500	1800	6200	2A19007	EPA 8260D	01/19/22 18:27	NMC	
trans-1,3-Dichloropropene [10061-02-6]^	1800	U	ug/L	2500	1800	6200	2A19007	EPA 8260D	01/19/22 18:27	NMC	
Trichloroethene [79-01-6]^	**210000**		ug/L	2500	2200	6200	2A19007	EPA 8260D	01/19/22 18:27	NMC	
Trichlorofluoromethane [75-69-4]^	2400	U	ug/L	2500	2400	6200	2A19007	EPA 8260D	01/19/22 18:27	NMC	
Vinyl chloride [75-01-4]^	**2000**	I	ug/L	2500	1800	6200	2A19007	EPA 8260D	01/19/22 18:27	NMC	
Xylenes (Total) [1330-20-7]	3200	U	ug/L	2500	3200	12000	2A19007	EPA 8260D	01/19/22 18:27	NMC	

ANALYTICAL RESULTS

Description: LC34PS-PZF-040.0-20220117 **Lab Sample ID:** AE10221-33 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 10:30 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*48*	*1*	*50.0*	*96 %*	*41-142*	*2A19007*	*EPA 8260D*	*01/19/22 18:27*	*NMC*	
Dibromofluoromethane	*45*	*1*	*50.0*	*91 %*	*53-146*	*2A19007*	*EPA 8260D*	*01/19/22 18:27*	*NMC*	
Toluene-d8	*48*	*1*	*50.0*	*95 %*	*41-146*	*2A19007*	*EPA 8260D*	*01/19/22 18:27*	*NMC*	

ANALYTICAL RESULTS

Description: LC34PS-PZF-050.0-20220117 **Lab Sample ID:** AE10221-34 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 10:32 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	16000	U	ug/L	20000	16000	50000	2A19007	EPA 8260D	01/19/22 18:56	NMC	
1,1,2,2-Tetrachloroethane [79-34-5]^	11000	U	ug/L	20000	11000	50000	2A19007	EPA 8260D	01/19/22 18:56	NMC	
1,1,2-Trichloroethane [79-00-5]^	15000	U	ug/L	20000	15000	50000	2A19007	EPA 8260D	01/19/22 18:56	NMC	
1,1-Dichloroethane [75-34-3]^	12000	U	ug/L	20000	12000	50000	2A19007	EPA 8260D	01/19/22 18:56	NMC	
1,1-Dichloroethene [75-35-4]^	19000	U	ug/L	20000	19000	50000	2A19007	EPA 8260D	01/19/22 18:56	NMC	
1,2,4-Trichlorobenzene [120-82-1]^	14000	U	ug/L	20000	14000	50000	2A19007	EPA 8260D	01/19/22 18:56	NMC	
1,2-Dibromo-3-chloropropane [96-12-8]^	19000	U	ug/L	20000	19000	50000	2A19007	EPA 8260D	01/19/22 18:56	NMC	
1,2-Dibromoethane [106-93-4]^	16000	U	ug/L	20000	16000	50000	2A19007	EPA 8260D	01/19/22 18:56	NMC	
1,2-Dichlorobenzene [95-50-1]^	15000	U	ug/L	20000	15000	50000	2A19007	EPA 8260D	01/19/22 18:56	NMC	
1,2-Dichloroethane [107-06-2]^	13000	U	ug/L	20000	13000	50000	2A19007	EPA 8260D	01/19/22 18:56	NMC	
1,2-Dichloropropane [78-87-5]^	16000	U	ug/L	20000	16000	50000	2A19007	EPA 8260D	01/19/22 18:56	NMC	
1,3-Dichlorobenzene [541-73-1]^	15000	U	ug/L	20000	15000	50000	2A19007	EPA 8260D	01/19/22 18:56	NMC	
1,4-Dichlorobenzene [106-46-7]^	15000	U	ug/L	20000	15000	50000	2A19007	EPA 8260D	01/19/22 18:56	NMC	
2-Butanone [78-93-3]^	90000	U	ug/L	20000	90000	250000	2A19007	EPA 8260D	01/19/22 18:56	NMC	
2-Hexanone [591-78-6]^	50000	U	ug/L	20000	50000	250000	2A19007	EPA 8260D	01/19/22 18:56	NMC	
4-Methyl-2-pentanone [108-10-1]^	50000	U	ug/L	20000	50000	250000	2A19007	EPA 8260D	01/19/22 18:56	NMC	
Acetone [67-64-1]^	200000	U	ug/L	20000	200000	500000	2A19007	EPA 8260D	01/19/22 18:56	NMC	
Benzene [71-43-2]^	14000	U	ug/L	20000	14000	50000	2A19007	EPA 8260D	01/19/22 18:56	NMC	
Bromodichloromethane [75-27-4]^	10000	U	ug/L	20000	10000	50000	2A19007	EPA 8260D	01/19/22 18:56	NMC	
Bromoform [75-25-2]^	15000	U	ug/L	20000	15000	50000	2A19007	EPA 8260D	01/19/22 18:56	NMC	
Bromomethane [74-83-9]^	19000	U	ug/L	20000	19000	50000	2A19007	EPA 8260D	01/19/22 18:56	NMC	
Carbon disulfide [75-15-0]^	50000	U	ug/L	20000	50000	250000	2A19007	EPA 8260D	01/19/22 18:56	NMC	QV-01
Carbon Tetrachloride [56-23-5]^	19000	U	ug/L	20000	19000	50000	2A19007	EPA 8260D	01/19/22 18:56	NMC	
Chlorobenzene [108-90-7]^	14000	U	ug/L	20000	14000	50000	2A19007	EPA 8260D	01/19/22 18:56	NMC	
Chloroethane [75-00-3]^	20000	U	ug/L	20000	20000	50000	2A19007	EPA 8260D	01/19/22 18:56	NMC	
Chloroform [67-66-3]^	16000	U	ug/L	20000	16000	50000	2A19007	EPA 8260D	01/19/22 18:56	NMC	
Chloromethane [74-87-3]^	16000	U	ug/L	20000	16000	50000	2A19007	EPA 8260D	01/19/22 18:56	NMC	
cis-1,2-Dichloroethene [156-59-2]^	**39000**	I	ug/L	20000	11000	50000	2A19007	EPA 8260D	01/19/22 18:56	NMC	
cis-1,3-Dichloropropene [10061-01-5]^	12000	U	ug/L	20000	12000	50000	2A19007	EPA 8260D	01/19/22 18:56	NMC	
Cyclohexane [110-82-7]^	19000	U	ug/L	20000	19000	50000	2A19007	EPA 8260D	01/19/22 18:56	NMC	
Dibromochloromethane [124-48-1]^	10000	U	ug/L	20000	10000	50000	2A19007	EPA 8260D	01/19/22 18:56	NMC	
Dichlorodifluoromethane [75-71-8]^	15000	U	ug/L	20000	15000	50000	2A19007	EPA 8260D	01/19/22 18:56	NMC	QV-01
Ethylbenzene [100-41-4]^	14000	U	ug/L	20000	14000	50000	2A19007	EPA 8260D	01/19/22 18:56	NMC	
Freon 113 [76-13-1]^	15000	U	ug/L	20000	15000	50000	2A19007	EPA 8260D	01/19/22 18:56	NMC	
Isopropylbenzene [98-82-8]^	13000	U	ug/L	20000	13000	50000	2A19007	EPA 8260D	01/19/22 18:56	NMC	
Methyl acetate [79-20-9]^	19000	U	ug/L	20000	19000	50000	2A19007	EPA 8260D	01/19/22 18:56	NMC	
Methylene Chloride [75-09-2]^	50000	U	ug/L	20000	50000	250000	2A19007	EPA 8260D	01/19/22 18:56	NMC	
Methyl-tert-Butyl Ether [1634-04-4]^	12000	U	ug/L	20000	12000	50000	2A19007	EPA 8260D	01/19/22 18:56	NMC	
Styrene [100-42-5]^	12000	U	ug/L	20000	12000	50000	2A19007	EPA 8260D	01/19/22 18:56	NMC	
Tetrachloroethene [127-18-4]^	15000	U	ug/L	20000	15000	50000	2A19007	EPA 8260D	01/19/22 18:56	NMC	
Toluene [108-88-3]^	14000	U	ug/L	20000	14000	50000	2A19007	EPA 8260D	01/19/22 18:56	NMC	
trans-1,2-Dichloroethene [156-60-5]^	15000	U	ug/L	20000	15000	50000	2A19007	EPA 8260D	01/19/22 18:56	NMC	
trans-1,3-Dichloropropene [10061-02-6]^	15000	U	ug/L	20000	15000	50000	2A19007	EPA 8260D	01/19/22 18:56	NMC	
Trichloroethene [79-01-6]^	**930000**		ug/L	20000	18000	50000	2A19007	EPA 8260D	01/19/22 18:56	NMC	
Trichlorofluoromethane [75-69-4]^	19000	U	ug/L	20000	19000	50000	2A19007	EPA 8260D	01/19/22 18:56	NMC	
Vinyl chloride [75-01-4]^	14000	U	ug/L	20000	14000	50000	2A19007	EPA 8260D	01/19/22 18:56	NMC	
Xylenes (Total) [1330-20-7]	26000	U	ug/L	20000	26000	100000	2A19007	EPA 8260D	01/19/22 18:56	NMC	

ANALYTICAL RESULTS

Description: LC34PS-PZF-050.0-20220117	**Lab Sample ID:** AE10221-34	**Received:** 01/17/22 15:30
Matrix: Ground Water	**Sampled:** 01/17/22 10:32	**Work Order:** AE10221
Project: NASA KSC LC34	**Sampled By:** Dan Forester / James Lloyd	

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*47*	*1*	*50.0*	*94 %*	*41-142*	*2A19007*	*EPA 8260D*	*01/19/22 18:56*	*NMC*	
Dibromofluoromethane	*46*	*1*	*50.0*	*91 %*	*53-146*	*2A19007*	*EPA 8260D*	*01/19/22 18:56*	*NMC*	
Toluene-d8	*47*	*1*	*50.0*	*94 %*	*41-146*	*2A19007*	*EPA 8260D*	*01/19/22 18:56*	*NMC*	

ANALYTICAL RESULTS

Description: LC34PS-PZF-058.0-20220117 **Lab Sample ID:** AE10221-35 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 10:34 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	1600	U	ug/L	2000	1600	5000	2A19017	EPA 8260D	01/19/22 14:51	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	1100	U	ug/L	2000	1100	5000	2A19017	EPA 8260D	01/19/22 14:51	KKW	
1,1,2-Trichloroethane [79-00-5]^	1500	U	ug/L	2000	1500	5000	2A19017	EPA 8260D	01/19/22 14:51	KKW	
1,1-Dichloroethane [75-34-3]^	1200	U	ug/L	2000	1200	5000	2A19017	EPA 8260D	01/19/22 14:51	KKW	
1,1-Dichloroethene [75-35-4]^	1900	U	ug/L	2000	1900	5000	2A19017	EPA 8260D	01/19/22 14:51	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	1400	U	ug/L	2000	1400	5000	2A19017	EPA 8260D	01/19/22 14:51	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	1900	U	ug/L	2000	1900	5000	2A19017	EPA 8260D	01/19/22 14:51	KKW	
1,2-Dibromoethane [106-93-4]^	1600	U	ug/L	2000	1600	5000	2A19017	EPA 8260D	01/19/22 14:51	KKW	
1,2-Dichlorobenzene [95-50-1]^	1500	U	ug/L	2000	1500	5000	2A19017	EPA 8260D	01/19/22 14:51	KKW	
1,2-Dichloroethane [107-06-2]^	1300	U	ug/L	2000	1300	5000	2A19017	EPA 8260D	01/19/22 14:51	KKW	
1,2-Dichloropropane [78-87-5]^	1600	U	ug/L	2000	1600	5000	2A19017	EPA 8260D	01/19/22 14:51	KKW	
1,3-Dichlorobenzene [541-73-1]^	1500	U	ug/L	2000	1500	5000	2A19017	EPA 8260D	01/19/22 14:51	KKW	
1,4-Dichlorobenzene [106-46-7]^	1500	U	ug/L	2000	1500	5000	2A19017	EPA 8260D	01/19/22 14:51	KKW	
2-Butanone [78-93-3]^	9000	U	ug/L	2000	9000	25000	2A19017	EPA 8260D	01/19/22 14:51	KKW	
2-Hexanone [591-78-6]^	5000	U	ug/L	2000	5000	25000	2A19017	EPA 8260D	01/19/22 14:51	KKW	
4-Methyl-2-pentanone [108-10-1]^	5000	U	ug/L	2000	5000	25000	2A19017	EPA 8260D	01/19/22 14:51	KKW	
Acetone [67-64-1]^	20000	U	ug/L	2000	20000	50000	2A19017	EPA 8260D	01/19/22 14:51	KKW	
Benzene [71-43-2]^	1400	U	ug/L	2000	1400	5000	2A19017	EPA 8260D	01/19/22 14:51	KKW	
Bromodichloromethane [75-27-4]^	1000	U	ug/L	2000	1000	5000	2A19017	EPA 8260D	01/19/22 14:51	KKW	
Bromoform [75-25-2]^	1500	U	ug/L	2000	1500	5000	2A19017	EPA 8260D	01/19/22 14:51	KKW	
Bromomethane [74-83-9]^	1900	U	ug/L	2000	1900	5000	2A19017	EPA 8260D	01/19/22 14:51	KKW	QV-01
Carbon disulfide [75-15-0]^	5000	U	ug/L	2000	5000	25000	2A19017	EPA 8260D	01/19/22 14:51	KKW	
Carbon Tetrachloride [56-23-5]^	1900	U	ug/L	2000	1900	5000	2A19017	EPA 8260D	01/19/22 14:51	KKW	QL-02, QV-01
Chlorobenzene [108-90-7]^	1400	U	ug/L	2000	1400	5000	2A19017	EPA 8260D	01/19/22 14:51	KKW	
Chloroethane [75-00-3]^	2000	U	ug/L	2000	2000	5000	2A19017	EPA 8260D	01/19/22 14:51	KKW	
Chloroform [67-66-3]^	1600	U	ug/L	2000	1600	5000	2A19017	EPA 8260D	01/19/22 14:51	KKW	
Chloromethane [74-87-3]^	1600	U	ug/L	2000	1600	5000	2A19017	EPA 8260D	01/19/22 14:51	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**3100**	I	ug/L	2000	1100	5000	2A19017	EPA 8260D	01/19/22 14:51	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	1200	U	ug/L	2000	1200	5000	2A19017	EPA 8260D	01/19/22 14:51	KKW	
Cyclohexane [110-82-7]^	1900	U	ug/L	2000	1900	5000	2A19017	EPA 8260D	01/19/22 14:51	KKW	
Dibromochloromethane [124-48-1]^	1000	U	ug/L	2000	1000	5000	2A19017	EPA 8260D	01/19/22 14:51	KKW	
Dichlorodifluoromethane [75-71-8]^	1500	U	ug/L	2000	1500	5000	2A19017	EPA 8260D	01/19/22 14:51	KKW	
Ethylbenzene [100-41-4]^	1400	U	ug/L	2000	1400	5000	2A19017	EPA 8260D	01/19/22 14:51	KKW	
Freon 113 [76-13-1]^	1500	U	ug/L	2000	1500	5000	2A19017	EPA 8260D	01/19/22 14:51	KKW	
Isopropylbenzene [98-82-8]^	1300	U	ug/L	2000	1300	5000	2A19017	EPA 8260D	01/19/22 14:51	KKW	
Methyl acetate [79-20-9]^	1900	U	ug/L	2000	1900	5000	2A19017	EPA 8260D	01/19/22 14:51	KKW	
Methylene Chloride [75-09-2]^	5000	U	ug/L	2000	5000	25000	2A19017	EPA 8260D	01/19/22 14:51	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	1200	U	ug/L	2000	1200	5000	2A19017	EPA 8260D	01/19/22 14:51	KKW	
Styrene [100-42-5]^	1200	U	ug/L	2000	1200	5000	2A19017	EPA 8260D	01/19/22 14:51	KKW	
Tetrachloroethene [127-18-4]^	1500	U	ug/L	2000	1500	5000	2A19017	EPA 8260D	01/19/22 14:51	KKW	
Toluene [108-88-3]^	1400	U	ug/L	2000	1400	5000	2A19017	EPA 8260D	01/19/22 14:51	KKW	
trans-1,2-Dichloroethene [156-60-5]^	1500	U	ug/L	2000	1500	5000	2A19017	EPA 8260D	01/19/22 14:51	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	1500	U	ug/L	2000	1500	5000	2A19017	EPA 8260D	01/19/22 14:51	KKW	
Trichloroethene [79-01-6]^	**73000**		ug/L	2000	1800	5000	2A19017	EPA 8260D	01/19/22 14:51	KKW	
Trichlorofluoromethane [75-69-4]^	1900	U	ug/L	2000	1900	5000	2A19017	EPA 8260D	01/19/22 14:51	KKW	
Vinyl chloride [75-01-4]^	1400	U	ug/L	2000	1400	5000	2A19017	EPA 8260D	01/19/22 14:51	KKW	

ANALYTICAL RESULTS

Description: LC34PS-PZF-058.0-20220117 **Lab Sample ID:** AE10221-35 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 10:34 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Xylenes (Total) [1330-20-7]	2600	U	ug/L	2000	2600	10000	2A19017	EPA 8260D	01/19/22 14:51	KKW	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*53*	*1*	*50.0*	*106 %*	*41-142*	*2A19017*	*EPA 8260D*	*01/19/22 14:51*	*KKW*	
Dibromofluoromethane	*51*	*1*	*50.0*	*102 %*	*53-146*	*2A19017*	*EPA 8260D*	*01/19/22 14:51*	*KKW*	
Toluene-d8	*53*	*1*	*50.0*	*106 %*	*41-146*	*2A19017*	*EPA 8260D*	*01/19/22 14:51*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZF-073.0-20220117 **Lab Sample ID:** AE10221-36 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 10:36 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	2A19017	EPA 8260D	01/19/22 10:14	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	2A19017	EPA 8260D	01/19/22 10:14	KKW	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	2A19017	EPA 8260D	01/19/22 10:14	KKW	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	2A19017	EPA 8260D	01/19/22 10:14	KKW	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	2A19017	EPA 8260D	01/19/22 10:14	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	2A19017	EPA 8260D	01/19/22 10:14	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	2A19017	EPA 8260D	01/19/22 10:14	KKW	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	2A19017	EPA 8260D	01/19/22 10:14	KKW	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	2A19017	EPA 8260D	01/19/22 10:14	KKW	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	2A19017	EPA 8260D	01/19/22 10:14	KKW	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	2A19017	EPA 8260D	01/19/22 10:14	KKW	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	2A19017	EPA 8260D	01/19/22 10:14	KKW	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	2A19017	EPA 8260D	01/19/22 10:14	KKW	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	2A19017	EPA 8260D	01/19/22 10:14	KKW	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	2A19017	EPA 8260D	01/19/22 10:14	KKW	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	2A19017	EPA 8260D	01/19/22 10:14	KKW	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	2A19017	EPA 8260D	01/19/22 10:14	KKW	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	2A19017	EPA 8260D	01/19/22 10:14	KKW	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	2A19017	EPA 8260D	01/19/22 10:14	KKW	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	2A19017	EPA 8260D	01/19/22 10:14	KKW	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	2A19017	EPA 8260D	01/19/22 10:14	KKW	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	2A19017	EPA 8260D	01/19/22 10:14	KKW	
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	2A19017	EPA 8260D	01/19/22 10:14	KKW	QL-02, QV-01
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	2A19017	EPA 8260D	01/19/22 10:14	KKW	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	2A19017	EPA 8260D	01/19/22 10:14	KKW	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	2A19017	EPA 8260D	01/19/22 10:14	KKW	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	2A19017	EPA 8260D	01/19/22 10:14	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**18**		ug/L	1	0.53	2.5	2A19017	EPA 8260D	01/19/22 10:14	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	2A19017	EPA 8260D	01/19/22 10:14	KKW	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	2A19017	EPA 8260D	01/19/22 10:14	KKW	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	2A19017	EPA 8260D	01/19/22 10:14	KKW	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	2A19017	EPA 8260D	01/19/22 10:14	KKW	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	2A19017	EPA 8260D	01/19/22 10:14	KKW	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	2A19017	EPA 8260D	01/19/22 10:14	KKW	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	2A19017	EPA 8260D	01/19/22 10:14	KKW	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	2A19017	EPA 8260D	01/19/22 10:14	KKW	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	2A19017	EPA 8260D	01/19/22 10:14	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	2A19017	EPA 8260D	01/19/22 10:14	KKW	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	2A19017	EPA 8260D	01/19/22 10:14	KKW	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	2A19017	EPA 8260D	01/19/22 10:14	KKW	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	2A19017	EPA 8260D	01/19/22 10:14	KKW	
trans-1,2-Dichloroethene [156-60-5]^	**1.7**	I	ug/L	1	0.73	2.5	2A19017	EPA 8260D	01/19/22 10:14	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	2A19017	EPA 8260D	01/19/22 10:14	KKW	
Trichloroethene [79-01-6]^	**32**		ug/L	1	0.89	2.5	2A19017	EPA 8260D	01/19/22 10:14	KKW	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	2A19017	EPA 8260D	01/19/22 10:14	KKW	
Vinyl chloride [75-01-4]^	0.71	U	ug/L	1	0.71	2.5	2A19017	EPA 8260D	01/19/22 10:14	KKW	

ANALYTICAL RESULTS

Description: LC34PS-PZF-073.0-20220117 **Lab Sample ID:** AE10221-36 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 10:36 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Xylenes (Total) [1330-20-7]	1.3	U	ug/L	1	1.3	5.0	2A19017	EPA 8260D	01/19/22 10:14	KKW	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*54*	*1*	*50.0*	*107 %*	*41-142*	*2A19017*	*EPA 8260D*	*01/19/22 10:14*	*KKW*	
Dibromofluoromethane	*53*	*1*	*50.0*	*107 %*	*53-146*	*2A19017*	*EPA 8260D*	*01/19/22 10:14*	*KKW*	
Toluene-d8	*54*	*1*	*50.0*	*108 %*	*41-146*	*2A19017*	*EPA 8260D*	*01/19/22 10:14*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZF-080.0-20220117 **Lab Sample ID:** AE10221-37 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 10:38 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	2A19017	EPA 8260D	01/19/22 10:42	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	2A19017	EPA 8260D	01/19/22 10:42	KKW	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	2A19017	EPA 8260D	01/19/22 10:42	KKW	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	2A19017	EPA 8260D	01/19/22 10:42	KKW	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	2A19017	EPA 8260D	01/19/22 10:42	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	2A19017	EPA 8260D	01/19/22 10:42	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	2A19017	EPA 8260D	01/19/22 10:42	KKW	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	2A19017	EPA 8260D	01/19/22 10:42	KKW	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	2A19017	EPA 8260D	01/19/22 10:42	KKW	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	2A19017	EPA 8260D	01/19/22 10:42	KKW	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	2A19017	EPA 8260D	01/19/22 10:42	KKW	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	2A19017	EPA 8260D	01/19/22 10:42	KKW	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	2A19017	EPA 8260D	01/19/22 10:42	KKW	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	2A19017	EPA 8260D	01/19/22 10:42	KKW	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	2A19017	EPA 8260D	01/19/22 10:42	KKW	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	2A19017	EPA 8260D	01/19/22 10:42	KKW	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	2A19017	EPA 8260D	01/19/22 10:42	KKW	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	2A19017	EPA 8260D	01/19/22 10:42	KKW	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	2A19017	EPA 8260D	01/19/22 10:42	KKW	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	2A19017	EPA 8260D	01/19/22 10:42	KKW	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	2A19017	EPA 8260D	01/19/22 10:42	KKW	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	2A19017	EPA 8260D	01/19/22 10:42	KKW	
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	2A19017	EPA 8260D	01/19/22 10:42	KKW	QL-02, QV-01
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	2A19017	EPA 8260D	01/19/22 10:42	KKW	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	2A19017	EPA 8260D	01/19/22 10:42	KKW	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	2A19017	EPA 8260D	01/19/22 10:42	KKW	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	2A19017	EPA 8260D	01/19/22 10:42	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**49**		ug/L	1	0.53	2.5	2A19017	EPA 8260D	01/19/22 10:42	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	2A19017	EPA 8260D	01/19/22 10:42	KKW	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	2A19017	EPA 8260D	01/19/22 10:42	KKW	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	2A19017	EPA 8260D	01/19/22 10:42	KKW	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	2A19017	EPA 8260D	01/19/22 10:42	KKW	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	2A19017	EPA 8260D	01/19/22 10:42	KKW	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	2A19017	EPA 8260D	01/19/22 10:42	KKW	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	2A19017	EPA 8260D	01/19/22 10:42	KKW	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	2A19017	EPA 8260D	01/19/22 10:42	KKW	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	2A19017	EPA 8260D	01/19/22 10:42	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	2A19017	EPA 8260D	01/19/22 10:42	KKW	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	2A19017	EPA 8260D	01/19/22 10:42	KKW	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	2A19017	EPA 8260D	01/19/22 10:42	KKW	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	2A19017	EPA 8260D	01/19/22 10:42	KKW	
trans-1,2-Dichloroethene [156-60-5]^	**4.0**		ug/L	1	0.73	2.5	2A19017	EPA 8260D	01/19/22 10:42	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	2A19017	EPA 8260D	01/19/22 10:42	KKW	
Trichloroethene [79-01-6]^	**11**		ug/L	1	0.89	2.5	2A19017	EPA 8260D	01/19/22 10:42	KKW	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	2A19017	EPA 8260D	01/19/22 10:42	KKW	
Vinyl chloride [75-01-4]^	**11**		ug/L	1	0.71	2.5	2A19017	EPA 8260D	01/19/22 10:42	KKW	

ANALYTICAL RESULTS

Description: LC34PS-PZF-080.0-20220117 **Lab Sample ID:** AE10221-37 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 10:38 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Xylenes (Total) [1330-20-7]	1.3	U	ug/L	1	1.3	5.0	2A19017	EPA 8260D	01/19/22 10:42	KKW	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*54*	*1*	*50.0*	*108 %*	*41-142*	*2A19017*	*EPA 8260D*	*01/19/22 10:42*	*KKW*	
Dibromofluoromethane	*52*	*1*	*50.0*	*105 %*	*53-146*	*2A19017*	*EPA 8260D*	*01/19/22 10:42*	*KKW*	
Toluene-d8	*52*	*1*	*50.0*	*105 %*	*41-146*	*2A19017*	*EPA 8260D*	*01/19/22 10:42*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZA-040.0-20220117 **Lab Sample ID:** AE10221-38 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 11:00 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	4000	U	ug/L	5000	4000	12000	2A19017	EPA 8260D	01/19/22 15:19	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	2700	U	ug/L	5000	2700	12000	2A19017	EPA 8260D	01/19/22 15:19	KKW	
1,1,2-Trichloroethane [79-00-5]^	3800	U	ug/L	5000	3800	12000	2A19017	EPA 8260D	01/19/22 15:19	KKW	
1,1-Dichloroethane [75-34-3]^	3100	U	ug/L	5000	3100	12000	2A19017	EPA 8260D	01/19/22 15:19	KKW	
1,1-Dichloroethene [75-35-4]^	4700	U	ug/L	5000	4700	12000	2A19017	EPA 8260D	01/19/22 15:19	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	3500	U	ug/L	5000	3500	12000	2A19017	EPA 8260D	01/19/22 15:19	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	4800	U	ug/L	5000	4800	12000	2A19017	EPA 8260D	01/19/22 15:19	KKW	
1,2-Dibromoethane [106-93-4]^	3900	U	ug/L	5000	3900	12000	2A19017	EPA 8260D	01/19/22 15:19	KKW	
1,2-Dichlorobenzene [95-50-1]^	3600	U	ug/L	5000	3600	12000	2A19017	EPA 8260D	01/19/22 15:19	KKW	
1,2-Dichloroethane [107-06-2]^	3200	U	ug/L	5000	3200	12000	2A19017	EPA 8260D	01/19/22 15:19	KKW	
1,2-Dichloropropane [78-87-5]^	4000	U	ug/L	5000	4000	12000	2A19017	EPA 8260D	01/19/22 15:19	KKW	
1,3-Dichlorobenzene [541-73-1]^	3800	U	ug/L	5000	3800	12000	2A19017	EPA 8260D	01/19/22 15:19	KKW	
1,4-Dichlorobenzene [106-46-7]^	3800	U	ug/L	5000	3800	12000	2A19017	EPA 8260D	01/19/22 15:19	KKW	
2-Butanone [78-93-3]^	22000	U	ug/L	5000	22000	62000	2A19017	EPA 8260D	01/19/22 15:19	KKW	
2-Hexanone [591-78-6]^	12000	U	ug/L	5000	12000	62000	2A19017	EPA 8260D	01/19/22 15:19	KKW	
4-Methyl-2-pentanone [108-10-1]^	12000	U	ug/L	5000	12000	62000	2A19017	EPA 8260D	01/19/22 15:19	KKW	
Acetone [67-64-1]^	50000	U	ug/L	5000	50000	120000	2A19017	EPA 8260D	01/19/22 15:19	KKW	
Benzene [71-43-2]^	3600	U	ug/L	5000	3600	12000	2A19017	EPA 8260D	01/19/22 15:19	KKW	
Bromodichloromethane [75-27-4]^	2600	U	ug/L	5000	2600	12000	2A19017	EPA 8260D	01/19/22 15:19	KKW	
Bromoform [75-25-2]^	3800	U	ug/L	5000	3800	12000	2A19017	EPA 8260D	01/19/22 15:19	KKW	
Bromomethane [74-83-9]^	4800	U	ug/L	5000	4800	12000	2A19017	EPA 8260D	01/19/22 15:19	KKW	QV-01
Carbon disulfide [75-15-0]^	12000	U	ug/L	5000	12000	62000	2A19017	EPA 8260D	01/19/22 15:19	KKW	
Carbon Tetrachloride [56-23-5]^	4700	U	ug/L	5000	4700	12000	2A19017	EPA 8260D	01/19/22 15:19	KKW	QL-02, QV-01
Chlorobenzene [108-90-7]^	3600	U	ug/L	5000	3600	12000	2A19017	EPA 8260D	01/19/22 15:19	KKW	
Chloroethane [75-00-3]^	4900	U	ug/L	5000	4900	12000	2A19017	EPA 8260D	01/19/22 15:19	KKW	
Chloroform [67-66-3]^	4000	U	ug/L	5000	4000	12000	2A19017	EPA 8260D	01/19/22 15:19	KKW	
Chloromethane [74-87-3]^	4100	U	ug/L	5000	4100	12000	2A19017	EPA 8260D	01/19/22 15:19	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**25000**		ug/L	5000	2600	12000	2A19017	EPA 8260D	01/19/22 15:19	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	3000	U	ug/L	5000	3000	12000	2A19017	EPA 8260D	01/19/22 15:19	KKW	
Cyclohexane [110-82-7]^	4600	U	ug/L	5000	4600	12000	2A19017	EPA 8260D	01/19/22 15:19	KKW	
Dibromochloromethane [124-48-1]^	2500	U	ug/L	5000	2500	12000	2A19017	EPA 8260D	01/19/22 15:19	KKW	
Dichlorodifluoromethane [75-71-8]^	3700	U	ug/L	5000	3700	12000	2A19017	EPA 8260D	01/19/22 15:19	KKW	
Ethylbenzene [100-41-4]^	3400	U	ug/L	5000	3400	12000	2A19017	EPA 8260D	01/19/22 15:19	KKW	
Freon 113 [76-13-1]^	3600	U	ug/L	5000	3600	12000	2A19017	EPA 8260D	01/19/22 15:19	KKW	
Isopropylbenzene [98-82-8]^	3400	U	ug/L	5000	3400	12000	2A19017	EPA 8260D	01/19/22 15:19	KKW	
Methyl acetate [79-20-9]^	4800	U	ug/L	5000	4800	12000	2A19017	EPA 8260D	01/19/22 15:19	KKW	
Methylene Chloride [75-09-2]^	12000	U	ug/L	5000	12000	62000	2A19017	EPA 8260D	01/19/22 15:19	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	3000	U	ug/L	5000	3000	12000	2A19017	EPA 8260D	01/19/22 15:19	KKW	
Styrene [100-42-5]^	3000	U	ug/L	5000	3000	12000	2A19017	EPA 8260D	01/19/22 15:19	KKW	
Tetrachloroethene [127-18-4]^	3800	U	ug/L	5000	3800	12000	2A19017	EPA 8260D	01/19/22 15:19	KKW	
Toluene [108-88-3]^	3600	U	ug/L	5000	3600	12000	2A19017	EPA 8260D	01/19/22 15:19	KKW	
trans-1,2-Dichloroethene [156-60-5]^	3600	U	ug/L	5000	3600	12000	2A19017	EPA 8260D	01/19/22 15:19	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	3600	U	ug/L	5000	3600	12000	2A19017	EPA 8260D	01/19/22 15:19	KKW	
Trichloroethene [79-01-6]^	**450000**		ug/L	5000	4400	12000	2A19017	EPA 8260D	01/19/22 15:19	KKW	
Trichlorofluoromethane [75-69-4]^	4700	U	ug/L	5000	4700	12000	2A19017	EPA 8260D	01/19/22 15:19	KKW	
Vinyl chloride [75-01-4]^	3600	U	ug/L	5000	3600	12000	2A19017	EPA 8260D	01/19/22 15:19	KKW	

ANALYTICAL RESULTS

Description: LC34PS-PZA-040.0-20220117 **Lab Sample ID:** AE10221-38 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 11:00 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Xylenes (Total) [1330-20-7]	6500	U	ug/L	5000	6500	25000	2A19017	EPA 8260D	01/19/22 15:19	KKW	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*53*	*1*	*50.0*	*107 %*	*41-142*	*2A19017*	*EPA 8260D*	*01/19/22 15:19*	*KKW*	
Dibromofluoromethane	*52*	*1*	*50.0*	*103 %*	*53-146*	*2A19017*	*EPA 8260D*	*01/19/22 15:19*	*KKW*	
Toluene-d8	*53*	*1*	*50.0*	*106 %*	*41-146*	*2A19017*	*EPA 8260D*	*01/19/22 15:19*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZA-050.0-20220117 **Lab Sample ID:** AE10221-39 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 11:02 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	16000	U	ug/L	20000	16000	50000	2A19017	EPA 8260D	01/19/22 15:47	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	11000	U	ug/L	20000	11000	50000	2A19017	EPA 8260D	01/19/22 15:47	KKW	
1,1,2-Trichloroethane [79-00-5]^	15000	U	ug/L	20000	15000	50000	2A19017	EPA 8260D	01/19/22 15:47	KKW	
1,1-Dichloroethane [75-34-3]^	12000	U	ug/L	20000	12000	50000	2A19017	EPA 8260D	01/19/22 15:47	KKW	
1,1-Dichloroethene [75-35-4]^	19000	U	ug/L	20000	19000	50000	2A19017	EPA 8260D	01/19/22 15:47	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	14000	U	ug/L	20000	14000	50000	2A19017	EPA 8260D	01/19/22 15:47	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	19000	U	ug/L	20000	19000	50000	2A19017	EPA 8260D	01/19/22 15:47	KKW	
1,2-Dibromoethane [106-93-4]^	16000	U	ug/L	20000	16000	50000	2A19017	EPA 8260D	01/19/22 15:47	KKW	
1,2-Dichlorobenzene [95-50-1]^	15000	U	ug/L	20000	15000	50000	2A19017	EPA 8260D	01/19/22 15:47	KKW	
1,2-Dichloroethane [107-06-2]^	13000	U	ug/L	20000	13000	50000	2A19017	EPA 8260D	01/19/22 15:47	KKW	
1,2-Dichloropropane [78-87-5]^	16000	U	ug/L	20000	16000	50000	2A19017	EPA 8260D	01/19/22 15:47	KKW	
1,3-Dichlorobenzene [541-73-1]^	15000	U	ug/L	20000	15000	50000	2A19017	EPA 8260D	01/19/22 15:47	KKW	
1,4-Dichlorobenzene [106-46-7]^	15000	U	ug/L	20000	15000	50000	2A19017	EPA 8260D	01/19/22 15:47	KKW	
2-Butanone [78-93-3]^	90000	U	ug/L	20000	90000	250000	2A19017	EPA 8260D	01/19/22 15:47	KKW	
2-Hexanone [591-78-6]^	50000	U	ug/L	20000	50000	250000	2A19017	EPA 8260D	01/19/22 15:47	KKW	
4-Methyl-2-pentanone [108-10-1]^	50000	U	ug/L	20000	50000	250000	2A19017	EPA 8260D	01/19/22 15:47	KKW	
Acetone [67-64-1]^	200000	U	ug/L	20000	200000	500000	2A19017	EPA 8260D	01/19/22 15:47	KKW	
Benzene [71-43-2]^	14000	U	ug/L	20000	14000	50000	2A19017	EPA 8260D	01/19/22 15:47	KKW	
Bromodichloromethane [75-27-4]^	10000	U	ug/L	20000	10000	50000	2A19017	EPA 8260D	01/19/22 15:47	KKW	
Bromoform [75-25-2]^	15000	U	ug/L	20000	15000	50000	2A19017	EPA 8260D	01/19/22 15:47	KKW	
Bromomethane [74-83-9]^	19000	U	ug/L	20000	19000	50000	2A19017	EPA 8260D	01/19/22 15:47	KKW	QV-01
Carbon disulfide [75-15-0]^	50000	U	ug/L	20000	50000	250000	2A19017	EPA 8260D	01/19/22 15:47	KKW	
Carbon Tetrachloride [56-23-5]^	19000	U	ug/L	20000	19000	50000	2A19017	EPA 8260D	01/19/22 15:47	KKW	QL-02, QV-01
Chlorobenzene [108-90-7]^	14000	U	ug/L	20000	14000	50000	2A19017	EPA 8260D	01/19/22 15:47	KKW	
Chloroethane [75-00-3]^	20000	U	ug/L	20000	20000	50000	2A19017	EPA 8260D	01/19/22 15:47	KKW	
Chloroform [67-66-3]^	16000	U	ug/L	20000	16000	50000	2A19017	EPA 8260D	01/19/22 15:47	KKW	
Chloromethane [74-87-3]^	16000	U	ug/L	20000	16000	50000	2A19017	EPA 8260D	01/19/22 15:47	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**20000**	I	ug/L	20000	11000	50000	2A19017	EPA 8260D	01/19/22 15:47	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	12000	U	ug/L	20000	12000	50000	2A19017	EPA 8260D	01/19/22 15:47	KKW	
Cyclohexane [110-82-7]^	19000	U	ug/L	20000	19000	50000	2A19017	EPA 8260D	01/19/22 15:47	KKW	
Dibromochloromethane [124-48-1]^	10000	U	ug/L	20000	10000	50000	2A19017	EPA 8260D	01/19/22 15:47	KKW	
Dichlorodifluoromethane [75-71-8]^	15000	U	ug/L	20000	15000	50000	2A19017	EPA 8260D	01/19/22 15:47	KKW	
Ethylbenzene [100-41-4]^	14000	U	ug/L	20000	14000	50000	2A19017	EPA 8260D	01/19/22 15:47	KKW	
Freon 113 [76-13-1]^	15000	U	ug/L	20000	15000	50000	2A19017	EPA 8260D	01/19/22 15:47	KKW	
Isopropylbenzene [98-82-8]^	13000	U	ug/L	20000	13000	50000	2A19017	EPA 8260D	01/19/22 15:47	KKW	
Methyl acetate [79-20-9]^	19000	U	ug/L	20000	19000	50000	2A19017	EPA 8260D	01/19/22 15:47	KKW	
Methylene Chloride [75-09-2]^	50000	U	ug/L	20000	50000	250000	2A19017	EPA 8260D	01/19/22 15:47	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	12000	U	ug/L	20000	12000	50000	2A19017	EPA 8260D	01/19/22 15:47	KKW	
Styrene [100-42-5]^	12000	U	ug/L	20000	12000	50000	2A19017	EPA 8260D	01/19/22 15:47	KKW	
Tetrachloroethene [127-18-4]^	15000	U	ug/L	20000	15000	50000	2A19017	EPA 8260D	01/19/22 15:47	KKW	
Toluene [108-88-3]^	14000	U	ug/L	20000	14000	50000	2A19017	EPA 8260D	01/19/22 15:47	KKW	
trans-1,2-Dichloroethene [156-60-5]^	15000	U	ug/L	20000	15000	50000	2A19017	EPA 8260D	01/19/22 15:47	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	15000	U	ug/L	20000	15000	50000	2A19017	EPA 8260D	01/19/22 15:47	KKW	
Trichloroethene [79-01-6]^	**770000**		ug/L	20000	18000	50000	2A19017	EPA 8260D	01/19/22 15:47	KKW	
Trichlorofluoromethane [75-69-4]^	19000	U	ug/L	20000	19000	50000	2A19017	EPA 8260D	01/19/22 15:47	KKW	
Vinyl chloride [75-01-4]^	14000	U	ug/L	20000	14000	50000	2A19017	EPA 8260D	01/19/22 15:47	KKW	

ANALYTICAL RESULTS

Description: LC34PS-PZA-050.0-20220117 **Lab Sample ID:** AE10221-39 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 11:02 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Xylenes (Total) [1330-20-7]	26000	U	ug/L	20000	26000	100000	2A19017	EPA 8260D	01/19/22 15:47	KKW	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*54*	*1*	*50.0*	*108 %*	*41-142*	*2A19017*	*EPA 8260D*	*01/19/22 15:47*	*KKW*	
Dibromofluoromethane	*51*	*1*	*50.0*	*103 %*	*53-146*	*2A19017*	*EPA 8260D*	*01/19/22 15:47*	*KKW*	
Toluene-d8	*52*	*1*	*50.0*	*105 %*	*41-146*	*2A19017*	*EPA 8260D*	*01/19/22 15:47*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZA-058.0-20220117 **Lab Sample ID:** AE10221-40 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 11:04 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	800	U	ug/L	1000	800	2500	2A19017	EPA 8260D	01/19/22 16:14	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	540	U	ug/L	1000	540	2500	2A19017	EPA 8260D	01/19/22 16:14	KKW	
1,1,2-Trichloroethane [79-00-5]^	760	U	ug/L	1000	760	2500	2A19017	EPA 8260D	01/19/22 16:14	KKW	
1,1-Dichloroethane [75-34-3]^	620	U	ug/L	1000	620	2500	2A19017	EPA 8260D	01/19/22 16:14	KKW	
1,1-Dichloroethene [75-35-4]^	940	U	ug/L	1000	940	2500	2A19017	EPA 8260D	01/19/22 16:14	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	700	U	ug/L	1000	700	2500	2A19017	EPA 8260D	01/19/22 16:14	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	960	U	ug/L	1000	960	2500	2A19017	EPA 8260D	01/19/22 16:14	KKW	
1,2-Dibromoethane [106-93-4]^	780	U	ug/L	1000	780	2500	2A19017	EPA 8260D	01/19/22 16:14	KKW	
1,2-Dichlorobenzene [95-50-1]^	730	U	ug/L	1000	730	2500	2A19017	EPA 8260D	01/19/22 16:14	KKW	
1,2-Dichloroethane [107-06-2]^	630	U	ug/L	1000	630	2500	2A19017	EPA 8260D	01/19/22 16:14	KKW	
1,2-Dichloropropane [78-87-5]^	800	U	ug/L	1000	800	2500	2A19017	EPA 8260D	01/19/22 16:14	KKW	
1,3-Dichlorobenzene [541-73-1]^	770	U	ug/L	1000	770	2500	2A19017	EPA 8260D	01/19/22 16:14	KKW	
1,4-Dichlorobenzene [106-46-7]^	760	U	ug/L	1000	760	2500	2A19017	EPA 8260D	01/19/22 16:14	KKW	
2-Butanone [78-93-3]^	4500	U	ug/L	1000	4500	12000	2A19017	EPA 8260D	01/19/22 16:14	KKW	
2-Hexanone [591-78-6]^	2500	U	ug/L	1000	2500	12000	2A19017	EPA 8260D	01/19/22 16:14	KKW	
4-Methyl-2-pentanone [108-10-1]^	2500	U	ug/L	1000	2500	12000	2A19017	EPA 8260D	01/19/22 16:14	KKW	
Acetone [67-64-1]^	10000	U	ug/L	1000	10000	25000	2A19017	EPA 8260D	01/19/22 16:14	KKW	
Benzene [71-43-2]^	710	U	ug/L	1000	710	2500	2A19017	EPA 8260D	01/19/22 16:14	KKW	
Bromodichloromethane [75-27-4]^	520	U	ug/L	1000	520	2500	2A19017	EPA 8260D	01/19/22 16:14	KKW	
Bromoform [75-25-2]^	750	U	ug/L	1000	750	2500	2A19017	EPA 8260D	01/19/22 16:14	KKW	
Bromomethane [74-83-9]^	950	U	ug/L	1000	950	2500	2A19017	EPA 8260D	01/19/22 16:14	KKW	QV-01
Carbon disulfide [75-15-0]^	2500	U	ug/L	1000	2500	12000	2A19017	EPA 8260D	01/19/22 16:14	KKW	
Carbon Tetrachloride [56-23-5]^	940	U	ug/L	1000	940	2500	2A19017	EPA 8260D	01/19/22 16:14	KKW	QL-02, QV-01
Chlorobenzene [108-90-7]^	720	U	ug/L	1000	720	2500	2A19017	EPA 8260D	01/19/22 16:14	KKW	
Chloroethane [75-00-3]^	980	U	ug/L	1000	980	2500	2A19017	EPA 8260D	01/19/22 16:14	KKW	
Chloroform [67-66-3]^	800	U	ug/L	1000	800	2500	2A19017	EPA 8260D	01/19/22 16:14	KKW	
Chloromethane [74-87-3]^	820	U	ug/L	1000	820	2500	2A19017	EPA 8260D	01/19/22 16:14	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**12000**		ug/L	1000	530	2500	2A19017	EPA 8260D	01/19/22 16:14	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	590	U	ug/L	1000	590	2500	2A19017	EPA 8260D	01/19/22 16:14	KKW	
Cyclohexane [110-82-7]^	930	U	ug/L	1000	930	2500	2A19017	EPA 8260D	01/19/22 16:14	KKW	
Dibromochloromethane [124-48-1]^	500	U	ug/L	1000	500	2500	2A19017	EPA 8260D	01/19/22 16:14	KKW	
Dichlorodifluoromethane [75-71-8]^	740	U	ug/L	1000	740	2500	2A19017	EPA 8260D	01/19/22 16:14	KKW	
Ethylbenzene [100-41-4]^	690	U	ug/L	1000	690	2500	2A19017	EPA 8260D	01/19/22 16:14	KKW	
Freon 113 [76-13-1]^	730	U	ug/L	1000	730	2500	2A19017	EPA 8260D	01/19/22 16:14	KKW	
Isopropylbenzene [98-82-8]^	670	U	ug/L	1000	670	2500	2A19017	EPA 8260D	01/19/22 16:14	KKW	
Methyl acetate [79-20-9]^	950	U	ug/L	1000	950	2500	2A19017	EPA 8260D	01/19/22 16:14	KKW	
Methylene Chloride [75-09-2]^	2500	U	ug/L	1000	2500	12000	2A19017	EPA 8260D	01/19/22 16:14	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	600	U	ug/L	1000	600	2500	2A19017	EPA 8260D	01/19/22 16:14	KKW	
Styrene [100-42-5]^	610	U	ug/L	1000	610	2500	2A19017	EPA 8260D	01/19/22 16:14	KKW	
Tetrachloroethene [127-18-4]^	760	U	ug/L	1000	760	2500	2A19017	EPA 8260D	01/19/22 16:14	KKW	
Toluene [108-88-3]^	720	U	ug/L	1000	720	2500	2A19017	EPA 8260D	01/19/22 16:14	KKW	
trans-1,2-Dichloroethene [156-60-5]^	730	U	ug/L	1000	730	2500	2A19017	EPA 8260D	01/19/22 16:14	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	730	U	ug/L	1000	730	2500	2A19017	EPA 8260D	01/19/22 16:14	KKW	
Trichloroethene [79-01-6]^	**52000**		ug/L	1000	890	2500	2A19017	EPA 8260D	01/19/22 16:14	KKW	
Trichlorofluoromethane [75-69-4]^	940	U	ug/L	1000	940	2500	2A19017	EPA 8260D	01/19/22 16:14	KKW	
Vinyl chloride [75-01-4]^	710	U	ug/L	1000	710	2500	2A19017	EPA 8260D	01/19/22 16:14	KKW	

ANALYTICAL RESULTS

Description: LC34PS-PZA-058.0-20220117 **Lab Sample ID:** AE10221-40 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 11:04 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Xylenes (Total) [1330-20-7]	1300	U	ug/L	1000	1300	5000	2A19017	EPA 8260D	01/19/22 16:14	KKW	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*56*	*1*	*50.0*	*111 %*	*41-142*	*2A19017*	*EPA 8260D*	*01/19/22 16:14*	*KKW*	
Dibromofluoromethane	*52*	*1*	*50.0*	*104 %*	*53-146*	*2A19017*	*EPA 8260D*	*01/19/22 16:14*	*KKW*	
Toluene-d8	*54*	*1*	*50.0*	*107 %*	*41-146*	*2A19017*	*EPA 8260D*	*01/19/22 16:14*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZA-073.0-20220117 **Lab Sample ID:** AE10221-41 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 11:06 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	20	U	ug/L	25	20	62	2A19017	EPA 8260D	01/19/22 16:42	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	14	U	ug/L	25	14	62	2A19017	EPA 8260D	01/19/22 16:42	KKW	
1,1,2-Trichloroethane [79-00-5]^	19	U	ug/L	25	19	62	2A19017	EPA 8260D	01/19/22 16:42	KKW	
1,1-Dichloroethane [75-34-3]^	16	U	ug/L	25	16	62	2A19017	EPA 8260D	01/19/22 16:42	KKW	
1,1-Dichloroethene [75-35-4]^	24	U	ug/L	25	24	62	2A19017	EPA 8260D	01/19/22 16:42	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	18	U	ug/L	25	18	62	2A19017	EPA 8260D	01/19/22 16:42	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	24	U	ug/L	25	24	62	2A19017	EPA 8260D	01/19/22 16:42	KKW	
1,2-Dibromoethane [106-93-4]^	20	U	ug/L	25	20	62	2A19017	EPA 8260D	01/19/22 16:42	KKW	
1,2-Dichlorobenzene [95-50-1]^	18	U	ug/L	25	18	62	2A19017	EPA 8260D	01/19/22 16:42	KKW	
1,2-Dichloroethane [107-06-2]^	16	U	ug/L	25	16	62	2A19017	EPA 8260D	01/19/22 16:42	KKW	
1,2-Dichloropropane [78-87-5]^	20	U	ug/L	25	20	62	2A19017	EPA 8260D	01/19/22 16:42	KKW	
1,3-Dichlorobenzene [541-73-1]^	19	U	ug/L	25	19	62	2A19017	EPA 8260D	01/19/22 16:42	KKW	
1,4-Dichlorobenzene [106-46-7]^	19	U	ug/L	25	19	62	2A19017	EPA 8260D	01/19/22 16:42	KKW	
2-Butanone [78-93-3]^	110	U	ug/L	25	110	310	2A19017	EPA 8260D	01/19/22 16:42	KKW	
2-Hexanone [591-78-6]^	62	U	ug/L	25	62	310	2A19017	EPA 8260D	01/19/22 16:42	KKW	
4-Methyl-2-pentanone [108-10-1]^	62	U	ug/L	25	62	310	2A19017	EPA 8260D	01/19/22 16:42	KKW	
Acetone [67-64-1]^	250	U	ug/L	25	250	620	2A19017	EPA 8260D	01/19/22 16:42	KKW	
Benzene [71-43-2]^	18	U	ug/L	25	18	62	2A19017	EPA 8260D	01/19/22 16:42	KKW	
Bromodichloromethane [75-27-4]^	13	U	ug/L	25	13	62	2A19017	EPA 8260D	01/19/22 16:42	KKW	
Bromoform [75-25-2]^	19	U	ug/L	25	19	62	2A19017	EPA 8260D	01/19/22 16:42	KKW	
Bromomethane [74-83-9]^	24	U	ug/L	25	24	62	2A19017	EPA 8260D	01/19/22 16:42	KKW	QV-01
Carbon disulfide [75-15-0]^	62	U	ug/L	25	62	310	2A19017	EPA 8260D	01/19/22 16:42	KKW	
Carbon Tetrachloride [56-23-5]^	24	U	ug/L	25	24	62	2A19017	EPA 8260D	01/19/22 16:42	KKW	QL-02, QV-01
Chlorobenzene [108-90-7]^	18	U	ug/L	25	18	62	2A19017	EPA 8260D	01/19/22 16:42	KKW	
Chloroethane [75-00-3]^	24	U	ug/L	25	24	62	2A19017	EPA 8260D	01/19/22 16:42	KKW	
Chloroform [67-66-3]^	20	U	ug/L	25	20	62	2A19017	EPA 8260D	01/19/22 16:42	KKW	
Chloromethane [74-87-3]^	20	U	ug/L	25	20	62	2A19017	EPA 8260D	01/19/22 16:42	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**1700**		ug/L	25	13	62	2A19017	EPA 8260D	01/19/22 16:42	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	15	U	ug/L	25	15	62	2A19017	EPA 8260D	01/19/22 16:42	KKW	
Cyclohexane [110-82-7]^	23	U	ug/L	25	23	62	2A19017	EPA 8260D	01/19/22 16:42	KKW	
Dibromochloromethane [124-48-1]^	12	U	ug/L	25	12	62	2A19017	EPA 8260D	01/19/22 16:42	KKW	
Dichlorodifluoromethane [75-71-8]^	18	U	ug/L	25	18	62	2A19017	EPA 8260D	01/19/22 16:42	KKW	
Ethylbenzene [100-41-4]^	17	U	ug/L	25	17	62	2A19017	EPA 8260D	01/19/22 16:42	KKW	
Freon 113 [76-13-1]^	18	U	ug/L	25	18	62	2A19017	EPA 8260D	01/19/22 16:42	KKW	
Isopropylbenzene [98-82-8]^	17	U	ug/L	25	17	62	2A19017	EPA 8260D	01/19/22 16:42	KKW	
Methyl acetate [79-20-9]^	24	U	ug/L	25	24	62	2A19017	EPA 8260D	01/19/22 16:42	KKW	
Methylene Chloride [75-09-2]^	62	U	ug/L	25	62	310	2A19017	EPA 8260D	01/19/22 16:42	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	15	U	ug/L	25	15	62	2A19017	EPA 8260D	01/19/22 16:42	KKW	
Styrene [100-42-5]^	15	U	ug/L	25	15	62	2A19017	EPA 8260D	01/19/22 16:42	KKW	
Tetrachloroethene [127-18-4]^	19	U	ug/L	25	19	62	2A19017	EPA 8260D	01/19/22 16:42	KKW	
Toluene [108-88-3]^	18	U	ug/L	25	18	62	2A19017	EPA 8260D	01/19/22 16:42	KKW	
trans-1,2-Dichloroethene [156-60-5]^	18	U	ug/L	25	18	62	2A19017	EPA 8260D	01/19/22 16:42	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	18	U	ug/L	25	18	62	2A19017	EPA 8260D	01/19/22 16:42	KKW	
Trichloroethene [79-01-6]^	**2000**		ug/L	25	22	62	2A19017	EPA 8260D	01/19/22 16:42	KKW	
Trichlorofluoromethane [75-69-4]^	24	U	ug/L	25	24	62	2A19017	EPA 8260D	01/19/22 16:42	KKW	
Vinyl chloride [75-01-4]^	**100**		ug/L	25	18	62	2A19017	EPA 8260D	01/19/22 16:42	KKW	

ANALYTICAL RESULTS

Description: LC34PS-PZA-073.0-20220117 **Lab Sample ID:** AE10221-41 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 11:06 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Xylenes (Total) [1330-20-7]	32	U	ug/L	25	32	120	2A19017	EPA 8260D	01/19/22 16:42	KKW	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*54*	*1*	*50.0*	*107 %*	*41-142*	*2A19017*	*EPA 8260D*	*01/19/22 16:42*	*KKW*	
Dibromofluoromethane	*50*	*1*	*50.0*	*100 %*	*53-146*	*2A19017*	*EPA 8260D*	*01/19/22 16:42*	*KKW*	
Toluene-d8	*53*	*1*	*50.0*	*107 %*	*41-146*	*2A19017*	*EPA 8260D*	*01/19/22 16:42*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZA-080.0-20220117 **Lab Sample ID:** AE10221-42 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 11:08 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	2A19017	EPA 8260D	01/19/22 11:09	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	2A19017	EPA 8260D	01/19/22 11:09	KKW	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	2A19017	EPA 8260D	01/19/22 11:09	KKW	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	2A19017	EPA 8260D	01/19/22 11:09	KKW	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	2A19017	EPA 8260D	01/19/22 11:09	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	2A19017	EPA 8260D	01/19/22 11:09	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	2A19017	EPA 8260D	01/19/22 11:09	KKW	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	2A19017	EPA 8260D	01/19/22 11:09	KKW	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	2A19017	EPA 8260D	01/19/22 11:09	KKW	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	2A19017	EPA 8260D	01/19/22 11:09	KKW	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	2A19017	EPA 8260D	01/19/22 11:09	KKW	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	2A19017	EPA 8260D	01/19/22 11:09	KKW	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	2A19017	EPA 8260D	01/19/22 11:09	KKW	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	2A19017	EPA 8260D	01/19/22 11:09	KKW	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	2A19017	EPA 8260D	01/19/22 11:09	KKW	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	2A19017	EPA 8260D	01/19/22 11:09	KKW	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	2A19017	EPA 8260D	01/19/22 11:09	KKW	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	2A19017	EPA 8260D	01/19/22 11:09	KKW	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	2A19017	EPA 8260D	01/19/22 11:09	KKW	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	2A19017	EPA 8260D	01/19/22 11:09	KKW	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	2A19017	EPA 8260D	01/19/22 11:09	KKW	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	2A19017	EPA 8260D	01/19/22 11:09	KKW	
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	2A19017	EPA 8260D	01/19/22 11:09	KKW	QV-01, QL-02
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	2A19017	EPA 8260D	01/19/22 11:09	KKW	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	2A19017	EPA 8260D	01/19/22 11:09	KKW	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	2A19017	EPA 8260D	01/19/22 11:09	KKW	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	2A19017	EPA 8260D	01/19/22 11:09	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**75**		ug/L	1	0.53	2.5	2A19017	EPA 8260D	01/19/22 11:09	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	2A19017	EPA 8260D	01/19/22 11:09	KKW	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	2A19017	EPA 8260D	01/19/22 11:09	KKW	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	2A19017	EPA 8260D	01/19/22 11:09	KKW	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	2A19017	EPA 8260D	01/19/22 11:09	KKW	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	2A19017	EPA 8260D	01/19/22 11:09	KKW	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	2A19017	EPA 8260D	01/19/22 11:09	KKW	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	2A19017	EPA 8260D	01/19/22 11:09	KKW	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	2A19017	EPA 8260D	01/19/22 11:09	KKW	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	2A19017	EPA 8260D	01/19/22 11:09	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	2A19017	EPA 8260D	01/19/22 11:09	KKW	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	2A19017	EPA 8260D	01/19/22 11:09	KKW	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	2A19017	EPA 8260D	01/19/22 11:09	KKW	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	2A19017	EPA 8260D	01/19/22 11:09	KKW	
trans-1,2-Dichloroethene [156-60-5]^	**12**		ug/L	1	0.73	2.5	2A19017	EPA 8260D	01/19/22 11:09	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	2A19017	EPA 8260D	01/19/22 11:09	KKW	
Trichloroethene [79-01-6]^	**18**		ug/L	1	0.89	2.5	2A19017	EPA 8260D	01/19/22 11:09	KKW	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	2A19017	EPA 8260D	01/19/22 11:09	KKW	
Vinyl chloride [75-01-4]^	**1.4**	I	ug/L	1	0.71	2.5	2A19017	EPA 8260D	01/19/22 11:09	KKW	

ANALYTICAL RESULTS

Description: LC34PS-PZA-080.0-20220117 **Lab Sample ID:** AE10221-42 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 11:08 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Xylenes (Total) [1330-20-7]	1.3	U	ug/L	1	1.3	5.0	2A19017	EPA 8260D	01/19/22 11:09	KKW	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*54*	*1*	*50.0*	*107 %*	*41-142*	*2A19017*	*EPA 8260D*	*01/19/22 11:09*	*KKW*	
Dibromofluoromethane	*54*	*1*	*50.0*	*107 %*	*53-146*	*2A19017*	*EPA 8260D*	*01/19/22 11:09*	*KKW*	
Toluene-d8	*52*	*1*	*50.0*	*104 %*	*41-146*	*2A19017*	*EPA 8260D*	*01/19/22 11:09*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZB-040.0-20220117 **Lab Sample ID:** AE10221-43 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 11:30 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	8000	U	ug/L	10000	8000	25000	2A19017	EPA 8260D	01/19/22 17:10	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	5400	U	ug/L	10000	5400	25000	2A19017	EPA 8260D	01/19/22 17:10	KKW	
1,1,2-Trichloroethane [79-00-5]^	7600	U	ug/L	10000	7600	25000	2A19017	EPA 8260D	01/19/22 17:10	KKW	
1,1-Dichloroethane [75-34-3]^	6200	U	ug/L	10000	6200	25000	2A19017	EPA 8260D	01/19/22 17:10	KKW	
1,1-Dichloroethene [75-35-4]^	9400	U	ug/L	10000	9400	25000	2A19017	EPA 8260D	01/19/22 17:10	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	7000	U	ug/L	10000	7000	25000	2A19017	EPA 8260D	01/19/22 17:10	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	9600	U	ug/L	10000	9600	25000	2A19017	EPA 8260D	01/19/22 17:10	KKW	
1,2-Dibromoethane [106-93-4]^	7800	U	ug/L	10000	7800	25000	2A19017	EPA 8260D	01/19/22 17:10	KKW	
1,2-Dichlorobenzene [95-50-1]^	7300	U	ug/L	10000	7300	25000	2A19017	EPA 8260D	01/19/22 17:10	KKW	
1,2-Dichloroethane [107-06-2]^	6300	U	ug/L	10000	6300	25000	2A19017	EPA 8260D	01/19/22 17:10	KKW	
1,2-Dichloropropane [78-87-5]^	8000	U	ug/L	10000	8000	25000	2A19017	EPA 8260D	01/19/22 17:10	KKW	
1,3-Dichlorobenzene [541-73-1]^	7700	U	ug/L	10000	7700	25000	2A19017	EPA 8260D	01/19/22 17:10	KKW	
1,4-Dichlorobenzene [106-46-7]^	7600	U	ug/L	10000	7600	25000	2A19017	EPA 8260D	01/19/22 17:10	KKW	
2-Butanone [78-93-3]^	45000	U	ug/L	10000	45000	120000	2A19017	EPA 8260D	01/19/22 17:10	KKW	
2-Hexanone [591-78-6]^	25000	U	ug/L	10000	25000	120000	2A19017	EPA 8260D	01/19/22 17:10	KKW	
4-Methyl-2-pentanone [108-10-1]^	25000	U	ug/L	10000	25000	120000	2A19017	EPA 8260D	01/19/22 17:10	KKW	
Acetone [67-64-1]^	100000	U	ug/L	10000	100000	250000	2A19017	EPA 8260D	01/19/22 17:10	KKW	
Benzene [71-43-2]^	7100	U	ug/L	10000	7100	25000	2A19017	EPA 8260D	01/19/22 17:10	KKW	
Bromodichloromethane [75-27-4]^	5200	U	ug/L	10000	5200	25000	2A19017	EPA 8260D	01/19/22 17:10	KKW	
Bromoform [75-25-2]^	7500	U	ug/L	10000	7500	25000	2A19017	EPA 8260D	01/19/22 17:10	KKW	
Bromomethane [74-83-9]^	9500	U	ug/L	10000	9500	25000	2A19017	EPA 8260D	01/19/22 17:10	KKW	QV-01
Carbon disulfide [75-15-0]^	25000	U	ug/L	10000	25000	120000	2A19017	EPA 8260D	01/19/22 17:10	KKW	
Carbon Tetrachloride [56-23-5]^	9400	U	ug/L	10000	9400	25000	2A19017	EPA 8260D	01/19/22 17:10	KKW	QL-02, QV-01
Chlorobenzene [108-90-7]^	7200	U	ug/L	10000	7200	25000	2A19017	EPA 8260D	01/19/22 17:10	KKW	
Chloroethane [75-00-3]^	9800	U	ug/L	10000	9800	25000	2A19017	EPA 8260D	01/19/22 17:10	KKW	
Chloroform [67-66-3]^	8000	U	ug/L	10000	8000	25000	2A19017	EPA 8260D	01/19/22 17:10	KKW	
Chloromethane [74-87-3]^	8200	U	ug/L	10000	8200	25000	2A19017	EPA 8260D	01/19/22 17:10	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**24000**	I	ug/L	10000	5300	25000	2A19017	EPA 8260D	01/19/22 17:10	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	5900	U	ug/L	10000	5900	25000	2A19017	EPA 8260D	01/19/22 17:10	KKW	
Cyclohexane [110-82-7]^	9300	U	ug/L	10000	9300	25000	2A19017	EPA 8260D	01/19/22 17:10	KKW	
Dibromochloromethane [124-48-1]^	5000	U	ug/L	10000	5000	25000	2A19017	EPA 8260D	01/19/22 17:10	KKW	
Dichlorodifluoromethane [75-71-8]^	7400	U	ug/L	10000	7400	25000	2A19017	EPA 8260D	01/19/22 17:10	KKW	
Ethylbenzene [100-41-4]^	6900	U	ug/L	10000	6900	25000	2A19017	EPA 8260D	01/19/22 17:10	KKW	
Freon 113 [76-13-1]^	7300	U	ug/L	10000	7300	25000	2A19017	EPA 8260D	01/19/22 17:10	KKW	
Isopropylbenzene [98-82-8]^	6700	U	ug/L	10000	6700	25000	2A19017	EPA 8260D	01/19/22 17:10	KKW	
Methyl acetate [79-20-9]^	9500	U	ug/L	10000	9500	25000	2A19017	EPA 8260D	01/19/22 17:10	KKW	
Methylene Chloride [75-09-2]^	25000	U	ug/L	10000	25000	120000	2A19017	EPA 8260D	01/19/22 17:10	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	6000	U	ug/L	10000	6000	25000	2A19017	EPA 8260D	01/19/22 17:10	KKW	
Styrene [100-42-5]^	6100	U	ug/L	10000	6100	25000	2A19017	EPA 8260D	01/19/22 17:10	KKW	
Tetrachloroethene [127-18-4]^	7600	U	ug/L	10000	7600	25000	2A19017	EPA 8260D	01/19/22 17:10	KKW	
Toluene [108-88-3]^	7200	U	ug/L	10000	7200	25000	2A19017	EPA 8260D	01/19/22 17:10	KKW	
trans-1,2-Dichloroethene [156-60-5]^	7300	U	ug/L	10000	7300	25000	2A19017	EPA 8260D	01/19/22 17:10	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	7300	U	ug/L	10000	7300	25000	2A19017	EPA 8260D	01/19/22 17:10	KKW	
Trichloroethene [79-01-6]^	**320000**		ug/L	10000	8900	25000	2A19017	EPA 8260D	01/19/22 17:10	KKW	
Trichlorofluoromethane [75-69-4]^	9400	U	ug/L	10000	9400	25000	2A19017	EPA 8260D	01/19/22 17:10	KKW	
Vinyl chloride [75-01-4]^	7100	U	ug/L	10000	7100	25000	2A19017	EPA 8260D	01/19/22 17:10	KKW	

ANALYTICAL RESULTS

Description: LC34PS-PZB-040.0-20220117 **Lab Sample ID:** AE10221-43 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 11:30 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Xylenes (Total) [1330-20-7]	13000	U	ug/L	10000	13000	50000	2A19017	EPA 8260D	01/19/22 17:10	KKW	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*53*	*1*	*50.0*	*106 %*	*41-142*	*2A19017*	*EPA 8260D*	*01/19/22 17:10*	*KKW*	
Dibromofluoromethane	*50*	*1*	*50.0*	*100 %*	*53-146*	*2A19017*	*EPA 8260D*	*01/19/22 17:10*	*KKW*	
Toluene-d8	*52*	*1*	*50.0*	*103 %*	*41-146*	*2A19017*	*EPA 8260D*	*01/19/22 17:10*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZB-050.0-20220117 **Lab Sample ID:** AE10221-44 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 11:32 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	16000	U	ug/L	20000	16000	50000	2A19017	EPA 8260D	01/19/22 17:37	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	11000	U	ug/L	20000	11000	50000	2A19017	EPA 8260D	01/19/22 17:37	KKW	
1,1,2-Trichloroethane [79-00-5]^	15000	U	ug/L	20000	15000	50000	2A19017	EPA 8260D	01/19/22 17:37	KKW	
1,1-Dichloroethane [75-34-3]^	12000	U	ug/L	20000	12000	50000	2A19017	EPA 8260D	01/19/22 17:37	KKW	
1,1-Dichloroethene [75-35-4]^	19000	U	ug/L	20000	19000	50000	2A19017	EPA 8260D	01/19/22 17:37	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	14000	U	ug/L	20000	14000	50000	2A19017	EPA 8260D	01/19/22 17:37	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	19000	U	ug/L	20000	19000	50000	2A19017	EPA 8260D	01/19/22 17:37	KKW	
1,2-Dibromoethane [106-93-4]^	16000	U	ug/L	20000	16000	50000	2A19017	EPA 8260D	01/19/22 17:37	KKW	
1,2-Dichlorobenzene [95-50-1]^	15000	U	ug/L	20000	15000	50000	2A19017	EPA 8260D	01/19/22 17:37	KKW	
1,2-Dichloroethane [107-06-2]^	13000	U	ug/L	20000	13000	50000	2A19017	EPA 8260D	01/19/22 17:37	KKW	
1,2-Dichloropropane [78-87-5]^	16000	U	ug/L	20000	16000	50000	2A19017	EPA 8260D	01/19/22 17:37	KKW	
1,3-Dichlorobenzene [541-73-1]^	15000	U	ug/L	20000	15000	50000	2A19017	EPA 8260D	01/19/22 17:37	KKW	
1,4-Dichlorobenzene [106-46-7]^	15000	U	ug/L	20000	15000	50000	2A19017	EPA 8260D	01/19/22 17:37	KKW	
2-Butanone [78-93-3]^	90000	U	ug/L	20000	90000	250000	2A19017	EPA 8260D	01/19/22 17:37	KKW	
2-Hexanone [591-78-6]^	50000	U	ug/L	20000	50000	250000	2A19017	EPA 8260D	01/19/22 17:37	KKW	
4-Methyl-2-pentanone [108-10-1]^	50000	U	ug/L	20000	50000	250000	2A19017	EPA 8260D	01/19/22 17:37	KKW	
Acetone [67-64-1]^	200000	U	ug/L	20000	200000	500000	2A19017	EPA 8260D	01/19/22 17:37	KKW	
Benzene [71-43-2]^	14000	U	ug/L	20000	14000	50000	2A19017	EPA 8260D	01/19/22 17:37	KKW	
Bromodichloromethane [75-27-4]^	10000	U	ug/L	20000	10000	50000	2A19017	EPA 8260D	01/19/22 17:37	KKW	
Bromoform [75-25-2]^	15000	U	ug/L	20000	15000	50000	2A19017	EPA 8260D	01/19/22 17:37	KKW	
Bromomethane [74-83-9]^	19000	U	ug/L	20000	19000	50000	2A19017	EPA 8260D	01/19/22 17:37	KKW	QV-01
Carbon disulfide [75-15-0]^	50000	U	ug/L	20000	50000	250000	2A19017	EPA 8260D	01/19/22 17:37	KKW	
Carbon Tetrachloride [56-23-5]^	19000	U	ug/L	20000	19000	50000	2A19017	EPA 8260D	01/19/22 17:37	KKW	QL-02, QV-01
Chlorobenzene [108-90-7]^	14000	U	ug/L	20000	14000	50000	2A19017	EPA 8260D	01/19/22 17:37	KKW	
Chloroethane [75-00-3]^	20000	U	ug/L	20000	20000	50000	2A19017	EPA 8260D	01/19/22 17:37	KKW	
Chloroform [67-66-3]^	16000	U	ug/L	20000	16000	50000	2A19017	EPA 8260D	01/19/22 17:37	KKW	
Chloromethane [74-87-3]^	16000	U	ug/L	20000	16000	50000	2A19017	EPA 8260D	01/19/22 17:37	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**39000**	I	ug/L	20000	11000	50000	2A19017	EPA 8260D	01/19/22 17:37	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	12000	U	ug/L	20000	12000	50000	2A19017	EPA 8260D	01/19/22 17:37	KKW	
Cyclohexane [110-82-7]^	19000	U	ug/L	20000	19000	50000	2A19017	EPA 8260D	01/19/22 17:37	KKW	
Dibromochloromethane [124-48-1]^	10000	U	ug/L	20000	10000	50000	2A19017	EPA 8260D	01/19/22 17:37	KKW	
Dichlorodifluoromethane [75-71-8]^	15000	U	ug/L	20000	15000	50000	2A19017	EPA 8260D	01/19/22 17:37	KKW	
Ethylbenzene [100-41-4]^	14000	U	ug/L	20000	14000	50000	2A19017	EPA 8260D	01/19/22 17:37	KKW	
Freon 113 [76-13-1]^	15000	U	ug/L	20000	15000	50000	2A19017	EPA 8260D	01/19/22 17:37	KKW	
Isopropylbenzene [98-82-8]^	13000	U	ug/L	20000	13000	50000	2A19017	EPA 8260D	01/19/22 17:37	KKW	
Methyl acetate [79-20-9]^	19000	U	ug/L	20000	19000	50000	2A19017	EPA 8260D	01/19/22 17:37	KKW	
Methylene Chloride [75-09-2]^	50000	U	ug/L	20000	50000	250000	2A19017	EPA 8260D	01/19/22 17:37	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	12000	U	ug/L	20000	12000	50000	2A19017	EPA 8260D	01/19/22 17:37	KKW	
Styrene [100-42-5]^	12000	U	ug/L	20000	12000	50000	2A19017	EPA 8260D	01/19/22 17:37	KKW	
Tetrachloroethene [127-18-4]^	15000	U	ug/L	20000	15000	50000	2A19017	EPA 8260D	01/19/22 17:37	KKW	
Toluene [108-88-3]^	14000	U	ug/L	20000	14000	50000	2A19017	EPA 8260D	01/19/22 17:37	KKW	
trans-1,2-Dichloroethene [156-60-5]^	15000	U	ug/L	20000	15000	50000	2A19017	EPA 8260D	01/19/22 17:37	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	15000	U	ug/L	20000	15000	50000	2A19017	EPA 8260D	01/19/22 17:37	KKW	
Trichloroethene [79-01-6]^	**970000**		ug/L	20000	18000	50000	2A19017	EPA 8260D	01/19/22 17:37	KKW	
Trichlorofluoromethane [75-69-4]^	19000	U	ug/L	20000	19000	50000	2A19017	EPA 8260D	01/19/22 17:37	KKW	
Vinyl chloride [75-01-4]^	14000	U	ug/L	20000	14000	50000	2A19017	EPA 8260D	01/19/22 17:37	KKW	

ANALYTICAL RESULTS

Description: LC34PS-PZB-050.0-20220117 **Lab Sample ID:** AE10221-44 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 11:32 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Xylenes (Total) [1330-20-7]	26000	U	ug/L	20000	26000	100000	2A19017	EPA 8260D	01/19/22 17:37	KKW	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*54*	*1*	*50.0*	*108 %*	*41-142*	*2A19017*	*EPA 8260D*	*01/19/22 17:37*	*KKW*	
Dibromofluoromethane	*51*	*1*	*50.0*	*102 %*	*53-146*	*2A19017*	*EPA 8260D*	*01/19/22 17:37*	*KKW*	
Toluene-d8	*53*	*1*	*50.0*	*106 %*	*41-146*	*2A19017*	*EPA 8260D*	*01/19/22 17:37*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZB-058.0-20220117 **Lab Sample ID:** AE10221-45 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 11:34 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	1600	U	ug/L	2000	1600	5000	2A19017	EPA 8260D	01/19/22 18:05	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	1100	U	ug/L	2000	1100	5000	2A19017	EPA 8260D	01/19/22 18:05	KKW	
1,1,2-Trichloroethane [79-00-5]^	1500	U	ug/L	2000	1500	5000	2A19017	EPA 8260D	01/19/22 18:05	KKW	
1,1-Dichloroethane [75-34-3]^	1200	U	ug/L	2000	1200	5000	2A19017	EPA 8260D	01/19/22 18:05	KKW	
1,1-Dichloroethene [75-35-4]^	1900	U	ug/L	2000	1900	5000	2A19017	EPA 8260D	01/19/22 18:05	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	1400	U	ug/L	2000	1400	5000	2A19017	EPA 8260D	01/19/22 18:05	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	1900	U	ug/L	2000	1900	5000	2A19017	EPA 8260D	01/19/22 18:05	KKW	
1,2-Dibromoethane [106-93-4]^	1600	U	ug/L	2000	1600	5000	2A19017	EPA 8260D	01/19/22 18:05	KKW	
1,2-Dichlorobenzene [95-50-1]^	1500	U	ug/L	2000	1500	5000	2A19017	EPA 8260D	01/19/22 18:05	KKW	
1,2-Dichloroethane [107-06-2]^	1300	U	ug/L	2000	1300	5000	2A19017	EPA 8260D	01/19/22 18:05	KKW	
1,2-Dichloropropane [78-87-5]^	1600	U	ug/L	2000	1600	5000	2A19017	EPA 8260D	01/19/22 18:05	KKW	
1,3-Dichlorobenzene [541-73-1]^	1500	U	ug/L	2000	1500	5000	2A19017	EPA 8260D	01/19/22 18:05	KKW	
1,4-Dichlorobenzene [106-46-7]^	1500	U	ug/L	2000	1500	5000	2A19017	EPA 8260D	01/19/22 18:05	KKW	
2-Butanone [78-93-3]^	9000	U	ug/L	2000	9000	25000	2A19017	EPA 8260D	01/19/22 18:05	KKW	
2-Hexanone [591-78-6]^	5000	U	ug/L	2000	5000	25000	2A19017	EPA 8260D	01/19/22 18:05	KKW	
4-Methyl-2-pentanone [108-10-1]^	5000	U	ug/L	2000	5000	25000	2A19017	EPA 8260D	01/19/22 18:05	KKW	
Acetone [67-64-1]^	20000	U	ug/L	2000	20000	50000	2A19017	EPA 8260D	01/19/22 18:05	KKW	
Benzene [71-43-2]^	1400	U	ug/L	2000	1400	5000	2A19017	EPA 8260D	01/19/22 18:05	KKW	
Bromodichloromethane [75-27-4]^	1000	U	ug/L	2000	1000	5000	2A19017	EPA 8260D	01/19/22 18:05	KKW	
Bromoform [75-25-2]^	1500	U	ug/L	2000	1500	5000	2A19017	EPA 8260D	01/19/22 18:05	KKW	
Bromomethane [74-83-9]^	1900	U	ug/L	2000	1900	5000	2A19017	EPA 8260D	01/19/22 18:05	KKW	QV-01
Carbon disulfide [75-15-0]^	5000	U	ug/L	2000	5000	25000	2A19017	EPA 8260D	01/19/22 18:05	KKW	
Carbon Tetrachloride [56-23-5]^	1900	U	ug/L	2000	1900	5000	2A19017	EPA 8260D	01/19/22 18:05	KKW	QV-01, QL-02
Chlorobenzene [108-90-7]^	1400	U	ug/L	2000	1400	5000	2A19017	EPA 8260D	01/19/22 18:05	KKW	
Chloroethane [75-00-3]^	2000	U	ug/L	2000	2000	5000	2A19017	EPA 8260D	01/19/22 18:05	KKW	
Chloroform [67-66-3]^	1600	U	ug/L	2000	1600	5000	2A19017	EPA 8260D	01/19/22 18:05	KKW	
Chloromethane [74-87-3]^	1600	U	ug/L	2000	1600	5000	2A19017	EPA 8260D	01/19/22 18:05	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**9800**		ug/L	2000	1100	5000	2A19017	EPA 8260D	01/19/22 18:05	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	1200	U	ug/L	2000	1200	5000	2A19017	EPA 8260D	01/19/22 18:05	KKW	
Cyclohexane [110-82-7]^	1900	U	ug/L	2000	1900	5000	2A19017	EPA 8260D	01/19/22 18:05	KKW	
Dibromochloromethane [124-48-1]^	1000	U	ug/L	2000	1000	5000	2A19017	EPA 8260D	01/19/22 18:05	KKW	
Dichlorodifluoromethane [75-71-8]^	1500	U	ug/L	2000	1500	5000	2A19017	EPA 8260D	01/19/22 18:05	KKW	
Ethylbenzene [100-41-4]^	1400	U	ug/L	2000	1400	5000	2A19017	EPA 8260D	01/19/22 18:05	KKW	
Freon 113 [76-13-1]^	1500	U	ug/L	2000	1500	5000	2A19017	EPA 8260D	01/19/22 18:05	KKW	
Isopropylbenzene [98-82-8]^	1300	U	ug/L	2000	1300	5000	2A19017	EPA 8260D	01/19/22 18:05	KKW	
Methyl acetate [79-20-9]^	1900	U	ug/L	2000	1900	5000	2A19017	EPA 8260D	01/19/22 18:05	KKW	
Methylene Chloride [75-09-2]^	5000	U	ug/L	2000	5000	25000	2A19017	EPA 8260D	01/19/22 18:05	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	1200	U	ug/L	2000	1200	5000	2A19017	EPA 8260D	01/19/22 18:05	KKW	
Styrene [100-42-5]^	1200	U	ug/L	2000	1200	5000	2A19017	EPA 8260D	01/19/22 18:05	KKW	
Tetrachloroethene [127-18-4]^	1500	U	ug/L	2000	1500	5000	2A19017	EPA 8260D	01/19/22 18:05	KKW	
Toluene [108-88-3]^	1400	U	ug/L	2000	1400	5000	2A19017	EPA 8260D	01/19/22 18:05	KKW	
trans-1,2-Dichloroethene [156-60-5]^	1500	U	ug/L	2000	1500	5000	2A19017	EPA 8260D	01/19/22 18:05	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	1500	U	ug/L	2000	1500	5000	2A19017	EPA 8260D	01/19/22 18:05	KKW	
Trichloroethene [79-01-6]^	**90000**		ug/L	2000	1800	5000	2A19017	EPA 8260D	01/19/22 18:05	KKW	
Trichlorofluoromethane [75-69-4]^	1900	U	ug/L	2000	1900	5000	2A19017	EPA 8260D	01/19/22 18:05	KKW	
Vinyl chloride [75-01-4]^	1400	U	ug/L	2000	1400	5000	2A19017	EPA 8260D	01/19/22 18:05	KKW	

ANALYTICAL RESULTS

Description: LC34PS-PZB-058.0-20220117 **Lab Sample ID:** AE10221-45 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 11:34 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Xylenes (Total) [1330-20-7]	2600	U	ug/L	2000	2600	10000	2A19017	EPA 8260D	01/19/22 18:05	KKW	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*52*	*1*	*50.0*	*105 %*	*41-142*	*2A19017*	*EPA 8260D*	*01/19/22 18:05*	*KKW*	
Dibromofluoromethane	*50*	*1*	*50.0*	*100 %*	*53-146*	*2A19017*	*EPA 8260D*	*01/19/22 18:05*	*KKW*	
Toluene-d8	*51*	*1*	*50.0*	*103 %*	*41-146*	*2A19017*	*EPA 8260D*	*01/19/22 18:05*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZB-073.0-20220117 **Lab Sample ID:** AE10221-46 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 11:36 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	4.0	U	ug/L	5	4.0	12	2A21003	EPA 8260D	01/21/22 10:51	NMC	
1,1,2,2-Tetrachloroethane [79-34-5]^	2.7	U	ug/L	5	2.7	12	2A21003	EPA 8260D	01/21/22 10:51	NMC	
1,1,2-Trichloroethane [79-00-5]^	3.8	U	ug/L	5	3.8	12	2A21003	EPA 8260D	01/21/22 10:51	NMC	
1,1-Dichloroethane [75-34-3]^	3.1	U	ug/L	5	3.1	12	2A21003	EPA 8260D	01/21/22 10:51	NMC	
1,1-Dichloroethene [75-35-4]^	4.7	U	ug/L	5	4.7	12	2A21003	EPA 8260D	01/21/22 10:51	NMC	
1,2,4-Trichlorobenzene [120-82-1]^	3.5	U	ug/L	5	3.5	12	2A21003	EPA 8260D	01/21/22 10:51	NMC	
1,2-Dibromo-3-chloropropane [96-12-8]^	4.8	U	ug/L	5	4.8	12	2A21003	EPA 8260D	01/21/22 10:51	NMC	
1,2-Dibromoethane [106-93-4]^	3.9	U	ug/L	5	3.9	12	2A21003	EPA 8260D	01/21/22 10:51	NMC	
1,2-Dichlorobenzene [95-50-1]^	3.6	U	ug/L	5	3.6	12	2A21003	EPA 8260D	01/21/22 10:51	NMC	
1,2-Dichloroethane [107-06-2]^	3.2	U	ug/L	5	3.2	12	2A21003	EPA 8260D	01/21/22 10:51	NMC	
1,2-Dichloropropane [78-87-5]^	4.0	U	ug/L	5	4.0	12	2A21003	EPA 8260D	01/21/22 10:51	NMC	
1,3-Dichlorobenzene [541-73-1]^	3.8	U	ug/L	5	3.8	12	2A21003	EPA 8260D	01/21/22 10:51	NMC	
1,4-Dichlorobenzene [106-46-7]^	3.8	U	ug/L	5	3.8	12	2A21003	EPA 8260D	01/21/22 10:51	NMC	
2-Butanone [78-93-3]^	22	U	ug/L	5	22	62	2A21003	EPA 8260D	01/21/22 10:51	NMC	
2-Hexanone [591-78-6]^	12	U	ug/L	5	12	62	2A21003	EPA 8260D	01/21/22 10:51	NMC	
4-Methyl-2-pentanone [108-10-1]^	12	U	ug/L	5	12	62	2A21003	EPA 8260D	01/21/22 10:51	NMC	
Acetone [67-64-1]^	50	U	ug/L	5	50	120	2A21003	EPA 8260D	01/21/22 10:51	NMC	
Benzene [71-43-2]^	3.6	U	ug/L	5	3.6	12	2A21003	EPA 8260D	01/21/22 10:51	NMC	
Bromodichloromethane [75-27-4]^	2.6	U	ug/L	5	2.6	12	2A21003	EPA 8260D	01/21/22 10:51	NMC	
Bromoform [75-25-2]^	3.8	U	ug/L	5	3.8	12	2A21003	EPA 8260D	01/21/22 10:51	NMC	
Bromomethane [74-83-9]^	4.8	U	ug/L	5	4.8	12	2A21003	EPA 8260D	01/21/22 10:51	NMC	QV-01
Carbon disulfide [75-15-0]^	12	U	ug/L	5	12	62	2A21003	EPA 8260D	01/21/22 10:51	NMC	QV-01
Carbon Tetrachloride [56-23-5]^	4.7	U	ug/L	5	4.7	12	2A21003	EPA 8260D	01/21/22 10:51	NMC	
Chlorobenzene [108-90-7]^	3.6	U	ug/L	5	3.6	12	2A21003	EPA 8260D	01/21/22 10:51	NMC	
Chloroethane [75-00-3]^	4.9	U	ug/L	5	4.9	12	2A21003	EPA 8260D	01/21/22 10:51	NMC	
Chloroform [67-66-3]^	4.0	U	ug/L	5	4.0	12	2A21003	EPA 8260D	01/21/22 10:51	NMC	
Chloromethane [74-87-3]^	4.1	U	ug/L	5	4.1	12	2A21003	EPA 8260D	01/21/22 10:51	NMC	
cis-1,2-Dichloroethene [156-59-2]^	**14**		ug/L	5	2.6	12	2A21003	EPA 8260D	01/21/22 10:51	NMC	
cis-1,3-Dichloropropene [10061-01-5]^	3.0	U	ug/L	5	3.0	12	2A21003	EPA 8260D	01/21/22 10:51	NMC	
Cyclohexane [110-82-7]^	4.6	U	ug/L	5	4.6	12	2A21003	EPA 8260D	01/21/22 10:51	NMC	
Dibromochloromethane [124-48-1]^	2.5	U	ug/L	5	2.5	12	2A21003	EPA 8260D	01/21/22 10:51	NMC	
Dichlorodifluoromethane [75-71-8]^	3.7	U	ug/L	5	3.7	12	2A21003	EPA 8260D	01/21/22 10:51	NMC	QV-01
Ethylbenzene [100-41-4]^	3.4	U	ug/L	5	3.4	12	2A21003	EPA 8260D	01/21/22 10:51	NMC	
Freon 113 [76-13-1]^	3.6	U	ug/L	5	3.6	12	2A21003	EPA 8260D	01/21/22 10:51	NMC	QV-01
Isopropylbenzene [98-82-8]^	3.4	U	ug/L	5	3.4	12	2A21003	EPA 8260D	01/21/22 10:51	NMC	
Methyl acetate [79-20-9]^	4.8	U	ug/L	5	4.8	12	2A21003	EPA 8260D	01/21/22 10:51	NMC	
Methylene Chloride [75-09-2]^	12	U	ug/L	5	12	62	2A21003	EPA 8260D	01/21/22 10:51	NMC	
Methyl-tert-Butyl Ether [1634-04-4]^	3.0	U	ug/L	5	3.0	12	2A21003	EPA 8260D	01/21/22 10:51	NMC	
Styrene [100-42-5]^	3.0	U	ug/L	5	3.0	12	2A21003	EPA 8260D	01/21/22 10:51	NMC	
Tetrachloroethene [127-18-4]^	3.8	U	ug/L	5	3.8	12	2A21003	EPA 8260D	01/21/22 10:51	NMC	
Toluene [108-88-3]^	3.6	U	ug/L	5	3.6	12	2A21003	EPA 8260D	01/21/22 10:51	NMC	
trans-1,2-Dichloroethene [156-60-5]^	3.6	U	ug/L	5	3.6	12	2A21003	EPA 8260D	01/21/22 10:51	NMC	
trans-1,3-Dichloropropene [10061-02-6]^	3.6	U	ug/L	5	3.6	12	2A21003	EPA 8260D	01/21/22 10:51	NMC	
Trichloroethene [79-01-6]^	**300**		ug/L	5	4.4	12	2A21003	EPA 8260D	01/21/22 10:51	NMC	
Trichlorofluoromethane [75-69-4]^	4.7	U	ug/L	5	4.7	12	2A21003	EPA 8260D	01/21/22 10:51	NMC	
Vinyl chloride [75-01-4]^	3.6	U	ug/L	5	3.6	12	2A21003	EPA 8260D	01/21/22 10:51	NMC	
Xylenes (Total) [1330-20-7]	6.5	U	ug/L	5	6.5	25	2A21003	EPA 8260D	01/21/22 10:51	NMC	

ANALYTICAL RESULTS

Description: LC34PS-PZB-073.0-20220117 **Lab Sample ID:** AE10221-46 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 11:36 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*48*	*1*	*50.0*	*96 %*	*41-142*	*2A21003*	*EPA 8260D*	*01/21/22 10:51*	*NMC*	
Dibromofluoromethane	*47*	*1*	*50.0*	*94 %*	*53-146*	*2A21003*	*EPA 8260D*	*01/21/22 10:51*	*NMC*	
Toluene-d8	*47*	*1*	*50.0*	*93 %*	*41-146*	*2A21003*	*EPA 8260D*	*01/21/22 10:51*	*NMC*	

ANALYTICAL RESULTS

Description: LC34PS-PZB-080.0-20220117 **Lab Sample ID:** AE10221-47 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 11:38 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	2A21003	EPA 8260D	01/21/22 11:19	NMC	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	2A21003	EPA 8260D	01/21/22 11:19	NMC	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	2A21003	EPA 8260D	01/21/22 11:19	NMC	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	2A21003	EPA 8260D	01/21/22 11:19	NMC	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	2A21003	EPA 8260D	01/21/22 11:19	NMC	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	2A21003	EPA 8260D	01/21/22 11:19	NMC	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	2A21003	EPA 8260D	01/21/22 11:19	NMC	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	2A21003	EPA 8260D	01/21/22 11:19	NMC	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	2A21003	EPA 8260D	01/21/22 11:19	NMC	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	2A21003	EPA 8260D	01/21/22 11:19	NMC	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	2A21003	EPA 8260D	01/21/22 11:19	NMC	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	2A21003	EPA 8260D	01/21/22 11:19	NMC	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	2A21003	EPA 8260D	01/21/22 11:19	NMC	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	2A21003	EPA 8260D	01/21/22 11:19	NMC	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	2A21003	EPA 8260D	01/21/22 11:19	NMC	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	2A21003	EPA 8260D	01/21/22 11:19	NMC	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	2A21003	EPA 8260D	01/21/22 11:19	NMC	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	2A21003	EPA 8260D	01/21/22 11:19	NMC	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	2A21003	EPA 8260D	01/21/22 11:19	NMC	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	2A21003	EPA 8260D	01/21/22 11:19	NMC	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	2A21003	EPA 8260D	01/21/22 11:19	NMC	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	2A21003	EPA 8260D	01/21/22 11:19	NMC	QV-01
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	2A21003	EPA 8260D	01/21/22 11:19	NMC	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	2A21003	EPA 8260D	01/21/22 11:19	NMC	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	2A21003	EPA 8260D	01/21/22 11:19	NMC	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	2A21003	EPA 8260D	01/21/22 11:19	NMC	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	2A21003	EPA 8260D	01/21/22 11:19	NMC	
cis-1,2-Dichloroethene [156-59-2]^	**64**		ug/L	1	0.53	2.5	2A21003	EPA 8260D	01/21/22 11:19	NMC	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	2A21003	EPA 8260D	01/21/22 11:19	NMC	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	2A21003	EPA 8260D	01/21/22 11:19	NMC	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	2A21003	EPA 8260D	01/21/22 11:19	NMC	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	2A21003	EPA 8260D	01/21/22 11:19	NMC	QV-01
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	2A21003	EPA 8260D	01/21/22 11:19	NMC	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	2A21003	EPA 8260D	01/21/22 11:19	NMC	QV-01
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	2A21003	EPA 8260D	01/21/22 11:19	NMC	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	2A21003	EPA 8260D	01/21/22 11:19	NMC	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	2A21003	EPA 8260D	01/21/22 11:19	NMC	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	2A21003	EPA 8260D	01/21/22 11:19	NMC	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	2A21003	EPA 8260D	01/21/22 11:19	NMC	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	2A21003	EPA 8260D	01/21/22 11:19	NMC	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	2A21003	EPA 8260D	01/21/22 11:19	NMC	
trans-1,2-Dichloroethene [156-60-5]^	**15**		ug/L	1	0.73	2.5	2A21003	EPA 8260D	01/21/22 11:19	NMC	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	2A21003	EPA 8260D	01/21/22 11:19	NMC	
Trichloroethene [79-01-6]^	**9.3**		ug/L	1	0.89	2.5	2A21003	EPA 8260D	01/21/22 11:19	NMC	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	2A21003	EPA 8260D	01/21/22 11:19	NMC	
Vinyl chloride [75-01-4]^	0.71	U	ug/L	1	0.71	2.5	2A21003	EPA 8260D	01/21/22 11:19	NMC	
Xylenes (Total) [1330-20-7]	1.3	U	ug/L	1	1.3	5.0	2A21003	EPA 8260D	01/21/22 11:19	NMC	

ANALYTICAL RESULTS

Description: LC34PS-PZB-080.0-20220117
Lab Sample ID: AE10221-47
Received: 01/17/22 15:30
Matrix: Ground Water
Sampled: 01/17/22 11:38
Work Order: AE10221
Project: NASA KSC LC34
Sampled By: Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*47*	*1*	*50.0*	*94 %*	*41-142*	*2A21003*	*EPA 8260D*	*01/21/22 11:19*	*NMC*	
Dibromofluoromethane	*48*	*1*	*50.0*	*96 %*	*53-146*	*2A21003*	*EPA 8260D*	*01/21/22 11:19*	*NMC*	
Toluene-d8	*47*	*1*	*50.0*	*93 %*	*41-146*	*2A21003*	*EPA 8260D*	*01/21/22 11:19*	*NMC*	

ANALYTICAL RESULTS

Description: LC34PS-PZC-040.0-20220117 **Lab Sample ID:** AE10221-48 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 12:00 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	8000	U	ug/L	10000	8000	25000	2A19017	EPA 8260D	01/19/22 19:28	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	5400	U	ug/L	10000	5400	25000	2A19017	EPA 8260D	01/19/22 19:28	KKW	
1,1,2-Trichloroethane [79-00-5]^	7600	U	ug/L	10000	7600	25000	2A19017	EPA 8260D	01/19/22 19:28	KKW	
1,1-Dichloroethane [75-34-3]^	6200	U	ug/L	10000	6200	25000	2A19017	EPA 8260D	01/19/22 19:28	KKW	
1,1-Dichloroethene [75-35-4]^	9400	U	ug/L	10000	9400	25000	2A19017	EPA 8260D	01/19/22 19:28	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	7000	U	ug/L	10000	7000	25000	2A19017	EPA 8260D	01/19/22 19:28	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	9600	U	ug/L	10000	9600	25000	2A19017	EPA 8260D	01/19/22 19:28	KKW	
1,2-Dibromoethane [106-93-4]^	7800	U	ug/L	10000	7800	25000	2A19017	EPA 8260D	01/19/22 19:28	KKW	
1,2-Dichlorobenzene [95-50-1]^	7300	U	ug/L	10000	7300	25000	2A19017	EPA 8260D	01/19/22 19:28	KKW	
1,2-Dichloroethane [107-06-2]^	6300	U	ug/L	10000	6300	25000	2A19017	EPA 8260D	01/19/22 19:28	KKW	
1,2-Dichloropropane [78-87-5]^	8000	U	ug/L	10000	8000	25000	2A19017	EPA 8260D	01/19/22 19:28	KKW	
1,3-Dichlorobenzene [541-73-1]^	7700	U	ug/L	10000	7700	25000	2A19017	EPA 8260D	01/19/22 19:28	KKW	
1,4-Dichlorobenzene [106-46-7]^	7600	U	ug/L	10000	7600	25000	2A19017	EPA 8260D	01/19/22 19:28	KKW	
2-Butanone [78-93-3]^	45000	U	ug/L	10000	45000	120000	2A19017	EPA 8260D	01/19/22 19:28	KKW	
2-Hexanone [591-78-6]^	25000	U	ug/L	10000	25000	120000	2A19017	EPA 8260D	01/19/22 19:28	KKW	
4-Methyl-2-pentanone [108-10-1]^	25000	U	ug/L	10000	25000	120000	2A19017	EPA 8260D	01/19/22 19:28	KKW	
Acetone [67-64-1]^	100000	U	ug/L	10000	100000	250000	2A19017	EPA 8260D	01/19/22 19:28	KKW	
Benzene [71-43-2]^	7100	U	ug/L	10000	7100	25000	2A19017	EPA 8260D	01/19/22 19:28	KKW	
Bromodichloromethane [75-27-4]^	5200	U	ug/L	10000	5200	25000	2A19017	EPA 8260D	01/19/22 19:28	KKW	
Bromoform [75-25-2]^	7500	U	ug/L	10000	7500	25000	2A19017	EPA 8260D	01/19/22 19:28	KKW	
Bromomethane [74-83-9]^	9500	U	ug/L	10000	9500	25000	2A19017	EPA 8260D	01/19/22 19:28	KKW	QV-01
Carbon disulfide [75-15-0]^	25000	U	ug/L	10000	25000	120000	2A19017	EPA 8260D	01/19/22 19:28	KKW	
Carbon Tetrachloride [56-23-5]^	9400	U	ug/L	10000	9400	25000	2A19017	EPA 8260D	01/19/22 19:28	KKW	QL-02, QV-01
Chlorobenzene [108-90-7]^	7200	U	ug/L	10000	7200	25000	2A19017	EPA 8260D	01/19/22 19:28	KKW	
Chloroethane [75-00-3]^	9800	U	ug/L	10000	9800	25000	2A19017	EPA 8260D	01/19/22 19:28	KKW	
Chloroform [67-66-3]^	8000	U	ug/L	10000	8000	25000	2A19017	EPA 8260D	01/19/22 19:28	KKW	
Chloromethane [74-87-3]^	8200	U	ug/L	10000	8200	25000	2A19017	EPA 8260D	01/19/22 19:28	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**19000**	I	ug/L	10000	5300	25000	2A19017	EPA 8260D	01/19/22 19:28	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	5900	U	ug/L	10000	5900	25000	2A19017	EPA 8260D	01/19/22 19:28	KKW	
Cyclohexane [110-82-7]^	9300	U	ug/L	10000	9300	25000	2A19017	EPA 8260D	01/19/22 19:28	KKW	
Dibromochloromethane [124-48-1]^	5000	U	ug/L	10000	5000	25000	2A19017	EPA 8260D	01/19/22 19:28	KKW	
Dichlorodifluoromethane [75-71-8]^	7400	U	ug/L	10000	7400	25000	2A19017	EPA 8260D	01/19/22 19:28	KKW	
Ethylbenzene [100-41-4]^	6900	U	ug/L	10000	6900	25000	2A19017	EPA 8260D	01/19/22 19:28	KKW	
Freon 113 [76-13-1]^	7300	U	ug/L	10000	7300	25000	2A19017	EPA 8260D	01/19/22 19:28	KKW	
Isopropylbenzene [98-82-8]^	6700	U	ug/L	10000	6700	25000	2A19017	EPA 8260D	01/19/22 19:28	KKW	
Methyl acetate [79-20-9]^	9500	U	ug/L	10000	9500	25000	2A19017	EPA 8260D	01/19/22 19:28	KKW	
Methylene Chloride [75-09-2]^	25000	U	ug/L	10000	25000	120000	2A19017	EPA 8260D	01/19/22 19:28	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	6000	U	ug/L	10000	6000	25000	2A19017	EPA 8260D	01/19/22 19:28	KKW	
Styrene [100-42-5]^	6100	U	ug/L	10000	6100	25000	2A19017	EPA 8260D	01/19/22 19:28	KKW	
Tetrachloroethene [127-18-4]^	7600	U	ug/L	10000	7600	25000	2A19017	EPA 8260D	01/19/22 19:28	KKW	
Toluene [108-88-3]^	7200	U	ug/L	10000	7200	25000	2A19017	EPA 8260D	01/19/22 19:28	KKW	
trans-1,2-Dichloroethene [156-60-5]^	7300	U	ug/L	10000	7300	25000	2A19017	EPA 8260D	01/19/22 19:28	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	7300	U	ug/L	10000	7300	25000	2A19017	EPA 8260D	01/19/22 19:28	KKW	
Trichloroethene [79-01-6]^	**600000**		ug/L	10000	8900	25000	2A19017	EPA 8260D	01/19/22 19:28	KKW	
Trichlorofluoromethane [75-69-4]^	9400	U	ug/L	10000	9400	25000	2A19017	EPA 8260D	01/19/22 19:28	KKW	
Vinyl chloride [75-01-4]^	7100	U	ug/L	10000	7100	25000	2A19017	EPA 8260D	01/19/22 19:28	KKW	

ANALYTICAL RESULTS

Description: LC34PS-PZC-040.0-20220117 **Lab Sample ID:** AE10221-48 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 12:00 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Xylenes (Total) [1330-20-7]	13000	U	ug/L	10000	13000	50000	2A19017	EPA 8260D	01/19/22 19:28	KKW	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*52*	*1*	*50.0*	*104 %*	*41-142*	*2A19017*	*EPA 8260D*	*01/19/22 19:28*	*KKW*	
Dibromofluoromethane	*51*	*1*	*50.0*	*102 %*	*53-146*	*2A19017*	*EPA 8260D*	*01/19/22 19:28*	*KKW*	
Toluene-d8	*53*	*1*	*50.0*	*106 %*	*41-146*	*2A19017*	*EPA 8260D*	*01/19/22 19:28*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZC-050.0-20220117 **Lab Sample ID:** AE10221-49 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 12:02 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	8000	U	ug/L	10000	8000	25000	2A21003	EPA 8260D	01/21/22 11:48	NMC	
1,1,2,2-Tetrachloroethane [79-34-5]^	5400	U	ug/L	10000	5400	25000	2A21003	EPA 8260D	01/21/22 11:48	NMC	
1,1,2-Trichloroethane [79-00-5]^	7600	U	ug/L	10000	7600	25000	2A21003	EPA 8260D	01/21/22 11:48	NMC	
1,1-Dichloroethane [75-34-3]^	6200	U	ug/L	10000	6200	25000	2A21003	EPA 8260D	01/21/22 11:48	NMC	
1,1-Dichloroethene [75-35-4]^	9400	U	ug/L	10000	9400	25000	2A21003	EPA 8260D	01/21/22 11:48	NMC	
1,2,4-Trichlorobenzene [120-82-1]^	7000	U	ug/L	10000	7000	25000	2A21003	EPA 8260D	01/21/22 11:48	NMC	
1,2-Dibromo-3-chloropropane [96-12-8]^	9600	U	ug/L	10000	9600	25000	2A21003	EPA 8260D	01/21/22 11:48	NMC	
1,2-Dibromoethane [106-93-4]^	7800	U	ug/L	10000	7800	25000	2A21003	EPA 8260D	01/21/22 11:48	NMC	
1,2-Dichlorobenzene [95-50-1]^	7300	U	ug/L	10000	7300	25000	2A21003	EPA 8260D	01/21/22 11:48	NMC	
1,2-Dichloroethane [107-06-2]^	6300	U	ug/L	10000	6300	25000	2A21003	EPA 8260D	01/21/22 11:48	NMC	
1,2-Dichloropropane [78-87-5]^	8000	U	ug/L	10000	8000	25000	2A21003	EPA 8260D	01/21/22 11:48	NMC	
1,3-Dichlorobenzene [541-73-1]^	7700	U	ug/L	10000	7700	25000	2A21003	EPA 8260D	01/21/22 11:48	NMC	
1,4-Dichlorobenzene [106-46-7]^	7600	U	ug/L	10000	7600	25000	2A21003	EPA 8260D	01/21/22 11:48	NMC	
2-Butanone [78-93-3]^	45000	U	ug/L	10000	45000	120000	2A21003	EPA 8260D	01/21/22 11:48	NMC	
2-Hexanone [591-78-6]^	25000	U	ug/L	10000	25000	120000	2A21003	EPA 8260D	01/21/22 11:48	NMC	
4-Methyl-2-pentanone [108-10-1]^	25000	U	ug/L	10000	25000	120000	2A21003	EPA 8260D	01/21/22 11:48	NMC	
Acetone [67-64-1]^	100000	U	ug/L	10000	100000	250000	2A21003	EPA 8260D	01/21/22 11:48	NMC	
Benzene [71-43-2]^	7100	U	ug/L	10000	7100	25000	2A21003	EPA 8260D	01/21/22 11:48	NMC	
Bromodichloromethane [75-27-4]^	5200	U	ug/L	10000	5200	25000	2A21003	EPA 8260D	01/21/22 11:48	NMC	
Bromoform [75-25-2]^	7500	U	ug/L	10000	7500	25000	2A21003	EPA 8260D	01/21/22 11:48	NMC	
Bromomethane [74-83-9]^	9500	U	ug/L	10000	9500	25000	2A21003	EPA 8260D	01/21/22 11:48	NMC	QV-01
Carbon disulfide [75-15-0]^	25000	U	ug/L	10000	25000	120000	2A21003	EPA 8260D	01/21/22 11:48	NMC	QV-01
Carbon Tetrachloride [56-23-5]^	9400	U	ug/L	10000	9400	25000	2A21003	EPA 8260D	01/21/22 11:48	NMC	
Chlorobenzene [108-90-7]^	7200	U	ug/L	10000	7200	25000	2A21003	EPA 8260D	01/21/22 11:48	NMC	
Chloroethane [75-00-3]^	9800	U	ug/L	10000	9800	25000	2A21003	EPA 8260D	01/21/22 11:48	NMC	
Chloroform [67-66-3]^	8000	U	ug/L	10000	8000	25000	2A21003	EPA 8260D	01/21/22 11:48	NMC	
Chloromethane [74-87-3]^	8200	U	ug/L	10000	8200	25000	2A21003	EPA 8260D	01/21/22 11:48	NMC	
cis-1,2-Dichloroethene [156-59-2]^	**49000**		ug/L	10000	5300	25000	2A21003	EPA 8260D	01/21/22 11:48	NMC	
cis-1,3-Dichloropropene [10061-01-5]^	5900	U	ug/L	10000	5900	25000	2A21003	EPA 8260D	01/21/22 11:48	NMC	
Cyclohexane [110-82-7]^	9300	U	ug/L	10000	9300	25000	2A21003	EPA 8260D	01/21/22 11:48	NMC	
Dibromochloromethane [124-48-1]^	5000	U	ug/L	10000	5000	25000	2A21003	EPA 8260D	01/21/22 11:48	NMC	
Dichlorodifluoromethane [75-71-8]^	7400	U	ug/L	10000	7400	25000	2A21003	EPA 8260D	01/21/22 11:48	NMC	QV-01
Ethylbenzene [100-41-4]^	6900	U	ug/L	10000	6900	25000	2A21003	EPA 8260D	01/21/22 11:48	NMC	
Freon 113 [76-13-1]^	7300	U	ug/L	10000	7300	25000	2A21003	EPA 8260D	01/21/22 11:48	NMC	QV-01
Isopropylbenzene [98-82-8]^	6700	U	ug/L	10000	6700	25000	2A21003	EPA 8260D	01/21/22 11:48	NMC	
Methyl acetate [79-20-9]^	9500	U	ug/L	10000	9500	25000	2A21003	EPA 8260D	01/21/22 11:48	NMC	
Methylene Chloride [75-09-2]^	25000	U	ug/L	10000	25000	120000	2A21003	EPA 8260D	01/21/22 11:48	NMC	
Methyl-tert-Butyl Ether [1634-04-4]^	6000	U	ug/L	10000	6000	25000	2A21003	EPA 8260D	01/21/22 11:48	NMC	
Styrene [100-42-5]^	6100	U	ug/L	10000	6100	25000	2A21003	EPA 8260D	01/21/22 11:48	NMC	
Tetrachloroethene [127-18-4]^	7600	U	ug/L	10000	7600	25000	2A21003	EPA 8260D	01/21/22 11:48	NMC	
Toluene [108-88-3]^	7200	U	ug/L	10000	7200	25000	2A21003	EPA 8260D	01/21/22 11:48	NMC	
trans-1,2-Dichloroethene [156-60-5]^	7300	U	ug/L	10000	7300	25000	2A21003	EPA 8260D	01/21/22 11:48	NMC	
trans-1,3-Dichloropropene [10061-02-6]^	7300	U	ug/L	10000	7300	25000	2A21003	EPA 8260D	01/21/22 11:48	NMC	
Trichloroethene [79-01-6]^	**760000**		ug/L	10000	8900	25000	2A21003	EPA 8260D	01/21/22 11:48	NMC	
Trichlorofluoromethane [75-69-4]^	9400	U	ug/L	10000	9400	25000	2A21003	EPA 8260D	01/21/22 11:48	NMC	
Vinyl chloride [75-01-4]^	7100	U	ug/L	10000	7100	25000	2A21003	EPA 8260D	01/21/22 11:48	NMC	
Xylenes (Total) [1330-20-7]	13000	U	ug/L	10000	13000	50000	2A21003	EPA 8260D	01/21/22 11:48	NMC	

ANALYTICAL RESULTS

Description: LC34PS-PZC-050.0-20220117
Matrix: Ground Water
Project: NASA KSC LC34

Lab Sample ID: AE10221-49
Sampled: 01/17/22 12:02
Sampled By: Dan Forester / James Lloyd

Received: 01/17/22 15:30
Work Order: AE10221

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*48*	*1*	*50.0*	*96 %*	*41-142*	*2A21003*	*EPA 8260D*	*01/21/22 11:48*	*NMC*	
Dibromofluoromethane	*47*	*1*	*50.0*	*95 %*	*53-146*	*2A21003*	*EPA 8260D*	*01/21/22 11:48*	*NMC*	
Toluene-d8	*46*	*1*	*50.0*	*92 %*	*41-146*	*2A21003*	*EPA 8260D*	*01/21/22 11:48*	*NMC*	

ANALYTICAL RESULTS

Description: LC34PS-PZC-058.0-20220117 **Lab Sample ID:** AE10221-50 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 12:04 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	4000	U	ug/L	5000	4000	12000	2A21003	EPA 8260D	01/21/22 12:17	NMC	
1,1,2,2-Tetrachloroethane [79-34-5]^	2700	U	ug/L	5000	2700	12000	2A21003	EPA 8260D	01/21/22 12:17	NMC	
1,1,2-Trichloroethane [79-00-5]^	3800	U	ug/L	5000	3800	12000	2A21003	EPA 8260D	01/21/22 12:17	NMC	
1,1-Dichloroethane [75-34-3]^	3100	U	ug/L	5000	3100	12000	2A21003	EPA 8260D	01/21/22 12:17	NMC	
1,1-Dichloroethene [75-35-4]^	4700	U	ug/L	5000	4700	12000	2A21003	EPA 8260D	01/21/22 12:17	NMC	
1,2,4-Trichlorobenzene [120-82-1]^	3500	U	ug/L	5000	3500	12000	2A21003	EPA 8260D	01/21/22 12:17	NMC	
1,2-Dibromo-3-chloropropane [96-12-8]^	4800	U	ug/L	5000	4800	12000	2A21003	EPA 8260D	01/21/22 12:17	NMC	
1,2-Dibromoethane [106-93-4]^	3900	U	ug/L	5000	3900	12000	2A21003	EPA 8260D	01/21/22 12:17	NMC	
1,2-Dichlorobenzene [95-50-1]^	3600	U	ug/L	5000	3600	12000	2A21003	EPA 8260D	01/21/22 12:17	NMC	
1,2-Dichloroethane [107-06-2]^	3200	U	ug/L	5000	3200	12000	2A21003	EPA 8260D	01/21/22 12:17	NMC	
1,2-Dichloropropane [78-87-5]^	4000	U	ug/L	5000	4000	12000	2A21003	EPA 8260D	01/21/22 12:17	NMC	
1,3-Dichlorobenzene [541-73-1]^	3800	U	ug/L	5000	3800	12000	2A21003	EPA 8260D	01/21/22 12:17	NMC	
1,4-Dichlorobenzene [106-46-7]^	3800	U	ug/L	5000	3800	12000	2A21003	EPA 8260D	01/21/22 12:17	NMC	
2-Butanone [78-93-3]^	22000	U	ug/L	5000	22000	62000	2A21003	EPA 8260D	01/21/22 12:17	NMC	
2-Hexanone [591-78-6]^	12000	U	ug/L	5000	12000	62000	2A21003	EPA 8260D	01/21/22 12:17	NMC	
4-Methyl-2-pentanone [108-10-1]^	12000	U	ug/L	5000	12000	62000	2A21003	EPA 8260D	01/21/22 12:17	NMC	
Acetone [67-64-1]^	50000	U	ug/L	5000	50000	120000	2A21003	EPA 8260D	01/21/22 12:17	NMC	
Benzene [71-43-2]^	3600	U	ug/L	5000	3600	12000	2A21003	EPA 8260D	01/21/22 12:17	NMC	
Bromodichloromethane [75-27-4]^	2600	U	ug/L	5000	2600	12000	2A21003	EPA 8260D	01/21/22 12:17	NMC	
Bromoform [75-25-2]^	3800	U	ug/L	5000	3800	12000	2A21003	EPA 8260D	01/21/22 12:17	NMC	
Bromomethane [74-83-9]^	4800	U	ug/L	5000	4800	12000	2A21003	EPA 8260D	01/21/22 12:17	NMC	QV-01
Carbon disulfide [75-15-0]^	12000	U	ug/L	5000	12000	62000	2A21003	EPA 8260D	01/21/22 12:17	NMC	QV-01
Carbon Tetrachloride [56-23-5]^	4700	U	ug/L	5000	4700	12000	2A21003	EPA 8260D	01/21/22 12:17	NMC	
Chlorobenzene [108-90-7]^	3600	U	ug/L	5000	3600	12000	2A21003	EPA 8260D	01/21/22 12:17	NMC	
Chloroethane [75-00-3]^	4900	U	ug/L	5000	4900	12000	2A21003	EPA 8260D	01/21/22 12:17	NMC	
Chloroform [67-66-3]^	4000	U	ug/L	5000	4000	12000	2A21003	EPA 8260D	01/21/22 12:17	NMC	
Chloromethane [74-87-3]^	4100	U	ug/L	5000	4100	12000	2A21003	EPA 8260D	01/21/22 12:17	NMC	
cis-1,2-Dichloroethene [156-59-2]^	**25000**		ug/L	5000	2600	12000	2A21003	EPA 8260D	01/21/22 12:17	NMC	
cis-1,3-Dichloropropene [10061-01-5]^	3000	U	ug/L	5000	3000	12000	2A21003	EPA 8260D	01/21/22 12:17	NMC	
Cyclohexane [110-82-7]^	4600	U	ug/L	5000	4600	12000	2A21003	EPA 8260D	01/21/22 12:17	NMC	
Dibromochloromethane [124-48-1]^	2500	U	ug/L	5000	2500	12000	2A21003	EPA 8260D	01/21/22 12:17	NMC	
Dichlorodifluoromethane [75-71-8]^	3700	U	ug/L	5000	3700	12000	2A21003	EPA 8260D	01/21/22 12:17	NMC	QV-01
Ethylbenzene [100-41-4]^	3400	U	ug/L	5000	3400	12000	2A21003	EPA 8260D	01/21/22 12:17	NMC	
Freon 113 [76-13-1]^	3600	U	ug/L	5000	3600	12000	2A21003	EPA 8260D	01/21/22 12:17	NMC	QV-01
Isopropylbenzene [98-82-8]^	3400	U	ug/L	5000	3400	12000	2A21003	EPA 8260D	01/21/22 12:17	NMC	
Methyl acetate [79-20-9]^	4800	U	ug/L	5000	4800	12000	2A21003	EPA 8260D	01/21/22 12:17	NMC	
Methylene Chloride [75-09-2]^	12000	U	ug/L	5000	12000	62000	2A21003	EPA 8260D	01/21/22 12:17	NMC	
Methyl-tert-Butyl Ether [1634-04-4]^	3000	U	ug/L	5000	3000	12000	2A21003	EPA 8260D	01/21/22 12:17	NMC	
Styrene [100-42-5]^	3000	U	ug/L	5000	3000	12000	2A21003	EPA 8260D	01/21/22 12:17	NMC	
Tetrachloroethene [127-18-4]^	3800	U	ug/L	5000	3800	12000	2A21003	EPA 8260D	01/21/22 12:17	NMC	
Toluene [108-88-3]^	3600	U	ug/L	5000	3600	12000	2A21003	EPA 8260D	01/21/22 12:17	NMC	
trans-1,2-Dichloroethene [156-60-5]^	3600	U	ug/L	5000	3600	12000	2A21003	EPA 8260D	01/21/22 12:17	NMC	
trans-1,3-Dichloropropene [10061-02-6]^	3600	U	ug/L	5000	3600	12000	2A21003	EPA 8260D	01/21/22 12:17	NMC	
Trichloroethene [79-01-6]^	**250000**		ug/L	5000	4400	12000	2A21003	EPA 8260D	01/21/22 12:17	NMC	
Trichlorofluoromethane [75-69-4]^	4700	U	ug/L	5000	4700	12000	2A21003	EPA 8260D	01/21/22 12:17	NMC	
Vinyl chloride [75-01-4]^	3600	U	ug/L	5000	3600	12000	2A21003	EPA 8260D	01/21/22 12:17	NMC	
Xylenes (Total) [1330-20-7]	6500	U	ug/L	5000	6500	25000	2A21003	EPA 8260D	01/21/22 12:17	NMC	

ANALYTICAL RESULTS

Description: LC34PS-PZC-058.0-20220117 **Lab Sample ID:** AE10221-50 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 12:04 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*49*	*1*	*50.0*	*98 %*	*41-142*	*2A21003*	*EPA 8260D*	*01/21/22 12:17*	*NMC*	
Dibromofluoromethane	*48*	*1*	*50.0*	*96 %*	*53-146*	*2A21003*	*EPA 8260D*	*01/21/22 12:17*	*NMC*	
Toluene-d8	*47*	*1*	*50.0*	*94 %*	*41-146*	*2A21003*	*EPA 8260D*	*01/21/22 12:17*	*NMC*	

ANALYTICAL RESULTS

Description: LC34PS-PZC-073.0-20220117 **Lab Sample ID:** AE10221-51 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 12:06 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	4.0	U	ug/L	5	4.0	12	2A24004	EPA 8260D	01/24/22 10:33	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	2.7	U	ug/L	5	2.7	12	2A24004	EPA 8260D	01/24/22 10:33	KKW	
1,1,2-Trichloroethane [79-00-5]^	3.8	U	ug/L	5	3.8	12	2A24004	EPA 8260D	01/24/22 10:33	KKW	
1,1-Dichloroethane [75-34-3]^	3.1	U	ug/L	5	3.1	12	2A24004	EPA 8260D	01/24/22 10:33	KKW	
1,1-Dichloroethene [75-35-4]^	4.7	U	ug/L	5	4.7	12	2A24004	EPA 8260D	01/24/22 10:33	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	3.5	U	ug/L	5	3.5	12	2A24004	EPA 8260D	01/24/22 10:33	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	4.8	U	ug/L	5	4.8	12	2A24004	EPA 8260D	01/24/22 10:33	KKW	
1,2-Dibromoethane [106-93-4]^	3.9	U	ug/L	5	3.9	12	2A24004	EPA 8260D	01/24/22 10:33	KKW	
1,2-Dichlorobenzene [95-50-1]^	3.6	U	ug/L	5	3.6	12	2A24004	EPA 8260D	01/24/22 10:33	KKW	
1,2-Dichloroethane [107-06-2]^	3.2	U	ug/L	5	3.2	12	2A24004	EPA 8260D	01/24/22 10:33	KKW	
1,2-Dichloropropane [78-87-5]^	4.0	U	ug/L	5	4.0	12	2A24004	EPA 8260D	01/24/22 10:33	KKW	
1,3-Dichlorobenzene [541-73-1]^	3.8	U	ug/L	5	3.8	12	2A24004	EPA 8260D	01/24/22 10:33	KKW	
1,4-Dichlorobenzene [106-46-7]^	3.8	U	ug/L	5	3.8	12	2A24004	EPA 8260D	01/24/22 10:33	KKW	
2-Butanone [78-93-3]^	22	U	ug/L	5	22	62	2A24004	EPA 8260D	01/24/22 10:33	KKW	
2-Hexanone [591-78-6]^	12	U	ug/L	5	12	62	2A24004	EPA 8260D	01/24/22 10:33	KKW	
4-Methyl-2-pentanone [108-10-1]^	12	U	ug/L	5	12	62	2A24004	EPA 8260D	01/24/22 10:33	KKW	
Acetone [67-64-1]^	50	U	ug/L	5	50	120	2A24004	EPA 8260D	01/24/22 10:33	KKW	
Benzene [71-43-2]^	3.6	U	ug/L	5	3.6	12	2A24004	EPA 8260D	01/24/22 10:33	KKW	
Bromodichloromethane [75-27-4]^	2.6	U	ug/L	5	2.6	12	2A24004	EPA 8260D	01/24/22 10:33	KKW	
Bromoform [75-25-2]^	3.8	U	ug/L	5	3.8	12	2A24004	EPA 8260D	01/24/22 10:33	KKW	
Bromomethane [74-83-9]^	4.8	U	ug/L	5	4.8	12	2A24004	EPA 8260D	01/24/22 10:33	KKW	QV-01
Carbon disulfide [75-15-0]^	12	U	ug/L	5	12	62	2A24004	EPA 8260D	01/24/22 10:33	KKW	
Carbon Tetrachloride [56-23-5]^	4.7	U	ug/L	5	4.7	12	2A24004	EPA 8260D	01/24/22 10:33	KKW	QV-01
Chlorobenzene [108-90-7]^	3.6	U	ug/L	5	3.6	12	2A24004	EPA 8260D	01/24/22 10:33	KKW	
Chloroethane [75-00-3]^	4.9	U	ug/L	5	4.9	12	2A24004	EPA 8260D	01/24/22 10:33	KKW	
Chloroform [67-66-3]^	4.0	U	ug/L	5	4.0	12	2A24004	EPA 8260D	01/24/22 10:33	KKW	
Chloromethane [74-87-3]^	4.1	U	ug/L	5	4.1	12	2A24004	EPA 8260D	01/24/22 10:33	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**6.6**	I	ug/L	5	2.6	12	2A24004	EPA 8260D	01/24/22 10:33	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	3.0	U	ug/L	5	3.0	12	2A24004	EPA 8260D	01/24/22 10:33	KKW	
Cyclohexane [110-82-7]^	4.6	U	ug/L	5	4.6	12	2A24004	EPA 8260D	01/24/22 10:33	KKW	
Dibromochloromethane [124-48-1]^	2.5	U	ug/L	5	2.5	12	2A24004	EPA 8260D	01/24/22 10:33	KKW	
Dichlorodifluoromethane [75-71-8]^	3.7	U	ug/L	5	3.7	12	2A24004	EPA 8260D	01/24/22 10:33	KKW	
Ethylbenzene [100-41-4]^	3.4	U	ug/L	5	3.4	12	2A24004	EPA 8260D	01/24/22 10:33	KKW	
Freon 113 [76-13-1]^	3.6	U	ug/L	5	3.6	12	2A24004	EPA 8260D	01/24/22 10:33	KKW	
Isopropylbenzene [98-82-8]^	3.4	U	ug/L	5	3.4	12	2A24004	EPA 8260D	01/24/22 10:33	KKW	
Methyl acetate [79-20-9]^	4.8	U	ug/L	5	4.8	12	2A24004	EPA 8260D	01/24/22 10:33	KKW	
Methylene Chloride [75-09-2]^	12	U	ug/L	5	12	62	2A24004	EPA 8260D	01/24/22 10:33	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	3.0	U	ug/L	5	3.0	12	2A24004	EPA 8260D	01/24/22 10:33	KKW	
Styrene [100-42-5]^	3.0	U	ug/L	5	3.0	12	2A24004	EPA 8260D	01/24/22 10:33	KKW	
Tetrachloroethene [127-18-4]^	3.8	U	ug/L	5	3.8	12	2A24004	EPA 8260D	01/24/22 10:33	KKW	
Toluene [108-88-3]^	3.6	U	ug/L	5	3.6	12	2A24004	EPA 8260D	01/24/22 10:33	KKW	
trans-1,2-Dichloroethene [156-60-5]^	3.6	U	ug/L	5	3.6	12	2A24004	EPA 8260D	01/24/22 10:33	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	3.6	U	ug/L	5	3.6	12	2A24004	EPA 8260D	01/24/22 10:33	KKW	
Trichloroethene [79-01-6]^	**390**		ug/L	5	4.4	12	2A24004	EPA 8260D	01/24/22 10:33	KKW	
Trichlorofluoromethane [75-69-4]^	4.7	U	ug/L	5	4.7	12	2A24004	EPA 8260D	01/24/22 10:33	KKW	
Vinyl chloride [75-01-4]^	3.6	U	ug/L	5	3.6	12	2A24004	EPA 8260D	01/24/22 10:33	KKW	
Xylenes (Total) [1330-20-7]	6.5	U	ug/L	5	6.5	25	2A24004	EPA 8260D	01/24/22 10:33	KKW	

ANALYTICAL RESULTS

Description: LC34PS-PZC-073.0-20220117 **Lab Sample ID:** AE10221-51 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 12:06 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*55*	*1*	*50.0*	*111 %*	*41-142*	*2A24004*	*EPA 8260D*	*01/24/22 10:33*	*KKW*	
Dibromofluoromethane	*57*	*1*	*50.0*	*114 %*	*53-146*	*2A24004*	*EPA 8260D*	*01/24/22 10:33*	*KKW*	
Toluene-d8	*54*	*1*	*50.0*	*107 %*	*41-146*	*2A24004*	*EPA 8260D*	*01/24/22 10:33*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZC-080.0-20220117 **Lab Sample ID:** AE10221-52 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 12:08 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	2A21003	EPA 8260D	01/21/22 10:22	NMC	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	2A21003	EPA 8260D	01/21/22 10:22	NMC	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	2A21003	EPA 8260D	01/21/22 10:22	NMC	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	2A21003	EPA 8260D	01/21/22 10:22	NMC	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	2A21003	EPA 8260D	01/21/22 10:22	NMC	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	2A21003	EPA 8260D	01/21/22 10:22	NMC	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	2A21003	EPA 8260D	01/21/22 10:22	NMC	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	2A21003	EPA 8260D	01/21/22 10:22	NMC	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	2A21003	EPA 8260D	01/21/22 10:22	NMC	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	2A21003	EPA 8260D	01/21/22 10:22	NMC	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	2A21003	EPA 8260D	01/21/22 10:22	NMC	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	2A21003	EPA 8260D	01/21/22 10:22	NMC	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	2A21003	EPA 8260D	01/21/22 10:22	NMC	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	2A21003	EPA 8260D	01/21/22 10:22	NMC	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	2A21003	EPA 8260D	01/21/22 10:22	NMC	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	2A21003	EPA 8260D	01/21/22 10:22	NMC	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	2A21003	EPA 8260D	01/21/22 10:22	NMC	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	2A21003	EPA 8260D	01/21/22 10:22	NMC	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	2A21003	EPA 8260D	01/21/22 10:22	NMC	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	2A21003	EPA 8260D	01/21/22 10:22	NMC	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	2A21003	EPA 8260D	01/21/22 10:22	NMC	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	2A21003	EPA 8260D	01/21/22 10:22	NMC	QV-01
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	2A21003	EPA 8260D	01/21/22 10:22	NMC	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	2A21003	EPA 8260D	01/21/22 10:22	NMC	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	2A21003	EPA 8260D	01/21/22 10:22	NMC	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	2A21003	EPA 8260D	01/21/22 10:22	NMC	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	2A21003	EPA 8260D	01/21/22 10:22	NMC	
cis-1,2-Dichloroethene [156-59-2]^	**42**		ug/L	1	0.53	2.5	2A21003	EPA 8260D	01/21/22 10:22	NMC	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	2A21003	EPA 8260D	01/21/22 10:22	NMC	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	2A21003	EPA 8260D	01/21/22 10:22	NMC	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	2A21003	EPA 8260D	01/21/22 10:22	NMC	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	2A21003	EPA 8260D	01/21/22 10:22	NMC	QV-01
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	2A21003	EPA 8260D	01/21/22 10:22	NMC	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	2A21003	EPA 8260D	01/21/22 10:22	NMC	QV-01
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	2A21003	EPA 8260D	01/21/22 10:22	NMC	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	2A21003	EPA 8260D	01/21/22 10:22	NMC	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	2A21003	EPA 8260D	01/21/22 10:22	NMC	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	2A21003	EPA 8260D	01/21/22 10:22	NMC	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	2A21003	EPA 8260D	01/21/22 10:22	NMC	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	2A21003	EPA 8260D	01/21/22 10:22	NMC	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	2A21003	EPA 8260D	01/21/22 10:22	NMC	
trans-1,2-Dichloroethene [156-60-5]^	**8.7**		ug/L	1	0.73	2.5	2A21003	EPA 8260D	01/21/22 10:22	NMC	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	2A21003	EPA 8260D	01/21/22 10:22	NMC	
Trichloroethene [79-01-6]^	**3.3**		ug/L	1	0.89	2.5	2A21003	EPA 8260D	01/21/22 10:22	NMC	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	2A21003	EPA 8260D	01/21/22 10:22	NMC	
Vinyl chloride [75-01-4]^	0.71	U	ug/L	1	0.71	2.5	2A21003	EPA 8260D	01/21/22 10:22	NMC	
Xylenes (Total) [1330-20-7]	1.3	U	ug/L	1	1.3	5.0	2A21003	EPA 8260D	01/21/22 10:22	NMC	

ANALYTICAL RESULTS

Description: LC34PS-PZC-080.0-20220117
Matrix: Ground Water
Project: NASA KSC LC34

Lab Sample ID: AE10221-52
Sampled: 01/17/22 12:08
Sampled By: Dan Forester / James Lloyd

Received: 01/17/22 15:30
Work Order: AE10221

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*50*	*1*	*50.0*	*99 %*	*41-142*	*2A21003*	*EPA 8260D*	*01/21/22 10:22*	*NMC*	
Dibromofluoromethane	*48*	*1*	*50.0*	*96 %*	*53-146*	*2A21003*	*EPA 8260D*	*01/21/22 10:22*	*NMC*	
Toluene-d8	*49*	*1*	*50.0*	*98 %*	*41-146*	*2A21003*	*EPA 8260D*	*01/21/22 10:22*	*NMC*	

ANALYTICAL RESULTS

Description: LC34PS-PZD-040.0-20220117 **Lab Sample ID:** AE10221-53 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 12:30 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	2000	U	ug/L	2500	2000	6200	2A21003	EPA 8260D	01/21/22 13:15	NMC	
1,1,2,2-Tetrachloroethane [79-34-5]^	1400	U	ug/L	2500	1400	6200	2A21003	EPA 8260D	01/21/22 13:15	NMC	
1,1,2-Trichloroethane [79-00-5]^	1900	U	ug/L	2500	1900	6200	2A21003	EPA 8260D	01/21/22 13:15	NMC	
1,1-Dichloroethane [75-34-3]^	1600	U	ug/L	2500	1600	6200	2A21003	EPA 8260D	01/21/22 13:15	NMC	
1,1-Dichloroethene [75-35-4]^	2400	U	ug/L	2500	2400	6200	2A21003	EPA 8260D	01/21/22 13:15	NMC	
1,2,4-Trichlorobenzene [120-82-1]^	1800	U	ug/L	2500	1800	6200	2A21003	EPA 8260D	01/21/22 13:15	NMC	
1,2-Dibromo-3-chloropropane [96-12-8]^	2400	U	ug/L	2500	2400	6200	2A21003	EPA 8260D	01/21/22 13:15	NMC	
1,2-Dibromoethane [106-93-4]^	2000	U	ug/L	2500	2000	6200	2A21003	EPA 8260D	01/21/22 13:15	NMC	
1,2-Dichlorobenzene [95-50-1]^	1800	U	ug/L	2500	1800	6200	2A21003	EPA 8260D	01/21/22 13:15	NMC	
1,2-Dichloroethane [107-06-2]^	1600	U	ug/L	2500	1600	6200	2A21003	EPA 8260D	01/21/22 13:15	NMC	
1,2-Dichloropropane [78-87-5]^	2000	U	ug/L	2500	2000	6200	2A21003	EPA 8260D	01/21/22 13:15	NMC	
1,3-Dichlorobenzene [541-73-1]^	1900	U	ug/L	2500	1900	6200	2A21003	EPA 8260D	01/21/22 13:15	NMC	
1,4-Dichlorobenzene [106-46-7]^	1900	U	ug/L	2500	1900	6200	2A21003	EPA 8260D	01/21/22 13:15	NMC	
2-Butanone [78-93-3]^	11000	U	ug/L	2500	11000	31000	2A21003	EPA 8260D	01/21/22 13:15	NMC	
2-Hexanone [591-78-6]^	6200	U	ug/L	2500	6200	31000	2A21003	EPA 8260D	01/21/22 13:15	NMC	
4-Methyl-2-pentanone [108-10-1]^	6200	U	ug/L	2500	6200	31000	2A21003	EPA 8260D	01/21/22 13:15	NMC	
Acetone [67-64-1]^	25000	U	ug/L	2500	25000	62000	2A21003	EPA 8260D	01/21/22 13:15	NMC	
Benzene [71-43-2]^	1800	U	ug/L	2500	1800	6200	2A21003	EPA 8260D	01/21/22 13:15	NMC	
Bromodichloromethane [75-27-4]^	1300	U	ug/L	2500	1300	6200	2A21003	EPA 8260D	01/21/22 13:15	NMC	
Bromoform [75-25-2]^	1900	U	ug/L	2500	1900	6200	2A21003	EPA 8260D	01/21/22 13:15	NMC	
Bromomethane [74-83-9]^	2400	U	ug/L	2500	2400	6200	2A21003	EPA 8260D	01/21/22 13:15	NMC	QV-01
Carbon disulfide [75-15-0]^	6200	U	ug/L	2500	6200	31000	2A21003	EPA 8260D	01/21/22 13:15	NMC	QV-01
Carbon Tetrachloride [56-23-5]^	2400	U	ug/L	2500	2400	6200	2A21003	EPA 8260D	01/21/22 13:15	NMC	
Chlorobenzene [108-90-7]^	1800	U	ug/L	2500	1800	6200	2A21003	EPA 8260D	01/21/22 13:15	NMC	
Chloroethane [75-00-3]^	2400	U	ug/L	2500	2400	6200	2A21003	EPA 8260D	01/21/22 13:15	NMC	
Chloroform [67-66-3]^	2000	U	ug/L	2500	2000	6200	2A21003	EPA 8260D	01/21/22 13:15	NMC	
Chloromethane [74-87-3]^	2000	U	ug/L	2500	2000	6200	2A21003	EPA 8260D	01/21/22 13:15	NMC	
cis-1,2-Dichloroethene [156-59-2]^	**51000**		ug/L	2500	1300	6200	2A21003	EPA 8260D	01/21/22 13:15	NMC	
cis-1,3-Dichloropropene [10061-01-5]^	1500	U	ug/L	2500	1500	6200	2A21003	EPA 8260D	01/21/22 13:15	NMC	
Cyclohexane [110-82-7]^	2300	U	ug/L	2500	2300	6200	2A21003	EPA 8260D	01/21/22 13:15	NMC	
Dibromochloromethane [124-48-1]^	1200	U	ug/L	2500	1200	6200	2A21003	EPA 8260D	01/21/22 13:15	NMC	
Dichlorodifluoromethane [75-71-8]^	1800	U	ug/L	2500	1800	6200	2A21003	EPA 8260D	01/21/22 13:15	NMC	QV-01
Ethylbenzene [100-41-4]^	1700	U	ug/L	2500	1700	6200	2A21003	EPA 8260D	01/21/22 13:15	NMC	
Freon 113 [76-13-1]^	1800	U	ug/L	2500	1800	6200	2A21003	EPA 8260D	01/21/22 13:15	NMC	QV-01
Isopropylbenzene [98-82-8]^	1700	U	ug/L	2500	1700	6200	2A21003	EPA 8260D	01/21/22 13:15	NMC	
Methyl acetate [79-20-9]^	2400	U	ug/L	2500	2400	6200	2A21003	EPA 8260D	01/21/22 13:15	NMC	
Methylene Chloride [75-09-2]^	6200	U	ug/L	2500	6200	31000	2A21003	EPA 8260D	01/21/22 13:15	NMC	
Methyl-tert-Butyl Ether [1634-04-4]^	1500	U	ug/L	2500	1500	6200	2A21003	EPA 8260D	01/21/22 13:15	NMC	
Styrene [100-42-5]^	1500	U	ug/L	2500	1500	6200	2A21003	EPA 8260D	01/21/22 13:15	NMC	
Tetrachloroethene [127-18-4]^	1900	U	ug/L	2500	1900	6200	2A21003	EPA 8260D	01/21/22 13:15	NMC	
Toluene [108-88-3]^	1800	U	ug/L	2500	1800	6200	2A21003	EPA 8260D	01/21/22 13:15	NMC	
trans-1,2-Dichloroethene [156-60-5]^	1800	U	ug/L	2500	1800	6200	2A21003	EPA 8260D	01/21/22 13:15	NMC	
trans-1,3-Dichloropropene [10061-02-6]^	1800	U	ug/L	2500	1800	6200	2A21003	EPA 8260D	01/21/22 13:15	NMC	
Trichloroethene [79-01-6]^	**170000**		ug/L	2500	2200	6200	2A21003	EPA 8260D	01/21/22 13:15	NMC	
Trichlorofluoromethane [75-69-4]^	2400	U	ug/L	2500	2400	6200	2A21003	EPA 8260D	01/21/22 13:15	NMC	
Vinyl chloride [75-01-4]^	1800	U	ug/L	2500	1800	6200	2A21003	EPA 8260D	01/21/22 13:15	NMC	
Xylenes (Total) [1330-20-7]	3200	U	ug/L	2500	3200	12000	2A21003	EPA 8260D	01/21/22 13:15	NMC	

ANALYTICAL RESULTS

Description: LC34PS-PZD-040.0-20220117	**Lab Sample ID:** AE10221-53	**Received:** 01/17/22 15:30
Matrix: Ground Water	**Sampled:** 01/17/22 12:30	**Work Order:** AE10221
Project: NASA KSC LC34	**Sampled By:** Dan Forester / James Lloyd	

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*48*	*1*	*50.0*	*96 %*	*41-142*	*2A21003*	*EPA 8260D*	*01/21/22 13:15*	*NMC*	
Dibromofluoromethane	*47*	*1*	*50.0*	*94 %*	*53-146*	*2A21003*	*EPA 8260D*	*01/21/22 13:15*	*NMC*	
Toluene-d8	*48*	*1*	*50.0*	*96 %*	*41-146*	*2A21003*	*EPA 8260D*	*01/21/22 13:15*	*NMC*	

ANALYTICAL RESULTS

Description: LC34PS-PZD-050.0-20220117 **Lab Sample ID:** AE10221-54 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 12:32 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	16000	U	ug/L	20000	16000	50000	2A21003	EPA 8260D	01/21/22 13:44	NMC	
1,1,2,2-Tetrachloroethane [79-34-5]^	11000	U	ug/L	20000	11000	50000	2A21003	EPA 8260D	01/21/22 13:44	NMC	
1,1,2-Trichloroethane [79-00-5]^	15000	U	ug/L	20000	15000	50000	2A21003	EPA 8260D	01/21/22 13:44	NMC	
1,1-Dichloroethane [75-34-3]^	12000	U	ug/L	20000	12000	50000	2A21003	EPA 8260D	01/21/22 13:44	NMC	
1,1-Dichloroethene [75-35-4]^	19000	U	ug/L	20000	19000	50000	2A21003	EPA 8260D	01/21/22 13:44	NMC	
1,2,4-Trichlorobenzene [120-82-1]^	14000	U	ug/L	20000	14000	50000	2A21003	EPA 8260D	01/21/22 13:44	NMC	
1,2-Dibromo-3-chloropropane [96-12-8]^	19000	U	ug/L	20000	19000	50000	2A21003	EPA 8260D	01/21/22 13:44	NMC	
1,2-Dibromoethane [106-93-4]^	16000	U	ug/L	20000	16000	50000	2A21003	EPA 8260D	01/21/22 13:44	NMC	
1,2-Dichlorobenzene [95-50-1]^	15000	U	ug/L	20000	15000	50000	2A21003	EPA 8260D	01/21/22 13:44	NMC	
1,2-Dichloroethane [107-06-2]^	13000	U	ug/L	20000	13000	50000	2A21003	EPA 8260D	01/21/22 13:44	NMC	
1,2-Dichloropropane [78-87-5]^	16000	U	ug/L	20000	16000	50000	2A21003	EPA 8260D	01/21/22 13:44	NMC	
1,3-Dichlorobenzene [541-73-1]^	15000	U	ug/L	20000	15000	50000	2A21003	EPA 8260D	01/21/22 13:44	NMC	
1,4-Dichlorobenzene [106-46-7]^	15000	U	ug/L	20000	15000	50000	2A21003	EPA 8260D	01/21/22 13:44	NMC	
2-Butanone [78-93-3]^	90000	U	ug/L	20000	90000	250000	2A21003	EPA 8260D	01/21/22 13:44	NMC	
2-Hexanone [591-78-6]^	50000	U	ug/L	20000	50000	250000	2A21003	EPA 8260D	01/21/22 13:44	NMC	
4-Methyl-2-pentanone [108-10-1]^	50000	U	ug/L	20000	50000	250000	2A21003	EPA 8260D	01/21/22 13:44	NMC	
Acetone [67-64-1]^	200000	U	ug/L	20000	200000	500000	2A21003	EPA 8260D	01/21/22 13:44	NMC	
Benzene [71-43-2]^	14000	U	ug/L	20000	14000	50000	2A21003	EPA 8260D	01/21/22 13:44	NMC	
Bromodichloromethane [75-27-4]^	10000	U	ug/L	20000	10000	50000	2A21003	EPA 8260D	01/21/22 13:44	NMC	
Bromoform [75-25-2]^	15000	U	ug/L	20000	15000	50000	2A21003	EPA 8260D	01/21/22 13:44	NMC	
Bromomethane [74-83-9]^	19000	U	ug/L	20000	19000	50000	2A21003	EPA 8260D	01/21/22 13:44	NMC	QV-01
Carbon disulfide [75-15-0]^	50000	U	ug/L	20000	50000	250000	2A21003	EPA 8260D	01/21/22 13:44	NMC	QV-01
Carbon Tetrachloride [56-23-5]^	19000	U	ug/L	20000	19000	50000	2A21003	EPA 8260D	01/21/22 13:44	NMC	
Chlorobenzene [108-90-7]^	14000	U	ug/L	20000	14000	50000	2A21003	EPA 8260D	01/21/22 13:44	NMC	
Chloroethane [75-00-3]^	20000	U	ug/L	20000	20000	50000	2A21003	EPA 8260D	01/21/22 13:44	NMC	
Chloroform [67-66-3]^	16000	U	ug/L	20000	16000	50000	2A21003	EPA 8260D	01/21/22 13:44	NMC	
Chloromethane [74-87-3]^	16000	U	ug/L	20000	16000	50000	2A21003	EPA 8260D	01/21/22 13:44	NMC	
cis-1,2-Dichloroethene [156-59-2]^	**72000**		ug/L	20000	11000	50000	2A21003	EPA 8260D	01/21/22 13:44	NMC	
cis-1,3-Dichloropropene [10061-01-5]^	12000	U	ug/L	20000	12000	50000	2A21003	EPA 8260D	01/21/22 13:44	NMC	
Cyclohexane [110-82-7]^	19000	U	ug/L	20000	19000	50000	2A21003	EPA 8260D	01/21/22 13:44	NMC	
Dibromochloromethane [124-48-1]^	10000	U	ug/L	20000	10000	50000	2A21003	EPA 8260D	01/21/22 13:44	NMC	
Dichlorodifluoromethane [75-71-8]^	15000	U	ug/L	20000	15000	50000	2A21003	EPA 8260D	01/21/22 13:44	NMC	QV-01
Ethylbenzene [100-41-4]^	14000	U	ug/L	20000	14000	50000	2A21003	EPA 8260D	01/21/22 13:44	NMC	
Freon 113 [76-13-1]^	15000	U	ug/L	20000	15000	50000	2A21003	EPA 8260D	01/21/22 13:44	NMC	QV-01
Isopropylbenzene [98-82-8]^	13000	U	ug/L	20000	13000	50000	2A21003	EPA 8260D	01/21/22 13:44	NMC	
Methyl acetate [79-20-9]^	19000	U	ug/L	20000	19000	50000	2A21003	EPA 8260D	01/21/22 13:44	NMC	
Methylene Chloride [75-09-2]^	50000	U	ug/L	20000	50000	250000	2A21003	EPA 8260D	01/21/22 13:44	NMC	
Methyl-tert-Butyl Ether [1634-04-4]^	12000	U	ug/L	20000	12000	50000	2A21003	EPA 8260D	01/21/22 13:44	NMC	
Styrene [100-42-5]^	12000	U	ug/L	20000	12000	50000	2A21003	EPA 8260D	01/21/22 13:44	NMC	
Tetrachloroethene [127-18-4]^	15000	U	ug/L	20000	15000	50000	2A21003	EPA 8260D	01/21/22 13:44	NMC	
Toluene [108-88-3]^	14000	U	ug/L	20000	14000	50000	2A21003	EPA 8260D	01/21/22 13:44	NMC	
trans-1,2-Dichloroethene [156-60-5]^	15000	U	ug/L	20000	15000	50000	2A21003	EPA 8260D	01/21/22 13:44	NMC	
trans-1,3-Dichloropropene [10061-02-6]^	15000	U	ug/L	20000	15000	50000	2A21003	EPA 8260D	01/21/22 13:44	NMC	
Trichloroethene [79-01-6]^	**830000**		ug/L	20000	18000	50000	2A21003	EPA 8260D	01/21/22 13:44	NMC	
Trichlorofluoromethane [75-69-4]^	19000	U	ug/L	20000	19000	50000	2A21003	EPA 8260D	01/21/22 13:44	NMC	
Vinyl chloride [75-01-4]^	14000	U	ug/L	20000	14000	50000	2A21003	EPA 8260D	01/21/22 13:44	NMC	
Xylenes (Total) [1330-20-7]	26000	U	ug/L	20000	26000	100000	2A21003	EPA 8260D	01/21/22 13:44	NMC	

ANALYTICAL RESULTS

Description: LC34PS-PZD-050.0-20220117	**Lab Sample ID:** AE10221-54	**Received:** 01/17/22 15:30
Matrix: Ground Water	**Sampled:** 01/17/22 12:32	**Work Order:** AE10221
Project: NASA KSC LC34	**Sampled By:** Dan Forester / James Lloyd	

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*48*	*1*	*50.0*	*96 %*	*41-142*	*2A21003*	*EPA 8260D*	*01/21/22 13:44*	*NMC*	
Dibromofluoromethane	*48*	*1*	*50.0*	*95 %*	*53-146*	*2A21003*	*EPA 8260D*	*01/21/22 13:44*	*NMC*	
Toluene-d8	*48*	*1*	*50.0*	*95 %*	*41-146*	*2A21003*	*EPA 8260D*	*01/21/22 13:44*	*NMC*	

ANALYTICAL RESULTS

Description: LC34PS-PZD-058.0-20220117 **Lab Sample ID:** AE10221-55 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 12:34 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	16000	U	ug/L	20000	16000	50000	2A21003	EPA 8260D	01/21/22 14:12	NMC	
1,1,2,2-Tetrachloroethane [79-34-5]^	11000	U	ug/L	20000	11000	50000	2A21003	EPA 8260D	01/21/22 14:12	NMC	
1,1,2-Trichloroethane [79-00-5]^	15000	U	ug/L	20000	15000	50000	2A21003	EPA 8260D	01/21/22 14:12	NMC	
1,1-Dichloroethane [75-34-3]^	12000	U	ug/L	20000	12000	50000	2A21003	EPA 8260D	01/21/22 14:12	NMC	
1,1-Dichloroethene [75-35-4]^	19000	U	ug/L	20000	19000	50000	2A21003	EPA 8260D	01/21/22 14:12	NMC	
1,2,4-Trichlorobenzene [120-82-1]^	14000	U	ug/L	20000	14000	50000	2A21003	EPA 8260D	01/21/22 14:12	NMC	
1,2-Dibromo-3-chloropropane [96-12-8]^	19000	U	ug/L	20000	19000	50000	2A21003	EPA 8260D	01/21/22 14:12	NMC	
1,2-Dibromoethane [106-93-4]^	16000	U	ug/L	20000	16000	50000	2A21003	EPA 8260D	01/21/22 14:12	NMC	
1,2-Dichlorobenzene [95-50-1]^	15000	U	ug/L	20000	15000	50000	2A21003	EPA 8260D	01/21/22 14:12	NMC	
1,2-Dichloroethane [107-06-2]^	13000	U	ug/L	20000	13000	50000	2A21003	EPA 8260D	01/21/22 14:12	NMC	
1,2-Dichloropropane [78-87-5]^	16000	U	ug/L	20000	16000	50000	2A21003	EPA 8260D	01/21/22 14:12	NMC	
1,3-Dichlorobenzene [541-73-1]^	15000	U	ug/L	20000	15000	50000	2A21003	EPA 8260D	01/21/22 14:12	NMC	
1,4-Dichlorobenzene [106-46-7]^	15000	U	ug/L	20000	15000	50000	2A21003	EPA 8260D	01/21/22 14:12	NMC	
2-Butanone [78-93-3]^	90000	U	ug/L	20000	90000	250000	2A21003	EPA 8260D	01/21/22 14:12	NMC	
2-Hexanone [591-78-6]^	50000	U	ug/L	20000	50000	250000	2A21003	EPA 8260D	01/21/22 14:12	NMC	
4-Methyl-2-pentanone [108-10-1]^	50000	U	ug/L	20000	50000	250000	2A21003	EPA 8260D	01/21/22 14:12	NMC	
Acetone [67-64-1]^	200000	U	ug/L	20000	200000	500000	2A21003	EPA 8260D	01/21/22 14:12	NMC	
Benzene [71-43-2]^	14000	U	ug/L	20000	14000	50000	2A21003	EPA 8260D	01/21/22 14:12	NMC	
Bromodichloromethane [75-27-4]^	10000	U	ug/L	20000	10000	50000	2A21003	EPA 8260D	01/21/22 14:12	NMC	
Bromoform [75-25-2]^	15000	U	ug/L	20000	15000	50000	2A21003	EPA 8260D	01/21/22 14:12	NMC	
Bromomethane [74-83-9]^	19000	U	ug/L	20000	19000	50000	2A21003	EPA 8260D	01/21/22 14:12	NMC	QV-01
Carbon disulfide [75-15-0]^	50000	U	ug/L	20000	50000	250000	2A21003	EPA 8260D	01/21/22 14:12	NMC	QV-01
Carbon Tetrachloride [56-23-5]^	19000	U	ug/L	20000	19000	50000	2A21003	EPA 8260D	01/21/22 14:12	NMC	
Chlorobenzene [108-90-7]^	14000	U	ug/L	20000	14000	50000	2A21003	EPA 8260D	01/21/22 14:12	NMC	
Chloroethane [75-00-3]^	20000	U	ug/L	20000	20000	50000	2A21003	EPA 8260D	01/21/22 14:12	NMC	
Chloroform [67-66-3]^	16000	U	ug/L	20000	16000	50000	2A21003	EPA 8260D	01/21/22 14:12	NMC	
Chloromethane [74-87-3]^	16000	U	ug/L	20000	16000	50000	2A21003	EPA 8260D	01/21/22 14:12	NMC	
cis-1,2-Dichloroethene [156-59-2]^	**57000**		ug/L	20000	11000	50000	2A21003	EPA 8260D	01/21/22 14:12	NMC	
cis-1,3-Dichloropropene [10061-01-5]^	12000	U	ug/L	20000	12000	50000	2A21003	EPA 8260D	01/21/22 14:12	NMC	
Cyclohexane [110-82-7]^	19000	U	ug/L	20000	19000	50000	2A21003	EPA 8260D	01/21/22 14:12	NMC	
Dibromochloromethane [124-48-1]^	10000	U	ug/L	20000	10000	50000	2A21003	EPA 8260D	01/21/22 14:12	NMC	
Dichlorodifluoromethane [75-71-8]^	15000	U	ug/L	20000	15000	50000	2A21003	EPA 8260D	01/21/22 14:12	NMC	QV-01
Ethylbenzene [100-41-4]^	14000	U	ug/L	20000	14000	50000	2A21003	EPA 8260D	01/21/22 14:12	NMC	
Freon 113 [76-13-1]^	15000	U	ug/L	20000	15000	50000	2A21003	EPA 8260D	01/21/22 14:12	NMC	QV-01
Isopropylbenzene [98-82-8]^	13000	U	ug/L	20000	13000	50000	2A21003	EPA 8260D	01/21/22 14:12	NMC	
Methyl acetate [79-20-9]^	19000	U	ug/L	20000	19000	50000	2A21003	EPA 8260D	01/21/22 14:12	NMC	
Methylene Chloride [75-09-2]^	50000	U	ug/L	20000	50000	250000	2A21003	EPA 8260D	01/21/22 14:12	NMC	
Methyl-tert-Butyl Ether [1634-04-4]^	12000	U	ug/L	20000	12000	50000	2A21003	EPA 8260D	01/21/22 14:12	NMC	
Styrene [100-42-5]^	12000	U	ug/L	20000	12000	50000	2A21003	EPA 8260D	01/21/22 14:12	NMC	
Tetrachloroethene [127-18-4]^	15000	U	ug/L	20000	15000	50000	2A21003	EPA 8260D	01/21/22 14:12	NMC	
Toluene [108-88-3]^	14000	U	ug/L	20000	14000	50000	2A21003	EPA 8260D	01/21/22 14:12	NMC	
trans-1,2-Dichloroethene [156-60-5]^	15000	U	ug/L	20000	15000	50000	2A21003	EPA 8260D	01/21/22 14:12	NMC	
trans-1,3-Dichloropropene [10061-02-6]^	15000	U	ug/L	20000	15000	50000	2A21003	EPA 8260D	01/21/22 14:12	NMC	
Trichloroethene [79-01-6]^	**640000**		ug/L	20000	18000	50000	2A21003	EPA 8260D	01/21/22 14:12	NMC	
Trichlorofluoromethane [75-69-4]^	19000	U	ug/L	20000	19000	50000	2A21003	EPA 8260D	01/21/22 14:12	NMC	
Vinyl chloride [75-01-4]^	14000	U	ug/L	20000	14000	50000	2A21003	EPA 8260D	01/21/22 14:12	NMC	
Xylenes (Total) [1330-20-7]	26000	U	ug/L	20000	26000	100000	2A21003	EPA 8260D	01/21/22 14:12	NMC	

ANALYTICAL RESULTS

Description: LC34PS-PZD-058.0-20220117	**Lab Sample ID:** AE10221-55	**Received:** 01/17/22 15:30
Matrix: Ground Water	**Sampled:** 01/17/22 12:34	**Work Order:** AE10221
Project: NASA KSC LC34	**Sampled By:** Dan Forester / James Lloyd	

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*48*	*1*	*50.0*	*96 %*	*41-142*	*2A21003*	*EPA 8260D*	*01/21/22 14:12*	*NMC*	
Dibromofluoromethane	*47*	*1*	*50.0*	*93 %*	*53-146*	*2A21003*	*EPA 8260D*	*01/21/22 14:12*	*NMC*	
Toluene-d8	*47*	*1*	*50.0*	*93 %*	*41-146*	*2A21003*	*EPA 8260D*	*01/21/22 14:12*	*NMC*	

ANALYTICAL RESULTS

Description: LC34PS-PZD-073.0-20220117 **Lab Sample ID:** AE10221-56 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 12:36 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	4.0	U	ug/L	5	4.0	12	2A21003	EPA 8260D	01/21/22 14:41	NMC	
1,1,2,2-Tetrachloroethane [79-34-5]^	2.7	U	ug/L	5	2.7	12	2A21003	EPA 8260D	01/21/22 14:41	NMC	
1,1,2-Trichloroethane [79-00-5]^	3.8	U	ug/L	5	3.8	12	2A21003	EPA 8260D	01/21/22 14:41	NMC	
1,1-Dichloroethane [75-34-3]^	3.1	U	ug/L	5	3.1	12	2A21003	EPA 8260D	01/21/22 14:41	NMC	
1,1-Dichloroethene [75-35-4]^	4.7	U	ug/L	5	4.7	12	2A21003	EPA 8260D	01/21/22 14:41	NMC	
1,2,4-Trichlorobenzene [120-82-1]^	3.5	U	ug/L	5	3.5	12	2A21003	EPA 8260D	01/21/22 14:41	NMC	
1,2-Dibromo-3-chloropropane [96-12-8]^	4.8	U	ug/L	5	4.8	12	2A21003	EPA 8260D	01/21/22 14:41	NMC	
1,2-Dibromoethane [106-93-4]^	3.9	U	ug/L	5	3.9	12	2A21003	EPA 8260D	01/21/22 14:41	NMC	
1,2-Dichlorobenzene [95-50-1]^	3.6	U	ug/L	5	3.6	12	2A21003	EPA 8260D	01/21/22 14:41	NMC	
1,2-Dichloroethane [107-06-2]^	3.2	U	ug/L	5	3.2	12	2A21003	EPA 8260D	01/21/22 14:41	NMC	
1,2-Dichloropropane [78-87-5]^	4.0	U	ug/L	5	4.0	12	2A21003	EPA 8260D	01/21/22 14:41	NMC	
1,3-Dichlorobenzene [541-73-1]^	3.8	U	ug/L	5	3.8	12	2A21003	EPA 8260D	01/21/22 14:41	NMC	
1,4-Dichlorobenzene [106-46-7]^	3.8	U	ug/L	5	3.8	12	2A21003	EPA 8260D	01/21/22 14:41	NMC	
2-Butanone [78-93-3]^	22	U	ug/L	5	22	62	2A21003	EPA 8260D	01/21/22 14:41	NMC	
2-Hexanone [591-78-6]^	12	U	ug/L	5	12	62	2A21003	EPA 8260D	01/21/22 14:41	NMC	
4-Methyl-2-pentanone [108-10-1]^	12	U	ug/L	5	12	62	2A21003	EPA 8260D	01/21/22 14:41	NMC	
Acetone [67-64-1]^	50	U	ug/L	5	50	120	2A21003	EPA 8260D	01/21/22 14:41	NMC	
Benzene [71-43-2]^	3.6	U	ug/L	5	3.6	12	2A21003	EPA 8260D	01/21/22 14:41	NMC	
Bromodichloromethane [75-27-4]^	2.6	U	ug/L	5	2.6	12	2A21003	EPA 8260D	01/21/22 14:41	NMC	
Bromoform [75-25-2]^	3.8	U	ug/L	5	3.8	12	2A21003	EPA 8260D	01/21/22 14:41	NMC	
Bromomethane [74-83-9]^	4.8	U	ug/L	5	4.8	12	2A21003	EPA 8260D	01/21/22 14:41	NMC	QV-01
Carbon disulfide [75-15-0]^	12	U	ug/L	5	12	62	2A21003	EPA 8260D	01/21/22 14:41	NMC	QV-01
Carbon Tetrachloride [56-23-5]^	4.7	U	ug/L	5	4.7	12	2A21003	EPA 8260D	01/21/22 14:41	NMC	
Chlorobenzene [108-90-7]^	3.6	U	ug/L	5	3.6	12	2A21003	EPA 8260D	01/21/22 14:41	NMC	
Chloroethane [75-00-3]^	4.9	U	ug/L	5	4.9	12	2A21003	EPA 8260D	01/21/22 14:41	NMC	
Chloroform [67-66-3]^	4.0	U	ug/L	5	4.0	12	2A21003	EPA 8260D	01/21/22 14:41	NMC	
Chloromethane [74-87-3]^	4.1	U	ug/L	5	4.1	12	2A21003	EPA 8260D	01/21/22 14:41	NMC	
cis-1,2-Dichloroethene [156-59-2]^	**6.6**	I	ug/L	5	2.6	12	2A21003	EPA 8260D	01/21/22 14:41	NMC	
cis-1,3-Dichloropropene [10061-01-5]^	3.0	U	ug/L	5	3.0	12	2A21003	EPA 8260D	01/21/22 14:41	NMC	
Cyclohexane [110-82-7]^	4.6	U	ug/L	5	4.6	12	2A21003	EPA 8260D	01/21/22 14:41	NMC	
Dibromochloromethane [124-48-1]^	2.5	U	ug/L	5	2.5	12	2A21003	EPA 8260D	01/21/22 14:41	NMC	
Dichlorodifluoromethane [75-71-8]^	3.7	U	ug/L	5	3.7	12	2A21003	EPA 8260D	01/21/22 14:41	NMC	QV-01
Ethylbenzene [100-41-4]^	3.4	U	ug/L	5	3.4	12	2A21003	EPA 8260D	01/21/22 14:41	NMC	
Freon 113 [76-13-1]^	3.6	U	ug/L	5	3.6	12	2A21003	EPA 8260D	01/21/22 14:41	NMC	QV-01
Isopropylbenzene [98-82-8]^	3.4	U	ug/L	5	3.4	12	2A21003	EPA 8260D	01/21/22 14:41	NMC	
Methyl acetate [79-20-9]^	4.8	U	ug/L	5	4.8	12	2A21003	EPA 8260D	01/21/22 14:41	NMC	
Methylene Chloride [75-09-2]^	12	U	ug/L	5	12	62	2A21003	EPA 8260D	01/21/22 14:41	NMC	
Methyl-tert-Butyl Ether [1634-04-4]^	3.0	U	ug/L	5	3.0	12	2A21003	EPA 8260D	01/21/22 14:41	NMC	
Styrene [100-42-5]^	3.0	U	ug/L	5	3.0	12	2A21003	EPA 8260D	01/21/22 14:41	NMC	
Tetrachloroethene [127-18-4]^	3.8	U	ug/L	5	3.8	12	2A21003	EPA 8260D	01/21/22 14:41	NMC	
Toluene [108-88-3]^	3.6	U	ug/L	5	3.6	12	2A21003	EPA 8260D	01/21/22 14:41	NMC	
trans-1,2-Dichloroethene [156-60-5]^	3.6	U	ug/L	5	3.6	12	2A21003	EPA 8260D	01/21/22 14:41	NMC	
trans-1,3-Dichloropropene [10061-02-6]^	3.6	U	ug/L	5	3.6	12	2A21003	EPA 8260D	01/21/22 14:41	NMC	
Trichloroethene [79-01-6]^	**410**		ug/L	5	4.4	12	2A21003	EPA 8260D	01/21/22 14:41	NMC	
Trichlorofluoromethane [75-69-4]^	4.7	U	ug/L	5	4.7	12	2A21003	EPA 8260D	01/21/22 14:41	NMC	
Vinyl chloride [75-01-4]^	3.6	U	ug/L	5	3.6	12	2A21003	EPA 8260D	01/21/22 14:41	NMC	
Xylenes (Total) [1330-20-7]	6.5	U	ug/L	5	6.5	25	2A21003	EPA 8260D	01/21/22 14:41	NMC	

ANALYTICAL RESULTS

Description: LC34PS-PZD-073.0-20220117	**Lab Sample ID:** AE10221-56	**Received:** 01/17/22 15:30
Matrix: Ground Water	**Sampled:** 01/17/22 12:36	**Work Order:** AE10221
Project: NASA KSC LC34	**Sampled By:** Dan Forester / James Lloyd	

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*49*	*1*	*50.0*	*97 %*	*41-142*	*2A21003*	*EPA 8260D*	*01/21/22 14:41*	*NMC*	
Dibromofluoromethane	*48*	*1*	*50.0*	*97 %*	*53-146*	*2A21003*	*EPA 8260D*	*01/21/22 14:41*	*NMC*	
Toluene-d8	*48*	*1*	*50.0*	*97 %*	*41-146*	*2A21003*	*EPA 8260D*	*01/21/22 14:41*	*NMC*	

ANALYTICAL RESULTS

Description: LC34PS-PZD-080.0-20220117 **Lab Sample ID:** AE10221-57 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 12:38 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	2A21003	EPA 8260D	01/21/22 15:10	NMC	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	2A21003	EPA 8260D	01/21/22 15:10	NMC	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	2A21003	EPA 8260D	01/21/22 15:10	NMC	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	2A21003	EPA 8260D	01/21/22 15:10	NMC	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	2A21003	EPA 8260D	01/21/22 15:10	NMC	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	2A21003	EPA 8260D	01/21/22 15:10	NMC	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	2A21003	EPA 8260D	01/21/22 15:10	NMC	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	2A21003	EPA 8260D	01/21/22 15:10	NMC	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	2A21003	EPA 8260D	01/21/22 15:10	NMC	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	2A21003	EPA 8260D	01/21/22 15:10	NMC	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	2A21003	EPA 8260D	01/21/22 15:10	NMC	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	2A21003	EPA 8260D	01/21/22 15:10	NMC	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	2A21003	EPA 8260D	01/21/22 15:10	NMC	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	2A21003	EPA 8260D	01/21/22 15:10	NMC	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	2A21003	EPA 8260D	01/21/22 15:10	NMC	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	2A21003	EPA 8260D	01/21/22 15:10	NMC	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	2A21003	EPA 8260D	01/21/22 15:10	NMC	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	2A21003	EPA 8260D	01/21/22 15:10	NMC	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	2A21003	EPA 8260D	01/21/22 15:10	NMC	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	2A21003	EPA 8260D	01/21/22 15:10	NMC	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	2A21003	EPA 8260D	01/21/22 15:10	NMC	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	2A21003	EPA 8260D	01/21/22 15:10	NMC	QV-01
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	2A21003	EPA 8260D	01/21/22 15:10	NMC	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	2A21003	EPA 8260D	01/21/22 15:10	NMC	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	2A21003	EPA 8260D	01/21/22 15:10	NMC	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	2A21003	EPA 8260D	01/21/22 15:10	NMC	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	2A21003	EPA 8260D	01/21/22 15:10	NMC	
cis-1,2-Dichloroethene [156-59-2]^	**35**		ug/L	1	0.53	2.5	2A21003	EPA 8260D	01/21/22 15:10	NMC	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	2A21003	EPA 8260D	01/21/22 15:10	NMC	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	2A21003	EPA 8260D	01/21/22 15:10	NMC	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	2A21003	EPA 8260D	01/21/22 15:10	NMC	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	2A21003	EPA 8260D	01/21/22 15:10	NMC	QV-01
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	2A21003	EPA 8260D	01/21/22 15:10	NMC	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	2A21003	EPA 8260D	01/21/22 15:10	NMC	QV-01
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	2A21003	EPA 8260D	01/21/22 15:10	NMC	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	2A21003	EPA 8260D	01/21/22 15:10	NMC	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	2A21003	EPA 8260D	01/21/22 15:10	NMC	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	2A21003	EPA 8260D	01/21/22 15:10	NMC	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	2A21003	EPA 8260D	01/21/22 15:10	NMC	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	2A21003	EPA 8260D	01/21/22 15:10	NMC	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	2A21003	EPA 8260D	01/21/22 15:10	NMC	
trans-1,2-Dichloroethene [156-60-5]^	**9.8**		ug/L	1	0.73	2.5	2A21003	EPA 8260D	01/21/22 15:10	NMC	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	2A21003	EPA 8260D	01/21/22 15:10	NMC	
Trichloroethene [79-01-6]^	**4.4**		ug/L	1	0.89	2.5	2A21003	EPA 8260D	01/21/22 15:10	NMC	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	2A21003	EPA 8260D	01/21/22 15:10	NMC	
Vinyl chloride [75-01-4]^	0.71	U	ug/L	1	0.71	2.5	2A21003	EPA 8260D	01/21/22 15:10	NMC	
Xylenes (Total) [1330-20-7]	1.3	U	ug/L	1	1.3	5.0	2A21003	EPA 8260D	01/21/22 15:10	NMC	

ANALYTICAL RESULTS

Description: LC34PS-PZD-080.0-20220117 **Lab Sample ID:** AE10221-57 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 12:38 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*45*	*1*	*50.0*	*90 %*	*41-142*	*2A21003*	*EPA 8260D*	*01/21/22 15:10*	*NMC*	
Dibromofluoromethane	*47*	*1*	*50.0*	*94 %*	*53-146*	*2A21003*	*EPA 8260D*	*01/21/22 15:10*	*NMC*	
Toluene-d8	*45*	*1*	*50.0*	*89 %*	*41-146*	*2A21003*	*EPA 8260D*	*01/21/22 15:10*	*NMC*	

ANALYTICAL RESULTS

Description: LC34PS-PZE-040.0-20220117 **Lab Sample ID:** AE10221-58 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 13:00 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	8000	U	ug/L	10000	8000	25000	2A21003	EPA 8260D	01/21/22 15:39	NMC	
1,1,2,2-Tetrachloroethane [79-34-5]^	5400	U	ug/L	10000	5400	25000	2A21003	EPA 8260D	01/21/22 15:39	NMC	
1,1,2-Trichloroethane [79-00-5]^	7600	U	ug/L	10000	7600	25000	2A21003	EPA 8260D	01/21/22 15:39	NMC	
1,1-Dichloroethane [75-34-3]^	6200	U	ug/L	10000	6200	25000	2A21003	EPA 8260D	01/21/22 15:39	NMC	
1,1-Dichloroethene [75-35-4]^	9400	U	ug/L	10000	9400	25000	2A21003	EPA 8260D	01/21/22 15:39	NMC	
1,2,4-Trichlorobenzene [120-82-1]^	7000	U	ug/L	10000	7000	25000	2A21003	EPA 8260D	01/21/22 15:39	NMC	
1,2-Dibromo-3-chloropropane [96-12-8]^	9600	U	ug/L	10000	9600	25000	2A21003	EPA 8260D	01/21/22 15:39	NMC	
1,2-Dibromoethane [106-93-4]^	7800	U	ug/L	10000	7800	25000	2A21003	EPA 8260D	01/21/22 15:39	NMC	
1,2-Dichlorobenzene [95-50-1]^	7300	U	ug/L	10000	7300	25000	2A21003	EPA 8260D	01/21/22 15:39	NMC	
1,2-Dichloroethane [107-06-2]^	6300	U	ug/L	10000	6300	25000	2A21003	EPA 8260D	01/21/22 15:39	NMC	
1,2-Dichloropropane [78-87-5]^	8000	U	ug/L	10000	8000	25000	2A21003	EPA 8260D	01/21/22 15:39	NMC	
1,3-Dichlorobenzene [541-73-1]^	7700	U	ug/L	10000	7700	25000	2A21003	EPA 8260D	01/21/22 15:39	NMC	
1,4-Dichlorobenzene [106-46-7]^	7600	U	ug/L	10000	7600	25000	2A21003	EPA 8260D	01/21/22 15:39	NMC	
2-Butanone [78-93-3]^	45000	U	ug/L	10000	45000	120000	2A21003	EPA 8260D	01/21/22 15:39	NMC	
2-Hexanone [591-78-6]^	25000	U	ug/L	10000	25000	120000	2A21003	EPA 8260D	01/21/22 15:39	NMC	
4-Methyl-2-pentanone [108-10-1]^	25000	U	ug/L	10000	25000	120000	2A21003	EPA 8260D	01/21/22 15:39	NMC	
Acetone [67-64-1]^	100000	U	ug/L	10000	100000	250000	2A21003	EPA 8260D	01/21/22 15:39	NMC	
Benzene [71-43-2]^	7100	U	ug/L	10000	7100	25000	2A21003	EPA 8260D	01/21/22 15:39	NMC	
Bromodichloromethane [75-27-4]^	5200	U	ug/L	10000	5200	25000	2A21003	EPA 8260D	01/21/22 15:39	NMC	
Bromoform [75-25-2]^	7500	U	ug/L	10000	7500	25000	2A21003	EPA 8260D	01/21/22 15:39	NMC	
Bromomethane [74-83-9]^	9500	U	ug/L	10000	9500	25000	2A21003	EPA 8260D	01/21/22 15:39	NMC	QV-01
Carbon disulfide [75-15-0]^	25000	U	ug/L	10000	25000	120000	2A21003	EPA 8260D	01/21/22 15:39	NMC	QV-01
Carbon Tetrachloride [56-23-5]^	9400	U	ug/L	10000	9400	25000	2A21003	EPA 8260D	01/21/22 15:39	NMC	
Chlorobenzene [108-90-7]^	7200	U	ug/L	10000	7200	25000	2A21003	EPA 8260D	01/21/22 15:39	NMC	
Chloroethane [75-00-3]^	9800	U	ug/L	10000	9800	25000	2A21003	EPA 8260D	01/21/22 15:39	NMC	
Chloroform [67-66-3]^	8000	U	ug/L	10000	8000	25000	2A21003	EPA 8260D	01/21/22 15:39	NMC	
Chloromethane [74-87-3]^	8200	U	ug/L	10000	8200	25000	2A21003	EPA 8260D	01/21/22 15:39	NMC	
cis-1,2-Dichloroethene [156-59-2]^	**24000**	I	ug/L	10000	5300	25000	2A21003	EPA 8260D	01/21/22 15:39	NMC	
cis-1,3-Dichloropropene [10061-01-5]^	5900	U	ug/L	10000	5900	25000	2A21003	EPA 8260D	01/21/22 15:39	NMC	
Cyclohexane [110-82-7]^	9300	U	ug/L	10000	9300	25000	2A21003	EPA 8260D	01/21/22 15:39	NMC	
Dibromochloromethane [124-48-1]^	5000	U	ug/L	10000	5000	25000	2A21003	EPA 8260D	01/21/22 15:39	NMC	
Dichlorodifluoromethane [75-71-8]^	7400	U	ug/L	10000	7400	25000	2A21003	EPA 8260D	01/21/22 15:39	NMC	QV-01
Ethylbenzene [100-41-4]^	6900	U	ug/L	10000	6900	25000	2A21003	EPA 8260D	01/21/22 15:39	NMC	
Freon 113 [76-13-1]^	7300	U	ug/L	10000	7300	25000	2A21003	EPA 8260D	01/21/22 15:39	NMC	QV-01
Isopropylbenzene [98-82-8]^	6700	U	ug/L	10000	6700	25000	2A21003	EPA 8260D	01/21/22 15:39	NMC	
Methyl acetate [79-20-9]^	9500	U	ug/L	10000	9500	25000	2A21003	EPA 8260D	01/21/22 15:39	NMC	
Methylene Chloride [75-09-2]^	25000	U	ug/L	10000	25000	120000	2A21003	EPA 8260D	01/21/22 15:39	NMC	
Methyl-tert-Butyl Ether [1634-04-4]^	6000	U	ug/L	10000	6000	25000	2A21003	EPA 8260D	01/21/22 15:39	NMC	
Styrene [100-42-5]^	6100	U	ug/L	10000	6100	25000	2A21003	EPA 8260D	01/21/22 15:39	NMC	
Tetrachloroethene [127-18-4]^	7600	U	ug/L	10000	7600	25000	2A21003	EPA 8260D	01/21/22 15:39	NMC	
Toluene [108-88-3]^	7200	U	ug/L	10000	7200	25000	2A21003	EPA 8260D	01/21/22 15:39	NMC	
trans-1,2-Dichloroethene [156-60-5]^	7300	U	ug/L	10000	7300	25000	2A21003	EPA 8260D	01/21/22 15:39	NMC	
trans-1,3-Dichloropropene [10061-02-6]^	7300	U	ug/L	10000	7300	25000	2A21003	EPA 8260D	01/21/22 15:39	NMC	
Trichloroethene [79-01-6]^	**530000**		ug/L	10000	8900	25000	2A21003	EPA 8260D	01/21/22 15:39	NMC	
Trichlorofluoromethane [75-69-4]^	9400	U	ug/L	10000	9400	25000	2A21003	EPA 8260D	01/21/22 15:39	NMC	
Vinyl chloride [75-01-4]^	7100	U	ug/L	10000	7100	25000	2A21003	EPA 8260D	01/21/22 15:39	NMC	
Xylenes (Total) [1330-20-7]	13000	U	ug/L	10000	13000	50000	2A21003	EPA 8260D	01/21/22 15:39	NMC	

ANALYTICAL RESULTS

Description: LC34PS-PZE-040.0-20220117 **Lab Sample ID:** AE10221-58 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 13:00 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*48*	*1*	*50.0*	*95 %*	*41-142*	*2A21003*	*EPA 8260D*	*01/21/22 15:39*	*NMC*	
Dibromofluoromethane	*46*	*1*	*50.0*	*93 %*	*53-146*	*2A21003*	*EPA 8260D*	*01/21/22 15:39*	*NMC*	
Toluene-d8	*46*	*1*	*50.0*	*93 %*	*41-146*	*2A21003*	*EPA 8260D*	*01/21/22 15:39*	*NMC*	

ANALYTICAL RESULTS

Description: LC34PS-PZE-050.0-20220117 **Lab Sample ID:** AE10221-59 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 13:02 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	8000	U	ug/L	10000	8000	25000	2A21003	EPA 8260D	01/21/22 16:08	NMC	
1,1,2,2-Tetrachloroethane [79-34-5]^	5400	U	ug/L	10000	5400	25000	2A21003	EPA 8260D	01/21/22 16:08	NMC	
1,1,2-Trichloroethane [79-00-5]^	7600	U	ug/L	10000	7600	25000	2A21003	EPA 8260D	01/21/22 16:08	NMC	
1,1-Dichloroethane [75-34-3]^	6200	U	ug/L	10000	6200	25000	2A21003	EPA 8260D	01/21/22 16:08	NMC	
1,1-Dichloroethene [75-35-4]^	9400	U	ug/L	10000	9400	25000	2A21003	EPA 8260D	01/21/22 16:08	NMC	
1,2,4-Trichlorobenzene [120-82-1]^	7000	U	ug/L	10000	7000	25000	2A21003	EPA 8260D	01/21/22 16:08	NMC	
1,2-Dibromo-3-chloropropane [96-12-8]^	9600	U	ug/L	10000	9600	25000	2A21003	EPA 8260D	01/21/22 16:08	NMC	
1,2-Dibromoethane [106-93-4]^	7800	U	ug/L	10000	7800	25000	2A21003	EPA 8260D	01/21/22 16:08	NMC	
1,2-Dichlorobenzene [95-50-1]^	7300	U	ug/L	10000	7300	25000	2A21003	EPA 8260D	01/21/22 16:08	NMC	
1,2-Dichloroethane [107-06-2]^	6300	U	ug/L	10000	6300	25000	2A21003	EPA 8260D	01/21/22 16:08	NMC	
1,2-Dichloropropane [78-87-5]^	8000	U	ug/L	10000	8000	25000	2A21003	EPA 8260D	01/21/22 16:08	NMC	
1,3-Dichlorobenzene [541-73-1]^	7700	U	ug/L	10000	7700	25000	2A21003	EPA 8260D	01/21/22 16:08	NMC	
1,4-Dichlorobenzene [106-46-7]^	7600	U	ug/L	10000	7600	25000	2A21003	EPA 8260D	01/21/22 16:08	NMC	
2-Butanone [78-93-3]^	45000	U	ug/L	10000	45000	120000	2A21003	EPA 8260D	01/21/22 16:08	NMC	
2-Hexanone [591-78-6]^	25000	U	ug/L	10000	25000	120000	2A21003	EPA 8260D	01/21/22 16:08	NMC	
4-Methyl-2-pentanone [108-10-1]^	25000	U	ug/L	10000	25000	120000	2A21003	EPA 8260D	01/21/22 16:08	NMC	
Acetone [67-64-1]^	100000	U	ug/L	10000	100000	250000	2A21003	EPA 8260D	01/21/22 16:08	NMC	
Benzene [71-43-2]^	7100	U	ug/L	10000	7100	25000	2A21003	EPA 8260D	01/21/22 16:08	NMC	
Bromodichloromethane [75-27-4]^	5200	U	ug/L	10000	5200	25000	2A21003	EPA 8260D	01/21/22 16:08	NMC	
Bromoform [75-25-2]^	7500	U	ug/L	10000	7500	25000	2A21003	EPA 8260D	01/21/22 16:08	NMC	
Bromomethane [74-83-9]^	9500	U	ug/L	10000	9500	25000	2A21003	EPA 8260D	01/21/22 16:08	NMC	QV-01
Carbon disulfide [75-15-0]^	25000	U	ug/L	10000	25000	120000	2A21003	EPA 8260D	01/21/22 16:08	NMC	QV-01
Carbon Tetrachloride [56-23-5]^	9400	U	ug/L	10000	9400	25000	2A21003	EPA 8260D	01/21/22 16:08	NMC	
Chlorobenzene [108-90-7]^	7200	U	ug/L	10000	7200	25000	2A21003	EPA 8260D	01/21/22 16:08	NMC	
Chloroethane [75-00-3]^	9800	U	ug/L	10000	9800	25000	2A21003	EPA 8260D	01/21/22 16:08	NMC	
Chloroform [67-66-3]^	8000	U	ug/L	10000	8000	25000	2A21003	EPA 8260D	01/21/22 16:08	NMC	
Chloromethane [74-87-3]^	8200	U	ug/L	10000	8200	25000	2A21003	EPA 8260D	01/21/22 16:08	NMC	
cis-1,2-Dichloroethene [156-59-2]^	**66000**		ug/L	10000	5300	25000	2A21003	EPA 8260D	01/21/22 16:08	NMC	
cis-1,3-Dichloropropene [10061-01-5]^	5900	U	ug/L	10000	5900	25000	2A21003	EPA 8260D	01/21/22 16:08	NMC	
Cyclohexane [110-82-7]^	9300	U	ug/L	10000	9300	25000	2A21003	EPA 8260D	01/21/22 16:08	NMC	
Dibromochloromethane [124-48-1]^	5000	U	ug/L	10000	5000	25000	2A21003	EPA 8260D	01/21/22 16:08	NMC	
Dichlorodifluoromethane [75-71-8]^	7400	U	ug/L	10000	7400	25000	2A21003	EPA 8260D	01/21/22 16:08	NMC	QV-01
Ethylbenzene [100-41-4]^	6900	U	ug/L	10000	6900	25000	2A21003	EPA 8260D	01/21/22 16:08	NMC	
Freon 113 [76-13-1]^	7300	U	ug/L	10000	7300	25000	2A21003	EPA 8260D	01/21/22 16:08	NMC	QV-01
Isopropylbenzene [98-82-8]^	6700	U	ug/L	10000	6700	25000	2A21003	EPA 8260D	01/21/22 16:08	NMC	
Methyl acetate [79-20-9]^	9500	U	ug/L	10000	9500	25000	2A21003	EPA 8260D	01/21/22 16:08	NMC	
Methylene Chloride [75-09-2]^	25000	U	ug/L	10000	25000	120000	2A21003	EPA 8260D	01/21/22 16:08	NMC	
Methyl-tert-Butyl Ether [1634-04-4]^	6000	U	ug/L	10000	6000	25000	2A21003	EPA 8260D	01/21/22 16:08	NMC	
Styrene [100-42-5]^	6100	U	ug/L	10000	6100	25000	2A21003	EPA 8260D	01/21/22 16:08	NMC	
Tetrachloroethene [127-18-4]^	7600	U	ug/L	10000	7600	25000	2A21003	EPA 8260D	01/21/22 16:08	NMC	
Toluene [108-88-3]^	7200	U	ug/L	10000	7200	25000	2A21003	EPA 8260D	01/21/22 16:08	NMC	
trans-1,2-Dichloroethene [156-60-5]^	7300	U	ug/L	10000	7300	25000	2A21003	EPA 8260D	01/21/22 16:08	NMC	
trans-1,3-Dichloropropene [10061-02-6]^	7300	U	ug/L	10000	7300	25000	2A21003	EPA 8260D	01/21/22 16:08	NMC	
Trichloroethene [79-01-6]^	**680000**		ug/L	10000	8900	25000	2A21003	EPA 8260D	01/21/22 16:08	NMC	
Trichlorofluoromethane [75-69-4]^	9400	U	ug/L	10000	9400	25000	2A21003	EPA 8260D	01/21/22 16:08	NMC	
Vinyl chloride [75-01-4]^	7100	U	ug/L	10000	7100	25000	2A21003	EPA 8260D	01/21/22 16:08	NMC	
Xylenes (Total) [1330-20-7]	13000	U	ug/L	10000	13000	50000	2A21003	EPA 8260D	01/21/22 16:08	NMC	

ANALYTICAL RESULTS

Description: LC34PS-PZE-050.0-20220117 **Lab Sample ID:** AE10221-59 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 13:02 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*48*	*1*	*50.0*	*95 %*	*41-142*	*2A21003*	*EPA 8260D*	*01/21/22 16:08*	*NMC*	
Dibromofluoromethane	*47*	*1*	*50.0*	*94 %*	*53-146*	*2A21003*	*EPA 8260D*	*01/21/22 16:08*	*NMC*	
Toluene-d8	*48*	*1*	*50.0*	*96 %*	*41-146*	*2A21003*	*EPA 8260D*	*01/21/22 16:08*	*NMC*	

ANALYTICAL RESULTS

Description: LC34PS-PZE-058.0-20220117 **Lab Sample ID:** AE10221-60 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 13:04 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	8000	U	ug/L	10000	8000	25000	2A21003	EPA 8260D	01/21/22 16:36	NMC	
1,1,2,2-Tetrachloroethane [79-34-5]^	5400	U	ug/L	10000	5400	25000	2A21003	EPA 8260D	01/21/22 16:36	NMC	
1,1,2-Trichloroethane [79-00-5]^	7600	U	ug/L	10000	7600	25000	2A21003	EPA 8260D	01/21/22 16:36	NMC	
1,1-Dichloroethane [75-34-3]^	6200	U	ug/L	10000	6200	25000	2A21003	EPA 8260D	01/21/22 16:36	NMC	
1,1-Dichloroethene [75-35-4]^	9400	U	ug/L	10000	9400	25000	2A21003	EPA 8260D	01/21/22 16:36	NMC	
1,2,4-Trichlorobenzene [120-82-1]^	7000	U	ug/L	10000	7000	25000	2A21003	EPA 8260D	01/21/22 16:36	NMC	
1,2-Dibromo-3-chloropropane [96-12-8]^	9600	U	ug/L	10000	9600	25000	2A21003	EPA 8260D	01/21/22 16:36	NMC	
1,2-Dibromoethane [106-93-4]^	7800	U	ug/L	10000	7800	25000	2A21003	EPA 8260D	01/21/22 16:36	NMC	
1,2-Dichlorobenzene [95-50-1]^	7300	U	ug/L	10000	7300	25000	2A21003	EPA 8260D	01/21/22 16:36	NMC	
1,2-Dichloroethane [107-06-2]^	6300	U	ug/L	10000	6300	25000	2A21003	EPA 8260D	01/21/22 16:36	NMC	
1,2-Dichloropropane [78-87-5]^	8000	U	ug/L	10000	8000	25000	2A21003	EPA 8260D	01/21/22 16:36	NMC	
1,3-Dichlorobenzene [541-73-1]^	7700	U	ug/L	10000	7700	25000	2A21003	EPA 8260D	01/21/22 16:36	NMC	
1,4-Dichlorobenzene [106-46-7]^	7600	U	ug/L	10000	7600	25000	2A21003	EPA 8260D	01/21/22 16:36	NMC	
2-Butanone [78-93-3]^	45000	U	ug/L	10000	45000	120000	2A21003	EPA 8260D	01/21/22 16:36	NMC	
2-Hexanone [591-78-6]^	25000	U	ug/L	10000	25000	120000	2A21003	EPA 8260D	01/21/22 16:36	NMC	
4-Methyl-2-pentanone [108-10-1]^	25000	U	ug/L	10000	25000	120000	2A21003	EPA 8260D	01/21/22 16:36	NMC	
Acetone [67-64-1]^	100000	U	ug/L	10000	100000	250000	2A21003	EPA 8260D	01/21/22 16:36	NMC	
Benzene [71-43-2]^	7100	U	ug/L	10000	7100	25000	2A21003	EPA 8260D	01/21/22 16:36	NMC	
Bromodichloromethane [75-27-4]^	5200	U	ug/L	10000	5200	25000	2A21003	EPA 8260D	01/21/22 16:36	NMC	
Bromoform [75-25-2]^	7500	U	ug/L	10000	7500	25000	2A21003	EPA 8260D	01/21/22 16:36	NMC	
Bromomethane [74-83-9]^	9500	U	ug/L	10000	9500	25000	2A21003	EPA 8260D	01/21/22 16:36	NMC	QV-01
Carbon disulfide [75-15-0]^	25000	U	ug/L	10000	25000	120000	2A21003	EPA 8260D	01/21/22 16:36	NMC	QV-01
Carbon Tetrachloride [56-23-5]^	9400	U	ug/L	10000	9400	25000	2A21003	EPA 8260D	01/21/22 16:36	NMC	
Chlorobenzene [108-90-7]^	7200	U	ug/L	10000	7200	25000	2A21003	EPA 8260D	01/21/22 16:36	NMC	
Chloroethane [75-00-3]^	9800	U	ug/L	10000	9800	25000	2A21003	EPA 8260D	01/21/22 16:36	NMC	
Chloroform [67-66-3]^	8000	U	ug/L	10000	8000	25000	2A21003	EPA 8260D	01/21/22 16:36	NMC	
Chloromethane [74-87-3]^	8200	U	ug/L	10000	8200	25000	2A21003	EPA 8260D	01/21/22 16:36	NMC	
cis-1,2-Dichloroethene [156-59-2]^	**40000**		ug/L	10000	5300	25000	2A21003	EPA 8260D	01/21/22 16:36	NMC	
cis-1,3-Dichloropropene [10061-01-5]^	5900	U	ug/L	10000	5900	25000	2A21003	EPA 8260D	01/21/22 16:36	NMC	
Cyclohexane [110-82-7]^	9300	U	ug/L	10000	9300	25000	2A21003	EPA 8260D	01/21/22 16:36	NMC	
Dibromochloromethane [124-48-1]^	5000	U	ug/L	10000	5000	25000	2A21003	EPA 8260D	01/21/22 16:36	NMC	
Dichlorodifluoromethane [75-71-8]^	7400	U	ug/L	10000	7400	25000	2A21003	EPA 8260D	01/21/22 16:36	NMC	QV-01
Ethylbenzene [100-41-4]^	6900	U	ug/L	10000	6900	25000	2A21003	EPA 8260D	01/21/22 16:36	NMC	
Freon 113 [76-13-1]^	7300	U	ug/L	10000	7300	25000	2A21003	EPA 8260D	01/21/22 16:36	NMC	QV-01
Isopropylbenzene [98-82-8]^	6700	U	ug/L	10000	6700	25000	2A21003	EPA 8260D	01/21/22 16:36	NMC	
Methyl acetate [79-20-9]^	9500	U	ug/L	10000	9500	25000	2A21003	EPA 8260D	01/21/22 16:36	NMC	
Methylene Chloride [75-09-2]^	25000	U	ug/L	10000	25000	120000	2A21003	EPA 8260D	01/21/22 16:36	NMC	
Methyl-tert-Butyl Ether [1634-04-4]^	6000	U	ug/L	10000	6000	25000	2A21003	EPA 8260D	01/21/22 16:36	NMC	
Styrene [100-42-5]^	6100	U	ug/L	10000	6100	25000	2A21003	EPA 8260D	01/21/22 16:36	NMC	
Tetrachloroethene [127-18-4]^	7600	U	ug/L	10000	7600	25000	2A21003	EPA 8260D	01/21/22 16:36	NMC	
Toluene [108-88-3]^	7200	U	ug/L	10000	7200	25000	2A21003	EPA 8260D	01/21/22 16:36	NMC	
trans-1,2-Dichloroethene [156-60-5]^	7300	U	ug/L	10000	7300	25000	2A21003	EPA 8260D	01/21/22 16:36	NMC	
trans-1,3-Dichloropropene [10061-02-6]^	7300	U	ug/L	10000	7300	25000	2A21003	EPA 8260D	01/21/22 16:36	NMC	
Trichloroethene [79-01-6]^	**320000**		ug/L	10000	8900	25000	2A21003	EPA 8260D	01/21/22 16:36	NMC	
Trichlorofluoromethane [75-69-4]^	9400	U	ug/L	10000	9400	25000	2A21003	EPA 8260D	01/21/22 16:36	NMC	
Vinyl chloride [75-01-4]^	7100	U	ug/L	10000	7100	25000	2A21003	EPA 8260D	01/21/22 16:36	NMC	
Xylenes (Total) [1330-20-7]	13000	U	ug/L	10000	13000	50000	2A21003	EPA 8260D	01/21/22 16:36	NMC	

ANALYTICAL RESULTS

Description: LC34PS-PZE-058.0-20220117 **Lab Sample ID:** AE10221-60 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 13:04 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*48*	*1*	*50.0*	*97 %*	*41-142*	*2A21003*	*EPA 8260D*	*01/21/22 16:36*	*NMC*	
Dibromofluoromethane	*49*	*1*	*50.0*	*97 %*	*53-146*	*2A21003*	*EPA 8260D*	*01/21/22 16:36*	*NMC*	
Toluene-d8	*47*	*1*	*50.0*	*95 %*	*41-146*	*2A21003*	*EPA 8260D*	*01/21/22 16:36*	*NMC*	

ANALYTICAL RESULTS

Description: LC34PS-PZE-073.0-20220117 **Lab Sample ID:** AE10221-61 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 13:06 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	2A21003	EPA 8260D	01/21/22 17:05	NMC	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	2A21003	EPA 8260D	01/21/22 17:05	NMC	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	2A21003	EPA 8260D	01/21/22 17:05	NMC	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	2A21003	EPA 8260D	01/21/22 17:05	NMC	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	2A21003	EPA 8260D	01/21/22 17:05	NMC	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	2A21003	EPA 8260D	01/21/22 17:05	NMC	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	2A21003	EPA 8260D	01/21/22 17:05	NMC	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	2A21003	EPA 8260D	01/21/22 17:05	NMC	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	2A21003	EPA 8260D	01/21/22 17:05	NMC	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	2A21003	EPA 8260D	01/21/22 17:05	NMC	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	2A21003	EPA 8260D	01/21/22 17:05	NMC	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	2A21003	EPA 8260D	01/21/22 17:05	NMC	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	2A21003	EPA 8260D	01/21/22 17:05	NMC	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	2A21003	EPA 8260D	01/21/22 17:05	NMC	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	2A21003	EPA 8260D	01/21/22 17:05	NMC	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	2A21003	EPA 8260D	01/21/22 17:05	NMC	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	2A21003	EPA 8260D	01/21/22 17:05	NMC	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	2A21003	EPA 8260D	01/21/22 17:05	NMC	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	2A21003	EPA 8260D	01/21/22 17:05	NMC	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	2A21003	EPA 8260D	01/21/22 17:05	NMC	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	2A21003	EPA 8260D	01/21/22 17:05	NMC	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	2A21003	EPA 8260D	01/21/22 17:05	NMC	QV-01
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	2A21003	EPA 8260D	01/21/22 17:05	NMC	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	2A21003	EPA 8260D	01/21/22 17:05	NMC	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	2A21003	EPA 8260D	01/21/22 17:05	NMC	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	2A21003	EPA 8260D	01/21/22 17:05	NMC	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	2A21003	EPA 8260D	01/21/22 17:05	NMC	
cis-1,2-Dichloroethene [156-59-2]^	**1.4**	I	ug/L	1	0.53	2.5	2A21003	EPA 8260D	01/21/22 17:05	NMC	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	2A21003	EPA 8260D	01/21/22 17:05	NMC	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	2A21003	EPA 8260D	01/21/22 17:05	NMC	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	2A21003	EPA 8260D	01/21/22 17:05	NMC	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	2A21003	EPA 8260D	01/21/22 17:05	NMC	QV-01
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	2A21003	EPA 8260D	01/21/22 17:05	NMC	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	2A21003	EPA 8260D	01/21/22 17:05	NMC	QV-01
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	2A21003	EPA 8260D	01/21/22 17:05	NMC	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	2A21003	EPA 8260D	01/21/22 17:05	NMC	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	2A21003	EPA 8260D	01/21/22 17:05	NMC	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	2A21003	EPA 8260D	01/21/22 17:05	NMC	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	2A21003	EPA 8260D	01/21/22 17:05	NMC	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	2A21003	EPA 8260D	01/21/22 17:05	NMC	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	2A21003	EPA 8260D	01/21/22 17:05	NMC	
trans-1,2-Dichloroethene [156-60-5]^	0.73	U	ug/L	1	0.73	2.5	2A21003	EPA 8260D	01/21/22 17:05	NMC	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	2A21003	EPA 8260D	01/21/22 17:05	NMC	
Trichloroethene [79-01-6]^	**51**		ug/L	1	0.89	2.5	2A21003	EPA 8260D	01/21/22 17:05	NMC	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	2A21003	EPA 8260D	01/21/22 17:05	NMC	
Vinyl chloride [75-01-4]^	0.71	U	ug/L	1	0.71	2.5	2A21003	EPA 8260D	01/21/22 17:05	NMC	
Xylenes (Total) [1330-20-7]	1.3	U	ug/L	1	1.3	5.0	2A21003	EPA 8260D	01/21/22 17:05	NMC	

ANALYTICAL RESULTS

Description: LC34PS-PZE-073.0-20220117 **Lab Sample ID:** AE10221-61 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 13:06 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*48*	*1*	*50.0*	*96 %*	*41-142*	*2A21003*	*EPA 8260D*	*01/21/22 17:05*	*NMC*	
Dibromofluoromethane	*48*	*1*	*50.0*	*96 %*	*53-146*	*2A21003*	*EPA 8260D*	*01/21/22 17:05*	*NMC*	
Toluene-d8	*48*	*1*	*50.0*	*95 %*	*41-146*	*2A21003*	*EPA 8260D*	*01/21/22 17:05*	*NMC*	

ANALYTICAL RESULTS

Description: LC34PS-PZE-080.0-20220117 **Lab Sample ID:** AE10221-62 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 13:08 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	2A21003	EPA 8260D	01/21/22 17:34	NMC	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	2A21003	EPA 8260D	01/21/22 17:34	NMC	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	2A21003	EPA 8260D	01/21/22 17:34	NMC	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	2A21003	EPA 8260D	01/21/22 17:34	NMC	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	2A21003	EPA 8260D	01/21/22 17:34	NMC	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	2A21003	EPA 8260D	01/21/22 17:34	NMC	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	2A21003	EPA 8260D	01/21/22 17:34	NMC	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	2A21003	EPA 8260D	01/21/22 17:34	NMC	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	2A21003	EPA 8260D	01/21/22 17:34	NMC	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	2A21003	EPA 8260D	01/21/22 17:34	NMC	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	2A21003	EPA 8260D	01/21/22 17:34	NMC	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	2A21003	EPA 8260D	01/21/22 17:34	NMC	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	2A21003	EPA 8260D	01/21/22 17:34	NMC	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	2A21003	EPA 8260D	01/21/22 17:34	NMC	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	2A21003	EPA 8260D	01/21/22 17:34	NMC	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	2A21003	EPA 8260D	01/21/22 17:34	NMC	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	2A21003	EPA 8260D	01/21/22 17:34	NMC	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	2A21003	EPA 8260D	01/21/22 17:34	NMC	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	2A21003	EPA 8260D	01/21/22 17:34	NMC	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	2A21003	EPA 8260D	01/21/22 17:34	NMC	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	2A21003	EPA 8260D	01/21/22 17:34	NMC	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	2A21003	EPA 8260D	01/21/22 17:34	NMC	QV-01
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	2A21003	EPA 8260D	01/21/22 17:34	NMC	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	2A21003	EPA 8260D	01/21/22 17:34	NMC	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	2A21003	EPA 8260D	01/21/22 17:34	NMC	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	2A21003	EPA 8260D	01/21/22 17:34	NMC	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	2A21003	EPA 8260D	01/21/22 17:34	NMC	
cis-1,2-Dichloroethene [156-59-2]^	**95**		ug/L	1	0.53	2.5	2A21003	EPA 8260D	01/21/22 17:34	NMC	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	2A21003	EPA 8260D	01/21/22 17:34	NMC	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	2A21003	EPA 8260D	01/21/22 17:34	NMC	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	2A21003	EPA 8260D	01/21/22 17:34	NMC	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	2A21003	EPA 8260D	01/21/22 17:34	NMC	QV-01
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	2A21003	EPA 8260D	01/21/22 17:34	NMC	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	2A21003	EPA 8260D	01/21/22 17:34	NMC	QV-01
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	2A21003	EPA 8260D	01/21/22 17:34	NMC	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	2A21003	EPA 8260D	01/21/22 17:34	NMC	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	2A21003	EPA 8260D	01/21/22 17:34	NMC	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	2A21003	EPA 8260D	01/21/22 17:34	NMC	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	2A21003	EPA 8260D	01/21/22 17:34	NMC	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	2A21003	EPA 8260D	01/21/22 17:34	NMC	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	2A21003	EPA 8260D	01/21/22 17:34	NMC	
trans-1,2-Dichloroethene [156-60-5]^	**23**		ug/L	1	0.73	2.5	2A21003	EPA 8260D	01/21/22 17:34	NMC	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	2A21003	EPA 8260D	01/21/22 17:34	NMC	
Trichloroethene [79-01-6]^	**17**		ug/L	1	0.89	2.5	2A21003	EPA 8260D	01/21/22 17:34	NMC	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	2A21003	EPA 8260D	01/21/22 17:34	NMC	
Vinyl chloride [75-01-4]^	**0.73**	I	ug/L	1	0.71	2.5	2A21003	EPA 8260D	01/21/22 17:34	NMC	
Xylenes (Total) [1330-20-7]	1.3	U	ug/L	1	1.3	5.0	2A21003	EPA 8260D	01/21/22 17:34	NMC	

ANALYTICAL RESULTS

Description: LC34PS-PZE-080.0-20220117 **Lab Sample ID:** AE10221-62 **Received:** 01/17/22 15:30

Matrix: Ground Water **Sampled:** 01/17/22 13:08 **Work Order:** AE10221

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*50*	*1*	*50.0*	*99 %*	*41-142*	*2A21003*	*EPA 8260D*	*01/21/22 17:34*	*NMC*	
Dibromofluoromethane	*48*	*1*	*50.0*	*97 %*	*53-146*	*2A21003*	*EPA 8260D*	*01/21/22 17:34*	*NMC*	
Toluene-d8	*49*	*1*	*50.0*	*98 %*	*41-146*	*2A21003*	*EPA 8260D*	*01/21/22 17:34*	*NMC*	

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2A18006 - EPA 5030B_MS

Blank (2A18006-BLK1) Prepared: 01/18/2022 00:00 Analyzed: 01/18/2022 09:37

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	0.80	U	2.5	ug/L							
1,1,2,2-Tetrachloroethane	0.54	U	2.5	ug/L							
1,1,2-Trichloroethane	0.76	U	2.5	ug/L							
1,1-Dichloroethane	0.62	U	2.5	ug/L							
1,1-Dichloroethene	0.94	U	2.5	ug/L							
1,2,4-Trichlorobenzene	0.70	U	2.5	ug/L							
1,2-Dibromo-3-chloropropane	0.96	U	2.5	ug/L							
1,2-Dibromoethane	0.78	U	2.5	ug/L							
1,2-Dichlorobenzene	0.73	U	2.5	ug/L							
1,2-Dichloroethane	0.63	U	2.5	ug/L							
1,2-Dichloropropane	0.80	U	2.5	ug/L							
1,3-Dichlorobenzene	0.77	U	2.5	ug/L							
1,4-Dichlorobenzene	0.76	U	2.5	ug/L							
2-Butanone	4.5	U	12	ug/L							
2-Hexanone	2.5	U	12	ug/L							
4-Methyl-2-pentanone	2.5	U	12	ug/L							
Acetone	10	U	25	ug/L							
Benzene	0.71	U	2.5	ug/L							
Bromodichloromethane	0.52	U	2.5	ug/L							
Bromoform	0.75	U	2.5	ug/L							
Bromomethane	0.95	U	2.5	ug/L							
Carbon disulfide	2.5	U	12	ug/L							
Carbon Tetrachloride	0.94	U	2.5	ug/L							
Chlorobenzene	0.72	U	2.5	ug/L							
Chloroethane	0.98	U	2.5	ug/L							
Chloroform	0.80	U	2.5	ug/L							
Chloromethane	0.82	U	2.5	ug/L							
cis-1,2-Dichloroethene	0.53	U	2.5	ug/L							
cis-1,3-Dichloropropene	0.59	U	2.5	ug/L							
Cyclohexane	0.93	U	2.5	ug/L							
Dibromochloromethane	0.50	U	2.5	ug/L							
Dichlorodifluoromethane	0.74	U	2.5	ug/L							
Ethylbenzene	0.69	U	2.5	ug/L							
Freon 113	0.73	U	2.5	ug/L							
Isopropylbenzene	0.67	U	2.5	ug/L							
Methyl acetate	0.95	U	2.5	ug/L							
Methylene Chloride	2.5	U	12	ug/L							
Methyl-tert-Butyl Ether	0.60	U	2.5	ug/L							
Styrene	0.61	U	2.5	ug/L							
Tetrachloroethene	0.76	U	2.5	ug/L							
Toluene	0.72	U	2.5	ug/L							
trans-1,2-Dichloroethene	0.73	U	2.5	ug/L							
trans-1,3-Dichloropropene	0.73	U	2.5	ug/L							
Trichloroethene	0.89	U	2.5	ug/L							
Trichlorofluoromethane	0.94	U	2.5	ug/L							
Vinyl chloride	0.71	U	2.5	ug/L							
Xylenes (Total)	1.3	U	5.0	ug/L							
4-Bromofluorobenzene	*49*	*I*		*ug/L*	*50.0*		*98*	*41-142*			
Dibromofluoromethane	*44*	*I*		*ug/L*	*50.0*		*89*	*53-146*			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2A18006 - EPA 5030B_MS - Continued

Blank (2A18006-BLK1) Continued Prepared: 01/18/2022 00:00 Analyzed: 01/18/2022 09:37

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Toluene-d8	*47*	*I*		*ug/L*	*50.0*		*94*	*41-146*			

LCS (2A18006-BS1) Prepared: 01/18/2022 00:00 Analyzed: 01/18/2022 07:41

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	21		2.5	ug/L	20.0		105	57-148			
1,1,2,2-Tetrachloroethane	23		2.5	ug/L	20.0		113	60-139			
1,1,2-Trichloroethane	22		2.5	ug/L	20.0		112	57-141			
1,1-Dichloroethane	20		2.5	ug/L	20.0		101	57-142			
1,1-Dichloroethene	23		2.5	ug/L	20.0		115	47-139			
1,2,4-Trichlorobenzene	27		2.5	ug/L	20.0		133	52-159			
1,2-Dibromo-3-chloropropane	23		2.5	ug/L	20.0		114	48-150			
1,2-Dibromoethane	22		2.5	ug/L	20.0		109	57-140			
1,2-Dichlorobenzene	22		2.5	ug/L	20.0		109	63-131			
1,2-Dichloroethane	18		2.5	ug/L	20.0		91	50-156			
1,2-Dichloropropane	19		2.5	ug/L	20.0		96	61-133			
1,3-Dichlorobenzene	22		2.5	ug/L	20.0		108	66-129			
1,4-Dichlorobenzene	20		2.5	ug/L	20.0		102	65-133			
2-Butanone	160		12	ug/L	100		159	10-180			
2-Hexanone	94		12	ug/L	100		94	12-180			
4-Methyl-2-pentanone	110		12	ug/L	100		112	19-180			
Acetone	91		25	ug/L	100		91	10-180			
Benzene	21		2.5	ug/L	20.0		107	56-136			
Bromodichloromethane	22		2.5	ug/L	20.0		108	58-135			
Bromoform	25		2.5	ug/L	20.0		126	46-148			
Bromomethane	14		2.5	ug/L	20.0		68	10-173			
Carbon disulfide	29		12	ug/L	20.0		144	43-153			
Carbon Tetrachloride	21		2.5	ug/L	20.0		106	54-156			
Chlorobenzene	21		2.5	ug/L	20.0		107	51-139			
Chloroethane	21		2.5	ug/L	20.0		103	27-180			
Chloroform	21		2.5	ug/L	20.0		106	58-139			
Chloromethane	20		2.5	ug/L	20.0		101	33-154			
cis-1,2-Dichloroethene	22		2.5	ug/L	20.0		110	56-128			
cis-1,3-Dichloropropene	20		2.5	ug/L	20.0		102	64-128			
Cyclohexane	21		2.5	ug/L	20.0		104	70-130			
Dibromochloromethane	22		2.5	ug/L	20.0		109	50-140			
Dichlorodifluoromethane	23		2.5	ug/L	20.0		114	10-180			
Ethylbenzene	21		2.5	ug/L	20.0		107	63-133			
Freon 113	22		2.5	ug/L	20.0		112	47-173			
Isopropylbenzene	22		2.5	ug/L	20.0		109	60-132			
m,p-Xylenes	42		5.0	ug/L	40.0		104	64-133			
Methyl acetate	25		2.5	ug/L	20.0		123	70-130			
Methylene Chloride	22		12	ug/L	20.0		109	43-142			
Methyl-tert-Butyl Ether	21		2.5	ug/L	20.0		106	51-145			
o-Xylene	22		2.5	ug/L	20.0		108	61-129			
Styrene	23		2.5	ug/L	20.0		115	59-136			
Tetrachloroethene	22		2.5	ug/L	20.0		110	60-147			
Toluene	22		2.5	ug/L	20.0		110	64-131			
trans-1,2-Dichloroethene	23		2.5	ug/L	20.0		116	54-134			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2A18006 - EPA 5030B_MS - Continued

LCS (2A18006-BS1) Continued Prepared: 01/18/2022 00:00 Analyzed: 01/18/2022 07:41

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
trans-1,3-Dichloropropene	22		2.5	ug/L	20.0		112	65-149			
Trichloroethene	20		2.5	ug/L	20.0		102	62-135			
Trichlorofluoromethane	21		2.5	ug/L	20.0		106	56-155			
Vinyl chloride	22		2.5	ug/L	20.0		110	20-167			
4-Bromofluorobenzene	*52*			*ug/L*	*50.0*		*103*	*41-142*			
Dibromofluoromethane	*48*	*I*		*ug/L*	*50.0*		*96*	*53-146*			
Toluene-d8	*49*	*I*		*ug/L*	*50.0*		*97*	*41-146*			

Matrix Spike (2A18006-MS1) Prepared: 01/18/2022 00:00 Analyzed: 01/18/2022 08:10

Source: AE10221-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	21		2.5	ug/L	20.0	0.80 U	107	57-148			
1,1,2,2-Tetrachloroethane	22		2.5	ug/L	20.0	0.54 U	109	60-139			
1,1,2-Trichloroethane	22		2.5	ug/L	20.0	0.76 U	109	57-141			
1,1-Dichloroethane	21		2.5	ug/L	20.0	0.62 U	103	57-142			
1,1-Dichloroethene	24		2.5	ug/L	20.0	0.94 U	118	47-139			
1,2,4-Trichlorobenzene	26		2.5	ug/L	20.0	0.70 U	129	52-159			
1,2-Dibromo-3-chloropropane	21		2.5	ug/L	20.0	0.96 U	103	48-150			
1,2-Dibromoethane	21		2.5	ug/L	20.0	0.78 U	107	57-140			
1,2-Dichlorobenzene	22		2.5	ug/L	20.0	0.73 U	110	63-131			
1,2-Dichloroethane	18		2.5	ug/L	20.0	0.63 U	92	50-156			
1,2-Dichloropropane	20		2.5	ug/L	20.0	0.80 U	100	61-133			
1,3-Dichlorobenzene	22		2.5	ug/L	20.0	0.77 U	111	66-129			
1,4-Dichlorobenzene	20		2.5	ug/L	20.0	0.76 U	100	65-133			
2-Butanone	150		12	ug/L	100	4.5 U	146	10-180			
2-Hexanone	90		12	ug/L	100	2.5 U	90	12-180			
4-Methyl-2-pentanone	110		12	ug/L	100	2.5 U	110	19-180			
Acetone	83		25	ug/L	100	10 U	83	10-180			
Benzene	22		2.5	ug/L	20.0	0.71 U	112	56-136			
Bromodichloromethane	22		2.5	ug/L	20.0	0.52 U	110	58-135			
Bromoform	24		2.5	ug/L	20.0	0.75 U	122	46-148			
Bromomethane	15		2.5	ug/L	20.0	0.95 U	76	10-173			
Carbon disulfide	27		12	ug/L	20.0	2.5 U	133	43-153			
Carbon Tetrachloride	22		2.5	ug/L	20.0	0.94 U	112	54-156			
Chlorobenzene	22		2.5	ug/L	20.0	0.72 U	110	51-139			
Chloroethane	20		2.5	ug/L	20.0	0.98 U	100	27-180			
Chloroform	22		2.5	ug/L	20.0	0.80 U	108	58-139			
Chloromethane	20		2.5	ug/L	20.0	0.82 U	98	33-154			
cis-1,2-Dichloroethene	22		2.5	ug/L	20.0	0.53 U	111	56-128			
cis-1,3-Dichloropropene	20		2.5	ug/L	20.0	0.59 U	102	64-128			
Cyclohexane	22		2.5	ug/L	20.0	0.93 U	109	70-130			
Dibromochloromethane	21		2.5	ug/L	20.0	0.50 U	106	50-140			
Dichlorodifluoromethane	22		2.5	ug/L	20.0	0.74 U	111	10-180			
Ethylbenzene	22		2.5	ug/L	20.0	0.69 U	108	63-133			
Freon 113	24		2.5	ug/L	20.0	0.73 U	118	47-173			
Isopropylbenzene	22		2.5	ug/L	20.0	0.67 U	111	60-132			
m,p-Xylenes	43		5.0	ug/L	40.0	1.3 U	108	64-133			
Methyl acetate	22		2.5	ug/L	20.0	0.95 U	111	70-130			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2A18006 - EPA 5030B_MS - Continued

Matrix Spike (2A18006-MS1) Continued Prepared: 01/18/2022 00:00 Analyzed: 01/18/2022 08:10

Source: AE10221-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Methylene Chloride	22		12	ug/L	20.0	2.5 U	109	43-142			
Methyl-tert-Butyl Ether	20		2.5	ug/L	20.0	0.60 U	102	51-145			
o-Xylene	22		2.5	ug/L	20.0	0.53 U	109	61-129			
Styrene	23		2.5	ug/L	20.0	0.61 U	115	59-136			
Tetrachloroethene	22		2.5	ug/L	20.0	0.76 U	108	60-147			
Toluene	22		2.5	ug/L	20.0	0.72 U	112	64-131			
trans-1,2-Dichloroethene	23		2.5	ug/L	20.0	0.73 U	116	54-134			
trans-1,3-Dichloropropene	22		2.5	ug/L	20.0	0.73 U	108	65-149			
Trichloroethene	21		2.5	ug/L	20.0	0.89 U	105	62-135			
Trichlorofluoromethane	20		2.5	ug/L	20.0	0.94 U	101	56-155			
Vinyl chloride	21		2.5	ug/L	20.0	0.71 U	107	20-167			
4-Bromofluorobenzene	*50*			*ug/L*	*50.0*		*100*	*41-142*			
Dibromofluoromethane	*46*	*I*		*ug/L*	*50.0*		*92*	*53-146*			
Toluene-d8	*49*	*I*		*ug/L*	*50.0*		*97*	*41-146*			

Matrix Spike Dup (2A18006-MSD1) Prepared: 01/18/2022 00:00 Analyzed: 01/18/2022 08:39

Source: AE10221-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	20		2.5	ug/L	20.0	0.80 U	102	57-148	5	25	
1,1,2,2-Tetrachloroethane	20		2.5	ug/L	20.0	0.54 U	99	60-139	10	17	
1,1,2-Trichloroethane	22		2.5	ug/L	20.0	0.76 U	108	57-141	0.6	16	
1,1-Dichloroethane	19		2.5	ug/L	20.0	0.62 U	96	57-142	7	24	
1,1-Dichloroethene	22		2.5	ug/L	20.0	0.94 U	111	47-139	7	16	
1,2,4-Trichlorobenzene	23		2.5	ug/L	20.0	0.70 U	116	52-159	10	24	
1,2-Dibromo-3-chloropropane	19		2.5	ug/L	20.0	0.96 U	97	48-150	6	21	
1,2-Dibromoethane	20		2.5	ug/L	20.0	0.78 U	102	57-140	5	16	
1,2-Dichlorobenzene	20		2.5	ug/L	20.0	0.73 U	102	63-131	7	25	
1,2-Dichloroethane	17		2.5	ug/L	20.0	0.63 U	87	50-156	6	18	
1,2-Dichloropropane	19		2.5	ug/L	20.0	0.80 U	94	61-133	5	26	
1,3-Dichlorobenzene	21		2.5	ug/L	20.0	0.77 U	103	66-129	8	23	
1,4-Dichlorobenzene	19		2.5	ug/L	20.0	0.76 U	94	65-133	6	23	
2-Butanone	130		12	ug/L	100	4.5 U	134	10-180	8	29	
2-Hexanone	83		12	ug/L	100	2.5 U	83	12-180	8	28	
4-Methyl-2-pentanone	100		12	ug/L	100	2.5 U	101	19-180	8	24	
Acetone	77		25	ug/L	100	10 U	77	10-180	8	19	
Benzene	21		2.5	ug/L	20.0	0.71 U	106	56-136	5	14	
Bromodichloromethane	21		2.5	ug/L	20.0	0.52 U	103	58-135	7	19	
Bromoform	22		2.5	ug/L	20.0	0.75 U	112	46-148	8	18	
Bromomethane	15		2.5	ug/L	20.0	0.95 U	74	10-173	3	29	
Carbon disulfide	24		12	ug/L	20.0	2.5 U	120	43-153	10	26	
Carbon Tetrachloride	21		2.5	ug/L	20.0	0.94 U	106	54-156	5	27	
Chlorobenzene	21		2.5	ug/L	20.0	0.72 U	105	51-139	4	13	
Chloroethane	19		2.5	ug/L	20.0	0.98 U	93	27-180	8	22	
Chloroform	20		2.5	ug/L	20.0	0.80 U	100	58-139	7	17	
Chloromethane	17		2.5	ug/L	20.0	0.82 U	83	33-154	16	31	
cis-1,2-Dichloroethene	21		2.5	ug/L	20.0	0.53 U	103	56-128	7	17	
cis-1,3-Dichloropropene	19		2.5	ug/L	20.0	0.59 U	97	64-128	5	20	
Cyclohexane	20		2.5	ug/L	20.0	0.93 U	101	70-130	7	20	

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2A18006 - EPA 5030B_MS - Continued

Matrix Spike Dup (2A18006-MSD1) Continued Prepared: 01/18/2022 00:00 Analyzed: 01/18/2022 08:39

Source: AE10221-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Dibromochloromethane	20		2.5	ug/L	20.0	0.50 U	102	50-140	4	18	
Dichlorodifluoromethane	21		2.5	ug/L	20.0	0.74 U	104	10-180	6	26	
Ethylbenzene	21		2.5	ug/L	20.0	0.69 U	104	63-133	4	18	
Freon 113	22		2.5	ug/L	20.0	0.73 U	108	47-173	9	30	
Isopropylbenzene	22		2.5	ug/L	20.0	0.67 U	109	60-132	2	23	
m,p-Xylenes	42		5.0	ug/L	40.0	1.3 U	105	64-133	3	18	
Methyl acetate	21		2.5	ug/L	20.0	0.95 U	104	70-130	7	20	
Methylene Chloride	20		12	ug/L	20.0	2.5 U	100	43-142	9	23	
Methyl-tert-Butyl Ether	19		2.5	ug/L	20.0	0.60 U	97	51-145	5	22	
o-Xylene	21		2.5	ug/L	20.0	0.53 U	105	61-129	4	16	
Styrene	22		2.5	ug/L	20.0	0.61 U	110	59-136	5	32	
Tetrachloroethene	21		2.5	ug/L	20.0	0.76 U	105	60-147	3	21	
Toluene	22		2.5	ug/L	20.0	0.72 U	109	64-131	3	16	
trans-1,2-Dichloroethene	22		2.5	ug/L	20.0	0.73 U	109	54-134	6	20	
trans-1,3-Dichloropropene	20		2.5	ug/L	20.0	0.73 U	102	65-149	6	17	
Trichloroethene	20		2.5	ug/L	20.0	0.89 U	102	62-135	3	20	
Trichlorofluoromethane	19		2.5	ug/L	20.0	0.94 U	95	56-155	6	22	
Vinyl chloride	20		2.5	ug/L	20.0	0.71 U	99	20-167	8	24	
4-Bromofluorobenzene	*49*	*I*		*ug/L*	*50.0*		*97*	*41-142*			
Dibromofluoromethane	*43*	*I*		*ug/L*	*50.0*		*87*	*53-146*			
Toluene-d8	*47*	*I*		*ug/L*	*50.0*		*95*	*41-146*			

Batch 2A18016 - EPA 5030B_MS

Blank (2A18016-BLK1) Prepared: 01/18/2022 00:00 Analyzed: 01/18/2022 10:02

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	0.80	U	2.5	ug/L							
1,1,2,2-Tetrachloroethane	0.54	U	2.5	ug/L							
1,1,2-Trichloroethane	0.76	U	2.5	ug/L							
1,1-Dichloroethane	0.62	U	2.5	ug/L							
1,1-Dichloroethene	0.94	U	2.5	ug/L							
1,2,4-Trichlorobenzene	0.70	U	2.5	ug/L							
1,2-Dibromo-3-chloropropane	0.96	U	2.5	ug/L							
1,2-Dibromoethane	0.78	U	2.5	ug/L							
1,2-Dichlorobenzene	0.73	U	2.5	ug/L							
1,2-Dichloroethane	0.63	U	2.5	ug/L							
1,2-Dichloropropane	0.80	U	2.5	ug/L							
1,3-Dichlorobenzene	0.77	U	2.5	ug/L							
1,4-Dichlorobenzene	0.76	U	2.5	ug/L							
2-Butanone	4.5	U	12	ug/L							
2-Hexanone	2.5	U	12	ug/L							
4-Methyl-2-pentanone	2.5	U	12	ug/L							
Acetone	10	U	25	ug/L							
Benzene	0.71	U	2.5	ug/L							
Bromodichloromethane	0.52	U	2.5	ug/L							
Bromoform	0.75	U	2.5	ug/L							
Bromomethane	0.95	U	2.5	ug/L							
Carbon disulfide	2.5	U	12	ug/L							

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2A18016 - EPA 5030B_MS - Continued

Blank (2A18016-BLK1) Continued Prepared: 01/18/2022 00:00 Analyzed: 01/18/2022 10:02

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Carbon Tetrachloride	0.94	U	2.5	ug/L							
Chlorobenzene	0.72	U	2.5	ug/L							
Chloroethane	0.98	U	2.5	ug/L							
Chloroform	0.80	U	2.5	ug/L							
Chloromethane	0.82	U	2.5	ug/L							
cis-1,2-Dichloroethene	0.53	U	2.5	ug/L							
cis-1,3-Dichloropropene	0.59	U	2.5	ug/L							
Cyclohexane	0.93	U	2.5	ug/L							
Dibromochloromethane	0.50	U	2.5	ug/L							
Dichlorodifluoromethane	0.74	U	2.5	ug/L							
Ethylbenzene	0.69	U	2.5	ug/L							
Freon 113	0.73	U	2.5	ug/L							
Isopropylbenzene	0.67	U	2.5	ug/L							
Methyl acetate	0.95	U	2.5	ug/L							
Methylene Chloride	2.5	U	12	ug/L							
Methyl-tert-Butyl Ether	0.60	U	2.5	ug/L							
Styrene	0.61	U	2.5	ug/L							
Tetrachloroethene	0.76	U	2.5	ug/L							
Toluene	0.72	U	2.5	ug/L							
trans-1,2-Dichloroethene	0.73	U	2.5	ug/L							
trans-1,3-Dichloropropene	0.73	U	2.5	ug/L							
Trichloroethene	0.89	U	2.5	ug/L							
Trichlorofluoromethane	0.94	U	2.5	ug/L							
Vinyl chloride	0.71	U	2.5	ug/L							
Xylenes (Total)	1.3	U	5.0	ug/L							
4-Bromofluorobenzene	*55*			*ug/L*	*50.0*		*109*	*41-142*			
Dibromofluoromethane	*52*			*ug/L*	*50.0*		*104*	*53-146*			
Toluene-d8	*52*			*ug/L*	*50.0*		*104*	*41-146*			

LCS (2A18016-BS1) Prepared: 01/18/2022 00:00 Analyzed: 01/18/2022 09:07

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	23		2.5	ug/L	20.0		114	57-148			
1,1,2,2-Tetrachloroethane	19		2.5	ug/L	20.0		97	60-139			
1,1,2-Trichloroethane	21		2.5	ug/L	20.0		103	57-141			
1,1-Dichloroethane	21		2.5	ug/L	20.0		106	57-142			
1,1-Dichloroethene	20		2.5	ug/L	20.0		99	47-139			
1,2,4-Trichlorobenzene	22		2.5	ug/L	20.0		111	52-159			
1,2-Dibromo-3-chloropropane	19		2.5	ug/L	20.0		93	48-150			
1,2-Dibromoethane	21		2.5	ug/L	20.0		103	57-140			
1,2-Dichlorobenzene	21		2.5	ug/L	20.0		106	63-131			
1,2-Dichloroethane	18		2.5	ug/L	20.0		92	50-156			
1,2-Dichloropropane	20		2.5	ug/L	20.0		102	61-133			
1,3-Dichlorobenzene	22		2.5	ug/L	20.0		111	66-129			
1,4-Dichlorobenzene	20		2.5	ug/L	20.0		98	65-133			
2-Butanone	99		12	ug/L	100		99	10-180			
2-Hexanone	80		12	ug/L	100		80	12-180			
4-Methyl-2-pentanone	93		12	ug/L	100		93	19-180			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2A18016 - EPA 5030B_MS - Continued

LCS (2A18016-BS1) Continued Prepared: 01/18/2022 00:00 Analyzed: 01/18/2022 09:07

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Acetone	86		25	ug/L	100		86	10-180			
Benzene	22		2.5	ug/L	20.0		108	56-136			
Bromodichloromethane	19		2.5	ug/L	20.0		95	58-135			
Bromoform	26		2.5	ug/L	20.0		128	46-148			
Bromomethane	11		2.5	ug/L	20.0		56	10-173			
Carbon disulfide	23		12	ug/L	20.0		113	43-153			
Carbon Tetrachloride	26		2.5	ug/L	20.0		132	54-156			
Chlorobenzene	22		2.5	ug/L	20.0		108	51-139			
Chloroethane	23		2.5	ug/L	20.0		116	27-180			
Chloroform	20		2.5	ug/L	20.0		102	58-139			
Chloromethane	17		2.5	ug/L	20.0		86	33-154			
cis-1,2-Dichloroethene	20		2.5	ug/L	20.0		102	56-128			
cis-1,3-Dichloropropene	18		2.5	ug/L	20.0		90	64-128			
Cyclohexane	22		2.5	ug/L	20.0		109	70-130			
Dibromochloromethane	20		2.5	ug/L	20.0		101	50-140			
Dichlorodifluoromethane	18		2.5	ug/L	20.0		89	10-180			
Ethylbenzene	21		2.5	ug/L	20.0		107	63-133			
Freon 113	22		2.5	ug/L	20.0		109	47-173			
Isopropylbenzene	23		2.5	ug/L	20.0		115	60-132			
m,p-Xylenes	44		5.0	ug/L	40.0		109	64-133			
Methyl acetate	21		2.5	ug/L	20.0		103	70-130			
Methylene Chloride	21		12	ug/L	20.0		104	43-142			
Methyl-tert-Butyl Ether	22		2.5	ug/L	20.0		108	51-145			
o-Xylene	23		2.5	ug/L	20.0		116	61-129			
Styrene	20		2.5	ug/L	20.0		100	59-136			
Tetrachloroethene	24		2.5	ug/L	20.0		118	60-147			
Toluene	21		2.5	ug/L	20.0		105	64-131			
trans-1,2-Dichloroethene	22		2.5	ug/L	20.0		112	54-134			
trans-1,3-Dichloropropene	20		2.5	ug/L	20.0		98	65-149			
Trichloroethene	20		2.5	ug/L	20.0		99	62-135			
Trichlorofluoromethane	21		2.5	ug/L	20.0		106	56-155			
Vinyl chloride	20		2.5	ug/L	20.0		102	20-167			
4-Bromofluorobenzene	*56*			*ug/L*	*50.0*		*111*	*41-142*			
Dibromofluoromethane	*52*			*ug/L*	*50.0*		*104*	*53-146*			
Toluene-d8	*54*			*ug/L*	*50.0*		*108*	*41-146*			

Matrix Spike (2A18016-MS1) Prepared: 01/18/2022 00:00 Analyzed: 01/18/2022 11:53

Source: AE10221-12

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	25		2.5	ug/L	20.0	0.80 U	125	57-148			
1,1,2,2-Tetrachloroethane	20		2.5	ug/L	20.0	0.54 U	100	60-139			
1,1,2-Trichloroethane	23		2.5	ug/L	20.0	0.76 U	115	57-141			
1,1-Dichloroethane	22		2.5	ug/L	20.0	0.62 U	110	57-142			
1,1-Dichloroethene	22		2.5	ug/L	20.0	0.94 U	108	47-139			
1,2,4-Trichlorobenzene	21		2.5	ug/L	20.0	0.70 U	106	52-159			
1,2-Dibromo-3-chloropropane	20		2.5	ug/L	20.0	0.96 U	101	48-150			
1,2-Dibromoethane	21		2.5	ug/L	20.0	0.78 U	103	57-140			
1,2-Dichlorobenzene	23		2.5	ug/L	20.0	0.73 U	114	63-131			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2A18016 - EPA 5030B_MS - Continued

Matrix Spike (2A18016-MS1) Continued Prepared: 01/18/2022 00:00 Analyzed: 01/18/2022 11:53

Source: AE10221-12

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,2-Dichloroethane	19		2.5	ug/L	20.0	0.63 U	97	50-156			
1,2-Dichloropropane	20		2.5	ug/L	20.0	0.80 U	100	61-133			
1,3-Dichlorobenzene	22		2.5	ug/L	20.0	0.77 U	112	66-129			
1,4-Dichlorobenzene	21		2.5	ug/L	20.0	0.76 U	104	65-133			
2-Butanone	95		12	ug/L	100	4.5 U	95	10-180			
2-Hexanone	82		12	ug/L	100	2.5 U	82	12-180			
4-Methyl-2-pentanone	96		12	ug/L	100	2.5 U	96	19-180			
Acetone	78		25	ug/L	100	10 U	78	10-180			
Benzene	23		2.5	ug/L	20.0	0.71 U	114	56-136			
Bromodichloromethane	20		2.5	ug/L	20.0	0.52 U	99	58-135			
Bromoform	27		2.5	ug/L	20.0	0.75 U	137	46-148			
Bromomethane	17		2.5	ug/L	20.0	0.95 U	87	10-173			
Carbon disulfide	24		12	ug/L	20.0	2.5 U	119	43-153			
Carbon Tetrachloride	33		2.5	ug/L	20.0	0.94 U	163	54-156			QM-07
Chlorobenzene	24		2.5	ug/L	20.0	0.72 U	119	51-139			
Chloroethane	25		2.5	ug/L	20.0	0.98 U	125	27-180			
Chloroform	22		2.5	ug/L	20.0	0.80 U	109	58-139			
Chloromethane	17		2.5	ug/L	20.0	0.82 U	84	33-154			
cis-1,2-Dichloroethene	32		2.5	ug/L	20.0	9.8	110	56-128			
cis-1,3-Dichloropropene	18		2.5	ug/L	20.0	0.59 U	90	64-128			
Cyclohexane	25		2.5	ug/L	20.0	0.93 U	125	70-130			
Dibromochloromethane	21		2.5	ug/L	20.0	0.50 U	105	50-140			
Dichlorodifluoromethane	19		2.5	ug/L	20.0	0.74 U	95	10-180			
Ethylbenzene	24		2.5	ug/L	20.0	0.69 U	118	63-133			
Freon 113	23		2.5	ug/L	20.0	0.73 U	116	47-173			
Isopropylbenzene	25		2.5	ug/L	20.0	0.67 U	124	60-132			
m,p-Xylenes	48		5.0	ug/L	40.0	1.3 U	119	64-133			
Methyl acetate	19		2.5	ug/L	20.0	0.95 U	97	70-130			
Methylene Chloride	22		12	ug/L	20.0	2.5 U	108	43-142			
Methyl-tert-Butyl Ether	22		2.5	ug/L	20.0	0.60 U	108	51-145			
o-Xylene	24		2.5	ug/L	20.0	0.53 U	122	61-129			
Styrene	21		2.5	ug/L	20.0	0.61 U	105	59-136			
Tetrachloroethene	22		2.5	ug/L	20.0	0.76 U	110	60-147			
Toluene	23		2.5	ug/L	20.0	0.72 U	115	64-131			
trans-1,2-Dichloroethene	25		2.5	ug/L	20.0	0.89	119	54-134			
trans-1,3-Dichloropropene	20		2.5	ug/L	20.0	0.73 U	102	65-149			
Trichloroethene	59		2.5	ug/L	20.0	30	142	62-135			QM-07
Trichlorofluoromethane	22		2.5	ug/L	20.0	0.94 U	108	56-155			
Vinyl chloride	23		2.5	ug/L	20.0	2.2	103	20-167			
4-Bromofluorobenzene	*56*			*ug/L*	*50.0*		*111*	*41-142*			
Dibromofluoromethane	*53*			*ug/L*	*50.0*		*106*	*53-146*			
Toluene-d8	*53*			*ug/L*	*50.0*		*106*	*41-146*			

Matrix Spike Dup (2A18016-MSD1) Prepared: 01/18/2022 00:00 Analyzed: 01/18/2022 12:21

Source: AE10221-12

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	24		2.5	ug/L	20.0	0.80 U	122	57-148	2	25	
1,1,2,2-Tetrachloroethane	21		2.5	ug/L	20.0	0.54 U	103	60-139	3	17	

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2A18016 - EPA 5030B_MS - Continued

Matrix Spike Dup (2A18016-MSD1) Continued Prepared: 01/18/2022 00:00 Analyzed: 01/18/2022 12:21

Source: AE10221-12

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,2-Trichloroethane	22		2.5	ug/L	20.0	0.76 U	111	57-141	4	16	
1,1-Dichloroethane	21		2.5	ug/L	20.0	0.62 U	107	57-142	3	24	
1,1-Dichloroethene	21		2.5	ug/L	20.0	0.94 U	107	47-139	0.9	16	
1,2,4-Trichlorobenzene	23		2.5	ug/L	20.0	0.70 U	116	52-159	9	24	
1,2-Dibromo-3-chloropropane	19		2.5	ug/L	20.0	0.96 U	96	48-150	5	21	
1,2-Dibromoethane	21		2.5	ug/L	20.0	0.78 U	105	57-140	2	16	
1,2-Dichlorobenzene	22		2.5	ug/L	20.0	0.73 U	112	63-131	2	25	
1,2-Dichloroethane	19		2.5	ug/L	20.0	0.63 U	97	50-156	0.1	18	
1,2-Dichloropropane	21		2.5	ug/L	20.0	0.80 U	103	61-133	3	26	
1,3-Dichlorobenzene	23		2.5	ug/L	20.0	0.77 U	115	66-129	3	23	
1,4-Dichlorobenzene	21		2.5	ug/L	20.0	0.76 U	106	65-133	2	23	
2-Butanone	92		12	ug/L	100	4.5 U	92	10-180	3	29	
2-Hexanone	82		12	ug/L	100	2.5 U	82	12-180	0.2	28	
4-Methyl-2-pentanone	96		12	ug/L	100	2.5 U	96	19-180	0.8	24	
Acetone	80		25	ug/L	100	10 U	80	10-180	3	19	
Benzene	22		2.5	ug/L	20.0	0.71 U	111	56-136	3	14	
Bromodichloromethane	20		2.5	ug/L	20.0	0.52 U	100	58-135	1	19	
Bromoform	26		2.5	ug/L	20.0	0.75 U	129	46-148	6	18	
Bromomethane	22		2.5	ug/L	20.0	0.95 U	108	10-173	22	29	
Carbon disulfide	22		12	ug/L	20.0	2.5 U	110	43-153	8	26	
Carbon Tetrachloride	31		2.5	ug/L	20.0	0.94 U	153	54-156	6	27	
Chlorobenzene	23		2.5	ug/L	20.0	0.72 U	114	51-139	4	13	
Chloroethane	24		2.5	ug/L	20.0	0.98 U	119	27-180	6	22	
Chloroform	21		2.5	ug/L	20.0	0.80 U	107	58-139	3	17	
Chloromethane	18		2.5	ug/L	20.0	0.82 U	89	33-154	6	31	
cis-1,2-Dichloroethene	32		2.5	ug/L	20.0	9.8	112	56-128	1	17	
cis-1,3-Dichloropropene	18		2.5	ug/L	20.0	0.59 U	92	64-128	2	20	
Cyclohexane	24		2.5	ug/L	20.0	0.93 U	119	70-130	4	20	
Dibromochloromethane	20		2.5	ug/L	20.0	0.50 U	102	50-140	3	18	
Dichlorodifluoromethane	18		2.5	ug/L	20.0	0.74 U	92	10-180	3	26	
Ethylbenzene	23		2.5	ug/L	20.0	0.69 U	115	63-133	2	18	
Freon 113	22		2.5	ug/L	20.0	0.73 U	110	47-173	5	30	
Isopropylbenzene	24		2.5	ug/L	20.0	0.67 U	119	60-132	4	23	
m,p-Xylenes	45		5.0	ug/L	40.0	1.3 U	112	64-133	6	18	
Methyl acetate	19		2.5	ug/L	20.0	0.95 U	94	70-130	3	20	
Methylene Chloride	22		12	ug/L	20.0	2.5 U	108	43-142	0.4	23	
Methyl-tert-Butyl Ether	22		2.5	ug/L	20.0	0.60 U	111	51-145	3	22	
o-Xylene	23		2.5	ug/L	20.0	0.53 U	115	61-129	6	16	
Styrene	20		2.5	ug/L	20.0	0.61 U	102	59-136	3	32	
Tetrachloroethene	21		2.5	ug/L	20.0	0.76 U	104	60-147	5	21	
Toluene	21		2.5	ug/L	20.0	0.72 U	107	64-131	8	16	
trans-1,2-Dichloroethene	23		2.5	ug/L	20.0	0.89	111	54-134	7	20	
trans-1,3-Dichloropropene	21		2.5	ug/L	20.0	0.73 U	103	65-149	2	17	
Trichloroethene	57		2.5	ug/L	20.0	30	131	62-135	4	20	
Trichlorofluoromethane	20		2.5	ug/L	20.0	0.94 U	101	56-155	6	22	
Vinyl chloride	23		2.5	ug/L	20.0	2.2	103	20-167	0.2	24	
4-Bromofluorobenzene	*56*			*ug/L*	*50.0*		*111*	*41-142*			
Dibromofluoromethane	*55*			*ug/L*	*50.0*		*110*	*53-146*			
Toluene-d8	*54*			*ug/L*	*50.0*		*107*	*41-146*			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2A19007 - EPA 5030B_MS

Blank (2A19007-BLK1) Prepared: 01/19/2022 07:40 Analyzed: 01/19/2022 09:49

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	0.80	U	2.5	ug/L							
1,1,2,2-Tetrachloroethane	0.54	U	2.5	ug/L							
1,1,2-Trichloroethane	0.76	U	2.5	ug/L							
1,1-Dichloroethane	0.62	U	2.5	ug/L							
1,1-Dichloroethene	0.94	U	2.5	ug/L							
1,2,4-Trichlorobenzene	0.70	U	2.5	ug/L							
1,2-Dibromo-3-chloropropane	0.96	U	2.5	ug/L							
1,2-Dibromoethane	0.78	U	2.5	ug/L							
1,2-Dichlorobenzene	0.73	U	2.5	ug/L							
1,2-Dichloroethane	0.63	U	2.5	ug/L							
1,2-Dichloropropane	0.80	U	2.5	ug/L							
1,3-Dichlorobenzene	0.77	U	2.5	ug/L							
1,4-Dichlorobenzene	0.76	U	2.5	ug/L							
2-Butanone	4.5	U	12	ug/L							
2-Hexanone	2.5	U	12	ug/L							
4-Methyl-2-pentanone	2.5	U	12	ug/L							
Acetone	10	U	25	ug/L							
Benzene	0.71	U	2.5	ug/L							
Bromodichloromethane	0.52	U	2.5	ug/L							
Bromoform	0.75	U	2.5	ug/L							
Bromomethane	0.95	U	2.5	ug/L							
Carbon disulfide	2.5	U	12	ug/L							
Carbon Tetrachloride	0.94	U	2.5	ug/L							
Chlorobenzene	0.72	U	2.5	ug/L							
Chloroethane	0.98	U	2.5	ug/L							
Chloroform	0.80	U	2.5	ug/L							
Chloromethane	0.82	U	2.5	ug/L							
cis-1,2-Dichloroethene	0.53	U	2.5	ug/L							
cis-1,3-Dichloropropene	0.59	U	2.5	ug/L							
Cyclohexane	0.93	U	2.5	ug/L							
Dibromochloromethane	0.50	U	2.5	ug/L							
Dichlorodifluoromethane	0.74	U	2.5	ug/L							
Ethylbenzene	0.69	U	2.5	ug/L							
Freon 113	0.73	U	2.5	ug/L							
Isopropylbenzene	0.67	U	2.5	ug/L							
Methyl acetate	0.95	U	2.5	ug/L							
Methylene Chloride	2.5	U	12	ug/L							
Methyl-tert-Butyl Ether	0.60	U	2.5	ug/L							
Styrene	0.61	U	2.5	ug/L							
Tetrachloroethene	0.76	U	2.5	ug/L							
Toluene	0.72	U	2.5	ug/L							
trans-1,2-Dichloroethene	0.73	U	2.5	ug/L							
trans-1,3-Dichloropropene	0.73	U	2.5	ug/L							
Trichloroethene	0.89	U	2.5	ug/L							
Trichlorofluoromethane	0.94	U	2.5	ug/L							
Vinyl chloride	0.71	U	2.5	ug/L							
Xylenes (Total)	1.3	U	5.0	ug/L							
4-Bromofluorobenzene	*47*	*I*		*ug/L*	*50.0*		*95*	*41-142*			
Dibromofluoromethane	*45*	*I*		*ug/L*	*50.0*		*91*	*53-146*			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2A19007 - EPA 5030B_MS - Continued

Blank (2A19007-BLK1) Continued Prepared: 01/19/2022 07:40 Analyzed: 01/19/2022 09:49

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Toluene-d8	*47*	*I*		*ug/L*	*50.0*		*93*	*41-146*			

LCS (2A19007-BS1) Prepared: 01/19/2022 00:00 Analyzed: 01/19/2022 07:54

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	23		2.5	ug/L	20.0		114	57-148			
1,1,2,2-Tetrachloroethane	22		2.5	ug/L	20.0		108	60-139			
1,1,2-Trichloroethane	23		2.5	ug/L	20.0		114	57-141			
1,1-Dichloroethane	22		2.5	ug/L	20.0		108	57-142			
1,1-Dichloroethene	24		2.5	ug/L	20.0		118	47-139			
1,2,4-Trichlorobenzene	26		2.5	ug/L	20.0		132	52-159			
1,2-Dibromo-3-chloropropane	21		2.5	ug/L	20.0		104	48-150			
1,2-Dibromoethane	22		2.5	ug/L	20.0		109	57-140			
1,2-Dichlorobenzene	23		2.5	ug/L	20.0		116	63-131			
1,2-Dichloroethane	21		2.5	ug/L	20.0		104	50-156			
1,2-Dichloropropane	21		2.5	ug/L	20.0		103	61-133			
1,3-Dichlorobenzene	22		2.5	ug/L	20.0		111	66-129			
1,4-Dichlorobenzene	21		2.5	ug/L	20.0		107	65-133			
2-Butanone	160		12	ug/L	100		156	10-180			
2-Hexanone	99		12	ug/L	100		99	12-180			
4-Methyl-2-pentanone	110		12	ug/L	100		111	19-180			
Acetone	93		25	ug/L	100		93	10-180			
Benzene	23		2.5	ug/L	20.0		115	56-136			
Bromodichloromethane	23		2.5	ug/L	20.0		117	58-135			
Bromoform	24		2.5	ug/L	20.0		118	46-148			
Bromomethane	12		2.5	ug/L	20.0		61	10-173			
Carbon disulfide	29		12	ug/L	20.0		146	43-153			
Carbon Tetrachloride	23		2.5	ug/L	20.0		116	54-156			
Chlorobenzene	23		2.5	ug/L	20.0		113	51-139			
Chloroethane	21		2.5	ug/L	20.0		105	27-180			
Chloroform	23		2.5	ug/L	20.0		114	58-139			
Chloromethane	18		2.5	ug/L	20.0		90	33-154			
cis-1,2-Dichloroethene	23		2.5	ug/L	20.0		114	56-128			
cis-1,3-Dichloropropene	21		2.5	ug/L	20.0		105	64-128			
Cyclohexane	22		2.5	ug/L	20.0		111	70-130			
Dibromochloromethane	22		2.5	ug/L	20.0		109	50-140			
Dichlorodifluoromethane	22		2.5	ug/L	20.0		108	10-180			
Ethylbenzene	22		2.5	ug/L	20.0		112	63-133			
Freon 113	23		2.5	ug/L	20.0		116	47-173			
Isopropylbenzene	23		2.5	ug/L	20.0		113	60-132			
m,p-Xylenes	44		5.0	ug/L	40.0		110	64-133			
Methyl acetate	24		2.5	ug/L	20.0		119	70-130			
Methylene Chloride	23		12	ug/L	20.0		114	43-142			
Methyl-tert-Butyl Ether	22		2.5	ug/L	20.0		110	51-145			
o-Xylene	22		2.5	ug/L	20.0		111	61-129			
Styrene	24		2.5	ug/L	20.0		119	59-136			
Tetrachloroethene	22		2.5	ug/L	20.0		112	60-147			
Toluene	23		2.5	ug/L	20.0		114	64-131			
trans-1,2-Dichloroethene	23		2.5	ug/L	20.0		117	54-134			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2A19007 - EPA 5030B_MS - Continued

LCS (2A19007-BS1) Continued Prepared: 01/19/2022 00:00 Analyzed: 01/19/2022 07:54

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
trans-1,3-Dichloropropene	22		2.5	ug/L	20.0		110	65-149			
Trichloroethene	22		2.5	ug/L	20.0		112	62-135			
Trichlorofluoromethane	21		2.5	ug/L	20.0		106	56-155			
Vinyl chloride	21		2.5	ug/L	20.0		105	20-167			
4-Bromofluorobenzene	*50*			*ug/L*	*50.0*		*100*	*41-142*			
Dibromofluoromethane	*47*	*I*		*ug/L*	*50.0*		*93*	*53-146*			
Toluene-d8	*49*	*I*		*ug/L*	*50.0*		*98*	*41-146*			

Matrix Spike (2A19007-MS1) Prepared: 01/19/2022 00:00 Analyzed: 01/19/2022 08:22

Source: AE10221-27

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	25		2.5	ug/L	20.0	0.80 U	126	57-148			
1,1,2,2-Tetrachloroethane	23		2.5	ug/L	20.0	0.54 U	113	60-139			
1,1,2-Trichloroethane	23		2.5	ug/L	20.0	0.76 U	115	57-141			
1,1-Dichloroethane	24		2.5	ug/L	20.0	0.62 U	120	57-142			
1,1-Dichloroethene	26		2.5	ug/L	20.0	0.94 U	130	47-139			
1,2,4-Trichlorobenzene	26		2.5	ug/L	20.0	0.70 U	131	52-159			
1,2-Dibromo-3-chloropropane	23		2.5	ug/L	20.0	0.96 U	114	48-150			
1,2-Dibromoethane	23		2.5	ug/L	20.0	0.78 U	117	57-140			
1,2-Dichlorobenzene	24		2.5	ug/L	20.0	0.73 U	121	63-131			
1,2-Dichloroethane	22		2.5	ug/L	20.0	0.63 U	108	50-156			
1,2-Dichloropropane	22		2.5	ug/L	20.0	0.80 U	111	61-133			
1,3-Dichlorobenzene	24		2.5	ug/L	20.0	0.77 U	120	66-129			
1,4-Dichlorobenzene	23		2.5	ug/L	20.0	0.76 U	114	65-133			
2-Butanone	170		12	ug/L	100	4.5 U	166	10-180			
2-Hexanone	100		12	ug/L	100	2.5 U	100	12-180			
4-Methyl-2-pentanone	120		12	ug/L	100	2.5 U	120	19-180			
Acetone	94		25	ug/L	100	10 U	94	10-180			
Benzene	25		2.5	ug/L	20.0	0.71 U	125	56-136			
Bromodichloromethane	25		2.5	ug/L	20.0	0.52 U	125	58-135			
Bromoform	26		2.5	ug/L	20.0	0.75 U	130	46-148			
Bromomethane	18		2.5	ug/L	20.0	0.95 U	88	10-173			
Carbon disulfide	29		12	ug/L	20.0	2.5 U	147	43-153			
Carbon Tetrachloride	25		2.5	ug/L	20.0	0.94 U	126	54-156			
Chlorobenzene	24		2.5	ug/L	20.0	0.72 U	120	51-139			
Chloroethane	24		2.5	ug/L	20.0	0.98 U	118	27-180			
Chloroform	25		2.5	ug/L	20.0	0.80 U	125	58-139			
Chloromethane	22		2.5	ug/L	20.0	0.82 U	111	33-154			
cis-1,2-Dichloroethene	49		2.5	ug/L	20.0	24	125	56-128			
cis-1,3-Dichloropropene	23		2.5	ug/L	20.0	0.59 U	113	64-128			
Cyclohexane	23		2.5	ug/L	20.0	0.93 U	116	70-130			
Dibromochloromethane	24		2.5	ug/L	20.0	0.50 U	119	50-140			
Dichlorodifluoromethane	21		2.5	ug/L	20.0	0.74 U	105	10-180			
Ethylbenzene	24		2.5	ug/L	20.0	0.69 U	118	63-133			
Freon 113	22		2.5	ug/L	20.0	0.73 U	110	47-173			
Isopropylbenzene	24		2.5	ug/L	20.0	0.67 U	122	60-132			
m,p-Xylenes	47		5.0	ug/L	40.0	1.3 U	118	64-133			
Methyl acetate	25		2.5	ug/L	20.0	0.95 U	124	70-130			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2A19007 - EPA 5030B_MS - Continued

Matrix Spike (2A19007-MS1) Continued Prepared: 01/19/2022 00:00 Analyzed: 01/19/2022 08:22

Source: AE10221-27

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Methylene Chloride	25		12	ug/L	20.0	2.5 U	125	43-142			
Methyl-tert-Butyl Ether	23		2.5	ug/L	20.0	0.60 U	116	51-145			
o-Xylene	24		2.5	ug/L	20.0	0.53 U	118	61-129			
Styrene	25		2.5	ug/L	20.0	0.61 U	125	59-136			
Tetrachloroethene	23		2.5	ug/L	20.0	0.76 U	117	60-147			
Toluene	25		2.5	ug/L	20.0	0.72 U	125	64-131			
trans-1,2-Dichloroethene	28		2.5	ug/L	20.0	2.2	130	54-134			
trans-1,3-Dichloropropene	24		2.5	ug/L	20.0	0.73 U	121	65-149			
Trichloroethene	38		2.5	ug/L	20.0	14	120	62-135			
Trichlorofluoromethane	23		2.5	ug/L	20.0	0.94 U	116	56-155			
Vinyl chloride	25		2.5	ug/L	20.0	0.71 U	125	20-167			
4-Bromofluorobenzene	*49*	*I*		*ug/L*	*50.0*		*99*	*41-142*			
Dibromofluoromethane	*46*	*I*		*ug/L*	*50.0*		*93*	*53-146*			
Toluene-d8	*48*	*I*		*ug/L*	*50.0*		*96*	*41-146*			

Matrix Spike Dup (2A19007-MSD1) Prepared: 01/19/2022 00:00 Analyzed: 01/19/2022 08:51

Source: AE10221-27

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	24		2.5	ug/L	20.0	0.80 U	118	57-148	6	25	
1,1,2,2-Tetrachloroethane	21		2.5	ug/L	20.0	0.54 U	107	60-139	6	17	
1,1,2-Trichloroethane	22		2.5	ug/L	20.0	0.76 U	112	57-141	2	16	
1,1-Dichloroethane	22		2.5	ug/L	20.0	0.62 U	110	57-142	9	24	
1,1-Dichloroethene	25		2.5	ug/L	20.0	0.94 U	124	47-139	5	16	
1,2,4-Trichlorobenzene	25		2.5	ug/L	20.0	0.70 U	126	52-159	4	24	
1,2-Dibromo-3-chloropropane	21		2.5	ug/L	20.0	0.96 U	103	48-150	10	21	
1,2-Dibromoethane	22		2.5	ug/L	20.0	0.78 U	110	57-140	6	16	
1,2-Dichlorobenzene	22		2.5	ug/L	20.0	0.73 U	111	63-131	8	25	
1,2-Dichloroethane	21		2.5	ug/L	20.0	0.63 U	103	50-156	5	18	
1,2-Dichloropropane	21		2.5	ug/L	20.0	0.80 U	107	61-133	4	26	
1,3-Dichlorobenzene	22		2.5	ug/L	20.0	0.77 U	111	66-129	7	23	
1,4-Dichlorobenzene	21		2.5	ug/L	20.0	0.76 U	106	65-133	7	23	
2-Butanone	150		12	ug/L	100	4.5 U	154	10-180	7	29	
2-Hexanone	99		12	ug/L	100	2.5 U	99	12-180	0.8	28	
4-Methyl-2-pentanone	120		12	ug/L	100	2.5 U	115	19-180	4	24	
Acetone	90		25	ug/L	100	10 U	90	10-180	4	19	
Benzene	24		2.5	ug/L	20.0	0.71 U	118	56-136	6	14	
Bromodichloromethane	24		2.5	ug/L	20.0	0.52 U	118	58-135	6	19	
Bromoform	24		2.5	ug/L	20.0	0.75 U	121	46-148	8	18	
Bromomethane	17		2.5	ug/L	20.0	0.95 U	83	10-173	6	29	
Carbon disulfide	27		12	ug/L	20.0	2.5 U	134	43-153	10	26	
Carbon Tetrachloride	24		2.5	ug/L	20.0	0.94 U	118	54-156	7	27	
Chlorobenzene	23		2.5	ug/L	20.0	0.72 U	114	51-139	5	13	
Chloroethane	21		2.5	ug/L	20.0	0.98 U	107	27-180	9	22	
Chloroform	23		2.5	ug/L	20.0	0.80 U	114	58-139	9	17	
Chloromethane	19		2.5	ug/L	20.0	0.82 U	96	33-154	15	31	
cis-1,2-Dichloroethene	45		2.5	ug/L	20.0	24	106	56-128	8	17	
cis-1,3-Dichloropropene	22		2.5	ug/L	20.0	0.59 U	108	64-128	5	20	
Cyclohexane	21		2.5	ug/L	20.0	0.93 U	104	70-130	11	20	

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2A19007 - EPA 5030B_MS - Continued

Matrix Spike Dup (2A19007-MSD1) Continued Prepared: 01/19/2022 00:00 Analyzed: 01/19/2022 08:51

Source: AE10221-27

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Dibromochloromethane	22		2.5	ug/L	20.0	0.50 U	112	50-140	6	18	
Dichlorodifluoromethane	20		2.5	ug/L	20.0	0.74 U	99	10-180	7	26	
Ethylbenzene	22		2.5	ug/L	20.0	0.69 U	112	63-133	5	18	
Freon 113	20		2.5	ug/L	20.0	0.73 U	102	47-173	8	30	
Isopropylbenzene	23		2.5	ug/L	20.0	0.67 U	115	60-132	6	23	
m,p-Xylenes	44		5.0	ug/L	40.0	1.3 U	111	64-133	6	18	
Methyl acetate	23		2.5	ug/L	20.0	0.95 U	115	70-130	8	20	
Methylene Chloride	23		12	ug/L	20.0	2.5 U	113	43-142	10	23	
Methyl-tert-Butyl Ether	22		2.5	ug/L	20.0	0.60 U	110	51-145	5	22	
o-Xylene	22		2.5	ug/L	20.0	0.53 U	112	61-129	5	16	
Styrene	24		2.5	ug/L	20.0	0.61 U	118	59-136	6	32	
Tetrachloroethene	22		2.5	ug/L	20.0	0.76 U	112	60-147	5	21	
Toluene	23		2.5	ug/L	20.0	0.72 U	114	64-131	9	16	
trans-1,2-Dichloroethene	26		2.5	ug/L	20.0	2.2	120	54-134	7	20	
trans-1,3-Dichloropropene	22		2.5	ug/L	20.0	0.73 U	112	65-149	8	17	
Trichloroethene	36		2.5	ug/L	20.0	14	112	62-135	4	20	
Trichlorofluoromethane	22		2.5	ug/L	20.0	0.94 U	108	56-155	7	22	
Vinyl chloride	23		2.5	ug/L	20.0	0.71 U	114	20-167	9	24	
4-Bromofluorobenzene	*47*	*I*		*ug/L*	*50.0*		*94*	*41-142*			
Dibromofluoromethane	*43*	*I*		*ug/L*	*50.0*		*87*	*53-146*			
Toluene-d8	*46*	*I*		*ug/L*	*50.0*		*93*	*41-146*			

Batch 2A19017 - EPA 5030B_MS

Blank (2A19017-BLK1) Prepared: 01/19/2022 00:00 Analyzed: 01/19/2022 09:46

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	0.80	U	2.5	ug/L							
1,1,2,2-Tetrachloroethane	0.54	U	2.5	ug/L							
1,1,2-Trichloroethane	0.76	U	2.5	ug/L							
1,1-Dichloroethane	0.62	U	2.5	ug/L							
1,1-Dichloroethene	0.94	U	2.5	ug/L							
1,2,4-Trichlorobenzene	0.70	U	2.5	ug/L							
1,2-Dibromo-3-chloropropane	0.96	U	2.5	ug/L							
1,2-Dibromoethane	0.78	U	2.5	ug/L							
1,2-Dichlorobenzene	0.73	U	2.5	ug/L							
1,2-Dichloroethane	0.63	U	2.5	ug/L							
1,2-Dichloropropane	0.80	U	2.5	ug/L							
1,3-Dichlorobenzene	0.77	U	2.5	ug/L							
1,4-Dichlorobenzene	0.76	U	2.5	ug/L							
2-Butanone	4.5	U	12	ug/L							
2-Hexanone	2.5	U	12	ug/L							
4-Methyl-2-pentanone	2.5	U	12	ug/L							
Acetone	10	U	25	ug/L							
Benzene	0.71	U	2.5	ug/L							
Bromodichloromethane	0.52	U	2.5	ug/L							
Bromoform	0.75	U	2.5	ug/L							
Bromomethane	0.95	U	2.5	ug/L							
Carbon disulfide	2.5	U	12	ug/L							

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2A19017 - EPA 5030B_MS - Continued

Blank (2A19017-BLK1) Continued Prepared: 01/19/2022 00:00 Analyzed: 01/19/2022 09:46

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Carbon Tetrachloride	0.94	U	2.5	ug/L							
Chlorobenzene	0.72	U	2.5	ug/L							
Chloroethane	0.98	U	2.5	ug/L							
Chloroform	0.80	U	2.5	ug/L							
Chloromethane	0.82	U	2.5	ug/L							
cis-1,2-Dichloroethene	0.53	U	2.5	ug/L							
cis-1,3-Dichloropropene	0.59	U	2.5	ug/L							
Cyclohexane	0.93	U	2.5	ug/L							
Dibromochloromethane	0.50	U	2.5	ug/L							
Dichlorodifluoromethane	0.74	U	2.5	ug/L							
Ethylbenzene	0.69	U	2.5	ug/L							
Freon 113	0.73	U	2.5	ug/L							
Isopropylbenzene	0.67	U	2.5	ug/L							
Methyl acetate	0.95	U	2.5	ug/L							
Methylene Chloride	2.5	U	12	ug/L							
Methyl-tert-Butyl Ether	0.60	U	2.5	ug/L							
Styrene	0.61	U	2.5	ug/L							
Tetrachloroethene	0.76	U	2.5	ug/L							
Toluene	0.72	U	2.5	ug/L							
trans-1,2-Dichloroethene	0.73	U	2.5	ug/L							
trans-1,3-Dichloropropene	0.73	U	2.5	ug/L							
Trichloroethene	0.89	U	2.5	ug/L							
Trichlorofluoromethane	0.94	U	2.5	ug/L							
Vinyl chloride	0.71	U	2.5	ug/L							
Xylenes (Total)	1.3	U	5.0	ug/L							
4-Bromofluorobenzene	*53*			*ug/L*	*50.0*		*107*	*41-142*			
Dibromofluoromethane	*52*			*ug/L*	*50.0*		*104*	*53-146*			
Toluene-d8	*52*			*ug/L*	*50.0*		*104*	*41-146*			

LCS (2A19017-BS1) Prepared: 01/19/2022 00:00 Analyzed: 01/19/2022 08:51

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	24		2.5	ug/L	20.0		122	57-148			
1,1,2,2-Tetrachloroethane	20		2.5	ug/L	20.0		100	60-139			
1,1,2-Trichloroethane	23		2.5	ug/L	20.0		114	57-141			
1,1-Dichloroethane	22		2.5	ug/L	20.0		109	57-142			
1,1-Dichloroethene	22		2.5	ug/L	20.0		109	47-139			
1,2,4-Trichlorobenzene	23		2.5	ug/L	20.0		113	52-159			
1,2-Dibromo-3-chloropropane	19		2.5	ug/L	20.0		97	48-150			
1,2-Dibromoethane	21		2.5	ug/L	20.0		103	57-140			
1,2-Dichlorobenzene	22		2.5	ug/L	20.0		112	63-131			
1,2-Dichloroethane	21		2.5	ug/L	20.0		103	50-156			
1,2-Dichloropropane	21		2.5	ug/L	20.0		103	61-133			
1,3-Dichlorobenzene	23		2.5	ug/L	20.0		113	66-129			
1,4-Dichlorobenzene	21		2.5	ug/L	20.0		104	65-133			
2-Butanone	93		12	ug/L	100		93	10-180			
2-Hexanone	77		12	ug/L	100		77	12-180			
4-Methyl-2-pentanone	94		12	ug/L	100		94	19-180			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2A19017 - EPA 5030B_MS - Continued

LCS (2A19017-BS1) Continued Prepared: 01/19/2022 00:00 Analyzed: 01/19/2022 08:51

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Acetone	83		25	ug/L	100		83	10-180			
Benzene	22		2.5	ug/L	20.0		111	56-136			
Bromodichloromethane	20		2.5	ug/L	20.0		100	58-135			
Bromoform	25		2.5	ug/L	20.0		127	46-148			
Bromomethane	13		2.5	ug/L	20.0		64	10-173			
Carbon disulfide	23		12	ug/L	20.0		114	43-153			
Carbon Tetrachloride	32		2.5	ug/L	20.0		160	54-156			QL-02
Chlorobenzene	23		2.5	ug/L	20.0		114	51-139			
Chloroethane	23		2.5	ug/L	20.0		114	27-180			
Chloroform	22		2.5	ug/L	20.0		110	58-139			
Chloromethane	15		2.5	ug/L	20.0		76	33-154			
cis-1,2-Dichloroethene	21		2.5	ug/L	20.0		105	56-128			
cis-1,3-Dichloropropene	18		2.5	ug/L	20.0		91	64-128			
Cyclohexane	23		2.5	ug/L	20.0		113	70-130			
Dibromochloromethane	20		2.5	ug/L	20.0		100	50-140			
Dichlorodifluoromethane	17		2.5	ug/L	20.0		83	10-180			
Ethylbenzene	23		2.5	ug/L	20.0		114	63-133			
Freon 113	22		2.5	ug/L	20.0		110	47-173			
Isopropylbenzene	23		2.5	ug/L	20.0		114	60-132			
m,p-Xylenes	45		5.0	ug/L	40.0		112	64-133			
Methyl acetate	18		2.5	ug/L	20.0		88	70-130			
Methylene Chloride	22		12	ug/L	20.0		112	43-142			
Methyl-tert-Butyl Ether	22		2.5	ug/L	20.0		110	51-145			
o-Xylene	23		2.5	ug/L	20.0		115	61-129			
Styrene	20		2.5	ug/L	20.0		101	59-136			
Tetrachloroethene	23		2.5	ug/L	20.0		117	60-147			
Toluene	21		2.5	ug/L	20.0		104	64-131			
trans-1,2-Dichloroethene	23		2.5	ug/L	20.0		117	54-134			
trans-1,3-Dichloropropene	20		2.5	ug/L	20.0		100	65-149			
Trichloroethene	22		2.5	ug/L	20.0		109	62-135			
Trichlorofluoromethane	19		2.5	ug/L	20.0		97	56-155			
Vinyl chloride	19		2.5	ug/L	20.0		95	20-167			
4-Bromofluorobenzene	*56*			*ug/L*	*50.0*		*112*	*41-142*			
Dibromofluoromethane	*53*			*ug/L*	*50.0*		*106*	*53-146*			
Toluene-d8	*53*			*ug/L*	*50.0*		*106*	*41-146*			

Matrix Spike (2A19017-MS1) Prepared: 01/19/2022 00:00 Analyzed: 01/19/2022 12:05

Source: AE10221-36

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	24		2.5	ug/L	20.0	0.80 U	119	57-148			
1,1,2,2-Tetrachloroethane	20		2.5	ug/L	20.0	0.54 U	98	60-139			
1,1,2-Trichloroethane	22		2.5	ug/L	20.0	0.76 U	110	57-141			
1,1-Dichloroethane	22		2.5	ug/L	20.0	0.62 U	108	57-142			
1,1-Dichloroethene	22		2.5	ug/L	20.0	0.94 U	109	47-139			
1,2,4-Trichlorobenzene	24		2.5	ug/L	20.0	0.70 U	118	52-159			
1,2-Dibromo-3-chloropropane	22		2.5	ug/L	20.0	0.96 U	111	48-150			
1,2-Dibromoethane	20		2.5	ug/L	20.0	0.78 U	102	57-140			
1,2-Dichlorobenzene	23		2.5	ug/L	20.0	0.73 U	117	63-131			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2A19017 - EPA 5030B_MS - Continued

Matrix Spike (2A19017-MS1) Continued Prepared: 01/19/2022 00:00 Analyzed: 01/19/2022 12:05

Source: AE10221-36

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,2-Dichloroethane	20		2.5	ug/L	20.0	0.63 U	98	50-156			
1,2-Dichloropropane	20		2.5	ug/L	20.0	0.80 U	100	61-133			
1,3-Dichlorobenzene	24		2.5	ug/L	20.0	0.77 U	119	66-129			
1,4-Dichlorobenzene	22		2.5	ug/L	20.0	0.76 U	108	65-133			
2-Butanone	100		12	ug/L	100	4.5 U	100	10-180			
2-Hexanone	85		12	ug/L	100	2.5 U	85	12-180			
4-Methyl-2-pentanone	99		12	ug/L	100	2.5 U	99	19-180			
Acetone	83		25	ug/L	100	10 U	83	10-180			
Benzene	22		2.5	ug/L	20.0	0.71 U	111	56-136			
Bromodichloromethane	19		2.5	ug/L	20.0	0.52 U	96	58-135			
Bromoform	27		2.5	ug/L	20.0	0.75 U	133	46-148			
Bromomethane	19		2.5	ug/L	20.0	0.95 U	97	10-173			
Carbon disulfide	24		12	ug/L	20.0	2.5 U	119	43-153			
Carbon Tetrachloride	28		2.5	ug/L	20.0	0.94 U	140	54-156			
Chlorobenzene	23		2.5	ug/L	20.0	0.72 U	114	51-139			
Chloroethane	23		2.5	ug/L	20.0	0.98 U	115	27-180			
Chloroform	22		2.5	ug/L	20.0	0.80 U	108	58-139			
Chloromethane	18		2.5	ug/L	20.0	0.82 U	88	33-154			
cis-1,2-Dichloroethene	40		2.5	ug/L	20.0	18	112	56-128			
cis-1,3-Dichloropropene	18		2.5	ug/L	20.0	0.59 U	92	64-128			
Cyclohexane	24		2.5	ug/L	20.0	0.93 U	122	70-130			
Dibromochloromethane	19		2.5	ug/L	20.0	0.50 U	97	50-140			
Dichlorodifluoromethane	18		2.5	ug/L	20.0	0.74 U	89	10-180			
Ethylbenzene	22		2.5	ug/L	20.0	0.69 U	112	63-133			
Freon 113	23		2.5	ug/L	20.0	0.73 U	114	47-173			
Isopropylbenzene	23		2.5	ug/L	20.0	0.67 U	115	60-132			
m,p-Xylenes	44		5.0	ug/L	40.0	1.3 U	111	64-133			
Methyl acetate	21		2.5	ug/L	20.0	0.95 U	105	70-130			
Methylene Chloride	21		12	ug/L	20.0	2.5 U	105	43-142			
Methyl-tert-Butyl Ether	22		2.5	ug/L	20.0	0.60 U	110	51-145			
o-Xylene	23		2.5	ug/L	20.0	0.53 U	115	61-129			
Styrene	20		2.5	ug/L	20.0	0.61 U	102	59-136			
Tetrachloroethene	22		2.5	ug/L	20.0	0.76 U	108	60-147			
Toluene	22		2.5	ug/L	20.0	0.72 U	109	64-131			
trans-1,2-Dichloroethene	24		2.5	ug/L	20.0	1.7	111	54-134			
trans-1,3-Dichloropropene	20		2.5	ug/L	20.0	0.73 U	102	65-149			
Trichloroethene	56		2.5	ug/L	20.0	32	118	62-135			
Trichlorofluoromethane	22		2.5	ug/L	20.0	0.94 U	109	56-155			
Vinyl chloride	20		2.5	ug/L	20.0	0.71 U	102	20-167			
4-Bromofluorobenzene	*54*			*ug/L*	*50.0*		*108*	*41-142*			
Dibromofluoromethane	*52*			*ug/L*	*50.0*		*104*	*53-146*			
Toluene-d8	*52*			*ug/L*	*50.0*		*105*	*41-146*			

Matrix Spike Dup (2A19017-MSD1) Prepared: 01/19/2022 00:00 Analyzed: 01/19/2022 12:33

Source: AE10221-36

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	24		2.5	ug/L	20.0	0.80 U	118	57-148	0.4	25	
1,1,2,2-Tetrachloroethane	20		2.5	ug/L	20.0	0.54 U	100	60-139	2	17	

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2A19017 - EPA 5030B_MS - Continued

Matrix Spike Dup (2A19017-MSD1) Continued Prepared: 01/19/2022 00:00 Analyzed: 01/19/2022 12:33

Source: AE10221-36

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,2-Trichloroethane	21		2.5	ug/L	20.0	0.76 U	103	57-141	6	16	
1,1-Dichloroethane	21		2.5	ug/L	20.0	0.62 U	106	57-142	1	24	
1,1-Dichloroethene	22		2.5	ug/L	20.0	0.94 U	108	47-139	0.7	16	
1,2,4-Trichlorobenzene	24		2.5	ug/L	20.0	0.70 U	119	52-159	1	24	
1,2-Dibromo-3-chloropropane	21		2.5	ug/L	20.0	0.96 U	104	48-150	7	21	
1,2-Dibromoethane	20		2.5	ug/L	20.0	0.78 U	99	57-140	3	16	
1,2-Dichlorobenzene	23		2.5	ug/L	20.0	0.73 U	113	63-131	3	25	
1,2-Dichloroethane	20		2.5	ug/L	20.0	0.63 U	98	50-156	0	18	
1,2-Dichloropropane	20		2.5	ug/L	20.0	0.80 U	102	61-133	2	26	
1,3-Dichlorobenzene	23		2.5	ug/L	20.0	0.77 U	115	66-129	3	23	
1,4-Dichlorobenzene	21		2.5	ug/L	20.0	0.76 U	107	65-133	1	23	
2-Butanone	95		12	ug/L	100	4.5 U	95	10-180	5	29	
2-Hexanone	83		12	ug/L	100	2.5 U	83	12-180	2	28	
4-Methyl-2-pentanone	100		12	ug/L	100	2.5 U	103	19-180	4	24	
Acetone	85		25	ug/L	100	10 U	85	10-180	2	19	
Benzene	22		2.5	ug/L	20.0	0.71 U	110	56-136	0.6	14	
Bromodichloromethane	20		2.5	ug/L	20.0	0.52 U	98	58-135	2	19	
Bromoform	26		2.5	ug/L	20.0	0.75 U	132	46-148	0.9	18	
Bromomethane	21		2.5	ug/L	20.0	0.95 U	107	10-173	10	29	
Carbon disulfide	22		12	ug/L	20.0	2.5 U	112	43-153	6	26	
Carbon Tetrachloride	29		2.5	ug/L	20.0	0.94 U	143	54-156	2	27	
Chlorobenzene	22		2.5	ug/L	20.0	0.72 U	110	51-139	4	13	
Chloroethane	23		2.5	ug/L	20.0	0.98 U	113	27-180	2	22	
Chloroform	21		2.5	ug/L	20.0	0.80 U	107	58-139	0.9	17	
Chloromethane	18		2.5	ug/L	20.0	0.82 U	88	33-154	0.5	31	
cis-1,2-Dichloroethene	39		2.5	ug/L	20.0	18	108	56-128	2	17	
cis-1,3-Dichloropropene	18		2.5	ug/L	20.0	0.59 U	89	64-128	3	20	
Cyclohexane	24		2.5	ug/L	20.0	0.93 U	120	70-130	2	20	
Dibromochloromethane	20		2.5	ug/L	20.0	0.50 U	100	50-140	3	18	
Dichlorodifluoromethane	18		2.5	ug/L	20.0	0.74 U	91	10-180	1	26	
Ethylbenzene	22		2.5	ug/L	20.0	0.69 U	112	63-133	0.3	18	
Freon 113	23		2.5	ug/L	20.0	0.73 U	114	47-173	0.04	30	
Isopropylbenzene	23		2.5	ug/L	20.0	0.67 U	115	60-132	0.4	23	
m,p-Xylenes	44		5.0	ug/L	40.0	1.3 U	111	64-133	0.3	18	
Methyl acetate	20		2.5	ug/L	20.0	0.95 U	102	70-130	3	20	
Methylene Chloride	21		12	ug/L	20.0	2.5 U	107	43-142	2	23	
Methyl-tert-Butyl Ether	22		2.5	ug/L	20.0	0.60 U	110	51-145	0.2	22	
o-Xylene	23		2.5	ug/L	20.0	0.53 U	113	61-129	2	16	
Styrene	20		2.5	ug/L	20.0	0.61 U	99	59-136	2	32	
Tetrachloroethene	21		2.5	ug/L	20.0	0.76 U	103	60-147	5	21	
Toluene	21		2.5	ug/L	20.0	0.72 U	106	64-131	3	16	
trans-1,2-Dichloroethene	24		2.5	ug/L	20.0	1.7	110	54-134	0.9	20	
trans-1,3-Dichloropropene	19		2.5	ug/L	20.0	0.73 U	95	65-149	7	17	
Trichloroethene	55		2.5	ug/L	20.0	32	113	62-135	2	20	
Trichlorofluoromethane	20		2.5	ug/L	20.0	0.94 U	102	56-155	7	22	
Vinyl chloride	20		2.5	ug/L	20.0	0.71 U	99	20-167	3	24	
4-Bromofluorobenzene	*54*			*ug/L*	*50.0*		*107*	*41-142*			
Dibromofluoromethane	*53*			*ug/L*	*50.0*		*106*	*53-146*			
Toluene-d8	*54*			*ug/L*	*50.0*		*107*	*41-146*			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2A21003 - EPA 5030B_MS

Blank (2A21003-BLK1) Prepared: 01/21/2022 07:44 Analyzed: 01/21/2022 09:53

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	0.80	U	2.5	ug/L							
1,1,2,2-Tetrachloroethane	0.54	U	2.5	ug/L							
1,1,2-Trichloroethane	0.76	U	2.5	ug/L							
1,1-Dichloroethane	0.62	U	2.5	ug/L							
1,1-Dichloroethene	0.94	U	2.5	ug/L							
1,2,4-Trichlorobenzene	0.70	U	2.5	ug/L							
1,2-Dibromo-3-chloropropane	0.96	U	2.5	ug/L							
1,2-Dibromoethane	0.78	U	2.5	ug/L							
1,2-Dichlorobenzene	0.73	U	2.5	ug/L							
1,2-Dichloroethane	0.63	U	2.5	ug/L							
1,2-Dichloropropane	0.80	U	2.5	ug/L							
1,3-Dichlorobenzene	0.77	U	2.5	ug/L							
1,4-Dichlorobenzene	0.76	U	2.5	ug/L							
2-Butanone	4.5	U	12	ug/L							
2-Hexanone	2.5	U	12	ug/L							
4-Methyl-2-pentanone	2.5	U	12	ug/L							
Acetone	10	U	25	ug/L							
Benzene	0.71	U	2.5	ug/L							
Bromodichloromethane	0.52	U	2.5	ug/L							
Bromoform	0.75	U	2.5	ug/L							
Bromomethane	0.95	U	2.5	ug/L							
Carbon disulfide	2.5	U	12	ug/L							
Carbon Tetrachloride	0.94	U	2.5	ug/L							
Chlorobenzene	0.72	U	2.5	ug/L							
Chloroethane	0.98	U	2.5	ug/L							
Chloroform	0.80	U	2.5	ug/L							
Chloromethane	0.82	U	2.5	ug/L							
cis-1,2-Dichloroethene	0.53	U	2.5	ug/L							
cis-1,3-Dichloropropene	0.59	U	2.5	ug/L							
Cyclohexane	0.93	U	2.5	ug/L							
Dibromochloromethane	0.50	U	2.5	ug/L							
Dichlorodifluoromethane	0.74	U	2.5	ug/L							
Ethylbenzene	0.69	U	2.5	ug/L							
Freon 113	0.73	U	2.5	ug/L							
Isopropylbenzene	0.67	U	2.5	ug/L							
Methyl acetate	0.95	U	2.5	ug/L							
Methylene Chloride	2.5	U	12	ug/L							
Methyl-tert-Butyl Ether	0.60	U	2.5	ug/L							
Styrene	0.61	U	2.5	ug/L							
Tetrachloroethene	0.76	U	2.5	ug/L							
Toluene	0.72	U	2.5	ug/L							
trans-1,2-Dichloroethene	0.73	U	2.5	ug/L							
trans-1,3-Dichloropropene	0.73	U	2.5	ug/L							
Trichloroethene	0.89	U	2.5	ug/L							
Trichlorofluoromethane	0.94	U	2.5	ug/L							
Vinyl chloride	0.71	U	2.5	ug/L							
Xylenes (Total)	1.3	U	5.0	ug/L							
4-Bromofluorobenzene	*49*	*I*		*ug/L*	*50.0*		*98*	*41-142*			
Dibromofluoromethane	*48*	*I*		*ug/L*	*50.0*		*96*	*53-146*			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2A21003 - EPA 5030B_MS - Continued

Blank (2A21003-BLK1) Continued Prepared: 01/21/2022 07:44 Analyzed: 01/21/2022 09:53

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Toluene-d8	*48*	*I*		*ug/L*	*50.0*		*96*	*41-146*			

LCS (2A21003-BS1) Prepared: 01/21/2022 07:44 Analyzed: 01/21/2022 07:58

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	22		2.5	ug/L	20.0		108	57-148			
1,1,2,2-Tetrachloroethane	19		2.5	ug/L	20.0		97	60-139			
1,1,2-Trichloroethane	20		2.5	ug/L	20.0		99	57-141			
1,1-Dichloroethane	20		2.5	ug/L	20.0		101	57-142			
1,1-Dichloroethene	22		2.5	ug/L	20.0		108	47-139			
1,2,4-Trichlorobenzene	23		2.5	ug/L	20.0		117	52-159			
1,2-Dibromo-3-chloropropane	20		2.5	ug/L	20.0		98	48-150			
1,2-Dibromoethane	20		2.5	ug/L	20.0		98	57-140			
1,2-Dichlorobenzene	20		2.5	ug/L	20.0		101	63-131			
1,2-Dichloroethane	19		2.5	ug/L	20.0		93	50-156			
1,2-Dichloropropane	18		2.5	ug/L	20.0		90	61-133			
1,3-Dichlorobenzene	20		2.5	ug/L	20.0		99	66-129			
1,4-Dichlorobenzene	19		2.5	ug/L	20.0		93	65-133			
2-Butanone	150		12	ug/L	100		145	10-180			
2-Hexanone	91		12	ug/L	100		91	12-180			
4-Methyl-2-pentanone	100		12	ug/L	100		104	19-180			
Acetone	87		25	ug/L	100		87	10-180			
Benzene	20		2.5	ug/L	20.0		102	56-136			
Bromodichloromethane	21		2.5	ug/L	20.0		105	58-135			
Bromoform	22		2.5	ug/L	20.0		110	46-148			
Bromomethane	13		2.5	ug/L	20.0		63	10-173			
Carbon disulfide	28		12	ug/L	20.0		138	43-153			
Carbon Tetrachloride	21		2.5	ug/L	20.0		106	54-156			
Chlorobenzene	19		2.5	ug/L	20.0		96	51-139			
Chloroethane	20		2.5	ug/L	20.0		100	27-180			
Chloroform	21		2.5	ug/L	20.0		105	58-139			
Chloromethane	18		2.5	ug/L	20.0		90	33-154			
cis-1,2-Dichloroethene	21		2.5	ug/L	20.0		104	56-128			
cis-1,3-Dichloropropene	19		2.5	ug/L	20.0		96	64-128			
Cyclohexane	20		2.5	ug/L	20.0		101	70-130			
Dibromochloromethane	19		2.5	ug/L	20.0		97	50-140			
Dichlorodifluoromethane	20		2.5	ug/L	20.0		102	10-180			
Ethylbenzene	19		2.5	ug/L	20.0		95	63-133			
Freon 113	21		2.5	ug/L	20.0		104	47-173			
Isopropylbenzene	20		2.5	ug/L	20.0		99	60-132			
m,p-Xylenes	38		5.0	ug/L	40.0		95	64-133			
Methyl acetate	22		2.5	ug/L	20.0		109	70-130			
Methylene Chloride	20		12	ug/L	20.0		102	43-142			
Methyl-tert-Butyl Ether	20		2.5	ug/L	20.0		102	51-145			
o-Xylene	19		2.5	ug/L	20.0		95	61-129			
Styrene	20		2.5	ug/L	20.0		102	59-136			
Tetrachloroethene	20		2.5	ug/L	20.0		101	60-147			
Toluene	20		2.5	ug/L	20.0		98	64-131			
trans-1,2-Dichloroethene	22		2.5	ug/L	20.0		108	54-134			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2A21003 - EPA 5030B_MS - Continued

LCS (2A21003-BS1) Continued Prepared: 01/21/2022 07:44 Analyzed: 01/21/2022 07:58

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
trans-1,3-Dichloropropene	21		2.5	ug/L	20.0		104	65-149			
Trichloroethene	20		2.5	ug/L	20.0		98	62-135			
Trichlorofluoromethane	21		2.5	ug/L	20.0		104	56-155			
Vinyl chloride	20		2.5	ug/L	20.0		101	20-167			
4-Bromofluorobenzene	*50*			*ug/L*	*50.0*		*99*	*41-142*			
Dibromofluoromethane	*48*	*I*		*ug/L*	*50.0*		*96*	*53-146*			
Toluene-d8	*48*	*I*		*ug/L*	*50.0*		*96*	*41-146*			

Matrix Spike (2A21003-MS1) Prepared: 01/21/2022 07:44 Analyzed: 01/21/2022 08:26

Source: AE10221-52

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	26		2.5	ug/L	20.0	0.80 U	130	57-148			
1,1,2,2-Tetrachloroethane	21		2.5	ug/L	20.0	0.54 U	104	60-139			
1,1,2-Trichloroethane	23		2.5	ug/L	20.0	0.76 U	113	57-141			
1,1-Dichloroethane	24		2.5	ug/L	20.0	0.62 U	118	57-142			
1,1-Dichloroethene	26		2.5	ug/L	20.0	0.94 U	131	47-139			
1,2,4-Trichlorobenzene	26		2.5	ug/L	20.0	0.70 U	131	52-159			
1,2-Dibromo-3-chloropropane	21		2.5	ug/L	20.0	0.96 U	103	48-150			
1,2-Dibromoethane	22		2.5	ug/L	20.0	0.78 U	108	57-140			
1,2-Dichlorobenzene	23		2.5	ug/L	20.0	0.73 U	115	63-131			
1,2-Dichloroethane	22		2.5	ug/L	20.0	0.63 U	108	50-156			
1,2-Dichloropropane	22		2.5	ug/L	20.0	0.80 U	109	61-133			
1,3-Dichlorobenzene	23		2.5	ug/L	20.0	0.77 U	115	66-129			
1,4-Dichlorobenzene	22		2.5	ug/L	20.0	0.76 U	111	65-133			
2-Butanone	150		12	ug/L	100	4.5 U	152	10-180			
2-Hexanone	100		12	ug/L	100	2.5 U	101	12-180			
4-Methyl-2-pentanone	120		12	ug/L	100	2.5 U	116	19-180			
Acetone	93		25	ug/L	100	10 U	93	10-180			
Benzene	24		2.5	ug/L	20.0	0.71 U	122	56-136			
Bromodichloromethane	25		2.5	ug/L	20.0	0.52 U	124	58-135			
Bromoform	24		2.5	ug/L	20.0	0.75 U	120	46-148			
Bromomethane	16		2.5	ug/L	20.0	0.95 U	80	10-173			
Carbon disulfide	30		12	ug/L	20.0	2.5 U	150	43-153			
Carbon Tetrachloride	25		2.5	ug/L	20.0	0.94 U	125	54-156			
Chlorobenzene	23		2.5	ug/L	20.0	0.72 U	114	51-139			
Chloroethane	23		2.5	ug/L	20.0	0.98 U	116	27-180			
Chloroform	25		2.5	ug/L	20.0	0.80 U	125	58-139			
Chloromethane	20		2.5	ug/L	20.0	0.82 U	100	33-154			
cis-1,2-Dichloroethene	65		2.5	ug/L	20.0	42	115	56-128			
cis-1,3-Dichloropropene	22		2.5	ug/L	20.0	0.59 U	111	64-128			
Cyclohexane	24		2.5	ug/L	20.0	0.93 U	119	70-130			
Dibromochloromethane	22		2.5	ug/L	20.0	0.50 U	109	50-140			
Dichlorodifluoromethane	23		2.5	ug/L	20.0	0.74 U	115	10-180			
Ethylbenzene	23		2.5	ug/L	20.0	0.69 U	113	63-133			
Freon 113	24		2.5	ug/L	20.0	0.73 U	122	47-173			
Isopropylbenzene	24		2.5	ug/L	20.0	0.67 U	118	60-132			
m,p-Xylenes	45		5.0	ug/L	40.0	1.3 U	113	64-133			
Methyl acetate	24		2.5	ug/L	20.0	0.95 U	119	70-130			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2A21003 - EPA 5030B_MS - Continued

Matrix Spike (2A21003-MS1) Continued Prepared: 01/21/2022 07:44 Analyzed: 01/21/2022 08:26

Source: AE10221-52

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Methylene Chloride	24		12	ug/L	20.0	2.5 U	118	43-142			
Methyl-tert-Butyl Ether	23		2.5	ug/L	20.0	0.60 U	117	51-145			
o-Xylene	23		2.5	ug/L	20.0	0.53 U	113	61-129			
Styrene	24		2.5	ug/L	20.0	0.61 U	118	59-136			
Tetrachloroethene	22		2.5	ug/L	20.0	0.76 U	110	60-147			
Toluene	23		2.5	ug/L	20.0	0.72 U	115	64-131			
trans-1,2-Dichloroethene	34		2.5	ug/L	20.0	8.7	127	54-134			
trans-1,3-Dichloropropene	23		2.5	ug/L	20.0	0.73 U	114	65-149			
Trichloroethene	26		2.5	ug/L	20.0	3.3	116	62-135			
Trichlorofluoromethane	24		2.5	ug/L	20.0	0.94 U	122	56-155			
Vinyl chloride	24		2.5	ug/L	20.0	0.71 U	120	20-167			
4-Bromofluorobenzene	*50*			*ug/L*	*50.0*		*99*	*41-142*			
Dibromofluoromethane	*48*	*I*		*ug/L*	*50.0*		*96*	*53-146*			
Toluene-d8	*49*	*I*		*ug/L*	*50.0*		*98*	*41-146*			

Matrix Spike Dup (2A21003-MSD1) Prepared: 01/21/2022 07:44 Analyzed: 01/21/2022 08:55

Source: AE10221-52

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	25		2.5	ug/L	20.0	0.80 U	124	57-148	5	25	
1,1,2,2-Tetrachloroethane	21		2.5	ug/L	20.0	0.54 U	106	60-139	2	17	
1,1,2-Trichloroethane	21		2.5	ug/L	20.0	0.76 U	107	57-141	5	16	
1,1-Dichloroethane	23		2.5	ug/L	20.0	0.62 U	115	57-142	3	24	
1,1-Dichloroethene	25		2.5	ug/L	20.0	0.94 U	126	47-139	4	16	
1,2,4-Trichlorobenzene	25		2.5	ug/L	20.0	0.70 U	123	52-159	6	24	
1,2-Dibromo-3-chloropropane	21		2.5	ug/L	20.0	0.96 U	105	48-150	2	21	
1,2-Dibromoethane	22		2.5	ug/L	20.0	0.78 U	109	57-140	2	16	
1,2-Dichlorobenzene	23		2.5	ug/L	20.0	0.73 U	114	63-131	1	25	
1,2-Dichloroethane	21		2.5	ug/L	20.0	0.63 U	105	50-156	3	18	
1,2-Dichloropropane	21		2.5	ug/L	20.0	0.80 U	105	61-133	4	26	
1,3-Dichlorobenzene	22		2.5	ug/L	20.0	0.77 U	112	66-129	3	23	
1,4-Dichlorobenzene	22		2.5	ug/L	20.0	0.76 U	108	65-133	3	23	
2-Butanone	150		12	ug/L	100	4.5 U	154	10-180	2	29	
2-Hexanone	100		12	ug/L	100	2.5 U	100	12-180	2	28	
4-Methyl-2-pentanone	120		12	ug/L	100	2.5 U	117	19-180	0.6	24	
Acetone	94		25	ug/L	100	10 U	94	10-180	2	19	
Benzene	24		2.5	ug/L	20.0	0.71 U	120	56-136	2	14	
Bromodichloromethane	24		2.5	ug/L	20.0	0.52 U	120	58-135	3	19	
Bromoform	24		2.5	ug/L	20.0	0.75 U	120	46-148	0.1	18	
Bromomethane	17		2.5	ug/L	20.0	0.95 U	85	10-173	6	29	
Carbon disulfide	28		12	ug/L	20.0	2.5 U	142	43-153	5	26	
Carbon Tetrachloride	25		2.5	ug/L	20.0	0.94 U	123	54-156	2	27	
Chlorobenzene	23		2.5	ug/L	20.0	0.72 U	113	51-139	0.4	13	
Chloroethane	22		2.5	ug/L	20.0	0.98 U	111	27-180	5	22	
Chloroform	24		2.5	ug/L	20.0	0.80 U	120	58-139	4	17	
Chloromethane	20		2.5	ug/L	20.0	0.82 U	98	33-154	1	31	
cis-1,2-Dichloroethene	63		2.5	ug/L	20.0	42	105	56-128	3	17	
cis-1,3-Dichloropropene	21		2.5	ug/L	20.0	0.59 U	107	64-128	4	20	
Cyclohexane	23		2.5	ug/L	20.0	0.93 U	114	70-130	5	20	

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2A21003 - EPA 5030B_MS - Continued

Matrix Spike Dup (2A21003-MSD1) Continued Prepared: 01/21/2022 07:44 Analyzed: 01/21/2022 08:55

Source: AE10221-52

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Dibromochloromethane	22		2.5	ug/L	20.0	0.50 U	112	50-140	3	18	
Dichlorodifluoromethane	22		2.5	ug/L	20.0	0.74 U	111	10-180	4	26	
Ethylbenzene	22		2.5	ug/L	20.0	0.69 U	112	63-133	0.3	18	
Freon 113	23		2.5	ug/L	20.0	0.73 U	116	47-173	5	30	
Isopropylbenzene	23		2.5	ug/L	20.0	0.67 U	116	60-132	2	23	
m,p-Xylenes	45		5.0	ug/L	40.0	1.3 U	112	64-133	1	18	
Methyl acetate	23		2.5	ug/L	20.0	0.95 U	117	70-130	2	20	
Methylene Chloride	23		12	ug/L	20.0	2.5 U	115	43-142	2	23	
Methyl-tert-Butyl Ether	23		2.5	ug/L	20.0	0.60 U	114	51-145	3	22	
o-Xylene	23		2.5	ug/L	20.0	0.53 U	114	61-129	0.3	16	
Styrene	24		2.5	ug/L	20.0	0.61 U	118	59-136	0.4	32	
Tetrachloroethene	22		2.5	ug/L	20.0	0.76 U	110	60-147	0.2	21	
Toluene	23		2.5	ug/L	20.0	0.72 U	114	64-131	0.6	16	
trans-1,2-Dichloroethene	33		2.5	ug/L	20.0	8.7	122	54-134	3	20	
trans-1,3-Dichloropropene	23		2.5	ug/L	20.0	0.73 U	114	65-149	0.09	17	
Trichloroethene	27		2.5	ug/L	20.0	3.3	116	62-135	0.6	20	
Trichlorofluoromethane	24		2.5	ug/L	20.0	0.94 U	119	56-155	2	22	
Vinyl chloride	23		2.5	ug/L	20.0	0.71 U	115	20-167	4	24	
4-Bromofluorobenzene	*50*			*ug/L*	*50.0*		*101*	*41-142*			
Dibromofluoromethane	*47*	*I*		*ug/L*	*50.0*		*94*	*53-146*			
Toluene-d8	*49*	*I*		*ug/L*	*50.0*		*99*	*41-146*			

Batch 2A24004 - EPA 5030B_MS

Blank (2A24004-BLK1) Prepared: 01/24/2022 00:00 Analyzed: 01/24/2022 09:38

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	0.80	U	2.5	ug/L							
1,1,2,2-Tetrachloroethane	0.54	U	2.5	ug/L							
1,1,2-Trichloroethane	0.76	U	2.5	ug/L							
1,1-Dichloroethane	0.62	U	2.5	ug/L							
1,1-Dichloroethene	0.94	U	2.5	ug/L							
1,2,4-Trichlorobenzene	0.70	U	2.5	ug/L							
1,2-Dibromo-3-chloropropane	0.96	U	2.5	ug/L							
1,2-Dibromoethane	0.78	U	2.5	ug/L							
1,2-Dichlorobenzene	0.73	U	2.5	ug/L							
1,2-Dichloroethane	0.63	U	2.5	ug/L							
1,2-Dichloropropane	0.80	U	2.5	ug/L							
1,3-Dichlorobenzene	0.77	U	2.5	ug/L							
1,4-Dichlorobenzene	0.76	U	2.5	ug/L							
2-Butanone	4.5	U	12	ug/L							
2-Hexanone	2.5	U	12	ug/L							
4-Methyl-2-pentanone	2.5	U	12	ug/L							
Acetone	10	U	25	ug/L							
Benzene	0.71	U	2.5	ug/L							
Bromodichloromethane	0.52	U	2.5	ug/L							
Bromoform	0.75	U	2.5	ug/L							
Bromomethane	0.95	U	2.5	ug/L							
Carbon disulfide	2.5	U	12	ug/L							

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2A24004 - EPA 5030B_MS - Continued

Blank (2A24004-BLK1) Continued Prepared: 01/24/2022 00:00 Analyzed: 01/24/2022 09:38

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Carbon Tetrachloride	0.94	U	2.5	ug/L							
Chlorobenzene	0.72	U	2.5	ug/L							
Chloroethane	0.98	U	2.5	ug/L							
Chloroform	0.80	U	2.5	ug/L							
Chloromethane	0.82	U	2.5	ug/L							
cis-1,2-Dichloroethene	0.53	U	2.5	ug/L							
cis-1,3-Dichloropropene	0.59	U	2.5	ug/L							
Cyclohexane	0.93	U	2.5	ug/L							
Dibromochloromethane	0.50	U	2.5	ug/L							
Dichlorodifluoromethane	0.74	U	2.5	ug/L							
Ethylbenzene	0.69	U	2.5	ug/L							
Freon 113	0.73	U	2.5	ug/L							
Isopropylbenzene	0.67	U	2.5	ug/L							
Methyl acetate	0.95	U	2.5	ug/L							
Methylene Chloride	2.5	U	12	ug/L							
Methyl-tert-Butyl Ether	0.60	U	2.5	ug/L							
Styrene	0.61	U	2.5	ug/L							
Tetrachloroethene	0.76	U	2.5	ug/L							
Toluene	0.72	U	2.5	ug/L							
trans-1,2-Dichloroethene	0.73	U	2.5	ug/L							
trans-1,3-Dichloropropene	0.73	U	2.5	ug/L							
Trichloroethene	0.89	U	2.5	ug/L							
Trichlorofluoromethane	0.94	U	2.5	ug/L							
Vinyl chloride	0.71	U	2.5	ug/L							
Xylenes (Total)	1.3	U	5.0	ug/L							
4-Bromofluorobenzene	*55*			*ug/L*	*50.0*		*111*	*41-142*			
Dibromofluoromethane	*52*			*ug/L*	*50.0*		*103*	*53-146*			
Toluene-d8	*52*			*ug/L*	*50.0*		*105*	*41-146*			

LCS (2A24004-BS1) Prepared: 01/24/2022 00:00 Analyzed: 01/24/2022 08:43

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	24		2.5	ug/L	20.0		119	57-148			
1,1,2,2-Tetrachloroethane	20		2.5	ug/L	20.0		102	60-139			
1,1,2-Trichloroethane	22		2.5	ug/L	20.0		109	57-141			
1,1-Dichloroethane	21		2.5	ug/L	20.0		107	57-142			
1,1-Dichloroethene	22		2.5	ug/L	20.0		112	47-139			
1,2,4-Trichlorobenzene	22		2.5	ug/L	20.0		111	52-159			
1,2-Dibromo-3-chloropropane	23		2.5	ug/L	20.0		116	48-150			
1,2-Dibromoethane	20		2.5	ug/L	20.0		102	57-140			
1,2-Dichlorobenzene	22		2.5	ug/L	20.0		110	63-131			
1,2-Dichloroethane	19		2.5	ug/L	20.0		96	50-156			
1,2-Dichloropropane	20		2.5	ug/L	20.0		102	61-133			
1,3-Dichlorobenzene	23		2.5	ug/L	20.0		115	66-129			
1,4-Dichlorobenzene	21		2.5	ug/L	20.0		104	65-133			
2-Butanone	100		12	ug/L	100		102	10-180			
2-Hexanone	88		12	ug/L	100		88	12-180			
4-Methyl-2-pentanone	100		12	ug/L	100		104	19-180			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2A24004 - EPA 5030B_MS - Continued

LCS (2A24004-BS1) Continued Prepared: 01/24/2022 00:00 Analyzed: 01/24/2022 08:43

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Acetone	91		25	ug/L	100		91	10-180			
Benzene	22		2.5	ug/L	20.0		110	56-136			
Bromodichloromethane	20		2.5	ug/L	20.0		99	58-135			
Bromoform	28		2.5	ug/L	20.0		141	46-148			
Bromomethane	13		2.5	ug/L	20.0		65	10-173			
Carbon disulfide	25		12	ug/L	20.0		126	43-153			
Carbon Tetrachloride	27		2.5	ug/L	20.0		135	54-156			
Chlorobenzene	22		2.5	ug/L	20.0		112	51-139			
Chloroethane	21		2.5	ug/L	20.0		107	27-180			
Chloroform	21		2.5	ug/L	20.0		105	58-139			
Chloromethane	17		2.5	ug/L	20.0		85	33-154			
cis-1,2-Dichloroethene	22		2.5	ug/L	20.0		109	56-128			
cis-1,3-Dichloropropene	19		2.5	ug/L	20.0		94	64-128			
Cyclohexane	22		2.5	ug/L	20.0		111	70-130			
Dibromochloromethane	20		2.5	ug/L	20.0		100	50-140			
Dichlorodifluoromethane	17		2.5	ug/L	20.0		83	10-180			
Ethylbenzene	22		2.5	ug/L	20.0		111	63-133			
Freon 113	23		2.5	ug/L	20.0		113	47-173			
Isopropylbenzene	23		2.5	ug/L	20.0		114	60-132			
m,p-Xylenes	45		5.0	ug/L	40.0		112	64-133			
Methyl acetate	19		2.5	ug/L	20.0		94	70-130			
Methylene Chloride	22		12	ug/L	20.0		109	43-142			
Methyl-tert-Butyl Ether	23		2.5	ug/L	20.0		116	51-145			
o-Xylene	23		2.5	ug/L	20.0		114	61-129			
Styrene	20		2.5	ug/L	20.0		99	59-136			
Tetrachloroethene	22		2.5	ug/L	20.0		108	60-147			
Toluene	21		2.5	ug/L	20.0		106	64-131			
trans-1,2-Dichloroethene	23		2.5	ug/L	20.0		115	54-134			
trans-1,3-Dichloropropene	21		2.5	ug/L	20.0		105	65-149			
Trichloroethene	21		2.5	ug/L	20.0		107	62-135			
Trichlorofluoromethane	20		2.5	ug/L	20.0		101	56-155			
Vinyl chloride	19		2.5	ug/L	20.0		95	20-167			
4-Bromofluorobenzene	*55*			*ug/L*	*50.0*		*111*	*41-142*			
Dibromofluoromethane	*53*			*ug/L*	*50.0*		*106*	*53-146*			
Toluene-d8	*53*			*ug/L*	*50.0*		*106*	*41-146*			

Matrix Spike (2A24004-MS1) Prepared: 01/24/2022 00:00 Analyzed: 01/24/2022 19:13

Source: AE09618-06

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	27		2.5	ug/L	20.0	0.80 U	133	57-148			
1,1,2,2-Tetrachloroethane	20		2.5	ug/L	20.0	0.54 U	98	60-139			
1,1,2-Trichloroethane	21		2.5	ug/L	20.0	0.76 U	104	57-141			
1,1-Dichloroethane	23		2.5	ug/L	20.0	0.62 U	113	57-142			
1,1-Dichloroethene	22		2.5	ug/L	20.0	0.94 U	108	47-139			
1,2,4-Trichlorobenzene	21		2.5	ug/L	20.0	0.70 U	103	52-159			
1,2-Dibromo-3-chloropropane	18		2.5	ug/L	20.0	0.96 U	89	48-150			
1,2-Dibromoethane	20		2.5	ug/L	20.0	0.78 U	100	57-140			
1,2-Dichlorobenzene	21		2.5	ug/L	20.0	0.73 U	105	63-131			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2A24004 - EPA 5030B_MS - Continued

Matrix Spike (2A24004-MS1) Continued Prepared: 01/24/2022 00:00 Analyzed: 01/24/2022 19:13

Source: AE09618-06

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,2-Dichloroethane	21		2.5	ug/L	20.0	0.63 U	103	50-156			
1,2-Dichloropropane	19		2.5	ug/L	20.0	0.80 U	97	61-133			
1,3-Dichlorobenzene	21		2.5	ug/L	20.0	0.77 U	107	66-129			
1,4-Dichlorobenzene	19		2.5	ug/L	20.0	0.76 U	97	65-133			
2-Butanone	98		12	ug/L	100	4.5 U	98	10-180			
2-Hexanone	73		12	ug/L	100	2.5 U	73	12-180			
4-Methyl-2-pentanone	91		12	ug/L	100	2.5 U	91	19-180			
Acetone	85		25	ug/L	100	10 U	85	10-180			
Benzene	22		2.5	ug/L	20.0	0.71 U	110	56-136			
Bromodichloromethane	20		2.5	ug/L	20.0	0.52 U	100	58-135			
Bromoform	27		2.5	ug/L	20.0	0.75 U	134	46-148			
Bromomethane	23		2.5	ug/L	20.0	0.95 U	116	10-173			
Carbon disulfide	26		12	ug/L	20.0	2.5 U	129	43-153			
Carbon Tetrachloride	34		2.5	ug/L	20.0	0.94 U	168	54-156			QM-07
Chlorobenzene	22		2.5	ug/L	20.0	0.72 U	112	51-139			
Chloroethane	24		2.5	ug/L	20.0	0.98 U	122	27-180			
Chloroform	23		2.5	ug/L	20.0	0.80 U	113	58-139			
Chloromethane	17		2.5	ug/L	20.0	0.82 U	84	33-154			
cis-1,2-Dichloroethene	22		2.5	ug/L	20.0	0.53 U	110	56-128			
cis-1,3-Dichloropropene	17		2.5	ug/L	20.0	0.59 U	86	64-128			
Cyclohexane	22		2.5	ug/L	20.0	0.93 U	112	70-130			
Dibromochloromethane	20		2.5	ug/L	20.0	0.50 U	102	50-140			
Dichlorodifluoromethane	19		2.5	ug/L	20.0	0.74 U	97	10-180			
Ethylbenzene	23		2.5	ug/L	20.0	0.69 U	113	63-133			
Freon 113	26		2.5	ug/L	20.0	0.73 U	130	47-173			
Isopropylbenzene	24		2.5	ug/L	20.0	0.67 U	118	60-132			
m,p-Xylenes	46		5.0	ug/L	40.0	1.3 U	116	64-133			
Methyl acetate	17		2.5	ug/L	20.0	0.95 U	85	70-130			
Methylene Chloride	22		12	ug/L	20.0	2.5 U	108	43-142			
Methyl-tert-Butyl Ether	22		2.5	ug/L	20.0	0.60 U	112	51-145			
o-Xylene	22		2.5	ug/L	20.0	0.53 U	112	61-129			
Styrene	20		2.5	ug/L	20.0	0.61 U	101	59-136			
Tetrachloroethene	22		2.5	ug/L	20.0	0.76 U	108	60-147			
Toluene	21		2.5	ug/L	20.0	0.72 U	106	64-131			
trans-1,2-Dichloroethene	25		2.5	ug/L	20.0	0.73 U	126	54-134			
trans-1,3-Dichloropropene	20		2.5	ug/L	20.0	0.73 U	99	65-149			
Trichloroethene	21		2.5	ug/L	20.0	0.89 U	106	62-135			
Trichlorofluoromethane	23		2.5	ug/L	20.0	0.94 U	115	56-155			
Vinyl chloride	20		2.5	ug/L	20.0	0.71 U	101	20-167			
4-Bromofluorobenzene	*57*			*ug/L*	*50.0*		*115*	*41-142*			
Dibromofluoromethane	*56*			*ug/L*	*50.0*		*112*	*53-146*			
Toluene-d8	*53*			*ug/L*	*50.0*		*106*	*41-146*			

Matrix Spike Dup (2A24004-MSD1) Prepared: 01/24/2022 00:00 Analyzed: 01/24/2022 19:40

Source: AE09618-06

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	25		2.5	ug/L	20.0	0.80 U	126	57-148	5	25	
1,1,2,2-Tetrachloroethane	20		2.5	ug/L	20.0	0.54 U	98	60-139	0.2	17	

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2A24004 - EPA 5030B_MS - Continued

Matrix Spike Dup (2A24004-MSD1) Continued Prepared: 01/24/2022 00:00 Analyzed: 01/24/2022 19:40

Source: AE09618-06

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,2-Trichloroethane	21		2.5	ug/L	20.0	0.76 U	106	57-141	2	16	
1,1-Dichloroethane	21		2.5	ug/L	20.0	0.62 U	107	57-142	6	24	
1,1-Dichloroethene	22		2.5	ug/L	20.0	0.94 U	108	47-139	0.4	16	
1,2,4-Trichlorobenzene	21		2.5	ug/L	20.0	0.70 U	104	52-159	1	24	
1,2-Dibromo-3-chloropropane	20		2.5	ug/L	20.0	0.96 U	101	48-150	12	21	
1,2-Dibromoethane	20		2.5	ug/L	20.0	0.78 U	101	57-140	0.9	16	
1,2-Dichlorobenzene	21		2.5	ug/L	20.0	0.73 U	105	63-131	0.2	25	
1,2-Dichloroethane	21		2.5	ug/L	20.0	0.63 U	103	50-156	0.05	18	
1,2-Dichloropropane	19		2.5	ug/L	20.0	0.80 U	97	61-133	0.3	26	
1,3-Dichlorobenzene	22		2.5	ug/L	20.0	0.77 U	109	66-129	2	23	
1,4-Dichlorobenzene	20		2.5	ug/L	20.0	0.76 U	100	65-133	2	23	
2-Butanone	98		12	ug/L	100	4.5 U	98	10-180	0.8	29	
2-Hexanone	75		12	ug/L	100	2.5 U	75	12-180	2	28	
4-Methyl-2-pentanone	96		12	ug/L	100	2.5 U	96	19-180	5	24	
Acetone	85		25	ug/L	100	10 U	85	10-180	0.3	19	
Benzene	21		2.5	ug/L	20.0	0.71 U	107	56-136	3	14	
Bromodichloromethane	20		2.5	ug/L	20.0	0.52 U	98	58-135	2	19	
Bromoform	26		2.5	ug/L	20.0	0.75 U	132	46-148	1	18	
Bromomethane	21		2.5	ug/L	20.0	0.95 U	105	10-173	9	29	
Carbon disulfide	23		12	ug/L	20.0	2.5 U	117	43-153	10	26	
Carbon Tetrachloride	33		2.5	ug/L	20.0	0.94 U	165	54-156	1	27	QM-07
Chlorobenzene	22		2.5	ug/L	20.0	0.72 U	111	51-139	1	13	
Chloroethane	24		2.5	ug/L	20.0	0.98 U	121	27-180	0.7	22	
Chloroform	22		2.5	ug/L	20.0	0.80 U	112	58-139	1	17	
Chloromethane	17		2.5	ug/L	20.0	0.82 U	84	33-154	0.06	31	
cis-1,2-Dichloroethene	23		2.5	ug/L	20.0	0.53 U	114	56-128	3	17	
cis-1,3-Dichloropropene	17		2.5	ug/L	20.0	0.59 U	87	64-128	2	20	
Cyclohexane	22		2.5	ug/L	20.0	0.93 U	111	70-130	1	20	
Dibromochloromethane	20		2.5	ug/L	20.0	0.50 U	102	50-140	0.4	18	
Dichlorodifluoromethane	18		2.5	ug/L	20.0	0.74 U	92	10-180	5	26	
Ethylbenzene	22		2.5	ug/L	20.0	0.69 U	109	63-133	3	18	
Freon 113	24		2.5	ug/L	20.0	0.73 U	119	47-173	9	30	
Isopropylbenzene	23		2.5	ug/L	20.0	0.67 U	113	60-132	4	23	
m,p-Xylenes	45		5.0	ug/L	40.0	1.3 U	112	64-133	3	18	
Methyl acetate	18		2.5	ug/L	20.0	0.95 U	88	70-130	4	20	
Methylene Chloride	22		12	ug/L	20.0	2.5 U	111	43-142	2	23	
Methyl-tert-Butyl Ether	23		2.5	ug/L	20.0	0.60 U	114	51-145	2	22	
o-Xylene	22		2.5	ug/L	20.0	0.53 U	109	61-129	3	16	
Styrene	20		2.5	ug/L	20.0	0.61 U	100	59-136	0.8	32	
Tetrachloroethene	20		2.5	ug/L	20.0	0.76 U	100	60-147	7	21	
Toluene	21		2.5	ug/L	20.0	0.72 U	107	64-131	0.8	16	
trans-1,2-Dichloroethene	24		2.5	ug/L	20.0	0.73 U	119	54-134	6	20	
trans-1,3-Dichloropropene	20		2.5	ug/L	20.0	0.73 U	98	65-149	0.3	17	
Trichloroethene	22		2.5	ug/L	20.0	0.89 U	108	62-135	2	20	
Trichlorofluoromethane	22		2.5	ug/L	20.0	0.94 U	109	56-155	5	22	
Vinyl chloride	20		2.5	ug/L	20.0	0.71 U	99	20-167	2	24	
4-Bromofluorobenzene	*55*			*ug/L*	*50.0*		*111*	*41-142*			
Dibromofluoromethane	*54*			*ug/L*	*50.0*		*109*	*53-146*			
Toluene-d8	*53*			*ug/L*	*50.0*		*106*	*41-146*			

FLAGS/NOTES AND DEFINITIONS

PQL	PQL: Practical Quantitation Limit. The PQL presented is the laboratory MRL.
B	Results are based upon membrane filter colony counts that are outside the method indicated ideal range.
I	The reported value is between the laboratory method detection limit (MDL) and the practical quantitation limit (PQL).
J	Estimated value.
K	Off-scale low; Actual value is known to be less than the value given.
L	Off-scale high; Actual value is known to be greater than value given.
M	Presence of analyte is verified but not quantified; the actual value is less than the MRL but greater than the MDL.
N	Presumptive evidence of presence of material.
O	Sampled, but analysis lost or not performed.
Q	Sample exceeded the accepted holding time.
T	Value reported is less than the laboratory method detection limit. The value is reported for informational purposes only and shall not be used in statistical analysis.
U	Indicates that the compound was analyzed for but not detected.
V	Indicates that the analyte was detected in both the sample and the associated method blank.
Y	The laboratory analysis was from an improperly preserved sample. The data may not be accurate.
Z	Too many colonies were present (TNTC); the numeric value represents the filtration volume.
?	Data are rejected and should not be used. Some or all of the quality control data for the analyte were outside criteria, and the presence or absence of the analyte cannot be determined from the data.
*	Not reported due to interference.
[CALC]	Calculated analyte - MDL/MRL reported to the highest reporting limit of the component analyses.
QL-02	The associated laboratory control sample exhibited high bias; since the result is ND, there is no impact.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
QV-01	The associated continuing calibration verification standard exhibited high bias; since the result is ND, there is no impact.

AE18881

Tetra Tech, Inc. CHAIN OF CUSTODY | NUMBER No. 3167 | PAGE 1 OF 6

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G08985	LC34	MATT JENNET	412-921-8622	ENCO
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER: DAN FORESTER	PHONE NUMBER: 304-780-1426	ADDRESS
		CARRIER/WAYBILL NUMBER		CITY, STATE: ORLANDO, FL

STANDARD TAT ☑
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR 2022	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS: 8260	CONTAINER TYPE PLASTIC (P) or GLASS (G): G	PRESERVATIVE USED: HCL	COMMENTS: Cooled on Ice
17 JAN	0700	LC34-GAC-20220117	LC34	—	—	GW	G	3	X			
	0710	LC34-AS1-20220117										
	0720	LC34-AS2-20220117										
	0730	LC34-RW17C-20220117										
	0740	LC34-RW18C-20220117										
	0750	LC34-RW19C-20220117										
	0800	LC34-RW20C-20220117										

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	11/17/22	1530	1. RECEIVED BY	11/17/22	1530
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS: LC-Red 0.0°C LC623 4.3°C

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

AE10221

Tetra Tech, Inc. CHAIN OF CUSTODY NUMBER No. 3168 PAGE 2 OF 6

PROJECT NO: 112G03485	FACILITY: LC34 PS	PROJECT MANAGER MARK JENNET	PHONE NUMBER 412-921-8622	LABORATORY NAME AND CONTACT: ENCO
SAMPLERS (SIGNATURE) DAN FORESTER, JAMES WOYD		FIELD OPERATIONS LEADER DAN FORESTER	PHONE NUMBER 304-780-1426	ADDRESS
		CARRIER/WAYBILL NUMBER		CITY, STATE ORLANDO, F

STANDARD TAT ☑ RUSH TAT ☐ ☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR 2022	TIME	SAMPLE ID	LOCATION ID LC34PS	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	CONTAINER TYPE PLASTIC (P) or GLASS (G): G	PRESERVATIVE USED: HCL	TYPE OF ANALYSIS: 8260	COMMENTS: Cooled on Ice
17 JAN	0800	LC34PS-PZI-040.0-20220117		30	40	GW	G	3	P		X	
	0802	LC34PS-PZI-050.0-20220117		45	50							
	0804	LC34PS-PZI-058.0-20220117		53	58							
	0806	LC34PS-PZI-073.0-20220117		68	73							
	0808	LC34PS-PZI-080.0-20220117		75	80							
	0830	LC34PS-PZH-040.0-20220117		30	40							
	0832	LC34PS-PZH-050.0-20220117		45	50							
	0834	LC34PS-PZH-058.0-20220117		53	58							
	0836	LC34PS-PZH-073.0-20220117		68	73							
	0838	LC34PS-PZH-080.0-20220117		75	80							
	0900	LC34PS-PZK-040.0-20220117		30	40							
	0902	LC34PS-PZK-050.0-20220117		45	50							
	0904	LC34PS-PZK-058.0-20220117		53	58							

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	1/17/22	1530	1. RECEIVED BY	1/17/22	1530
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

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FORM NO. TtNUS-001

AE10221

Tetra Tech, Inc. CHAIN OF CUSTODY | NUMBER No. 3169 | PAGE 3 OF 6

PROJECT NO: 117G08985	FACILITY: LC34PS	PROJECT MANAGER Mark Jonet	PHONE NUMBER 412-921-8622	LABORATORY NAME AND CONTACT: ENCO
SAMPLERS (SIGNATURE) Dan Forester, James Lloyd		FIELD OPERATIONS LEADER Dan Forester	PHONE NUMBER 304-780-1426	ADDRESS
		CARRIER/WAYBILL NUMBER		CITY, STATE Orlando, FL

STANDARD TAT ☑
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR 2022	TIME	SAMPLE ID	LOCATION ID LC34PS	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	CONTAINER TYPE PLASTIC (P) or GLASS (G): G	PRESERVATIVE USED: HCL	TYPE OF ANALYSIS: 8260	COMMENTS: Cooled on Ice
17 Jan	0906	LC34PS-PZK-073.0-20220117		68	73	GW	G	3	X			
	0908	LC34PS-PZK-080.0-20220117		75	80							
	0930	LC34PS-PZJ-040.0-20220117		30	40							
	0932	LC34PS-PZJ-050.0-20220117		45	50							
	0934	LC34PS-PZJ-058.0-20220117		53	58							
	0936	LC34PS-PZJ-073.0-20220117		68	73							
	0938	LC34PS-PZJ-080.0-20220117		75	80							
	1000	LC34PS-PZG-040.0-20220117		30	40							
	1002	LC34PS-PZG-050.0-20220117		45	50							
	1004	LC34PS-PZG-058.0-20220117		53	58							
	1006	LC34PS-PZG-073.0-20220117		68	73							
	1008	LC34PS-PZG-080.0-20220117		75	80							
	1030	LC34PS-PZF-040.0-20220117		30	40							

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	1/17/22	1530	1. RECEIVED BY	1/17/22	1530
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

AE10221

Tetra Tech, Inc. CHAIN OF CUSTODY | NUMBER No. 3170 | PAGE 4 OF 6

PROJECT NO: 112G08985	FACILITY: LC34PS	PROJECT MANAGER Mark Jornet	PHONE NUMBER 412-921-8622	LABORATORY NAME AND CONTACT: ENCO
SAMPLERS (SIGNATURE) Dan Forester, James Lloyd		FIELD OPERATIONS LEADER Dan Forester	PHONE NUMBER 304-780-1426	ADDRESS
		CARRIER/WAYBILL NUMBER		CITY, STATE Orlando, FL

STANDARD TAT ☑ RUSH TAT ☐ ☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G
PRESERVATIVE USED: HCl
TYPE OF ANALYSIS: 8260

DATE YEAR 2022	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	8260	COMMENTS: Cooled on Ice
17 Jan	1032	LC34PS-PZF-050.0-20220117	LC34PS	45	50	GW	G	3	X	
	1034	LC34PS-PZF-058.0-20220117		53	58					
	1036	LC34PS-PZF-073.0-20220117		68	73					
	1038	LC34PS-PZF-080.0-20220117		75	80					
	1100	LC34PS-PZA-040.0-20220117		30	40					
	1102	LC34PS-PZA-050.0-20220117		45	50					
	1104	LC34PS-PZA-058.0-20220117		53	58					
	1106	LC34PS-PZA-073.0-20220117		68	73					
	1108	LC34PS-PZA-080.0-20220117		75	80					
	1130	LC34PS-PZB-040.0-20220117		30	40					
	1132	LC34PS-PZB-050.0-20220117		45	50					
	1134	LC34PS-PZB-058.0-20220117		53	58					
	1136	LC34PS-PZB-073.0-20220117		68	73					

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	1/17/22	1530	1. RECEIVED BY	1/17/22	1530
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

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Tetra Tech, Inc. CHAIN OF CUSTODY | NUMBER No. 3171 | PAGE 5 OF 6

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112608985	LC34 PS	Mark Jonnet	412-921-8622	ENCO
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER	PHONE NUMBER	ADDRESS
Dan Forester James Lloyd		Dan Forester	304-780-1426	
		CARRIER/WAYBILL NUMBER		CITY, STATE: Orlando, FL

STANDARD TAT ☑
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR 2022	TIME	SAMPLE ID	LOCATION ID LC34PS	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	CONTAINER TYPE PLASTIC (P) or GLASS (G): G	PRESERVATIVE USED: HCL	TYPE OF ANALYSIS: 8260	COMMENTS: Cooled on Ice
17 Jan	1138	LC34PS-PZB-080.0-20220117		75	80	GW	G	3	X			
	1200	LC34PS-PZE-040.0-20220117		30	40							
	1202	LC34PS-PZC-050.0-20220117		45	50							
	1204	LC34PS-PZC-058.0-20220117		53	58							
	1206	LC34PS-PZC-073.0-20220117		68	73							
	1208	LC34PS-PZC-080.0-20220117		75	80							
	1230	LC34PS-PZD-040.0-20220117		30	40							
	1232	LC34PS-PZD-050.0-20220117		45	50							
	1234	LC34PS-PZD-058.0-20220117		53	58							
	1236	LC34PS-PZD-073.0-20220117		68	73							
	1238	LC34PS-PZD-080.0-20220117		75	80							
	1300	LC34PS-PZE-040.0-20220117		30	40							
	1302	LC34PS-PZE-050.0-20220117		45	50							

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	1/17/22	1530	1. RECEIVED BY	1/17/22	1530
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

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FORM NO. TtNUS-001

Tetra Tech, Inc.

CHAIN OF CUSTODY NUMBER No. 3172 PAGE 6 OF 6

PE 10221

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G08985		Mark Jonnet	412-921-8622	ENCO
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER	PHONE NUMBER	ADDRESS
Dan Forester		Dan Forester	304-780-1426	
James Hood		CARRIER/WAYBILL NUMBER		CITY, STATE
				Orlando, FL

STANDARD TAT ☑
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR 2022	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	CONTAINER TYPE PLASTIC (P) or GLASS (G)	PRESERVATIVE USED	TYPE OF ANALYSIS: 8260	TYPE OF ANALYSIS: TCL	TYPE OF ANALYSIS: G	COMMENTS
														Cooled on Ice
17 Jan	1304	LC34PS-PZE-058.0-20220117	LC34PS	53	58	GW	G	3			X			
	1306	LC34PS-PZE-073.0-20220117		68	73									
	1308	LC34PS-PZE-080.0-20220117		75	80									

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	1/17/22	1530	1. RECEIVED BY	1/17/22	1530
2. RELINQUISHED BY			2. RECEIVED BY		
3. RELINQUISHED BY			3. RECEIVED BY		

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Orlando FL, 32824
Phone: 407.826.5314 FAX: 407.850.6945

Monday, February 21, 2022
Tetra Tech NUS, Inc. (TE015)
Attn: Mark Jonnet
Foster Plaza 7, 661 Anderson Drive
Pittsburgh, PA 15220

RE: Laboratory Results for
Project Number: 112G08985, Project Name/Desc: NASA KSC LC34
ENCO Workorder(s): AF00827

Dear Mark Jonnet,

Enclosed is a copy of your laboratory report for test samples received by our laboratory on Monday, February 14, 2022.

Unless otherwise noted in an attached project narrative, all samples were received in acceptable condition and processed in accordance with the referenced methods/procedures. Results for these procedures apply only to the samples as submitted.

The analytical results contained in this report are in compliance with NELAC standards, except as noted in the project narrative if applicable. This report shall not be reproduced except in full, without the written approval of the Laboratory.

This report contains only those analyses performed by Environmental Conservation Laboratories. Unless otherwise noted, all analyses were performed at ENCO Orlando. Data from outside organizations will be reported under separate cover.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

Kaitlin Dylnicki

Project Manager

Enclosure(s)

SAMPLE SUMMARY/LABORATORY CHRONICLE

Client ID: LC34-GAC-20220214 | **Lab ID: AF00827-01** | **Sampled: 02/14/22 07:00** | **Received: 02/14/22 15:40**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	02/28/22	02/16/22 00:00	02/16/22 11:33

Client ID: LC34-AS1-20220214 | **Lab ID: AF00827-02** | **Sampled: 02/14/22 07:10** | **Received: 02/14/22 15:40**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	02/28/22	02/16/22 09:00	02/16/22 10:49

Client ID: LC34-AS2-20220214 | **Lab ID: AF00827-03RE1** | **Sampled: 02/14/22 07:15** | **Received: 02/14/22 15:40**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	02/28/22	02/17/22 09:14	02/17/22 13:12

Client ID: LC34-RW17C-20220214 | **Lab ID: AF00827-04** | **Sampled: 02/14/22 07:20** | **Received: 02/14/22 15:40**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	02/28/22	02/16/22 09:00	02/16/22 11:45

Client ID: LC34-RW18C-20220214 | **Lab ID: AF00827-05** | **Sampled: 02/14/22 07:30** | **Received: 02/14/22 15:40**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	02/28/22	02/16/22 09:00	02/16/22 12:12

Client ID: LC34-RW19C-20220214 | **Lab ID: AF00827-06** | **Sampled: 02/14/22 07:40** | **Received: 02/14/22 15:40**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	02/28/22	02/16/22 09:00	02/16/22 12:40

Client ID: LC34-RW20C-20220214 | **Lab ID: AF00827-07** | **Sampled: 02/14/22 07:50** | **Received: 02/14/22 15:40**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	02/28/22	02/16/22 09:00	02/16/22 13:08

Client ID: LC34PS-PZI-040.0-20220214 | **Lab ID: AF00827-08** | **Sampled: 02/14/22 08:00** | **Received: 02/14/22 15:40**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	02/28/22	02/16/22 09:00	02/16/22 13:35

Client ID: LC34PS-PZI-050.0-20220214 | **Lab ID: AF00827-09** | **Sampled: 02/14/22 08:02** | **Received: 02/14/22 15:40**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	02/28/22	02/16/22 09:00	02/16/22 14:03

Client ID: LC34PS-PZI-058.0-20220214 | **Lab ID: AF00827-10RE1** | **Sampled: 02/14/22 08:04** | **Received: 02/14/22 15:40**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	02/28/22	02/17/22 09:14	02/17/22 13:40

Client ID: LC34PS-PZI-073.0-20220214 | **Lab ID: AF00827-11** | **Sampled: 02/14/22 08:06** | **Received: 02/14/22 15:40**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	02/28/22	02/16/22 09:00	02/16/22 14:59

Client ID: LC34PS-PZI-080.0-20220214 | **Lab ID: AF00827-12** | **Sampled: 02/14/22 08:08** | **Received: 02/14/22 15:40**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	02/28/22	02/16/22 09:00	02/16/22 15:26

Client ID: LC34PS-PZH-040.0-20220214 | **Lab ID: AF00827-13RE1** | **Sampled: 02/14/22 08:30** | **Received: 02/14/22 15:40**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	02/28/22	02/17/22 09:14	02/17/22 14:08

Client ID: LC34PS-PZH-050.0-20220214 | **Lab ID: AF00827-14** | **Sampled: 02/14/22 08:32** | **Received: 02/14/22 15:40**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	02/28/22	02/16/22 09:00	02/16/22 16:22

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SAMPLE SUMMARY/LABORATORY CHRONICLE

Client ID: LC34PS-PZH-058.0-20220214 **Lab ID: AF00827-15RE1** **Sampled: 02/14/22 08:34** **Received: 02/14/22 15:40**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	02/28/22	02/17/22 09:14	02/17/22 14:35

Client ID: LC34PS-PZH-073.0-20220214 **Lab ID: AF00827-16** **Sampled: 02/14/22 08:36** **Received: 02/14/22 15:40**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	02/28/22	02/16/22 09:00	02/16/22 17:18

Client ID: LC34PS-PZH-080.0-20220214 **Lab ID: AF00827-17** **Sampled: 02/14/22 08:38** **Received: 02/14/22 15:40**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	02/28/22	02/16/22 09:00	02/16/22 17:45

Client ID: LC34PS-PZK-040.0-20220214 **Lab ID: AF00827-18RE1** **Sampled: 02/14/22 09:00** **Received: 02/14/22 15:40**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	02/28/22	02/17/22 09:14	02/17/22 15:03

Client ID: LC34PS-PZK-050.0-20220214 **Lab ID: AF00827-19** **Sampled: 02/14/22 09:02** **Received: 02/14/22 15:40**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	02/28/22	02/16/22 09:00	02/16/22 18:41

Client ID: LC34PS-PZK-058.0-20220214 **Lab ID: AF00827-20** **Sampled: 02/14/22 09:04** **Received: 02/14/22 15:40**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	02/28/22	02/16/22 00:00	02/16/22 12:01

Client ID: LC34PS-PZK-073.0-20220214 **Lab ID: AF00827-21RE1** **Sampled: 02/14/22 09:06** **Received: 02/14/22 15:40**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	02/28/22	02/17/22 09:14	02/17/22 15:31

Client ID: LC34PS-PZK-080.0-20220214 **Lab ID: AF00827-22RE1** **Sampled: 02/14/22 09:08** **Received: 02/14/22 15:40**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	02/28/22	02/17/22 09:14	02/17/22 15:58

Client ID: LC34PS-PZJ-040.0-20220214 **Lab ID: AF00827-23RE1** **Sampled: 02/14/22 09:30** **Received: 02/14/22 15:40**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	02/28/22	02/17/22 09:14	02/17/22 16:26

Client ID: LC34PS-PZJ-050.0-20220214 **Lab ID: AF00827-24** **Sampled: 02/14/22 09:32** **Received: 02/14/22 15:40**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	02/28/22	02/16/22 00:00	02/16/22 13:57

Client ID: LC34PS-PZJ-050.0-20220214 **Lab ID: AF00827-24RE2** **Sampled: 02/14/22 09:32** **Received: 02/14/22 15:40**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	02/28/22	02/18/22 08:59	02/18/22 13:33

Client ID: LC34PS-PZJ-058.0-20220214 **Lab ID: AF00827-25RE1** **Sampled: 02/14/22 09:34** **Received: 02/14/22 15:40**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	02/28/22	02/17/22 00:00	02/17/22 13:14

Client ID: LC34PS-PZJ-073.0-20220214 **Lab ID: AF00827-26** **Sampled: 02/14/22 09:36** **Received: 02/14/22 15:40**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	02/28/22	02/16/22 00:00	02/16/22 14:54

Client ID: LC34PS-PZJ-080.0-20220214 **Lab ID: AF00827-27** **Sampled: 02/14/22 09:38** **Received: 02/14/22 15:40**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	02/28/22	02/16/22 00:00	02/16/22 15:23

SAMPLE SUMMARY/LABORATORY CHRONICLE

Client ID: LC34PS-PZG-040.0-20220214 **Lab ID: AF00827-28RE1** **Sampled: 02/14/22 10:00** **Received: 02/14/22 15:40**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	02/28/22	02/17/22 00:00	02/17/22 13:43

Client ID: LC34PS-PZG-050.0-20220214 **Lab ID: AF00827-29** **Sampled: 02/14/22 10:02** **Received: 02/14/22 15:40**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	02/28/22	02/16/22 00:00	02/16/22 16:21

Client ID: LC34PS-PZG-058.0-20220214 **Lab ID: AF00827-30** **Sampled: 02/14/22 10:04** **Received: 02/14/22 15:40**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	02/28/22	02/16/22 00:00	02/16/22 16:50

Client ID: LC34PS-PZG-058.0-20220214 **Lab ID: AF00827-30RE1** **Sampled: 02/14/22 10:04** **Received: 02/14/22 15:40**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	02/28/22	02/17/22 00:00	02/17/22 14:12

Client ID: LC34PS-PZG-073.0-20220214 **Lab ID: AF00827-31** **Sampled: 02/14/22 10:06** **Received: 02/14/22 15:40**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	02/28/22	02/16/22 00:00	02/16/22 17:19

Client ID: LC34PS-PZG-073.0-20220214 **Lab ID: AF00827-31RE1** **Sampled: 02/14/22 10:06** **Received: 02/14/22 15:40**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	02/28/22	02/17/22 00:00	02/17/22 14:41

Client ID: LC34PS-PZG-080.0-20220214 **Lab ID: AF00827-32** **Sampled: 02/14/22 10:08** **Received: 02/14/22 15:40**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	02/28/22	02/16/22 00:00	02/16/22 17:47

Client ID: LC34PS-PZF-040.0-20220214 **Lab ID: AF00827-33RE2** **Sampled: 02/14/22 10:30** **Received: 02/14/22 15:40**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	02/28/22	02/18/22 08:59	02/18/22 14:28

Client ID: LC34PS-PZF-050.0-20220214 **Lab ID: AF00827-34** **Sampled: 02/14/22 10:32** **Received: 02/14/22 15:40**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	02/28/22	02/16/22 00:00	02/16/22 18:45

Client ID: LC34PS-PZF-058.0-20220214 **Lab ID: AF00827-35** **Sampled: 02/14/22 10:34** **Received: 02/14/22 15:40**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	02/28/22	02/16/22 00:00	02/16/22 19:14

Client ID: LC34PS-PZF-073.0-20220214 **Lab ID: AF00827-36** **Sampled: 02/14/22 10:36** **Received: 02/14/22 15:40**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	02/28/22	02/16/22 00:00	02/16/22 19:43

Client ID: LC34PS-PZF-080.0-20220214 **Lab ID: AF00827-37** **Sampled: 02/14/22 10:38** **Received: 02/14/22 15:40**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	02/28/22	02/16/22 00:00	02/17/22 00:31

Client ID: LC34PS-PZF-080.0-20220214 **Lab ID: AF00827-37RE2** **Sampled: 02/14/22 10:38** **Received: 02/14/22 15:40**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	02/28/22	02/18/22 08:59	02/18/22 14:01

Client ID: LC34PS-PZA-040.0-20220214 **Lab ID: AF00827-38RE2** **Sampled: 02/14/22 11:00** **Received: 02/14/22 15:40**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	02/28/22	02/18/22 08:59	02/18/22 14:56

SAMPLE SUMMARY/LABORATORY CHRONICLE

Client ID: LC34PS-PZA-050.0-20220214 **Lab ID: AF00827-39** **Sampled: 02/14/22 11:02** **Received: 02/14/22 15:40**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	02/28/22	02/16/22 00:00	02/17/22 01:29

Client ID: LC34PS-PZA-058.0-20220214 **Lab ID: AF00827-40RE1** **Sampled: 02/14/22 11:04** **Received: 02/14/22 15:40**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	02/28/22	02/18/22 08:59	02/18/22 15:24

Client ID: LC34PS-PZA-073.0-20220214 **Lab ID: AF00827-41** **Sampled: 02/14/22 11:06** **Received: 02/14/22 15:40**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	02/28/22	02/16/22 00:00	02/17/22 02:26

Client ID: LC34PS-PZA-073.0-20220214 **Lab ID: AF00827-41RE2** **Sampled: 02/14/22 11:06** **Received: 02/14/22 15:40**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	02/28/22	02/18/22 08:59	02/18/22 15:51

Client ID: LC34PS-PZA-080.0-20220214 **Lab ID: AF00827-42** **Sampled: 02/14/22 11:08** **Received: 02/14/22 15:40**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	02/28/22	02/16/22 00:00	02/17/22 02:55

Client ID: LC34PS-PZA-080.0-20220214 **Lab ID: AF00827-42RE1** **Sampled: 02/14/22 11:08** **Received: 02/14/22 15:40**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	02/28/22	02/18/22 08:59	02/18/22 16:19

Client ID: LC34PS-PZB-040.0-20220214 **Lab ID: AF00827-43** **Sampled: 02/14/22 11:30** **Received: 02/14/22 15:40**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	02/28/22	02/16/22 00:00	02/17/22 03:24

Client ID: LC34PS-PZB-050.0-20220214 **Lab ID: AF00827-44** **Sampled: 02/14/22 11:32** **Received: 02/14/22 15:40**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	02/28/22	02/16/22 00:00	02/17/22 03:53

Client ID: LC34PS-PZB-058.0-20220214 **Lab ID: AF00827-45RE1** **Sampled: 02/14/22 11:34** **Received: 02/14/22 15:40**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	02/28/22	02/18/22 08:59	02/18/22 16:47

Client ID: LC34PS-PZB-073.0-20220214 **Lab ID: AF00827-46** **Sampled: 02/14/22 11:36** **Received: 02/14/22 15:40**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	02/28/22	02/16/22 00:00	02/17/22 04:50

Client ID: LC34PS-PZB-073.0-20220214 **Lab ID: AF00827-46RE1** **Sampled: 02/14/22 11:36** **Received: 02/14/22 15:40**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	02/28/22	02/18/22 08:59	02/18/22 17:14

Client ID: LC34PS-PZB-080.0-20220214 **Lab ID: AF00827-47** **Sampled: 02/14/22 11:38** **Received: 02/14/22 15:40**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	02/28/22	02/16/22 00:00	02/17/22 05:19

Client ID: LC34PS-PZC-040.0-20220214 **Lab ID: AF00827-48** **Sampled: 02/14/22 12:00** **Received: 02/14/22 15:40**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	02/28/22	02/16/22 00:00	02/17/22 05:48

Client ID: LC34PS-PZC-050.0-20220214 **Lab ID: AF00827-49** **Sampled: 02/14/22 12:02** **Received: 02/14/22 15:40**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	02/28/22	02/16/22 00:00	02/17/22 06:17

SAMPLE SUMMARY/LABORATORY CHRONICLE

Client ID: LC34PS-PZC-058.0-20220214	Lab ID: AF00827-50	Sampled: 02/14/22 12:04	Received: 02/14/22 15:40
Parameter	**Preparation**	**Hold Date/Time(s)**	**Prep Date/Time(s)**	**Analysis Date/Time(s)**
EPA 8260D	EPA 5030B_MS	02/28/22	02/16/22 00:00	02/17/22 06:45

Client ID: LC34PS-PZC-073.0-20220214	Lab ID: AF00827-51	Sampled: 02/14/22 12:06	Received: 02/14/22 15:40
Parameter	**Preparation**	**Hold Date/Time(s)**	**Prep Date/Time(s)**	**Analysis Date/Time(s)**
EPA 8260D	EPA 5030B_MS	02/28/22	02/16/22 00:00	02/17/22 07:14

Client ID: LC34PS-PZC-073.0-20220214	Lab ID: AF00827-51RE1	Sampled: 02/14/22 12:06	Received: 02/14/22 15:40
Parameter	**Preparation**	**Hold Date/Time(s)**	**Prep Date/Time(s)**	**Analysis Date/Time(s)**
EPA 8260D	EPA 5030B_MS	02/28/22	02/18/22 08:59	02/18/22 17:42

Client ID: LC34PS-PZC-080.0-20220214	Lab ID: AF00827-52	Sampled: 02/14/22 12:08	Received: 02/14/22 15:40
Parameter	**Preparation**	**Hold Date/Time(s)**	**Prep Date/Time(s)**	**Analysis Date/Time(s)**
EPA 8260D	EPA 5030B_MS	02/28/22	02/16/22 00:00	02/17/22 07:43

Client ID: LC34PS-PZD-040.0-20220214	Lab ID: AF00827-53	Sampled: 02/14/22 12:30	Received: 02/14/22 15:40
Parameter	**Preparation**	**Hold Date/Time(s)**	**Prep Date/Time(s)**	**Analysis Date/Time(s)**
EPA 8260D	EPA 5030B_MS	02/28/22	02/16/22 13:20	02/17/22 01:11

Client ID: LC34PS-PZD-050.0-20220214	Lab ID: AF00827-54	Sampled: 02/14/22 12:32	Received: 02/14/22 15:40
Parameter	**Preparation**	**Hold Date/Time(s)**	**Prep Date/Time(s)**	**Analysis Date/Time(s)**
EPA 8260D	EPA 5030B_MS	02/28/22	02/16/22 13:20	02/17/22 01:38

Client ID: LC34PS-PZD-058.0-20220214	Lab ID: AF00827-55	Sampled: 02/14/22 12:34	Received: 02/14/22 15:40
Parameter	**Preparation**	**Hold Date/Time(s)**	**Prep Date/Time(s)**	**Analysis Date/Time(s)**
EPA 8260D	EPA 5030B_MS	02/28/22	02/16/22 13:20	02/17/22 02:06

Client ID: LC34PS-PZD-073.0-20220214	Lab ID: AF00827-56	Sampled: 02/14/22 12:36	Received: 02/14/22 15:40
Parameter	**Preparation**	**Hold Date/Time(s)**	**Prep Date/Time(s)**	**Analysis Date/Time(s)**
EPA 8260D	EPA 5030B_MS	02/28/22	02/16/22 13:20	02/17/22 02:34

Client ID: LC34PS-PZD-073.0-20220214	Lab ID: AF00827-56RE1	Sampled: 02/14/22 12:36	Received: 02/14/22 15:40
Parameter	**Preparation**	**Hold Date/Time(s)**	**Prep Date/Time(s)**	**Analysis Date/Time(s)**
EPA 8260D	EPA 5030B_MS	02/28/22	02/18/22 08:59	02/18/22 18:10

Client ID: LC34PS-PZD-080.0-20220214	Lab ID: AF00827-57	Sampled: 02/14/22 12:38	Received: 02/14/22 15:40
Parameter	**Preparation**	**Hold Date/Time(s)**	**Prep Date/Time(s)**	**Analysis Date/Time(s)**
EPA 8260D	EPA 5030B_MS	02/28/22	02/16/22 13:20	02/17/22 03:02

Client ID: LC34PS-PZE-040.0-20220214	Lab ID: AF00827-58	Sampled: 02/14/22 13:00	Received: 02/14/22 15:40
Parameter	**Preparation**	**Hold Date/Time(s)**	**Prep Date/Time(s)**	**Analysis Date/Time(s)**
EPA 8260D	EPA 5030B_MS	02/28/22	02/16/22 13:20	02/17/22 03:30

Client ID: LC34PS-PZE-050.0-20220214	Lab ID: AF00827-59	Sampled: 02/14/22 13:02	Received: 02/14/22 15:40
Parameter	**Preparation**	**Hold Date/Time(s)**	**Prep Date/Time(s)**	**Analysis Date/Time(s)**
EPA 8260D	EPA 5030B_MS	02/28/22	02/16/22 13:20	02/17/22 03:57

Client ID: LC34PS-PZE-058.0-20220214	Lab ID: AF00827-60	Sampled: 02/14/22 13:04	Received: 02/14/22 15:40
Parameter	**Preparation**	**Hold Date/Time(s)**	**Prep Date/Time(s)**	**Analysis Date/Time(s)**
EPA 8260D	EPA 5030B_MS	02/28/22	02/16/22 13:20	02/17/22 04:25

Client ID: LC34PS-PZE-073.0-20220214	Lab ID: AF00827-61	Sampled: 02/14/22 13:06	Received: 02/14/22 15:40
Parameter	**Preparation**	**Hold Date/Time(s)**	**Prep Date/Time(s)**	**Analysis Date/Time(s)**
EPA 8260D	EPA 5030B_MS	02/28/22	02/16/22 13:20	02/17/22 04:53

SAMPLE SUMMARY/LABORATORY CHRONICLE

Client ID: LC34PS-PZE-080.0-20220214 **Lab ID:** AF00827-62 **Sampled:** 02/14/22 13:08 **Received:** 02/14/22 15:40

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	02/28/22	02/16/22 13:20	02/17/22 05:21

SAMPLE DETECTION SUMMARY

Client ID: LC34-AS1-20220214 **Lab ID: AF00827-02**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	0.74	I	0.53	2.5	ug/L	EPA 8260D	

Client ID: LC34-AS2-20220214 **Lab ID: AF00827-03RE1**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	74		0.53	2.5	ug/L	EPA 8260D	
Trichloroethene	98		0.89	2.5	ug/L	EPA 8260D	
Vinyl chloride	1.1	I	0.71	2.5	ug/L	EPA 8260D	

Client ID: LC34-RW17C-20220214 **Lab ID: AF00827-04**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	4000	I	1300	6200	ug/L	EPA 8260D	
Trichloroethene	120000		2200	6200	ug/L	EPA 8260D	

Client ID: LC34-RW18C-20220214 **Lab ID: AF00827-05**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	5500	I	5300	25000	ug/L	EPA 8260D	
Trichloroethene	290000		8900	25000	ug/L	EPA 8260D	

Client ID: LC34-RW19C-20220214 **Lab ID: AF00827-06**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	7800	I	5300	25000	ug/L	EPA 8260D	
Trichloroethene	530000		8900	25000	ug/L	EPA 8260D	

Client ID: LC34-RW20C-20220214 **Lab ID: AF00827-07**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	7200	I	2600	12000	ug/L	EPA 8260D	
Trichloroethene	170000		4400	12000	ug/L	EPA 8260D	

Client ID: LC34PS-PZI-040.0-20220214 **Lab ID: AF00827-08**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	27000		530	2500	ug/L	EPA 8260D	
Trichloroethene	24000		890	2500	ug/L	EPA 8260D	

Client ID: LC34PS-PZI-050.0-20220214 **Lab ID: AF00827-09**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	12000		1300	6200	ug/L	EPA 8260D	
Trichloroethene	180000		2200	6200	ug/L	EPA 8260D	

Client ID: LC34PS-PZI-058.0-20220214 **Lab ID: AF00827-10RE1**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	10000		260	1200	ug/L	EPA 8260D	
Trichloroethene	27000		440	1200	ug/L	EPA 8260D	
Vinyl chloride	390	I	360	1200	ug/L	EPA 8260D	

Client ID: LC34PS-PZI-073.0-20220214 **Lab ID: AF00827-11**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	6.1		0.53	2.5	ug/L	EPA 8260D	
Trichloroethene	4.4		0.89	2.5	ug/L	EPA 8260D	
Vinyl chloride	1.6	I	0.71	2.5	ug/L	EPA 8260D	

Client ID: LC34PS-PZI-080.0-20220214 **Lab ID: AF00827-12**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	4.0		0.53	2.5	ug/L	EPA 8260D	
Trichloroethene	57		0.89	2.5	ug/L	EPA 8260D	

Client ID: LC34PS-PZH-040.0-20220214 **Lab ID: AF00827-13RE1**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	2000		110	500	ug/L	EPA 8260D	
Trichloroethene	13000		180	500	ug/L	EPA 8260D	

Client ID: LC34PS-PZH-050.0-20220214 **Lab ID: AF00827-14**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	21000		2600	12000	ug/L	EPA 8260D	
Trichloroethene	390000		4400	12000	ug/L	EPA 8260D	

SAMPLE DETECTION SUMMARY

Client ID: LC34PS-PZH-058.0-20220214 **Lab ID: AF00827-15RE1**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	8600		130	620	ug/L	EPA 8260D	
Trichloroethene	19000		220	620	ug/L	EPA 8260D	
Vinyl chloride	260	I	180	620	ug/L	EPA 8260D	

Client ID: LC34PS-PZH-073.0-20220214 **Lab ID: AF00827-16**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	7.2	I	2.6	12	ug/L	EPA 8260D	
Trichloroethene	340		4.4	12	ug/L	EPA 8260D	

Client ID: LC34PS-PZH-080.0-20220214 **Lab ID: AF00827-17**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	4.0		0.53	2.5	ug/L	EPA 8260D	
Trichloroethene	7.9		0.89	2.5	ug/L	EPA 8260D	

Client ID: LC34PS-PZK-040.0-20220214 **Lab ID: AF00827-18RE1**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	3500		260	1200	ug/L	EPA 8260D	
Trichloroethene	40000		440	1200	ug/L	EPA 8260D	

Client ID: LC34PS-PZK-050.0-20220214 **Lab ID: AF00827-19**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	12000		2600	12000	ug/L	EPA 8260D	
Trichloroethene	470000		4400	12000	ug/L	EPA 8260D	

Client ID: LC34PS-PZK-058.0-20220214 **Lab ID: AF00827-20**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	16000		2600	12000	ug/L	EPA 8260D	
Trichloroethene	180000		4400	12000	ug/L	EPA 8260D	

Client ID: LC34PS-PZK-073.0-20220214 **Lab ID: AF00827-21RE1**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	9.4	I	2.6	12	ug/L	EPA 8260D	
Trichloroethene	410		4.4	12	ug/L	EPA 8260D	
Vinyl chloride	3.8	I	3.6	12	ug/L	EPA 8260D	

Client ID: LC34PS-PZK-080.0-20220214 **Lab ID: AF00827-22RE1**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	11		0.53	2.5	ug/L	EPA 8260D	
trans-1,2-Dichloroethene	2.8		0.73	2.5	ug/L	EPA 8260D	
Trichloroethene	52		0.89	2.5	ug/L	EPA 8260D	
Vinyl chloride	8.0		0.71	2.5	ug/L	EPA 8260D	

Client ID: LC34PS-PZJ-040.0-20220214 **Lab ID: AF00827-23RE1**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	17000		130	620	ug/L	EPA 8260D	
trans-1,2-Dichloroethene	440	I	180	620	ug/L	EPA 8260D	
Trichloroethene	22000		220	620	ug/L	EPA 8260D	
Vinyl chloride	460	I	180	620	ug/L	EPA 8260D	

Client ID: LC34PS-PZJ-050.0-20220214 **Lab ID: AF00827-24**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	23000		1300	6200	ug/L	EPA 8260D	

Client ID: LC34PS-PZJ-050.0-20220214 **Lab ID: AF00827-24RE2**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Trichloroethene	180000		4400	12000	ug/L	EPA 8260D	

Client ID: LC34PS-PZJ-058.0-20220214 **Lab ID: AF00827-25RE1**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	11000		260	1200	ug/L	EPA 8260D	
Trichloroethene	36000		440	1200	ug/L	EPA 8260D	

Client ID: LC34PS-PZJ-073.0-20220214 **Lab ID: AF00827-26**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	17		1.1	5.0	ug/L	EPA 8260D	
Trichloroethene	120		1.8	5.0	ug/L	EPA 8260D	

SAMPLE DETECTION SUMMARY

Client ID: LC34PS-PZJ-080.0-20220214 **Lab ID: AF00827-27**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	10		0.53	2.5	ug/L	EPA 8260D	
trans-1,2-Dichloroethene	1.0	I	0.73	2.5	ug/L	EPA 8260D	
Trichloroethene	12		0.89	2.5	ug/L	EPA 8260D	

Client ID: LC34PS-PZG-040.0-20220214 **Lab ID: AF00827-28RE1**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	20000		260	1200	ug/L	EPA 8260D	
Trichloroethene	31000		440	1200	ug/L	EPA 8260D	
Vinyl chloride	710	I	360	1200	ug/L	EPA 8260D	

Client ID: LC34PS-PZG-050.0-20220214 **Lab ID: AF00827-29**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	59000		5300	25000	ug/L	EPA 8260D	
Trichloroethene	550000		8900	25000	ug/L	EPA 8260D	

Client ID: LC34PS-PZG-058.0-20220214 **Lab ID: AF00827-30**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Trichloroethene	5900		440	1200	ug/L	EPA 8260D	

Client ID: LC34PS-PZG-058.0-20220214 **Lab ID: AF00827-30RE1**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	880		26	120	ug/L	EPA 8260D	

Client ID: LC34PS-PZG-073.0-20220214 **Lab ID: AF00827-31**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	160		2.6	12	ug/L	EPA 8260D	
trans-1,2-Dichloroethene	12		3.6	12	ug/L	EPA 8260D	
Vinyl chloride	5.9	I	3.6	12	ug/L	EPA 8260D	

Client ID: LC34PS-PZG-073.0-20220214 **Lab ID: AF00827-31RE1**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Trichloroethene	4400		89	250	ug/L	EPA 8260D	

Client ID: LC34PS-PZG-080.0-20220214 **Lab ID: AF00827-32**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	45		0.53	2.5	ug/L	EPA 8260D	
trans-1,2-Dichloroethene	15		0.73	2.5	ug/L	EPA 8260D	
Trichloroethene	24		0.89	2.5	ug/L	EPA 8260D	
Vinyl chloride	65		0.71	2.5	ug/L	EPA 8260D	

Client ID: LC34PS-PZF-040.0-20220214 **Lab ID: AF00827-33RE2**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	26000		530	2500	ug/L	EPA 8260D	
Trichloroethene	65000		890	2500	ug/L	EPA 8260D	

Client ID: LC34PS-PZF-050.0-20220214 **Lab ID: AF00827-34**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	26000	I	11000	50000	ug/L	EPA 8260D	
Trichloroethene	710000		18000	50000	ug/L	EPA 8260D	

Client ID: LC34PS-PZF-058.0-20220214 **Lab ID: AF00827-35**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	3000		530	2500	ug/L	EPA 8260D	
Trichloroethene	36000		890	2500	ug/L	EPA 8260D	

Client ID: LC34PS-PZF-073.0-20220214 **Lab ID: AF00827-36**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	7.8		0.53	2.5	ug/L	EPA 8260D	
trans-1,2-Dichloroethene	0.82	I	0.73	2.5	ug/L	EPA 8260D	
Trichloroethene	84		0.89	2.5	ug/L	EPA 8260D	

Client ID: LC34PS-PZF-080.0-20220214 **Lab ID: AF00827-37**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	26		0.53	2.5	ug/L	EPA 8260D	
trans-1,2-Dichloroethene	2.4	I	0.73	2.5	ug/L	EPA 8260D	
Vinyl chloride	6.9		0.71	2.5	ug/L	EPA 8260D	

SAMPLE DETECTION SUMMARY

Client ID: LC34PS-PZF-080.0-20220214 **Lab ID:** AF00827-37RE2

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Trichloroethene	88		4.4	12	ug/L	EPA 8260D	

Client ID: LC34PS-PZA-040.0-20220214 **Lab ID:** AF00827-38RE2

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	2200	I	530	2500	ug/L	EPA 8260D	
Trichloroethene	71000		890	2500	ug/L	EPA 8260D	

Client ID: LC34PS-PZA-050.0-20220214 **Lab ID:** AF00827-39

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	26000	I	11000	50000	ug/L	EPA 8260D	
Trichloroethene	840000		18000	50000	ug/L	EPA 8260D	

Client ID: LC34PS-PZA-058.0-20220214 **Lab ID:** AF00827-40RE1

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	4800		110	500	ug/L	EPA 8260D	
Trichloroethene	17000		180	500	ug/L	EPA 8260D	
Vinyl chloride	150	I	140	500	ug/L	EPA 8260D	

Client ID: LC34PS-PZA-073.0-20220214 **Lab ID:** AF00827-41

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Vinyl chloride	300		18	62	ug/L	EPA 8260D	

Client ID: LC34PS-PZA-073.0-20220214 **Lab ID:** AF00827-41RE2

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	3500		53	250	ug/L	EPA 8260D	
Trichloroethene	2500		89	250	ug/L	EPA 8260D	

Client ID: LC34PS-PZA-080.0-20220214 **Lab ID:** AF00827-42

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	48		0.53	2.5	ug/L	EPA 8260D	
trans-1,2-Dichloroethene	7.0		0.73	2.5	ug/L	EPA 8260D	
Vinyl chloride	1.3	I	0.71	2.5	ug/L	EPA 8260D	

Client ID: LC34PS-PZA-080.0-20220214 **Lab ID:** AF00827-42RE1

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Trichloroethene	400		18	50	ug/L	EPA 8260D	

Client ID: LC34PS-PZB-040.0-20220214 **Lab ID:** AF00827-43

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	23000		2600	12000	ug/L	EPA 8260D	
Trichloroethene	280000		4400	12000	ug/L	EPA 8260D	

Client ID: LC34PS-PZB-050.0-20220214 **Lab ID:** AF00827-44

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	39000	I	11000	50000	ug/L	EPA 8260D	
Trichloroethene	830000		18000	50000	ug/L	EPA 8260D	

Client ID: LC34PS-PZB-058.0-20220214 **Lab ID:** AF00827-45RE1

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	9300		260	1200	ug/L	EPA 8260D	
Trichloroethene	46000		440	1200	ug/L	EPA 8260D	

Client ID: LC34PS-PZB-073.0-20220214 **Lab ID:** AF00827-46

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	150		2.6	12	ug/L	EPA 8260D	
Vinyl chloride	25		3.6	12	ug/L	EPA 8260D	

Client ID: LC34PS-PZB-073.0-20220214 **Lab ID:** AF00827-46RE1

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Trichloroethene	590		18	50	ug/L	EPA 8260D	

Client ID: LC34PS-PZB-080.0-20220214 **Lab ID:** AF00827-47

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	45		0.53	2.5	ug/L	EPA 8260D	
trans-1,2-Dichloroethene	12		0.73	2.5	ug/L	EPA 8260D	
Trichloroethene	15		0.89	2.5	ug/L	EPA 8260D	

SAMPLE DETECTION SUMMARY

Client ID: LC34PS-PZC-040.0-20220214 **Lab ID:** AF00827-48

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	16000	I	5300	25000	ug/L	EPA 8260D	
Trichloroethene	470000		8900	25000	ug/L	EPA 8260D	

Client ID: LC34PS-PZC-050.0-20220214 **Lab ID:** AF00827-49

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	43000		5300	25000	ug/L	EPA 8260D	
Trichloroethene	740000		8900	25000	ug/L	EPA 8260D	

Client ID: LC34PS-PZC-058.0-20220214 **Lab ID:** AF00827-50

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	17000		2600	12000	ug/L	EPA 8260D	
Trichloroethene	140000		4400	12000	ug/L	EPA 8260D	

Client ID: LC34PS-PZC-073.0-20220214 **Lab ID:** AF00827-51

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	13		2.6	12	ug/L	EPA 8260D	

Client ID: LC34PS-PZC-073.0-20220214 **Lab ID:** AF00827-51RE1

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Trichloroethene	770		44	120	ug/L	EPA 8260D	

Client ID: LC34PS-PZC-080.0-20220214 **Lab ID:** AF00827-52

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	25		0.53	2.5	ug/L	EPA 8260D	
trans-1,2-Dichloroethene	6.1		0.73	2.5	ug/L	EPA 8260D	
Trichloroethene	5.7		0.89	2.5	ug/L	EPA 8260D	

Client ID: LC34PS-PZD-040.0-20220214 **Lab ID:** AF00827-53

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	47000		1300	6200	ug/L	EPA 8260D	
Trichloroethene	170000		2200	6200	ug/L	EPA 8260D	

Client ID: LC34PS-PZD-050.0-20220214 **Lab ID:** AF00827-54

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	55000		11000	50000	ug/L	EPA 8260D	
Trichloroethene	660000		18000	50000	ug/L	EPA 8260D	

Client ID: LC34PS-PZD-058.0-20220214 **Lab ID:** AF00827-55

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	28000		5300	25000	ug/L	EPA 8260D	
Trichloroethene	230000		8900	25000	ug/L	EPA 8260D	

Client ID: LC34PS-PZD-073.0-20220214 **Lab ID:** AF00827-56

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	8.3	I	2.6	12	ug/L	EPA 8260D	

Client ID: LC34PS-PZD-073.0-20220214 **Lab ID:** AF00827-56RE1

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Trichloroethene	570		22	62	ug/L	EPA 8260D	

Client ID: LC34PS-PZD-080.0-20220214 **Lab ID:** AF00827-57

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	56		0.53	2.5	ug/L	EPA 8260D	
trans-1,2-Dichloroethene	15		0.73	2.5	ug/L	EPA 8260D	
Trichloroethene	4.5		0.89	2.5	ug/L	EPA 8260D	

Client ID: LC34PS-PZE-040.0-20220214 **Lab ID:** AF00827-58

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	19000	I	5300	25000	ug/L	EPA 8260D	
Trichloroethene	500000		8900	25000	ug/L	EPA 8260D	

Client ID: LC34PS-PZE-050.0-20220214 **Lab ID:** AF00827-59

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	56000		5300	25000	ug/L	EPA 8260D	
Trichloroethene	600000		8900	25000	ug/L	EPA 8260D	

SAMPLE DETECTION SUMMARY

Client ID: LC34PS-PZE-058.0-20220214 **Lab ID:** AF00827-60

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	26000		2600	12000	ug/L	EPA 8260D	
Trichloroethene	160000		4400	12000	ug/L	EPA 8260D	

Client ID: LC34PS-PZE-073.0-20220214 **Lab ID:** AF00827-61

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	3.9		0.53	2.5	ug/L	EPA 8260D	
Trichloroethene	81		0.89	2.5	ug/L	EPA 8260D	

Client ID: LC34PS-PZE-080.0-20220214 **Lab ID:** AF00827-62

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	96		0.53	2.5	ug/L	EPA 8260D	
trans-1,2-Dichloroethene	24		0.73	2.5	ug/L	EPA 8260D	
Trichloroethene	17		0.89	2.5	ug/L	EPA 8260D	

ANALYTICAL RESULTS

Description: LC34-GAC-20220214 **Lab Sample ID:** AF00827-01 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 07:00 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	2B16003	EPA 8260D	02/16/22 11:33	JMW	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	2B16003	EPA 8260D	02/16/22 11:33	JMW	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	2B16003	EPA 8260D	02/16/22 11:33	JMW	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	2B16003	EPA 8260D	02/16/22 11:33	JMW	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	2B16003	EPA 8260D	02/16/22 11:33	JMW	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	2B16003	EPA 8260D	02/16/22 11:33	JMW	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	2B16003	EPA 8260D	02/16/22 11:33	JMW	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	2B16003	EPA 8260D	02/16/22 11:33	JMW	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	2B16003	EPA 8260D	02/16/22 11:33	JMW	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	2B16003	EPA 8260D	02/16/22 11:33	JMW	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	2B16003	EPA 8260D	02/16/22 11:33	JMW	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	2B16003	EPA 8260D	02/16/22 11:33	JMW	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	2B16003	EPA 8260D	02/16/22 11:33	JMW	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	2B16003	EPA 8260D	02/16/22 11:33	JMW	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	2B16003	EPA 8260D	02/16/22 11:33	JMW	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	2B16003	EPA 8260D	02/16/22 11:33	JMW	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	2B16003	EPA 8260D	02/16/22 11:33	JMW	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	2B16003	EPA 8260D	02/16/22 11:33	JMW	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	2B16003	EPA 8260D	02/16/22 11:33	JMW	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	2B16003	EPA 8260D	02/16/22 11:33	JMW	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	2B16003	EPA 8260D	02/16/22 11:33	JMW	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	2B16003	EPA 8260D	02/16/22 11:33	JMW	
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	2B16003	EPA 8260D	02/16/22 11:33	JMW	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	2B16003	EPA 8260D	02/16/22 11:33	JMW	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	2B16003	EPA 8260D	02/16/22 11:33	JMW	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	2B16003	EPA 8260D	02/16/22 11:33	JMW	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	2B16003	EPA 8260D	02/16/22 11:33	JMW	
cis-1,2-Dichloroethene [156-59-2]^	0.53	U	ug/L	1	0.53	2.5	2B16003	EPA 8260D	02/16/22 11:33	JMW	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	2B16003	EPA 8260D	02/16/22 11:33	JMW	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	2B16003	EPA 8260D	02/16/22 11:33	JMW	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	2B16003	EPA 8260D	02/16/22 11:33	JMW	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	2B16003	EPA 8260D	02/16/22 11:33	JMW	QV-01
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	2B16003	EPA 8260D	02/16/22 11:33	JMW	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	2B16003	EPA 8260D	02/16/22 11:33	JMW	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	2B16003	EPA 8260D	02/16/22 11:33	JMW	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	2B16003	EPA 8260D	02/16/22 11:33	JMW	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	2B16003	EPA 8260D	02/16/22 11:33	JMW	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	2B16003	EPA 8260D	02/16/22 11:33	JMW	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	2B16003	EPA 8260D	02/16/22 11:33	JMW	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	2B16003	EPA 8260D	02/16/22 11:33	JMW	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	2B16003	EPA 8260D	02/16/22 11:33	JMW	
trans-1,2-Dichloroethene [156-60-5]^	0.73	U	ug/L	1	0.73	2.5	2B16003	EPA 8260D	02/16/22 11:33	JMW	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	2B16003	EPA 8260D	02/16/22 11:33	JMW	
Trichloroethene [79-01-6]^	0.89	U	ug/L	1	0.89	2.5	2B16003	EPA 8260D	02/16/22 11:33	JMW	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	2B16003	EPA 8260D	02/16/22 11:33	JMW	
Vinyl chloride [75-01-4]^	0.71	U	ug/L	1	0.71	2.5	2B16003	EPA 8260D	02/16/22 11:33	JMW	
Xylenes (Total) [1330-20-7]	1.3	U	ug/L	1	1.3	5.0	2B16003	EPA 8260D	02/16/22 11:33	JMW	

ANALYTICAL RESULTS

Description: LC34-GAC-20220214 | **Lab Sample ID:** AF00827-01 | **Received:** 02/14/22 15:40

Matrix: Ground Water | **Sampled:** 02/14/22 07:00 | **Work Order:** AF00827

Project: NASA KSC LC34 | **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*47*	*1*	*50.0*	*94 %*	*41-142*	*2B16003*	*EPA 8260D*	*02/16/22 11:33*	*JMW*	
Dibromofluoromethane	*52*	*1*	*50.0*	*103 %*	*53-146*	*2B16003*	*EPA 8260D*	*02/16/22 11:33*	*JMW*	
Toluene-d8	*55*	*1*	*50.0*	*110 %*	*41-146*	*2B16003*	*EPA 8260D*	*02/16/22 11:33*	*JMW*	

ANALYTICAL RESULTS

Description: LC34-AS1-20220214 **Lab Sample ID:** AF00827-02 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 07:10 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

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Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	2B16006	EPA 8260D	02/16/22 10:49	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	2B16006	EPA 8260D	02/16/22 10:49	KKW	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	2B16006	EPA 8260D	02/16/22 10:49	KKW	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	2B16006	EPA 8260D	02/16/22 10:49	KKW	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	2B16006	EPA 8260D	02/16/22 10:49	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	2B16006	EPA 8260D	02/16/22 10:49	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	2B16006	EPA 8260D	02/16/22 10:49	KKW	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	2B16006	EPA 8260D	02/16/22 10:49	KKW	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	2B16006	EPA 8260D	02/16/22 10:49	KKW	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	2B16006	EPA 8260D	02/16/22 10:49	KKW	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	2B16006	EPA 8260D	02/16/22 10:49	KKW	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	2B16006	EPA 8260D	02/16/22 10:49	KKW	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	2B16006	EPA 8260D	02/16/22 10:49	KKW	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	2B16006	EPA 8260D	02/16/22 10:49	KKW	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	2B16006	EPA 8260D	02/16/22 10:49	KKW	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	2B16006	EPA 8260D	02/16/22 10:49	KKW	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	2B16006	EPA 8260D	02/16/22 10:49	KKW	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	2B16006	EPA 8260D	02/16/22 10:49	KKW	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	2B16006	EPA 8260D	02/16/22 10:49	KKW	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	2B16006	EPA 8260D	02/16/22 10:49	KKW	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	2B16006	EPA 8260D	02/16/22 10:49	KKW	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	2B16006	EPA 8260D	02/16/22 10:49	KKW	QV-01
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	2B16006	EPA 8260D	02/16/22 10:49	KKW	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	2B16006	EPA 8260D	02/16/22 10:49	KKW	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	2B16006	EPA 8260D	02/16/22 10:49	KKW	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	2B16006	EPA 8260D	02/16/22 10:49	KKW	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	2B16006	EPA 8260D	02/16/22 10:49	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**0.74**	I	ug/L	1	0.53	2.5	2B16006	EPA 8260D	02/16/22 10:49	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	2B16006	EPA 8260D	02/16/22 10:49	KKW	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	2B16006	EPA 8260D	02/16/22 10:49	KKW	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	2B16006	EPA 8260D	02/16/22 10:49	KKW	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	2B16006	EPA 8260D	02/16/22 10:49	KKW	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	2B16006	EPA 8260D	02/16/22 10:49	KKW	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	2B16006	EPA 8260D	02/16/22 10:49	KKW	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	2B16006	EPA 8260D	02/16/22 10:49	KKW	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	2B16006	EPA 8260D	02/16/22 10:49	KKW	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	2B16006	EPA 8260D	02/16/22 10:49	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	2B16006	EPA 8260D	02/16/22 10:49	KKW	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	2B16006	EPA 8260D	02/16/22 10:49	KKW	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	2B16006	EPA 8260D	02/16/22 10:49	KKW	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	2B16006	EPA 8260D	02/16/22 10:49	KKW	
trans-1,2-Dichloroethene [156-60-5]^	0.73	U	ug/L	1	0.73	2.5	2B16006	EPA 8260D	02/16/22 10:49	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	2B16006	EPA 8260D	02/16/22 10:49	KKW	
Trichloroethene [79-01-6]^	0.89	U	ug/L	1	0.89	2.5	2B16006	EPA 8260D	02/16/22 10:49	KKW	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	2B16006	EPA 8260D	02/16/22 10:49	KKW	
Vinyl chloride [75-01-4]^	0.71	U	ug/L	1	0.71	2.5	2B16006	EPA 8260D	02/16/22 10:49	KKW	
Xylenes (Total) [1330-20-7]	1.3	U	ug/L	1	1.3	5.0	2B16006	EPA 8260D	02/16/22 10:49	KKW	

ANALYTICAL RESULTS

Description: LC34-AS1-20220214 **Lab Sample ID:** AF00827-02 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 07:10 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*54*	*1*	*50.0*	*108 %*	*41-142*	*2B16006*	*EPA 8260D*	*02/16/22 10:49*	*KKW*	
Dibromofluoromethane	*56*	*1*	*50.0*	*111 %*	*53-146*	*2B16006*	*EPA 8260D*	*02/16/22 10:49*	*KKW*	
Toluene-d8	*55*	*1*	*50.0*	*110 %*	*41-146*	*2B16006*	*EPA 8260D*	*02/16/22 10:49*	*KKW*	

ANALYTICAL RESULTS

Description: LC34-AS2-20220214 **Lab Sample ID:** AF00827-03 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 07:15 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	2B17014	EPA 8260D	02/17/22 13:12	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	2B17014	EPA 8260D	02/17/22 13:12	KKW	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	2B17014	EPA 8260D	02/17/22 13:12	KKW	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	2B17014	EPA 8260D	02/17/22 13:12	KKW	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	2B17014	EPA 8260D	02/17/22 13:12	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	2B17014	EPA 8260D	02/17/22 13:12	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	2B17014	EPA 8260D	02/17/22 13:12	KKW	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	2B17014	EPA 8260D	02/17/22 13:12	KKW	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	2B17014	EPA 8260D	02/17/22 13:12	KKW	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	2B17014	EPA 8260D	02/17/22 13:12	KKW	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	2B17014	EPA 8260D	02/17/22 13:12	KKW	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	2B17014	EPA 8260D	02/17/22 13:12	KKW	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	2B17014	EPA 8260D	02/17/22 13:12	KKW	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	2B17014	EPA 8260D	02/17/22 13:12	KKW	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	2B17014	EPA 8260D	02/17/22 13:12	KKW	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	2B17014	EPA 8260D	02/17/22 13:12	KKW	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	2B17014	EPA 8260D	02/17/22 13:12	KKW	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	2B17014	EPA 8260D	02/17/22 13:12	KKW	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	2B17014	EPA 8260D	02/17/22 13:12	KKW	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	2B17014	EPA 8260D	02/17/22 13:12	KKW	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	2B17014	EPA 8260D	02/17/22 13:12	KKW	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	2B17014	EPA 8260D	02/17/22 13:12	KKW	QV-01
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	2B17014	EPA 8260D	02/17/22 13:12	KKW	QV-01
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	2B17014	EPA 8260D	02/17/22 13:12	KKW	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	2B17014	EPA 8260D	02/17/22 13:12	KKW	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	2B17014	EPA 8260D	02/17/22 13:12	KKW	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	2B17014	EPA 8260D	02/17/22 13:12	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**74**		ug/L	1	0.53	2.5	2B17014	EPA 8260D	02/17/22 13:12	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	2B17014	EPA 8260D	02/17/22 13:12	KKW	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	2B17014	EPA 8260D	02/17/22 13:12	KKW	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	2B17014	EPA 8260D	02/17/22 13:12	KKW	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	2B17014	EPA 8260D	02/17/22 13:12	KKW	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	2B17014	EPA 8260D	02/17/22 13:12	KKW	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	2B17014	EPA 8260D	02/17/22 13:12	KKW	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	2B17014	EPA 8260D	02/17/22 13:12	KKW	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	2B17014	EPA 8260D	02/17/22 13:12	KKW	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	2B17014	EPA 8260D	02/17/22 13:12	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	2B17014	EPA 8260D	02/17/22 13:12	KKW	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	2B17014	EPA 8260D	02/17/22 13:12	KKW	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	2B17014	EPA 8260D	02/17/22 13:12	KKW	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	2B17014	EPA 8260D	02/17/22 13:12	KKW	
trans-1,2-Dichloroethene [156-60-5]^	0.73	U	ug/L	1	0.73	2.5	2B17014	EPA 8260D	02/17/22 13:12	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	2B17014	EPA 8260D	02/17/22 13:12	KKW	
Trichloroethene [79-01-6]^	**98**		ug/L	1	0.89	2.5	2B17014	EPA 8260D	02/17/22 13:12	KKW	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	2B17014	EPA 8260D	02/17/22 13:12	KKW	
Vinyl chloride [75-01-4]^	**1.1**	I	ug/L	1	0.71	2.5	2B17014	EPA 8260D	02/17/22 13:12	KKW	
Xylenes (Total) [1330-20-7]	1.3	U	ug/L	1	1.3	5.0	2B17014	EPA 8260D	02/17/22 13:12	KKW	

ANALYTICAL RESULTS

Description: LC34-AS2-20220214 **Lab Sample ID:** AF00827-03 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 07:15 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*57*	*1*	*50.0*	*113 %*	*41-142*	*2B17014*	*EPA 8260D*	*02/17/22 13:12*	*KKW*	
Dibromofluoromethane	*51*	*1*	*50.0*	*102 %*	*53-146*	*2B17014*	*EPA 8260D*	*02/17/22 13:12*	*KKW*	
Toluene-d8	*52*	*1*	*50.0*	*105 %*	*41-146*	*2B17014*	*EPA 8260D*	*02/17/22 13:12*	*KKW*	

ANALYTICAL RESULTS

Description: LC34-RW17C-20220214 **Lab Sample ID:** AF00827-04 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 07:20 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	2000	U	ug/L	2500	2000	6200	2B16006	EPA 8260D	02/16/22 11:45	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	1400	U	ug/L	2500	1400	6200	2B16006	EPA 8260D	02/16/22 11:45	KKW	
1,1,2-Trichloroethane [79-00-5]^	1900	U	ug/L	2500	1900	6200	2B16006	EPA 8260D	02/16/22 11:45	KKW	
1,1-Dichloroethane [75-34-3]^	1600	U	ug/L	2500	1600	6200	2B16006	EPA 8260D	02/16/22 11:45	KKW	
1,1-Dichloroethene [75-35-4]^	2400	U	ug/L	2500	2400	6200	2B16006	EPA 8260D	02/16/22 11:45	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	1800	U	ug/L	2500	1800	6200	2B16006	EPA 8260D	02/16/22 11:45	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	2400	U	ug/L	2500	2400	6200	2B16006	EPA 8260D	02/16/22 11:45	KKW	
1,2-Dibromoethane [106-93-4]^	2000	U	ug/L	2500	2000	6200	2B16006	EPA 8260D	02/16/22 11:45	KKW	
1,2-Dichlorobenzene [95-50-1]^	1800	U	ug/L	2500	1800	6200	2B16006	EPA 8260D	02/16/22 11:45	KKW	
1,2-Dichloroethane [107-06-2]^	1600	U	ug/L	2500	1600	6200	2B16006	EPA 8260D	02/16/22 11:45	KKW	
1,2-Dichloropropane [78-87-5]^	2000	U	ug/L	2500	2000	6200	2B16006	EPA 8260D	02/16/22 11:45	KKW	
1,3-Dichlorobenzene [541-73-1]^	1900	U	ug/L	2500	1900	6200	2B16006	EPA 8260D	02/16/22 11:45	KKW	
1,4-Dichlorobenzene [106-46-7]^	1900	U	ug/L	2500	1900	6200	2B16006	EPA 8260D	02/16/22 11:45	KKW	
2-Butanone [78-93-3]^	11000	U	ug/L	2500	11000	31000	2B16006	EPA 8260D	02/16/22 11:45	KKW	
2-Hexanone [591-78-6]^	6200	U	ug/L	2500	6200	31000	2B16006	EPA 8260D	02/16/22 11:45	KKW	
4-Methyl-2-pentanone [108-10-1]^	6200	U	ug/L	2500	6200	31000	2B16006	EPA 8260D	02/16/22 11:45	KKW	
Acetone [67-64-1]^	25000	U	ug/L	2500	25000	62000	2B16006	EPA 8260D	02/16/22 11:45	KKW	
Benzene [71-43-2]^	1800	U	ug/L	2500	1800	6200	2B16006	EPA 8260D	02/16/22 11:45	KKW	
Bromodichloromethane [75-27-4]^	1300	U	ug/L	2500	1300	6200	2B16006	EPA 8260D	02/16/22 11:45	KKW	
Bromoform [75-25-2]^	1900	U	ug/L	2500	1900	6200	2B16006	EPA 8260D	02/16/22 11:45	KKW	
Bromomethane [74-83-9]^	2400	U	ug/L	2500	2400	6200	2B16006	EPA 8260D	02/16/22 11:45	KKW	QV-01
Carbon disulfide [75-15-0]^	6200	U	ug/L	2500	6200	31000	2B16006	EPA 8260D	02/16/22 11:45	KKW	QV-01
Carbon Tetrachloride [56-23-5]^	2400	U	ug/L	2500	2400	6200	2B16006	EPA 8260D	02/16/22 11:45	KKW	
Chlorobenzene [108-90-7]^	1800	U	ug/L	2500	1800	6200	2B16006	EPA 8260D	02/16/22 11:45	KKW	
Chloroethane [75-00-3]^	2400	U	ug/L	2500	2400	6200	2B16006	EPA 8260D	02/16/22 11:45	KKW	
Chloroform [67-66-3]^	2000	U	ug/L	2500	2000	6200	2B16006	EPA 8260D	02/16/22 11:45	KKW	
Chloromethane [74-87-3]^	2000	U	ug/L	2500	2000	6200	2B16006	EPA 8260D	02/16/22 11:45	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**4000**	I	ug/L	2500	1300	6200	2B16006	EPA 8260D	02/16/22 11:45	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	1500	U	ug/L	2500	1500	6200	2B16006	EPA 8260D	02/16/22 11:45	KKW	
Cyclohexane [110-82-7]^	2300	U	ug/L	2500	2300	6200	2B16006	EPA 8260D	02/16/22 11:45	KKW	
Dibromochloromethane [124-48-1]^	1200	U	ug/L	2500	1200	6200	2B16006	EPA 8260D	02/16/22 11:45	KKW	
Dichlorodifluoromethane [75-71-8]^	1800	U	ug/L	2500	1800	6200	2B16006	EPA 8260D	02/16/22 11:45	KKW	
Ethylbenzene [100-41-4]^	1700	U	ug/L	2500	1700	6200	2B16006	EPA 8260D	02/16/22 11:45	KKW	
Freon 113 [76-13-1]^	1800	U	ug/L	2500	1800	6200	2B16006	EPA 8260D	02/16/22 11:45	KKW	
Isopropylbenzene [98-82-8]^	1700	U	ug/L	2500	1700	6200	2B16006	EPA 8260D	02/16/22 11:45	KKW	
Methyl acetate [79-20-9]^	2400	U	ug/L	2500	2400	6200	2B16006	EPA 8260D	02/16/22 11:45	KKW	
Methylene Chloride [75-09-2]^	6200	U	ug/L	2500	6200	31000	2B16006	EPA 8260D	02/16/22 11:45	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	1500	U	ug/L	2500	1500	6200	2B16006	EPA 8260D	02/16/22 11:45	KKW	
Styrene [100-42-5]^	1500	U	ug/L	2500	1500	6200	2B16006	EPA 8260D	02/16/22 11:45	KKW	
Tetrachloroethene [127-18-4]^	1900	U	ug/L	2500	1900	6200	2B16006	EPA 8260D	02/16/22 11:45	KKW	
Toluene [108-88-3]^	1800	U	ug/L	2500	1800	6200	2B16006	EPA 8260D	02/16/22 11:45	KKW	
trans-1,2-Dichloroethene [156-60-5]^	1800	U	ug/L	2500	1800	6200	2B16006	EPA 8260D	02/16/22 11:45	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	1800	U	ug/L	2500	1800	6200	2B16006	EPA 8260D	02/16/22 11:45	KKW	
Trichloroethene [79-01-6]^	**120000**		ug/L	2500	2200	6200	2B16006	EPA 8260D	02/16/22 11:45	KKW	
Trichlorofluoromethane [75-69-4]^	2400	U	ug/L	2500	2400	6200	2B16006	EPA 8260D	02/16/22 11:45	KKW	
Vinyl chloride [75-01-4]^	1800	U	ug/L	2500	1800	6200	2B16006	EPA 8260D	02/16/22 11:45	KKW	
Xylenes (Total) [1330-20-7]	3200	U	ug/L	2500	3200	12000	2B16006	EPA 8260D	02/16/22 11:45	KKW	

ANALYTICAL RESULTS

Description: LC34-RW17C-20220214 **Lab Sample ID:** AF00827-04 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 07:20 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*56*	*1*	*50.0*	*112 %*	*41-142*	*2B16006*	*EPA 8260D*	*02/16/22 11:45*	*KKW*	
Dibromofluoromethane	*57*	*1*	*50.0*	*114 %*	*53-146*	*2B16006*	*EPA 8260D*	*02/16/22 11:45*	*KKW*	
Toluene-d8	*54*	*1*	*50.0*	*109 %*	*41-146*	*2B16006*	*EPA 8260D*	*02/16/22 11:45*	*KKW*	

ANALYTICAL RESULTS

Description: LC34-RW18C-20220214 **Lab Sample ID:** AF00827-05 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 07:30 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	8000	U	ug/L	10000	8000	25000	2B16006	EPA 8260D	02/16/22 12:12	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	5400	U	ug/L	10000	5400	25000	2B16006	EPA 8260D	02/16/22 12:12	KKW	
1,1,2-Trichloroethane [79-00-5]^	7600	U	ug/L	10000	7600	25000	2B16006	EPA 8260D	02/16/22 12:12	KKW	
1,1-Dichloroethane [75-34-3]^	6200	U	ug/L	10000	6200	25000	2B16006	EPA 8260D	02/16/22 12:12	KKW	
1,1-Dichloroethene [75-35-4]^	9400	U	ug/L	10000	9400	25000	2B16006	EPA 8260D	02/16/22 12:12	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	7000	U	ug/L	10000	7000	25000	2B16006	EPA 8260D	02/16/22 12:12	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	9600	U	ug/L	10000	9600	25000	2B16006	EPA 8260D	02/16/22 12:12	KKW	
1,2-Dibromoethane [106-93-4]^	7800	U	ug/L	10000	7800	25000	2B16006	EPA 8260D	02/16/22 12:12	KKW	
1,2-Dichlorobenzene [95-50-1]^	7300	U	ug/L	10000	7300	25000	2B16006	EPA 8260D	02/16/22 12:12	KKW	
1,2-Dichloroethane [107-06-2]^	6300	U	ug/L	10000	6300	25000	2B16006	EPA 8260D	02/16/22 12:12	KKW	
1,2-Dichloropropane [78-87-5]^	8000	U	ug/L	10000	8000	25000	2B16006	EPA 8260D	02/16/22 12:12	KKW	
1,3-Dichlorobenzene [541-73-1]^	7700	U	ug/L	10000	7700	25000	2B16006	EPA 8260D	02/16/22 12:12	KKW	
1,4-Dichlorobenzene [106-46-7]^	7600	U	ug/L	10000	7600	25000	2B16006	EPA 8260D	02/16/22 12:12	KKW	
2-Butanone [78-93-3]^	45000	U	ug/L	10000	45000	120000	2B16006	EPA 8260D	02/16/22 12:12	KKW	
2-Hexanone [591-78-6]^	25000	U	ug/L	10000	25000	120000	2B16006	EPA 8260D	02/16/22 12:12	KKW	
4-Methyl-2-pentanone [108-10-1]^	25000	U	ug/L	10000	25000	120000	2B16006	EPA 8260D	02/16/22 12:12	KKW	
Acetone [67-64-1]^	100000	U	ug/L	10000	100000	250000	2B16006	EPA 8260D	02/16/22 12:12	KKW	
Benzene [71-43-2]^	7100	U	ug/L	10000	7100	25000	2B16006	EPA 8260D	02/16/22 12:12	KKW	
Bromodichloromethane [75-27-4]^	5200	U	ug/L	10000	5200	25000	2B16006	EPA 8260D	02/16/22 12:12	KKW	
Bromoform [75-25-2]^	7500	U	ug/L	10000	7500	25000	2B16006	EPA 8260D	02/16/22 12:12	KKW	
Bromomethane [74-83-9]^	9500	U	ug/L	10000	9500	25000	2B16006	EPA 8260D	02/16/22 12:12	KKW	QV-01
Carbon disulfide [75-15-0]^	25000	U	ug/L	10000	25000	120000	2B16006	EPA 8260D	02/16/22 12:12	KKW	QV-01
Carbon Tetrachloride [56-23-5]^	9400	U	ug/L	10000	9400	25000	2B16006	EPA 8260D	02/16/22 12:12	KKW	
Chlorobenzene [108-90-7]^	7200	U	ug/L	10000	7200	25000	2B16006	EPA 8260D	02/16/22 12:12	KKW	
Chloroethane [75-00-3]^	9800	U	ug/L	10000	9800	25000	2B16006	EPA 8260D	02/16/22 12:12	KKW	
Chloroform [67-66-3]^	8000	U	ug/L	10000	8000	25000	2B16006	EPA 8260D	02/16/22 12:12	KKW	
Chloromethane [74-87-3]^	8200	U	ug/L	10000	8200	25000	2B16006	EPA 8260D	02/16/22 12:12	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**5500**	I	ug/L	10000	5300	25000	2B16006	EPA 8260D	02/16/22 12:12	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	5900	U	ug/L	10000	5900	25000	2B16006	EPA 8260D	02/16/22 12:12	KKW	
Cyclohexane [110-82-7]^	9300	U	ug/L	10000	9300	25000	2B16006	EPA 8260D	02/16/22 12:12	KKW	
Dibromochloromethane [124-48-1]^	5000	U	ug/L	10000	5000	25000	2B16006	EPA 8260D	02/16/22 12:12	KKW	
Dichlorodifluoromethane [75-71-8]^	7400	U	ug/L	10000	7400	25000	2B16006	EPA 8260D	02/16/22 12:12	KKW	
Ethylbenzene [100-41-4]^	6900	U	ug/L	10000	6900	25000	2B16006	EPA 8260D	02/16/22 12:12	KKW	
Freon 113 [76-13-1]^	7300	U	ug/L	10000	7300	25000	2B16006	EPA 8260D	02/16/22 12:12	KKW	
Isopropylbenzene [98-82-8]^	6700	U	ug/L	10000	6700	25000	2B16006	EPA 8260D	02/16/22 12:12	KKW	
Methyl acetate [79-20-9]^	9500	U	ug/L	10000	9500	25000	2B16006	EPA 8260D	02/16/22 12:12	KKW	
Methylene Chloride [75-09-2]^	25000	U	ug/L	10000	25000	120000	2B16006	EPA 8260D	02/16/22 12:12	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	6000	U	ug/L	10000	6000	25000	2B16006	EPA 8260D	02/16/22 12:12	KKW	
Styrene [100-42-5]^	6100	U	ug/L	10000	6100	25000	2B16006	EPA 8260D	02/16/22 12:12	KKW	
Tetrachloroethene [127-18-4]^	7600	U	ug/L	10000	7600	25000	2B16006	EPA 8260D	02/16/22 12:12	KKW	
Toluene [108-88-3]^	7200	U	ug/L	10000	7200	25000	2B16006	EPA 8260D	02/16/22 12:12	KKW	
trans-1,2-Dichloroethene [156-60-5]^	7300	U	ug/L	10000	7300	25000	2B16006	EPA 8260D	02/16/22 12:12	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	7300	U	ug/L	10000	7300	25000	2B16006	EPA 8260D	02/16/22 12:12	KKW	
Trichloroethene [79-01-6]^	**290000**		ug/L	10000	8900	25000	2B16006	EPA 8260D	02/16/22 12:12	KKW	
Trichlorofluoromethane [75-69-4]^	9400	U	ug/L	10000	9400	25000	2B16006	EPA 8260D	02/16/22 12:12	KKW	
Vinyl chloride [75-01-4]^	7100	U	ug/L	10000	7100	25000	2B16006	EPA 8260D	02/16/22 12:12	KKW	
Xylenes (Total) [1330-20-7]	13000	U	ug/L	10000	13000	50000	2B16006	EPA 8260D	02/16/22 12:12	KKW	

ANALYTICAL RESULTS

Description: LC34-RW18C-20220214 **Lab Sample ID:** AF00827-05 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 07:30 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*54*	*1*	*50.0*	*109 %*	*41-142*	*2B16006*	*EPA 8260D*	*02/16/22 12:12*	*KKW*	
Dibromofluoromethane	*54*	*1*	*50.0*	*108 %*	*53-146*	*2B16006*	*EPA 8260D*	*02/16/22 12:12*	*KKW*	
Toluene-d8	*54*	*1*	*50.0*	*108 %*	*41-146*	*2B16006*	*EPA 8260D*	*02/16/22 12:12*	*KKW*	

ANALYTICAL RESULTS

Description: LC34-RW19C-20220214 **Lab Sample ID:** AF00827-06 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 07:40 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	8000	U	ug/L	10000	8000	25000	2B16006	EPA 8260D	02/16/22 12:40	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	5400	U	ug/L	10000	5400	25000	2B16006	EPA 8260D	02/16/22 12:40	KKW	
1,1,2-Trichloroethane [79-00-5]^	7600	U	ug/L	10000	7600	25000	2B16006	EPA 8260D	02/16/22 12:40	KKW	
1,1-Dichloroethane [75-34-3]^	6200	U	ug/L	10000	6200	25000	2B16006	EPA 8260D	02/16/22 12:40	KKW	
1,1-Dichloroethene [75-35-4]^	9400	U	ug/L	10000	9400	25000	2B16006	EPA 8260D	02/16/22 12:40	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	7000	U	ug/L	10000	7000	25000	2B16006	EPA 8260D	02/16/22 12:40	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	9600	U	ug/L	10000	9600	25000	2B16006	EPA 8260D	02/16/22 12:40	KKW	
1,2-Dibromoethane [106-93-4]^	7800	U	ug/L	10000	7800	25000	2B16006	EPA 8260D	02/16/22 12:40	KKW	
1,2-Dichlorobenzene [95-50-1]^	7300	U	ug/L	10000	7300	25000	2B16006	EPA 8260D	02/16/22 12:40	KKW	
1,2-Dichloroethane [107-06-2]^	6300	U	ug/L	10000	6300	25000	2B16006	EPA 8260D	02/16/22 12:40	KKW	
1,2-Dichloropropane [78-87-5]^	8000	U	ug/L	10000	8000	25000	2B16006	EPA 8260D	02/16/22 12:40	KKW	
1,3-Dichlorobenzene [541-73-1]^	7700	U	ug/L	10000	7700	25000	2B16006	EPA 8260D	02/16/22 12:40	KKW	
1,4-Dichlorobenzene [106-46-7]^	7600	U	ug/L	10000	7600	25000	2B16006	EPA 8260D	02/16/22 12:40	KKW	
2-Butanone [78-93-3]^	45000	U	ug/L	10000	45000	120000	2B16006	EPA 8260D	02/16/22 12:40	KKW	
2-Hexanone [591-78-6]^	25000	U	ug/L	10000	25000	120000	2B16006	EPA 8260D	02/16/22 12:40	KKW	
4-Methyl-2-pentanone [108-10-1]^	25000	U	ug/L	10000	25000	120000	2B16006	EPA 8260D	02/16/22 12:40	KKW	
Acetone [67-64-1]^	100000	U	ug/L	10000	100000	250000	2B16006	EPA 8260D	02/16/22 12:40	KKW	
Benzene [71-43-2]^	7100	U	ug/L	10000	7100	25000	2B16006	EPA 8260D	02/16/22 12:40	KKW	
Bromodichloromethane [75-27-4]^	5200	U	ug/L	10000	5200	25000	2B16006	EPA 8260D	02/16/22 12:40	KKW	
Bromoform [75-25-2]^	7500	U	ug/L	10000	7500	25000	2B16006	EPA 8260D	02/16/22 12:40	KKW	
Bromomethane [74-83-9]^	9500	U	ug/L	10000	9500	25000	2B16006	EPA 8260D	02/16/22 12:40	KKW	QV-01
Carbon disulfide [75-15-0]^	25000	U	ug/L	10000	25000	120000	2B16006	EPA 8260D	02/16/22 12:40	KKW	QV-01
Carbon Tetrachloride [56-23-5]^	9400	U	ug/L	10000	9400	25000	2B16006	EPA 8260D	02/16/22 12:40	KKW	
Chlorobenzene [108-90-7]^	7200	U	ug/L	10000	7200	25000	2B16006	EPA 8260D	02/16/22 12:40	KKW	
Chloroethane [75-00-3]^	9800	U	ug/L	10000	9800	25000	2B16006	EPA 8260D	02/16/22 12:40	KKW	
Chloroform [67-66-3]^	8000	U	ug/L	10000	8000	25000	2B16006	EPA 8260D	02/16/22 12:40	KKW	
Chloromethane [74-87-3]^	8200	U	ug/L	10000	8200	25000	2B16006	EPA 8260D	02/16/22 12:40	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**7800**	I	ug/L	10000	5300	25000	2B16006	EPA 8260D	02/16/22 12:40	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	5900	U	ug/L	10000	5900	25000	2B16006	EPA 8260D	02/16/22 12:40	KKW	
Cyclohexane [110-82-7]^	9300	U	ug/L	10000	9300	25000	2B16006	EPA 8260D	02/16/22 12:40	KKW	
Dibromochloromethane [124-48-1]^	5000	U	ug/L	10000	5000	25000	2B16006	EPA 8260D	02/16/22 12:40	KKW	
Dichlorodifluoromethane [75-71-8]^	7400	U	ug/L	10000	7400	25000	2B16006	EPA 8260D	02/16/22 12:40	KKW	
Ethylbenzene [100-41-4]^	6900	U	ug/L	10000	6900	25000	2B16006	EPA 8260D	02/16/22 12:40	KKW	
Freon 113 [76-13-1]^	7300	U	ug/L	10000	7300	25000	2B16006	EPA 8260D	02/16/22 12:40	KKW	
Isopropylbenzene [98-82-8]^	6700	U	ug/L	10000	6700	25000	2B16006	EPA 8260D	02/16/22 12:40	KKW	
Methyl acetate [79-20-9]^	9500	U	ug/L	10000	9500	25000	2B16006	EPA 8260D	02/16/22 12:40	KKW	
Methylene Chloride [75-09-2]^	25000	U	ug/L	10000	25000	120000	2B16006	EPA 8260D	02/16/22 12:40	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	6000	U	ug/L	10000	6000	25000	2B16006	EPA 8260D	02/16/22 12:40	KKW	
Styrene [100-42-5]^	6100	U	ug/L	10000	6100	25000	2B16006	EPA 8260D	02/16/22 12:40	KKW	
Tetrachloroethene [127-18-4]^	7600	U	ug/L	10000	7600	25000	2B16006	EPA 8260D	02/16/22 12:40	KKW	
Toluene [108-88-3]^	7200	U	ug/L	10000	7200	25000	2B16006	EPA 8260D	02/16/22 12:40	KKW	
trans-1,2-Dichloroethene [156-60-5]^	7300	U	ug/L	10000	7300	25000	2B16006	EPA 8260D	02/16/22 12:40	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	7300	U	ug/L	10000	7300	25000	2B16006	EPA 8260D	02/16/22 12:40	KKW	
Trichloroethene [79-01-6]^	**530000**		ug/L	10000	8900	25000	2B16006	EPA 8260D	02/16/22 12:40	KKW	
Trichlorofluoromethane [75-69-4]^	9400	U	ug/L	10000	9400	25000	2B16006	EPA 8260D	02/16/22 12:40	KKW	
Vinyl chloride [75-01-4]^	7100	U	ug/L	10000	7100	25000	2B16006	EPA 8260D	02/16/22 12:40	KKW	
Xylenes (Total) [1330-20-7]	13000	U	ug/L	10000	13000	50000	2B16006	EPA 8260D	02/16/22 12:40	KKW	

ANALYTICAL RESULTS

Description: LC34-RW19C-20220214 **Lab Sample ID:** AF00827-06 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 07:40 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*55*	*1*	*50.0*	*110 %*	*41-142*	*2B16006*	*EPA 8260D*	*02/16/22 12:40*	*KKW*	
Dibromofluoromethane	*56*	*1*	*50.0*	*113 %*	*53-146*	*2B16006*	*EPA 8260D*	*02/16/22 12:40*	*KKW*	
Toluene-d8	*54*	*1*	*50.0*	*108 %*	*41-146*	*2B16006*	*EPA 8260D*	*02/16/22 12:40*	*KKW*	

ANALYTICAL RESULTS

Description: LC34-RW20C-20220214 **Lab Sample ID:** AF00827-07 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 07:50 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	4000	U	ug/L	5000	4000	12000	2B16006	EPA 8260D	02/16/22 13:08	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	2700	U	ug/L	5000	2700	12000	2B16006	EPA 8260D	02/16/22 13:08	KKW	
1,1,2-Trichloroethane [79-00-5]^	3800	U	ug/L	5000	3800	12000	2B16006	EPA 8260D	02/16/22 13:08	KKW	
1,1-Dichloroethane [75-34-3]^	3100	U	ug/L	5000	3100	12000	2B16006	EPA 8260D	02/16/22 13:08	KKW	
1,1-Dichloroethene [75-35-4]^	4700	U	ug/L	5000	4700	12000	2B16006	EPA 8260D	02/16/22 13:08	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	3500	U	ug/L	5000	3500	12000	2B16006	EPA 8260D	02/16/22 13:08	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	4800	U	ug/L	5000	4800	12000	2B16006	EPA 8260D	02/16/22 13:08	KKW	
1,2-Dibromoethane [106-93-4]^	3900	U	ug/L	5000	3900	12000	2B16006	EPA 8260D	02/16/22 13:08	KKW	
1,2-Dichlorobenzene [95-50-1]^	3600	U	ug/L	5000	3600	12000	2B16006	EPA 8260D	02/16/22 13:08	KKW	
1,2-Dichloroethane [107-06-2]^	3200	U	ug/L	5000	3200	12000	2B16006	EPA 8260D	02/16/22 13:08	KKW	
1,2-Dichloropropane [78-87-5]^	4000	U	ug/L	5000	4000	12000	2B16006	EPA 8260D	02/16/22 13:08	KKW	
1,3-Dichlorobenzene [541-73-1]^	3800	U	ug/L	5000	3800	12000	2B16006	EPA 8260D	02/16/22 13:08	KKW	
1,4-Dichlorobenzene [106-46-7]^	3800	U	ug/L	5000	3800	12000	2B16006	EPA 8260D	02/16/22 13:08	KKW	
2-Butanone [78-93-3]^	22000	U	ug/L	5000	22000	62000	2B16006	EPA 8260D	02/16/22 13:08	KKW	
2-Hexanone [591-78-6]^	12000	U	ug/L	5000	12000	62000	2B16006	EPA 8260D	02/16/22 13:08	KKW	
4-Methyl-2-pentanone [108-10-1]^	12000	U	ug/L	5000	12000	62000	2B16006	EPA 8260D	02/16/22 13:08	KKW	
Acetone [67-64-1]^	50000	U	ug/L	5000	50000	120000	2B16006	EPA 8260D	02/16/22 13:08	KKW	
Benzene [71-43-2]^	3600	U	ug/L	5000	3600	12000	2B16006	EPA 8260D	02/16/22 13:08	KKW	
Bromodichloromethane [75-27-4]^	2600	U	ug/L	5000	2600	12000	2B16006	EPA 8260D	02/16/22 13:08	KKW	
Bromoform [75-25-2]^	3800	U	ug/L	5000	3800	12000	2B16006	EPA 8260D	02/16/22 13:08	KKW	
Bromomethane [74-83-9]^	4800	U	ug/L	5000	4800	12000	2B16006	EPA 8260D	02/16/22 13:08	KKW	QV-01
Carbon disulfide [75-15-0]^	12000	U	ug/L	5000	12000	62000	2B16006	EPA 8260D	02/16/22 13:08	KKW	QV-01
Carbon Tetrachloride [56-23-5]^	4700	U	ug/L	5000	4700	12000	2B16006	EPA 8260D	02/16/22 13:08	KKW	
Chlorobenzene [108-90-7]^	3600	U	ug/L	5000	3600	12000	2B16006	EPA 8260D	02/16/22 13:08	KKW	
Chloroethane [75-00-3]^	4900	U	ug/L	5000	4900	12000	2B16006	EPA 8260D	02/16/22 13:08	KKW	
Chloroform [67-66-3]^	4000	U	ug/L	5000	4000	12000	2B16006	EPA 8260D	02/16/22 13:08	KKW	
Chloromethane [74-87-3]^	4100	U	ug/L	5000	4100	12000	2B16006	EPA 8260D	02/16/22 13:08	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**7200**	I	ug/L	5000	2600	12000	2B16006	EPA 8260D	02/16/22 13:08	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	3000	U	ug/L	5000	3000	12000	2B16006	EPA 8260D	02/16/22 13:08	KKW	
Cyclohexane [110-82-7]^	4600	U	ug/L	5000	4600	12000	2B16006	EPA 8260D	02/16/22 13:08	KKW	
Dibromochloromethane [124-48-1]^	2500	U	ug/L	5000	2500	12000	2B16006	EPA 8260D	02/16/22 13:08	KKW	
Dichlorodifluoromethane [75-71-8]^	3700	U	ug/L	5000	3700	12000	2B16006	EPA 8260D	02/16/22 13:08	KKW	
Ethylbenzene [100-41-4]^	3400	U	ug/L	5000	3400	12000	2B16006	EPA 8260D	02/16/22 13:08	KKW	
Freon 113 [76-13-1]^	3600	U	ug/L	5000	3600	12000	2B16006	EPA 8260D	02/16/22 13:08	KKW	
Isopropylbenzene [98-82-8]^	3400	U	ug/L	5000	3400	12000	2B16006	EPA 8260D	02/16/22 13:08	KKW	
Methyl acetate [79-20-9]^	4800	U	ug/L	5000	4800	12000	2B16006	EPA 8260D	02/16/22 13:08	KKW	
Methylene Chloride [75-09-2]^	12000	U	ug/L	5000	12000	62000	2B16006	EPA 8260D	02/16/22 13:08	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	3000	U	ug/L	5000	3000	12000	2B16006	EPA 8260D	02/16/22 13:08	KKW	
Styrene [100-42-5]^	3000	U	ug/L	5000	3000	12000	2B16006	EPA 8260D	02/16/22 13:08	KKW	
Tetrachloroethene [127-18-4]^	3800	U	ug/L	5000	3800	12000	2B16006	EPA 8260D	02/16/22 13:08	KKW	
Toluene [108-88-3]^	3600	U	ug/L	5000	3600	12000	2B16006	EPA 8260D	02/16/22 13:08	KKW	
trans-1,2-Dichloroethene [156-60-5]^	3600	U	ug/L	5000	3600	12000	2B16006	EPA 8260D	02/16/22 13:08	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	3600	U	ug/L	5000	3600	12000	2B16006	EPA 8260D	02/16/22 13:08	KKW	
Trichloroethene [79-01-6]^	**170000**		ug/L	5000	4400	12000	2B16006	EPA 8260D	02/16/22 13:08	KKW	
Trichlorofluoromethane [75-69-4]^	4700	U	ug/L	5000	4700	12000	2B16006	EPA 8260D	02/16/22 13:08	KKW	
Vinyl chloride [75-01-4]^	3600	U	ug/L	5000	3600	12000	2B16006	EPA 8260D	02/16/22 13:08	KKW	
Xylenes (Total) [1330-20-7]	6500	U	ug/L	5000	6500	25000	2B16006	EPA 8260D	02/16/22 13:08	KKW	

ANALYTICAL RESULTS

Description: LC34-RW20C-20220214 **Lab Sample ID:** AF00827-07 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 07:50 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*56*	*1*	*50.0*	*112 %*	*41-142*	*2B16006*	*EPA 8260D*	*02/16/22 13:08*	*KKW*	
Dibromofluoromethane	*57*	*1*	*50.0*	*113 %*	*53-146*	*2B16006*	*EPA 8260D*	*02/16/22 13:08*	*KKW*	
Toluene-d8	*54*	*1*	*50.0*	*109 %*	*41-146*	*2B16006*	*EPA 8260D*	*02/16/22 13:08*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZI-040.0-20220214 **Lab Sample ID:** AF00827-08 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 08:00 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyc

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	800	U	ug/L	1000	800	2500	2B16006	EPA 8260D	02/16/22 13:35	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	540	U	ug/L	1000	540	2500	2B16006	EPA 8260D	02/16/22 13:35	KKW	
1,1,2-Trichloroethane [79-00-5]^	760	U	ug/L	1000	760	2500	2B16006	EPA 8260D	02/16/22 13:35	KKW	
1,1-Dichloroethane [75-34-3]^	620	U	ug/L	1000	620	2500	2B16006	EPA 8260D	02/16/22 13:35	KKW	
1,1-Dichloroethene [75-35-4]^	940	U	ug/L	1000	940	2500	2B16006	EPA 8260D	02/16/22 13:35	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	700	U	ug/L	1000	700	2500	2B16006	EPA 8260D	02/16/22 13:35	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	960	U	ug/L	1000	960	2500	2B16006	EPA 8260D	02/16/22 13:35	KKW	
1,2-Dibromoethane [106-93-4]^	780	U	ug/L	1000	780	2500	2B16006	EPA 8260D	02/16/22 13:35	KKW	
1,2-Dichlorobenzene [95-50-1]^	730	U	ug/L	1000	730	2500	2B16006	EPA 8260D	02/16/22 13:35	KKW	
1,2-Dichloroethane [107-06-2]^	630	U	ug/L	1000	630	2500	2B16006	EPA 8260D	02/16/22 13:35	KKW	
1,2-Dichloropropane [78-87-5]^	800	U	ug/L	1000	800	2500	2B16006	EPA 8260D	02/16/22 13:35	KKW	
1,3-Dichlorobenzene [541-73-1]^	770	U	ug/L	1000	770	2500	2B16006	EPA 8260D	02/16/22 13:35	KKW	
1,4-Dichlorobenzene [106-46-7]^	760	U	ug/L	1000	760	2500	2B16006	EPA 8260D	02/16/22 13:35	KKW	
2-Butanone [78-93-3]^	4500	U	ug/L	1000	4500	12000	2B16006	EPA 8260D	02/16/22 13:35	KKW	
2-Hexanone [591-78-6]^	2500	U	ug/L	1000	2500	12000	2B16006	EPA 8260D	02/16/22 13:35	KKW	
4-Methyl-2-pentanone [108-10-1]^	2500	U	ug/L	1000	2500	12000	2B16006	EPA 8260D	02/16/22 13:35	KKW	
Acetone [67-64-1]^	10000	U	ug/L	1000	10000	25000	2B16006	EPA 8260D	02/16/22 13:35	KKW	
Benzene [71-43-2]^	710	U	ug/L	1000	710	2500	2B16006	EPA 8260D	02/16/22 13:35	KKW	
Bromodichloromethane [75-27-4]^	520	U	ug/L	1000	520	2500	2B16006	EPA 8260D	02/16/22 13:35	KKW	
Bromoform [75-25-2]^	750	U	ug/L	1000	750	2500	2B16006	EPA 8260D	02/16/22 13:35	KKW	
Bromomethane [74-83-9]^	950	U	ug/L	1000	950	2500	2B16006	EPA 8260D	02/16/22 13:35	KKW	QV-01
Carbon disulfide [75-15-0]^	2500	U	ug/L	1000	2500	12000	2B16006	EPA 8260D	02/16/22 13:35	KKW	QV-01
Carbon Tetrachloride [56-23-5]^	940	U	ug/L	1000	940	2500	2B16006	EPA 8260D	02/16/22 13:35	KKW	
Chlorobenzene [108-90-7]^	720	U	ug/L	1000	720	2500	2B16006	EPA 8260D	02/16/22 13:35	KKW	
Chloroethane [75-00-3]^	980	U	ug/L	1000	980	2500	2B16006	EPA 8260D	02/16/22 13:35	KKW	
Chloroform [67-66-3]^	800	U	ug/L	1000	800	2500	2B16006	EPA 8260D	02/16/22 13:35	KKW	
Chloromethane [74-87-3]^	820	U	ug/L	1000	820	2500	2B16006	EPA 8260D	02/16/22 13:35	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**27000**		ug/L	1000	530	2500	2B16006	EPA 8260D	02/16/22 13:35	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	590	U	ug/L	1000	590	2500	2B16006	EPA 8260D	02/16/22 13:35	KKW	
Cyclohexane [110-82-7]^	930	U	ug/L	1000	930	2500	2B16006	EPA 8260D	02/16/22 13:35	KKW	
Dibromochloromethane [124-48-1]^	500	U	ug/L	1000	500	2500	2B16006	EPA 8260D	02/16/22 13:35	KKW	
Dichlorodifluoromethane [75-71-8]^	740	U	ug/L	1000	740	2500	2B16006	EPA 8260D	02/16/22 13:35	KKW	
Ethylbenzene [100-41-4]^	690	U	ug/L	1000	690	2500	2B16006	EPA 8260D	02/16/22 13:35	KKW	
Freon 113 [76-13-1]^	730	U	ug/L	1000	730	2500	2B16006	EPA 8260D	02/16/22 13:35	KKW	
Isopropylbenzene [98-82-8]^	670	U	ug/L	1000	670	2500	2B16006	EPA 8260D	02/16/22 13:35	KKW	
Methyl acetate [79-20-9]^	950	U	ug/L	1000	950	2500	2B16006	EPA 8260D	02/16/22 13:35	KKW	
Methylene Chloride [75-09-2]^	2500	U	ug/L	1000	2500	12000	2B16006	EPA 8260D	02/16/22 13:35	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	600	U	ug/L	1000	600	2500	2B16006	EPA 8260D	02/16/22 13:35	KKW	
Styrene [100-42-5]^	610	U	ug/L	1000	610	2500	2B16006	EPA 8260D	02/16/22 13:35	KKW	
Tetrachloroethene [127-18-4]^	760	U	ug/L	1000	760	2500	2B16006	EPA 8260D	02/16/22 13:35	KKW	
Toluene [108-88-3]^	720	U	ug/L	1000	720	2500	2B16006	EPA 8260D	02/16/22 13:35	KKW	
trans-1,2-Dichloroethene [156-60-5]^	730	U	ug/L	1000	730	2500	2B16006	EPA 8260D	02/16/22 13:35	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	730	U	ug/L	1000	730	2500	2B16006	EPA 8260D	02/16/22 13:35	KKW	
Trichloroethene [79-01-6]^	**24000**		ug/L	1000	890	2500	2B16006	EPA 8260D	02/16/22 13:35	KKW	
Trichlorofluoromethane [75-69-4]^	940	U	ug/L	1000	940	2500	2B16006	EPA 8260D	02/16/22 13:35	KKW	
Vinyl chloride [75-01-4]^	710	U	ug/L	1000	710	2500	2B16006	EPA 8260D	02/16/22 13:35	KKW	
Xylenes (Total) [1330-20-7]	1300	U	ug/L	1000	1300	5000	2B16006	EPA 8260D	02/16/22 13:35	KKW	

ANALYTICAL RESULTS

Description: LC34PS-PZI-040.0-20220214 **Lab Sample ID:** AF00827-08 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 08:00 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*54*	*1*	*50.0*	*108 %*	*41-142*	*2B16006*	*EPA 8260D*	*02/16/22 13:35*	*KKW*	
Dibromofluoromethane	*54*	*1*	*50.0*	*109 %*	*53-146*	*2B16006*	*EPA 8260D*	*02/16/22 13:35*	*KKW*	
Toluene-d8	*54*	*1*	*50.0*	*107 %*	*41-146*	*2B16006*	*EPA 8260D*	*02/16/22 13:35*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZI-050.0-20220214 **Lab Sample ID:** AF00827-09 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 08:02 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	2000	U	ug/L	2500	2000	6200	2B16006	EPA 8260D	02/16/22 14:03	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	1400	U	ug/L	2500	1400	6200	2B16006	EPA 8260D	02/16/22 14:03	KKW	
1,1,2-Trichloroethane [79-00-5]^	1900	U	ug/L	2500	1900	6200	2B16006	EPA 8260D	02/16/22 14:03	KKW	
1,1-Dichloroethane [75-34-3]^	1600	U	ug/L	2500	1600	6200	2B16006	EPA 8260D	02/16/22 14:03	KKW	
1,1-Dichloroethene [75-35-4]^	2400	U	ug/L	2500	2400	6200	2B16006	EPA 8260D	02/16/22 14:03	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	1800	U	ug/L	2500	1800	6200	2B16006	EPA 8260D	02/16/22 14:03	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	2400	U	ug/L	2500	2400	6200	2B16006	EPA 8260D	02/16/22 14:03	KKW	
1,2-Dibromoethane [106-93-4]^	2000	U	ug/L	2500	2000	6200	2B16006	EPA 8260D	02/16/22 14:03	KKW	
1,2-Dichlorobenzene [95-50-1]^	1800	U	ug/L	2500	1800	6200	2B16006	EPA 8260D	02/16/22 14:03	KKW	
1,2-Dichloroethane [107-06-2]^	1600	U	ug/L	2500	1600	6200	2B16006	EPA 8260D	02/16/22 14:03	KKW	
1,2-Dichloropropane [78-87-5]^	2000	U	ug/L	2500	2000	6200	2B16006	EPA 8260D	02/16/22 14:03	KKW	
1,3-Dichlorobenzene [541-73-1]^	1900	U	ug/L	2500	1900	6200	2B16006	EPA 8260D	02/16/22 14:03	KKW	
1,4-Dichlorobenzene [106-46-7]^	1900	U	ug/L	2500	1900	6200	2B16006	EPA 8260D	02/16/22 14:03	KKW	
2-Butanone [78-93-3]^	11000	U	ug/L	2500	11000	31000	2B16006	EPA 8260D	02/16/22 14:03	KKW	
2-Hexanone [591-78-6]^	6200	U	ug/L	2500	6200	31000	2B16006	EPA 8260D	02/16/22 14:03	KKW	
4-Methyl-2-pentanone [108-10-1]^	6200	U	ug/L	2500	6200	31000	2B16006	EPA 8260D	02/16/22 14:03	KKW	
Acetone [67-64-1]^	25000	U	ug/L	2500	25000	62000	2B16006	EPA 8260D	02/16/22 14:03	KKW	
Benzene [71-43-2]^	1800	U	ug/L	2500	1800	6200	2B16006	EPA 8260D	02/16/22 14:03	KKW	
Bromodichloromethane [75-27-4]^	1300	U	ug/L	2500	1300	6200	2B16006	EPA 8260D	02/16/22 14:03	KKW	
Bromoform [75-25-2]^	1900	U	ug/L	2500	1900	6200	2B16006	EPA 8260D	02/16/22 14:03	KKW	
Bromomethane [74-83-9]^	2400	U	ug/L	2500	2400	6200	2B16006	EPA 8260D	02/16/22 14:03	KKW	QV-01
Carbon disulfide [75-15-0]^	6200	U	ug/L	2500	6200	31000	2B16006	EPA 8260D	02/16/22 14:03	KKW	QV-01
Carbon Tetrachloride [56-23-5]^	2400	U	ug/L	2500	2400	6200	2B16006	EPA 8260D	02/16/22 14:03	KKW	
Chlorobenzene [108-90-7]^	1800	U	ug/L	2500	1800	6200	2B16006	EPA 8260D	02/16/22 14:03	KKW	
Chloroethane [75-00-3]^	2400	U	ug/L	2500	2400	6200	2B16006	EPA 8260D	02/16/22 14:03	KKW	
Chloroform [67-66-3]^	2000	U	ug/L	2500	2000	6200	2B16006	EPA 8260D	02/16/22 14:03	KKW	
Chloromethane [74-87-3]^	2000	U	ug/L	2500	2000	6200	2B16006	EPA 8260D	02/16/22 14:03	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**12000**		ug/L	2500	1300	6200	2B16006	EPA 8260D	02/16/22 14:03	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	1500	U	ug/L	2500	1500	6200	2B16006	EPA 8260D	02/16/22 14:03	KKW	
Cyclohexane [110-82-7]^	2300	U	ug/L	2500	2300	6200	2B16006	EPA 8260D	02/16/22 14:03	KKW	
Dibromochloromethane [124-48-1]^	1200	U	ug/L	2500	1200	6200	2B16006	EPA 8260D	02/16/22 14:03	KKW	
Dichlorodifluoromethane [75-71-8]^	1800	U	ug/L	2500	1800	6200	2B16006	EPA 8260D	02/16/22 14:03	KKW	
Ethylbenzene [100-41-4]^	1700	U	ug/L	2500	1700	6200	2B16006	EPA 8260D	02/16/22 14:03	KKW	
Freon 113 [76-13-1]^	1800	U	ug/L	2500	1800	6200	2B16006	EPA 8260D	02/16/22 14:03	KKW	
Isopropylbenzene [98-82-8]^	1700	U	ug/L	2500	1700	6200	2B16006	EPA 8260D	02/16/22 14:03	KKW	
Methyl acetate [79-20-9]^	2400	U	ug/L	2500	2400	6200	2B16006	EPA 8260D	02/16/22 14:03	KKW	
Methylene Chloride [75-09-2]^	6200	U	ug/L	2500	6200	31000	2B16006	EPA 8260D	02/16/22 14:03	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	1500	U	ug/L	2500	1500	6200	2B16006	EPA 8260D	02/16/22 14:03	KKW	
Styrene [100-42-5]^	1500	U	ug/L	2500	1500	6200	2B16006	EPA 8260D	02/16/22 14:03	KKW	
Tetrachloroethene [127-18-4]^	1900	U	ug/L	2500	1900	6200	2B16006	EPA 8260D	02/16/22 14:03	KKW	
Toluene [108-88-3]^	1800	U	ug/L	2500	1800	6200	2B16006	EPA 8260D	02/16/22 14:03	KKW	
trans-1,2-Dichloroethene [156-60-5]^	1800	U	ug/L	2500	1800	6200	2B16006	EPA 8260D	02/16/22 14:03	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	1800	U	ug/L	2500	1800	6200	2B16006	EPA 8260D	02/16/22 14:03	KKW	
Trichloroethene [79-01-6]^	**180000**		ug/L	2500	2200	6200	2B16006	EPA 8260D	02/16/22 14:03	KKW	
Trichlorofluoromethane [75-69-4]^	2400	U	ug/L	2500	2400	6200	2B16006	EPA 8260D	02/16/22 14:03	KKW	
Vinyl chloride [75-01-4]^	1800	U	ug/L	2500	1800	6200	2B16006	EPA 8260D	02/16/22 14:03	KKW	
Xylenes (Total) [1330-20-7]	3200	U	ug/L	2500	3200	12000	2B16006	EPA 8260D	02/16/22 14:03	KKW	

ANALYTICAL RESULTS

Description: LC34PS-PZI-050.0-20220214 **Lab Sample ID:** AF00827-09 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 08:02 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*54*	*1*	*50.0*	*109 %*	*41-142*	*2B16006*	*EPA 8260D*	*02/16/22 14:03*	*KKW*	
Dibromofluoromethane	*54*	*1*	*50.0*	*108 %*	*53-146*	*2B16006*	*EPA 8260D*	*02/16/22 14:03*	*KKW*	
Toluene-d8	*52*	*1*	*50.0*	*104 %*	*41-146*	*2B16006*	*EPA 8260D*	*02/16/22 14:03*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZI-058.0-20220214 **Lab Sample ID:** AF00827-10 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 08:04 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	400	U	ug/L	500	400	1200	2B17014	EPA 8260D	02/17/22 13:40	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	270	U	ug/L	500	270	1200	2B17014	EPA 8260D	02/17/22 13:40	KKW	
1,1,2-Trichloroethane [79-00-5]^	380	U	ug/L	500	380	1200	2B17014	EPA 8260D	02/17/22 13:40	KKW	
1,1-Dichloroethane [75-34-3]^	310	U	ug/L	500	310	1200	2B17014	EPA 8260D	02/17/22 13:40	KKW	
1,1-Dichloroethene [75-35-4]^	470	U	ug/L	500	470	1200	2B17014	EPA 8260D	02/17/22 13:40	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	350	U	ug/L	500	350	1200	2B17014	EPA 8260D	02/17/22 13:40	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	480	U	ug/L	500	480	1200	2B17014	EPA 8260D	02/17/22 13:40	KKW	
1,2-Dibromoethane [106-93-4]^	390	U	ug/L	500	390	1200	2B17014	EPA 8260D	02/17/22 13:40	KKW	
1,2-Dichlorobenzene [95-50-1]^	360	U	ug/L	500	360	1200	2B17014	EPA 8260D	02/17/22 13:40	KKW	
1,2-Dichloroethane [107-06-2]^	320	U	ug/L	500	320	1200	2B17014	EPA 8260D	02/17/22 13:40	KKW	
1,2-Dichloropropane [78-87-5]^	400	U	ug/L	500	400	1200	2B17014	EPA 8260D	02/17/22 13:40	KKW	
1,3-Dichlorobenzene [541-73-1]^	380	U	ug/L	500	380	1200	2B17014	EPA 8260D	02/17/22 13:40	KKW	
1,4-Dichlorobenzene [106-46-7]^	380	U	ug/L	500	380	1200	2B17014	EPA 8260D	02/17/22 13:40	KKW	
2-Butanone [78-93-3]^	2200	U	ug/L	500	2200	6200	2B17014	EPA 8260D	02/17/22 13:40	KKW	
2-Hexanone [591-78-6]^	1200	U	ug/L	500	1200	6200	2B17014	EPA 8260D	02/17/22 13:40	KKW	
4-Methyl-2-pentanone [108-10-1]^	1200	U	ug/L	500	1200	6200	2B17014	EPA 8260D	02/17/22 13:40	KKW	
Acetone [67-64-1]^	5000	U	ug/L	500	5000	12000	2B17014	EPA 8260D	02/17/22 13:40	KKW	
Benzene [71-43-2]^	360	U	ug/L	500	360	1200	2B17014	EPA 8260D	02/17/22 13:40	KKW	
Bromodichloromethane [75-27-4]^	260	U	ug/L	500	260	1200	2B17014	EPA 8260D	02/17/22 13:40	KKW	
Bromoform [75-25-2]^	380	U	ug/L	500	380	1200	2B17014	EPA 8260D	02/17/22 13:40	KKW	
Bromomethane [74-83-9]^	480	U	ug/L	500	480	1200	2B17014	EPA 8260D	02/17/22 13:40	KKW	QV-01
Carbon disulfide [75-15-0]^	1200	U	ug/L	500	1200	6200	2B17014	EPA 8260D	02/17/22 13:40	KKW	QV-01
Carbon Tetrachloride [56-23-5]^	470	U	ug/L	500	470	1200	2B17014	EPA 8260D	02/17/22 13:40	KKW	QV-01
Chlorobenzene [108-90-7]^	360	U	ug/L	500	360	1200	2B17014	EPA 8260D	02/17/22 13:40	KKW	
Chloroethane [75-00-3]^	490	U	ug/L	500	490	1200	2B17014	EPA 8260D	02/17/22 13:40	KKW	
Chloroform [67-66-3]^	400	U	ug/L	500	400	1200	2B17014	EPA 8260D	02/17/22 13:40	KKW	
Chloromethane [74-87-3]^	410	U	ug/L	500	410	1200	2B17014	EPA 8260D	02/17/22 13:40	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**10000**		ug/L	500	260	1200	2B17014	EPA 8260D	02/17/22 13:40	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	300	U	ug/L	500	300	1200	2B17014	EPA 8260D	02/17/22 13:40	KKW	
Cyclohexane [110-82-7]^	460	U	ug/L	500	460	1200	2B17014	EPA 8260D	02/17/22 13:40	KKW	
Dibromochloromethane [124-48-1]^	250	U	ug/L	500	250	1200	2B17014	EPA 8260D	02/17/22 13:40	KKW	
Dichlorodifluoromethane [75-71-8]^	370	U	ug/L	500	370	1200	2B17014	EPA 8260D	02/17/22 13:40	KKW	
Ethylbenzene [100-41-4]^	340	U	ug/L	500	340	1200	2B17014	EPA 8260D	02/17/22 13:40	KKW	
Freon 113 [76-13-1]^	360	U	ug/L	500	360	1200	2B17014	EPA 8260D	02/17/22 13:40	KKW	
Isopropylbenzene [98-82-8]^	340	U	ug/L	500	340	1200	2B17014	EPA 8260D	02/17/22 13:40	KKW	
Methyl acetate [79-20-9]^	480	U	ug/L	500	480	1200	2B17014	EPA 8260D	02/17/22 13:40	KKW	
Methylene Chloride [75-09-2]^	1200	U	ug/L	500	1200	6200	2B17014	EPA 8260D	02/17/22 13:40	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	300	U	ug/L	500	300	1200	2B17014	EPA 8260D	02/17/22 13:40	KKW	
Styrene [100-42-5]^	300	U	ug/L	500	300	1200	2B17014	EPA 8260D	02/17/22 13:40	KKW	
Tetrachloroethene [127-18-4]^	380	U	ug/L	500	380	1200	2B17014	EPA 8260D	02/17/22 13:40	KKW	
Toluene [108-88-3]^	360	U	ug/L	500	360	1200	2B17014	EPA 8260D	02/17/22 13:40	KKW	
trans-1,2-Dichloroethene [156-60-5]^	360	U	ug/L	500	360	1200	2B17014	EPA 8260D	02/17/22 13:40	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	360	U	ug/L	500	360	1200	2B17014	EPA 8260D	02/17/22 13:40	KKW	
Trichloroethene [79-01-6]^	**27000**		ug/L	500	440	1200	2B17014	EPA 8260D	02/17/22 13:40	KKW	
Trichlorofluoromethane [75-69-4]^	470	U	ug/L	500	470	1200	2B17014	EPA 8260D	02/17/22 13:40	KKW	
Vinyl chloride [75-01-4]^	**390**	I	ug/L	500	360	1200	2B17014	EPA 8260D	02/17/22 13:40	KKW	
Xylenes (Total) [1330-20-7]	650	U	ug/L	500	650	2500	2B17014	EPA 8260D	02/17/22 13:40	KKW	

ANALYTICAL RESULTS

Description: LC34PS-PZI-058.0-20220214 **Lab Sample ID:** AF00827-10 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 08:04 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*55*	*1*	*50.0*	*109 %*	*41-142*	*2B17014*	*EPA 8260D*	*02/17/22 13:40*	*KKW*	
Dibromofluoromethane	*51*	*1*	*50.0*	*102 %*	*53-146*	*2B17014*	*EPA 8260D*	*02/17/22 13:40*	*KKW*	
Toluene-d8	*51*	*1*	*50.0*	*101 %*	*41-146*	*2B17014*	*EPA 8260D*	*02/17/22 13:40*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZI-073.0-20220214 **Lab Sample ID:** AF00827-11 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 08:06 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	2B16006	EPA 8260D	02/16/22 14:59	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	2B16006	EPA 8260D	02/16/22 14:59	KKW	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	2B16006	EPA 8260D	02/16/22 14:59	KKW	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	2B16006	EPA 8260D	02/16/22 14:59	KKW	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	2B16006	EPA 8260D	02/16/22 14:59	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	2B16006	EPA 8260D	02/16/22 14:59	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	2B16006	EPA 8260D	02/16/22 14:59	KKW	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	2B16006	EPA 8260D	02/16/22 14:59	KKW	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	2B16006	EPA 8260D	02/16/22 14:59	KKW	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	2B16006	EPA 8260D	02/16/22 14:59	KKW	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	2B16006	EPA 8260D	02/16/22 14:59	KKW	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	2B16006	EPA 8260D	02/16/22 14:59	KKW	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	2B16006	EPA 8260D	02/16/22 14:59	KKW	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	2B16006	EPA 8260D	02/16/22 14:59	KKW	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	2B16006	EPA 8260D	02/16/22 14:59	KKW	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	2B16006	EPA 8260D	02/16/22 14:59	KKW	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	2B16006	EPA 8260D	02/16/22 14:59	KKW	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	2B16006	EPA 8260D	02/16/22 14:59	KKW	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	2B16006	EPA 8260D	02/16/22 14:59	KKW	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	2B16006	EPA 8260D	02/16/22 14:59	KKW	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	2B16006	EPA 8260D	02/16/22 14:59	KKW	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	2B16006	EPA 8260D	02/16/22 14:59	KKW	QV-01
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	2B16006	EPA 8260D	02/16/22 14:59	KKW	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	2B16006	EPA 8260D	02/16/22 14:59	KKW	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	2B16006	EPA 8260D	02/16/22 14:59	KKW	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	2B16006	EPA 8260D	02/16/22 14:59	KKW	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	2B16006	EPA 8260D	02/16/22 14:59	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**6.1**		ug/L	1	0.53	2.5	2B16006	EPA 8260D	02/16/22 14:59	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	2B16006	EPA 8260D	02/16/22 14:59	KKW	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	2B16006	EPA 8260D	02/16/22 14:59	KKW	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	2B16006	EPA 8260D	02/16/22 14:59	KKW	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	2B16006	EPA 8260D	02/16/22 14:59	KKW	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	2B16006	EPA 8260D	02/16/22 14:59	KKW	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	2B16006	EPA 8260D	02/16/22 14:59	KKW	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	2B16006	EPA 8260D	02/16/22 14:59	KKW	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	2B16006	EPA 8260D	02/16/22 14:59	KKW	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	2B16006	EPA 8260D	02/16/22 14:59	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	2B16006	EPA 8260D	02/16/22 14:59	KKW	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	2B16006	EPA 8260D	02/16/22 14:59	KKW	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	2B16006	EPA 8260D	02/16/22 14:59	KKW	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	2B16006	EPA 8260D	02/16/22 14:59	KKW	
trans-1,2-Dichloroethene [156-60-5]^	0.73	U	ug/L	1	0.73	2.5	2B16006	EPA 8260D	02/16/22 14:59	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	2B16006	EPA 8260D	02/16/22 14:59	KKW	
Trichloroethene [79-01-6]^	**4.4**		ug/L	1	0.89	2.5	2B16006	EPA 8260D	02/16/22 14:59	KKW	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	2B16006	EPA 8260D	02/16/22 14:59	KKW	
Vinyl chloride [75-01-4]^	**1.6**	I	ug/L	1	0.71	2.5	2B16006	EPA 8260D	02/16/22 14:59	KKW	
Xylenes (Total) [1330-20-7]	1.3	U	ug/L	1	1.3	5.0	2B16006	EPA 8260D	02/16/22 14:59	KKW	

ANALYTICAL RESULTS

Description: LC34PS-PZI-073.0-20220214 **Lab Sample ID:** AF00827-11 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 08:06 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*55*	*1*	*50.0*	*110 %*	*41-142*	*2B16006*	*EPA 8260D*	*02/16/22 14:59*	*KKW*	
Dibromofluoromethane	*54*	*1*	*50.0*	*108 %*	*53-146*	*2B16006*	*EPA 8260D*	*02/16/22 14:59*	*KKW*	
Toluene-d8	*53*	*1*	*50.0*	*105 %*	*41-146*	*2B16006*	*EPA 8260D*	*02/16/22 14:59*	*KKW*	

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ANALYTICAL RESULTS

Description: LC34PS-PZI-080.0-20220214 | **Lab Sample ID:** AF00827-12 | **Received:** 02/14/22 15:40

Matrix: Ground Water | **Sampled:** 02/14/22 08:08 | **Work Order:** AF00827

Project: NASA KSC LC34 | **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	2B16006	EPA 8260D	02/16/22 15:26	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	2B16006	EPA 8260D	02/16/22 15:26	KKW	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	2B16006	EPA 8260D	02/16/22 15:26	KKW	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	2B16006	EPA 8260D	02/16/22 15:26	KKW	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	2B16006	EPA 8260D	02/16/22 15:26	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	2B16006	EPA 8260D	02/16/22 15:26	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	2B16006	EPA 8260D	02/16/22 15:26	KKW	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	2B16006	EPA 8260D	02/16/22 15:26	KKW	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	2B16006	EPA 8260D	02/16/22 15:26	KKW	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	2B16006	EPA 8260D	02/16/22 15:26	KKW	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	2B16006	EPA 8260D	02/16/22 15:26	KKW	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	2B16006	EPA 8260D	02/16/22 15:26	KKW	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	2B16006	EPA 8260D	02/16/22 15:26	KKW	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	2B16006	EPA 8260D	02/16/22 15:26	KKW	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	2B16006	EPA 8260D	02/16/22 15:26	KKW	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	2B16006	EPA 8260D	02/16/22 15:26	KKW	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	2B16006	EPA 8260D	02/16/22 15:26	KKW	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	2B16006	EPA 8260D	02/16/22 15:26	KKW	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	2B16006	EPA 8260D	02/16/22 15:26	KKW	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	2B16006	EPA 8260D	02/16/22 15:26	KKW	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	2B16006	EPA 8260D	02/16/22 15:26	KKW	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	2B16006	EPA 8260D	02/16/22 15:26	KKW	QV-01
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	2B16006	EPA 8260D	02/16/22 15:26	KKW	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	2B16006	EPA 8260D	02/16/22 15:26	KKW	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	2B16006	EPA 8260D	02/16/22 15:26	KKW	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	2B16006	EPA 8260D	02/16/22 15:26	KKW	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	2B16006	EPA 8260D	02/16/22 15:26	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**4.0**		ug/L	1	0.53	2.5	2B16006	EPA 8260D	02/16/22 15:26	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	2B16006	EPA 8260D	02/16/22 15:26	KKW	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	2B16006	EPA 8260D	02/16/22 15:26	KKW	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	2B16006	EPA 8260D	02/16/22 15:26	KKW	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	2B16006	EPA 8260D	02/16/22 15:26	KKW	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	2B16006	EPA 8260D	02/16/22 15:26	KKW	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	2B16006	EPA 8260D	02/16/22 15:26	KKW	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	2B16006	EPA 8260D	02/16/22 15:26	KKW	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	2B16006	EPA 8260D	02/16/22 15:26	KKW	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	2B16006	EPA 8260D	02/16/22 15:26	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	2B16006	EPA 8260D	02/16/22 15:26	KKW	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	2B16006	EPA 8260D	02/16/22 15:26	KKW	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	2B16006	EPA 8260D	02/16/22 15:26	KKW	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	2B16006	EPA 8260D	02/16/22 15:26	KKW	
trans-1,2-Dichloroethene [156-60-5]^	0.73	U	ug/L	1	0.73	2.5	2B16006	EPA 8260D	02/16/22 15:26	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	2B16006	EPA 8260D	02/16/22 15:26	KKW	
Trichloroethene [79-01-6]^	**57**		ug/L	1	0.89	2.5	2B16006	EPA 8260D	02/16/22 15:26	KKW	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	2B16006	EPA 8260D	02/16/22 15:26	KKW	
Vinyl chloride [75-01-4]^	0.71	U	ug/L	1	0.71	2.5	2B16006	EPA 8260D	02/16/22 15:26	KKW	
Xylenes (Total) [1330-20-7]	1.3	U	ug/L	1	1.3	5.0	2B16006	EPA 8260D	02/16/22 15:26	KKW	

ANALYTICAL RESULTS

Description: LC34PS-PZI-080.0-20220214 **Lab Sample ID:** AF00827-12 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 08:08 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*56*	*1*	*50.0*	*111 %*	*41-142*	*2B16006*	*EPA 8260D*	*02/16/22 15:26*	*KKW*	
Dibromofluoromethane	*53*	*1*	*50.0*	*105 %*	*53-146*	*2B16006*	*EPA 8260D*	*02/16/22 15:26*	*KKW*	
Toluene-d8	*52*	*1*	*50.0*	*105 %*	*41-146*	*2B16006*	*EPA 8260D*	*02/16/22 15:26*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZH-040.0-20220214 **Lab Sample ID:** AF00827-13 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 08:30 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	160	U	ug/L	200	160	500	2B17014	EPA 8260D	02/17/22 14:08	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	110	U	ug/L	200	110	500	2B17014	EPA 8260D	02/17/22 14:08	KKW	
1,1,2-Trichloroethane [79-00-5]^	150	U	ug/L	200	150	500	2B17014	EPA 8260D	02/17/22 14:08	KKW	
1,1-Dichloroethane [75-34-3]^	120	U	ug/L	200	120	500	2B17014	EPA 8260D	02/17/22 14:08	KKW	
1,1-Dichloroethene [75-35-4]^	190	U	ug/L	200	190	500	2B17014	EPA 8260D	02/17/22 14:08	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	140	U	ug/L	200	140	500	2B17014	EPA 8260D	02/17/22 14:08	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	190	U	ug/L	200	190	500	2B17014	EPA 8260D	02/17/22 14:08	KKW	
1,2-Dibromoethane [106-93-4]^	160	U	ug/L	200	160	500	2B17014	EPA 8260D	02/17/22 14:08	KKW	
1,2-Dichlorobenzene [95-50-1]^	150	U	ug/L	200	150	500	2B17014	EPA 8260D	02/17/22 14:08	KKW	
1,2-Dichloroethane [107-06-2]^	130	U	ug/L	200	130	500	2B17014	EPA 8260D	02/17/22 14:08	KKW	
1,2-Dichloropropane [78-87-5]^	160	U	ug/L	200	160	500	2B17014	EPA 8260D	02/17/22 14:08	KKW	
1,3-Dichlorobenzene [541-73-1]^	150	U	ug/L	200	150	500	2B17014	EPA 8260D	02/17/22 14:08	KKW	
1,4-Dichlorobenzene [106-46-7]^	150	U	ug/L	200	150	500	2B17014	EPA 8260D	02/17/22 14:08	KKW	
2-Butanone [78-93-3]^	900	U	ug/L	200	900	2500	2B17014	EPA 8260D	02/17/22 14:08	KKW	
2-Hexanone [591-78-6]^	500	U	ug/L	200	500	2500	2B17014	EPA 8260D	02/17/22 14:08	KKW	
4-Methyl-2-pentanone [108-10-1]^	500	U	ug/L	200	500	2500	2B17014	EPA 8260D	02/17/22 14:08	KKW	
Acetone [67-64-1]^	2000	U	ug/L	200	2000	5000	2B17014	EPA 8260D	02/17/22 14:08	KKW	
Benzene [71-43-2]^	140	U	ug/L	200	140	500	2B17014	EPA 8260D	02/17/22 14:08	KKW	
Bromodichloromethane [75-27-4]^	100	U	ug/L	200	100	500	2B17014	EPA 8260D	02/17/22 14:08	KKW	
Bromoform [75-25-2]^	150	U	ug/L	200	150	500	2B17014	EPA 8260D	02/17/22 14:08	KKW	
Bromomethane [74-83-9]^	190	U	ug/L	200	190	500	2B17014	EPA 8260D	02/17/22 14:08	KKW	QV-01
Carbon disulfide [75-15-0]^	500	U	ug/L	200	500	2500	2B17014	EPA 8260D	02/17/22 14:08	KKW	QV-01
Carbon Tetrachloride [56-23-5]^	190	U	ug/L	200	190	500	2B17014	EPA 8260D	02/17/22 14:08	KKW	QV-01
Chlorobenzene [108-90-7]^	140	U	ug/L	200	140	500	2B17014	EPA 8260D	02/17/22 14:08	KKW	
Chloroethane [75-00-3]^	200	U	ug/L	200	200	500	2B17014	EPA 8260D	02/17/22 14:08	KKW	
Chloroform [67-66-3]^	160	U	ug/L	200	160	500	2B17014	EPA 8260D	02/17/22 14:08	KKW	
Chloromethane [74-87-3]^	160	U	ug/L	200	160	500	2B17014	EPA 8260D	02/17/22 14:08	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**2000**		ug/L	200	110	500	2B17014	EPA 8260D	02/17/22 14:08	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	120	U	ug/L	200	120	500	2B17014	EPA 8260D	02/17/22 14:08	KKW	
Cyclohexane [110-82-7]^	190	U	ug/L	200	190	500	2B17014	EPA 8260D	02/17/22 14:08	KKW	
Dibromochloromethane [124-48-1]^	100	U	ug/L	200	100	500	2B17014	EPA 8260D	02/17/22 14:08	KKW	
Dichlorodifluoromethane [75-71-8]^	150	U	ug/L	200	150	500	2B17014	EPA 8260D	02/17/22 14:08	KKW	
Ethylbenzene [100-41-4]^	140	U	ug/L	200	140	500	2B17014	EPA 8260D	02/17/22 14:08	KKW	
Freon 113 [76-13-1]^	150	U	ug/L	200	150	500	2B17014	EPA 8260D	02/17/22 14:08	KKW	
Isopropylbenzene [98-82-8]^	130	U	ug/L	200	130	500	2B17014	EPA 8260D	02/17/22 14:08	KKW	
Methyl acetate [79-20-9]^	190	U	ug/L	200	190	500	2B17014	EPA 8260D	02/17/22 14:08	KKW	
Methylene Chloride [75-09-2]^	500	U	ug/L	200	500	2500	2B17014	EPA 8260D	02/17/22 14:08	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	120	U	ug/L	200	120	500	2B17014	EPA 8260D	02/17/22 14:08	KKW	
Styrene [100-42-5]^	120	U	ug/L	200	120	500	2B17014	EPA 8260D	02/17/22 14:08	KKW	
Tetrachloroethene [127-18-4]^	150	U	ug/L	200	150	500	2B17014	EPA 8260D	02/17/22 14:08	KKW	
Toluene [108-88-3]^	140	U	ug/L	200	140	500	2B17014	EPA 8260D	02/17/22 14:08	KKW	
trans-1,2-Dichloroethene [156-60-5]^	150	U	ug/L	200	150	500	2B17014	EPA 8260D	02/17/22 14:08	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	150	U	ug/L	200	150	500	2B17014	EPA 8260D	02/17/22 14:08	KKW	
Trichloroethene [79-01-6]^	**13000**		ug/L	200	180	500	2B17014	EPA 8260D	02/17/22 14:08	KKW	
Trichlorofluoromethane [75-69-4]^	190	U	ug/L	200	190	500	2B17014	EPA 8260D	02/17/22 14:08	KKW	
Vinyl chloride [75-01-4]^	140	U	ug/L	200	140	500	2B17014	EPA 8260D	02/17/22 14:08	KKW	
Xylenes (Total) [1330-20-7]	260	U	ug/L	200	260	1000	2B17014	EPA 8260D	02/17/22 14:08	KKW	

ANALYTICAL RESULTS

Description: LC34PS-PZH-040.0-20220214 | **Lab Sample ID:** AF00827-13 | **Received:** 02/14/22 15:40

Matrix: Ground Water | **Sampled:** 02/14/22 08:30 | **Work Order:** AF00827

Project: NASA KSC LC34 | **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*54*	*1*	*50.0*	*108 %*	*41-142*	*2B17014*	*EPA 8260D*	*02/17/22 14:08*	*KKW*	
Dibromofluoromethane	*50*	*1*	*50.0*	*100 %*	*53-146*	*2B17014*	*EPA 8260D*	*02/17/22 14:08*	*KKW*	
Toluene-d8	*51*	*1*	*50.0*	*101 %*	*41-146*	*2B17014*	*EPA 8260D*	*02/17/22 14:08*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZH-050.0-20220214 **Lab Sample ID:** AF00827-14 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 08:32 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	4000	U	ug/L	5000	4000	12000	2B16006	EPA 8260D	02/16/22 16:22	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	2700	U	ug/L	5000	2700	12000	2B16006	EPA 8260D	02/16/22 16:22	KKW	
1,1,2-Trichloroethane [79-00-5]^	3800	U	ug/L	5000	3800	12000	2B16006	EPA 8260D	02/16/22 16:22	KKW	
1,1-Dichloroethane [75-34-3]^	3100	U	ug/L	5000	3100	12000	2B16006	EPA 8260D	02/16/22 16:22	KKW	
1,1-Dichloroethene [75-35-4]^	4700	U	ug/L	5000	4700	12000	2B16006	EPA 8260D	02/16/22 16:22	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	3500	U	ug/L	5000	3500	12000	2B16006	EPA 8260D	02/16/22 16:22	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	4800	U	ug/L	5000	4800	12000	2B16006	EPA 8260D	02/16/22 16:22	KKW	
1,2-Dibromoethane [106-93-4]^	3900	U	ug/L	5000	3900	12000	2B16006	EPA 8260D	02/16/22 16:22	KKW	
1,2-Dichlorobenzene [95-50-1]^	3600	U	ug/L	5000	3600	12000	2B16006	EPA 8260D	02/16/22 16:22	KKW	
1,2-Dichloroethane [107-06-2]^	3200	U	ug/L	5000	3200	12000	2B16006	EPA 8260D	02/16/22 16:22	KKW	
1,2-Dichloropropane [78-87-5]^	4000	U	ug/L	5000	4000	12000	2B16006	EPA 8260D	02/16/22 16:22	KKW	
1,3-Dichlorobenzene [541-73-1]^	3800	U	ug/L	5000	3800	12000	2B16006	EPA 8260D	02/16/22 16:22	KKW	
1,4-Dichlorobenzene [106-46-7]^	3800	U	ug/L	5000	3800	12000	2B16006	EPA 8260D	02/16/22 16:22	KKW	
2-Butanone [78-93-3]^	22000	U	ug/L	5000	22000	62000	2B16006	EPA 8260D	02/16/22 16:22	KKW	
2-Hexanone [591-78-6]^	12000	U	ug/L	5000	12000	62000	2B16006	EPA 8260D	02/16/22 16:22	KKW	
4-Methyl-2-pentanone [108-10-1]^	12000	U	ug/L	5000	12000	62000	2B16006	EPA 8260D	02/16/22 16:22	KKW	
Acetone [67-64-1]^	50000	U	ug/L	5000	50000	120000	2B16006	EPA 8260D	02/16/22 16:22	KKW	
Benzene [71-43-2]^	3600	U	ug/L	5000	3600	12000	2B16006	EPA 8260D	02/16/22 16:22	KKW	
Bromodichloromethane [75-27-4]^	2600	U	ug/L	5000	2600	12000	2B16006	EPA 8260D	02/16/22 16:22	KKW	
Bromoform [75-25-2]^	3800	U	ug/L	5000	3800	12000	2B16006	EPA 8260D	02/16/22 16:22	KKW	
Bromomethane [74-83-9]^	4800	U	ug/L	5000	4800	12000	2B16006	EPA 8260D	02/16/22 16:22	KKW	QV-01
Carbon disulfide [75-15-0]^	12000	U	ug/L	5000	12000	62000	2B16006	EPA 8260D	02/16/22 16:22	KKW	QV-01
Carbon Tetrachloride [56-23-5]^	4700	U	ug/L	5000	4700	12000	2B16006	EPA 8260D	02/16/22 16:22	KKW	
Chlorobenzene [108-90-7]^	3600	U	ug/L	5000	3600	12000	2B16006	EPA 8260D	02/16/22 16:22	KKW	
Chloroethane [75-00-3]^	4900	U	ug/L	5000	4900	12000	2B16006	EPA 8260D	02/16/22 16:22	KKW	
Chloroform [67-66-3]^	4000	U	ug/L	5000	4000	12000	2B16006	EPA 8260D	02/16/22 16:22	KKW	
Chloromethane [74-87-3]^	4100	U	ug/L	5000	4100	12000	2B16006	EPA 8260D	02/16/22 16:22	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**21000**		ug/L	5000	2600	12000	2B16006	EPA 8260D	02/16/22 16:22	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	3000	U	ug/L	5000	3000	12000	2B16006	EPA 8260D	02/16/22 16:22	KKW	
Cyclohexane [110-82-7]^	4600	U	ug/L	5000	4600	12000	2B16006	EPA 8260D	02/16/22 16:22	KKW	
Dibromochloromethane [124-48-1]^	2500	U	ug/L	5000	2500	12000	2B16006	EPA 8260D	02/16/22 16:22	KKW	
Dichlorodifluoromethane [75-71-8]^	3700	U	ug/L	5000	3700	12000	2B16006	EPA 8260D	02/16/22 16:22	KKW	
Ethylbenzene [100-41-4]^	3400	U	ug/L	5000	3400	12000	2B16006	EPA 8260D	02/16/22 16:22	KKW	
Freon 113 [76-13-1]^	3600	U	ug/L	5000	3600	12000	2B16006	EPA 8260D	02/16/22 16:22	KKW	
Isopropylbenzene [98-82-8]^	3400	U	ug/L	5000	3400	12000	2B16006	EPA 8260D	02/16/22 16:22	KKW	
Methyl acetate [79-20-9]^	4800	U	ug/L	5000	4800	12000	2B16006	EPA 8260D	02/16/22 16:22	KKW	
Methylene Chloride [75-09-2]^	12000	U	ug/L	5000	12000	62000	2B16006	EPA 8260D	02/16/22 16:22	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	3000	U	ug/L	5000	3000	12000	2B16006	EPA 8260D	02/16/22 16:22	KKW	
Styrene [100-42-5]^	3000	U	ug/L	5000	3000	12000	2B16006	EPA 8260D	02/16/22 16:22	KKW	
Tetrachloroethene [127-18-4]^	3800	U	ug/L	5000	3800	12000	2B16006	EPA 8260D	02/16/22 16:22	KKW	
Toluene [108-88-3]^	3600	U	ug/L	5000	3600	12000	2B16006	EPA 8260D	02/16/22 16:22	KKW	
trans-1,2-Dichloroethene [156-60-5]^	3600	U	ug/L	5000	3600	12000	2B16006	EPA 8260D	02/16/22 16:22	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	3600	U	ug/L	5000	3600	12000	2B16006	EPA 8260D	02/16/22 16:22	KKW	
Trichloroethene [79-01-6]^	**390000**		ug/L	5000	4400	12000	2B16006	EPA 8260D	02/16/22 16:22	KKW	
Trichlorofluoromethane [75-69-4]^	4700	U	ug/L	5000	4700	12000	2B16006	EPA 8260D	02/16/22 16:22	KKW	
Vinyl chloride [75-01-4]^	3600	U	ug/L	5000	3600	12000	2B16006	EPA 8260D	02/16/22 16:22	KKW	
Xylenes (Total) [1330-20-7]	6500	U	ug/L	5000	6500	25000	2B16006	EPA 8260D	02/16/22 16:22	KKW	

ANALYTICAL RESULTS

Description: LC34PS-PZH-050.0-20220214 **Lab Sample ID:** AF00827-14 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 08:32 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*56*	*1*	*50.0*	*111 %*	*41-142*	*2B16006*	*EPA 8260D*	*02/16/22 16:22*	*KKW*	
Dibromofluoromethane	*53*	*1*	*50.0*	*106 %*	*53-146*	*2B16006*	*EPA 8260D*	*02/16/22 16:22*	*KKW*	
Toluene-d8	*51*	*1*	*50.0*	*102 %*	*41-146*	*2B16006*	*EPA 8260D*	*02/16/22 16:22*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZH-058.0-20220214 **Lab Sample ID:** AF00827-15 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 08:34 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	200	U	ug/L	250	200	620	2B17014	EPA 8260D	02/17/22 14:35	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	140	U	ug/L	250	140	620	2B17014	EPA 8260D	02/17/22 14:35	KKW	
1,1,2-Trichloroethane [79-00-5]^	190	U	ug/L	250	190	620	2B17014	EPA 8260D	02/17/22 14:35	KKW	
1,1-Dichloroethane [75-34-3]^	160	U	ug/L	250	160	620	2B17014	EPA 8260D	02/17/22 14:35	KKW	
1,1-Dichloroethene [75-35-4]^	240	U	ug/L	250	240	620	2B17014	EPA 8260D	02/17/22 14:35	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	180	U	ug/L	250	180	620	2B17014	EPA 8260D	02/17/22 14:35	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	240	U	ug/L	250	240	620	2B17014	EPA 8260D	02/17/22 14:35	KKW	
1,2-Dibromoethane [106-93-4]^	200	U	ug/L	250	200	620	2B17014	EPA 8260D	02/17/22 14:35	KKW	
1,2-Dichlorobenzene [95-50-1]^	180	U	ug/L	250	180	620	2B17014	EPA 8260D	02/17/22 14:35	KKW	
1,2-Dichloroethane [107-06-2]^	160	U	ug/L	250	160	620	2B17014	EPA 8260D	02/17/22 14:35	KKW	
1,2-Dichloropropane [78-87-5]^	200	U	ug/L	250	200	620	2B17014	EPA 8260D	02/17/22 14:35	KKW	
1,3-Dichlorobenzene [541-73-1]^	190	U	ug/L	250	190	620	2B17014	EPA 8260D	02/17/22 14:35	KKW	
1,4-Dichlorobenzene [106-46-7]^	190	U	ug/L	250	190	620	2B17014	EPA 8260D	02/17/22 14:35	KKW	
2-Butanone [78-93-3]^	1100	U	ug/L	250	1100	3100	2B17014	EPA 8260D	02/17/22 14:35	KKW	
2-Hexanone [591-78-6]^	620	U	ug/L	250	620	3100	2B17014	EPA 8260D	02/17/22 14:35	KKW	
4-Methyl-2-pentanone [108-10-1]^	620	U	ug/L	250	620	3100	2B17014	EPA 8260D	02/17/22 14:35	KKW	
Acetone [67-64-1]^	2500	U	ug/L	250	2500	6200	2B17014	EPA 8260D	02/17/22 14:35	KKW	
Benzene [71-43-2]^	180	U	ug/L	250	180	620	2B17014	EPA 8260D	02/17/22 14:35	KKW	
Bromodichloromethane [75-27-4]^	130	U	ug/L	250	130	620	2B17014	EPA 8260D	02/17/22 14:35	KKW	
Bromoform [75-25-2]^	190	U	ug/L	250	190	620	2B17014	EPA 8260D	02/17/22 14:35	KKW	
Bromomethane [74-83-9]^	240	U	ug/L	250	240	620	2B17014	EPA 8260D	02/17/22 14:35	KKW	QV-01
Carbon disulfide [75-15-0]^	620	U	ug/L	250	620	3100	2B17014	EPA 8260D	02/17/22 14:35	KKW	QV-01
Carbon Tetrachloride [56-23-5]^	240	U	ug/L	250	240	620	2B17014	EPA 8260D	02/17/22 14:35	KKW	QV-01
Chlorobenzene [108-90-7]^	180	U	ug/L	250	180	620	2B17014	EPA 8260D	02/17/22 14:35	KKW	
Chloroethane [75-00-3]^	240	U	ug/L	250	240	620	2B17014	EPA 8260D	02/17/22 14:35	KKW	
Chloroform [67-66-3]^	200	U	ug/L	250	200	620	2B17014	EPA 8260D	02/17/22 14:35	KKW	
Chloromethane [74-87-3]^	200	U	ug/L	250	200	620	2B17014	EPA 8260D	02/17/22 14:35	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**8600**		ug/L	250	130	620	2B17014	EPA 8260D	02/17/22 14:35	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	150	U	ug/L	250	150	620	2B17014	EPA 8260D	02/17/22 14:35	KKW	
Cyclohexane [110-82-7]^	230	U	ug/L	250	230	620	2B17014	EPA 8260D	02/17/22 14:35	KKW	
Dibromochloromethane [124-48-1]^	120	U	ug/L	250	120	620	2B17014	EPA 8260D	02/17/22 14:35	KKW	
Dichlorodifluoromethane [75-71-8]^	180	U	ug/L	250	180	620	2B17014	EPA 8260D	02/17/22 14:35	KKW	
Ethylbenzene [100-41-4]^	170	U	ug/L	250	170	620	2B17014	EPA 8260D	02/17/22 14:35	KKW	
Freon 113 [76-13-1]^	180	U	ug/L	250	180	620	2B17014	EPA 8260D	02/17/22 14:35	KKW	
Isopropylbenzene [98-82-8]^	170	U	ug/L	250	170	620	2B17014	EPA 8260D	02/17/22 14:35	KKW	
Methyl acetate [79-20-9]^	240	U	ug/L	250	240	620	2B17014	EPA 8260D	02/17/22 14:35	KKW	
Methylene Chloride [75-09-2]^	620	U	ug/L	250	620	3100	2B17014	EPA 8260D	02/17/22 14:35	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	150	U	ug/L	250	150	620	2B17014	EPA 8260D	02/17/22 14:35	KKW	
Styrene [100-42-5]^	150	U	ug/L	250	150	620	2B17014	EPA 8260D	02/17/22 14:35	KKW	
Tetrachloroethene [127-18-4]^	190	U	ug/L	250	190	620	2B17014	EPA 8260D	02/17/22 14:35	KKW	
Toluene [108-88-3]^	180	U	ug/L	250	180	620	2B17014	EPA 8260D	02/17/22 14:35	KKW	
trans-1,2-Dichloroethene [156-60-5]^	180	U	ug/L	250	180	620	2B17014	EPA 8260D	02/17/22 14:35	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	180	U	ug/L	250	180	620	2B17014	EPA 8260D	02/17/22 14:35	KKW	
Trichloroethene [79-01-6]^	**19000**		ug/L	250	220	620	2B17014	EPA 8260D	02/17/22 14:35	KKW	
Trichlorofluoromethane [75-69-4]^	240	U	ug/L	250	240	620	2B17014	EPA 8260D	02/17/22 14:35	KKW	
Vinyl chloride [75-01-4]^	**260**	I	ug/L	250	180	620	2B17014	EPA 8260D	02/17/22 14:35	KKW	
Xylenes (Total) [1330-20-7]	320	U	ug/L	250	320	1200	2B17014	EPA 8260D	02/17/22 14:35	KKW	

ANALYTICAL RESULTS

Description: LC34PS-PZH-058.0-20220214 **Lab Sample ID:** AF00827-15 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 08:34 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*55*	*1*	*50.0*	*109 %*	*41-142*	*2B17014*	*EPA 8260D*	*02/17/22 14:35*	*KKW*	
Dibromofluoromethane	*50*	*1*	*50.0*	*99 %*	*53-146*	*2B17014*	*EPA 8260D*	*02/17/22 14:35*	*KKW*	
Toluene-d8	*52*	*1*	*50.0*	*103 %*	*41-146*	*2B17014*	*EPA 8260D*	*02/17/22 14:35*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZH-073.0-20220214 **Lab Sample ID:** AF00827-16 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 08:36 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	4.0	U	ug/L	5	4.0	12	2B16006	EPA 8260D	02/16/22 17:18	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	2.7	U	ug/L	5	2.7	12	2B16006	EPA 8260D	02/16/22 17:18	KKW	
1,1,2-Trichloroethane [79-00-5]^	3.8	U	ug/L	5	3.8	12	2B16006	EPA 8260D	02/16/22 17:18	KKW	
1,1-Dichloroethane [75-34-3]^	3.1	U	ug/L	5	3.1	12	2B16006	EPA 8260D	02/16/22 17:18	KKW	
1,1-Dichloroethene [75-35-4]^	4.7	U	ug/L	5	4.7	12	2B16006	EPA 8260D	02/16/22 17:18	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	3.5	U	ug/L	5	3.5	12	2B16006	EPA 8260D	02/16/22 17:18	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	4.8	U	ug/L	5	4.8	12	2B16006	EPA 8260D	02/16/22 17:18	KKW	
1,2-Dibromoethane [106-93-4]^	3.9	U	ug/L	5	3.9	12	2B16006	EPA 8260D	02/16/22 17:18	KKW	
1,2-Dichlorobenzene [95-50-1]^	3.6	U	ug/L	5	3.6	12	2B16006	EPA 8260D	02/16/22 17:18	KKW	
1,2-Dichloroethane [107-06-2]^	3.2	U	ug/L	5	3.2	12	2B16006	EPA 8260D	02/16/22 17:18	KKW	
1,2-Dichloropropane [78-87-5]^	4.0	U	ug/L	5	4.0	12	2B16006	EPA 8260D	02/16/22 17:18	KKW	
1,3-Dichlorobenzene [541-73-1]^	3.8	U	ug/L	5	3.8	12	2B16006	EPA 8260D	02/16/22 17:18	KKW	
1,4-Dichlorobenzene [106-46-7]^	3.8	U	ug/L	5	3.8	12	2B16006	EPA 8260D	02/16/22 17:18	KKW	
2-Butanone [78-93-3]^	22	U	ug/L	5	22	62	2B16006	EPA 8260D	02/16/22 17:18	KKW	
2-Hexanone [591-78-6]^	12	U	ug/L	5	12	62	2B16006	EPA 8260D	02/16/22 17:18	KKW	
4-Methyl-2-pentanone [108-10-1]^	12	U	ug/L	5	12	62	2B16006	EPA 8260D	02/16/22 17:18	KKW	
Acetone [67-64-1]^	50	U	ug/L	5	50	120	2B16006	EPA 8260D	02/16/22 17:18	KKW	
Benzene [71-43-2]^	3.6	U	ug/L	5	3.6	12	2B16006	EPA 8260D	02/16/22 17:18	KKW	
Bromodichloromethane [75-27-4]^	2.6	U	ug/L	5	2.6	12	2B16006	EPA 8260D	02/16/22 17:18	KKW	
Bromoform [75-25-2]^	3.8	U	ug/L	5	3.8	12	2B16006	EPA 8260D	02/16/22 17:18	KKW	
Bromomethane [74-83-9]^	4.8	U	ug/L	5	4.8	12	2B16006	EPA 8260D	02/16/22 17:18	KKW	QV-01
Carbon disulfide [75-15-0]^	12	U	ug/L	5	12	62	2B16006	EPA 8260D	02/16/22 17:18	KKW	QV-01
Carbon Tetrachloride [56-23-5]^	4.7	U	ug/L	5	4.7	12	2B16006	EPA 8260D	02/16/22 17:18	KKW	
Chlorobenzene [108-90-7]^	3.6	U	ug/L	5	3.6	12	2B16006	EPA 8260D	02/16/22 17:18	KKW	
Chloroethane [75-00-3]^	4.9	U	ug/L	5	4.9	12	2B16006	EPA 8260D	02/16/22 17:18	KKW	
Chloroform [67-66-3]^	4.0	U	ug/L	5	4.0	12	2B16006	EPA 8260D	02/16/22 17:18	KKW	
Chloromethane [74-87-3]^	4.1	U	ug/L	5	4.1	12	2B16006	EPA 8260D	02/16/22 17:18	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**7.2**	I	ug/L	5	2.6	12	2B16006	EPA 8260D	02/16/22 17:18	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	3.0	U	ug/L	5	3.0	12	2B16006	EPA 8260D	02/16/22 17:18	KKW	
Cyclohexane [110-82-7]^	4.6	U	ug/L	5	4.6	12	2B16006	EPA 8260D	02/16/22 17:18	KKW	
Dibromochloromethane [124-48-1]^	2.5	U	ug/L	5	2.5	12	2B16006	EPA 8260D	02/16/22 17:18	KKW	
Dichlorodifluoromethane [75-71-8]^	3.7	U	ug/L	5	3.7	12	2B16006	EPA 8260D	02/16/22 17:18	KKW	
Ethylbenzene [100-41-4]^	3.4	U	ug/L	5	3.4	12	2B16006	EPA 8260D	02/16/22 17:18	KKW	
Freon 113 [76-13-1]^	3.6	U	ug/L	5	3.6	12	2B16006	EPA 8260D	02/16/22 17:18	KKW	
Isopropylbenzene [98-82-8]^	3.4	U	ug/L	5	3.4	12	2B16006	EPA 8260D	02/16/22 17:18	KKW	
Methyl acetate [79-20-9]^	4.8	U	ug/L	5	4.8	12	2B16006	EPA 8260D	02/16/22 17:18	KKW	
Methylene Chloride [75-09-2]^	12	U	ug/L	5	12	62	2B16006	EPA 8260D	02/16/22 17:18	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	3.0	U	ug/L	5	3.0	12	2B16006	EPA 8260D	02/16/22 17:18	KKW	
Styrene [100-42-5]^	3.0	U	ug/L	5	3.0	12	2B16006	EPA 8260D	02/16/22 17:18	KKW	
Tetrachloroethene [127-18-4]^	3.8	U	ug/L	5	3.8	12	2B16006	EPA 8260D	02/16/22 17:18	KKW	
Toluene [108-88-3]^	3.6	U	ug/L	5	3.6	12	2B16006	EPA 8260D	02/16/22 17:18	KKW	
trans-1,2-Dichloroethene [156-60-5]^	3.6	U	ug/L	5	3.6	12	2B16006	EPA 8260D	02/16/22 17:18	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	3.6	U	ug/L	5	3.6	12	2B16006	EPA 8260D	02/16/22 17:18	KKW	
Trichloroethene [79-01-6]^	**340**		ug/L	5	4.4	12	2B16006	EPA 8260D	02/16/22 17:18	KKW	
Trichlorofluoromethane [75-69-4]^	4.7	U	ug/L	5	4.7	12	2B16006	EPA 8260D	02/16/22 17:18	KKW	
Vinyl chloride [75-01-4]^	3.6	U	ug/L	5	3.6	12	2B16006	EPA 8260D	02/16/22 17:18	KKW	
Xylenes (Total) [1330-20-7]	6.5	U	ug/L	5	6.5	25	2B16006	EPA 8260D	02/16/22 17:18	KKW	

ANALYTICAL RESULTS

Description: LC34PS-PZH-073.0-20220214 **Lab Sample ID:** AF00827-16 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 08:36 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*54*	*1*	*50.0*	*108 %*	*41-142*	*2B16006*	*EPA 8260D*	*02/16/22 17:18*	*KKW*	
Dibromofluoromethane	*53*	*1*	*50.0*	*106 %*	*53-146*	*2B16006*	*EPA 8260D*	*02/16/22 17:18*	*KKW*	
Toluene-d8	*52*	*1*	*50.0*	*105 %*	*41-146*	*2B16006*	*EPA 8260D*	*02/16/22 17:18*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZH-080.0-20220214 **Lab Sample ID:** AF00827-17 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 08:38 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	2B16006	EPA 8260D	02/16/22 17:45	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	2B16006	EPA 8260D	02/16/22 17:45	KKW	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	2B16006	EPA 8260D	02/16/22 17:45	KKW	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	2B16006	EPA 8260D	02/16/22 17:45	KKW	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	2B16006	EPA 8260D	02/16/22 17:45	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	2B16006	EPA 8260D	02/16/22 17:45	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	2B16006	EPA 8260D	02/16/22 17:45	KKW	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	2B16006	EPA 8260D	02/16/22 17:45	KKW	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	2B16006	EPA 8260D	02/16/22 17:45	KKW	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	2B16006	EPA 8260D	02/16/22 17:45	KKW	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	2B16006	EPA 8260D	02/16/22 17:45	KKW	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	2B16006	EPA 8260D	02/16/22 17:45	KKW	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	2B16006	EPA 8260D	02/16/22 17:45	KKW	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	2B16006	EPA 8260D	02/16/22 17:45	KKW	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	2B16006	EPA 8260D	02/16/22 17:45	KKW	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	2B16006	EPA 8260D	02/16/22 17:45	KKW	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	2B16006	EPA 8260D	02/16/22 17:45	KKW	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	2B16006	EPA 8260D	02/16/22 17:45	KKW	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	2B16006	EPA 8260D	02/16/22 17:45	KKW	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	2B16006	EPA 8260D	02/16/22 17:45	KKW	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	2B16006	EPA 8260D	02/16/22 17:45	KKW	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	2B16006	EPA 8260D	02/16/22 17:45	KKW	QV-01
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	2B16006	EPA 8260D	02/16/22 17:45	KKW	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	2B16006	EPA 8260D	02/16/22 17:45	KKW	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	2B16006	EPA 8260D	02/16/22 17:45	KKW	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	2B16006	EPA 8260D	02/16/22 17:45	KKW	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	2B16006	EPA 8260D	02/16/22 17:45	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**4.0**		ug/L	1	0.53	2.5	2B16006	EPA 8260D	02/16/22 17:45	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	2B16006	EPA 8260D	02/16/22 17:45	KKW	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	2B16006	EPA 8260D	02/16/22 17:45	KKW	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	2B16006	EPA 8260D	02/16/22 17:45	KKW	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	2B16006	EPA 8260D	02/16/22 17:45	KKW	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	2B16006	EPA 8260D	02/16/22 17:45	KKW	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	2B16006	EPA 8260D	02/16/22 17:45	KKW	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	2B16006	EPA 8260D	02/16/22 17:45	KKW	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	2B16006	EPA 8260D	02/16/22 17:45	KKW	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	2B16006	EPA 8260D	02/16/22 17:45	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	2B16006	EPA 8260D	02/16/22 17:45	KKW	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	2B16006	EPA 8260D	02/16/22 17:45	KKW	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	2B16006	EPA 8260D	02/16/22 17:45	KKW	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	2B16006	EPA 8260D	02/16/22 17:45	KKW	
trans-1,2-Dichloroethene [156-60-5]^	0.73	U	ug/L	1	0.73	2.5	2B16006	EPA 8260D	02/16/22 17:45	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	2B16006	EPA 8260D	02/16/22 17:45	KKW	
Trichloroethene [79-01-6]^	**7.9**		ug/L	1	0.89	2.5	2B16006	EPA 8260D	02/16/22 17:45	KKW	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	2B16006	EPA 8260D	02/16/22 17:45	KKW	
Vinyl chloride [75-01-4]^	0.71	U	ug/L	1	0.71	2.5	2B16006	EPA 8260D	02/16/22 17:45	KKW	
Xylenes (Total) [1330-20-7]	1.3	U	ug/L	1	1.3	5.0	2B16006	EPA 8260D	02/16/22 17:45	KKW	

ANALYTICAL RESULTS

Description: LC34PS-PZH-080.0-20220214 **Lab Sample ID:** AF00827-17 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 08:38 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*56*	*1*	*50.0*	*111 %*	*41-142*	*2B16006*	*EPA 8260D*	*02/16/22 17:45*	*KKW*	
Dibromofluoromethane	*53*	*1*	*50.0*	*106 %*	*53-146*	*2B16006*	*EPA 8260D*	*02/16/22 17:45*	*KKW*	
Toluene-d8	*51*	*1*	*50.0*	*102 %*	*41-146*	*2B16006*	*EPA 8260D*	*02/16/22 17:45*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZK-040.0-20220214 **Lab Sample ID:** AF00827-18 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 09:00 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	400	U	ug/L	500	400	1200	2B17014	EPA 8260D	02/17/22 15:03	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	270	U	ug/L	500	270	1200	2B17014	EPA 8260D	02/17/22 15:03	KKW	
1,1,2-Trichloroethane [79-00-5]^	380	U	ug/L	500	380	1200	2B17014	EPA 8260D	02/17/22 15:03	KKW	
1,1-Dichloroethane [75-34-3]^	310	U	ug/L	500	310	1200	2B17014	EPA 8260D	02/17/22 15:03	KKW	
1,1-Dichloroethene [75-35-4]^	470	U	ug/L	500	470	1200	2B17014	EPA 8260D	02/17/22 15:03	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	350	U	ug/L	500	350	1200	2B17014	EPA 8260D	02/17/22 15:03	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	480	U	ug/L	500	480	1200	2B17014	EPA 8260D	02/17/22 15:03	KKW	
1,2-Dibromoethane [106-93-4]^	390	U	ug/L	500	390	1200	2B17014	EPA 8260D	02/17/22 15:03	KKW	
1,2-Dichlorobenzene [95-50-1]^	360	U	ug/L	500	360	1200	2B17014	EPA 8260D	02/17/22 15:03	KKW	
1,2-Dichloroethane [107-06-2]^	320	U	ug/L	500	320	1200	2B17014	EPA 8260D	02/17/22 15:03	KKW	
1,2-Dichloropropane [78-87-5]^	400	U	ug/L	500	400	1200	2B17014	EPA 8260D	02/17/22 15:03	KKW	
1,3-Dichlorobenzene [541-73-1]^	380	U	ug/L	500	380	1200	2B17014	EPA 8260D	02/17/22 15:03	KKW	
1,4-Dichlorobenzene [106-46-7]^	380	U	ug/L	500	380	1200	2B17014	EPA 8260D	02/17/22 15:03	KKW	
2-Butanone [78-93-3]^	2200	U	ug/L	500	2200	6200	2B17014	EPA 8260D	02/17/22 15:03	KKW	
2-Hexanone [591-78-6]^	1200	U	ug/L	500	1200	6200	2B17014	EPA 8260D	02/17/22 15:03	KKW	
4-Methyl-2-pentanone [108-10-1]^	1200	U	ug/L	500	1200	6200	2B17014	EPA 8260D	02/17/22 15:03	KKW	
Acetone [67-64-1]^	5000	U	ug/L	500	5000	12000	2B17014	EPA 8260D	02/17/22 15:03	KKW	
Benzene [71-43-2]^	360	U	ug/L	500	360	1200	2B17014	EPA 8260D	02/17/22 15:03	KKW	
Bromodichloromethane [75-27-4]^	260	U	ug/L	500	260	1200	2B17014	EPA 8260D	02/17/22 15:03	KKW	
Bromoform [75-25-2]^	380	U	ug/L	500	380	1200	2B17014	EPA 8260D	02/17/22 15:03	KKW	
Bromomethane [74-83-9]^	480	U	ug/L	500	480	1200	2B17014	EPA 8260D	02/17/22 15:03	KKW	QV-01
Carbon disulfide [75-15-0]^	1200	U	ug/L	500	1200	6200	2B17014	EPA 8260D	02/17/22 15:03	KKW	QV-01
Carbon Tetrachloride [56-23-5]^	470	U	ug/L	500	470	1200	2B17014	EPA 8260D	02/17/22 15:03	KKW	QV-01
Chlorobenzene [108-90-7]^	360	U	ug/L	500	360	1200	2B17014	EPA 8260D	02/17/22 15:03	KKW	
Chloroethane [75-00-3]^	490	U	ug/L	500	490	1200	2B17014	EPA 8260D	02/17/22 15:03	KKW	
Chloroform [67-66-3]^	400	U	ug/L	500	400	1200	2B17014	EPA 8260D	02/17/22 15:03	KKW	
Chloromethane [74-87-3]^	410	U	ug/L	500	410	1200	2B17014	EPA 8260D	02/17/22 15:03	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**3500**		ug/L	500	260	1200	2B17014	EPA 8260D	02/17/22 15:03	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	300	U	ug/L	500	300	1200	2B17014	EPA 8260D	02/17/22 15:03	KKW	
Cyclohexane [110-82-7]^	460	U	ug/L	500	460	1200	2B17014	EPA 8260D	02/17/22 15:03	KKW	
Dibromochloromethane [124-48-1]^	250	U	ug/L	500	250	1200	2B17014	EPA 8260D	02/17/22 15:03	KKW	
Dichlorodifluoromethane [75-71-8]^	370	U	ug/L	500	370	1200	2B17014	EPA 8260D	02/17/22 15:03	KKW	
Ethylbenzene [100-41-4]^	340	U	ug/L	500	340	1200	2B17014	EPA 8260D	02/17/22 15:03	KKW	
Freon 113 [76-13-1]^	360	U	ug/L	500	360	1200	2B17014	EPA 8260D	02/17/22 15:03	KKW	
Isopropylbenzene [98-82-8]^	340	U	ug/L	500	340	1200	2B17014	EPA 8260D	02/17/22 15:03	KKW	
Methyl acetate [79-20-9]^	480	U	ug/L	500	480	1200	2B17014	EPA 8260D	02/17/22 15:03	KKW	
Methylene Chloride [75-09-2]^	1200	U	ug/L	500	1200	6200	2B17014	EPA 8260D	02/17/22 15:03	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	300	U	ug/L	500	300	1200	2B17014	EPA 8260D	02/17/22 15:03	KKW	
Styrene [100-42-5]^	300	U	ug/L	500	300	1200	2B17014	EPA 8260D	02/17/22 15:03	KKW	
Tetrachloroethene [127-18-4]^	380	U	ug/L	500	380	1200	2B17014	EPA 8260D	02/17/22 15:03	KKW	
Toluene [108-88-3]^	360	U	ug/L	500	360	1200	2B17014	EPA 8260D	02/17/22 15:03	KKW	
trans-1,2-Dichloroethene [156-60-5]^	360	U	ug/L	500	360	1200	2B17014	EPA 8260D	02/17/22 15:03	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	360	U	ug/L	500	360	1200	2B17014	EPA 8260D	02/17/22 15:03	KKW	
Trichloroethene [79-01-6]^	**40000**		ug/L	500	440	1200	2B17014	EPA 8260D	02/17/22 15:03	KKW	
Trichlorofluoromethane [75-69-4]^	470	U	ug/L	500	470	1200	2B17014	EPA 8260D	02/17/22 15:03	KKW	
Vinyl chloride [75-01-4]^	360	U	ug/L	500	360	1200	2B17014	EPA 8260D	02/17/22 15:03	KKW	
Xylenes (Total) [1330-20-7]	650	U	ug/L	500	650	2500	2B17014	EPA 8260D	02/17/22 15:03	KKW	

ANALYTICAL RESULTS

Description: LC34PS-PZK-040.0-20220214 | **Lab Sample ID:** AF00827-18 | **Received:** 02/14/22 15:40

Matrix: Ground Water | **Sampled:** 02/14/22 09:00 | **Work Order:** AF00827

Project: NASA KSC LC34 | **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*55*	*1*	*50.0*	*110 %*	*41-142*	*2B17014*	*EPA 8260D*	*02/17/22 15:03*	*KKW*	
Dibromofluoromethane	*50*	*1*	*50.0*	*100 %*	*53-146*	*2B17014*	*EPA 8260D*	*02/17/22 15:03*	*KKW*	
Toluene-d8	*53*	*1*	*50.0*	*105 %*	*41-146*	*2B17014*	*EPA 8260D*	*02/17/22 15:03*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZK-050.0-20220214 **Lab Sample ID:** AF00827-19 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 09:02 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	4000	U	ug/L	5000	4000	12000	2B16006	EPA 8260D	02/16/22 18:41	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	2700	U	ug/L	5000	2700	12000	2B16006	EPA 8260D	02/16/22 18:41	KKW	
1,1,2-Trichloroethane [79-00-5]^	3800	U	ug/L	5000	3800	12000	2B16006	EPA 8260D	02/16/22 18:41	KKW	
1,1-Dichloroethane [75-34-3]^	3100	U	ug/L	5000	3100	12000	2B16006	EPA 8260D	02/16/22 18:41	KKW	
1,1-Dichloroethene [75-35-4]^	4700	U	ug/L	5000	4700	12000	2B16006	EPA 8260D	02/16/22 18:41	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	3500	U	ug/L	5000	3500	12000	2B16006	EPA 8260D	02/16/22 18:41	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	4800	U	ug/L	5000	4800	12000	2B16006	EPA 8260D	02/16/22 18:41	KKW	
1,2-Dibromoethane [106-93-4]^	3900	U	ug/L	5000	3900	12000	2B16006	EPA 8260D	02/16/22 18:41	KKW	
1,2-Dichlorobenzene [95-50-1]^	3600	U	ug/L	5000	3600	12000	2B16006	EPA 8260D	02/16/22 18:41	KKW	
1,2-Dichloroethane [107-06-2]^	3200	U	ug/L	5000	3200	12000	2B16006	EPA 8260D	02/16/22 18:41	KKW	
1,2-Dichloropropane [78-87-5]^	4000	U	ug/L	5000	4000	12000	2B16006	EPA 8260D	02/16/22 18:41	KKW	
1,3-Dichlorobenzene [541-73-1]^	3800	U	ug/L	5000	3800	12000	2B16006	EPA 8260D	02/16/22 18:41	KKW	
1,4-Dichlorobenzene [106-46-7]^	3800	U	ug/L	5000	3800	12000	2B16006	EPA 8260D	02/16/22 18:41	KKW	
2-Butanone [78-93-3]^	22000	U	ug/L	5000	22000	62000	2B16006	EPA 8260D	02/16/22 18:41	KKW	
2-Hexanone [591-78-6]^	12000	U	ug/L	5000	12000	62000	2B16006	EPA 8260D	02/16/22 18:41	KKW	
4-Methyl-2-pentanone [108-10-1]^	12000	U	ug/L	5000	12000	62000	2B16006	EPA 8260D	02/16/22 18:41	KKW	
Acetone [67-64-1]^	50000	U	ug/L	5000	50000	120000	2B16006	EPA 8260D	02/16/22 18:41	KKW	
Benzene [71-43-2]^	3600	U	ug/L	5000	3600	12000	2B16006	EPA 8260D	02/16/22 18:41	KKW	
Bromodichloromethane [75-27-4]^	2600	U	ug/L	5000	2600	12000	2B16006	EPA 8260D	02/16/22 18:41	KKW	
Bromoform [75-25-2]^	3800	U	ug/L	5000	3800	12000	2B16006	EPA 8260D	02/16/22 18:41	KKW	
Bromomethane [74-83-9]^	4800	U	ug/L	5000	4800	12000	2B16006	EPA 8260D	02/16/22 18:41	KKW	QV-01
Carbon disulfide [75-15-0]^	12000	U	ug/L	5000	12000	62000	2B16006	EPA 8260D	02/16/22 18:41	KKW	QV-01
Carbon Tetrachloride [56-23-5]^	4700	U	ug/L	5000	4700	12000	2B16006	EPA 8260D	02/16/22 18:41	KKW	
Chlorobenzene [108-90-7]^	3600	U	ug/L	5000	3600	12000	2B16006	EPA 8260D	02/16/22 18:41	KKW	
Chloroethane [75-00-3]^	4900	U	ug/L	5000	4900	12000	2B16006	EPA 8260D	02/16/22 18:41	KKW	
Chloroform [67-66-3]^	4000	U	ug/L	5000	4000	12000	2B16006	EPA 8260D	02/16/22 18:41	KKW	
Chloromethane [74-87-3]^	4100	U	ug/L	5000	4100	12000	2B16006	EPA 8260D	02/16/22 18:41	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**12000**		ug/L	5000	2600	12000	2B16006	EPA 8260D	02/16/22 18:41	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	3000	U	ug/L	5000	3000	12000	2B16006	EPA 8260D	02/16/22 18:41	KKW	
Cyclohexane [110-82-7]^	4600	U	ug/L	5000	4600	12000	2B16006	EPA 8260D	02/16/22 18:41	KKW	
Dibromochloromethane [124-48-1]^	2500	U	ug/L	5000	2500	12000	2B16006	EPA 8260D	02/16/22 18:41	KKW	
Dichlorodifluoromethane [75-71-8]^	3700	U	ug/L	5000	3700	12000	2B16006	EPA 8260D	02/16/22 18:41	KKW	
Ethylbenzene [100-41-4]^	3400	U	ug/L	5000	3400	12000	2B16006	EPA 8260D	02/16/22 18:41	KKW	
Freon 113 [76-13-1]^	3600	U	ug/L	5000	3600	12000	2B16006	EPA 8260D	02/16/22 18:41	KKW	
Isopropylbenzene [98-82-8]^	3400	U	ug/L	5000	3400	12000	2B16006	EPA 8260D	02/16/22 18:41	KKW	
Methyl acetate [79-20-9]^	4800	U	ug/L	5000	4800	12000	2B16006	EPA 8260D	02/16/22 18:41	KKW	
Methylene Chloride [75-09-2]^	12000	U	ug/L	5000	12000	62000	2B16006	EPA 8260D	02/16/22 18:41	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	3000	U	ug/L	5000	3000	12000	2B16006	EPA 8260D	02/16/22 18:41	KKW	
Styrene [100-42-5]^	3000	U	ug/L	5000	3000	12000	2B16006	EPA 8260D	02/16/22 18:41	KKW	
Tetrachloroethene [127-18-4]^	3800	U	ug/L	5000	3800	12000	2B16006	EPA 8260D	02/16/22 18:41	KKW	
Toluene [108-88-3]^	3600	U	ug/L	5000	3600	12000	2B16006	EPA 8260D	02/16/22 18:41	KKW	
trans-1,2-Dichloroethene [156-60-5]^	3600	U	ug/L	5000	3600	12000	2B16006	EPA 8260D	02/16/22 18:41	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	3600	U	ug/L	5000	3600	12000	2B16006	EPA 8260D	02/16/22 18:41	KKW	
Trichloroethene [79-01-6]^	**470000**		ug/L	5000	4400	12000	2B16006	EPA 8260D	02/16/22 18:41	KKW	
Trichlorofluoromethane [75-69-4]^	4700	U	ug/L	5000	4700	12000	2B16006	EPA 8260D	02/16/22 18:41	KKW	
Vinyl chloride [75-01-4]^	3600	U	ug/L	5000	3600	12000	2B16006	EPA 8260D	02/16/22 18:41	KKW	
Xylenes (Total) [1330-20-7]	6500	U	ug/L	5000	6500	25000	2B16006	EPA 8260D	02/16/22 18:41	KKW	

ANALYTICAL RESULTS

Description: LC34PS-PZK-050.0-20220214 **Lab Sample ID:** AF00827-19 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 09:02 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*54*	*1*	*50.0*	*108 %*	*41-142*	*2B16006*	*EPA 8260D*	*02/16/22 18:41*	*KKW*	
Dibromofluoromethane	*55*	*1*	*50.0*	*110 %*	*53-146*	*2B16006*	*EPA 8260D*	*02/16/22 18:41*	*KKW*	
Toluene-d8	*51*	*1*	*50.0*	*102 %*	*41-146*	*2B16006*	*EPA 8260D*	*02/16/22 18:41*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZK-058.0-20220214 **Lab Sample ID:** AF00827-20 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 09:04 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyc

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	4000	U	ug/L	5000	4000	12000	2B16003	EPA 8260D	02/16/22 12:01	JMW	
1,1,2,2-Tetrachloroethane [79-34-5]^	2700	U	ug/L	5000	2700	12000	2B16003	EPA 8260D	02/16/22 12:01	JMW	
1,1,2-Trichloroethane [79-00-5]^	3800	U	ug/L	5000	3800	12000	2B16003	EPA 8260D	02/16/22 12:01	JMW	
1,1-Dichloroethane [75-34-3]^	3100	U	ug/L	5000	3100	12000	2B16003	EPA 8260D	02/16/22 12:01	JMW	
1,1-Dichloroethene [75-35-4]^	4700	U	ug/L	5000	4700	12000	2B16003	EPA 8260D	02/16/22 12:01	JMW	
1,2,4-Trichlorobenzene [120-82-1]^	3500	U	ug/L	5000	3500	12000	2B16003	EPA 8260D	02/16/22 12:01	JMW	
1,2-Dibromo-3-chloropropane [96-12-8]^	4800	U	ug/L	5000	4800	12000	2B16003	EPA 8260D	02/16/22 12:01	JMW	
1,2-Dibromoethane [106-93-4]^	3900	U	ug/L	5000	3900	12000	2B16003	EPA 8260D	02/16/22 12:01	JMW	
1,2-Dichlorobenzene [95-50-1]^	3600	U	ug/L	5000	3600	12000	2B16003	EPA 8260D	02/16/22 12:01	JMW	
1,2-Dichloroethane [107-06-2]^	3200	U	ug/L	5000	3200	12000	2B16003	EPA 8260D	02/16/22 12:01	JMW	
1,2-Dichloropropane [78-87-5]^	4000	U	ug/L	5000	4000	12000	2B16003	EPA 8260D	02/16/22 12:01	JMW	
1,3-Dichlorobenzene [541-73-1]^	3800	U	ug/L	5000	3800	12000	2B16003	EPA 8260D	02/16/22 12:01	JMW	
1,4-Dichlorobenzene [106-46-7]^	3800	U	ug/L	5000	3800	12000	2B16003	EPA 8260D	02/16/22 12:01	JMW	
2-Butanone [78-93-3]^	22000	U	ug/L	5000	22000	62000	2B16003	EPA 8260D	02/16/22 12:01	JMW	
2-Hexanone [591-78-6]^	12000	U	ug/L	5000	12000	62000	2B16003	EPA 8260D	02/16/22 12:01	JMW	
4-Methyl-2-pentanone [108-10-1]^	12000	U	ug/L	5000	12000	62000	2B16003	EPA 8260D	02/16/22 12:01	JMW	
Acetone [67-64-1]^	50000	U	ug/L	5000	50000	120000	2B16003	EPA 8260D	02/16/22 12:01	JMW	
Benzene [71-43-2]^	3600	U	ug/L	5000	3600	12000	2B16003	EPA 8260D	02/16/22 12:01	JMW	
Bromodichloromethane [75-27-4]^	2600	U	ug/L	5000	2600	12000	2B16003	EPA 8260D	02/16/22 12:01	JMW	
Bromoform [75-25-2]^	3800	U	ug/L	5000	3800	12000	2B16003	EPA 8260D	02/16/22 12:01	JMW	
Bromomethane [74-83-9]^	4800	U	ug/L	5000	4800	12000	2B16003	EPA 8260D	02/16/22 12:01	JMW	QV-01
Carbon disulfide [75-15-0]^	12000	U	ug/L	5000	12000	62000	2B16003	EPA 8260D	02/16/22 12:01	JMW	
Carbon Tetrachloride [56-23-5]^	4700	U	ug/L	5000	4700	12000	2B16003	EPA 8260D	02/16/22 12:01	JMW	
Chlorobenzene [108-90-7]^	3600	U	ug/L	5000	3600	12000	2B16003	EPA 8260D	02/16/22 12:01	JMW	
Chloroethane [75-00-3]^	4900	U	ug/L	5000	4900	12000	2B16003	EPA 8260D	02/16/22 12:01	JMW	
Chloroform [67-66-3]^	4000	U	ug/L	5000	4000	12000	2B16003	EPA 8260D	02/16/22 12:01	JMW	
Chloromethane [74-87-3]^	4100	U	ug/L	5000	4100	12000	2B16003	EPA 8260D	02/16/22 12:01	JMW	
cis-1,2-Dichloroethene [156-59-2]^	**16000**		ug/L	5000	2600	12000	2B16003	EPA 8260D	02/16/22 12:01	JMW	
cis-1,3-Dichloropropene [10061-01-5]^	3000	U	ug/L	5000	3000	12000	2B16003	EPA 8260D	02/16/22 12:01	JMW	
Cyclohexane [110-82-7]^	4600	U	ug/L	5000	4600	12000	2B16003	EPA 8260D	02/16/22 12:01	JMW	
Dibromochloromethane [124-48-1]^	2500	U	ug/L	5000	2500	12000	2B16003	EPA 8260D	02/16/22 12:01	JMW	
Dichlorodifluoromethane [75-71-8]^	3700	U	ug/L	5000	3700	12000	2B16003	EPA 8260D	02/16/22 12:01	JMW	QV-01
Ethylbenzene [100-41-4]^	3400	U	ug/L	5000	3400	12000	2B16003	EPA 8260D	02/16/22 12:01	JMW	
Freon 113 [76-13-1]^	3600	U	ug/L	5000	3600	12000	2B16003	EPA 8260D	02/16/22 12:01	JMW	
Isopropylbenzene [98-82-8]^	3400	U	ug/L	5000	3400	12000	2B16003	EPA 8260D	02/16/22 12:01	JMW	
Methyl acetate [79-20-9]^	4800	U	ug/L	5000	4800	12000	2B16003	EPA 8260D	02/16/22 12:01	JMW	
Methylene Chloride [75-09-2]^	12000	U	ug/L	5000	12000	62000	2B16003	EPA 8260D	02/16/22 12:01	JMW	
Methyl-tert-Butyl Ether [1634-04-4]^	3000	U	ug/L	5000	3000	12000	2B16003	EPA 8260D	02/16/22 12:01	JMW	
Styrene [100-42-5]^	3000	U	ug/L	5000	3000	12000	2B16003	EPA 8260D	02/16/22 12:01	JMW	
Tetrachloroethene [127-18-4]^	3800	U	ug/L	5000	3800	12000	2B16003	EPA 8260D	02/16/22 12:01	JMW	
Toluene [108-88-3]^	3600	U	ug/L	5000	3600	12000	2B16003	EPA 8260D	02/16/22 12:01	JMW	
trans-1,2-Dichloroethene [156-60-5]^	3600	U	ug/L	5000	3600	12000	2B16003	EPA 8260D	02/16/22 12:01	JMW	
trans-1,3-Dichloropropene [10061-02-6]^	3600	U	ug/L	5000	3600	12000	2B16003	EPA 8260D	02/16/22 12:01	JMW	
Trichloroethene [79-01-6]^	**180000**		ug/L	5000	4400	12000	2B16003	EPA 8260D	02/16/22 12:01	JMW	
Trichlorofluoromethane [75-69-4]^	4700	U	ug/L	5000	4700	12000	2B16003	EPA 8260D	02/16/22 12:01	JMW	
Vinyl chloride [75-01-4]^	3600	U	ug/L	5000	3600	12000	2B16003	EPA 8260D	02/16/22 12:01	JMW	
Xylenes (Total) [1330-20-7]	6500	U	ug/L	5000	6500	25000	2B16003	EPA 8260D	02/16/22 12:01	JMW	

ANALYTICAL RESULTS

Description: LC34PS-PZK-058.0-20220214 **Lab Sample ID:** AF00827-20 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 09:04 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*47*	*1*	*50.0*	*94 %*	*41-142*	*2B16003*	*EPA 8260D*	*02/16/22 12:01*	*JMW*	
Dibromofluoromethane	*52*	*1*	*50.0*	*104 %*	*53-146*	*2B16003*	*EPA 8260D*	*02/16/22 12:01*	*JMW*	
Toluene-d8	*54*	*1*	*50.0*	*108 %*	*41-146*	*2B16003*	*EPA 8260D*	*02/16/22 12:01*	*JMW*	

ANALYTICAL RESULTS

Description: LC34PS-PZK-073.0-20220214 **Lab Sample ID:** AF00827-21 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 09:06 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyc

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	4.0	U	ug/L	5	4.0	12	2B17014	EPA 8260D	02/17/22 15:31	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	2.7	U	ug/L	5	2.7	12	2B17014	EPA 8260D	02/17/22 15:31	KKW	
1,1,2-Trichloroethane [79-00-5]^	3.8	U	ug/L	5	3.8	12	2B17014	EPA 8260D	02/17/22 15:31	KKW	
1,1-Dichloroethane [75-34-3]^	3.1	U	ug/L	5	3.1	12	2B17014	EPA 8260D	02/17/22 15:31	KKW	
1,1-Dichloroethene [75-35-4]^	4.7	U	ug/L	5	4.7	12	2B17014	EPA 8260D	02/17/22 15:31	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	3.5	U	ug/L	5	3.5	12	2B17014	EPA 8260D	02/17/22 15:31	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	4.8	U	ug/L	5	4.8	12	2B17014	EPA 8260D	02/17/22 15:31	KKW	
1,2-Dibromoethane [106-93-4]^	3.9	U	ug/L	5	3.9	12	2B17014	EPA 8260D	02/17/22 15:31	KKW	
1,2-Dichlorobenzene [95-50-1]^	3.6	U	ug/L	5	3.6	12	2B17014	EPA 8260D	02/17/22 15:31	KKW	
1,2-Dichloroethane [107-06-2]^	3.2	U	ug/L	5	3.2	12	2B17014	EPA 8260D	02/17/22 15:31	KKW	
1,2-Dichloropropane [78-87-5]^	4.0	U	ug/L	5	4.0	12	2B17014	EPA 8260D	02/17/22 15:31	KKW	
1,3-Dichlorobenzene [541-73-1]^	3.8	U	ug/L	5	3.8	12	2B17014	EPA 8260D	02/17/22 15:31	KKW	
1,4-Dichlorobenzene [106-46-7]^	3.8	U	ug/L	5	3.8	12	2B17014	EPA 8260D	02/17/22 15:31	KKW	
2-Butanone [78-93-3]^	22	U	ug/L	5	22	62	2B17014	EPA 8260D	02/17/22 15:31	KKW	
2-Hexanone [591-78-6]^	12	U	ug/L	5	12	62	2B17014	EPA 8260D	02/17/22 15:31	KKW	
4-Methyl-2-pentanone [108-10-1]^	12	U	ug/L	5	12	62	2B17014	EPA 8260D	02/17/22 15:31	KKW	
Acetone [67-64-1]^	50	U	ug/L	5	50	120	2B17014	EPA 8260D	02/17/22 15:31	KKW	
Benzene [71-43-2]^	3.6	U	ug/L	5	3.6	12	2B17014	EPA 8260D	02/17/22 15:31	KKW	
Bromodichloromethane [75-27-4]^	2.6	U	ug/L	5	2.6	12	2B17014	EPA 8260D	02/17/22 15:31	KKW	
Bromoform [75-25-2]^	3.8	U	ug/L	5	3.8	12	2B17014	EPA 8260D	02/17/22 15:31	KKW	
Bromomethane [74-83-9]^	4.8	U	ug/L	5	4.8	12	2B17014	EPA 8260D	02/17/22 15:31	KKW	QV-01
Carbon disulfide [75-15-0]^	12	U	ug/L	5	12	62	2B17014	EPA 8260D	02/17/22 15:31	KKW	QV-01
Carbon Tetrachloride [56-23-5]^	4.7	U	ug/L	5	4.7	12	2B17014	EPA 8260D	02/17/22 15:31	KKW	QV-01
Chlorobenzene [108-90-7]^	3.6	U	ug/L	5	3.6	12	2B17014	EPA 8260D	02/17/22 15:31	KKW	
Chloroethane [75-00-3]^	4.9	U	ug/L	5	4.9	12	2B17014	EPA 8260D	02/17/22 15:31	KKW	
Chloroform [67-66-3]^	4.0	U	ug/L	5	4.0	12	2B17014	EPA 8260D	02/17/22 15:31	KKW	
Chloromethane [74-87-3]^	4.1	U	ug/L	5	4.1	12	2B17014	EPA 8260D	02/17/22 15:31	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**9.4**	I	ug/L	5	2.6	12	2B17014	EPA 8260D	02/17/22 15:31	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	3.0	U	ug/L	5	3.0	12	2B17014	EPA 8260D	02/17/22 15:31	KKW	
Cyclohexane [110-82-7]^	4.6	U	ug/L	5	4.6	12	2B17014	EPA 8260D	02/17/22 15:31	KKW	
Dibromochloromethane [124-48-1]^	2.5	U	ug/L	5	2.5	12	2B17014	EPA 8260D	02/17/22 15:31	KKW	
Dichlorodifluoromethane [75-71-8]^	3.7	U	ug/L	5	3.7	12	2B17014	EPA 8260D	02/17/22 15:31	KKW	
Ethylbenzene [100-41-4]^	3.4	U	ug/L	5	3.4	12	2B17014	EPA 8260D	02/17/22 15:31	KKW	
Freon 113 [76-13-1]^	3.6	U	ug/L	5	3.6	12	2B17014	EPA 8260D	02/17/22 15:31	KKW	
Isopropylbenzene [98-82-8]^	3.4	U	ug/L	5	3.4	12	2B17014	EPA 8260D	02/17/22 15:31	KKW	
Methyl acetate [79-20-9]^	4.8	U	ug/L	5	4.8	12	2B17014	EPA 8260D	02/17/22 15:31	KKW	
Methylene Chloride [75-09-2]^	12	U	ug/L	5	12	62	2B17014	EPA 8260D	02/17/22 15:31	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	3.0	U	ug/L	5	3.0	12	2B17014	EPA 8260D	02/17/22 15:31	KKW	
Styrene [100-42-5]^	3.0	U	ug/L	5	3.0	12	2B17014	EPA 8260D	02/17/22 15:31	KKW	
Tetrachloroethene [127-18-4]^	3.8	U	ug/L	5	3.8	12	2B17014	EPA 8260D	02/17/22 15:31	KKW	
Toluene [108-88-3]^	3.6	U	ug/L	5	3.6	12	2B17014	EPA 8260D	02/17/22 15:31	KKW	
trans-1,2-Dichloroethene [156-60-5]^	3.6	U	ug/L	5	3.6	12	2B17014	EPA 8260D	02/17/22 15:31	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	3.6	U	ug/L	5	3.6	12	2B17014	EPA 8260D	02/17/22 15:31	KKW	
Trichloroethene [79-01-6]^	**410**		ug/L	5	4.4	12	2B17014	EPA 8260D	02/17/22 15:31	KKW	
Trichlorofluoromethane [75-69-4]^	4.7	U	ug/L	5	4.7	12	2B17014	EPA 8260D	02/17/22 15:31	KKW	
Vinyl chloride [75-01-4]^	**3.8**	I	ug/L	5	3.6	12	2B17014	EPA 8260D	02/17/22 15:31	KKW	
Xylenes (Total) [1330-20-7]	6.5	U	ug/L	5	6.5	25	2B17014	EPA 8260D	02/17/22 15:31	KKW	

ANALYTICAL RESULTS

Description: LC34PS-PZK-073.0-20220214 | **Lab Sample ID:** AF00827-21 | **Received:** 02/14/22 15:40

Matrix: Ground Water | **Sampled:** 02/14/22 09:06 | **Work Order:** AF00827

Project: NASA KSC LC34 | **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*55*	*1*	*50.0*	*110 %*	*41-142*	*2B17014*	*EPA 8260D*	*02/17/22 15:31*	*KKW*	
Dibromofluoromethane	*51*	*1*	*50.0*	*102 %*	*53-146*	*2B17014*	*EPA 8260D*	*02/17/22 15:31*	*KKW*	
Toluene-d8	*52*	*1*	*50.0*	*104 %*	*41-146*	*2B17014*	*EPA 8260D*	*02/17/22 15:31*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZK-080.0-20220214 **Lab Sample ID:** AF00827-22 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 09:08 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	2B17014	EPA 8260D	02/17/22 15:58	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	2B17014	EPA 8260D	02/17/22 15:58	KKW	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	2B17014	EPA 8260D	02/17/22 15:58	KKW	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	2B17014	EPA 8260D	02/17/22 15:58	KKW	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	2B17014	EPA 8260D	02/17/22 15:58	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	2B17014	EPA 8260D	02/17/22 15:58	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	2B17014	EPA 8260D	02/17/22 15:58	KKW	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	2B17014	EPA 8260D	02/17/22 15:58	KKW	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	2B17014	EPA 8260D	02/17/22 15:58	KKW	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	2B17014	EPA 8260D	02/17/22 15:58	KKW	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	2B17014	EPA 8260D	02/17/22 15:58	KKW	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	2B17014	EPA 8260D	02/17/22 15:58	KKW	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	2B17014	EPA 8260D	02/17/22 15:58	KKW	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	2B17014	EPA 8260D	02/17/22 15:58	KKW	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	2B17014	EPA 8260D	02/17/22 15:58	KKW	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	2B17014	EPA 8260D	02/17/22 15:58	KKW	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	2B17014	EPA 8260D	02/17/22 15:58	KKW	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	2B17014	EPA 8260D	02/17/22 15:58	KKW	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	2B17014	EPA 8260D	02/17/22 15:58	KKW	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	2B17014	EPA 8260D	02/17/22 15:58	KKW	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	2B17014	EPA 8260D	02/17/22 15:58	KKW	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	2B17014	EPA 8260D	02/17/22 15:58	KKW	QV-01
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	2B17014	EPA 8260D	02/17/22 15:58	KKW	QV-01
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	2B17014	EPA 8260D	02/17/22 15:58	KKW	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	2B17014	EPA 8260D	02/17/22 15:58	KKW	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	2B17014	EPA 8260D	02/17/22 15:58	KKW	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	2B17014	EPA 8260D	02/17/22 15:58	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**11**		ug/L	1	0.53	2.5	2B17014	EPA 8260D	02/17/22 15:58	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	2B17014	EPA 8260D	02/17/22 15:58	KKW	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	2B17014	EPA 8260D	02/17/22 15:58	KKW	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	2B17014	EPA 8260D	02/17/22 15:58	KKW	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	2B17014	EPA 8260D	02/17/22 15:58	KKW	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	2B17014	EPA 8260D	02/17/22 15:58	KKW	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	2B17014	EPA 8260D	02/17/22 15:58	KKW	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	2B17014	EPA 8260D	02/17/22 15:58	KKW	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	2B17014	EPA 8260D	02/17/22 15:58	KKW	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	2B17014	EPA 8260D	02/17/22 15:58	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	2B17014	EPA 8260D	02/17/22 15:58	KKW	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	2B17014	EPA 8260D	02/17/22 15:58	KKW	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	2B17014	EPA 8260D	02/17/22 15:58	KKW	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	2B17014	EPA 8260D	02/17/22 15:58	KKW	
trans-1,2-Dichloroethene [156-60-5]^	**2.8**		ug/L	1	0.73	2.5	2B17014	EPA 8260D	02/17/22 15:58	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	2B17014	EPA 8260D	02/17/22 15:58	KKW	
Trichloroethene [79-01-6]^	**52**		ug/L	1	0.89	2.5	2B17014	EPA 8260D	02/17/22 15:58	KKW	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	2B17014	EPA 8260D	02/17/22 15:58	KKW	
Vinyl chloride [75-01-4]^	**8.0**		ug/L	1	0.71	2.5	2B17014	EPA 8260D	02/17/22 15:58	KKW	
Xylenes (Total) [1330-20-7]	1.3	U	ug/L	1	1.3	5.0	2B17014	EPA 8260D	02/17/22 15:58	KKW	

ANALYTICAL RESULTS

Description: LC34PS-PZK-080.0-20220214	**Lab Sample ID:** AF00827-22	**Received:** 02/14/22 15:40
Matrix: Ground Water	**Sampled:** 02/14/22 09:08	**Work Order:** AF00827
Project: NASA KSC LC34	**Sampled By:** Dan Forester / James Lloyd	

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*55*	*1*	*50.0*	*109 %*	*41-142*	*2B17014*	*EPA 8260D*	*02/17/22 15:58*	*KKW*	
Dibromofluoromethane	*49*	*1*	*50.0*	*98 %*	*53-146*	*2B17014*	*EPA 8260D*	*02/17/22 15:58*	*KKW*	
Toluene-d8	*52*	*1*	*50.0*	*103 %*	*41-146*	*2B17014*	*EPA 8260D*	*02/17/22 15:58*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZJ-040.0-20220214 **Lab Sample ID:** AF00827-23 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 09:30 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	200	U	ug/L	250	200	620	2B17014	EPA 8260D	02/17/22 16:26	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	140	U	ug/L	250	140	620	2B17014	EPA 8260D	02/17/22 16:26	KKW	
1,1,2-Trichloroethane [79-00-5]^	190	U	ug/L	250	190	620	2B17014	EPA 8260D	02/17/22 16:26	KKW	
1,1-Dichloroethane [75-34-3]^	160	U	ug/L	250	160	620	2B17014	EPA 8260D	02/17/22 16:26	KKW	
1,1-Dichloroethene [75-35-4]^	240	U	ug/L	250	240	620	2B17014	EPA 8260D	02/17/22 16:26	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	180	U	ug/L	250	180	620	2B17014	EPA 8260D	02/17/22 16:26	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	240	U	ug/L	250	240	620	2B17014	EPA 8260D	02/17/22 16:26	KKW	
1,2-Dibromoethane [106-93-4]^	200	U	ug/L	250	200	620	2B17014	EPA 8260D	02/17/22 16:26	KKW	
1,2-Dichlorobenzene [95-50-1]^	180	U	ug/L	250	180	620	2B17014	EPA 8260D	02/17/22 16:26	KKW	
1,2-Dichloroethane [107-06-2]^	160	U	ug/L	250	160	620	2B17014	EPA 8260D	02/17/22 16:26	KKW	
1,2-Dichloropropane [78-87-5]^	200	U	ug/L	250	200	620	2B17014	EPA 8260D	02/17/22 16:26	KKW	
1,3-Dichlorobenzene [541-73-1]^	190	U	ug/L	250	190	620	2B17014	EPA 8260D	02/17/22 16:26	KKW	
1,4-Dichlorobenzene [106-46-7]^	190	U	ug/L	250	190	620	2B17014	EPA 8260D	02/17/22 16:26	KKW	
2-Butanone [78-93-3]^	1100	U	ug/L	250	1100	3100	2B17014	EPA 8260D	02/17/22 16:26	KKW	
2-Hexanone [591-78-6]^	620	U	ug/L	250	620	3100	2B17014	EPA 8260D	02/17/22 16:26	KKW	
4-Methyl-2-pentanone [108-10-1]^	620	U	ug/L	250	620	3100	2B17014	EPA 8260D	02/17/22 16:26	KKW	
Acetone [67-64-1]^	2500	U	ug/L	250	2500	6200	2B17014	EPA 8260D	02/17/22 16:26	KKW	
Benzene [71-43-2]^	180	U	ug/L	250	180	620	2B17014	EPA 8260D	02/17/22 16:26	KKW	
Bromodichloromethane [75-27-4]^	130	U	ug/L	250	130	620	2B17014	EPA 8260D	02/17/22 16:26	KKW	
Bromoform [75-25-2]^	190	U	ug/L	250	190	620	2B17014	EPA 8260D	02/17/22 16:26	KKW	
Bromomethane [74-83-9]^	240	U	ug/L	250	240	620	2B17014	EPA 8260D	02/17/22 16:26	KKW	QV-01
Carbon disulfide [75-15-0]^	620	U	ug/L	250	620	3100	2B17014	EPA 8260D	02/17/22 16:26	KKW	QV-01
Carbon Tetrachloride [56-23-5]^	240	U	ug/L	250	240	620	2B17014	EPA 8260D	02/17/22 16:26	KKW	QV-01
Chlorobenzene [108-90-7]^	180	U	ug/L	250	180	620	2B17014	EPA 8260D	02/17/22 16:26	KKW	
Chloroethane [75-00-3]^	240	U	ug/L	250	240	620	2B17014	EPA 8260D	02/17/22 16:26	KKW	
Chloroform [67-66-3]^	200	U	ug/L	250	200	620	2B17014	EPA 8260D	02/17/22 16:26	KKW	
Chloromethane [74-87-3]^	200	U	ug/L	250	200	620	2B17014	EPA 8260D	02/17/22 16:26	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**17000**		ug/L	250	130	620	2B17014	EPA 8260D	02/17/22 16:26	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	150	U	ug/L	250	150	620	2B17014	EPA 8260D	02/17/22 16:26	KKW	
Cyclohexane [110-82-7]^	230	U	ug/L	250	230	620	2B17014	EPA 8260D	02/17/22 16:26	KKW	
Dibromochloromethane [124-48-1]^	120	U	ug/L	250	120	620	2B17014	EPA 8260D	02/17/22 16:26	KKW	
Dichlorodifluoromethane [75-71-8]^	180	U	ug/L	250	180	620	2B17014	EPA 8260D	02/17/22 16:26	KKW	
Ethylbenzene [100-41-4]^	170	U	ug/L	250	170	620	2B17014	EPA 8260D	02/17/22 16:26	KKW	
Freon 113 [76-13-1]^	180	U	ug/L	250	180	620	2B17014	EPA 8260D	02/17/22 16:26	KKW	
Isopropylbenzene [98-82-8]^	170	U	ug/L	250	170	620	2B17014	EPA 8260D	02/17/22 16:26	KKW	
Methyl acetate [79-20-9]^	240	U	ug/L	250	240	620	2B17014	EPA 8260D	02/17/22 16:26	KKW	
Methylene Chloride [75-09-2]^	620	U	ug/L	250	620	3100	2B17014	EPA 8260D	02/17/22 16:26	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	150	U	ug/L	250	150	620	2B17014	EPA 8260D	02/17/22 16:26	KKW	
Styrene [100-42-5]^	150	U	ug/L	250	150	620	2B17014	EPA 8260D	02/17/22 16:26	KKW	
Tetrachloroethene [127-18-4]^	190	U	ug/L	250	190	620	2B17014	EPA 8260D	02/17/22 16:26	KKW	
Toluene [108-88-3]^	180	U	ug/L	250	180	620	2B17014	EPA 8260D	02/17/22 16:26	KKW	
trans-1,2-Dichloroethene [156-60-5]^	**440**	I	ug/L	250	180	620	2B17014	EPA 8260D	02/17/22 16:26	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	180	U	ug/L	250	180	620	2B17014	EPA 8260D	02/17/22 16:26	KKW	
Trichloroethene [79-01-6]^	**22000**		ug/L	250	220	620	2B17014	EPA 8260D	02/17/22 16:26	KKW	
Trichlorofluoromethane [75-69-4]^	240	U	ug/L	250	240	620	2B17014	EPA 8260D	02/17/22 16:26	KKW	
Vinyl chloride [75-01-4]^	**460**	I	ug/L	250	180	620	2B17014	EPA 8260D	02/17/22 16:26	KKW	
Xylenes (Total) [1330-20-7]	320	U	ug/L	250	320	1200	2B17014	EPA 8260D	02/17/22 16:26	KKW	

ANALYTICAL RESULTS

Description: LC34PS-PZJ-040.0-20220214	**Lab Sample ID:** AF00827-23	**Received:** 02/14/22 15:40
Matrix: Ground Water	**Sampled:** 02/14/22 09:30	**Work Order:** AF00827
Project: NASA KSC LC34	**Sampled By:** Dan Forester / James Lloyd	

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*55*	*1*	*50.0*	*109 %*	*41-142*	*2B17014*	*EPA 8260D*	*02/17/22 16:26*	*KKW*	
Dibromofluoromethane	*50*	*1*	*50.0*	*99 %*	*53-146*	*2B17014*	*EPA 8260D*	*02/17/22 16:26*	*KKW*	
Toluene-d8	*51*	*1*	*50.0*	*101 %*	*41-146*	*2B17014*	*EPA 8260D*	*02/17/22 16:26*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZJ-050.0-20220214 **Lab Sample ID:** AF00827-24 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 09:32 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	2000	U	ug/L	2500	2000	6200	2B16003	EPA 8260D	02/16/22 13:57	JMW	
1,1,2,2-Tetrachloroethane [79-34-5]^	1400	U	ug/L	2500	1400	6200	2B16003	EPA 8260D	02/16/22 13:57	JMW	
1,1,2-Trichloroethane [79-00-5]^	1900	U	ug/L	2500	1900	6200	2B16003	EPA 8260D	02/16/22 13:57	JMW	
1,1-Dichloroethane [75-34-3]^	1600	U	ug/L	2500	1600	6200	2B16003	EPA 8260D	02/16/22 13:57	JMW	
1,1-Dichloroethene [75-35-4]^	2400	U	ug/L	2500	2400	6200	2B16003	EPA 8260D	02/16/22 13:57	JMW	
1,2,4-Trichlorobenzene [120-82-1]^	1800	U	ug/L	2500	1800	6200	2B16003	EPA 8260D	02/16/22 13:57	JMW	
1,2-Dibromo-3-chloropropane [96-12-8]^	2400	U	ug/L	2500	2400	6200	2B16003	EPA 8260D	02/16/22 13:57	JMW	
1,2-Dibromoethane [106-93-4]^	2000	U	ug/L	2500	2000	6200	2B16003	EPA 8260D	02/16/22 13:57	JMW	
1,2-Dichlorobenzene [95-50-1]^	1800	U	ug/L	2500	1800	6200	2B16003	EPA 8260D	02/16/22 13:57	JMW	
1,2-Dichloroethane [107-06-2]^	1600	U	ug/L	2500	1600	6200	2B16003	EPA 8260D	02/16/22 13:57	JMW	
1,2-Dichloropropane [78-87-5]^	2000	U	ug/L	2500	2000	6200	2B16003	EPA 8260D	02/16/22 13:57	JMW	
1,3-Dichlorobenzene [541-73-1]^	1900	U	ug/L	2500	1900	6200	2B16003	EPA 8260D	02/16/22 13:57	JMW	
1,4-Dichlorobenzene [106-46-7]^	1900	U	ug/L	2500	1900	6200	2B16003	EPA 8260D	02/16/22 13:57	JMW	
2-Butanone [78-93-3]^	11000	U	ug/L	2500	11000	31000	2B16003	EPA 8260D	02/16/22 13:57	JMW	
2-Hexanone [591-78-6]^	6200	U	ug/L	2500	6200	31000	2B16003	EPA 8260D	02/16/22 13:57	JMW	
4-Methyl-2-pentanone [108-10-1]^	6200	U	ug/L	2500	6200	31000	2B16003	EPA 8260D	02/16/22 13:57	JMW	
Acetone [67-64-1]^	25000	U	ug/L	2500	25000	62000	2B16003	EPA 8260D	02/16/22 13:57	JMW	
Benzene [71-43-2]^	1800	U	ug/L	2500	1800	6200	2B16003	EPA 8260D	02/16/22 13:57	JMW	
Bromodichloromethane [75-27-4]^	1300	U	ug/L	2500	1300	6200	2B16003	EPA 8260D	02/16/22 13:57	JMW	
Bromoform [75-25-2]^	1900	U	ug/L	2500	1900	6200	2B16003	EPA 8260D	02/16/22 13:57	JMW	
Bromomethane [74-83-9]^	2400	U	ug/L	2500	2400	6200	2B16003	EPA 8260D	02/16/22 13:57	JMW	QV-01
Carbon disulfide [75-15-0]^	6200	U	ug/L	2500	6200	31000	2B16003	EPA 8260D	02/16/22 13:57	JMW	
Carbon Tetrachloride [56-23-5]^	2400	U	ug/L	2500	2400	6200	2B16003	EPA 8260D	02/16/22 13:57	JMW	
Chlorobenzene [108-90-7]^	1800	U	ug/L	2500	1800	6200	2B16003	EPA 8260D	02/16/22 13:57	JMW	
Chloroethane [75-00-3]^	2400	U	ug/L	2500	2400	6200	2B16003	EPA 8260D	02/16/22 13:57	JMW	
Chloroform [67-66-3]^	2000	U	ug/L	2500	2000	6200	2B16003	EPA 8260D	02/16/22 13:57	JMW	
Chloromethane [74-87-3]^	2000	U	ug/L	2500	2000	6200	2B16003	EPA 8260D	02/16/22 13:57	JMW	
cis-1,2-Dichloroethene [156-59-2]^	**23000**		ug/L	2500	1300	6200	2B16003	EPA 8260D	02/16/22 13:57	JMW	
cis-1,3-Dichloropropene [10061-01-5]^	1500	U	ug/L	2500	1500	6200	2B16003	EPA 8260D	02/16/22 13:57	JMW	
Cyclohexane [110-82-7]^	2300	U	ug/L	2500	2300	6200	2B16003	EPA 8260D	02/16/22 13:57	JMW	
Dibromochloromethane [124-48-1]^	1200	U	ug/L	2500	1200	6200	2B16003	EPA 8260D	02/16/22 13:57	JMW	
Dichlorodifluoromethane [75-71-8]^	1800	U	ug/L	2500	1800	6200	2B16003	EPA 8260D	02/16/22 13:57	JMW	QV-01
Ethylbenzene [100-41-4]^	1700	U	ug/L	2500	1700	6200	2B16003	EPA 8260D	02/16/22 13:57	JMW	
Freon 113 [76-13-1]^	1800	U	ug/L	2500	1800	6200	2B16003	EPA 8260D	02/16/22 13:57	JMW	
Isopropylbenzene [98-82-8]^	1700	U	ug/L	2500	1700	6200	2B16003	EPA 8260D	02/16/22 13:57	JMW	
Methyl acetate [79-20-9]^	2400	U	ug/L	2500	2400	6200	2B16003	EPA 8260D	02/16/22 13:57	JMW	
Methylene Chloride [75-09-2]^	6200	U	ug/L	2500	6200	31000	2B16003	EPA 8260D	02/16/22 13:57	JMW	
Methyl-tert-Butyl Ether [1634-04-4]^	1500	U	ug/L	2500	1500	6200	2B16003	EPA 8260D	02/16/22 13:57	JMW	
Styrene [100-42-5]^	1500	U	ug/L	2500	1500	6200	2B16003	EPA 8260D	02/16/22 13:57	JMW	
Tetrachloroethene [127-18-4]^	1900	U	ug/L	2500	1900	6200	2B16003	EPA 8260D	02/16/22 13:57	JMW	
Toluene [108-88-3]^	1800	U	ug/L	2500	1800	6200	2B16003	EPA 8260D	02/16/22 13:57	JMW	
trans-1,2-Dichloroethene [156-60-5]^	1800	U	ug/L	2500	1800	6200	2B16003	EPA 8260D	02/16/22 13:57	JMW	
trans-1,3-Dichloropropene [10061-02-6]^	1800	U	ug/L	2500	1800	6200	2B16003	EPA 8260D	02/16/22 13:57	JMW	
Trichloroethene [79-01-6]^	**180000**		ug/L	5000	4400	12000	2B18005	EPA 8260D	02/18/22 13:33	KKW	
Trichlorofluoromethane [75-69-4]^	2400	U	ug/L	2500	2400	6200	2B16003	EPA 8260D	02/16/22 13:57	JMW	
Vinyl chloride [75-01-4]^	1800	U	ug/L	2500	1800	6200	2B16003	EPA 8260D	02/16/22 13:57	JMW	
Xylenes (Total) [1330-20-7]	3200	U	ug/L	2500	3200	12000	2B16003	EPA 8260D	02/16/22 13:57	JMW	

ANALYTICAL RESULTS

Description: LC34PS-PZJ-050.0-20220214 **Lab Sample ID:** AF00827-24 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 09:32 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*47*	*1*	*50.0*	*93 %*	*41-142*	*2B16003*	*EPA 8260D*	*02/16/22 13:57*	*JMW*	
4-Bromofluorobenzene	*55*	*1*	*50.0*	*110 %*	*41-142*	*2B18005*	*EPA 8260D*	*02/18/22 13:33*	*KKW*	
Dibromofluoromethane	*52*	*1*	*50.0*	*104 %*	*53-146*	*2B16003*	*EPA 8260D*	*02/16/22 13:57*	*JMW*	
Dibromofluoromethane	*50*	*1*	*50.0*	*101 %*	*53-146*	*2B18005*	*EPA 8260D*	*02/18/22 13:33*	*KKW*	
Toluene-d8	*53*	*1*	*50.0*	*107 %*	*41-146*	*2B16003*	*EPA 8260D*	*02/16/22 13:57*	*JMW*	
Toluene-d8	*50*	*1*	*50.0*	*101 %*	*41-146*	*2B18005*	*EPA 8260D*	*02/18/22 13:33*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZJ-058.0-20220214 **Lab Sample ID:** AF00827-25 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 09:34 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	400	U	ug/L	500	400	1200	2B17011	EPA 8260D	02/17/22 13:14	JMW	
1,1,2,2-Tetrachloroethane [79-34-5]^	270	U	ug/L	500	270	1200	2B17011	EPA 8260D	02/17/22 13:14	JMW	
1,1,2-Trichloroethane [79-00-5]^	380	U	ug/L	500	380	1200	2B17011	EPA 8260D	02/17/22 13:14	JMW	
1,1-Dichloroethane [75-34-3]^	310	U	ug/L	500	310	1200	2B17011	EPA 8260D	02/17/22 13:14	JMW	
1,1-Dichloroethene [75-35-4]^	470	U	ug/L	500	470	1200	2B17011	EPA 8260D	02/17/22 13:14	JMW	
1,2,4-Trichlorobenzene [120-82-1]^	350	U	ug/L	500	350	1200	2B17011	EPA 8260D	02/17/22 13:14	JMW	
1,2-Dibromo-3-chloropropane [96-12-8]^	480	U	ug/L	500	480	1200	2B17011	EPA 8260D	02/17/22 13:14	JMW	
1,2-Dibromoethane [106-93-4]^	390	U	ug/L	500	390	1200	2B17011	EPA 8260D	02/17/22 13:14	JMW	
1,2-Dichlorobenzene [95-50-1]^	360	U	ug/L	500	360	1200	2B17011	EPA 8260D	02/17/22 13:14	JMW	
1,2-Dichloroethane [107-06-2]^	320	U	ug/L	500	320	1200	2B17011	EPA 8260D	02/17/22 13:14	JMW	
1,2-Dichloropropane [78-87-5]^	400	U	ug/L	500	400	1200	2B17011	EPA 8260D	02/17/22 13:14	JMW	
1,3-Dichlorobenzene [541-73-1]^	380	U	ug/L	500	380	1200	2B17011	EPA 8260D	02/17/22 13:14	JMW	
1,4-Dichlorobenzene [106-46-7]^	380	U	ug/L	500	380	1200	2B17011	EPA 8260D	02/17/22 13:14	JMW	
2-Butanone [78-93-3]^	2200	U	ug/L	500	2200	6200	2B17011	EPA 8260D	02/17/22 13:14	JMW	
2-Hexanone [591-78-6]^	1200	U	ug/L	500	1200	6200	2B17011	EPA 8260D	02/17/22 13:14	JMW	
4-Methyl-2-pentanone [108-10-1]^	1200	U	ug/L	500	1200	6200	2B17011	EPA 8260D	02/17/22 13:14	JMW	
Acetone [67-64-1]^	5000	U	ug/L	500	5000	12000	2B17011	EPA 8260D	02/17/22 13:14	JMW	
Benzene [71-43-2]^	360	U	ug/L	500	360	1200	2B17011	EPA 8260D	02/17/22 13:14	JMW	
Bromodichloromethane [75-27-4]^	260	U	ug/L	500	260	1200	2B17011	EPA 8260D	02/17/22 13:14	JMW	
Bromoform [75-25-2]^	380	U	ug/L	500	380	1200	2B17011	EPA 8260D	02/17/22 13:14	JMW	
Bromomethane [74-83-9]^	480	U	ug/L	500	480	1200	2B17011	EPA 8260D	02/17/22 13:14	JMW	QV-01
Carbon disulfide [75-15-0]^	1200	U	ug/L	500	1200	6200	2B17011	EPA 8260D	02/17/22 13:14	JMW	
Carbon Tetrachloride [56-23-5]^	470	U	ug/L	500	470	1200	2B17011	EPA 8260D	02/17/22 13:14	JMW	
Chlorobenzene [108-90-7]^	360	U	ug/L	500	360	1200	2B17011	EPA 8260D	02/17/22 13:14	JMW	
Chloroethane [75-00-3]^	490	U	ug/L	500	490	1200	2B17011	EPA 8260D	02/17/22 13:14	JMW	
Chloroform [67-66-3]^	400	U	ug/L	500	400	1200	2B17011	EPA 8260D	02/17/22 13:14	JMW	
Chloromethane [74-87-3]^	410	U	ug/L	500	410	1200	2B17011	EPA 8260D	02/17/22 13:14	JMW	
cis-1,2-Dichloroethene [156-59-2]^	**11000**		ug/L	500	260	1200	2B17011	EPA 8260D	02/17/22 13:14	JMW	
cis-1,3-Dichloropropene [10061-01-5]^	300	U	ug/L	500	300	1200	2B17011	EPA 8260D	02/17/22 13:14	JMW	
Cyclohexane [110-82-7]^	460	U	ug/L	500	460	1200	2B17011	EPA 8260D	02/17/22 13:14	JMW	
Dibromochloromethane [124-48-1]^	250	U	ug/L	500	250	1200	2B17011	EPA 8260D	02/17/22 13:14	JMW	
Dichlorodifluoromethane [75-71-8]^	370	U	ug/L	500	370	1200	2B17011	EPA 8260D	02/17/22 13:14	JMW	
Ethylbenzene [100-41-4]^	340	U	ug/L	500	340	1200	2B17011	EPA 8260D	02/17/22 13:14	JMW	
Freon 113 [76-13-1]^	360	U	ug/L	500	360	1200	2B17011	EPA 8260D	02/17/22 13:14	JMW	
Isopropylbenzene [98-82-8]^	340	U	ug/L	500	340	1200	2B17011	EPA 8260D	02/17/22 13:14	JMW	
Methyl acetate [79-20-9]^	480	U	ug/L	500	480	1200	2B17011	EPA 8260D	02/17/22 13:14	JMW	
Methylene Chloride [75-09-2]^	1200	U	ug/L	500	1200	6200	2B17011	EPA 8260D	02/17/22 13:14	JMW	
Methyl-tert-Butyl Ether [1634-04-4]^	300	U	ug/L	500	300	1200	2B17011	EPA 8260D	02/17/22 13:14	JMW	
Styrene [100-42-5]^	300	U	ug/L	500	300	1200	2B17011	EPA 8260D	02/17/22 13:14	JMW	
Tetrachloroethene [127-18-4]^	380	U	ug/L	500	380	1200	2B17011	EPA 8260D	02/17/22 13:14	JMW	
Toluene [108-88-3]^	360	U	ug/L	500	360	1200	2B17011	EPA 8260D	02/17/22 13:14	JMW	
trans-1,2-Dichloroethene [156-60-5]^	360	U	ug/L	500	360	1200	2B17011	EPA 8260D	02/17/22 13:14	JMW	
trans-1,3-Dichloropropene [10061-02-6]^	360	U	ug/L	500	360	1200	2B17011	EPA 8260D	02/17/22 13:14	JMW	
Trichloroethene [79-01-6]^	**36000**		ug/L	500	440	1200	2B17011	EPA 8260D	02/17/22 13:14	JMW	
Trichlorofluoromethane [75-69-4]^	470	U	ug/L	500	470	1200	2B17011	EPA 8260D	02/17/22 13:14	JMW	
Vinyl chloride [75-01-4]^	360	U	ug/L	500	360	1200	2B17011	EPA 8260D	02/17/22 13:14	JMW	
Xylenes (Total) [1330-20-7]	650	U	ug/L	500	650	2500	2B17011	EPA 8260D	02/17/22 13:14	JMW	

ANALYTICAL RESULTS

Description: LC34PS-PZJ-058.0-20220214 **Lab Sample ID:** AF00827-25 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 09:34 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*46*	*1*	*50.0*	*92 %*	*41-142*	*2B17011*	*EPA 8260D*	*02/17/22 13:14*	*JMW*	
Dibromofluoromethane	*54*	*1*	*50.0*	*108 %*	*53-146*	*2B17011*	*EPA 8260D*	*02/17/22 13:14*	*JMW*	
Toluene-d8	*55*	*1*	*50.0*	*110 %*	*41-146*	*2B17011*	*EPA 8260D*	*02/17/22 13:14*	*JMW*	

ANALYTICAL RESULTS

Description: LC34PS-PZJ-073.0-20220214 **Lab Sample ID:** AF00827-26 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 09:36 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyc

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	1.6	U	ug/L	2	1.6	5.0	2B16003	EPA 8260D	02/16/22 14:54	JMW	
1,1,2,2-Tetrachloroethane [79-34-5]^	1.1	U	ug/L	2	1.1	5.0	2B16003	EPA 8260D	02/16/22 14:54	JMW	
1,1,2-Trichloroethane [79-00-5]^	1.5	U	ug/L	2	1.5	5.0	2B16003	EPA 8260D	02/16/22 14:54	JMW	
1,1-Dichloroethane [75-34-3]^	1.2	U	ug/L	2	1.2	5.0	2B16003	EPA 8260D	02/16/22 14:54	JMW	
1,1-Dichloroethene [75-35-4]^	1.9	U	ug/L	2	1.9	5.0	2B16003	EPA 8260D	02/16/22 14:54	JMW	
1,2,4-Trichlorobenzene [120-82-1]^	1.4	U	ug/L	2	1.4	5.0	2B16003	EPA 8260D	02/16/22 14:54	JMW	
1,2-Dibromo-3-chloropropane [96-12-8]^	1.9	U	ug/L	2	1.9	5.0	2B16003	EPA 8260D	02/16/22 14:54	JMW	
1,2-Dibromoethane [106-93-4]^	1.6	U	ug/L	2	1.6	5.0	2B16003	EPA 8260D	02/16/22 14:54	JMW	
1,2-Dichlorobenzene [95-50-1]^	1.5	U	ug/L	2	1.5	5.0	2B16003	EPA 8260D	02/16/22 14:54	JMW	
1,2-Dichloroethane [107-06-2]^	1.3	U	ug/L	2	1.3	5.0	2B16003	EPA 8260D	02/16/22 14:54	JMW	
1,2-Dichloropropane [78-87-5]^	1.6	U	ug/L	2	1.6	5.0	2B16003	EPA 8260D	02/16/22 14:54	JMW	
1,3-Dichlorobenzene [541-73-1]^	1.5	U	ug/L	2	1.5	5.0	2B16003	EPA 8260D	02/16/22 14:54	JMW	
1,4-Dichlorobenzene [106-46-7]^	1.5	U	ug/L	2	1.5	5.0	2B16003	EPA 8260D	02/16/22 14:54	JMW	
2-Butanone [78-93-3]^	9.0	U	ug/L	2	9.0	25	2B16003	EPA 8260D	02/16/22 14:54	JMW	
2-Hexanone [591-78-6]^	5.0	U	ug/L	2	5.0	25	2B16003	EPA 8260D	02/16/22 14:54	JMW	
4-Methyl-2-pentanone [108-10-1]^	5.0	U	ug/L	2	5.0	25	2B16003	EPA 8260D	02/16/22 14:54	JMW	
Acetone [67-64-1]^	20	U	ug/L	2	20	50	2B16003	EPA 8260D	02/16/22 14:54	JMW	
Benzene [71-43-2]^	1.4	U	ug/L	2	1.4	5.0	2B16003	EPA 8260D	02/16/22 14:54	JMW	
Bromodichloromethane [75-27-4]^	1.0	U	ug/L	2	1.0	5.0	2B16003	EPA 8260D	02/16/22 14:54	JMW	
Bromoform [75-25-2]^	1.5	U	ug/L	2	1.5	5.0	2B16003	EPA 8260D	02/16/22 14:54	JMW	
Bromomethane [74-83-9]^	1.9	U	ug/L	2	1.9	5.0	2B16003	EPA 8260D	02/16/22 14:54	JMW	QV-01
Carbon disulfide [75-15-0]^	5.0	U	ug/L	2	5.0	25	2B16003	EPA 8260D	02/16/22 14:54	JMW	
Carbon Tetrachloride [56-23-5]^	1.9	U	ug/L	2	1.9	5.0	2B16003	EPA 8260D	02/16/22 14:54	JMW	
Chlorobenzene [108-90-7]^	1.4	U	ug/L	2	1.4	5.0	2B16003	EPA 8260D	02/16/22 14:54	JMW	
Chloroethane [75-00-3]^	2.0	U	ug/L	2	2.0	5.0	2B16003	EPA 8260D	02/16/22 14:54	JMW	
Chloroform [67-66-3]^	1.6	U	ug/L	2	1.6	5.0	2B16003	EPA 8260D	02/16/22 14:54	JMW	
Chloromethane [74-87-3]^	1.6	U	ug/L	2	1.6	5.0	2B16003	EPA 8260D	02/16/22 14:54	JMW	
cis-1,2-Dichloroethene [156-59-2]^	**17**		ug/L	2	1.1	5.0	2B16003	EPA 8260D	02/16/22 14:54	JMW	
cis-1,3-Dichloropropene [10061-01-5]^	1.2	U	ug/L	2	1.2	5.0	2B16003	EPA 8260D	02/16/22 14:54	JMW	
Cyclohexane [110-82-7]^	1.9	U	ug/L	2	1.9	5.0	2B16003	EPA 8260D	02/16/22 14:54	JMW	
Dibromochloromethane [124-48-1]^	1.0	U	ug/L	2	1.0	5.0	2B16003	EPA 8260D	02/16/22 14:54	JMW	
Dichlorodifluoromethane [75-71-8]^	1.5	U	ug/L	2	1.5	5.0	2B16003	EPA 8260D	02/16/22 14:54	JMW	QV-01
Ethylbenzene [100-41-4]^	1.4	U	ug/L	2	1.4	5.0	2B16003	EPA 8260D	02/16/22 14:54	JMW	
Freon 113 [76-13-1]^	1.5	U	ug/L	2	1.5	5.0	2B16003	EPA 8260D	02/16/22 14:54	JMW	
Isopropylbenzene [98-82-8]^	1.3	U	ug/L	2	1.3	5.0	2B16003	EPA 8260D	02/16/22 14:54	JMW	
Methyl acetate [79-20-9]^	1.9	U	ug/L	2	1.9	5.0	2B16003	EPA 8260D	02/16/22 14:54	JMW	
Methylene Chloride [75-09-2]^	5.0	U	ug/L	2	5.0	25	2B16003	EPA 8260D	02/16/22 14:54	JMW	
Methyl-tert-Butyl Ether [1634-04-4]^	1.2	U	ug/L	2	1.2	5.0	2B16003	EPA 8260D	02/16/22 14:54	JMW	
Styrene [100-42-5]^	1.2	U	ug/L	2	1.2	5.0	2B16003	EPA 8260D	02/16/22 14:54	JMW	
Tetrachloroethene [127-18-4]^	1.5	U	ug/L	2	1.5	5.0	2B16003	EPA 8260D	02/16/22 14:54	JMW	
Toluene [108-88-3]^	1.4	U	ug/L	2	1.4	5.0	2B16003	EPA 8260D	02/16/22 14:54	JMW	
trans-1,2-Dichloroethene [156-60-5]^	1.5	U	ug/L	2	1.5	5.0	2B16003	EPA 8260D	02/16/22 14:54	JMW	
trans-1,3-Dichloropropene [10061-02-6]^	1.5	U	ug/L	2	1.5	5.0	2B16003	EPA 8260D	02/16/22 14:54	JMW	
Trichloroethene [79-01-6]^	**120**		ug/L	2	1.8	5.0	2B16003	EPA 8260D	02/16/22 14:54	JMW	
Trichlorofluoromethane [75-69-4]^	1.9	U	ug/L	2	1.9	5.0	2B16003	EPA 8260D	02/16/22 14:54	JMW	
Vinyl chloride [75-01-4]^	1.4	U	ug/L	2	1.4	5.0	2B16003	EPA 8260D	02/16/22 14:54	JMW	
Xylenes (Total) [1330-20-7]	2.6	U	ug/L	2	2.6	10	2B16003	EPA 8260D	02/16/22 14:54	JMW	

ANALYTICAL RESULTS

Description: LC34PS-PZJ-073.0-20220214 **Lab Sample ID:** AF00827-26 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 09:36 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*47*	*1*	*50.0*	*94 %*	*41-142*	*2B16003*	*EPA 8260D*	*02/16/22 14:54*	*JMW*	
Dibromofluoromethane	*54*	*1*	*50.0*	*107 %*	*53-146*	*2B16003*	*EPA 8260D*	*02/16/22 14:54*	*JMW*	
Toluene-d8	*54*	*1*	*50.0*	*109 %*	*41-146*	*2B16003*	*EPA 8260D*	*02/16/22 14:54*	*JMW*	

ANALYTICAL RESULTS

Description: LC34PS-PZJ-080.0-20220214 **Lab Sample ID:** AF00827-27 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 09:38 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	2B16003	EPA 8260D	02/16/22 15:23	JMW	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	2B16003	EPA 8260D	02/16/22 15:23	JMW	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	2B16003	EPA 8260D	02/16/22 15:23	JMW	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	2B16003	EPA 8260D	02/16/22 15:23	JMW	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	2B16003	EPA 8260D	02/16/22 15:23	JMW	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	2B16003	EPA 8260D	02/16/22 15:23	JMW	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	2B16003	EPA 8260D	02/16/22 15:23	JMW	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	2B16003	EPA 8260D	02/16/22 15:23	JMW	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	2B16003	EPA 8260D	02/16/22 15:23	JMW	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	2B16003	EPA 8260D	02/16/22 15:23	JMW	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	2B16003	EPA 8260D	02/16/22 15:23	JMW	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	2B16003	EPA 8260D	02/16/22 15:23	JMW	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	2B16003	EPA 8260D	02/16/22 15:23	JMW	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	2B16003	EPA 8260D	02/16/22 15:23	JMW	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	2B16003	EPA 8260D	02/16/22 15:23	JMW	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	2B16003	EPA 8260D	02/16/22 15:23	JMW	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	2B16003	EPA 8260D	02/16/22 15:23	JMW	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	2B16003	EPA 8260D	02/16/22 15:23	JMW	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	2B16003	EPA 8260D	02/16/22 15:23	JMW	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	2B16003	EPA 8260D	02/16/22 15:23	JMW	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	2B16003	EPA 8260D	02/16/22 15:23	JMW	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	2B16003	EPA 8260D	02/16/22 15:23	JMW	
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	2B16003	EPA 8260D	02/16/22 15:23	JMW	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	2B16003	EPA 8260D	02/16/22 15:23	JMW	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	2B16003	EPA 8260D	02/16/22 15:23	JMW	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	2B16003	EPA 8260D	02/16/22 15:23	JMW	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	2B16003	EPA 8260D	02/16/22 15:23	JMW	
cis-1,2-Dichloroethene [156-59-2]^	**10**		ug/L	1	0.53	2.5	2B16003	EPA 8260D	02/16/22 15:23	JMW	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	2B16003	EPA 8260D	02/16/22 15:23	JMW	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	2B16003	EPA 8260D	02/16/22 15:23	JMW	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	2B16003	EPA 8260D	02/16/22 15:23	JMW	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	2B16003	EPA 8260D	02/16/22 15:23	JMW	QV-01
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	2B16003	EPA 8260D	02/16/22 15:23	JMW	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	2B16003	EPA 8260D	02/16/22 15:23	JMW	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	2B16003	EPA 8260D	02/16/22 15:23	JMW	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	2B16003	EPA 8260D	02/16/22 15:23	JMW	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	2B16003	EPA 8260D	02/16/22 15:23	JMW	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	2B16003	EPA 8260D	02/16/22 15:23	JMW	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	2B16003	EPA 8260D	02/16/22 15:23	JMW	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	2B16003	EPA 8260D	02/16/22 15:23	JMW	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	2B16003	EPA 8260D	02/16/22 15:23	JMW	
trans-1,2-Dichloroethene [156-60-5]^	**1.0**	I	ug/L	1	0.73	2.5	2B16003	EPA 8260D	02/16/22 15:23	JMW	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	2B16003	EPA 8260D	02/16/22 15:23	JMW	
Trichloroethene [79-01-6]^	**12**		ug/L	1	0.89	2.5	2B16003	EPA 8260D	02/16/22 15:23	JMW	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	2B16003	EPA 8260D	02/16/22 15:23	JMW	
Vinyl chloride [75-01-4]^	0.71	U	ug/L	1	0.71	2.5	2B16003	EPA 8260D	02/16/22 15:23	JMW	
Xylenes (Total) [1330-20-7]	1.3	U	ug/L	1	1.3	5.0	2B16003	EPA 8260D	02/16/22 15:23	JMW	

ANALYTICAL RESULTS

Description: LC34PS-PZJ-080.0-20220214 **Lab Sample ID:** AF00827-27 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 09:38 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*46*	*1*	*50.0*	*92 %*	*41-142*	*2B16003*	*EPA 8260D*	*02/16/22 15:23*	*JMW*	
Dibromofluoromethane	*52*	*1*	*50.0*	*105 %*	*53-146*	*2B16003*	*EPA 8260D*	*02/16/22 15:23*	*JMW*	
Toluene-d8	*54*	*1*	*50.0*	*108 %*	*41-146*	*2B16003*	*EPA 8260D*	*02/16/22 15:23*	*JMW*	

ANALYTICAL RESULTS

Description: LC34PS-PZG-040.0-20220214 **Lab Sample ID:** AF00827-28 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 10:00 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	400	U	ug/L	500	400	1200	2B17011	EPA 8260D	02/17/22 13:43	JMW	
1,1,2,2-Tetrachloroethane [79-34-5]^	270	U	ug/L	500	270	1200	2B17011	EPA 8260D	02/17/22 13:43	JMW	
1,1,2-Trichloroethane [79-00-5]^	380	U	ug/L	500	380	1200	2B17011	EPA 8260D	02/17/22 13:43	JMW	
1,1-Dichloroethane [75-34-3]^	310	U	ug/L	500	310	1200	2B17011	EPA 8260D	02/17/22 13:43	JMW	
1,1-Dichloroethene [75-35-4]^	470	U	ug/L	500	470	1200	2B17011	EPA 8260D	02/17/22 13:43	JMW	
1,2,4-Trichlorobenzene [120-82-1]^	350	U	ug/L	500	350	1200	2B17011	EPA 8260D	02/17/22 13:43	JMW	
1,2-Dibromo-3-chloropropane [96-12-8]^	480	U	ug/L	500	480	1200	2B17011	EPA 8260D	02/17/22 13:43	JMW	
1,2-Dibromoethane [106-93-4]^	390	U	ug/L	500	390	1200	2B17011	EPA 8260D	02/17/22 13:43	JMW	
1,2-Dichlorobenzene [95-50-1]^	360	U	ug/L	500	360	1200	2B17011	EPA 8260D	02/17/22 13:43	JMW	
1,2-Dichloroethane [107-06-2]^	320	U	ug/L	500	320	1200	2B17011	EPA 8260D	02/17/22 13:43	JMW	
1,2-Dichloropropane [78-87-5]^	400	U	ug/L	500	400	1200	2B17011	EPA 8260D	02/17/22 13:43	JMW	
1,3-Dichlorobenzene [541-73-1]^	380	U	ug/L	500	380	1200	2B17011	EPA 8260D	02/17/22 13:43	JMW	
1,4-Dichlorobenzene [106-46-7]^	380	U	ug/L	500	380	1200	2B17011	EPA 8260D	02/17/22 13:43	JMW	
2-Butanone [78-93-3]^	2200	U	ug/L	500	2200	6200	2B17011	EPA 8260D	02/17/22 13:43	JMW	
2-Hexanone [591-78-6]^	1200	U	ug/L	500	1200	6200	2B17011	EPA 8260D	02/17/22 13:43	JMW	
4-Methyl-2-pentanone [108-10-1]^	1200	U	ug/L	500	1200	6200	2B17011	EPA 8260D	02/17/22 13:43	JMW	
Acetone [67-64-1]^	5000	U	ug/L	500	5000	12000	2B17011	EPA 8260D	02/17/22 13:43	JMW	
Benzene [71-43-2]^	360	U	ug/L	500	360	1200	2B17011	EPA 8260D	02/17/22 13:43	JMW	
Bromodichloromethane [75-27-4]^	260	U	ug/L	500	260	1200	2B17011	EPA 8260D	02/17/22 13:43	JMW	
Bromoform [75-25-2]^	380	U	ug/L	500	380	1200	2B17011	EPA 8260D	02/17/22 13:43	JMW	
Bromomethane [74-83-9]^	480	U	ug/L	500	480	1200	2B17011	EPA 8260D	02/17/22 13:43	JMW	QV-01
Carbon disulfide [75-15-0]^	1200	U	ug/L	500	1200	6200	2B17011	EPA 8260D	02/17/22 13:43	JMW	
Carbon Tetrachloride [56-23-5]^	470	U	ug/L	500	470	1200	2B17011	EPA 8260D	02/17/22 13:43	JMW	
Chlorobenzene [108-90-7]^	360	U	ug/L	500	360	1200	2B17011	EPA 8260D	02/17/22 13:43	JMW	
Chloroethane [75-00-3]^	490	U	ug/L	500	490	1200	2B17011	EPA 8260D	02/17/22 13:43	JMW	
Chloroform [67-66-3]^	400	U	ug/L	500	400	1200	2B17011	EPA 8260D	02/17/22 13:43	JMW	
Chloromethane [74-87-3]^	410	U	ug/L	500	410	1200	2B17011	EPA 8260D	02/17/22 13:43	JMW	
cis-1,2-Dichloroethene [156-59-2]^	**20000**		ug/L	500	260	1200	2B17011	EPA 8260D	02/17/22 13:43	JMW	
cis-1,3-Dichloropropene [10061-01-5]^	300	U	ug/L	500	300	1200	2B17011	EPA 8260D	02/17/22 13:43	JMW	
Cyclohexane [110-82-7]^	460	U	ug/L	500	460	1200	2B17011	EPA 8260D	02/17/22 13:43	JMW	
Dibromochloromethane [124-48-1]^	250	U	ug/L	500	250	1200	2B17011	EPA 8260D	02/17/22 13:43	JMW	
Dichlorodifluoromethane [75-71-8]^	370	U	ug/L	500	370	1200	2B17011	EPA 8260D	02/17/22 13:43	JMW	
Ethylbenzene [100-41-4]^	340	U	ug/L	500	340	1200	2B17011	EPA 8260D	02/17/22 13:43	JMW	
Freon 113 [76-13-1]^	360	U	ug/L	500	360	1200	2B17011	EPA 8260D	02/17/22 13:43	JMW	
Isopropylbenzene [98-82-8]^	340	U	ug/L	500	340	1200	2B17011	EPA 8260D	02/17/22 13:43	JMW	
Methyl acetate [79-20-9]^	480	U	ug/L	500	480	1200	2B17011	EPA 8260D	02/17/22 13:43	JMW	
Methylene Chloride [75-09-2]^	1200	U	ug/L	500	1200	6200	2B17011	EPA 8260D	02/17/22 13:43	JMW	
Methyl-tert-Butyl Ether [1634-04-4]^	300	U	ug/L	500	300	1200	2B17011	EPA 8260D	02/17/22 13:43	JMW	
Styrene [100-42-5]^	300	U	ug/L	500	300	1200	2B17011	EPA 8260D	02/17/22 13:43	JMW	
Tetrachloroethene [127-18-4]^	380	U	ug/L	500	380	1200	2B17011	EPA 8260D	02/17/22 13:43	JMW	
Toluene [108-88-3]^	360	U	ug/L	500	360	1200	2B17011	EPA 8260D	02/17/22 13:43	JMW	
trans-1,2-Dichloroethene [156-60-5]^	360	U	ug/L	500	360	1200	2B17011	EPA 8260D	02/17/22 13:43	JMW	
trans-1,3-Dichloropropene [10061-02-6]^	360	U	ug/L	500	360	1200	2B17011	EPA 8260D	02/17/22 13:43	JMW	
Trichloroethene [79-01-6]^	**31000**		ug/L	500	440	1200	2B17011	EPA 8260D	02/17/22 13:43	JMW	
Trichlorofluoromethane [75-69-4]^	470	U	ug/L	500	470	1200	2B17011	EPA 8260D	02/17/22 13:43	JMW	
Vinyl chloride [75-01-4]^	**710**	I	ug/L	500	360	1200	2B17011	EPA 8260D	02/17/22 13:43	JMW	
Xylenes (Total) [1330-20-7]	650	U	ug/L	500	650	2500	2B17011	EPA 8260D	02/17/22 13:43	JMW	

ANALYTICAL RESULTS

Description: LC34PS-PZG-040.0-20220214 **Lab Sample ID:** AF00827-28 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 10:00 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*46*	*1*	*50.0*	*92 %*	*41-142*	*2B17011*	*EPA 8260D*	*02/17/22 13:43*	*JMW*	
Dibromofluoromethane	*55*	*1*	*50.0*	*109 %*	*53-146*	*2B17011*	*EPA 8260D*	*02/17/22 13:43*	*JMW*	
Toluene-d8	*55*	*1*	*50.0*	*110 %*	*41-146*	*2B17011*	*EPA 8260D*	*02/17/22 13:43*	*JMW*	

ANALYTICAL RESULTS

Description: LC34PS-PZG-050.0-20220214 **Lab Sample ID:** AF00827-29 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 10:02 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	8000	U	ug/L	10000	8000	25000	2B16003	EPA 8260D	02/16/22 16:21	JMW	
1,1,2,2-Tetrachloroethane [79-34-5]^	5400	U	ug/L	10000	5400	25000	2B16003	EPA 8260D	02/16/22 16:21	JMW	
1,1,2-Trichloroethane [79-00-5]^	7600	U	ug/L	10000	7600	25000	2B16003	EPA 8260D	02/16/22 16:21	JMW	
1,1-Dichloroethane [75-34-3]^	6200	U	ug/L	10000	6200	25000	2B16003	EPA 8260D	02/16/22 16:21	JMW	
1,1-Dichloroethene [75-35-4]^	9400	U	ug/L	10000	9400	25000	2B16003	EPA 8260D	02/16/22 16:21	JMW	
1,2,4-Trichlorobenzene [120-82-1]^	7000	U	ug/L	10000	7000	25000	2B16003	EPA 8260D	02/16/22 16:21	JMW	
1,2-Dibromo-3-chloropropane [96-12-8]^	9600	U	ug/L	10000	9600	25000	2B16003	EPA 8260D	02/16/22 16:21	JMW	
1,2-Dibromoethane [106-93-4]^	7800	U	ug/L	10000	7800	25000	2B16003	EPA 8260D	02/16/22 16:21	JMW	
1,2-Dichlorobenzene [95-50-1]^	7300	U	ug/L	10000	7300	25000	2B16003	EPA 8260D	02/16/22 16:21	JMW	
1,2-Dichloroethane [107-06-2]^	6300	U	ug/L	10000	6300	25000	2B16003	EPA 8260D	02/16/22 16:21	JMW	
1,2-Dichloropropane [78-87-5]^	8000	U	ug/L	10000	8000	25000	2B16003	EPA 8260D	02/16/22 16:21	JMW	
1,3-Dichlorobenzene [541-73-1]^	7700	U	ug/L	10000	7700	25000	2B16003	EPA 8260D	02/16/22 16:21	JMW	
1,4-Dichlorobenzene [106-46-7]^	7600	U	ug/L	10000	7600	25000	2B16003	EPA 8260D	02/16/22 16:21	JMW	
2-Butanone [78-93-3]^	45000	U	ug/L	10000	45000	120000	2B16003	EPA 8260D	02/16/22 16:21	JMW	
2-Hexanone [591-78-6]^	25000	U	ug/L	10000	25000	120000	2B16003	EPA 8260D	02/16/22 16:21	JMW	
4-Methyl-2-pentanone [108-10-1]^	25000	U	ug/L	10000	25000	120000	2B16003	EPA 8260D	02/16/22 16:21	JMW	
Acetone [67-64-1]^	100000	U	ug/L	10000	100000	250000	2B16003	EPA 8260D	02/16/22 16:21	JMW	
Benzene [71-43-2]^	7100	U	ug/L	10000	7100	25000	2B16003	EPA 8260D	02/16/22 16:21	JMW	
Bromodichloromethane [75-27-4]^	5200	U	ug/L	10000	5200	25000	2B16003	EPA 8260D	02/16/22 16:21	JMW	
Bromoform [75-25-2]^	7500	U	ug/L	10000	7500	25000	2B16003	EPA 8260D	02/16/22 16:21	JMW	
Bromomethane [74-83-9]^	9500	U	ug/L	10000	9500	25000	2B16003	EPA 8260D	02/16/22 16:21	JMW	QV-01
Carbon disulfide [75-15-0]^	25000	U	ug/L	10000	25000	120000	2B16003	EPA 8260D	02/16/22 16:21	JMW	
Carbon Tetrachloride [56-23-5]^	9400	U	ug/L	10000	9400	25000	2B16003	EPA 8260D	02/16/22 16:21	JMW	
Chlorobenzene [108-90-7]^	7200	U	ug/L	10000	7200	25000	2B16003	EPA 8260D	02/16/22 16:21	JMW	
Chloroethane [75-00-3]^	9800	U	ug/L	10000	9800	25000	2B16003	EPA 8260D	02/16/22 16:21	JMW	
Chloroform [67-66-3]^	8000	U	ug/L	10000	8000	25000	2B16003	EPA 8260D	02/16/22 16:21	JMW	
Chloromethane [74-87-3]^	8200	U	ug/L	10000	8200	25000	2B16003	EPA 8260D	02/16/22 16:21	JMW	
cis-1,2-Dichloroethene [156-59-2]^	**59000**		ug/L	10000	5300	25000	2B16003	EPA 8260D	02/16/22 16:21	JMW	
cis-1,3-Dichloropropene [10061-01-5]^	5900	U	ug/L	10000	5900	25000	2B16003	EPA 8260D	02/16/22 16:21	JMW	
Cyclohexane [110-82-7]^	9300	U	ug/L	10000	9300	25000	2B16003	EPA 8260D	02/16/22 16:21	JMW	
Dibromochloromethane [124-48-1]^	5000	U	ug/L	10000	5000	25000	2B16003	EPA 8260D	02/16/22 16:21	JMW	
Dichlorodifluoromethane [75-71-8]^	7400	U	ug/L	10000	7400	25000	2B16003	EPA 8260D	02/16/22 16:21	JMW	QV-01
Ethylbenzene [100-41-4]^	6900	U	ug/L	10000	6900	25000	2B16003	EPA 8260D	02/16/22 16:21	JMW	
Freon 113 [76-13-1]^	7300	U	ug/L	10000	7300	25000	2B16003	EPA 8260D	02/16/22 16:21	JMW	
Isopropylbenzene [98-82-8]^	6700	U	ug/L	10000	6700	25000	2B16003	EPA 8260D	02/16/22 16:21	JMW	
Methyl acetate [79-20-9]^	9500	U	ug/L	10000	9500	25000	2B16003	EPA 8260D	02/16/22 16:21	JMW	
Methylene Chloride [75-09-2]^	25000	U	ug/L	10000	25000	120000	2B16003	EPA 8260D	02/16/22 16:21	JMW	
Methyl-tert-Butyl Ether [1634-04-4]^	6000	U	ug/L	10000	6000	25000	2B16003	EPA 8260D	02/16/22 16:21	JMW	
Styrene [100-42-5]^	6100	U	ug/L	10000	6100	25000	2B16003	EPA 8260D	02/16/22 16:21	JMW	
Tetrachloroethene [127-18-4]^	7600	U	ug/L	10000	7600	25000	2B16003	EPA 8260D	02/16/22 16:21	JMW	
Toluene [108-88-3]^	7200	U	ug/L	10000	7200	25000	2B16003	EPA 8260D	02/16/22 16:21	JMW	
trans-1,2-Dichloroethene [156-60-5]^	7300	U	ug/L	10000	7300	25000	2B16003	EPA 8260D	02/16/22 16:21	JMW	
trans-1,3-Dichloropropene [10061-02-6]^	7300	U	ug/L	10000	7300	25000	2B16003	EPA 8260D	02/16/22 16:21	JMW	
Trichloroethene [79-01-6]^	**550000**		ug/L	10000	8900	25000	2B16003	EPA 8260D	02/16/22 16:21	JMW	
Trichlorofluoromethane [75-69-4]^	9400	U	ug/L	10000	9400	25000	2B16003	EPA 8260D	02/16/22 16:21	JMW	
Vinyl chloride [75-01-4]^	7100	U	ug/L	10000	7100	25000	2B16003	EPA 8260D	02/16/22 16:21	JMW	
Xylenes (Total) [1330-20-7]	13000	U	ug/L	10000	13000	50000	2B16003	EPA 8260D	02/16/22 16:21	JMW	

ANALYTICAL RESULTS

Description: LC34PS-PZG-050.0-20220214 **Lab Sample ID:** AF00827-29 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 10:02 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*46*	*1*	*50.0*	*92 %*	*41-142*	*2B16003*	*EPA 8260D*	*02/16/22 16:21*	*JMW*	
Dibromofluoromethane	*52*	*1*	*50.0*	*103 %*	*53-146*	*2B16003*	*EPA 8260D*	*02/16/22 16:21*	*JMW*	
Toluene-d8	*54*	*1*	*50.0*	*108 %*	*41-146*	*2B16003*	*EPA 8260D*	*02/16/22 16:21*	*JMW*	

ANALYTICAL RESULTS

Description: LC34PS-PZG-058.0-20220214 **Lab Sample ID:** AF00827-30 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 10:04 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	40	U	ug/L	50	40	120	2B17011	EPA 8260D	02/17/22 14:12	JMW	
1,1,2,2-Tetrachloroethane [79-34-5]^	27	U	ug/L	50	27	120	2B17011	EPA 8260D	02/17/22 14:12	JMW	
1,1,2-Trichloroethane [79-00-5]^	38	U	ug/L	50	38	120	2B17011	EPA 8260D	02/17/22 14:12	JMW	
1,1-Dichloroethane [75-34-3]^	31	U	ug/L	50	31	120	2B17011	EPA 8260D	02/17/22 14:12	JMW	
1,1-Dichloroethene [75-35-4]^	47	U	ug/L	50	47	120	2B17011	EPA 8260D	02/17/22 14:12	JMW	
1,2,4-Trichlorobenzene [120-82-1]^	35	U	ug/L	50	35	120	2B17011	EPA 8260D	02/17/22 14:12	JMW	
1,2-Dibromo-3-chloropropane [96-12-8]^	48	U	ug/L	50	48	120	2B17011	EPA 8260D	02/17/22 14:12	JMW	
1,2-Dibromoethane [106-93-4]^	39	U	ug/L	50	39	120	2B17011	EPA 8260D	02/17/22 14:12	JMW	
1,2-Dichlorobenzene [95-50-1]^	36	U	ug/L	50	36	120	2B17011	EPA 8260D	02/17/22 14:12	JMW	
1,2-Dichloroethane [107-06-2]^	32	U	ug/L	50	32	120	2B17011	EPA 8260D	02/17/22 14:12	JMW	
1,2-Dichloropropane [78-87-5]^	40	U	ug/L	50	40	120	2B17011	EPA 8260D	02/17/22 14:12	JMW	
1,3-Dichlorobenzene [541-73-1]^	38	U	ug/L	50	38	120	2B17011	EPA 8260D	02/17/22 14:12	JMW	
1,4-Dichlorobenzene [106-46-7]^	38	U	ug/L	50	38	120	2B17011	EPA 8260D	02/17/22 14:12	JMW	
2-Butanone [78-93-3]^	220	U	ug/L	50	220	620	2B17011	EPA 8260D	02/17/22 14:12	JMW	
2-Hexanone [591-78-6]^	120	U	ug/L	50	120	620	2B17011	EPA 8260D	02/17/22 14:12	JMW	
4-Methyl-2-pentanone [108-10-1]^	120	U	ug/L	50	120	620	2B17011	EPA 8260D	02/17/22 14:12	JMW	
Acetone [67-64-1]^	500	U	ug/L	50	500	1200	2B17011	EPA 8260D	02/17/22 14:12	JMW	
Benzene [71-43-2]^	36	U	ug/L	50	36	120	2B17011	EPA 8260D	02/17/22 14:12	JMW	
Bromodichloromethane [75-27-4]^	26	U	ug/L	50	26	120	2B17011	EPA 8260D	02/17/22 14:12	JMW	
Bromoform [75-25-2]^	38	U	ug/L	50	38	120	2B17011	EPA 8260D	02/17/22 14:12	JMW	
Bromomethane [74-83-9]^	48	U	ug/L	50	48	120	2B17011	EPA 8260D	02/17/22 14:12	JMW	QV-01
Carbon disulfide [75-15-0]^	120	U	ug/L	50	120	620	2B17011	EPA 8260D	02/17/22 14:12	JMW	
Carbon Tetrachloride [56-23-5]^	47	U	ug/L	50	47	120	2B17011	EPA 8260D	02/17/22 14:12	JMW	
Chlorobenzene [108-90-7]^	36	U	ug/L	50	36	120	2B17011	EPA 8260D	02/17/22 14:12	JMW	
Chloroethane [75-00-3]^	49	U	ug/L	50	49	120	2B17011	EPA 8260D	02/17/22 14:12	JMW	
Chloroform [67-66-3]^	40	U	ug/L	50	40	120	2B17011	EPA 8260D	02/17/22 14:12	JMW	
Chloromethane [74-87-3]^	41	U	ug/L	50	41	120	2B17011	EPA 8260D	02/17/22 14:12	JMW	
cis-1,2-Dichloroethene [156-59-2]^	**880**		ug/L	50	26	120	2B17011	EPA 8260D	02/17/22 14:12	JMW	
cis-1,3-Dichloropropene [10061-01-5]^	30	U	ug/L	50	30	120	2B17011	EPA 8260D	02/17/22 14:12	JMW	
Cyclohexane [110-82-7]^	46	U	ug/L	50	46	120	2B17011	EPA 8260D	02/17/22 14:12	JMW	
Dibromochloromethane [124-48-1]^	25	U	ug/L	50	25	120	2B17011	EPA 8260D	02/17/22 14:12	JMW	
Dichlorodifluoromethane [75-71-8]^	37	U	ug/L	50	37	120	2B17011	EPA 8260D	02/17/22 14:12	JMW	
Ethylbenzene [100-41-4]^	34	U	ug/L	50	34	120	2B17011	EPA 8260D	02/17/22 14:12	JMW	
Freon 113 [76-13-1]^	36	U	ug/L	50	36	120	2B17011	EPA 8260D	02/17/22 14:12	JMW	
Isopropylbenzene [98-82-8]^	34	U	ug/L	50	34	120	2B17011	EPA 8260D	02/17/22 14:12	JMW	
Methyl acetate [79-20-9]^	48	U	ug/L	50	48	120	2B17011	EPA 8260D	02/17/22 14:12	JMW	
Methylene Chloride [75-09-2]^	120	U	ug/L	50	120	620	2B17011	EPA 8260D	02/17/22 14:12	JMW	
Methyl-tert-Butyl Ether [1634-04-4]^	30	U	ug/L	50	30	120	2B17011	EPA 8260D	02/17/22 14:12	JMW	
Styrene [100-42-5]^	30	U	ug/L	50	30	120	2B17011	EPA 8260D	02/17/22 14:12	JMW	
Tetrachloroethene [127-18-4]^	38	U	ug/L	50	38	120	2B17011	EPA 8260D	02/17/22 14:12	JMW	
Toluene [108-88-3]^	36	U	ug/L	50	36	120	2B17011	EPA 8260D	02/17/22 14:12	JMW	
trans-1,2-Dichloroethene [156-60-5]^	36	U	ug/L	50	36	120	2B17011	EPA 8260D	02/17/22 14:12	JMW	
trans-1,3-Dichloropropene [10061-02-6]^	36	U	ug/L	50	36	120	2B17011	EPA 8260D	02/17/22 14:12	JMW	
Trichloroethene [79-01-6]^	**5900**		ug/L	500	440	1200	2B16003	EPA 8260D	02/16/22 16:50	JMW	
Trichlorofluoromethane [75-69-4]^	47	U	ug/L	50	47	120	2B17011	EPA 8260D	02/17/22 14:12	JMW	
Vinyl chloride [75-01-4]^	36	U	ug/L	50	36	120	2B17011	EPA 8260D	02/17/22 14:12	JMW	
Xylenes (Total) [1330-20-7]	65	U	ug/L	50	65	250	2B17011	EPA 8260D	02/17/22 14:12	JMW	

ANALYTICAL RESULTS

Description: LC34PS-PZG-058.0-20220214 **Lab Sample ID:** AF00827-30 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 10:04 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*46*	*1*	*50.0*	*92 %*	*41-142*	*2B16003*	*EPA 8260D*	*02/16/22 16:50*	*JMW*	
4-Bromofluorobenzene	*45*	*1*	*50.0*	*90 %*	*41-142*	*2B17011*	*EPA 8260D*	*02/17/22 14:12*	*JMW*	
Dibromofluoromethane	*53*	*1*	*50.0*	*106 %*	*53-146*	*2B16003*	*EPA 8260D*	*02/16/22 16:50*	*JMW*	
Dibromofluoromethane	*54*	*1*	*50.0*	*108 %*	*53-146*	*2B17011*	*EPA 8260D*	*02/17/22 14:12*	*JMW*	
Toluene-d8	*54*	*1*	*50.0*	*109 %*	*41-146*	*2B16003*	*EPA 8260D*	*02/16/22 16:50*	*JMW*	
Toluene-d8	*54*	*1*	*50.0*	*109 %*	*41-146*	*2B17011*	*EPA 8260D*	*02/17/22 14:12*	*JMW*	

ANALYTICAL RESULTS

Description: LC34PS-PZG-073.0-20220214 **Lab Sample ID:** AF00827-31 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 10:06 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	4.0	U	ug/L	5	4.0	12	2B16003	EPA 8260D	02/16/22 17:19	JMW	
1,1,2,2-Tetrachloroethane [79-34-5]^	2.7	U	ug/L	5	2.7	12	2B16003	EPA 8260D	02/16/22 17:19	JMW	
1,1,2-Trichloroethane [79-00-5]^	3.8	U	ug/L	5	3.8	12	2B16003	EPA 8260D	02/16/22 17:19	JMW	
1,1-Dichloroethane [75-34-3]^	3.1	U	ug/L	5	3.1	12	2B16003	EPA 8260D	02/16/22 17:19	JMW	
1,1-Dichloroethene [75-35-4]^	4.7	U	ug/L	5	4.7	12	2B16003	EPA 8260D	02/16/22 17:19	JMW	
1,2,4-Trichlorobenzene [120-82-1]^	3.5	U	ug/L	5	3.5	12	2B16003	EPA 8260D	02/16/22 17:19	JMW	
1,2-Dibromo-3-chloropropane [96-12-8]^	4.8	U	ug/L	5	4.8	12	2B16003	EPA 8260D	02/16/22 17:19	JMW	
1,2-Dibromoethane [106-93-4]^	3.9	U	ug/L	5	3.9	12	2B16003	EPA 8260D	02/16/22 17:19	JMW	
1,2-Dichlorobenzene [95-50-1]^	3.6	U	ug/L	5	3.6	12	2B16003	EPA 8260D	02/16/22 17:19	JMW	
1,2-Dichloroethane [107-06-2]^	3.2	U	ug/L	5	3.2	12	2B16003	EPA 8260D	02/16/22 17:19	JMW	
1,2-Dichloropropane [78-87-5]^	4.0	U	ug/L	5	4.0	12	2B16003	EPA 8260D	02/16/22 17:19	JMW	
1,3-Dichlorobenzene [541-73-1]^	3.8	U	ug/L	5	3.8	12	2B16003	EPA 8260D	02/16/22 17:19	JMW	
1,4-Dichlorobenzene [106-46-7]^	3.8	U	ug/L	5	3.8	12	2B16003	EPA 8260D	02/16/22 17:19	JMW	
2-Butanone [78-93-3]^	22	U	ug/L	5	22	62	2B16003	EPA 8260D	02/16/22 17:19	JMW	
2-Hexanone [591-78-6]^	12	U	ug/L	5	12	62	2B16003	EPA 8260D	02/16/22 17:19	JMW	
4-Methyl-2-pentanone [108-10-1]^	12	U	ug/L	5	12	62	2B16003	EPA 8260D	02/16/22 17:19	JMW	
Acetone [67-64-1]^	50	U	ug/L	5	50	120	2B16003	EPA 8260D	02/16/22 17:19	JMW	
Benzene [71-43-2]^	3.6	U	ug/L	5	3.6	12	2B16003	EPA 8260D	02/16/22 17:19	JMW	
Bromodichloromethane [75-27-4]^	2.6	U	ug/L	5	2.6	12	2B16003	EPA 8260D	02/16/22 17:19	JMW	
Bromoform [75-25-2]^	3.8	U	ug/L	5	3.8	12	2B16003	EPA 8260D	02/16/22 17:19	JMW	
Bromomethane [74-83-9]^	4.8	U	ug/L	5	4.8	12	2B16003	EPA 8260D	02/16/22 17:19	JMW	QV-01
Carbon disulfide [75-15-0]^	12	U	ug/L	5	12	62	2B16003	EPA 8260D	02/16/22 17:19	JMW	
Carbon Tetrachloride [56-23-5]^	4.7	U	ug/L	5	4.7	12	2B16003	EPA 8260D	02/16/22 17:19	JMW	
Chlorobenzene [108-90-7]^	3.6	U	ug/L	5	3.6	12	2B16003	EPA 8260D	02/16/22 17:19	JMW	
Chloroethane [75-00-3]^	4.9	U	ug/L	5	4.9	12	2B16003	EPA 8260D	02/16/22 17:19	JMW	
Chloroform [67-66-3]^	4.0	U	ug/L	5	4.0	12	2B16003	EPA 8260D	02/16/22 17:19	JMW	
Chloromethane [74-87-3]^	4.1	U	ug/L	5	4.1	12	2B16003	EPA 8260D	02/16/22 17:19	JMW	
cis-1,2-Dichloroethene [156-59-2]^	**160**		ug/L	5	2.6	12	2B16003	EPA 8260D	02/16/22 17:19	JMW	
cis-1,3-Dichloropropene [10061-01-5]^	3.0	U	ug/L	5	3.0	12	2B16003	EPA 8260D	02/16/22 17:19	JMW	
Cyclohexane [110-82-7]^	4.6	U	ug/L	5	4.6	12	2B16003	EPA 8260D	02/16/22 17:19	JMW	
Dibromochloromethane [124-48-1]^	2.5	U	ug/L	5	2.5	12	2B16003	EPA 8260D	02/16/22 17:19	JMW	
Dichlorodifluoromethane [75-71-8]^	3.7	U	ug/L	5	3.7	12	2B16003	EPA 8260D	02/16/22 17:19	JMW	QV-01
Ethylbenzene [100-41-4]^	3.4	U	ug/L	5	3.4	12	2B16003	EPA 8260D	02/16/22 17:19	JMW	
Freon 113 [76-13-1]^	3.6	U	ug/L	5	3.6	12	2B16003	EPA 8260D	02/16/22 17:19	JMW	
Isopropylbenzene [98-82-8]^	3.4	U	ug/L	5	3.4	12	2B16003	EPA 8260D	02/16/22 17:19	JMW	
Methyl acetate [79-20-9]^	4.8	U	ug/L	5	4.8	12	2B16003	EPA 8260D	02/16/22 17:19	JMW	
Methylene Chloride [75-09-2]^	12	U	ug/L	5	12	62	2B16003	EPA 8260D	02/16/22 17:19	JMW	
Methyl-tert-Butyl Ether [1634-04-4]^	3.0	U	ug/L	5	3.0	12	2B16003	EPA 8260D	02/16/22 17:19	JMW	
Styrene [100-42-5]^	3.0	U	ug/L	5	3.0	12	2B16003	EPA 8260D	02/16/22 17:19	JMW	
Tetrachloroethene [127-18-4]^	3.8	U	ug/L	5	3.8	12	2B16003	EPA 8260D	02/16/22 17:19	JMW	
Toluene [108-88-3]^	3.6	U	ug/L	5	3.6	12	2B16003	EPA 8260D	02/16/22 17:19	JMW	
trans-1,2-Dichloroethene [156-60-5]^	**12**		ug/L	5	3.6	12	2B16003	EPA 8260D	02/16/22 17:19	JMW	
trans-1,3-Dichloropropene [10061-02-6]^	3.6	U	ug/L	5	3.6	12	2B16003	EPA 8260D	02/16/22 17:19	JMW	
Trichloroethene [79-01-6]^	**4400**		ug/L	100	89	250	2B17011	EPA 8260D	02/17/22 14:41	JMW	
Trichlorofluoromethane [75-69-4]^	4.7	U	ug/L	5	4.7	12	2B16003	EPA 8260D	02/16/22 17:19	JMW	
Vinyl chloride [75-01-4]^	**5.9**	I	ug/L	5	3.6	12	2B16003	EPA 8260D	02/16/22 17:19	JMW	
Xylenes (Total) [1330-20-7]	6.5	U	ug/L	5	6.5	25	2B16003	EPA 8260D	02/16/22 17:19	JMW	

ANALYTICAL RESULTS

Description: LC34PS-PZG-073.0-20220214 **Lab Sample ID:** AF00827-31 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 10:06 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*48*	*1*	*50.0*	*95 %*	*41-142*	*2B16003*	*EPA 8260D*	*02/16/22 17:19*	*JMW*	
4-Bromofluorobenzene	*46*	*1*	*50.0*	*93 %*	*41-142*	*2B17011*	*EPA 8260D*	*02/17/22 14:41*	*JMW*	
Dibromofluoromethane	*54*	*1*	*50.0*	*107 %*	*53-146*	*2B16003*	*EPA 8260D*	*02/16/22 17:19*	*JMW*	
Dibromofluoromethane	*55*	*1*	*50.0*	*111 %*	*53-146*	*2B17011*	*EPA 8260D*	*02/17/22 14:41*	*JMW*	
Toluene-d8	*53*	*1*	*50.0*	*107 %*	*41-146*	*2B16003*	*EPA 8260D*	*02/16/22 17:19*	*JMW*	
Toluene-d8	*53*	*1*	*50.0*	*106 %*	*41-146*	*2B17011*	*EPA 8260D*	*02/17/22 14:41*	*JMW*	

ANALYTICAL RESULTS

Description: LC34PS-PZG-080.0-20220214 **Lab Sample ID:** AF00827-32 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 10:08 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	2B16003	EPA 8260D	02/16/22 17:47	JMW	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	2B16003	EPA 8260D	02/16/22 17:47	JMW	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	2B16003	EPA 8260D	02/16/22 17:47	JMW	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	2B16003	EPA 8260D	02/16/22 17:47	JMW	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	2B16003	EPA 8260D	02/16/22 17:47	JMW	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	2B16003	EPA 8260D	02/16/22 17:47	JMW	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	2B16003	EPA 8260D	02/16/22 17:47	JMW	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	2B16003	EPA 8260D	02/16/22 17:47	JMW	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	2B16003	EPA 8260D	02/16/22 17:47	JMW	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	2B16003	EPA 8260D	02/16/22 17:47	JMW	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	2B16003	EPA 8260D	02/16/22 17:47	JMW	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	2B16003	EPA 8260D	02/16/22 17:47	JMW	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	2B16003	EPA 8260D	02/16/22 17:47	JMW	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	2B16003	EPA 8260D	02/16/22 17:47	JMW	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	2B16003	EPA 8260D	02/16/22 17:47	JMW	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	2B16003	EPA 8260D	02/16/22 17:47	JMW	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	2B16003	EPA 8260D	02/16/22 17:47	JMW	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	2B16003	EPA 8260D	02/16/22 17:47	JMW	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	2B16003	EPA 8260D	02/16/22 17:47	JMW	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	2B16003	EPA 8260D	02/16/22 17:47	JMW	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	2B16003	EPA 8260D	02/16/22 17:47	JMW	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	2B16003	EPA 8260D	02/16/22 17:47	JMW	
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	2B16003	EPA 8260D	02/16/22 17:47	JMW	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	2B16003	EPA 8260D	02/16/22 17:47	JMW	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	2B16003	EPA 8260D	02/16/22 17:47	JMW	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	2B16003	EPA 8260D	02/16/22 17:47	JMW	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	2B16003	EPA 8260D	02/16/22 17:47	JMW	
cis-1,2-Dichloroethene [156-59-2]^	**45**		ug/L	1	0.53	2.5	2B16003	EPA 8260D	02/16/22 17:47	JMW	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	2B16003	EPA 8260D	02/16/22 17:47	JMW	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	2B16003	EPA 8260D	02/16/22 17:47	JMW	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	2B16003	EPA 8260D	02/16/22 17:47	JMW	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	2B16003	EPA 8260D	02/16/22 17:47	JMW	QV-01
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	2B16003	EPA 8260D	02/16/22 17:47	JMW	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	2B16003	EPA 8260D	02/16/22 17:47	JMW	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	2B16003	EPA 8260D	02/16/22 17:47	JMW	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	2B16003	EPA 8260D	02/16/22 17:47	JMW	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	2B16003	EPA 8260D	02/16/22 17:47	JMW	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	2B16003	EPA 8260D	02/16/22 17:47	JMW	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	2B16003	EPA 8260D	02/16/22 17:47	JMW	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	2B16003	EPA 8260D	02/16/22 17:47	JMW	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	2B16003	EPA 8260D	02/16/22 17:47	JMW	
trans-1,2-Dichloroethene [156-60-5]^	**15**		ug/L	1	0.73	2.5	2B16003	EPA 8260D	02/16/22 17:47	JMW	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	2B16003	EPA 8260D	02/16/22 17:47	JMW	
Trichloroethene [79-01-6]^	**24**		ug/L	1	0.89	2.5	2B16003	EPA 8260D	02/16/22 17:47	JMW	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	2B16003	EPA 8260D	02/16/22 17:47	JMW	
Vinyl chloride [75-01-4]^	**65**		ug/L	1	0.71	2.5	2B16003	EPA 8260D	02/16/22 17:47	JMW	
Xylenes (Total) [1330-20-7]	1.3	U	ug/L	1	1.3	5.0	2B16003	EPA 8260D	02/16/22 17:47	JMW	

ANALYTICAL RESULTS

Description: LC34PS-PZG-080.0-20220214 **Lab Sample ID:** AF00827-32 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 10:08 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*46*	*1*	*50.0*	*91 %*	*41-142*	*2B16003*	*EPA 8260D*	*02/16/22 17:47*	*JMW*	
Dibromofluoromethane	*54*	*1*	*50.0*	*108 %*	*53-146*	*2B16003*	*EPA 8260D*	*02/16/22 17:47*	*JMW*	
Toluene-d8	*54*	*1*	*50.0*	*109 %*	*41-146*	*2B16003*	*EPA 8260D*	*02/16/22 17:47*	*JMW*	

ANALYTICAL RESULTS

Description: LC34PS-PZF-040.0-20220214 **Lab Sample ID:** AF00827-33 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 10:30 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	800	U	ug/L	1000	800	2500	2B18005	EPA 8260D	02/18/22 14:28	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	540	U	ug/L	1000	540	2500	2B18005	EPA 8260D	02/18/22 14:28	KKW	
1,1,2-Trichloroethane [79-00-5]^	760	U	ug/L	1000	760	2500	2B18005	EPA 8260D	02/18/22 14:28	KKW	
1,1-Dichloroethane [75-34-3]^	620	U	ug/L	1000	620	2500	2B18005	EPA 8260D	02/18/22 14:28	KKW	
1,1-Dichloroethene [75-35-4]^	940	U	ug/L	1000	940	2500	2B18005	EPA 8260D	02/18/22 14:28	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	700	U	ug/L	1000	700	2500	2B18005	EPA 8260D	02/18/22 14:28	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	960	U	ug/L	1000	960	2500	2B18005	EPA 8260D	02/18/22 14:28	KKW	
1,2-Dibromoethane [106-93-4]^	780	U	ug/L	1000	780	2500	2B18005	EPA 8260D	02/18/22 14:28	KKW	
1,2-Dichlorobenzene [95-50-1]^	730	U	ug/L	1000	730	2500	2B18005	EPA 8260D	02/18/22 14:28	KKW	
1,2-Dichloroethane [107-06-2]^	630	U	ug/L	1000	630	2500	2B18005	EPA 8260D	02/18/22 14:28	KKW	
1,2-Dichloropropane [78-87-5]^	800	U	ug/L	1000	800	2500	2B18005	EPA 8260D	02/18/22 14:28	KKW	
1,3-Dichlorobenzene [541-73-1]^	770	U	ug/L	1000	770	2500	2B18005	EPA 8260D	02/18/22 14:28	KKW	
1,4-Dichlorobenzene [106-46-7]^	760	U	ug/L	1000	760	2500	2B18005	EPA 8260D	02/18/22 14:28	KKW	
2-Butanone [78-93-3]^	4500	U	ug/L	1000	4500	12000	2B18005	EPA 8260D	02/18/22 14:28	KKW	
2-Hexanone [591-78-6]^	2500	U	ug/L	1000	2500	12000	2B18005	EPA 8260D	02/18/22 14:28	KKW	
4-Methyl-2-pentanone [108-10-1]^	2500	U	ug/L	1000	2500	12000	2B18005	EPA 8260D	02/18/22 14:28	KKW	
Acetone [67-64-1]^	10000	U	ug/L	1000	10000	25000	2B18005	EPA 8260D	02/18/22 14:28	KKW	
Benzene [71-43-2]^	710	U	ug/L	1000	710	2500	2B18005	EPA 8260D	02/18/22 14:28	KKW	
Bromodichloromethane [75-27-4]^	520	U	ug/L	1000	520	2500	2B18005	EPA 8260D	02/18/22 14:28	KKW	
Bromoform [75-25-2]^	750	U	ug/L	1000	750	2500	2B18005	EPA 8260D	02/18/22 14:28	KKW	
Bromomethane [74-83-9]^	950	U	ug/L	1000	950	2500	2B18005	EPA 8260D	02/18/22 14:28	KKW	QV-01
Carbon disulfide [75-15-0]^	2500	U	ug/L	1000	2500	12000	2B18005	EPA 8260D	02/18/22 14:28	KKW	QV-01
Carbon Tetrachloride [56-23-5]^	940	U	ug/L	1000	940	2500	2B18005	EPA 8260D	02/18/22 14:28	KKW	
Chlorobenzene [108-90-7]^	720	U	ug/L	1000	720	2500	2B18005	EPA 8260D	02/18/22 14:28	KKW	
Chloroethane [75-00-3]^	980	U	ug/L	1000	980	2500	2B18005	EPA 8260D	02/18/22 14:28	KKW	
Chloroform [67-66-3]^	800	U	ug/L	1000	800	2500	2B18005	EPA 8260D	02/18/22 14:28	KKW	
Chloromethane [74-87-3]^	820	U	ug/L	1000	820	2500	2B18005	EPA 8260D	02/18/22 14:28	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**26000**		ug/L	1000	530	2500	2B18005	EPA 8260D	02/18/22 14:28	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	590	U	ug/L	1000	590	2500	2B18005	EPA 8260D	02/18/22 14:28	KKW	
Cyclohexane [110-82-7]^	930	U	ug/L	1000	930	2500	2B18005	EPA 8260D	02/18/22 14:28	KKW	
Dibromochloromethane [124-48-1]^	500	U	ug/L	1000	500	2500	2B18005	EPA 8260D	02/18/22 14:28	KKW	
Dichlorodifluoromethane [75-71-8]^	740	U	ug/L	1000	740	2500	2B18005	EPA 8260D	02/18/22 14:28	KKW	
Ethylbenzene [100-41-4]^	690	U	ug/L	1000	690	2500	2B18005	EPA 8260D	02/18/22 14:28	KKW	
Freon 113 [76-13-1]^	730	U	ug/L	1000	730	2500	2B18005	EPA 8260D	02/18/22 14:28	KKW	
Isopropylbenzene [98-82-8]^	670	U	ug/L	1000	670	2500	2B18005	EPA 8260D	02/18/22 14:28	KKW	
Methyl acetate [79-20-9]^	950	U	ug/L	1000	950	2500	2B18005	EPA 8260D	02/18/22 14:28	KKW	
Methylene Chloride [75-09-2]^	2500	U	ug/L	1000	2500	12000	2B18005	EPA 8260D	02/18/22 14:28	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	600	U	ug/L	1000	600	2500	2B18005	EPA 8260D	02/18/22 14:28	KKW	
Styrene [100-42-5]^	610	U	ug/L	1000	610	2500	2B18005	EPA 8260D	02/18/22 14:28	KKW	
Tetrachloroethene [127-18-4]^	760	U	ug/L	1000	760	2500	2B18005	EPA 8260D	02/18/22 14:28	KKW	
Toluene [108-88-3]^	720	U	ug/L	1000	720	2500	2B18005	EPA 8260D	02/18/22 14:28	KKW	
trans-1,2-Dichloroethene [156-60-5]^	730	U	ug/L	1000	730	2500	2B18005	EPA 8260D	02/18/22 14:28	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	730	U	ug/L	1000	730	2500	2B18005	EPA 8260D	02/18/22 14:28	KKW	
Trichloroethene [79-01-6]^	**65000**		ug/L	1000	890	2500	2B18005	EPA 8260D	02/18/22 14:28	KKW	
Trichlorofluoromethane [75-69-4]^	940	U	ug/L	1000	940	2500	2B18005	EPA 8260D	02/18/22 14:28	KKW	
Vinyl chloride [75-01-4]^	710	U	ug/L	1000	710	2500	2B18005	EPA 8260D	02/18/22 14:28	KKW	
Xylenes (Total) [1330-20-7]	1300	U	ug/L	1000	1300	5000	2B18005	EPA 8260D	02/18/22 14:28	KKW	

ANALYTICAL RESULTS

Description: LC34PS-PZF-040.0-20220214 **Lab Sample ID:** AF00827-33 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 10:30 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*55*	*1*	*50.0*	*110 %*	*41-142*	*2B18005*	*EPA 8260D*	*02/18/22 14:28*	*KKW*	
Dibromofluoromethane	*51*	*1*	*50.0*	*103 %*	*53-146*	*2B18005*	*EPA 8260D*	*02/18/22 14:28*	*KKW*	
Toluene-d8	*52*	*1*	*50.0*	*103 %*	*41-146*	*2B18005*	*EPA 8260D*	*02/18/22 14:28*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZF-050.0-20220214 **Lab Sample ID:** AF00827-34 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 10:32 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	16000	U	ug/L	20000	16000	50000	2B16003	EPA 8260D	02/16/22 18:45	JMW	
1,1,2,2-Tetrachloroethane [79-34-5]^	11000	U	ug/L	20000	11000	50000	2B16003	EPA 8260D	02/16/22 18:45	JMW	
1,1,2-Trichloroethane [79-00-5]^	15000	U	ug/L	20000	15000	50000	2B16003	EPA 8260D	02/16/22 18:45	JMW	
1,1-Dichloroethane [75-34-3]^	12000	U	ug/L	20000	12000	50000	2B16003	EPA 8260D	02/16/22 18:45	JMW	
1,1-Dichloroethene [75-35-4]^	19000	U	ug/L	20000	19000	50000	2B16003	EPA 8260D	02/16/22 18:45	JMW	
1,2,4-Trichlorobenzene [120-82-1]^	14000	U	ug/L	20000	14000	50000	2B16003	EPA 8260D	02/16/22 18:45	JMW	
1,2-Dibromo-3-chloropropane [96-12-8]^	19000	U	ug/L	20000	19000	50000	2B16003	EPA 8260D	02/16/22 18:45	JMW	
1,2-Dibromoethane [106-93-4]^	16000	U	ug/L	20000	16000	50000	2B16003	EPA 8260D	02/16/22 18:45	JMW	
1,2-Dichlorobenzene [95-50-1]^	15000	U	ug/L	20000	15000	50000	2B16003	EPA 8260D	02/16/22 18:45	JMW	
1,2-Dichloroethane [107-06-2]^	13000	U	ug/L	20000	13000	50000	2B16003	EPA 8260D	02/16/22 18:45	JMW	
1,2-Dichloropropane [78-87-5]^	16000	U	ug/L	20000	16000	50000	2B16003	EPA 8260D	02/16/22 18:45	JMW	
1,3-Dichlorobenzene [541-73-1]^	15000	U	ug/L	20000	15000	50000	2B16003	EPA 8260D	02/16/22 18:45	JMW	
1,4-Dichlorobenzene [106-46-7]^	15000	U	ug/L	20000	15000	50000	2B16003	EPA 8260D	02/16/22 18:45	JMW	
2-Butanone [78-93-3]^	90000	U	ug/L	20000	90000	250000	2B16003	EPA 8260D	02/16/22 18:45	JMW	
2-Hexanone [591-78-6]^	50000	U	ug/L	20000	50000	250000	2B16003	EPA 8260D	02/16/22 18:45	JMW	
4-Methyl-2-pentanone [108-10-1]^	50000	U	ug/L	20000	50000	250000	2B16003	EPA 8260D	02/16/22 18:45	JMW	
Acetone [67-64-1]^	200000	U	ug/L	20000	200000	500000	2B16003	EPA 8260D	02/16/22 18:45	JMW	
Benzene [71-43-2]^	14000	U	ug/L	20000	14000	50000	2B16003	EPA 8260D	02/16/22 18:45	JMW	
Bromodichloromethane [75-27-4]^	10000	U	ug/L	20000	10000	50000	2B16003	EPA 8260D	02/16/22 18:45	JMW	
Bromoform [75-25-2]^	15000	U	ug/L	20000	15000	50000	2B16003	EPA 8260D	02/16/22 18:45	JMW	
Bromomethane [74-83-9]^	19000	U	ug/L	20000	19000	50000	2B16003	EPA 8260D	02/16/22 18:45	JMW	QV-01
Carbon disulfide [75-15-0]^	50000	U	ug/L	20000	50000	250000	2B16003	EPA 8260D	02/16/22 18:45	JMW	
Carbon Tetrachloride [56-23-5]^	19000	U	ug/L	20000	19000	50000	2B16003	EPA 8260D	02/16/22 18:45	JMW	
Chlorobenzene [108-90-7]^	14000	U	ug/L	20000	14000	50000	2B16003	EPA 8260D	02/16/22 18:45	JMW	
Chloroethane [75-00-3]^	20000	U	ug/L	20000	20000	50000	2B16003	EPA 8260D	02/16/22 18:45	JMW	
Chloroform [67-66-3]^	16000	U	ug/L	20000	16000	50000	2B16003	EPA 8260D	02/16/22 18:45	JMW	
Chloromethane [74-87-3]^	16000	U	ug/L	20000	16000	50000	2B16003	EPA 8260D	02/16/22 18:45	JMW	
cis-1,2-Dichloroethene [156-59-2]^	**26000**	I	ug/L	20000	11000	50000	2B16003	EPA 8260D	02/16/22 18:45	JMW	
cis-1,3-Dichloropropene [10061-01-5]^	12000	U	ug/L	20000	12000	50000	2B16003	EPA 8260D	02/16/22 18:45	JMW	
Cyclohexane [110-82-7]^	19000	U	ug/L	20000	19000	50000	2B16003	EPA 8260D	02/16/22 18:45	JMW	
Dibromochloromethane [124-48-1]^	10000	U	ug/L	20000	10000	50000	2B16003	EPA 8260D	02/16/22 18:45	JMW	
Dichlorodifluoromethane [75-71-8]^	15000	U	ug/L	20000	15000	50000	2B16003	EPA 8260D	02/16/22 18:45	JMW	QV-01
Ethylbenzene [100-41-4]^	14000	U	ug/L	20000	14000	50000	2B16003	EPA 8260D	02/16/22 18:45	JMW	
Freon 113 [76-13-1]^	15000	U	ug/L	20000	15000	50000	2B16003	EPA 8260D	02/16/22 18:45	JMW	
Isopropylbenzene [98-82-8]^	13000	U	ug/L	20000	13000	50000	2B16003	EPA 8260D	02/16/22 18:45	JMW	
Methyl acetate [79-20-9]^	19000	U	ug/L	20000	19000	50000	2B16003	EPA 8260D	02/16/22 18:45	JMW	
Methylene Chloride [75-09-2]^	50000	U	ug/L	20000	50000	250000	2B16003	EPA 8260D	02/16/22 18:45	JMW	
Methyl-tert-Butyl Ether [1634-04-4]^	12000	U	ug/L	20000	12000	50000	2B16003	EPA 8260D	02/16/22 18:45	JMW	
Styrene [100-42-5]^	12000	U	ug/L	20000	12000	50000	2B16003	EPA 8260D	02/16/22 18:45	JMW	
Tetrachloroethene [127-18-4]^	15000	U	ug/L	20000	15000	50000	2B16003	EPA 8260D	02/16/22 18:45	JMW	
Toluene [108-88-3]^	14000	U	ug/L	20000	14000	50000	2B16003	EPA 8260D	02/16/22 18:45	JMW	
trans-1,2-Dichloroethene [156-60-5]^	15000	U	ug/L	20000	15000	50000	2B16003	EPA 8260D	02/16/22 18:45	JMW	
trans-1,3-Dichloropropene [10061-02-6]^	15000	U	ug/L	20000	15000	50000	2B16003	EPA 8260D	02/16/22 18:45	JMW	
Trichloroethene [79-01-6]^	**710000**		ug/L	20000	18000	50000	2B16003	EPA 8260D	02/16/22 18:45	JMW	
Trichlorofluoromethane [75-69-4]^	19000	U	ug/L	20000	19000	50000	2B16003	EPA 8260D	02/16/22 18:45	JMW	
Vinyl chloride [75-01-4]^	14000	U	ug/L	20000	14000	50000	2B16003	EPA 8260D	02/16/22 18:45	JMW	
Xylenes (Total) [1330-20-7]	26000	U	ug/L	20000	26000	100000	2B16003	EPA 8260D	02/16/22 18:45	JMW	

ANALYTICAL RESULTS

Description: LC34PS-PZF-050.0-20220214 **Lab Sample ID:** AF00827-34 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 10:32 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*46*	*1*	*50.0*	*93 %*	*41-142*	*2B16003*	*EPA 8260D*	*02/16/22 18:45*	*JMW*	
Dibromofluoromethane	*53*	*1*	*50.0*	*106 %*	*53-146*	*2B16003*	*EPA 8260D*	*02/16/22 18:45*	*JMW*	
Toluene-d8	*53*	*1*	*50.0*	*106 %*	*41-146*	*2B16003*	*EPA 8260D*	*02/16/22 18:45*	*JMW*	

ANALYTICAL RESULTS

Description: LC34PS-PZF-058.0-20220214 **Lab Sample ID:** AF00827-35 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 10:34 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	800	U	ug/L	1000	800	2500	2B16003	EPA 8260D	02/16/22 19:14	JMW	
1,1,2,2-Tetrachloroethane [79-34-5]^	540	U	ug/L	1000	540	2500	2B16003	EPA 8260D	02/16/22 19:14	JMW	
1,1,2-Trichloroethane [79-00-5]^	760	U	ug/L	1000	760	2500	2B16003	EPA 8260D	02/16/22 19:14	JMW	
1,1-Dichloroethane [75-34-3]^	620	U	ug/L	1000	620	2500	2B16003	EPA 8260D	02/16/22 19:14	JMW	
1,1-Dichloroethene [75-35-4]^	940	U	ug/L	1000	940	2500	2B16003	EPA 8260D	02/16/22 19:14	JMW	
1,2,4-Trichlorobenzene [120-82-1]^	700	U	ug/L	1000	700	2500	2B16003	EPA 8260D	02/16/22 19:14	JMW	
1,2-Dibromo-3-chloropropane [96-12-8]^	960	U	ug/L	1000	960	2500	2B16003	EPA 8260D	02/16/22 19:14	JMW	
1,2-Dibromoethane [106-93-4]^	780	U	ug/L	1000	780	2500	2B16003	EPA 8260D	02/16/22 19:14	JMW	
1,2-Dichlorobenzene [95-50-1]^	730	U	ug/L	1000	730	2500	2B16003	EPA 8260D	02/16/22 19:14	JMW	
1,2-Dichloroethane [107-06-2]^	630	U	ug/L	1000	630	2500	2B16003	EPA 8260D	02/16/22 19:14	JMW	
1,2-Dichloropropane [78-87-5]^	800	U	ug/L	1000	800	2500	2B16003	EPA 8260D	02/16/22 19:14	JMW	
1,3-Dichlorobenzene [541-73-1]^	770	U	ug/L	1000	770	2500	2B16003	EPA 8260D	02/16/22 19:14	JMW	
1,4-Dichlorobenzene [106-46-7]^	760	U	ug/L	1000	760	2500	2B16003	EPA 8260D	02/16/22 19:14	JMW	
2-Butanone [78-93-3]^	4500	U	ug/L	1000	4500	12000	2B16003	EPA 8260D	02/16/22 19:14	JMW	
2-Hexanone [591-78-6]^	2500	U	ug/L	1000	2500	12000	2B16003	EPA 8260D	02/16/22 19:14	JMW	
4-Methyl-2-pentanone [108-10-1]^	2500	U	ug/L	1000	2500	12000	2B16003	EPA 8260D	02/16/22 19:14	JMW	
Acetone [67-64-1]^	10000	U	ug/L	1000	10000	25000	2B16003	EPA 8260D	02/16/22 19:14	JMW	
Benzene [71-43-2]^	710	U	ug/L	1000	710	2500	2B16003	EPA 8260D	02/16/22 19:14	JMW	
Bromodichloromethane [75-27-4]^	520	U	ug/L	1000	520	2500	2B16003	EPA 8260D	02/16/22 19:14	JMW	
Bromoform [75-25-2]^	750	U	ug/L	1000	750	2500	2B16003	EPA 8260D	02/16/22 19:14	JMW	
Bromomethane [74-83-9]^	950	U	ug/L	1000	950	2500	2B16003	EPA 8260D	02/16/22 19:14	JMW	QV-01
Carbon disulfide [75-15-0]^	2500	U	ug/L	1000	2500	12000	2B16003	EPA 8260D	02/16/22 19:14	JMW	
Carbon Tetrachloride [56-23-5]^	940	U	ug/L	1000	940	2500	2B16003	EPA 8260D	02/16/22 19:14	JMW	
Chlorobenzene [108-90-7]^	720	U	ug/L	1000	720	2500	2B16003	EPA 8260D	02/16/22 19:14	JMW	
Chloroethane [75-00-3]^	980	U	ug/L	1000	980	2500	2B16003	EPA 8260D	02/16/22 19:14	JMW	
Chloroform [67-66-3]^	800	U	ug/L	1000	800	2500	2B16003	EPA 8260D	02/16/22 19:14	JMW	
Chloromethane [74-87-3]^	820	U	ug/L	1000	820	2500	2B16003	EPA 8260D	02/16/22 19:14	JMW	
cis-1,2-Dichloroethene [156-59-2]^	**3000**		ug/L	1000	530	2500	2B16003	EPA 8260D	02/16/22 19:14	JMW	
cis-1,3-Dichloropropene [10061-01-5]^	590	U	ug/L	1000	590	2500	2B16003	EPA 8260D	02/16/22 19:14	JMW	
Cyclohexane [110-82-7]^	930	U	ug/L	1000	930	2500	2B16003	EPA 8260D	02/16/22 19:14	JMW	
Dibromochloromethane [124-48-1]^	500	U	ug/L	1000	500	2500	2B16003	EPA 8260D	02/16/22 19:14	JMW	
Dichlorodifluoromethane [75-71-8]^	740	U	ug/L	1000	740	2500	2B16003	EPA 8260D	02/16/22 19:14	JMW	QV-01
Ethylbenzene [100-41-4]^	690	U	ug/L	1000	690	2500	2B16003	EPA 8260D	02/16/22 19:14	JMW	
Freon 113 [76-13-1]^	730	U	ug/L	1000	730	2500	2B16003	EPA 8260D	02/16/22 19:14	JMW	
Isopropylbenzene [98-82-8]^	670	U	ug/L	1000	670	2500	2B16003	EPA 8260D	02/16/22 19:14	JMW	
Methyl acetate [79-20-9]^	950	U	ug/L	1000	950	2500	2B16003	EPA 8260D	02/16/22 19:14	JMW	
Methylene Chloride [75-09-2]^	2500	U	ug/L	1000	2500	12000	2B16003	EPA 8260D	02/16/22 19:14	JMW	
Methyl-tert-Butyl Ether [1634-04-4]^	600	U	ug/L	1000	600	2500	2B16003	EPA 8260D	02/16/22 19:14	JMW	
Styrene [100-42-5]^	610	U	ug/L	1000	610	2500	2B16003	EPA 8260D	02/16/22 19:14	JMW	
Tetrachloroethene [127-18-4]^	760	U	ug/L	1000	760	2500	2B16003	EPA 8260D	02/16/22 19:14	JMW	
Toluene [108-88-3]^	720	U	ug/L	1000	720	2500	2B16003	EPA 8260D	02/16/22 19:14	JMW	
trans-1,2-Dichloroethene [156-60-5]^	730	U	ug/L	1000	730	2500	2B16003	EPA 8260D	02/16/22 19:14	JMW	
trans-1,3-Dichloropropene [10061-02-6]^	730	U	ug/L	1000	730	2500	2B16003	EPA 8260D	02/16/22 19:14	JMW	
Trichloroethene [79-01-6]^	**36000**		ug/L	1000	890	2500	2B16003	EPA 8260D	02/16/22 19:14	JMW	
Trichlorofluoromethane [75-69-4]^	940	U	ug/L	1000	940	2500	2B16003	EPA 8260D	02/16/22 19:14	JMW	
Vinyl chloride [75-01-4]^	710	U	ug/L	1000	710	2500	2B16003	EPA 8260D	02/16/22 19:14	JMW	
Xylenes (Total) [1330-20-7]	1300	U	ug/L	1000	1300	5000	2B16003	EPA 8260D	02/16/22 19:14	JMW	

ANALYTICAL RESULTS

Description: LC34PS-PZF-058.0-20220214 **Lab Sample ID:** AF00827-35 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 10:34 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*44*	*1*	*50.0*	*88 %*	*41-142*	*2B16003*	*EPA 8260D*	*02/16/22 19:14*	*JMW*	
Dibromofluoromethane	*51*	*1*	*50.0*	*102 %*	*53-146*	*2B16003*	*EPA 8260D*	*02/16/22 19:14*	*JMW*	
Toluene-d8	*53*	*1*	*50.0*	*105 %*	*41-146*	*2B16003*	*EPA 8260D*	*02/16/22 19:14*	*JMW*	

ANALYTICAL RESULTS

Description: LC34PS-PZF-073.0-20220214 **Lab Sample ID:** AF00827-36 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 10:36 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	2B16003	EPA 8260D	02/16/22 19:43	JMW	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	2B16003	EPA 8260D	02/16/22 19:43	JMW	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	2B16003	EPA 8260D	02/16/22 19:43	JMW	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	2B16003	EPA 8260D	02/16/22 19:43	JMW	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	2B16003	EPA 8260D	02/16/22 19:43	JMW	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	2B16003	EPA 8260D	02/16/22 19:43	JMW	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	2B16003	EPA 8260D	02/16/22 19:43	JMW	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	2B16003	EPA 8260D	02/16/22 19:43	JMW	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	2B16003	EPA 8260D	02/16/22 19:43	JMW	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	2B16003	EPA 8260D	02/16/22 19:43	JMW	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	2B16003	EPA 8260D	02/16/22 19:43	JMW	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	2B16003	EPA 8260D	02/16/22 19:43	JMW	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	2B16003	EPA 8260D	02/16/22 19:43	JMW	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	2B16003	EPA 8260D	02/16/22 19:43	JMW	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	2B16003	EPA 8260D	02/16/22 19:43	JMW	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	2B16003	EPA 8260D	02/16/22 19:43	JMW	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	2B16003	EPA 8260D	02/16/22 19:43	JMW	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	2B16003	EPA 8260D	02/16/22 19:43	JMW	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	2B16003	EPA 8260D	02/16/22 19:43	JMW	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	2B16003	EPA 8260D	02/16/22 19:43	JMW	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	2B16003	EPA 8260D	02/16/22 19:43	JMW	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	2B16003	EPA 8260D	02/16/22 19:43	JMW	
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	2B16003	EPA 8260D	02/16/22 19:43	JMW	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	2B16003	EPA 8260D	02/16/22 19:43	JMW	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	2B16003	EPA 8260D	02/16/22 19:43	JMW	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	2B16003	EPA 8260D	02/16/22 19:43	JMW	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	2B16003	EPA 8260D	02/16/22 19:43	JMW	
cis-1,2-Dichloroethene [156-59-2]^	**7.8**		ug/L	1	0.53	2.5	2B16003	EPA 8260D	02/16/22 19:43	JMW	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	2B16003	EPA 8260D	02/16/22 19:43	JMW	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	2B16003	EPA 8260D	02/16/22 19:43	JMW	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	2B16003	EPA 8260D	02/16/22 19:43	JMW	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	2B16003	EPA 8260D	02/16/22 19:43	JMW	QV-01
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	2B16003	EPA 8260D	02/16/22 19:43	JMW	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	2B16003	EPA 8260D	02/16/22 19:43	JMW	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	2B16003	EPA 8260D	02/16/22 19:43	JMW	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	2B16003	EPA 8260D	02/16/22 19:43	JMW	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	2B16003	EPA 8260D	02/16/22 19:43	JMW	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	2B16003	EPA 8260D	02/16/22 19:43	JMW	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	2B16003	EPA 8260D	02/16/22 19:43	JMW	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	2B16003	EPA 8260D	02/16/22 19:43	JMW	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	2B16003	EPA 8260D	02/16/22 19:43	JMW	
trans-1,2-Dichloroethene [156-60-5]^	**0.82**	I	ug/L	1	0.73	2.5	2B16003	EPA 8260D	02/16/22 19:43	JMW	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	2B16003	EPA 8260D	02/16/22 19:43	JMW	
Trichloroethene [79-01-6]^	**84**		ug/L	1	0.89	2.5	2B16003	EPA 8260D	02/16/22 19:43	JMW	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	2B16003	EPA 8260D	02/16/22 19:43	JMW	
Vinyl chloride [75-01-4]^	0.71	U	ug/L	1	0.71	2.5	2B16003	EPA 8260D	02/16/22 19:43	JMW	
Xylenes (Total) [1330-20-7]	1.3	U	ug/L	1	1.3	5.0	2B16003	EPA 8260D	02/16/22 19:43	JMW	

ANALYTICAL RESULTS

Description: LC34PS-PZF-073.0-20220214 **Lab Sample ID:** AF00827-36 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 10:36 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*46*	*1*	*50.0*	*91 %*	*41-142*	*2B16003*	*EPA 8260D*	*02/16/22 19:43*	*JMW*	
Dibromofluoromethane	*52*	*1*	*50.0*	*105 %*	*53-146*	*2B16003*	*EPA 8260D*	*02/16/22 19:43*	*JMW*	
Toluene-d8	*53*	*1*	*50.0*	*106 %*	*41-146*	*2B16003*	*EPA 8260D*	*02/16/22 19:43*	*JMW*	

ANALYTICAL RESULTS

Description: LC34PS-PZF-080.0-20220214 **Lab Sample ID:** AF00827-37 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 10:38 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	2B16024	EPA 8260D	02/17/22 00:31	JMW	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	2B16024	EPA 8260D	02/17/22 00:31	JMW	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	2B16024	EPA 8260D	02/17/22 00:31	JMW	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	2B16024	EPA 8260D	02/17/22 00:31	JMW	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	2B16024	EPA 8260D	02/17/22 00:31	JMW	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	2B16024	EPA 8260D	02/17/22 00:31	JMW	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	2B16024	EPA 8260D	02/17/22 00:31	JMW	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	2B16024	EPA 8260D	02/17/22 00:31	JMW	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	2B16024	EPA 8260D	02/17/22 00:31	JMW	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	2B16024	EPA 8260D	02/17/22 00:31	JMW	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	2B16024	EPA 8260D	02/17/22 00:31	JMW	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	2B16024	EPA 8260D	02/17/22 00:31	JMW	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	2B16024	EPA 8260D	02/17/22 00:31	JMW	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	2B16024	EPA 8260D	02/17/22 00:31	JMW	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	2B16024	EPA 8260D	02/17/22 00:31	JMW	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	2B16024	EPA 8260D	02/17/22 00:31	JMW	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	2B16024	EPA 8260D	02/17/22 00:31	JMW	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	2B16024	EPA 8260D	02/17/22 00:31	JMW	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	2B16024	EPA 8260D	02/17/22 00:31	JMW	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	2B16024	EPA 8260D	02/17/22 00:31	JMW	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	2B16024	EPA 8260D	02/17/22 00:31	JMW	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	2B16024	EPA 8260D	02/17/22 00:31	JMW	
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	2B16024	EPA 8260D	02/17/22 00:31	JMW	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	2B16024	EPA 8260D	02/17/22 00:31	JMW	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	2B16024	EPA 8260D	02/17/22 00:31	JMW	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	2B16024	EPA 8260D	02/17/22 00:31	JMW	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	2B16024	EPA 8260D	02/17/22 00:31	JMW	
cis-1,2-Dichloroethene [156-59-2]^	**26**		ug/L	1	0.53	2.5	2B16024	EPA 8260D	02/17/22 00:31	JMW	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	2B16024	EPA 8260D	02/17/22 00:31	JMW	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	2B16024	EPA 8260D	02/17/22 00:31	JMW	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	2B16024	EPA 8260D	02/17/22 00:31	JMW	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	2B16024	EPA 8260D	02/17/22 00:31	JMW	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	2B16024	EPA 8260D	02/17/22 00:31	JMW	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	2B16024	EPA 8260D	02/17/22 00:31	JMW	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	2B16024	EPA 8260D	02/17/22 00:31	JMW	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	2B16024	EPA 8260D	02/17/22 00:31	JMW	QV-01
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	2B16024	EPA 8260D	02/17/22 00:31	JMW	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	2B16024	EPA 8260D	02/17/22 00:31	JMW	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	2B16024	EPA 8260D	02/17/22 00:31	JMW	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	2B16024	EPA 8260D	02/17/22 00:31	JMW	QL-02, QV-01
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	2B16024	EPA 8260D	02/17/22 00:31	JMW	
trans-1,2-Dichloroethene [156-60-5]^	**2.4**	I	ug/L	1	0.73	2.5	2B16024	EPA 8260D	02/17/22 00:31	JMW	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	2B16024	EPA 8260D	02/17/22 00:31	JMW	
Trichloroethene [79-01-6]^	**88**		ug/L	5	4.4	12	2B18005	EPA 8260D	02/18/22 14:01	KKW	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	2B16024	EPA 8260D	02/17/22 00:31	JMW	
Vinyl chloride [75-01-4]^	**6.9**		ug/L	1	0.71	2.5	2B16024	EPA 8260D	02/17/22 00:31	JMW	

ANALYTICAL RESULTS

Description: LC34PS-PZF-080.0-20220214 **Lab Sample ID:** AF00827-37 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 10:38 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Xylenes (Total) [1330-20-7]	1.3	U	ug/L	1	1.3	5.0	2B16024	EPA 8260D	02/17/22 00:31	JMW	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*44*	*1*	*50.0*	*89 %*	*41-142*	*2B16024*	*EPA 8260D*	*02/17/22 00:31*	*JMW*	
4-Bromofluorobenzene	*55*	*1*	*50.0*	*110 %*	*41-142*	*2B18005*	*EPA 8260D*	*02/18/22 14:01*	*KKW*	
Dibromofluoromethane	*51*	*1*	*50.0*	*102 %*	*53-146*	*2B16024*	*EPA 8260D*	*02/17/22 00:31*	*JMW*	
Dibromofluoromethane	*50*	*1*	*50.0*	*100 %*	*53-146*	*2B18005*	*EPA 8260D*	*02/18/22 14:01*	*KKW*	
Toluene-d8	*53*	*1*	*50.0*	*106 %*	*41-146*	*2B16024*	*EPA 8260D*	*02/17/22 00:31*	*JMW*	
Toluene-d8	*52*	*1*	*50.0*	*103 %*	*41-146*	*2B18005*	*EPA 8260D*	*02/18/22 14:01*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZA-040.0-20220214 **Lab Sample ID:** AF00827-38 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 11:00 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	800	U	ug/L	1000	800	2500	2B18005	EPA 8260D	02/18/22 14:56	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	540	U	ug/L	1000	540	2500	2B18005	EPA 8260D	02/18/22 14:56	KKW	
1,1,2-Trichloroethane [79-00-5]^	760	U	ug/L	1000	760	2500	2B18005	EPA 8260D	02/18/22 14:56	KKW	
1,1-Dichloroethane [75-34-3]^	620	U	ug/L	1000	620	2500	2B18005	EPA 8260D	02/18/22 14:56	KKW	
1,1-Dichloroethene [75-35-4]^	940	U	ug/L	1000	940	2500	2B18005	EPA 8260D	02/18/22 14:56	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	700	U	ug/L	1000	700	2500	2B18005	EPA 8260D	02/18/22 14:56	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	960	U	ug/L	1000	960	2500	2B18005	EPA 8260D	02/18/22 14:56	KKW	
1,2-Dibromoethane [106-93-4]^	780	U	ug/L	1000	780	2500	2B18005	EPA 8260D	02/18/22 14:56	KKW	
1,2-Dichlorobenzene [95-50-1]^	730	U	ug/L	1000	730	2500	2B18005	EPA 8260D	02/18/22 14:56	KKW	
1,2-Dichloroethane [107-06-2]^	630	U	ug/L	1000	630	2500	2B18005	EPA 8260D	02/18/22 14:56	KKW	
1,2-Dichloropropane [78-87-5]^	800	U	ug/L	1000	800	2500	2B18005	EPA 8260D	02/18/22 14:56	KKW	
1,3-Dichlorobenzene [541-73-1]^	770	U	ug/L	1000	770	2500	2B18005	EPA 8260D	02/18/22 14:56	KKW	
1,4-Dichlorobenzene [106-46-7]^	760	U	ug/L	1000	760	2500	2B18005	EPA 8260D	02/18/22 14:56	KKW	
2-Butanone [78-93-3]^	4500	U	ug/L	1000	4500	12000	2B18005	EPA 8260D	02/18/22 14:56	KKW	
2-Hexanone [591-78-6]^	2500	U	ug/L	1000	2500	12000	2B18005	EPA 8260D	02/18/22 14:56	KKW	
4-Methyl-2-pentanone [108-10-1]^	2500	U	ug/L	1000	2500	12000	2B18005	EPA 8260D	02/18/22 14:56	KKW	
Acetone [67-64-1]^	10000	U	ug/L	1000	10000	25000	2B18005	EPA 8260D	02/18/22 14:56	KKW	
Benzene [71-43-2]^	710	U	ug/L	1000	710	2500	2B18005	EPA 8260D	02/18/22 14:56	KKW	
Bromodichloromethane [75-27-4]^	520	U	ug/L	1000	520	2500	2B18005	EPA 8260D	02/18/22 14:56	KKW	
Bromoform [75-25-2]^	750	U	ug/L	1000	750	2500	2B18005	EPA 8260D	02/18/22 14:56	KKW	
Bromomethane [74-83-9]^	950	U	ug/L	1000	950	2500	2B18005	EPA 8260D	02/18/22 14:56	KKW	QV-01
Carbon disulfide [75-15-0]^	2500	U	ug/L	1000	2500	12000	2B18005	EPA 8260D	02/18/22 14:56	KKW	QV-01
Carbon Tetrachloride [56-23-5]^	940	U	ug/L	1000	940	2500	2B18005	EPA 8260D	02/18/22 14:56	KKW	
Chlorobenzene [108-90-7]^	720	U	ug/L	1000	720	2500	2B18005	EPA 8260D	02/18/22 14:56	KKW	
Chloroethane [75-00-3]^	980	U	ug/L	1000	980	2500	2B18005	EPA 8260D	02/18/22 14:56	KKW	
Chloroform [67-66-3]^	800	U	ug/L	1000	800	2500	2B18005	EPA 8260D	02/18/22 14:56	KKW	
Chloromethane [74-87-3]^	820	U	ug/L	1000	820	2500	2B18005	EPA 8260D	02/18/22 14:56	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**2200**	I	ug/L	1000	530	2500	2B18005	EPA 8260D	02/18/22 14:56	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	590	U	ug/L	1000	590	2500	2B18005	EPA 8260D	02/18/22 14:56	KKW	
Cyclohexane [110-82-7]^	930	U	ug/L	1000	930	2500	2B18005	EPA 8260D	02/18/22 14:56	KKW	
Dibromochloromethane [124-48-1]^	500	U	ug/L	1000	500	2500	2B18005	EPA 8260D	02/18/22 14:56	KKW	
Dichlorodifluoromethane [75-71-8]^	740	U	ug/L	1000	740	2500	2B18005	EPA 8260D	02/18/22 14:56	KKW	
Ethylbenzene [100-41-4]^	690	U	ug/L	1000	690	2500	2B18005	EPA 8260D	02/18/22 14:56	KKW	
Freon 113 [76-13-1]^	730	U	ug/L	1000	730	2500	2B18005	EPA 8260D	02/18/22 14:56	KKW	
Isopropylbenzene [98-82-8]^	670	U	ug/L	1000	670	2500	2B18005	EPA 8260D	02/18/22 14:56	KKW	
Methyl acetate [79-20-9]^	950	U	ug/L	1000	950	2500	2B18005	EPA 8260D	02/18/22 14:56	KKW	
Methylene Chloride [75-09-2]^	2500	U	ug/L	1000	2500	12000	2B18005	EPA 8260D	02/18/22 14:56	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	600	U	ug/L	1000	600	2500	2B18005	EPA 8260D	02/18/22 14:56	KKW	
Styrene [100-42-5]^	610	U	ug/L	1000	610	2500	2B18005	EPA 8260D	02/18/22 14:56	KKW	
Tetrachloroethene [127-18-4]^	760	U	ug/L	1000	760	2500	2B18005	EPA 8260D	02/18/22 14:56	KKW	
Toluene [108-88-3]^	720	U	ug/L	1000	720	2500	2B18005	EPA 8260D	02/18/22 14:56	KKW	
trans-1,2-Dichloroethene [156-60-5]^	730	U	ug/L	1000	730	2500	2B18005	EPA 8260D	02/18/22 14:56	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	730	U	ug/L	1000	730	2500	2B18005	EPA 8260D	02/18/22 14:56	KKW	
Trichloroethene [79-01-6]^	**71000**		ug/L	1000	890	2500	2B18005	EPA 8260D	02/18/22 14:56	KKW	
Trichlorofluoromethane [75-69-4]^	940	U	ug/L	1000	940	2500	2B18005	EPA 8260D	02/18/22 14:56	KKW	
Vinyl chloride [75-01-4]^	710	U	ug/L	1000	710	2500	2B18005	EPA 8260D	02/18/22 14:56	KKW	
Xylenes (Total) [1330-20-7]	1300	U	ug/L	1000	1300	5000	2B18005	EPA 8260D	02/18/22 14:56	KKW	

ANALYTICAL RESULTS

Description: LC34PS-PZA-040.0-20220214 **Lab Sample ID:** AF00827-38 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 11:00 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*55*	*1*	*50.0*	*110 %*	*41-142*	*2B18005*	*EPA 8260D*	*02/18/22 14:56*	*KKW*	
Dibromofluoromethane	*49*	*1*	*50.0*	*98 %*	*53-146*	*2B18005*	*EPA 8260D*	*02/18/22 14:56*	*KKW*	
Toluene-d8	*51*	*1*	*50.0*	*101 %*	*41-146*	*2B18005*	*EPA 8260D*	*02/18/22 14:56*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZA-050.0-20220214 **Lab Sample ID:** AF00827-39 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 11:02 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	16000	U	ug/L	20000	16000	50000	2B16024	EPA 8260D	02/17/22 01:29	JMW	
1,1,2,2-Tetrachloroethane [79-34-5]^	11000	U	ug/L	20000	11000	50000	2B16024	EPA 8260D	02/17/22 01:29	JMW	
1,1,2-Trichloroethane [79-00-5]^	15000	U	ug/L	20000	15000	50000	2B16024	EPA 8260D	02/17/22 01:29	JMW	
1,1-Dichloroethane [75-34-3]^	12000	U	ug/L	20000	12000	50000	2B16024	EPA 8260D	02/17/22 01:29	JMW	
1,1-Dichloroethene [75-35-4]^	19000	U	ug/L	20000	19000	50000	2B16024	EPA 8260D	02/17/22 01:29	JMW	
1,2,4-Trichlorobenzene [120-82-1]^	14000	U	ug/L	20000	14000	50000	2B16024	EPA 8260D	02/17/22 01:29	JMW	
1,2-Dibromo-3-chloropropane [96-12-8]^	19000	U	ug/L	20000	19000	50000	2B16024	EPA 8260D	02/17/22 01:29	JMW	
1,2-Dibromoethane [106-93-4]^	16000	U	ug/L	20000	16000	50000	2B16024	EPA 8260D	02/17/22 01:29	JMW	
1,2-Dichlorobenzene [95-50-1]^	15000	U	ug/L	20000	15000	50000	2B16024	EPA 8260D	02/17/22 01:29	JMW	
1,2-Dichloroethane [107-06-2]^	13000	U	ug/L	20000	13000	50000	2B16024	EPA 8260D	02/17/22 01:29	JMW	
1,2-Dichloropropane [78-87-5]^	16000	U	ug/L	20000	16000	50000	2B16024	EPA 8260D	02/17/22 01:29	JMW	
1,3-Dichlorobenzene [541-73-1]^	15000	U	ug/L	20000	15000	50000	2B16024	EPA 8260D	02/17/22 01:29	JMW	
1,4-Dichlorobenzene [106-46-7]^	15000	U	ug/L	20000	15000	50000	2B16024	EPA 8260D	02/17/22 01:29	JMW	
2-Butanone [78-93-3]^	90000	U	ug/L	20000	90000	250000	2B16024	EPA 8260D	02/17/22 01:29	JMW	
2-Hexanone [591-78-6]^	50000	U	ug/L	20000	50000	250000	2B16024	EPA 8260D	02/17/22 01:29	JMW	
4-Methyl-2-pentanone [108-10-1]^	50000	U	ug/L	20000	50000	250000	2B16024	EPA 8260D	02/17/22 01:29	JMW	
Acetone [67-64-1]^	200000	U	ug/L	20000	200000	500000	2B16024	EPA 8260D	02/17/22 01:29	JMW	
Benzene [71-43-2]^	14000	U	ug/L	20000	14000	50000	2B16024	EPA 8260D	02/17/22 01:29	JMW	
Bromodichloromethane [75-27-4]^	10000	U	ug/L	20000	10000	50000	2B16024	EPA 8260D	02/17/22 01:29	JMW	
Bromoform [75-25-2]^	15000	U	ug/L	20000	15000	50000	2B16024	EPA 8260D	02/17/22 01:29	JMW	
Bromomethane [74-83-9]^	19000	U	ug/L	20000	19000	50000	2B16024	EPA 8260D	02/17/22 01:29	JMW	QV-01
Carbon disulfide [75-15-0]^	50000	U	ug/L	20000	50000	250000	2B16024	EPA 8260D	02/17/22 01:29	JMW	
Carbon Tetrachloride [56-23-5]^	19000	U	ug/L	20000	19000	50000	2B16024	EPA 8260D	02/17/22 01:29	JMW	
Chlorobenzene [108-90-7]^	14000	U	ug/L	20000	14000	50000	2B16024	EPA 8260D	02/17/22 01:29	JMW	
Chloroethane [75-00-3]^	20000	U	ug/L	20000	20000	50000	2B16024	EPA 8260D	02/17/22 01:29	JMW	
Chloroform [67-66-3]^	16000	U	ug/L	20000	16000	50000	2B16024	EPA 8260D	02/17/22 01:29	JMW	
Chloromethane [74-87-3]^	16000	U	ug/L	20000	16000	50000	2B16024	EPA 8260D	02/17/22 01:29	JMW	
cis-1,2-Dichloroethene [156-59-2]^	**26000**	I	ug/L	20000	11000	50000	2B16024	EPA 8260D	02/17/22 01:29	JMW	
cis-1,3-Dichloropropene [10061-01-5]^	12000	U	ug/L	20000	12000	50000	2B16024	EPA 8260D	02/17/22 01:29	JMW	
Cyclohexane [110-82-7]^	19000	U	ug/L	20000	19000	50000	2B16024	EPA 8260D	02/17/22 01:29	JMW	
Dibromochloromethane [124-48-1]^	10000	U	ug/L	20000	10000	50000	2B16024	EPA 8260D	02/17/22 01:29	JMW	
Dichlorodifluoromethane [75-71-8]^	15000	U	ug/L	20000	15000	50000	2B16024	EPA 8260D	02/17/22 01:29	JMW	
Ethylbenzene [100-41-4]^	14000	U	ug/L	20000	14000	50000	2B16024	EPA 8260D	02/17/22 01:29	JMW	
Freon 113 [76-13-1]^	15000	U	ug/L	20000	15000	50000	2B16024	EPA 8260D	02/17/22 01:29	JMW	
Isopropylbenzene [98-82-8]^	13000	U	ug/L	20000	13000	50000	2B16024	EPA 8260D	02/17/22 01:29	JMW	
Methyl acetate [79-20-9]^	19000	U	ug/L	20000	19000	50000	2B16024	EPA 8260D	02/17/22 01:29	JMW	QV-01
Methylene Chloride [75-09-2]^	50000	U	ug/L	20000	50000	250000	2B16024	EPA 8260D	02/17/22 01:29	JMW	
Methyl-tert-Butyl Ether [1634-04-4]^	12000	U	ug/L	20000	12000	50000	2B16024	EPA 8260D	02/17/22 01:29	JMW	
Styrene [100-42-5]^	12000	U	ug/L	20000	12000	50000	2B16024	EPA 8260D	02/17/22 01:29	JMW	
Tetrachloroethene [127-18-4]^	15000	U	ug/L	20000	15000	50000	2B16024	EPA 8260D	02/17/22 01:29	JMW	QL-02, QV-01
Toluene [108-88-3]^	14000	U	ug/L	20000	14000	50000	2B16024	EPA 8260D	02/17/22 01:29	JMW	
trans-1,2-Dichloroethene [156-60-5]^	15000	U	ug/L	20000	15000	50000	2B16024	EPA 8260D	02/17/22 01:29	JMW	
trans-1,3-Dichloropropene [10061-02-6]^	15000	U	ug/L	20000	15000	50000	2B16024	EPA 8260D	02/17/22 01:29	JMW	
Trichloroethene [79-01-6]^	**840000**		ug/L	20000	18000	50000	2B16024	EPA 8260D	02/17/22 01:29	JMW	
Trichlorofluoromethane [75-69-4]^	19000	U	ug/L	20000	19000	50000	2B16024	EPA 8260D	02/17/22 01:29	JMW	
Vinyl chloride [75-01-4]^	14000	U	ug/L	20000	14000	50000	2B16024	EPA 8260D	02/17/22 01:29	JMW	

ANALYTICAL RESULTS

Description: LC34PS-PZA-050.0-20220214 **Lab Sample ID:** AF00827-39 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 11:02 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Xylenes (Total) [1330-20-7]	26000	U	ug/L	20000	26000	100000	2B16024	EPA 8260D	02/17/22 01:29	JMW	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*46*	*1*	*50.0*	*92 %*	*41-142*	*2B16024*	*EPA 8260D*	*02/17/22 01:29*	*JMW*	
Dibromofluoromethane	*54*	*1*	*50.0*	*108 %*	*53-146*	*2B16024*	*EPA 8260D*	*02/17/22 01:29*	*JMW*	
Toluene-d8	*54*	*1*	*50.0*	*108 %*	*41-146*	*2B16024*	*EPA 8260D*	*02/17/22 01:29*	*JMW*	

ANALYTICAL RESULTS

Description: LC34PS-PZA-058.0-20220214 **Lab Sample ID:** AF00827-40 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 11:04 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	160	U	ug/L	200	160	500	2B18005	EPA 8260D	02/18/22 15:24	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	110	U	ug/L	200	110	500	2B18005	EPA 8260D	02/18/22 15:24	KKW	
1,1,2-Trichloroethane [79-00-5]^	150	U	ug/L	200	150	500	2B18005	EPA 8260D	02/18/22 15:24	KKW	
1,1-Dichloroethane [75-34-3]^	120	U	ug/L	200	120	500	2B18005	EPA 8260D	02/18/22 15:24	KKW	
1,1-Dichloroethene [75-35-4]^	190	U	ug/L	200	190	500	2B18005	EPA 8260D	02/18/22 15:24	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	140	U	ug/L	200	140	500	2B18005	EPA 8260D	02/18/22 15:24	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	190	U	ug/L	200	190	500	2B18005	EPA 8260D	02/18/22 15:24	KKW	
1,2-Dibromoethane [106-93-4]^	160	U	ug/L	200	160	500	2B18005	EPA 8260D	02/18/22 15:24	KKW	
1,2-Dichlorobenzene [95-50-1]^	150	U	ug/L	200	150	500	2B18005	EPA 8260D	02/18/22 15:24	KKW	
1,2-Dichloroethane [107-06-2]^	130	U	ug/L	200	130	500	2B18005	EPA 8260D	02/18/22 15:24	KKW	
1,2-Dichloropropane [78-87-5]^	160	U	ug/L	200	160	500	2B18005	EPA 8260D	02/18/22 15:24	KKW	
1,3-Dichlorobenzene [541-73-1]^	150	U	ug/L	200	150	500	2B18005	EPA 8260D	02/18/22 15:24	KKW	
1,4-Dichlorobenzene [106-46-7]^	150	U	ug/L	200	150	500	2B18005	EPA 8260D	02/18/22 15:24	KKW	
2-Butanone [78-93-3]^	900	U	ug/L	200	900	2500	2B18005	EPA 8260D	02/18/22 15:24	KKW	
2-Hexanone [591-78-6]^	500	U	ug/L	200	500	2500	2B18005	EPA 8260D	02/18/22 15:24	KKW	
4-Methyl-2-pentanone [108-10-1]^	500	U	ug/L	200	500	2500	2B18005	EPA 8260D	02/18/22 15:24	KKW	
Acetone [67-64-1]^	2000	U	ug/L	200	2000	5000	2B18005	EPA 8260D	02/18/22 15:24	KKW	
Benzene [71-43-2]^	140	U	ug/L	200	140	500	2B18005	EPA 8260D	02/18/22 15:24	KKW	
Bromodichloromethane [75-27-4]^	100	U	ug/L	200	100	500	2B18005	EPA 8260D	02/18/22 15:24	KKW	
Bromoform [75-25-2]^	150	U	ug/L	200	150	500	2B18005	EPA 8260D	02/18/22 15:24	KKW	
Bromomethane [74-83-9]^	190	U	ug/L	200	190	500	2B18005	EPA 8260D	02/18/22 15:24	KKW	QV-01
Carbon disulfide [75-15-0]^	500	U	ug/L	200	500	2500	2B18005	EPA 8260D	02/18/22 15:24	KKW	QV-01
Carbon Tetrachloride [56-23-5]^	190	U	ug/L	200	190	500	2B18005	EPA 8260D	02/18/22 15:24	KKW	
Chlorobenzene [108-90-7]^	140	U	ug/L	200	140	500	2B18005	EPA 8260D	02/18/22 15:24	KKW	
Chloroethane [75-00-3]^	200	U	ug/L	200	200	500	2B18005	EPA 8260D	02/18/22 15:24	KKW	
Chloroform [67-66-3]^	160	U	ug/L	200	160	500	2B18005	EPA 8260D	02/18/22 15:24	KKW	
Chloromethane [74-87-3]^	160	U	ug/L	200	160	500	2B18005	EPA 8260D	02/18/22 15:24	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**4800**		ug/L	200	110	500	2B18005	EPA 8260D	02/18/22 15:24	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	120	U	ug/L	200	120	500	2B18005	EPA 8260D	02/18/22 15:24	KKW	
Cyclohexane [110-82-7]^	190	U	ug/L	200	190	500	2B18005	EPA 8260D	02/18/22 15:24	KKW	
Dibromochloromethane [124-48-1]^	100	U	ug/L	200	100	500	2B18005	EPA 8260D	02/18/22 15:24	KKW	
Dichlorodifluoromethane [75-71-8]^	150	U	ug/L	200	150	500	2B18005	EPA 8260D	02/18/22 15:24	KKW	
Ethylbenzene [100-41-4]^	140	U	ug/L	200	140	500	2B18005	EPA 8260D	02/18/22 15:24	KKW	
Freon 113 [76-13-1]^	150	U	ug/L	200	150	500	2B18005	EPA 8260D	02/18/22 15:24	KKW	
Isopropylbenzene [98-82-8]^	130	U	ug/L	200	130	500	2B18005	EPA 8260D	02/18/22 15:24	KKW	
Methyl acetate [79-20-9]^	190	U	ug/L	200	190	500	2B18005	EPA 8260D	02/18/22 15:24	KKW	
Methylene Chloride [75-09-2]^	500	U	ug/L	200	500	2500	2B18005	EPA 8260D	02/18/22 15:24	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	120	U	ug/L	200	120	500	2B18005	EPA 8260D	02/18/22 15:24	KKW	
Styrene [100-42-5]^	120	U	ug/L	200	120	500	2B18005	EPA 8260D	02/18/22 15:24	KKW	
Tetrachloroethene [127-18-4]^	150	U	ug/L	200	150	500	2B18005	EPA 8260D	02/18/22 15:24	KKW	
Toluene [108-88-3]^	140	U	ug/L	200	140	500	2B18005	EPA 8260D	02/18/22 15:24	KKW	
trans-1,2-Dichloroethene [156-60-5]^	150	U	ug/L	200	150	500	2B18005	EPA 8260D	02/18/22 15:24	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	150	U	ug/L	200	150	500	2B18005	EPA 8260D	02/18/22 15:24	KKW	
Trichloroethene [79-01-6]^	**17000**		ug/L	200	180	500	2B18005	EPA 8260D	02/18/22 15:24	KKW	
Trichlorofluoromethane [75-69-4]^	190	U	ug/L	200	190	500	2B18005	EPA 8260D	02/18/22 15:24	KKW	
Vinyl chloride [75-01-4]^	**150**	I	ug/L	200	140	500	2B18005	EPA 8260D	02/18/22 15:24	KKW	
Xylenes (Total) [1330-20-7]	260	U	ug/L	200	260	1000	2B18005	EPA 8260D	02/18/22 15:24	KKW	

ANALYTICAL RESULTS

Description: LC34PS-PZA-058.0-20220214 **Lab Sample ID:** AF00827-40 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 11:04 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*57*	*1*	*50.0*	*113 %*	*41-142*	*2B18005*	*EPA 8260D*	*02/18/22 15:24*	*KKW*	
Dibromofluoromethane	*55*	*1*	*50.0*	*109 %*	*53-146*	*2B18005*	*EPA 8260D*	*02/18/22 15:24*	*KKW*	
Toluene-d8	*51*	*1*	*50.0*	*103 %*	*41-146*	*2B18005*	*EPA 8260D*	*02/18/22 15:24*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZA-073.0-20220214 **Lab Sample ID:** AF00827-41 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 11:06 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	20	U	ug/L	25	20	62	2B16024	EPA 8260D	02/17/22 02:26	JMW	
1,1,2,2-Tetrachloroethane [79-34-5]^	14	U	ug/L	25	14	62	2B16024	EPA 8260D	02/17/22 02:26	JMW	
1,1,2-Trichloroethane [79-00-5]^	19	U	ug/L	25	19	62	2B16024	EPA 8260D	02/17/22 02:26	JMW	
1,1-Dichloroethane [75-34-3]^	16	U	ug/L	25	16	62	2B16024	EPA 8260D	02/17/22 02:26	JMW	
1,1-Dichloroethene [75-35-4]^	24	U	ug/L	25	24	62	2B16024	EPA 8260D	02/17/22 02:26	JMW	
1,2,4-Trichlorobenzene [120-82-1]^	18	U	ug/L	25	18	62	2B16024	EPA 8260D	02/17/22 02:26	JMW	
1,2-Dibromo-3-chloropropane [96-12-8]^	24	U	ug/L	25	24	62	2B16024	EPA 8260D	02/17/22 02:26	JMW	
1,2-Dibromoethane [106-93-4]^	20	U	ug/L	25	20	62	2B16024	EPA 8260D	02/17/22 02:26	JMW	
1,2-Dichlorobenzene [95-50-1]^	18	U	ug/L	25	18	62	2B16024	EPA 8260D	02/17/22 02:26	JMW	
1,2-Dichloroethane [107-06-2]^	16	U	ug/L	25	16	62	2B16024	EPA 8260D	02/17/22 02:26	JMW	
1,2-Dichloropropane [78-87-5]^	20	U	ug/L	25	20	62	2B16024	EPA 8260D	02/17/22 02:26	JMW	
1,3-Dichlorobenzene [541-73-1]^	19	U	ug/L	25	19	62	2B16024	EPA 8260D	02/17/22 02:26	JMW	
1,4-Dichlorobenzene [106-46-7]^	19	U	ug/L	25	19	62	2B16024	EPA 8260D	02/17/22 02:26	JMW	
2-Butanone [78-93-3]^	110	U	ug/L	25	110	310	2B16024	EPA 8260D	02/17/22 02:26	JMW	
2-Hexanone [591-78-6]^	62	U	ug/L	25	62	310	2B16024	EPA 8260D	02/17/22 02:26	JMW	
4-Methyl-2-pentanone [108-10-1]^	62	U	ug/L	25	62	310	2B16024	EPA 8260D	02/17/22 02:26	JMW	
Acetone [67-64-1]^	250	U	ug/L	25	250	620	2B16024	EPA 8260D	02/17/22 02:26	JMW	
Benzene [71-43-2]^	18	U	ug/L	25	18	62	2B16024	EPA 8260D	02/17/22 02:26	JMW	
Bromodichloromethane [75-27-4]^	13	U	ug/L	25	13	62	2B16024	EPA 8260D	02/17/22 02:26	JMW	
Bromoform [75-25-2]^	19	U	ug/L	25	19	62	2B16024	EPA 8260D	02/17/22 02:26	JMW	
Bromomethane [74-83-9]^	24	U	ug/L	25	24	62	2B16024	EPA 8260D	02/17/22 02:26	JMW	QV-01
Carbon disulfide [75-15-0]^	62	U	ug/L	25	62	310	2B16024	EPA 8260D	02/17/22 02:26	JMW	
Carbon Tetrachloride [56-23-5]^	24	U	ug/L	25	24	62	2B16024	EPA 8260D	02/17/22 02:26	JMW	
Chlorobenzene [108-90-7]^	18	U	ug/L	25	18	62	2B16024	EPA 8260D	02/17/22 02:26	JMW	
Chloroethane [75-00-3]^	24	U	ug/L	25	24	62	2B16024	EPA 8260D	02/17/22 02:26	JMW	
Chloroform [67-66-3]^	20	U	ug/L	25	20	62	2B16024	EPA 8260D	02/17/22 02:26	JMW	
Chloromethane [74-87-3]^	20	U	ug/L	25	20	62	2B16024	EPA 8260D	02/17/22 02:26	JMW	
cis-1,2-Dichloroethene [156-59-2]^	**3500**		ug/L	100	53	250	2B18005	EPA 8260D	02/18/22 15:51	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	15	U	ug/L	25	15	62	2B16024	EPA 8260D	02/17/22 02:26	JMW	
Cyclohexane [110-82-7]^	23	U	ug/L	25	23	62	2B16024	EPA 8260D	02/17/22 02:26	JMW	
Dibromochloromethane [124-48-1]^	12	U	ug/L	25	12	62	2B16024	EPA 8260D	02/17/22 02:26	JMW	
Dichlorodifluoromethane [75-71-8]^	18	U	ug/L	25	18	62	2B16024	EPA 8260D	02/17/22 02:26	JMW	
Ethylbenzene [100-41-4]^	17	U	ug/L	25	17	62	2B16024	EPA 8260D	02/17/22 02:26	JMW	
Freon 113 [76-13-1]^	18	U	ug/L	25	18	62	2B16024	EPA 8260D	02/17/22 02:26	JMW	
Isopropylbenzene [98-82-8]^	17	U	ug/L	25	17	62	2B16024	EPA 8260D	02/17/22 02:26	JMW	
Methyl acetate [79-20-9]^	24	U	ug/L	25	24	62	2B16024	EPA 8260D	02/17/22 02:26	JMW	QV-01
Methylene Chloride [75-09-2]^	62	U	ug/L	25	62	310	2B16024	EPA 8260D	02/17/22 02:26	JMW	
Methyl-tert-Butyl Ether [1634-04-4]^	15	U	ug/L	25	15	62	2B16024	EPA 8260D	02/17/22 02:26	JMW	
Styrene [100-42-5]^	15	U	ug/L	25	15	62	2B16024	EPA 8260D	02/17/22 02:26	JMW	
Tetrachloroethene [127-18-4]^	19	U	ug/L	25	19	62	2B16024	EPA 8260D	02/17/22 02:26	JMW	QL-02, QV-01
Toluene [108-88-3]^	18	U	ug/L	25	18	62	2B16024	EPA 8260D	02/17/22 02:26	JMW	
trans-1,2-Dichloroethene [156-60-5]^	18	U	ug/L	25	18	62	2B16024	EPA 8260D	02/17/22 02:26	JMW	
trans-1,3-Dichloropropene [10061-02-6]^	18	U	ug/L	25	18	62	2B16024	EPA 8260D	02/17/22 02:26	JMW	
Trichloroethene [79-01-6]^	**2500**		ug/L	100	89	250	2B18005	EPA 8260D	02/18/22 15:51	KKW	
Trichlorofluoromethane [75-69-4]^	24	U	ug/L	25	24	62	2B16024	EPA 8260D	02/17/22 02:26	JMW	
Vinyl chloride [75-01-4]^	**300**		ug/L	25	18	62	2B16024	EPA 8260D	02/17/22 02:26	JMW	

ANALYTICAL RESULTS

Description: LC34PS-PZA-073.0-20220214 **Lab Sample ID:** AF00827-41 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 11:06 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Xylenes (Total) [1330-20-7]	32	U	ug/L	25	32	120	2B16024	EPA 8260D	02/17/22 02:26	JMW	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*45*	*1*	*50.0*	*90 %*	*41-142*	*2B16024*	*EPA 8260D*	*02/17/22 02:26*	*JMW*	
4-Bromofluorobenzene	*55*	*1*	*50.0*	*110 %*	*41-142*	*2B18005*	*EPA 8260D*	*02/18/22 15:51*	*KKW*	
Dibromofluoromethane	*53*	*1*	*50.0*	*106 %*	*53-146*	*2B16024*	*EPA 8260D*	*02/17/22 02:26*	*JMW*	
Dibromofluoromethane	*51*	*1*	*50.0*	*103 %*	*53-146*	*2B18005*	*EPA 8260D*	*02/18/22 15:51*	*KKW*	
Toluene-d8	*54*	*1*	*50.0*	*107 %*	*41-146*	*2B16024*	*EPA 8260D*	*02/17/22 02:26*	*JMW*	
Toluene-d8	*51*	*1*	*50.0*	*102 %*	*41-146*	*2B18005*	*EPA 8260D*	*02/18/22 15:51*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZA-080.0-20220214 **Lab Sample ID:** AF00827-42 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 11:08 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	2B16024	EPA 8260D	02/17/22 02:55	JMW	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	2B16024	EPA 8260D	02/17/22 02:55	JMW	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	2B16024	EPA 8260D	02/17/22 02:55	JMW	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	2B16024	EPA 8260D	02/17/22 02:55	JMW	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	2B16024	EPA 8260D	02/17/22 02:55	JMW	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	2B16024	EPA 8260D	02/17/22 02:55	JMW	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	2B16024	EPA 8260D	02/17/22 02:55	JMW	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	2B16024	EPA 8260D	02/17/22 02:55	JMW	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	2B16024	EPA 8260D	02/17/22 02:55	JMW	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	2B16024	EPA 8260D	02/17/22 02:55	JMW	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	2B16024	EPA 8260D	02/17/22 02:55	JMW	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	2B16024	EPA 8260D	02/17/22 02:55	JMW	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	2B16024	EPA 8260D	02/17/22 02:55	JMW	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	2B16024	EPA 8260D	02/17/22 02:55	JMW	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	2B16024	EPA 8260D	02/17/22 02:55	JMW	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	2B16024	EPA 8260D	02/17/22 02:55	JMW	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	2B16024	EPA 8260D	02/17/22 02:55	JMW	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	2B16024	EPA 8260D	02/17/22 02:55	JMW	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	2B16024	EPA 8260D	02/17/22 02:55	JMW	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	2B16024	EPA 8260D	02/17/22 02:55	JMW	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	2B16024	EPA 8260D	02/17/22 02:55	JMW	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	2B16024	EPA 8260D	02/17/22 02:55	JMW	
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	2B16024	EPA 8260D	02/17/22 02:55	JMW	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	2B16024	EPA 8260D	02/17/22 02:55	JMW	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	2B16024	EPA 8260D	02/17/22 02:55	JMW	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	2B16024	EPA 8260D	02/17/22 02:55	JMW	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	2B16024	EPA 8260D	02/17/22 02:55	JMW	
cis-1,2-Dichloroethene [156-59-2]^	**48**		ug/L	1	0.53	2.5	2B16024	EPA 8260D	02/17/22 02:55	JMW	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	2B16024	EPA 8260D	02/17/22 02:55	JMW	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	2B16024	EPA 8260D	02/17/22 02:55	JMW	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	2B16024	EPA 8260D	02/17/22 02:55	JMW	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	2B16024	EPA 8260D	02/17/22 02:55	JMW	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	2B16024	EPA 8260D	02/17/22 02:55	JMW	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	2B16024	EPA 8260D	02/17/22 02:55	JMW	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	2B16024	EPA 8260D	02/17/22 02:55	JMW	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	2B16024	EPA 8260D	02/17/22 02:55	JMW	QV-01
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	2B16024	EPA 8260D	02/17/22 02:55	JMW	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	2B16024	EPA 8260D	02/17/22 02:55	JMW	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	2B16024	EPA 8260D	02/17/22 02:55	JMW	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	2B16024	EPA 8260D	02/17/22 02:55	JMW	QL-02, QV-01
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	2B16024	EPA 8260D	02/17/22 02:55	JMW	
trans-1,2-Dichloroethene [156-60-5]^	**7.0**		ug/L	1	0.73	2.5	2B16024	EPA 8260D	02/17/22 02:55	JMW	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	2B16024	EPA 8260D	02/17/22 02:55	JMW	
Trichloroethene [79-01-6]^	**400**		ug/L	20	18	50	2B18005	EPA 8260D	02/18/22 16:19	KKW	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	2B16024	EPA 8260D	02/17/22 02:55	JMW	
Vinyl chloride [75-01-4]^	**1.3**	I	ug/L	1	0.71	2.5	2B16024	EPA 8260D	02/17/22 02:55	JMW	

ANALYTICAL RESULTS

Description: LC34PS-PZA-080.0-20220214 **Lab Sample ID:** AF00827-42 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 11:08 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Xylenes (Total) [1330-20-7]	1.3	U	ug/L	1	1.3	5.0	2B16024	EPA 8260D	02/17/22 02:55	JMW	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*45*	*1*	*50.0*	*90 %*	*41-142*	*2B16024*	*EPA 8260D*	*02/17/22 02:55*	*JMW*	
4-Bromofluorobenzene	*55*	*1*	*50.0*	*109 %*	*41-142*	*2B18005*	*EPA 8260D*	*02/18/22 16:19*	*KKW*	
Dibromofluoromethane	*52*	*1*	*50.0*	*103 %*	*53-146*	*2B16024*	*EPA 8260D*	*02/17/22 02:55*	*JMW*	
Dibromofluoromethane	*50*	*1*	*50.0*	*99 %*	*53-146*	*2B18005*	*EPA 8260D*	*02/18/22 16:19*	*KKW*	
Toluene-d8	*52*	*1*	*50.0*	*104 %*	*41-146*	*2B16024*	*EPA 8260D*	*02/17/22 02:55*	*JMW*	
Toluene-d8	*50*	*1*	*50.0*	*99 %*	*41-146*	*2B18005*	*EPA 8260D*	*02/18/22 16:19*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZB-040.0-20220214 **Lab Sample ID:** AF00827-43 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 11:30 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	4000	U	ug/L	5000	4000	12000	2B16024	EPA 8260D	02/17/22 03:24	JMW	
1,1,2,2-Tetrachloroethane [79-34-5]^	2700	U	ug/L	5000	2700	12000	2B16024	EPA 8260D	02/17/22 03:24	JMW	
1,1,2-Trichloroethane [79-00-5]^	3800	U	ug/L	5000	3800	12000	2B16024	EPA 8260D	02/17/22 03:24	JMW	
1,1-Dichloroethane [75-34-3]^	3100	U	ug/L	5000	3100	12000	2B16024	EPA 8260D	02/17/22 03:24	JMW	
1,1-Dichloroethene [75-35-4]^	4700	U	ug/L	5000	4700	12000	2B16024	EPA 8260D	02/17/22 03:24	JMW	
1,2,4-Trichlorobenzene [120-82-1]^	3500	U	ug/L	5000	3500	12000	2B16024	EPA 8260D	02/17/22 03:24	JMW	
1,2-Dibromo-3-chloropropane [96-12-8]^	4800	U	ug/L	5000	4800	12000	2B16024	EPA 8260D	02/17/22 03:24	JMW	
1,2-Dibromoethane [106-93-4]^	3900	U	ug/L	5000	3900	12000	2B16024	EPA 8260D	02/17/22 03:24	JMW	
1,2-Dichlorobenzene [95-50-1]^	3600	U	ug/L	5000	3600	12000	2B16024	EPA 8260D	02/17/22 03:24	JMW	
1,2-Dichloroethane [107-06-2]^	3200	U	ug/L	5000	3200	12000	2B16024	EPA 8260D	02/17/22 03:24	JMW	
1,2-Dichloropropane [78-87-5]^	4000	U	ug/L	5000	4000	12000	2B16024	EPA 8260D	02/17/22 03:24	JMW	
1,3-Dichlorobenzene [541-73-1]^	3800	U	ug/L	5000	3800	12000	2B16024	EPA 8260D	02/17/22 03:24	JMW	
1,4-Dichlorobenzene [106-46-7]^	3800	U	ug/L	5000	3800	12000	2B16024	EPA 8260D	02/17/22 03:24	JMW	
2-Butanone [78-93-3]^	22000	U	ug/L	5000	22000	62000	2B16024	EPA 8260D	02/17/22 03:24	JMW	
2-Hexanone [591-78-6]^	12000	U	ug/L	5000	12000	62000	2B16024	EPA 8260D	02/17/22 03:24	JMW	
4-Methyl-2-pentanone [108-10-1]^	12000	U	ug/L	5000	12000	62000	2B16024	EPA 8260D	02/17/22 03:24	JMW	
Acetone [67-64-1]^	50000	U	ug/L	5000	50000	120000	2B16024	EPA 8260D	02/17/22 03:24	JMW	
Benzene [71-43-2]^	3600	U	ug/L	5000	3600	12000	2B16024	EPA 8260D	02/17/22 03:24	JMW	
Bromodichloromethane [75-27-4]^	2600	U	ug/L	5000	2600	12000	2B16024	EPA 8260D	02/17/22 03:24	JMW	
Bromoform [75-25-2]^	3800	U	ug/L	5000	3800	12000	2B16024	EPA 8260D	02/17/22 03:24	JMW	
Bromomethane [74-83-9]^	4800	U	ug/L	5000	4800	12000	2B16024	EPA 8260D	02/17/22 03:24	JMW	QV-01
Carbon disulfide [75-15-0]^	12000	U	ug/L	5000	12000	62000	2B16024	EPA 8260D	02/17/22 03:24	JMW	
Carbon Tetrachloride [56-23-5]^	4700	U	ug/L	5000	4700	12000	2B16024	EPA 8260D	02/17/22 03:24	JMW	
Chlorobenzene [108-90-7]^	3600	U	ug/L	5000	3600	12000	2B16024	EPA 8260D	02/17/22 03:24	JMW	
Chloroethane [75-00-3]^	4900	U	ug/L	5000	4900	12000	2B16024	EPA 8260D	02/17/22 03:24	JMW	
Chloroform [67-66-3]^	4000	U	ug/L	5000	4000	12000	2B16024	EPA 8260D	02/17/22 03:24	JMW	
Chloromethane [74-87-3]^	4100	U	ug/L	5000	4100	12000	2B16024	EPA 8260D	02/17/22 03:24	JMW	
cis-1,2-Dichloroethene [156-59-2]^	**23000**		ug/L	5000	2600	12000	2B16024	EPA 8260D	02/17/22 03:24	JMW	
cis-1,3-Dichloropropene [10061-01-5]^	3000	U	ug/L	5000	3000	12000	2B16024	EPA 8260D	02/17/22 03:24	JMW	
Cyclohexane [110-82-7]^	4600	U	ug/L	5000	4600	12000	2B16024	EPA 8260D	02/17/22 03:24	JMW	
Dibromochloromethane [124-48-1]^	2500	U	ug/L	5000	2500	12000	2B16024	EPA 8260D	02/17/22 03:24	JMW	
Dichlorodifluoromethane [75-71-8]^	3700	U	ug/L	5000	3700	12000	2B16024	EPA 8260D	02/17/22 03:24	JMW	
Ethylbenzene [100-41-4]^	3400	U	ug/L	5000	3400	12000	2B16024	EPA 8260D	02/17/22 03:24	JMW	
Freon 113 [76-13-1]^	3600	U	ug/L	5000	3600	12000	2B16024	EPA 8260D	02/17/22 03:24	JMW	
Isopropylbenzene [98-82-8]^	3400	U	ug/L	5000	3400	12000	2B16024	EPA 8260D	02/17/22 03:24	JMW	
Methyl acetate [79-20-9]^	4800	U	ug/L	5000	4800	12000	2B16024	EPA 8260D	02/17/22 03:24	JMW	QV-01
Methylene Chloride [75-09-2]^	12000	U	ug/L	5000	12000	62000	2B16024	EPA 8260D	02/17/22 03:24	JMW	
Methyl-tert-Butyl Ether [1634-04-4]^	3000	U	ug/L	5000	3000	12000	2B16024	EPA 8260D	02/17/22 03:24	JMW	
Styrene [100-42-5]^	3000	U	ug/L	5000	3000	12000	2B16024	EPA 8260D	02/17/22 03:24	JMW	
Tetrachloroethene [127-18-4]^	3800	U	ug/L	5000	3800	12000	2B16024	EPA 8260D	02/17/22 03:24	JMW	QL-02, QV-01
Toluene [108-88-3]^	3600	U	ug/L	5000	3600	12000	2B16024	EPA 8260D	02/17/22 03:24	JMW	
trans-1,2-Dichloroethene [156-60-5]^	3600	U	ug/L	5000	3600	12000	2B16024	EPA 8260D	02/17/22 03:24	JMW	
trans-1,3-Dichloropropene [10061-02-6]^	3600	U	ug/L	5000	3600	12000	2B16024	EPA 8260D	02/17/22 03:24	JMW	
Trichloroethene [79-01-6]^	**280000**		ug/L	5000	4400	12000	2B16024	EPA 8260D	02/17/22 03:24	JMW	
Trichlorofluoromethane [75-69-4]^	4700	U	ug/L	5000	4700	12000	2B16024	EPA 8260D	02/17/22 03:24	JMW	
Vinyl chloride [75-01-4]^	3600	U	ug/L	5000	3600	12000	2B16024	EPA 8260D	02/17/22 03:24	JMW	

ANALYTICAL RESULTS

Description: LC34PS-PZB-040.0-20220214 **Lab Sample ID:** AF00827-43 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 11:30 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Xylenes (Total) [1330-20-7]	6500	U	ug/L	5000	6500	25000	2B16024	EPA 8260D	02/17/22 03:24	JMW	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*46*	*1*	*50.0*	*92 %*	*41-142*	*2B16024*	*EPA 8260D*	*02/17/22 03:24*	*JMW*	
Dibromofluoromethane	*53*	*1*	*50.0*	*107 %*	*53-146*	*2B16024*	*EPA 8260D*	*02/17/22 03:24*	*JMW*	
Toluene-d8	*54*	*1*	*50.0*	*108 %*	*41-146*	*2B16024*	*EPA 8260D*	*02/17/22 03:24*	*JMW*	

ANALYTICAL RESULTS

Description: LC34PS-PZB-050.0-20220214 **Lab Sample ID:** AF00827-44 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 11:32 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	16000	U	ug/L	20000	16000	50000	2B16024	EPA 8260D	02/17/22 03:53	JMW	
1,1,2,2-Tetrachloroethane [79-34-5]^	11000	U	ug/L	20000	11000	50000	2B16024	EPA 8260D	02/17/22 03:53	JMW	
1,1,2-Trichloroethane [79-00-5]^	15000	U	ug/L	20000	15000	50000	2B16024	EPA 8260D	02/17/22 03:53	JMW	
1,1-Dichloroethane [75-34-3]^	12000	U	ug/L	20000	12000	50000	2B16024	EPA 8260D	02/17/22 03:53	JMW	
1,1-Dichloroethene [75-35-4]^	19000	U	ug/L	20000	19000	50000	2B16024	EPA 8260D	02/17/22 03:53	JMW	
1,2,4-Trichlorobenzene [120-82-1]^	14000	U	ug/L	20000	14000	50000	2B16024	EPA 8260D	02/17/22 03:53	JMW	
1,2-Dibromo-3-chloropropane [96-12-8]^	19000	U	ug/L	20000	19000	50000	2B16024	EPA 8260D	02/17/22 03:53	JMW	
1,2-Dibromoethane [106-93-4]^	16000	U	ug/L	20000	16000	50000	2B16024	EPA 8260D	02/17/22 03:53	JMW	
1,2-Dichlorobenzene [95-50-1]^	15000	U	ug/L	20000	15000	50000	2B16024	EPA 8260D	02/17/22 03:53	JMW	
1,2-Dichloroethane [107-06-2]^	13000	U	ug/L	20000	13000	50000	2B16024	EPA 8260D	02/17/22 03:53	JMW	
1,2-Dichloropropane [78-87-5]^	16000	U	ug/L	20000	16000	50000	2B16024	EPA 8260D	02/17/22 03:53	JMW	
1,3-Dichlorobenzene [541-73-1]^	15000	U	ug/L	20000	15000	50000	2B16024	EPA 8260D	02/17/22 03:53	JMW	
1,4-Dichlorobenzene [106-46-7]^	15000	U	ug/L	20000	15000	50000	2B16024	EPA 8260D	02/17/22 03:53	JMW	
2-Butanone [78-93-3]^	90000	U	ug/L	20000	90000	250000	2B16024	EPA 8260D	02/17/22 03:53	JMW	
2-Hexanone [591-78-6]^	50000	U	ug/L	20000	50000	250000	2B16024	EPA 8260D	02/17/22 03:53	JMW	
4-Methyl-2-pentanone [108-10-1]^	50000	U	ug/L	20000	50000	250000	2B16024	EPA 8260D	02/17/22 03:53	JMW	
Acetone [67-64-1]^	200000	U	ug/L	20000	200000	500000	2B16024	EPA 8260D	02/17/22 03:53	JMW	
Benzene [71-43-2]^	14000	U	ug/L	20000	14000	50000	2B16024	EPA 8260D	02/17/22 03:53	JMW	
Bromodichloromethane [75-27-4]^	10000	U	ug/L	20000	10000	50000	2B16024	EPA 8260D	02/17/22 03:53	JMW	
Bromoform [75-25-2]^	15000	U	ug/L	20000	15000	50000	2B16024	EPA 8260D	02/17/22 03:53	JMW	
Bromomethane [74-83-9]^	19000	U	ug/L	20000	19000	50000	2B16024	EPA 8260D	02/17/22 03:53	JMW	QV-01
Carbon disulfide [75-15-0]^	50000	U	ug/L	20000	50000	250000	2B16024	EPA 8260D	02/17/22 03:53	JMW	
Carbon Tetrachloride [56-23-5]^	19000	U	ug/L	20000	19000	50000	2B16024	EPA 8260D	02/17/22 03:53	JMW	
Chlorobenzene [108-90-7]^	14000	U	ug/L	20000	14000	50000	2B16024	EPA 8260D	02/17/22 03:53	JMW	
Chloroethane [75-00-3]^	20000	U	ug/L	20000	20000	50000	2B16024	EPA 8260D	02/17/22 03:53	JMW	
Chloroform [67-66-3]^	16000	U	ug/L	20000	16000	50000	2B16024	EPA 8260D	02/17/22 03:53	JMW	
Chloromethane [74-87-3]^	16000	U	ug/L	20000	16000	50000	2B16024	EPA 8260D	02/17/22 03:53	JMW	
cis-1,2-Dichloroethene [156-59-2]^	**39000**	I	ug/L	20000	11000	50000	2B16024	EPA 8260D	02/17/22 03:53	JMW	
cis-1,3-Dichloropropene [10061-01-5]^	12000	U	ug/L	20000	12000	50000	2B16024	EPA 8260D	02/17/22 03:53	JMW	
Cyclohexane [110-82-7]^	19000	U	ug/L	20000	19000	50000	2B16024	EPA 8260D	02/17/22 03:53	JMW	
Dibromochloromethane [124-48-1]^	10000	U	ug/L	20000	10000	50000	2B16024	EPA 8260D	02/17/22 03:53	JMW	
Dichlorodifluoromethane [75-71-8]^	15000	U	ug/L	20000	15000	50000	2B16024	EPA 8260D	02/17/22 03:53	JMW	
Ethylbenzene [100-41-4]^	14000	U	ug/L	20000	14000	50000	2B16024	EPA 8260D	02/17/22 03:53	JMW	
Freon 113 [76-13-1]^	15000	U	ug/L	20000	15000	50000	2B16024	EPA 8260D	02/17/22 03:53	JMW	
Isopropylbenzene [98-82-8]^	13000	U	ug/L	20000	13000	50000	2B16024	EPA 8260D	02/17/22 03:53	JMW	
Methyl acetate [79-20-9]^	19000	U	ug/L	20000	19000	50000	2B16024	EPA 8260D	02/17/22 03:53	JMW	QV-01
Methylene Chloride [75-09-2]^	50000	U	ug/L	20000	50000	250000	2B16024	EPA 8260D	02/17/22 03:53	JMW	
Methyl-tert-Butyl Ether [1634-04-4]^	12000	U	ug/L	20000	12000	50000	2B16024	EPA 8260D	02/17/22 03:53	JMW	
Styrene [100-42-5]^	12000	U	ug/L	20000	12000	50000	2B16024	EPA 8260D	02/17/22 03:53	JMW	
Tetrachloroethene [127-18-4]^	15000	U	ug/L	20000	15000	50000	2B16024	EPA 8260D	02/17/22 03:53	JMW	QL-02, QV-01
Toluene [108-88-3]^	14000	U	ug/L	20000	14000	50000	2B16024	EPA 8260D	02/17/22 03:53	JMW	
trans-1,2-Dichloroethene [156-60-5]^	15000	U	ug/L	20000	15000	50000	2B16024	EPA 8260D	02/17/22 03:53	JMW	
trans-1,3-Dichloropropene [10061-02-6]^	15000	U	ug/L	20000	15000	50000	2B16024	EPA 8260D	02/17/22 03:53	JMW	
Trichloroethene [79-01-6]^	**830000**		ug/L	20000	18000	50000	2B16024	EPA 8260D	02/17/22 03:53	JMW	
Trichlorofluoromethane [75-69-4]^	19000	U	ug/L	20000	19000	50000	2B16024	EPA 8260D	02/17/22 03:53	JMW	
Vinyl chloride [75-01-4]^	14000	U	ug/L	20000	14000	50000	2B16024	EPA 8260D	02/17/22 03:53	JMW	

ANALYTICAL RESULTS

Description: LC34PS-PZB-050.0-20220214 **Lab Sample ID:** AF00827-44 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 11:32 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Xylenes (Total) [1330-20-7]	26000	U	ug/L	20000	26000	100000	2B16024	EPA 8260D	02/17/22 03:53	JMW	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*45*	*1*	*50.0*	*90 %*	*41-142*	*2B16024*	*EPA 8260D*	*02/17/22 03:53*	*JMW*	
Dibromofluoromethane	*54*	*1*	*50.0*	*107 %*	*53-146*	*2B16024*	*EPA 8260D*	*02/17/22 03:53*	*JMW*	
Toluene-d8	*54*	*1*	*50.0*	*108 %*	*41-146*	*2B16024*	*EPA 8260D*	*02/17/22 03:53*	*JMW*	

ANALYTICAL RESULTS

Description: LC34PS-PZB-058.0-20220214 **Lab Sample ID:** AF00827-45 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 11:34 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	400	U	ug/L	500	400	1200	2B18005	EPA 8260D	02/18/22 16:47	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	270	U	ug/L	500	270	1200	2B18005	EPA 8260D	02/18/22 16:47	KKW	
1,1,2-Trichloroethane [79-00-5]^	380	U	ug/L	500	380	1200	2B18005	EPA 8260D	02/18/22 16:47	KKW	
1,1-Dichloroethane [75-34-3]^	310	U	ug/L	500	310	1200	2B18005	EPA 8260D	02/18/22 16:47	KKW	
1,1-Dichloroethene [75-35-4]^	470	U	ug/L	500	470	1200	2B18005	EPA 8260D	02/18/22 16:47	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	350	U	ug/L	500	350	1200	2B18005	EPA 8260D	02/18/22 16:47	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	480	U	ug/L	500	480	1200	2B18005	EPA 8260D	02/18/22 16:47	KKW	
1,2-Dibromoethane [106-93-4]^	390	U	ug/L	500	390	1200	2B18005	EPA 8260D	02/18/22 16:47	KKW	
1,2-Dichlorobenzene [95-50-1]^	360	U	ug/L	500	360	1200	2B18005	EPA 8260D	02/18/22 16:47	KKW	
1,2-Dichloroethane [107-06-2]^	320	U	ug/L	500	320	1200	2B18005	EPA 8260D	02/18/22 16:47	KKW	
1,2-Dichloropropane [78-87-5]^	400	U	ug/L	500	400	1200	2B18005	EPA 8260D	02/18/22 16:47	KKW	
1,3-Dichlorobenzene [541-73-1]^	380	U	ug/L	500	380	1200	2B18005	EPA 8260D	02/18/22 16:47	KKW	
1,4-Dichlorobenzene [106-46-7]^	380	U	ug/L	500	380	1200	2B18005	EPA 8260D	02/18/22 16:47	KKW	
2-Butanone [78-93-3]^	2200	U	ug/L	500	2200	6200	2B18005	EPA 8260D	02/18/22 16:47	KKW	
2-Hexanone [591-78-6]^	1200	U	ug/L	500	1200	6200	2B18005	EPA 8260D	02/18/22 16:47	KKW	
4-Methyl-2-pentanone [108-10-1]^	1200	U	ug/L	500	1200	6200	2B18005	EPA 8260D	02/18/22 16:47	KKW	
Acetone [67-64-1]^	5000	U	ug/L	500	5000	12000	2B18005	EPA 8260D	02/18/22 16:47	KKW	
Benzene [71-43-2]^	360	U	ug/L	500	360	1200	2B18005	EPA 8260D	02/18/22 16:47	KKW	
Bromodichloromethane [75-27-4]^	260	U	ug/L	500	260	1200	2B18005	EPA 8260D	02/18/22 16:47	KKW	
Bromoform [75-25-2]^	380	U	ug/L	500	380	1200	2B18005	EPA 8260D	02/18/22 16:47	KKW	
Bromomethane [74-83-9]^	480	U	ug/L	500	480	1200	2B18005	EPA 8260D	02/18/22 16:47	KKW	QV-01
Carbon disulfide [75-15-0]^	1200	U	ug/L	500	1200	6200	2B18005	EPA 8260D	02/18/22 16:47	KKW	QV-01
Carbon Tetrachloride [56-23-5]^	470	U	ug/L	500	470	1200	2B18005	EPA 8260D	02/18/22 16:47	KKW	
Chlorobenzene [108-90-7]^	360	U	ug/L	500	360	1200	2B18005	EPA 8260D	02/18/22 16:47	KKW	
Chloroethane [75-00-3]^	490	U	ug/L	500	490	1200	2B18005	EPA 8260D	02/18/22 16:47	KKW	
Chloroform [67-66-3]^	400	U	ug/L	500	400	1200	2B18005	EPA 8260D	02/18/22 16:47	KKW	
Chloromethane [74-87-3]^	410	U	ug/L	500	410	1200	2B18005	EPA 8260D	02/18/22 16:47	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**9300**		ug/L	500	260	1200	2B18005	EPA 8260D	02/18/22 16:47	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	300	U	ug/L	500	300	1200	2B18005	EPA 8260D	02/18/22 16:47	KKW	
Cyclohexane [110-82-7]^	460	U	ug/L	500	460	1200	2B18005	EPA 8260D	02/18/22 16:47	KKW	
Dibromochloromethane [124-48-1]^	250	U	ug/L	500	250	1200	2B18005	EPA 8260D	02/18/22 16:47	KKW	
Dichlorodifluoromethane [75-71-8]^	370	U	ug/L	500	370	1200	2B18005	EPA 8260D	02/18/22 16:47	KKW	
Ethylbenzene [100-41-4]^	340	U	ug/L	500	340	1200	2B18005	EPA 8260D	02/18/22 16:47	KKW	
Freon 113 [76-13-1]^	360	U	ug/L	500	360	1200	2B18005	EPA 8260D	02/18/22 16:47	KKW	
Isopropylbenzene [98-82-8]^	340	U	ug/L	500	340	1200	2B18005	EPA 8260D	02/18/22 16:47	KKW	
Methyl acetate [79-20-9]^	480	U	ug/L	500	480	1200	2B18005	EPA 8260D	02/18/22 16:47	KKW	
Methylene Chloride [75-09-2]^	1200	U	ug/L	500	1200	6200	2B18005	EPA 8260D	02/18/22 16:47	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	300	U	ug/L	500	300	1200	2B18005	EPA 8260D	02/18/22 16:47	KKW	
Styrene [100-42-5]^	300	U	ug/L	500	300	1200	2B18005	EPA 8260D	02/18/22 16:47	KKW	
Tetrachloroethene [127-18-4]^	380	U	ug/L	500	380	1200	2B18005	EPA 8260D	02/18/22 16:47	KKW	
Toluene [108-88-3]^	360	U	ug/L	500	360	1200	2B18005	EPA 8260D	02/18/22 16:47	KKW	
trans-1,2-Dichloroethene [156-60-5]^	360	U	ug/L	500	360	1200	2B18005	EPA 8260D	02/18/22 16:47	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	360	U	ug/L	500	360	1200	2B18005	EPA 8260D	02/18/22 16:47	KKW	
Trichloroethene [79-01-6]^	**46000**		ug/L	500	440	1200	2B18005	EPA 8260D	02/18/22 16:47	KKW	
Trichlorofluoromethane [75-69-4]^	470	U	ug/L	500	470	1200	2B18005	EPA 8260D	02/18/22 16:47	KKW	
Vinyl chloride [75-01-4]^	360	U	ug/L	500	360	1200	2B18005	EPA 8260D	02/18/22 16:47	KKW	
Xylenes (Total) [1330-20-7]	650	U	ug/L	500	650	2500	2B18005	EPA 8260D	02/18/22 16:47	KKW	

ANALYTICAL RESULTS

Description: LC34PS-PZB-058.0-20220214 **Lab Sample ID:** AF00827-45 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 11:34 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*57*	*1*	*50.0*	*114 %*	*41-142*	*2B18005*	*EPA 8260D*	*02/18/22 16:47*	*KKW*	
Dibromofluoromethane	*51*	*1*	*50.0*	*103 %*	*53-146*	*2B18005*	*EPA 8260D*	*02/18/22 16:47*	*KKW*	
Toluene-d8	*52*	*1*	*50.0*	*104 %*	*41-146*	*2B18005*	*EPA 8260D*	*02/18/22 16:47*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZB-073.0-20220214 **Lab Sample ID:** AF00827-46 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 11:36 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	4.0	U	ug/L	5	4.0	12	2B16024	EPA 8260D	02/17/22 04:50	JMW	
1,1,2,2-Tetrachloroethane [79-34-5]^	2.7	U	ug/L	5	2.7	12	2B16024	EPA 8260D	02/17/22 04:50	JMW	
1,1,2-Trichloroethane [79-00-5]^	3.8	U	ug/L	5	3.8	12	2B16024	EPA 8260D	02/17/22 04:50	JMW	
1,1-Dichloroethane [75-34-3]^	3.1	U	ug/L	5	3.1	12	2B16024	EPA 8260D	02/17/22 04:50	JMW	
1,1-Dichloroethene [75-35-4]^	4.7	U	ug/L	5	4.7	12	2B16024	EPA 8260D	02/17/22 04:50	JMW	
1,2,4-Trichlorobenzene [120-82-1]^	3.5	U	ug/L	5	3.5	12	2B16024	EPA 8260D	02/17/22 04:50	JMW	
1,2-Dibromo-3-chloropropane [96-12-8]^	4.8	U	ug/L	5	4.8	12	2B16024	EPA 8260D	02/17/22 04:50	JMW	
1,2-Dibromoethane [106-93-4]^	3.9	U	ug/L	5	3.9	12	2B16024	EPA 8260D	02/17/22 04:50	JMW	
1,2-Dichlorobenzene [95-50-1]^	3.6	U	ug/L	5	3.6	12	2B16024	EPA 8260D	02/17/22 04:50	JMW	
1,2-Dichloroethane [107-06-2]^	3.2	U	ug/L	5	3.2	12	2B16024	EPA 8260D	02/17/22 04:50	JMW	
1,2-Dichloropropane [78-87-5]^	4.0	U	ug/L	5	4.0	12	2B16024	EPA 8260D	02/17/22 04:50	JMW	
1,3-Dichlorobenzene [541-73-1]^	3.8	U	ug/L	5	3.8	12	2B16024	EPA 8260D	02/17/22 04:50	JMW	
1,4-Dichlorobenzene [106-46-7]^	3.8	U	ug/L	5	3.8	12	2B16024	EPA 8260D	02/17/22 04:50	JMW	
2-Butanone [78-93-3]^	22	U	ug/L	5	22	62	2B16024	EPA 8260D	02/17/22 04:50	JMW	
2-Hexanone [591-78-6]^	12	U	ug/L	5	12	62	2B16024	EPA 8260D	02/17/22 04:50	JMW	
4-Methyl-2-pentanone [108-10-1]^	12	U	ug/L	5	12	62	2B16024	EPA 8260D	02/17/22 04:50	JMW	
Acetone [67-64-1]^	50	U	ug/L	5	50	120	2B16024	EPA 8260D	02/17/22 04:50	JMW	
Benzene [71-43-2]^	3.6	U	ug/L	5	3.6	12	2B16024	EPA 8260D	02/17/22 04:50	JMW	
Bromodichloromethane [75-27-4]^	2.6	U	ug/L	5	2.6	12	2B16024	EPA 8260D	02/17/22 04:50	JMW	
Bromoform [75-25-2]^	3.8	U	ug/L	5	3.8	12	2B16024	EPA 8260D	02/17/22 04:50	JMW	
Bromomethane [74-83-9]^	4.8	U	ug/L	5	4.8	12	2B16024	EPA 8260D	02/17/22 04:50	JMW	QV-01
Carbon disulfide [75-15-0]^	12	U	ug/L	5	12	62	2B16024	EPA 8260D	02/17/22 04:50	JMW	
Carbon Tetrachloride [56-23-5]^	4.7	U	ug/L	5	4.7	12	2B16024	EPA 8260D	02/17/22 04:50	JMW	
Chlorobenzene [108-90-7]^	3.6	U	ug/L	5	3.6	12	2B16024	EPA 8260D	02/17/22 04:50	JMW	
Chloroethane [75-00-3]^	4.9	U	ug/L	5	4.9	12	2B16024	EPA 8260D	02/17/22 04:50	JMW	
Chloroform [67-66-3]^	4.0	U	ug/L	5	4.0	12	2B16024	EPA 8260D	02/17/22 04:50	JMW	
Chloromethane [74-87-3]^	4.1	U	ug/L	5	4.1	12	2B16024	EPA 8260D	02/17/22 04:50	JMW	
cis-1,2-Dichloroethene [156-59-2]^	**150**		ug/L	5	2.6	12	2B16024	EPA 8260D	02/17/22 04:50	JMW	
cis-1,3-Dichloropropene [10061-01-5]^	3.0	U	ug/L	5	3.0	12	2B16024	EPA 8260D	02/17/22 04:50	JMW	
Cyclohexane [110-82-7]^	4.6	U	ug/L	5	4.6	12	2B16024	EPA 8260D	02/17/22 04:50	JMW	
Dibromochloromethane [124-48-1]^	2.5	U	ug/L	5	2.5	12	2B16024	EPA 8260D	02/17/22 04:50	JMW	
Dichlorodifluoromethane [75-71-8]^	3.7	U	ug/L	5	3.7	12	2B16024	EPA 8260D	02/17/22 04:50	JMW	
Ethylbenzene [100-41-4]^	3.4	U	ug/L	5	3.4	12	2B16024	EPA 8260D	02/17/22 04:50	JMW	
Freon 113 [76-13-1]^	3.6	U	ug/L	5	3.6	12	2B16024	EPA 8260D	02/17/22 04:50	JMW	
Isopropylbenzene [98-82-8]^	3.4	U	ug/L	5	3.4	12	2B16024	EPA 8260D	02/17/22 04:50	JMW	
Methyl acetate [79-20-9]^	4.8	U	ug/L	5	4.8	12	2B16024	EPA 8260D	02/17/22 04:50	JMW	QV-01
Methylene Chloride [75-09-2]^	12	U	ug/L	5	12	62	2B16024	EPA 8260D	02/17/22 04:50	JMW	
Methyl-tert-Butyl Ether [1634-04-4]^	3.0	U	ug/L	5	3.0	12	2B16024	EPA 8260D	02/17/22 04:50	JMW	
Styrene [100-42-5]^	3.0	U	ug/L	5	3.0	12	2B16024	EPA 8260D	02/17/22 04:50	JMW	
Tetrachloroethene [127-18-4]^	3.8	U	ug/L	5	3.8	12	2B16024	EPA 8260D	02/17/22 04:50	JMW	QL-02, QV-01
Toluene [108-88-3]^	3.6	U	ug/L	5	3.6	12	2B16024	EPA 8260D	02/17/22 04:50	JMW	
trans-1,2-Dichloroethene [156-60-5]^	3.6	U	ug/L	5	3.6	12	2B16024	EPA 8260D	02/17/22 04:50	JMW	
trans-1,3-Dichloropropene [10061-02-6]^	3.6	U	ug/L	5	3.6	12	2B16024	EPA 8260D	02/17/22 04:50	JMW	
Trichloroethene [79-01-6]^	**590**		ug/L	20	18	50	2B18005	EPA 8260D	02/18/22 17:14	KKW	
Trichlorofluoromethane [75-69-4]^	4.7	U	ug/L	5	4.7	12	2B16024	EPA 8260D	02/17/22 04:50	JMW	
Vinyl chloride [75-01-4]^	**25**		ug/L	5	3.6	12	2B16024	EPA 8260D	02/17/22 04:50	JMW	

ANALYTICAL RESULTS

Description: LC34PS-PZB-073.0-20220214 **Lab Sample ID:** AF00827-46 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 11:36 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Xylenes (Total) [1330-20-7]	6.5	U	ug/L	5	6.5	25	2B16024	EPA 8260D	02/17/22 04:50	JMW	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*46*	*1*	*50.0*	*92 %*	*41-142*	*2B16024*	*EPA 8260D*	*02/17/22 04:50*	*JMW*	
4-Bromofluorobenzene	*55*	*1*	*50.0*	*109 %*	*41-142*	*2B18005*	*EPA 8260D*	*02/18/22 17:14*	*KKW*	
Dibromofluoromethane	*54*	*1*	*50.0*	*107 %*	*53-146*	*2B16024*	*EPA 8260D*	*02/17/22 04:50*	*JMW*	
Dibromofluoromethane	*52*	*1*	*50.0*	*103 %*	*53-146*	*2B18005*	*EPA 8260D*	*02/18/22 17:14*	*KKW*	
Toluene-d8	*53*	*1*	*50.0*	*106 %*	*41-146*	*2B16024*	*EPA 8260D*	*02/17/22 04:50*	*JMW*	
Toluene-d8	*51*	*1*	*50.0*	*101 %*	*41-146*	*2B18005*	*EPA 8260D*	*02/18/22 17:14*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZB-080.0-20220214 **Lab Sample ID:** AF00827-47 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 11:38 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	2B16024	EPA 8260D	02/17/22 05:19	JMW	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	2B16024	EPA 8260D	02/17/22 05:19	JMW	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	2B16024	EPA 8260D	02/17/22 05:19	JMW	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	2B16024	EPA 8260D	02/17/22 05:19	JMW	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	2B16024	EPA 8260D	02/17/22 05:19	JMW	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	2B16024	EPA 8260D	02/17/22 05:19	JMW	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	2B16024	EPA 8260D	02/17/22 05:19	JMW	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	2B16024	EPA 8260D	02/17/22 05:19	JMW	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	2B16024	EPA 8260D	02/17/22 05:19	JMW	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	2B16024	EPA 8260D	02/17/22 05:19	JMW	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	2B16024	EPA 8260D	02/17/22 05:19	JMW	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	2B16024	EPA 8260D	02/17/22 05:19	JMW	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	2B16024	EPA 8260D	02/17/22 05:19	JMW	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	2B16024	EPA 8260D	02/17/22 05:19	JMW	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	2B16024	EPA 8260D	02/17/22 05:19	JMW	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	2B16024	EPA 8260D	02/17/22 05:19	JMW	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	2B16024	EPA 8260D	02/17/22 05:19	JMW	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	2B16024	EPA 8260D	02/17/22 05:19	JMW	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	2B16024	EPA 8260D	02/17/22 05:19	JMW	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	2B16024	EPA 8260D	02/17/22 05:19	JMW	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	2B16024	EPA 8260D	02/17/22 05:19	JMW	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	2B16024	EPA 8260D	02/17/22 05:19	JMW	
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	2B16024	EPA 8260D	02/17/22 05:19	JMW	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	2B16024	EPA 8260D	02/17/22 05:19	JMW	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	2B16024	EPA 8260D	02/17/22 05:19	JMW	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	2B16024	EPA 8260D	02/17/22 05:19	JMW	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	2B16024	EPA 8260D	02/17/22 05:19	JMW	
cis-1,2-Dichloroethene [156-59-2]^	**45**		ug/L	1	0.53	2.5	2B16024	EPA 8260D	02/17/22 05:19	JMW	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	2B16024	EPA 8260D	02/17/22 05:19	JMW	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	2B16024	EPA 8260D	02/17/22 05:19	JMW	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	2B16024	EPA 8260D	02/17/22 05:19	JMW	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	2B16024	EPA 8260D	02/17/22 05:19	JMW	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	2B16024	EPA 8260D	02/17/22 05:19	JMW	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	2B16024	EPA 8260D	02/17/22 05:19	JMW	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	2B16024	EPA 8260D	02/17/22 05:19	JMW	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	2B16024	EPA 8260D	02/17/22 05:19	JMW	QV-01
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	2B16024	EPA 8260D	02/17/22 05:19	JMW	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	2B16024	EPA 8260D	02/17/22 05:19	JMW	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	2B16024	EPA 8260D	02/17/22 05:19	JMW	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	2B16024	EPA 8260D	02/17/22 05:19	JMW	QL-02, QV-01
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	2B16024	EPA 8260D	02/17/22 05:19	JMW	
trans-1,2-Dichloroethene [156-60-5]^	**12**		ug/L	1	0.73	2.5	2B16024	EPA 8260D	02/17/22 05:19	JMW	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	2B16024	EPA 8260D	02/17/22 05:19	JMW	
Trichloroethene [79-01-6]^	**15**		ug/L	1	0.89	2.5	2B16024	EPA 8260D	02/17/22 05:19	JMW	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	2B16024	EPA 8260D	02/17/22 05:19	JMW	
Vinyl chloride [75-01-4]^	0.71	U	ug/L	1	0.71	2.5	2B16024	EPA 8260D	02/17/22 05:19	JMW	

ANALYTICAL RESULTS

Description: LC34PS-PZB-080.0-20220214 **Lab Sample ID:** AF00827-47 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 11:38 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Xylenes (Total) [1330-20-7]	1.3	U	ug/L	1	1.3	5.0	2B16024	EPA 8260D	02/17/22 05:19	JMW	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*46*	*1*	*50.0*	*91 %*	*41-142*	*2B16024*	*EPA 8260D*	*02/17/22 05:19*	*JMW*	
Dibromofluoromethane	*53*	*1*	*50.0*	*106 %*	*53-146*	*2B16024*	*EPA 8260D*	*02/17/22 05:19*	*JMW*	
Toluene-d8	*55*	*1*	*50.0*	*111 %*	*41-146*	*2B16024*	*EPA 8260D*	*02/17/22 05:19*	*JMW*	

ANALYTICAL RESULTS

Description: LC34PS-PZC-040.0-20220214 **Lab Sample ID:** AF00827-48 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 12:00 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	8000	U	ug/L	10000	8000	25000	2B16024	EPA 8260D	02/17/22 05:48	JMW	
1,1,2,2-Tetrachloroethane [79-34-5]^	5400	U	ug/L	10000	5400	25000	2B16024	EPA 8260D	02/17/22 05:48	JMW	
1,1,2-Trichloroethane [79-00-5]^	7600	U	ug/L	10000	7600	25000	2B16024	EPA 8260D	02/17/22 05:48	JMW	
1,1-Dichloroethane [75-34-3]^	6200	U	ug/L	10000	6200	25000	2B16024	EPA 8260D	02/17/22 05:48	JMW	
1,1-Dichloroethene [75-35-4]^	9400	U	ug/L	10000	9400	25000	2B16024	EPA 8260D	02/17/22 05:48	JMW	
1,2,4-Trichlorobenzene [120-82-1]^	7000	U	ug/L	10000	7000	25000	2B16024	EPA 8260D	02/17/22 05:48	JMW	
1,2-Dibromo-3-chloropropane [96-12-8]^	9600	U	ug/L	10000	9600	25000	2B16024	EPA 8260D	02/17/22 05:48	JMW	
1,2-Dibromoethane [106-93-4]^	7800	U	ug/L	10000	7800	25000	2B16024	EPA 8260D	02/17/22 05:48	JMW	
1,2-Dichlorobenzene [95-50-1]^	7300	U	ug/L	10000	7300	25000	2B16024	EPA 8260D	02/17/22 05:48	JMW	
1,2-Dichloroethane [107-06-2]^	6300	U	ug/L	10000	6300	25000	2B16024	EPA 8260D	02/17/22 05:48	JMW	
1,2-Dichloropropane [78-87-5]^	8000	U	ug/L	10000	8000	25000	2B16024	EPA 8260D	02/17/22 05:48	JMW	
1,3-Dichlorobenzene [541-73-1]^	7700	U	ug/L	10000	7700	25000	2B16024	EPA 8260D	02/17/22 05:48	JMW	
1,4-Dichlorobenzene [106-46-7]^	7600	U	ug/L	10000	7600	25000	2B16024	EPA 8260D	02/17/22 05:48	JMW	
2-Butanone [78-93-3]^	45000	U	ug/L	10000	45000	120000	2B16024	EPA 8260D	02/17/22 05:48	JMW	
2-Hexanone [591-78-6]^	25000	U	ug/L	10000	25000	120000	2B16024	EPA 8260D	02/17/22 05:48	JMW	
4-Methyl-2-pentanone [108-10-1]^	25000	U	ug/L	10000	25000	120000	2B16024	EPA 8260D	02/17/22 05:48	JMW	
Acetone [67-64-1]^	100000	U	ug/L	10000	100000	250000	2B16024	EPA 8260D	02/17/22 05:48	JMW	
Benzene [71-43-2]^	7100	U	ug/L	10000	7100	25000	2B16024	EPA 8260D	02/17/22 05:48	JMW	
Bromodichloromethane [75-27-4]^	5200	U	ug/L	10000	5200	25000	2B16024	EPA 8260D	02/17/22 05:48	JMW	
Bromoform [75-25-2]^	7500	U	ug/L	10000	7500	25000	2B16024	EPA 8260D	02/17/22 05:48	JMW	
Bromomethane [74-83-9]^	9500	U	ug/L	10000	9500	25000	2B16024	EPA 8260D	02/17/22 05:48	JMW	QV-01
Carbon disulfide [75-15-0]^	25000	U	ug/L	10000	25000	120000	2B16024	EPA 8260D	02/17/22 05:48	JMW	
Carbon Tetrachloride [56-23-5]^	9400	U	ug/L	10000	9400	25000	2B16024	EPA 8260D	02/17/22 05:48	JMW	
Chlorobenzene [108-90-7]^	7200	U	ug/L	10000	7200	25000	2B16024	EPA 8260D	02/17/22 05:48	JMW	
Chloroethane [75-00-3]^	9800	U	ug/L	10000	9800	25000	2B16024	EPA 8260D	02/17/22 05:48	JMW	
Chloroform [67-66-3]^	8000	U	ug/L	10000	8000	25000	2B16024	EPA 8260D	02/17/22 05:48	JMW	
Chloromethane [74-87-3]^	8200	U	ug/L	10000	8200	25000	2B16024	EPA 8260D	02/17/22 05:48	JMW	
cis-1,2-Dichloroethene [156-59-2]^	**16000**	I	ug/L	10000	5300	25000	2B16024	EPA 8260D	02/17/22 05:48	JMW	
cis-1,3-Dichloropropene [10061-01-5]^	5900	U	ug/L	10000	5900	25000	2B16024	EPA 8260D	02/17/22 05:48	JMW	
Cyclohexane [110-82-7]^	9300	U	ug/L	10000	9300	25000	2B16024	EPA 8260D	02/17/22 05:48	JMW	
Dibromochloromethane [124-48-1]^	5000	U	ug/L	10000	5000	25000	2B16024	EPA 8260D	02/17/22 05:48	JMW	
Dichlorodifluoromethane [75-71-8]^	7400	U	ug/L	10000	7400	25000	2B16024	EPA 8260D	02/17/22 05:48	JMW	
Ethylbenzene [100-41-4]^	6900	U	ug/L	10000	6900	25000	2B16024	EPA 8260D	02/17/22 05:48	JMW	
Freon 113 [76-13-1]^	7300	U	ug/L	10000	7300	25000	2B16024	EPA 8260D	02/17/22 05:48	JMW	
Isopropylbenzene [98-82-8]^	6700	U	ug/L	10000	6700	25000	2B16024	EPA 8260D	02/17/22 05:48	JMW	
Methyl acetate [79-20-9]^	9500	U	ug/L	10000	9500	25000	2B16024	EPA 8260D	02/17/22 05:48	JMW	QV-01
Methylene Chloride [75-09-2]^	25000	U	ug/L	10000	25000	120000	2B16024	EPA 8260D	02/17/22 05:48	JMW	
Methyl-tert-Butyl Ether [1634-04-4]^	6000	U	ug/L	10000	6000	25000	2B16024	EPA 8260D	02/17/22 05:48	JMW	
Styrene [100-42-5]^	6100	U	ug/L	10000	6100	25000	2B16024	EPA 8260D	02/17/22 05:48	JMW	
Tetrachloroethene [127-18-4]^	7600	U	ug/L	10000	7600	25000	2B16024	EPA 8260D	02/17/22 05:48	JMW	QL-02, QV-01
Toluene [108-88-3]^	7200	U	ug/L	10000	7200	25000	2B16024	EPA 8260D	02/17/22 05:48	JMW	
trans-1,2-Dichloroethene [156-60-5]^	7300	U	ug/L	10000	7300	25000	2B16024	EPA 8260D	02/17/22 05:48	JMW	
trans-1,3-Dichloropropene [10061-02-6]^	7300	U	ug/L	10000	7300	25000	2B16024	EPA 8260D	02/17/22 05:48	JMW	
Trichloroethene [79-01-6]^	**470000**		ug/L	10000	8900	25000	2B16024	EPA 8260D	02/17/22 05:48	JMW	
Trichlorofluoromethane [75-69-4]^	9400	U	ug/L	10000	9400	25000	2B16024	EPA 8260D	02/17/22 05:48	JMW	
Vinyl chloride [75-01-4]^	7100	U	ug/L	10000	7100	25000	2B16024	EPA 8260D	02/17/22 05:48	JMW	

ANALYTICAL RESULTS

Description: LC34PS-PZC-040.0-20220214 **Lab Sample ID:** AF00827-48 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 12:00 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Xylenes (Total) [1330-20-7]	13000	U	ug/L	10000	13000	50000	2B16024	EPA 8260D	02/17/22 05:48	JMW	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*46*	*1*	*50.0*	*92 %*	*41-142*	*2B16024*	*EPA 8260D*	*02/17/22 05:48*	*JMW*	
Dibromofluoromethane	*54*	*1*	*50.0*	*108 %*	*53-146*	*2B16024*	*EPA 8260D*	*02/17/22 05:48*	*JMW*	
Toluene-d8	*54*	*1*	*50.0*	*109 %*	*41-146*	*2B16024*	*EPA 8260D*	*02/17/22 05:48*	*JMW*	

ANALYTICAL RESULTS

Description: LC34PS-PZC-050.0-20220214 **Lab Sample ID:** AF00827-49 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 12:02 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	8000	U	ug/L	10000	8000	25000	2B16024	EPA 8260D	02/17/22 06:17	JMW	
1,1,2,2-Tetrachloroethane [79-34-5]^	5400	U	ug/L	10000	5400	25000	2B16024	EPA 8260D	02/17/22 06:17	JMW	
1,1,2-Trichloroethane [79-00-5]^	7600	U	ug/L	10000	7600	25000	2B16024	EPA 8260D	02/17/22 06:17	JMW	
1,1-Dichloroethane [75-34-3]^	6200	U	ug/L	10000	6200	25000	2B16024	EPA 8260D	02/17/22 06:17	JMW	
1,1-Dichloroethene [75-35-4]^	9400	U	ug/L	10000	9400	25000	2B16024	EPA 8260D	02/17/22 06:17	JMW	
1,2,4-Trichlorobenzene [120-82-1]^	7000	U	ug/L	10000	7000	25000	2B16024	EPA 8260D	02/17/22 06:17	JMW	
1,2-Dibromo-3-chloropropane [96-12-8]^	9600	U	ug/L	10000	9600	25000	2B16024	EPA 8260D	02/17/22 06:17	JMW	
1,2-Dibromoethane [106-93-4]^	7800	U	ug/L	10000	7800	25000	2B16024	EPA 8260D	02/17/22 06:17	JMW	
1,2-Dichlorobenzene [95-50-1]^	7300	U	ug/L	10000	7300	25000	2B16024	EPA 8260D	02/17/22 06:17	JMW	
1,2-Dichloroethane [107-06-2]^	6300	U	ug/L	10000	6300	25000	2B16024	EPA 8260D	02/17/22 06:17	JMW	
1,2-Dichloropropane [78-87-5]^	8000	U	ug/L	10000	8000	25000	2B16024	EPA 8260D	02/17/22 06:17	JMW	
1,3-Dichlorobenzene [541-73-1]^	7700	U	ug/L	10000	7700	25000	2B16024	EPA 8260D	02/17/22 06:17	JMW	
1,4-Dichlorobenzene [106-46-7]^	7600	U	ug/L	10000	7600	25000	2B16024	EPA 8260D	02/17/22 06:17	JMW	
2-Butanone [78-93-3]^	45000	U	ug/L	10000	45000	120000	2B16024	EPA 8260D	02/17/22 06:17	JMW	
2-Hexanone [591-78-6]^	25000	U	ug/L	10000	25000	120000	2B16024	EPA 8260D	02/17/22 06:17	JMW	
4-Methyl-2-pentanone [108-10-1]^	25000	U	ug/L	10000	25000	120000	2B16024	EPA 8260D	02/17/22 06:17	JMW	
Acetone [67-64-1]^	100000	U	ug/L	10000	100000	250000	2B16024	EPA 8260D	02/17/22 06:17	JMW	
Benzene [71-43-2]^	7100	U	ug/L	10000	7100	25000	2B16024	EPA 8260D	02/17/22 06:17	JMW	
Bromodichloromethane [75-27-4]^	5200	U	ug/L	10000	5200	25000	2B16024	EPA 8260D	02/17/22 06:17	JMW	
Bromoform [75-25-2]^	7500	U	ug/L	10000	7500	25000	2B16024	EPA 8260D	02/17/22 06:17	JMW	
Bromomethane [74-83-9]^	9500	U	ug/L	10000	9500	25000	2B16024	EPA 8260D	02/17/22 06:17	JMW	QV-01
Carbon disulfide [75-15-0]^	25000	U	ug/L	10000	25000	120000	2B16024	EPA 8260D	02/17/22 06:17	JMW	
Carbon Tetrachloride [56-23-5]^	9400	U	ug/L	10000	9400	25000	2B16024	EPA 8260D	02/17/22 06:17	JMW	
Chlorobenzene [108-90-7]^	7200	U	ug/L	10000	7200	25000	2B16024	EPA 8260D	02/17/22 06:17	JMW	
Chloroethane [75-00-3]^	9800	U	ug/L	10000	9800	25000	2B16024	EPA 8260D	02/17/22 06:17	JMW	
Chloroform [67-66-3]^	8000	U	ug/L	10000	8000	25000	2B16024	EPA 8260D	02/17/22 06:17	JMW	
Chloromethane [74-87-3]^	8200	U	ug/L	10000	8200	25000	2B16024	EPA 8260D	02/17/22 06:17	JMW	
cis-1,2-Dichloroethene [156-59-2]^	**43000**		ug/L	10000	5300	25000	2B16024	EPA 8260D	02/17/22 06:17	JMW	
cis-1,3-Dichloropropene [10061-01-5]^	5900	U	ug/L	10000	5900	25000	2B16024	EPA 8260D	02/17/22 06:17	JMW	
Cyclohexane [110-82-7]^	9300	U	ug/L	10000	9300	25000	2B16024	EPA 8260D	02/17/22 06:17	JMW	
Dibromochloromethane [124-48-1]^	5000	U	ug/L	10000	5000	25000	2B16024	EPA 8260D	02/17/22 06:17	JMW	
Dichlorodifluoromethane [75-71-8]^	7400	U	ug/L	10000	7400	25000	2B16024	EPA 8260D	02/17/22 06:17	JMW	
Ethylbenzene [100-41-4]^	6900	U	ug/L	10000	6900	25000	2B16024	EPA 8260D	02/17/22 06:17	JMW	
Freon 113 [76-13-1]^	7300	U	ug/L	10000	7300	25000	2B16024	EPA 8260D	02/17/22 06:17	JMW	
Isopropylbenzene [98-82-8]^	6700	U	ug/L	10000	6700	25000	2B16024	EPA 8260D	02/17/22 06:17	JMW	
Methyl acetate [79-20-9]^	9500	U	ug/L	10000	9500	25000	2B16024	EPA 8260D	02/17/22 06:17	JMW	QV-01
Methylene Chloride [75-09-2]^	25000	U	ug/L	10000	25000	120000	2B16024	EPA 8260D	02/17/22 06:17	JMW	
Methyl-tert-Butyl Ether [1634-04-4]^	6000	U	ug/L	10000	6000	25000	2B16024	EPA 8260D	02/17/22 06:17	JMW	
Styrene [100-42-5]^	6100	U	ug/L	10000	6100	25000	2B16024	EPA 8260D	02/17/22 06:17	JMW	
Tetrachloroethene [127-18-4]^	7600	U	ug/L	10000	7600	25000	2B16024	EPA 8260D	02/17/22 06:17	JMW	QL-02, QV-01
Toluene [108-88-3]^	7200	U	ug/L	10000	7200	25000	2B16024	EPA 8260D	02/17/22 06:17	JMW	
trans-1,2-Dichloroethene [156-60-5]^	7300	U	ug/L	10000	7300	25000	2B16024	EPA 8260D	02/17/22 06:17	JMW	
trans-1,3-Dichloropropene [10061-02-6]^	7300	U	ug/L	10000	7300	25000	2B16024	EPA 8260D	02/17/22 06:17	JMW	
Trichloroethene [79-01-6]^	**740000**		ug/L	10000	8900	25000	2B16024	EPA 8260D	02/17/22 06:17	JMW	
Trichlorofluoromethane [75-69-4]^	9400	U	ug/L	10000	9400	25000	2B16024	EPA 8260D	02/17/22 06:17	JMW	
Vinyl chloride [75-01-4]^	7100	U	ug/L	10000	7100	25000	2B16024	EPA 8260D	02/17/22 06:17	JMW	

ANALYTICAL RESULTS

Description: LC34PS-PZC-050.0-20220214 **Lab Sample ID:** AF00827-49 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 12:02 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Xylenes (Total) [1330-20-7]	13000	U	ug/L	10000	13000	50000	2B16024	EPA 8260D	02/17/22 06:17	JMW	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*46*	*1*	*50.0*	*93 %*	*41-142*	*2B16024*	*EPA 8260D*	*02/17/22 06:17*	*JMW*	
Dibromofluoromethane	*55*	*1*	*50.0*	*109 %*	*53-146*	*2B16024*	*EPA 8260D*	*02/17/22 06:17*	*JMW*	
Toluene-d8	*54*	*1*	*50.0*	*108 %*	*41-146*	*2B16024*	*EPA 8260D*	*02/17/22 06:17*	*JMW*	

ANALYTICAL RESULTS

Description: LC34PS-PZC-058.0-20220214 **Lab Sample ID:** AF00827-50 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 12:04 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	4000	U	ug/L	5000	4000	12000	2B16024	EPA 8260D	02/17/22 06:45	JMW	
1,1,2,2-Tetrachloroethane [79-34-5]^	2700	U	ug/L	5000	2700	12000	2B16024	EPA 8260D	02/17/22 06:45	JMW	
1,1,2-Trichloroethane [79-00-5]^	3800	U	ug/L	5000	3800	12000	2B16024	EPA 8260D	02/17/22 06:45	JMW	
1,1-Dichloroethane [75-34-3]^	3100	U	ug/L	5000	3100	12000	2B16024	EPA 8260D	02/17/22 06:45	JMW	
1,1-Dichloroethene [75-35-4]^	4700	U	ug/L	5000	4700	12000	2B16024	EPA 8260D	02/17/22 06:45	JMW	
1,2,4-Trichlorobenzene [120-82-1]^	3500	U	ug/L	5000	3500	12000	2B16024	EPA 8260D	02/17/22 06:45	JMW	
1,2-Dibromo-3-chloropropane [96-12-8]^	4800	U	ug/L	5000	4800	12000	2B16024	EPA 8260D	02/17/22 06:45	JMW	
1,2-Dibromoethane [106-93-4]^	3900	U	ug/L	5000	3900	12000	2B16024	EPA 8260D	02/17/22 06:45	JMW	
1,2-Dichlorobenzene [95-50-1]^	3600	U	ug/L	5000	3600	12000	2B16024	EPA 8260D	02/17/22 06:45	JMW	
1,2-Dichloroethane [107-06-2]^	3200	U	ug/L	5000	3200	12000	2B16024	EPA 8260D	02/17/22 06:45	JMW	
1,2-Dichloropropane [78-87-5]^	4000	U	ug/L	5000	4000	12000	2B16024	EPA 8260D	02/17/22 06:45	JMW	
1,3-Dichlorobenzene [541-73-1]^	3800	U	ug/L	5000	3800	12000	2B16024	EPA 8260D	02/17/22 06:45	JMW	
1,4-Dichlorobenzene [106-46-7]^	3800	U	ug/L	5000	3800	12000	2B16024	EPA 8260D	02/17/22 06:45	JMW	
2-Butanone [78-93-3]^	22000	U	ug/L	5000	22000	62000	2B16024	EPA 8260D	02/17/22 06:45	JMW	
2-Hexanone [591-78-6]^	12000	U	ug/L	5000	12000	62000	2B16024	EPA 8260D	02/17/22 06:45	JMW	
4-Methyl-2-pentanone [108-10-1]^	12000	U	ug/L	5000	12000	62000	2B16024	EPA 8260D	02/17/22 06:45	JMW	
Acetone [67-64-1]^	50000	U	ug/L	5000	50000	120000	2B16024	EPA 8260D	02/17/22 06:45	JMW	
Benzene [71-43-2]^	3600	U	ug/L	5000	3600	12000	2B16024	EPA 8260D	02/17/22 06:45	JMW	
Bromodichloromethane [75-27-4]^	2600	U	ug/L	5000	2600	12000	2B16024	EPA 8260D	02/17/22 06:45	JMW	
Bromoform [75-25-2]^	3800	U	ug/L	5000	3800	12000	2B16024	EPA 8260D	02/17/22 06:45	JMW	
Bromomethane [74-83-9]^	4800	U	ug/L	5000	4800	12000	2B16024	EPA 8260D	02/17/22 06:45	JMW	QV-01
Carbon disulfide [75-15-0]^	12000	U	ug/L	5000	12000	62000	2B16024	EPA 8260D	02/17/22 06:45	JMW	
Carbon Tetrachloride [56-23-5]^	4700	U	ug/L	5000	4700	12000	2B16024	EPA 8260D	02/17/22 06:45	JMW	
Chlorobenzene [108-90-7]^	3600	U	ug/L	5000	3600	12000	2B16024	EPA 8260D	02/17/22 06:45	JMW	
Chloroethane [75-00-3]^	4900	U	ug/L	5000	4900	12000	2B16024	EPA 8260D	02/17/22 06:45	JMW	
Chloroform [67-66-3]^	4000	U	ug/L	5000	4000	12000	2B16024	EPA 8260D	02/17/22 06:45	JMW	
Chloromethane [74-87-3]^	4100	U	ug/L	5000	4100	12000	2B16024	EPA 8260D	02/17/22 06:45	JMW	
cis-1,2-Dichloroethene [156-59-2]^	**17000**		ug/L	5000	2600	12000	2B16024	EPA 8260D	02/17/22 06:45	JMW	
cis-1,3-Dichloropropene [10061-01-5]^	3000	U	ug/L	5000	3000	12000	2B16024	EPA 8260D	02/17/22 06:45	JMW	
Cyclohexane [110-82-7]^	4600	U	ug/L	5000	4600	12000	2B16024	EPA 8260D	02/17/22 06:45	JMW	
Dibromochloromethane [124-48-1]^	2500	U	ug/L	5000	2500	12000	2B16024	EPA 8260D	02/17/22 06:45	JMW	
Dichlorodifluoromethane [75-71-8]^	3700	U	ug/L	5000	3700	12000	2B16024	EPA 8260D	02/17/22 06:45	JMW	
Ethylbenzene [100-41-4]^	3400	U	ug/L	5000	3400	12000	2B16024	EPA 8260D	02/17/22 06:45	JMW	
Freon 113 [76-13-1]^	3600	U	ug/L	5000	3600	12000	2B16024	EPA 8260D	02/17/22 06:45	JMW	
Isopropylbenzene [98-82-8]^	3400	U	ug/L	5000	3400	12000	2B16024	EPA 8260D	02/17/22 06:45	JMW	
Methyl acetate [79-20-9]^	4800	U	ug/L	5000	4800	12000	2B16024	EPA 8260D	02/17/22 06:45	JMW	QV-01
Methylene Chloride [75-09-2]^	12000	U	ug/L	5000	12000	62000	2B16024	EPA 8260D	02/17/22 06:45	JMW	
Methyl-tert-Butyl Ether [1634-04-4]^	3000	U	ug/L	5000	3000	12000	2B16024	EPA 8260D	02/17/22 06:45	JMW	
Styrene [100-42-5]^	3000	U	ug/L	5000	3000	12000	2B16024	EPA 8260D	02/17/22 06:45	JMW	
Tetrachloroethene [127-18-4]^	3800	U	ug/L	5000	3800	12000	2B16024	EPA 8260D	02/17/22 06:45	JMW	QL-02, QV-01
Toluene [108-88-3]^	3600	U	ug/L	5000	3600	12000	2B16024	EPA 8260D	02/17/22 06:45	JMW	
trans-1,2-Dichloroethene [156-60-5]^	3600	U	ug/L	5000	3600	12000	2B16024	EPA 8260D	02/17/22 06:45	JMW	
trans-1,3-Dichloropropene [10061-02-6]^	3600	U	ug/L	5000	3600	12000	2B16024	EPA 8260D	02/17/22 06:45	JMW	
Trichloroethene [79-01-6]^	**140000**		ug/L	5000	4400	12000	2B16024	EPA 8260D	02/17/22 06:45	JMW	
Trichlorofluoromethane [75-69-4]^	4700	U	ug/L	5000	4700	12000	2B16024	EPA 8260D	02/17/22 06:45	JMW	
Vinyl chloride [75-01-4]^	3600	U	ug/L	5000	3600	12000	2B16024	EPA 8260D	02/17/22 06:45	JMW	

ANALYTICAL RESULTS

Description: LC34PS-PZC-058.0-20220214 **Lab Sample ID:** AF00827-50 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 12:04 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Xylenes (Total) [1330-20-7]	6500	U	ug/L	5000	6500	25000	2B16024	EPA 8260D	02/17/22 06:45	JMW	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*46*	*1*	*50.0*	*92 %*	*41-142*	*2B16024*	*EPA 8260D*	*02/17/22 06:45*	*JMW*	
Dibromofluoromethane	*54*	*1*	*50.0*	*108 %*	*53-146*	*2B16024*	*EPA 8260D*	*02/17/22 06:45*	*JMW*	
Toluene-d8	*56*	*1*	*50.0*	*112 %*	*41-146*	*2B16024*	*EPA 8260D*	*02/17/22 06:45*	*JMW*	

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ANALYTICAL RESULTS

Description: LC34PS-PZC-073.0-20220214 **Lab Sample ID:** AF00827-51 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 12:06 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	4.0	U	ug/L	5	4.0	12	2B16024	EPA 8260D	02/17/22 07:14	JMW	
1,1,2,2-Tetrachloroethane [79-34-5]^	2.7	U	ug/L	5	2.7	12	2B16024	EPA 8260D	02/17/22 07:14	JMW	
1,1,2-Trichloroethane [79-00-5]^	3.8	U	ug/L	5	3.8	12	2B16024	EPA 8260D	02/17/22 07:14	JMW	
1,1-Dichloroethane [75-34-3]^	3.1	U	ug/L	5	3.1	12	2B16024	EPA 8260D	02/17/22 07:14	JMW	
1,1-Dichloroethene [75-35-4]^	4.7	U	ug/L	5	4.7	12	2B16024	EPA 8260D	02/17/22 07:14	JMW	
1,2,4-Trichlorobenzene [120-82-1]^	3.5	U	ug/L	5	3.5	12	2B16024	EPA 8260D	02/17/22 07:14	JMW	
1,2-Dibromo-3-chloropropane [96-12-8]^	4.8	U	ug/L	5	4.8	12	2B16024	EPA 8260D	02/17/22 07:14	JMW	
1,2-Dibromoethane [106-93-4]^	3.9	U	ug/L	5	3.9	12	2B16024	EPA 8260D	02/17/22 07:14	JMW	
1,2-Dichlorobenzene [95-50-1]^	3.6	U	ug/L	5	3.6	12	2B16024	EPA 8260D	02/17/22 07:14	JMW	
1,2-Dichloroethane [107-06-2]^	3.2	U	ug/L	5	3.2	12	2B16024	EPA 8260D	02/17/22 07:14	JMW	
1,2-Dichloropropane [78-87-5]^	4.0	U	ug/L	5	4.0	12	2B16024	EPA 8260D	02/17/22 07:14	JMW	
1,3-Dichlorobenzene [541-73-1]^	3.8	U	ug/L	5	3.8	12	2B16024	EPA 8260D	02/17/22 07:14	JMW	
1,4-Dichlorobenzene [106-46-7]^	3.8	U	ug/L	5	3.8	12	2B16024	EPA 8260D	02/17/22 07:14	JMW	
2-Butanone [78-93-3]^	22	U	ug/L	5	22	62	2B16024	EPA 8260D	02/17/22 07:14	JMW	
2-Hexanone [591-78-6]^	12	U	ug/L	5	12	62	2B16024	EPA 8260D	02/17/22 07:14	JMW	
4-Methyl-2-pentanone [108-10-1]^	12	U	ug/L	5	12	62	2B16024	EPA 8260D	02/17/22 07:14	JMW	
Acetone [67-64-1]^	50	U	ug/L	5	50	120	2B16024	EPA 8260D	02/17/22 07:14	JMW	
Benzene [71-43-2]^	3.6	U	ug/L	5	3.6	12	2B16024	EPA 8260D	02/17/22 07:14	JMW	
Bromodichloromethane [75-27-4]^	2.6	U	ug/L	5	2.6	12	2B16024	EPA 8260D	02/17/22 07:14	JMW	
Bromoform [75-25-2]^	3.8	U	ug/L	5	3.8	12	2B16024	EPA 8260D	02/17/22 07:14	JMW	
Bromomethane [74-83-9]^	4.8	U	ug/L	5	4.8	12	2B16024	EPA 8260D	02/17/22 07:14	JMW	QV-01
Carbon disulfide [75-15-0]^	12	U	ug/L	5	12	62	2B16024	EPA 8260D	02/17/22 07:14	JMW	
Carbon Tetrachloride [56-23-5]^	4.7	U	ug/L	5	4.7	12	2B16024	EPA 8260D	02/17/22 07:14	JMW	
Chlorobenzene [108-90-7]^	3.6	U	ug/L	5	3.6	12	2B16024	EPA 8260D	02/17/22 07:14	JMW	
Chloroethane [75-00-3]^	4.9	U	ug/L	5	4.9	12	2B16024	EPA 8260D	02/17/22 07:14	JMW	
Chloroform [67-66-3]^	4.0	U	ug/L	5	4.0	12	2B16024	EPA 8260D	02/17/22 07:14	JMW	
Chloromethane [74-87-3]^	4.1	U	ug/L	5	4.1	12	2B16024	EPA 8260D	02/17/22 07:14	JMW	
cis-1,2-Dichloroethene [156-59-2]^	**13**		ug/L	5	2.6	12	2B16024	EPA 8260D	02/17/22 07:14	JMW	
cis-1,3-Dichloropropene [10061-01-5]^	3.0	U	ug/L	5	3.0	12	2B16024	EPA 8260D	02/17/22 07:14	JMW	
Cyclohexane [110-82-7]^	4.6	U	ug/L	5	4.6	12	2B16024	EPA 8260D	02/17/22 07:14	JMW	
Dibromochloromethane [124-48-1]^	2.5	U	ug/L	5	2.5	12	2B16024	EPA 8260D	02/17/22 07:14	JMW	
Dichlorodifluoromethane [75-71-8]^	3.7	U	ug/L	5	3.7	12	2B16024	EPA 8260D	02/17/22 07:14	JMW	
Ethylbenzene [100-41-4]^	3.4	U	ug/L	5	3.4	12	2B16024	EPA 8260D	02/17/22 07:14	JMW	
Freon 113 [76-13-1]^	3.6	U	ug/L	5	3.6	12	2B16024	EPA 8260D	02/17/22 07:14	JMW	
Isopropylbenzene [98-82-8]^	3.4	U	ug/L	5	3.4	12	2B16024	EPA 8260D	02/17/22 07:14	JMW	
Methyl acetate [79-20-9]^	4.8	U	ug/L	5	4.8	12	2B16024	EPA 8260D	02/17/22 07:14	JMW	QV-01
Methylene Chloride [75-09-2]^	12	U	ug/L	5	12	62	2B16024	EPA 8260D	02/17/22 07:14	JMW	
Methyl-tert-Butyl Ether [1634-04-4]^	3.0	U	ug/L	5	3.0	12	2B16024	EPA 8260D	02/17/22 07:14	JMW	
Styrene [100-42-5]^	3.0	U	ug/L	5	3.0	12	2B16024	EPA 8260D	02/17/22 07:14	JMW	
Tetrachloroethene [127-18-4]^	3.8	U	ug/L	5	3.8	12	2B16024	EPA 8260D	02/17/22 07:14	JMW	QL-02, QV-01
Toluene [108-88-3]^	3.6	U	ug/L	5	3.6	12	2B16024	EPA 8260D	02/17/22 07:14	JMW	
trans-1,2-Dichloroethene [156-60-5]^	3.6	U	ug/L	5	3.6	12	2B16024	EPA 8260D	02/17/22 07:14	JMW	
trans-1,3-Dichloropropene [10061-02-6]^	3.6	U	ug/L	5	3.6	12	2B16024	EPA 8260D	02/17/22 07:14	JMW	
Trichloroethene [79-01-6]^	**770**		ug/L	50	44	120	2B18005	EPA 8260D	02/18/22 17:42	KKW	
Trichlorofluoromethane [75-69-4]^	4.7	U	ug/L	5	4.7	12	2B16024	EPA 8260D	02/17/22 07:14	JMW	
Vinyl chloride [75-01-4]^	3.6	U	ug/L	5	3.6	12	2B16024	EPA 8260D	02/17/22 07:14	JMW	

ANALYTICAL RESULTS

Description: LC34PS-PZC-073.0-20220214 **Lab Sample ID:** AF00827-51 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 12:06 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Xylenes (Total) [1330-20-7]	6.5	U	ug/L	5	6.5	25	2B16024	EPA 8260D	02/17/22 07:14	JMW	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*45*	*1*	*50.0*	*90 %*	*41-142*	*2B16024*	*EPA 8260D*	*02/17/22 07:14*	*JMW*	
4-Bromofluorobenzene	*55*	*1*	*50.0*	*109 %*	*41-142*	*2B18005*	*EPA 8260D*	*02/18/22 17:42*	*KKW*	
Dibromofluoromethane	*53*	*1*	*50.0*	*106 %*	*53-146*	*2B16024*	*EPA 8260D*	*02/17/22 07:14*	*JMW*	
Dibromofluoromethane	*51*	*1*	*50.0*	*102 %*	*53-146*	*2B18005*	*EPA 8260D*	*02/18/22 17:42*	*KKW*	
Toluene-d8	*51*	*1*	*50.0*	*103 %*	*41-146*	*2B16024*	*EPA 8260D*	*02/17/22 07:14*	*JMW*	
Toluene-d8	*50*	*1*	*50.0*	*101 %*	*41-146*	*2B18005*	*EPA 8260D*	*02/18/22 17:42*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZC-080.0-20220214 **Lab Sample ID:** AF00827-52 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 12:08 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	2B16024	EPA 8260D	02/17/22 07:43	JMW	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	2B16024	EPA 8260D	02/17/22 07:43	JMW	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	2B16024	EPA 8260D	02/17/22 07:43	JMW	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	2B16024	EPA 8260D	02/17/22 07:43	JMW	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	2B16024	EPA 8260D	02/17/22 07:43	JMW	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	2B16024	EPA 8260D	02/17/22 07:43	JMW	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	2B16024	EPA 8260D	02/17/22 07:43	JMW	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	2B16024	EPA 8260D	02/17/22 07:43	JMW	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	2B16024	EPA 8260D	02/17/22 07:43	JMW	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	2B16024	EPA 8260D	02/17/22 07:43	JMW	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	2B16024	EPA 8260D	02/17/22 07:43	JMW	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	2B16024	EPA 8260D	02/17/22 07:43	JMW	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	2B16024	EPA 8260D	02/17/22 07:43	JMW	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	2B16024	EPA 8260D	02/17/22 07:43	JMW	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	2B16024	EPA 8260D	02/17/22 07:43	JMW	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	2B16024	EPA 8260D	02/17/22 07:43	JMW	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	2B16024	EPA 8260D	02/17/22 07:43	JMW	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	2B16024	EPA 8260D	02/17/22 07:43	JMW	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	2B16024	EPA 8260D	02/17/22 07:43	JMW	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	2B16024	EPA 8260D	02/17/22 07:43	JMW	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	2B16024	EPA 8260D	02/17/22 07:43	JMW	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	2B16024	EPA 8260D	02/17/22 07:43	JMW	
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	2B16024	EPA 8260D	02/17/22 07:43	JMW	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	2B16024	EPA 8260D	02/17/22 07:43	JMW	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	2B16024	EPA 8260D	02/17/22 07:43	JMW	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	2B16024	EPA 8260D	02/17/22 07:43	JMW	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	2B16024	EPA 8260D	02/17/22 07:43	JMW	
cis-1,2-Dichloroethene [156-59-2]^	**25**		ug/L	1	0.53	2.5	2B16024	EPA 8260D	02/17/22 07:43	JMW	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	2B16024	EPA 8260D	02/17/22 07:43	JMW	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	2B16024	EPA 8260D	02/17/22 07:43	JMW	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	2B16024	EPA 8260D	02/17/22 07:43	JMW	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	2B16024	EPA 8260D	02/17/22 07:43	JMW	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	2B16024	EPA 8260D	02/17/22 07:43	JMW	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	2B16024	EPA 8260D	02/17/22 07:43	JMW	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	2B16024	EPA 8260D	02/17/22 07:43	JMW	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	2B16024	EPA 8260D	02/17/22 07:43	JMW	QV-01
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	2B16024	EPA 8260D	02/17/22 07:43	JMW	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	2B16024	EPA 8260D	02/17/22 07:43	JMW	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	2B16024	EPA 8260D	02/17/22 07:43	JMW	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	2B16024	EPA 8260D	02/17/22 07:43	JMW	QL-02, QV-01
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	2B16024	EPA 8260D	02/17/22 07:43	JMW	
trans-1,2-Dichloroethene [156-60-5]^	**6.1**		ug/L	1	0.73	2.5	2B16024	EPA 8260D	02/17/22 07:43	JMW	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	2B16024	EPA 8260D	02/17/22 07:43	JMW	
Trichloroethene [79-01-6]^	**5.7**		ug/L	1	0.89	2.5	2B16024	EPA 8260D	02/17/22 07:43	JMW	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	2B16024	EPA 8260D	02/17/22 07:43	JMW	
Vinyl chloride [75-01-4]^	0.71	U	ug/L	1	0.71	2.5	2B16024	EPA 8260D	02/17/22 07:43	JMW	

ANALYTICAL RESULTS

Description: LC34PS-PZC-080.0-20220214 **Lab Sample ID:** AF00827-52 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 12:08 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Xylenes (Total) [1330-20-7]	1.3	U	ug/L	1	1.3	5.0	2B16024	EPA 8260D	02/17/22 07:43	JMW	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*45*	*1*	*50.0*	*90 %*	*41-142*	*2B16024*	*EPA 8260D*	*02/17/22 07:43*	*JMW*	
Dibromofluoromethane	*55*	*1*	*50.0*	*110 %*	*53-146*	*2B16024*	*EPA 8260D*	*02/17/22 07:43*	*JMW*	
Toluene-d8	*54*	*1*	*50.0*	*108 %*	*41-146*	*2B16024*	*EPA 8260D*	*02/17/22 07:43*	*JMW*	

ANALYTICAL RESULTS

Description: LC34PS-PZD-040.0-20220214 **Lab Sample ID:** AF00827-53 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 12:30 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	2000	U	ug/L	2500	2000	6200	2B16031	EPA 8260D	02/17/22 01:11	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	1400	U	ug/L	2500	1400	6200	2B16031	EPA 8260D	02/17/22 01:11	KKW	
1,1,2-Trichloroethane [79-00-5]^	1900	U	ug/L	2500	1900	6200	2B16031	EPA 8260D	02/17/22 01:11	KKW	
1,1-Dichloroethane [75-34-3]^	1600	U	ug/L	2500	1600	6200	2B16031	EPA 8260D	02/17/22 01:11	KKW	
1,1-Dichloroethene [75-35-4]^	2400	U	ug/L	2500	2400	6200	2B16031	EPA 8260D	02/17/22 01:11	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	1800	U	ug/L	2500	1800	6200	2B16031	EPA 8260D	02/17/22 01:11	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	2400	U	ug/L	2500	2400	6200	2B16031	EPA 8260D	02/17/22 01:11	KKW	
1,2-Dibromoethane [106-93-4]^	2000	U	ug/L	2500	2000	6200	2B16031	EPA 8260D	02/17/22 01:11	KKW	
1,2-Dichlorobenzene [95-50-1]^	1800	U	ug/L	2500	1800	6200	2B16031	EPA 8260D	02/17/22 01:11	KKW	
1,2-Dichloroethane [107-06-2]^	1600	U	ug/L	2500	1600	6200	2B16031	EPA 8260D	02/17/22 01:11	KKW	
1,2-Dichloropropane [78-87-5]^	2000	U	ug/L	2500	2000	6200	2B16031	EPA 8260D	02/17/22 01:11	KKW	
1,3-Dichlorobenzene [541-73-1]^	1900	U	ug/L	2500	1900	6200	2B16031	EPA 8260D	02/17/22 01:11	KKW	
1,4-Dichlorobenzene [106-46-7]^	1900	U	ug/L	2500	1900	6200	2B16031	EPA 8260D	02/17/22 01:11	KKW	
2-Butanone [78-93-3]^	11000	U	ug/L	2500	11000	31000	2B16031	EPA 8260D	02/17/22 01:11	KKW	
2-Hexanone [591-78-6]^	6200	U	ug/L	2500	6200	31000	2B16031	EPA 8260D	02/17/22 01:11	KKW	
4-Methyl-2-pentanone [108-10-1]^	6200	U	ug/L	2500	6200	31000	2B16031	EPA 8260D	02/17/22 01:11	KKW	
Acetone [67-64-1]^	25000	U	ug/L	2500	25000	62000	2B16031	EPA 8260D	02/17/22 01:11	KKW	
Benzene [71-43-2]^	1800	U	ug/L	2500	1800	6200	2B16031	EPA 8260D	02/17/22 01:11	KKW	
Bromodichloromethane [75-27-4]^	1300	U	ug/L	2500	1300	6200	2B16031	EPA 8260D	02/17/22 01:11	KKW	
Bromoform [75-25-2]^	1900	U	ug/L	2500	1900	6200	2B16031	EPA 8260D	02/17/22 01:11	KKW	
Bromomethane [74-83-9]^	2400	U	ug/L	2500	2400	6200	2B16031	EPA 8260D	02/17/22 01:11	KKW	QV-01
Carbon disulfide [75-15-0]^	6200	U	ug/L	2500	6200	31000	2B16031	EPA 8260D	02/17/22 01:11	KKW	QV-01
Carbon Tetrachloride [56-23-5]^	2400	U	ug/L	2500	2400	6200	2B16031	EPA 8260D	02/17/22 01:11	KKW	
Chlorobenzene [108-90-7]^	1800	U	ug/L	2500	1800	6200	2B16031	EPA 8260D	02/17/22 01:11	KKW	
Chloroethane [75-00-3]^	2400	U	ug/L	2500	2400	6200	2B16031	EPA 8260D	02/17/22 01:11	KKW	
Chloroform [67-66-3]^	2000	U	ug/L	2500	2000	6200	2B16031	EPA 8260D	02/17/22 01:11	KKW	
Chloromethane [74-87-3]^	2000	U	ug/L	2500	2000	6200	2B16031	EPA 8260D	02/17/22 01:11	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**47000**		ug/L	2500	1300	6200	2B16031	EPA 8260D	02/17/22 01:11	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	1500	U	ug/L	2500	1500	6200	2B16031	EPA 8260D	02/17/22 01:11	KKW	
Cyclohexane [110-82-7]^	2300	U	ug/L	2500	2300	6200	2B16031	EPA 8260D	02/17/22 01:11	KKW	
Dibromochloromethane [124-48-1]^	1200	U	ug/L	2500	1200	6200	2B16031	EPA 8260D	02/17/22 01:11	KKW	
Dichlorodifluoromethane [75-71-8]^	1800	U	ug/L	2500	1800	6200	2B16031	EPA 8260D	02/17/22 01:11	KKW	
Ethylbenzene [100-41-4]^	1700	U	ug/L	2500	1700	6200	2B16031	EPA 8260D	02/17/22 01:11	KKW	
Freon 113 [76-13-1]^	1800	U	ug/L	2500	1800	6200	2B16031	EPA 8260D	02/17/22 01:11	KKW	
Isopropylbenzene [98-82-8]^	1700	U	ug/L	2500	1700	6200	2B16031	EPA 8260D	02/17/22 01:11	KKW	
Methyl acetate [79-20-9]^	2400	U	ug/L	2500	2400	6200	2B16031	EPA 8260D	02/17/22 01:11	KKW	QV-01
Methylene Chloride [75-09-2]^	6200	U	ug/L	2500	6200	31000	2B16031	EPA 8260D	02/17/22 01:11	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	1500	U	ug/L	2500	1500	6200	2B16031	EPA 8260D	02/17/22 01:11	KKW	
Styrene [100-42-5]^	1500	U	ug/L	2500	1500	6200	2B16031	EPA 8260D	02/17/22 01:11	KKW	
Tetrachloroethene [127-18-4]^	1900	U	ug/L	2500	1900	6200	2B16031	EPA 8260D	02/17/22 01:11	KKW	QV-01
Toluene [108-88-3]^	1800	U	ug/L	2500	1800	6200	2B16031	EPA 8260D	02/17/22 01:11	KKW	
trans-1,2-Dichloroethene [156-60-5]^	1800	U	ug/L	2500	1800	6200	2B16031	EPA 8260D	02/17/22 01:11	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	1800	U	ug/L	2500	1800	6200	2B16031	EPA 8260D	02/17/22 01:11	KKW	
Trichloroethene [79-01-6]^	**170000**		ug/L	2500	2200	6200	2B16031	EPA 8260D	02/17/22 01:11	KKW	
Trichlorofluoromethane [75-69-4]^	2400	U	ug/L	2500	2400	6200	2B16031	EPA 8260D	02/17/22 01:11	KKW	
Vinyl chloride [75-01-4]^	1800	U	ug/L	2500	1800	6200	2B16031	EPA 8260D	02/17/22 01:11	KKW	
Xylenes (Total) [1330-20-7]	3200	U	ug/L	2500	3200	12000	2B16031	EPA 8260D	02/17/22 01:11	KKW	

ANALYTICAL RESULTS

Description: LC34PS-PZD-040.0-20220214 **Lab Sample ID:** AF00827-53 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 12:30 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*56*	*1*	*50.0*	*112 %*	*41-142*	*2B16031*	*EPA 8260D*	*02/17/22 01:11*	*KKW*	
Dibromofluoromethane	*51*	*1*	*50.0*	*101 %*	*53-146*	*2B16031*	*EPA 8260D*	*02/17/22 01:11*	*KKW*	
Toluene-d8	*51*	*1*	*50.0*	*103 %*	*41-146*	*2B16031*	*EPA 8260D*	*02/17/22 01:11*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZD-050.0-20220214 **Lab Sample ID:** AF00827-54 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 12:32 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	16000	U	ug/L	20000	16000	50000	2B16031	EPA 8260D	02/17/22 01:38	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	11000	U	ug/L	20000	11000	50000	2B16031	EPA 8260D	02/17/22 01:38	KKW	
1,1,2-Trichloroethane [79-00-5]^	15000	U	ug/L	20000	15000	50000	2B16031	EPA 8260D	02/17/22 01:38	KKW	
1,1-Dichloroethane [75-34-3]^	12000	U	ug/L	20000	12000	50000	2B16031	EPA 8260D	02/17/22 01:38	KKW	
1,1-Dichloroethene [75-35-4]^	19000	U	ug/L	20000	19000	50000	2B16031	EPA 8260D	02/17/22 01:38	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	14000	U	ug/L	20000	14000	50000	2B16031	EPA 8260D	02/17/22 01:38	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	19000	U	ug/L	20000	19000	50000	2B16031	EPA 8260D	02/17/22 01:38	KKW	
1,2-Dibromoethane [106-93-4]^	16000	U	ug/L	20000	16000	50000	2B16031	EPA 8260D	02/17/22 01:38	KKW	
1,2-Dichlorobenzene [95-50-1]^	15000	U	ug/L	20000	15000	50000	2B16031	EPA 8260D	02/17/22 01:38	KKW	
1,2-Dichloroethane [107-06-2]^	13000	U	ug/L	20000	13000	50000	2B16031	EPA 8260D	02/17/22 01:38	KKW	
1,2-Dichloropropane [78-87-5]^	16000	U	ug/L	20000	16000	50000	2B16031	EPA 8260D	02/17/22 01:38	KKW	
1,3-Dichlorobenzene [541-73-1]^	15000	U	ug/L	20000	15000	50000	2B16031	EPA 8260D	02/17/22 01:38	KKW	
1,4-Dichlorobenzene [106-46-7]^	15000	U	ug/L	20000	15000	50000	2B16031	EPA 8260D	02/17/22 01:38	KKW	
2-Butanone [78-93-3]^	90000	U	ug/L	20000	90000	250000	2B16031	EPA 8260D	02/17/22 01:38	KKW	
2-Hexanone [591-78-6]^	50000	U	ug/L	20000	50000	250000	2B16031	EPA 8260D	02/17/22 01:38	KKW	
4-Methyl-2-pentanone [108-10-1]^	50000	U	ug/L	20000	50000	250000	2B16031	EPA 8260D	02/17/22 01:38	KKW	
Acetone [67-64-1]^	200000	U	ug/L	20000	200000	500000	2B16031	EPA 8260D	02/17/22 01:38	KKW	
Benzene [71-43-2]^	14000	U	ug/L	20000	14000	50000	2B16031	EPA 8260D	02/17/22 01:38	KKW	
Bromodichloromethane [75-27-4]^	10000	U	ug/L	20000	10000	50000	2B16031	EPA 8260D	02/17/22 01:38	KKW	
Bromoform [75-25-2]^	15000	U	ug/L	20000	15000	50000	2B16031	EPA 8260D	02/17/22 01:38	KKW	
Bromomethane [74-83-9]^	19000	U	ug/L	20000	19000	50000	2B16031	EPA 8260D	02/17/22 01:38	KKW	QV-01
Carbon disulfide [75-15-0]^	50000	U	ug/L	20000	50000	250000	2B16031	EPA 8260D	02/17/22 01:38	KKW	QV-01
Carbon Tetrachloride [56-23-5]^	19000	U	ug/L	20000	19000	50000	2B16031	EPA 8260D	02/17/22 01:38	KKW	
Chlorobenzene [108-90-7]^	14000	U	ug/L	20000	14000	50000	2B16031	EPA 8260D	02/17/22 01:38	KKW	
Chloroethane [75-00-3]^	20000	U	ug/L	20000	20000	50000	2B16031	EPA 8260D	02/17/22 01:38	KKW	
Chloroform [67-66-3]^	16000	U	ug/L	20000	16000	50000	2B16031	EPA 8260D	02/17/22 01:38	KKW	
Chloromethane [74-87-3]^	16000	U	ug/L	20000	16000	50000	2B16031	EPA 8260D	02/17/22 01:38	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**55000**		ug/L	20000	11000	50000	2B16031	EPA 8260D	02/17/22 01:38	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	12000	U	ug/L	20000	12000	50000	2B16031	EPA 8260D	02/17/22 01:38	KKW	
Cyclohexane [110-82-7]^	19000	U	ug/L	20000	19000	50000	2B16031	EPA 8260D	02/17/22 01:38	KKW	
Dibromochloromethane [124-48-1]^	10000	U	ug/L	20000	10000	50000	2B16031	EPA 8260D	02/17/22 01:38	KKW	
Dichlorodifluoromethane [75-71-8]^	15000	U	ug/L	20000	15000	50000	2B16031	EPA 8260D	02/17/22 01:38	KKW	
Ethylbenzene [100-41-4]^	14000	U	ug/L	20000	14000	50000	2B16031	EPA 8260D	02/17/22 01:38	KKW	
Freon 113 [76-13-1]^	15000	U	ug/L	20000	15000	50000	2B16031	EPA 8260D	02/17/22 01:38	KKW	
Isopropylbenzene [98-82-8]^	13000	U	ug/L	20000	13000	50000	2B16031	EPA 8260D	02/17/22 01:38	KKW	
Methyl acetate [79-20-9]^	19000	U	ug/L	20000	19000	50000	2B16031	EPA 8260D	02/17/22 01:38	KKW	QV-01
Methylene Chloride [75-09-2]^	50000	U	ug/L	20000	50000	250000	2B16031	EPA 8260D	02/17/22 01:38	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	12000	U	ug/L	20000	12000	50000	2B16031	EPA 8260D	02/17/22 01:38	KKW	
Styrene [100-42-5]^	12000	U	ug/L	20000	12000	50000	2B16031	EPA 8260D	02/17/22 01:38	KKW	
Tetrachloroethene [127-18-4]^	15000	U	ug/L	20000	15000	50000	2B16031	EPA 8260D	02/17/22 01:38	KKW	QV-01
Toluene [108-88-3]^	14000	U	ug/L	20000	14000	50000	2B16031	EPA 8260D	02/17/22 01:38	KKW	
trans-1,2-Dichloroethene [156-60-5]^	15000	U	ug/L	20000	15000	50000	2B16031	EPA 8260D	02/17/22 01:38	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	15000	U	ug/L	20000	15000	50000	2B16031	EPA 8260D	02/17/22 01:38	KKW	
Trichloroethene [79-01-6]^	**660000**		ug/L	20000	18000	50000	2B16031	EPA 8260D	02/17/22 01:38	KKW	
Trichlorofluoromethane [75-69-4]^	19000	U	ug/L	20000	19000	50000	2B16031	EPA 8260D	02/17/22 01:38	KKW	
Vinyl chloride [75-01-4]^	14000	U	ug/L	20000	14000	50000	2B16031	EPA 8260D	02/17/22 01:38	KKW	
Xylenes (Total) [1330-20-7]	26000	U	ug/L	20000	26000	100000	2B16031	EPA 8260D	02/17/22 01:38	KKW	

ANALYTICAL RESULTS

Description: LC34PS-PZD-050.0-20220214 **Lab Sample ID:** AF00827-54 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 12:32 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*54*	*1*	*50.0*	*108 %*	*41-142*	*2B16031*	*EPA 8260D*	*02/17/22 01:38*	*KKW*	
Dibromofluoromethane	*54*	*1*	*50.0*	*108 %*	*53-146*	*2B16031*	*EPA 8260D*	*02/17/22 01:38*	*KKW*	
Toluene-d8	*52*	*1*	*50.0*	*103 %*	*41-146*	*2B16031*	*EPA 8260D*	*02/17/22 01:38*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZD-058.0-20220214 **Lab Sample ID:** AF00827-55 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 12:34 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	8000	U	ug/L	10000	8000	25000	2B16031	EPA 8260D	02/17/22 02:06	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	5400	U	ug/L	10000	5400	25000	2B16031	EPA 8260D	02/17/22 02:06	KKW	
1,1,2-Trichloroethane [79-00-5]^	7600	U	ug/L	10000	7600	25000	2B16031	EPA 8260D	02/17/22 02:06	KKW	
1,1-Dichloroethane [75-34-3]^	6200	U	ug/L	10000	6200	25000	2B16031	EPA 8260D	02/17/22 02:06	KKW	
1,1-Dichloroethene [75-35-4]^	9400	U	ug/L	10000	9400	25000	2B16031	EPA 8260D	02/17/22 02:06	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	7000	U	ug/L	10000	7000	25000	2B16031	EPA 8260D	02/17/22 02:06	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	9600	U	ug/L	10000	9600	25000	2B16031	EPA 8260D	02/17/22 02:06	KKW	
1,2-Dibromoethane [106-93-4]^	7800	U	ug/L	10000	7800	25000	2B16031	EPA 8260D	02/17/22 02:06	KKW	
1,2-Dichlorobenzene [95-50-1]^	7300	U	ug/L	10000	7300	25000	2B16031	EPA 8260D	02/17/22 02:06	KKW	
1,2-Dichloroethane [107-06-2]^	6300	U	ug/L	10000	6300	25000	2B16031	EPA 8260D	02/17/22 02:06	KKW	
1,2-Dichloropropane [78-87-5]^	8000	U	ug/L	10000	8000	25000	2B16031	EPA 8260D	02/17/22 02:06	KKW	
1,3-Dichlorobenzene [541-73-1]^	7700	U	ug/L	10000	7700	25000	2B16031	EPA 8260D	02/17/22 02:06	KKW	
1,4-Dichlorobenzene [106-46-7]^	7600	U	ug/L	10000	7600	25000	2B16031	EPA 8260D	02/17/22 02:06	KKW	
2-Butanone [78-93-3]^	45000	U	ug/L	10000	45000	120000	2B16031	EPA 8260D	02/17/22 02:06	KKW	
2-Hexanone [591-78-6]^	25000	U	ug/L	10000	25000	120000	2B16031	EPA 8260D	02/17/22 02:06	KKW	
4-Methyl-2-pentanone [108-10-1]^	25000	U	ug/L	10000	25000	120000	2B16031	EPA 8260D	02/17/22 02:06	KKW	
Acetone [67-64-1]^	100000	U	ug/L	10000	100000	250000	2B16031	EPA 8260D	02/17/22 02:06	KKW	
Benzene [71-43-2]^	7100	U	ug/L	10000	7100	25000	2B16031	EPA 8260D	02/17/22 02:06	KKW	
Bromodichloromethane [75-27-4]^	5200	U	ug/L	10000	5200	25000	2B16031	EPA 8260D	02/17/22 02:06	KKW	
Bromoform [75-25-2]^	7500	U	ug/L	10000	7500	25000	2B16031	EPA 8260D	02/17/22 02:06	KKW	
Bromomethane [74-83-9]^	9500	U	ug/L	10000	9500	25000	2B16031	EPA 8260D	02/17/22 02:06	KKW	QV-01
Carbon disulfide [75-15-0]^	25000	U	ug/L	10000	25000	120000	2B16031	EPA 8260D	02/17/22 02:06	KKW	QV-01
Carbon Tetrachloride [56-23-5]^	9400	U	ug/L	10000	9400	25000	2B16031	EPA 8260D	02/17/22 02:06	KKW	
Chlorobenzene [108-90-7]^	7200	U	ug/L	10000	7200	25000	2B16031	EPA 8260D	02/17/22 02:06	KKW	
Chloroethane [75-00-3]^	9800	U	ug/L	10000	9800	25000	2B16031	EPA 8260D	02/17/22 02:06	KKW	
Chloroform [67-66-3]^	8000	U	ug/L	10000	8000	25000	2B16031	EPA 8260D	02/17/22 02:06	KKW	
Chloromethane [74-87-3]^	8200	U	ug/L	10000	8200	25000	2B16031	EPA 8260D	02/17/22 02:06	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**28000**		ug/L	10000	5300	25000	2B16031	EPA 8260D	02/17/22 02:06	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	5900	U	ug/L	10000	5900	25000	2B16031	EPA 8260D	02/17/22 02:06	KKW	
Cyclohexane [110-82-7]^	9300	U	ug/L	10000	9300	25000	2B16031	EPA 8260D	02/17/22 02:06	KKW	
Dibromochloromethane [124-48-1]^	5000	U	ug/L	10000	5000	25000	2B16031	EPA 8260D	02/17/22 02:06	KKW	
Dichlorodifluoromethane [75-71-8]^	7400	U	ug/L	10000	7400	25000	2B16031	EPA 8260D	02/17/22 02:06	KKW	
Ethylbenzene [100-41-4]^	6900	U	ug/L	10000	6900	25000	2B16031	EPA 8260D	02/17/22 02:06	KKW	
Freon 113 [76-13-1]^	7300	U	ug/L	10000	7300	25000	2B16031	EPA 8260D	02/17/22 02:06	KKW	
Isopropylbenzene [98-82-8]^	6700	U	ug/L	10000	6700	25000	2B16031	EPA 8260D	02/17/22 02:06	KKW	
Methyl acetate [79-20-9]^	9500	U	ug/L	10000	9500	25000	2B16031	EPA 8260D	02/17/22 02:06	KKW	QV-01
Methylene Chloride [75-09-2]^	25000	U	ug/L	10000	25000	120000	2B16031	EPA 8260D	02/17/22 02:06	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	6000	U	ug/L	10000	6000	25000	2B16031	EPA 8260D	02/17/22 02:06	KKW	
Styrene [100-42-5]^	6100	U	ug/L	10000	6100	25000	2B16031	EPA 8260D	02/17/22 02:06	KKW	
Tetrachloroethene [127-18-4]^	7600	U	ug/L	10000	7600	25000	2B16031	EPA 8260D	02/17/22 02:06	KKW	QV-01
Toluene [108-88-3]^	7200	U	ug/L	10000	7200	25000	2B16031	EPA 8260D	02/17/22 02:06	KKW	
trans-1,2-Dichloroethene [156-60-5]^	7300	U	ug/L	10000	7300	25000	2B16031	EPA 8260D	02/17/22 02:06	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	7300	U	ug/L	10000	7300	25000	2B16031	EPA 8260D	02/17/22 02:06	KKW	
Trichloroethene [79-01-6]^	**230000**		ug/L	10000	8900	25000	2B16031	EPA 8260D	02/17/22 02:06	KKW	
Trichlorofluoromethane [75-69-4]^	9400	U	ug/L	10000	9400	25000	2B16031	EPA 8260D	02/17/22 02:06	KKW	
Vinyl chloride [75-01-4]^	7100	U	ug/L	10000	7100	25000	2B16031	EPA 8260D	02/17/22 02:06	KKW	
Xylenes (Total) [1330-20-7]	13000	U	ug/L	10000	13000	50000	2B16031	EPA 8260D	02/17/22 02:06	KKW	

ANALYTICAL RESULTS

Description: LC34PS-PZD-058.0-20220214 | **Lab Sample ID:** AF00827-55 | **Received:** 02/14/22 15:40

Matrix: Ground Water | **Sampled:** 02/14/22 12:34 | **Work Order:** AF00827

Project: NASA KSC LC34 | **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*54*	*1*	*50.0*	*108 %*	*41-142*	*2B16031*	*EPA 8260D*	*02/17/22 02:06*	*KKW*	
Dibromofluoromethane	*53*	*1*	*50.0*	*107 %*	*53-146*	*2B16031*	*EPA 8260D*	*02/17/22 02:06*	*KKW*	
Toluene-d8	*52*	*1*	*50.0*	*103 %*	*41-146*	*2B16031*	*EPA 8260D*	*02/17/22 02:06*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZD-073.0-20220214 **Lab Sample ID:** AF00827-56 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 12:36 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyc

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	4.0	U	ug/L	5	4.0	12	2B16031	EPA 8260D	02/17/22 02:34	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	2.7	U	ug/L	5	2.7	12	2B16031	EPA 8260D	02/17/22 02:34	KKW	
1,1,2-Trichloroethane [79-00-5]^	3.8	U	ug/L	5	3.8	12	2B16031	EPA 8260D	02/17/22 02:34	KKW	
1,1-Dichloroethane [75-34-3]^	3.1	U	ug/L	5	3.1	12	2B16031	EPA 8260D	02/17/22 02:34	KKW	
1,1-Dichloroethene [75-35-4]^	4.7	U	ug/L	5	4.7	12	2B16031	EPA 8260D	02/17/22 02:34	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	3.5	U	ug/L	5	3.5	12	2B16031	EPA 8260D	02/17/22 02:34	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	4.8	U	ug/L	5	4.8	12	2B16031	EPA 8260D	02/17/22 02:34	KKW	
1,2-Dibromoethane [106-93-4]^	3.9	U	ug/L	5	3.9	12	2B16031	EPA 8260D	02/17/22 02:34	KKW	
1,2-Dichlorobenzene [95-50-1]^	3.6	U	ug/L	5	3.6	12	2B16031	EPA 8260D	02/17/22 02:34	KKW	
1,2-Dichloroethane [107-06-2]^	3.2	U	ug/L	5	3.2	12	2B16031	EPA 8260D	02/17/22 02:34	KKW	
1,2-Dichloropropane [78-87-5]^	4.0	U	ug/L	5	4.0	12	2B16031	EPA 8260D	02/17/22 02:34	KKW	
1,3-Dichlorobenzene [541-73-1]^	3.8	U	ug/L	5	3.8	12	2B16031	EPA 8260D	02/17/22 02:34	KKW	
1,4-Dichlorobenzene [106-46-7]^	3.8	U	ug/L	5	3.8	12	2B16031	EPA 8260D	02/17/22 02:34	KKW	
2-Butanone [78-93-3]^	22	U	ug/L	5	22	62	2B16031	EPA 8260D	02/17/22 02:34	KKW	
2-Hexanone [591-78-6]^	12	U	ug/L	5	12	62	2B16031	EPA 8260D	02/17/22 02:34	KKW	
4-Methyl-2-pentanone [108-10-1]^	12	U	ug/L	5	12	62	2B16031	EPA 8260D	02/17/22 02:34	KKW	
Acetone [67-64-1]^	50	U	ug/L	5	50	120	2B16031	EPA 8260D	02/17/22 02:34	KKW	
Benzene [71-43-2]^	3.6	U	ug/L	5	3.6	12	2B16031	EPA 8260D	02/17/22 02:34	KKW	
Bromodichloromethane [75-27-4]^	2.6	U	ug/L	5	2.6	12	2B16031	EPA 8260D	02/17/22 02:34	KKW	
Bromoform [75-25-2]^	3.8	U	ug/L	5	3.8	12	2B16031	EPA 8260D	02/17/22 02:34	KKW	
Bromomethane [74-83-9]^	4.8	U	ug/L	5	4.8	12	2B16031	EPA 8260D	02/17/22 02:34	KKW	QV-01
Carbon disulfide [75-15-0]^	12	U	ug/L	5	12	62	2B16031	EPA 8260D	02/17/22 02:34	KKW	QV-01
Carbon Tetrachloride [56-23-5]^	4.7	U	ug/L	5	4.7	12	2B16031	EPA 8260D	02/17/22 02:34	KKW	
Chlorobenzene [108-90-7]^	3.6	U	ug/L	5	3.6	12	2B16031	EPA 8260D	02/17/22 02:34	KKW	
Chloroethane [75-00-3]^	4.9	U	ug/L	5	4.9	12	2B16031	EPA 8260D	02/17/22 02:34	KKW	
Chloroform [67-66-3]^	4.0	U	ug/L	5	4.0	12	2B16031	EPA 8260D	02/17/22 02:34	KKW	
Chloromethane [74-87-3]^	4.1	U	ug/L	5	4.1	12	2B16031	EPA 8260D	02/17/22 02:34	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**8.3**	I	ug/L	5	2.6	12	2B16031	EPA 8260D	02/17/22 02:34	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	3.0	U	ug/L	5	3.0	12	2B16031	EPA 8260D	02/17/22 02:34	KKW	
Cyclohexane [110-82-7]^	4.6	U	ug/L	5	4.6	12	2B16031	EPA 8260D	02/17/22 02:34	KKW	
Dibromochloromethane [124-48-1]^	2.5	U	ug/L	5	2.5	12	2B16031	EPA 8260D	02/17/22 02:34	KKW	
Dichlorodifluoromethane [75-71-8]^	3.7	U	ug/L	5	3.7	12	2B16031	EPA 8260D	02/17/22 02:34	KKW	
Ethylbenzene [100-41-4]^	3.4	U	ug/L	5	3.4	12	2B16031	EPA 8260D	02/17/22 02:34	KKW	
Freon 113 [76-13-1]^	3.6	U	ug/L	5	3.6	12	2B16031	EPA 8260D	02/17/22 02:34	KKW	
Isopropylbenzene [98-82-8]^	3.4	U	ug/L	5	3.4	12	2B16031	EPA 8260D	02/17/22 02:34	KKW	
Methyl acetate [79-20-9]^	4.8	U	ug/L	5	4.8	12	2B16031	EPA 8260D	02/17/22 02:34	KKW	QV-01
Methylene Chloride [75-09-2]^	12	U	ug/L	5	12	62	2B16031	EPA 8260D	02/17/22 02:34	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	3.0	U	ug/L	5	3.0	12	2B16031	EPA 8260D	02/17/22 02:34	KKW	
Styrene [100-42-5]^	3.0	U	ug/L	5	3.0	12	2B16031	EPA 8260D	02/17/22 02:34	KKW	
Tetrachloroethene [127-18-4]^	3.8	U	ug/L	5	3.8	12	2B16031	EPA 8260D	02/17/22 02:34	KKW	QV-01
Toluene [108-88-3]^	3.6	U	ug/L	5	3.6	12	2B16031	EPA 8260D	02/17/22 02:34	KKW	
trans-1,2-Dichloroethene [156-60-5]^	3.6	U	ug/L	5	3.6	12	2B16031	EPA 8260D	02/17/22 02:34	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	3.6	U	ug/L	5	3.6	12	2B16031	EPA 8260D	02/17/22 02:34	KKW	
Trichloroethene [79-01-6]^	**570**		ug/L	25	22	62	2B18005	EPA 8260D	02/18/22 18:10	KKW	
Trichlorofluoromethane [75-69-4]^	4.7	U	ug/L	5	4.7	12	2B16031	EPA 8260D	02/17/22 02:34	KKW	
Vinyl chloride [75-01-4]^	3.6	U	ug/L	5	3.6	12	2B16031	EPA 8260D	02/17/22 02:34	KKW	
Xylenes (Total) [1330-20-7]	6.5	U	ug/L	5	6.5	25	2B16031	EPA 8260D	02/17/22 02:34	KKW	

ANALYTICAL RESULTS

Description: LC34PS-PZD-073.0-20220214 | **Lab Sample ID:** AF00827-56 | **Received:** 02/14/22 15:40

Matrix: Ground Water | **Sampled:** 02/14/22 12:36 | **Work Order:** AF00827

Project: NASA KSC LC34 | **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*54*	*1*	*50.0*	*109 %*	*41-142*	*2B16031*	*EPA 8260D*	*02/17/22 02:34*	*KKW*	
4-Bromofluorobenzene	*55*	*1*	*50.0*	*110 %*	*41-142*	*2B18005*	*EPA 8260D*	*02/18/22 18:10*	*KKW*	
Dibromofluoromethane	*51*	*1*	*50.0*	*102 %*	*53-146*	*2B16031*	*EPA 8260D*	*02/17/22 02:34*	*KKW*	
Dibromofluoromethane	*51*	*1*	*50.0*	*101 %*	*53-146*	*2B18005*	*EPA 8260D*	*02/18/22 18:10*	*KKW*	
Toluene-d8	*52*	*1*	*50.0*	*105 %*	*41-146*	*2B16031*	*EPA 8260D*	*02/17/22 02:34*	*KKW*	
Toluene-d8	*50*	*1*	*50.0*	*100 %*	*41-146*	*2B18005*	*EPA 8260D*	*02/18/22 18:10*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZD-080.0-20220214 **Lab Sample ID:** AF00827-57 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 12:38 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyc

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	2B16031	EPA 8260D	02/17/22 03:02	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	2B16031	EPA 8260D	02/17/22 03:02	KKW	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	2B16031	EPA 8260D	02/17/22 03:02	KKW	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	2B16031	EPA 8260D	02/17/22 03:02	KKW	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	2B16031	EPA 8260D	02/17/22 03:02	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	2B16031	EPA 8260D	02/17/22 03:02	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	2B16031	EPA 8260D	02/17/22 03:02	KKW	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	2B16031	EPA 8260D	02/17/22 03:02	KKW	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	2B16031	EPA 8260D	02/17/22 03:02	KKW	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	2B16031	EPA 8260D	02/17/22 03:02	KKW	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	2B16031	EPA 8260D	02/17/22 03:02	KKW	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	2B16031	EPA 8260D	02/17/22 03:02	KKW	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	2B16031	EPA 8260D	02/17/22 03:02	KKW	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	2B16031	EPA 8260D	02/17/22 03:02	KKW	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	2B16031	EPA 8260D	02/17/22 03:02	KKW	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	2B16031	EPA 8260D	02/17/22 03:02	KKW	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	2B16031	EPA 8260D	02/17/22 03:02	KKW	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	2B16031	EPA 8260D	02/17/22 03:02	KKW	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	2B16031	EPA 8260D	02/17/22 03:02	KKW	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	2B16031	EPA 8260D	02/17/22 03:02	KKW	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	2B16031	EPA 8260D	02/17/22 03:02	KKW	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	2B16031	EPA 8260D	02/17/22 03:02	KKW	QV-01
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	2B16031	EPA 8260D	02/17/22 03:02	KKW	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	2B16031	EPA 8260D	02/17/22 03:02	KKW	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	2B16031	EPA 8260D	02/17/22 03:02	KKW	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	2B16031	EPA 8260D	02/17/22 03:02	KKW	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	2B16031	EPA 8260D	02/17/22 03:02	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**56**		ug/L	1	0.53	2.5	2B16031	EPA 8260D	02/17/22 03:02	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	2B16031	EPA 8260D	02/17/22 03:02	KKW	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	2B16031	EPA 8260D	02/17/22 03:02	KKW	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	2B16031	EPA 8260D	02/17/22 03:02	KKW	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	2B16031	EPA 8260D	02/17/22 03:02	KKW	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	2B16031	EPA 8260D	02/17/22 03:02	KKW	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	2B16031	EPA 8260D	02/17/22 03:02	KKW	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	2B16031	EPA 8260D	02/17/22 03:02	KKW	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	2B16031	EPA 8260D	02/17/22 03:02	KKW	QV-01
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	2B16031	EPA 8260D	02/17/22 03:02	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	2B16031	EPA 8260D	02/17/22 03:02	KKW	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	2B16031	EPA 8260D	02/17/22 03:02	KKW	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	2B16031	EPA 8260D	02/17/22 03:02	KKW	QV-01
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	2B16031	EPA 8260D	02/17/22 03:02	KKW	
trans-1,2-Dichloroethene [156-60-5]^	**15**		ug/L	1	0.73	2.5	2B16031	EPA 8260D	02/17/22 03:02	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	2B16031	EPA 8260D	02/17/22 03:02	KKW	
Trichloroethene [79-01-6]^	**4.5**		ug/L	1	0.89	2.5	2B16031	EPA 8260D	02/17/22 03:02	KKW	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	2B16031	EPA 8260D	02/17/22 03:02	KKW	
Vinyl chloride [75-01-4]^	0.71	U	ug/L	1	0.71	2.5	2B16031	EPA 8260D	02/17/22 03:02	KKW	
Xylenes (Total) [1330-20-7]	1.3	U	ug/L	1	1.3	5.0	2B16031	EPA 8260D	02/17/22 03:02	KKW	

ANALYTICAL RESULTS

Description: LC34PS-PZD-080.0-20220214 **Lab Sample ID:** AF00827-57 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 12:38 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*54*	*1*	*50.0*	*109 %*	*41-142*	*2B16031*	*EPA 8260D*	*02/17/22 03:02*	*KKW*	
Dibromofluoromethane	*51*	*1*	*50.0*	*102 %*	*53-146*	*2B16031*	*EPA 8260D*	*02/17/22 03:02*	*KKW*	
Toluene-d8	*52*	*1*	*50.0*	*104 %*	*41-146*	*2B16031*	*EPA 8260D*	*02/17/22 03:02*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZE-040.0-20220214 **Lab Sample ID:** AF00827-58 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 13:00 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	8000	U	ug/L	10000	8000	25000	2B16031	EPA 8260D	02/17/22 03:30	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	5400	U	ug/L	10000	5400	25000	2B16031	EPA 8260D	02/17/22 03:30	KKW	
1,1,2-Trichloroethane [79-00-5]^	7600	U	ug/L	10000	7600	25000	2B16031	EPA 8260D	02/17/22 03:30	KKW	
1,1-Dichloroethane [75-34-3]^	6200	U	ug/L	10000	6200	25000	2B16031	EPA 8260D	02/17/22 03:30	KKW	
1,1-Dichloroethene [75-35-4]^	9400	U	ug/L	10000	9400	25000	2B16031	EPA 8260D	02/17/22 03:30	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	7000	U	ug/L	10000	7000	25000	2B16031	EPA 8260D	02/17/22 03:30	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	9600	U	ug/L	10000	9600	25000	2B16031	EPA 8260D	02/17/22 03:30	KKW	
1,2-Dibromoethane [106-93-4]^	7800	U	ug/L	10000	7800	25000	2B16031	EPA 8260D	02/17/22 03:30	KKW	
1,2-Dichlorobenzene [95-50-1]^	7300	U	ug/L	10000	7300	25000	2B16031	EPA 8260D	02/17/22 03:30	KKW	
1,2-Dichloroethane [107-06-2]^	6300	U	ug/L	10000	6300	25000	2B16031	EPA 8260D	02/17/22 03:30	KKW	
1,2-Dichloropropane [78-87-5]^	8000	U	ug/L	10000	8000	25000	2B16031	EPA 8260D	02/17/22 03:30	KKW	
1,3-Dichlorobenzene [541-73-1]^	7700	U	ug/L	10000	7700	25000	2B16031	EPA 8260D	02/17/22 03:30	KKW	
1,4-Dichlorobenzene [106-46-7]^	7600	U	ug/L	10000	7600	25000	2B16031	EPA 8260D	02/17/22 03:30	KKW	
2-Butanone [78-93-3]^	45000	U	ug/L	10000	45000	120000	2B16031	EPA 8260D	02/17/22 03:30	KKW	
2-Hexanone [591-78-6]^	25000	U	ug/L	10000	25000	120000	2B16031	EPA 8260D	02/17/22 03:30	KKW	
4-Methyl-2-pentanone [108-10-1]^	25000	U	ug/L	10000	25000	120000	2B16031	EPA 8260D	02/17/22 03:30	KKW	
Acetone [67-64-1]^	100000	U	ug/L	10000	100000	250000	2B16031	EPA 8260D	02/17/22 03:30	KKW	
Benzene [71-43-2]^	7100	U	ug/L	10000	7100	25000	2B16031	EPA 8260D	02/17/22 03:30	KKW	
Bromodichloromethane [75-27-4]^	5200	U	ug/L	10000	5200	25000	2B16031	EPA 8260D	02/17/22 03:30	KKW	
Bromoform [75-25-2]^	7500	U	ug/L	10000	7500	25000	2B16031	EPA 8260D	02/17/22 03:30	KKW	
Bromomethane [74-83-9]^	9500	U	ug/L	10000	9500	25000	2B16031	EPA 8260D	02/17/22 03:30	KKW	QV-01
Carbon disulfide [75-15-0]^	25000	U	ug/L	10000	25000	120000	2B16031	EPA 8260D	02/17/22 03:30	KKW	QV-01
Carbon Tetrachloride [56-23-5]^	9400	U	ug/L	10000	9400	25000	2B16031	EPA 8260D	02/17/22 03:30	KKW	
Chlorobenzene [108-90-7]^	7200	U	ug/L	10000	7200	25000	2B16031	EPA 8260D	02/17/22 03:30	KKW	
Chloroethane [75-00-3]^	9800	U	ug/L	10000	9800	25000	2B16031	EPA 8260D	02/17/22 03:30	KKW	
Chloroform [67-66-3]^	8000	U	ug/L	10000	8000	25000	2B16031	EPA 8260D	02/17/22 03:30	KKW	
Chloromethane [74-87-3]^	8200	U	ug/L	10000	8200	25000	2B16031	EPA 8260D	02/17/22 03:30	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**19000**	I	ug/L	10000	5300	25000	2B16031	EPA 8260D	02/17/22 03:30	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	5900	U	ug/L	10000	5900	25000	2B16031	EPA 8260D	02/17/22 03:30	KKW	
Cyclohexane [110-82-7]^	9300	U	ug/L	10000	9300	25000	2B16031	EPA 8260D	02/17/22 03:30	KKW	
Dibromochloromethane [124-48-1]^	5000	U	ug/L	10000	5000	25000	2B16031	EPA 8260D	02/17/22 03:30	KKW	
Dichlorodifluoromethane [75-71-8]^	7400	U	ug/L	10000	7400	25000	2B16031	EPA 8260D	02/17/22 03:30	KKW	
Ethylbenzene [100-41-4]^	6900	U	ug/L	10000	6900	25000	2B16031	EPA 8260D	02/17/22 03:30	KKW	
Freon 113 [76-13-1]^	7300	U	ug/L	10000	7300	25000	2B16031	EPA 8260D	02/17/22 03:30	KKW	
Isopropylbenzene [98-82-8]^	6700	U	ug/L	10000	6700	25000	2B16031	EPA 8260D	02/17/22 03:30	KKW	
Methyl acetate [79-20-9]^	9500	U	ug/L	10000	9500	25000	2B16031	EPA 8260D	02/17/22 03:30	KKW	QV-01
Methylene Chloride [75-09-2]^	25000	U	ug/L	10000	25000	120000	2B16031	EPA 8260D	02/17/22 03:30	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	6000	U	ug/L	10000	6000	25000	2B16031	EPA 8260D	02/17/22 03:30	KKW	
Styrene [100-42-5]^	6100	U	ug/L	10000	6100	25000	2B16031	EPA 8260D	02/17/22 03:30	KKW	
Tetrachloroethene [127-18-4]^	7600	U	ug/L	10000	7600	25000	2B16031	EPA 8260D	02/17/22 03:30	KKW	QV-01
Toluene [108-88-3]^	7200	U	ug/L	10000	7200	25000	2B16031	EPA 8260D	02/17/22 03:30	KKW	
trans-1,2-Dichloroethene [156-60-5]^	7300	U	ug/L	10000	7300	25000	2B16031	EPA 8260D	02/17/22 03:30	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	7300	U	ug/L	10000	7300	25000	2B16031	EPA 8260D	02/17/22 03:30	KKW	
Trichloroethene [79-01-6]^	**500000**		ug/L	10000	8900	25000	2B16031	EPA 8260D	02/17/22 03:30	KKW	
Trichlorofluoromethane [75-69-4]^	9400	U	ug/L	10000	9400	25000	2B16031	EPA 8260D	02/17/22 03:30	KKW	
Vinyl chloride [75-01-4]^	7100	U	ug/L	10000	7100	25000	2B16031	EPA 8260D	02/17/22 03:30	KKW	
Xylenes (Total) [1330-20-7]	13000	U	ug/L	10000	13000	50000	2B16031	EPA 8260D	02/17/22 03:30	KKW	

ANALYTICAL RESULTS

Description: LC34PS-PZE-040.0-20220214 **Lab Sample ID:** AF00827-58 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 13:00 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*55*	*1*	*50.0*	*110 %*	*41-142*	*2B16031*	*EPA 8260D*	*02/17/22 03:30*	*KKW*	
Dibromofluoromethane	*51*	*1*	*50.0*	*101 %*	*53-146*	*2B16031*	*EPA 8260D*	*02/17/22 03:30*	*KKW*	
Toluene-d8	*52*	*1*	*50.0*	*104 %*	*41-146*	*2B16031*	*EPA 8260D*	*02/17/22 03:30*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZE-050.0-20220214 **Lab Sample ID:** AF00827-59 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 13:02 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	8000	U	ug/L	10000	8000	25000	2B16031	EPA 8260D	02/17/22 03:57	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	5400	U	ug/L	10000	5400	25000	2B16031	EPA 8260D	02/17/22 03:57	KKW	
1,1,2-Trichloroethane [79-00-5]^	7600	U	ug/L	10000	7600	25000	2B16031	EPA 8260D	02/17/22 03:57	KKW	
1,1-Dichloroethane [75-34-3]^	6200	U	ug/L	10000	6200	25000	2B16031	EPA 8260D	02/17/22 03:57	KKW	
1,1-Dichloroethene [75-35-4]^	9400	U	ug/L	10000	9400	25000	2B16031	EPA 8260D	02/17/22 03:57	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	7000	U	ug/L	10000	7000	25000	2B16031	EPA 8260D	02/17/22 03:57	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	9600	U	ug/L	10000	9600	25000	2B16031	EPA 8260D	02/17/22 03:57	KKW	
1,2-Dibromoethane [106-93-4]^	7800	U	ug/L	10000	7800	25000	2B16031	EPA 8260D	02/17/22 03:57	KKW	
1,2-Dichlorobenzene [95-50-1]^	7300	U	ug/L	10000	7300	25000	2B16031	EPA 8260D	02/17/22 03:57	KKW	
1,2-Dichloroethane [107-06-2]^	6300	U	ug/L	10000	6300	25000	2B16031	EPA 8260D	02/17/22 03:57	KKW	
1,2-Dichloropropane [78-87-5]^	8000	U	ug/L	10000	8000	25000	2B16031	EPA 8260D	02/17/22 03:57	KKW	
1,3-Dichlorobenzene [541-73-1]^	7700	U	ug/L	10000	7700	25000	2B16031	EPA 8260D	02/17/22 03:57	KKW	
1,4-Dichlorobenzene [106-46-7]^	7600	U	ug/L	10000	7600	25000	2B16031	EPA 8260D	02/17/22 03:57	KKW	
2-Butanone [78-93-3]^	45000	U	ug/L	10000	45000	120000	2B16031	EPA 8260D	02/17/22 03:57	KKW	
2-Hexanone [591-78-6]^	25000	U	ug/L	10000	25000	120000	2B16031	EPA 8260D	02/17/22 03:57	KKW	
4-Methyl-2-pentanone [108-10-1]^	25000	U	ug/L	10000	25000	120000	2B16031	EPA 8260D	02/17/22 03:57	KKW	
Acetone [67-64-1]^	100000	U	ug/L	10000	100000	250000	2B16031	EPA 8260D	02/17/22 03:57	KKW	
Benzene [71-43-2]^	7100	U	ug/L	10000	7100	25000	2B16031	EPA 8260D	02/17/22 03:57	KKW	
Bromodichloromethane [75-27-4]^	5200	U	ug/L	10000	5200	25000	2B16031	EPA 8260D	02/17/22 03:57	KKW	
Bromoform [75-25-2]^	7500	U	ug/L	10000	7500	25000	2B16031	EPA 8260D	02/17/22 03:57	KKW	
Bromomethane [74-83-9]^	9500	U	ug/L	10000	9500	25000	2B16031	EPA 8260D	02/17/22 03:57	KKW	QV-01
Carbon disulfide [75-15-0]^	25000	U	ug/L	10000	25000	120000	2B16031	EPA 8260D	02/17/22 03:57	KKW	QV-01
Carbon Tetrachloride [56-23-5]^	9400	U	ug/L	10000	9400	25000	2B16031	EPA 8260D	02/17/22 03:57	KKW	
Chlorobenzene [108-90-7]^	7200	U	ug/L	10000	7200	25000	2B16031	EPA 8260D	02/17/22 03:57	KKW	
Chloroethane [75-00-3]^	9800	U	ug/L	10000	9800	25000	2B16031	EPA 8260D	02/17/22 03:57	KKW	
Chloroform [67-66-3]^	8000	U	ug/L	10000	8000	25000	2B16031	EPA 8260D	02/17/22 03:57	KKW	
Chloromethane [74-87-3]^	8200	U	ug/L	10000	8200	25000	2B16031	EPA 8260D	02/17/22 03:57	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**56000**		ug/L	10000	5300	25000	2B16031	EPA 8260D	02/17/22 03:57	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	5900	U	ug/L	10000	5900	25000	2B16031	EPA 8260D	02/17/22 03:57	KKW	
Cyclohexane [110-82-7]^	9300	U	ug/L	10000	9300	25000	2B16031	EPA 8260D	02/17/22 03:57	KKW	
Dibromochloromethane [124-48-1]^	5000	U	ug/L	10000	5000	25000	2B16031	EPA 8260D	02/17/22 03:57	KKW	
Dichlorodifluoromethane [75-71-8]^	7400	U	ug/L	10000	7400	25000	2B16031	EPA 8260D	02/17/22 03:57	KKW	
Ethylbenzene [100-41-4]^	6900	U	ug/L	10000	6900	25000	2B16031	EPA 8260D	02/17/22 03:57	KKW	
Freon 113 [76-13-1]^	7300	U	ug/L	10000	7300	25000	2B16031	EPA 8260D	02/17/22 03:57	KKW	
Isopropylbenzene [98-82-8]^	6700	U	ug/L	10000	6700	25000	2B16031	EPA 8260D	02/17/22 03:57	KKW	
Methyl acetate [79-20-9]^	9500	U	ug/L	10000	9500	25000	2B16031	EPA 8260D	02/17/22 03:57	KKW	QV-01
Methylene Chloride [75-09-2]^	25000	U	ug/L	10000	25000	120000	2B16031	EPA 8260D	02/17/22 03:57	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	6000	U	ug/L	10000	6000	25000	2B16031	EPA 8260D	02/17/22 03:57	KKW	
Styrene [100-42-5]^	6100	U	ug/L	10000	6100	25000	2B16031	EPA 8260D	02/17/22 03:57	KKW	
Tetrachloroethene [127-18-4]^	7600	U	ug/L	10000	7600	25000	2B16031	EPA 8260D	02/17/22 03:57	KKW	QV-01
Toluene [108-88-3]^	7200	U	ug/L	10000	7200	25000	2B16031	EPA 8260D	02/17/22 03:57	KKW	
trans-1,2-Dichloroethene [156-60-5]^	7300	U	ug/L	10000	7300	25000	2B16031	EPA 8260D	02/17/22 03:57	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	7300	U	ug/L	10000	7300	25000	2B16031	EPA 8260D	02/17/22 03:57	KKW	
Trichloroethene [79-01-6]^	**600000**		ug/L	10000	8900	25000	2B16031	EPA 8260D	02/17/22 03:57	KKW	
Trichlorofluoromethane [75-69-4]^	9400	U	ug/L	10000	9400	25000	2B16031	EPA 8260D	02/17/22 03:57	KKW	
Vinyl chloride [75-01-4]^	7100	U	ug/L	10000	7100	25000	2B16031	EPA 8260D	02/17/22 03:57	KKW	
Xylenes (Total) [1330-20-7]	13000	U	ug/L	10000	13000	50000	2B16031	EPA 8260D	02/17/22 03:57	KKW	

ANALYTICAL RESULTS

Description: LC34PS-PZE-050.0-20220214 **Lab Sample ID:** AF00827-59 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 13:02 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*54*	*1*	*50.0*	*109 %*	*41-142*	*2B16031*	*EPA 8260D*	*02/17/22 03:57*	*KKW*	
Dibromofluoromethane	*53*	*1*	*50.0*	*106 %*	*53-146*	*2B16031*	*EPA 8260D*	*02/17/22 03:57*	*KKW*	
Toluene-d8	*52*	*1*	*50.0*	*104 %*	*41-146*	*2B16031*	*EPA 8260D*	*02/17/22 03:57*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZE-058.0-20220214 **Lab Sample ID:** AF00827-60 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 13:04 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	4000	U	ug/L	5000	4000	12000	2B16031	EPA 8260D	02/17/22 04:25	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	2700	U	ug/L	5000	2700	12000	2B16031	EPA 8260D	02/17/22 04:25	KKW	
1,1,2-Trichloroethane [79-00-5]^	3800	U	ug/L	5000	3800	12000	2B16031	EPA 8260D	02/17/22 04:25	KKW	
1,1-Dichloroethane [75-34-3]^	3100	U	ug/L	5000	3100	12000	2B16031	EPA 8260D	02/17/22 04:25	KKW	
1,1-Dichloroethene [75-35-4]^	4700	U	ug/L	5000	4700	12000	2B16031	EPA 8260D	02/17/22 04:25	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	3500	U	ug/L	5000	3500	12000	2B16031	EPA 8260D	02/17/22 04:25	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	4800	U	ug/L	5000	4800	12000	2B16031	EPA 8260D	02/17/22 04:25	KKW	
1,2-Dibromoethane [106-93-4]^	3900	U	ug/L	5000	3900	12000	2B16031	EPA 8260D	02/17/22 04:25	KKW	
1,2-Dichlorobenzene [95-50-1]^	3600	U	ug/L	5000	3600	12000	2B16031	EPA 8260D	02/17/22 04:25	KKW	
1,2-Dichloroethane [107-06-2]^	3200	U	ug/L	5000	3200	12000	2B16031	EPA 8260D	02/17/22 04:25	KKW	
1,2-Dichloropropane [78-87-5]^	4000	U	ug/L	5000	4000	12000	2B16031	EPA 8260D	02/17/22 04:25	KKW	
1,3-Dichlorobenzene [541-73-1]^	3800	U	ug/L	5000	3800	12000	2B16031	EPA 8260D	02/17/22 04:25	KKW	
1,4-Dichlorobenzene [106-46-7]^	3800	U	ug/L	5000	3800	12000	2B16031	EPA 8260D	02/17/22 04:25	KKW	
2-Butanone [78-93-3]^	22000	U	ug/L	5000	22000	62000	2B16031	EPA 8260D	02/17/22 04:25	KKW	
2-Hexanone [591-78-6]^	12000	U	ug/L	5000	12000	62000	2B16031	EPA 8260D	02/17/22 04:25	KKW	
4-Methyl-2-pentanone [108-10-1]^	12000	U	ug/L	5000	12000	62000	2B16031	EPA 8260D	02/17/22 04:25	KKW	
Acetone [67-64-1]^	50000	U	ug/L	5000	50000	120000	2B16031	EPA 8260D	02/17/22 04:25	KKW	
Benzene [71-43-2]^	3600	U	ug/L	5000	3600	12000	2B16031	EPA 8260D	02/17/22 04:25	KKW	
Bromodichloromethane [75-27-4]^	2600	U	ug/L	5000	2600	12000	2B16031	EPA 8260D	02/17/22 04:25	KKW	
Bromoform [75-25-2]^	3800	U	ug/L	5000	3800	12000	2B16031	EPA 8260D	02/17/22 04:25	KKW	
Bromomethane [74-83-9]^	4800	U	ug/L	5000	4800	12000	2B16031	EPA 8260D	02/17/22 04:25	KKW	QV-01
Carbon disulfide [75-15-0]^	12000	U	ug/L	5000	12000	62000	2B16031	EPA 8260D	02/17/22 04:25	KKW	QV-01
Carbon Tetrachloride [56-23-5]^	4700	U	ug/L	5000	4700	12000	2B16031	EPA 8260D	02/17/22 04:25	KKW	
Chlorobenzene [108-90-7]^	3600	U	ug/L	5000	3600	12000	2B16031	EPA 8260D	02/17/22 04:25	KKW	
Chloroethane [75-00-3]^	4900	U	ug/L	5000	4900	12000	2B16031	EPA 8260D	02/17/22 04:25	KKW	
Chloroform [67-66-3]^	4000	U	ug/L	5000	4000	12000	2B16031	EPA 8260D	02/17/22 04:25	KKW	
Chloromethane [74-87-3]^	4100	U	ug/L	5000	4100	12000	2B16031	EPA 8260D	02/17/22 04:25	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**26000**		ug/L	5000	2600	12000	2B16031	EPA 8260D	02/17/22 04:25	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	3000	U	ug/L	5000	3000	12000	2B16031	EPA 8260D	02/17/22 04:25	KKW	
Cyclohexane [110-82-7]^	4600	U	ug/L	5000	4600	12000	2B16031	EPA 8260D	02/17/22 04:25	KKW	
Dibromochloromethane [124-48-1]^	2500	U	ug/L	5000	2500	12000	2B16031	EPA 8260D	02/17/22 04:25	KKW	
Dichlorodifluoromethane [75-71-8]^	3700	U	ug/L	5000	3700	12000	2B16031	EPA 8260D	02/17/22 04:25	KKW	
Ethylbenzene [100-41-4]^	3400	U	ug/L	5000	3400	12000	2B16031	EPA 8260D	02/17/22 04:25	KKW	
Freon 113 [76-13-1]^	3600	U	ug/L	5000	3600	12000	2B16031	EPA 8260D	02/17/22 04:25	KKW	
Isopropylbenzene [98-82-8]^	3400	U	ug/L	5000	3400	12000	2B16031	EPA 8260D	02/17/22 04:25	KKW	
Methyl acetate [79-20-9]^	4800	U	ug/L	5000	4800	12000	2B16031	EPA 8260D	02/17/22 04:25	KKW	QV-01
Methylene Chloride [75-09-2]^	12000	U	ug/L	5000	12000	62000	2B16031	EPA 8260D	02/17/22 04:25	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	3000	U	ug/L	5000	3000	12000	2B16031	EPA 8260D	02/17/22 04:25	KKW	
Styrene [100-42-5]^	3000	U	ug/L	5000	3000	12000	2B16031	EPA 8260D	02/17/22 04:25	KKW	
Tetrachloroethene [127-18-4]^	3800	U	ug/L	5000	3800	12000	2B16031	EPA 8260D	02/17/22 04:25	KKW	QV-01
Toluene [108-88-3]^	3600	U	ug/L	5000	3600	12000	2B16031	EPA 8260D	02/17/22 04:25	KKW	
trans-1,2-Dichloroethene [156-60-5]^	3600	U	ug/L	5000	3600	12000	2B16031	EPA 8260D	02/17/22 04:25	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	3600	U	ug/L	5000	3600	12000	2B16031	EPA 8260D	02/17/22 04:25	KKW	
Trichloroethene [79-01-6]^	**160000**		ug/L	5000	4400	12000	2B16031	EPA 8260D	02/17/22 04:25	KKW	
Trichlorofluoromethane [75-69-4]^	4700	U	ug/L	5000	4700	12000	2B16031	EPA 8260D	02/17/22 04:25	KKW	
Vinyl chloride [75-01-4]^	3600	U	ug/L	5000	3600	12000	2B16031	EPA 8260D	02/17/22 04:25	KKW	
Xylenes (Total) [1330-20-7]	6500	U	ug/L	5000	6500	25000	2B16031	EPA 8260D	02/17/22 04:25	KKW	

ANALYTICAL RESULTS

Description: LC34PS-PZE-058.0-20220214	**Lab Sample ID:** AF00827-60	**Received:** 02/14/22 15:40
Matrix: Ground Water	**Sampled:** 02/14/22 13:04	**Work Order:** AF00827
Project: NASA KSC LC34	**Sampled By:** Dan Forester / James Lloyd	

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*55*	*1*	*50.0*	*110 %*	*41-142*	*2B16031*	*EPA 8260D*	*02/17/22 04:25*	*KKW*	
Dibromofluoromethane	*52*	*1*	*50.0*	*104 %*	*53-146*	*2B16031*	*EPA 8260D*	*02/17/22 04:25*	*KKW*	
Toluene-d8	*51*	*1*	*50.0*	*103 %*	*41-146*	*2B16031*	*EPA 8260D*	*02/17/22 04:25*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZE-073.0-20220214 **Lab Sample ID:** AF00827-61 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 13:06 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyc

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	2B16031	EPA 8260D	02/17/22 04:53	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	2B16031	EPA 8260D	02/17/22 04:53	KKW	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	2B16031	EPA 8260D	02/17/22 04:53	KKW	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	2B16031	EPA 8260D	02/17/22 04:53	KKW	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	2B16031	EPA 8260D	02/17/22 04:53	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	2B16031	EPA 8260D	02/17/22 04:53	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	2B16031	EPA 8260D	02/17/22 04:53	KKW	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	2B16031	EPA 8260D	02/17/22 04:53	KKW	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	2B16031	EPA 8260D	02/17/22 04:53	KKW	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	2B16031	EPA 8260D	02/17/22 04:53	KKW	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	2B16031	EPA 8260D	02/17/22 04:53	KKW	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	2B16031	EPA 8260D	02/17/22 04:53	KKW	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	2B16031	EPA 8260D	02/17/22 04:53	KKW	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	2B16031	EPA 8260D	02/17/22 04:53	KKW	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	2B16031	EPA 8260D	02/17/22 04:53	KKW	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	2B16031	EPA 8260D	02/17/22 04:53	KKW	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	2B16031	EPA 8260D	02/17/22 04:53	KKW	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	2B16031	EPA 8260D	02/17/22 04:53	KKW	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	2B16031	EPA 8260D	02/17/22 04:53	KKW	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	2B16031	EPA 8260D	02/17/22 04:53	KKW	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	2B16031	EPA 8260D	02/17/22 04:53	KKW	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	2B16031	EPA 8260D	02/17/22 04:53	KKW	QV-01
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	2B16031	EPA 8260D	02/17/22 04:53	KKW	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	2B16031	EPA 8260D	02/17/22 04:53	KKW	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	2B16031	EPA 8260D	02/17/22 04:53	KKW	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	2B16031	EPA 8260D	02/17/22 04:53	KKW	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	2B16031	EPA 8260D	02/17/22 04:53	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**3.9**		ug/L	1	0.53	2.5	2B16031	EPA 8260D	02/17/22 04:53	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	2B16031	EPA 8260D	02/17/22 04:53	KKW	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	2B16031	EPA 8260D	02/17/22 04:53	KKW	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	2B16031	EPA 8260D	02/17/22 04:53	KKW	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	2B16031	EPA 8260D	02/17/22 04:53	KKW	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	2B16031	EPA 8260D	02/17/22 04:53	KKW	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	2B16031	EPA 8260D	02/17/22 04:53	KKW	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	2B16031	EPA 8260D	02/17/22 04:53	KKW	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	2B16031	EPA 8260D	02/17/22 04:53	KKW	QV-01
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	2B16031	EPA 8260D	02/17/22 04:53	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	2B16031	EPA 8260D	02/17/22 04:53	KKW	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	2B16031	EPA 8260D	02/17/22 04:53	KKW	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	2B16031	EPA 8260D	02/17/22 04:53	KKW	QV-01
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	2B16031	EPA 8260D	02/17/22 04:53	KKW	
trans-1,2-Dichloroethene [156-60-5]^	0.73	U	ug/L	1	0.73	2.5	2B16031	EPA 8260D	02/17/22 04:53	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	2B16031	EPA 8260D	02/17/22 04:53	KKW	
Trichloroethene [79-01-6]^	**81**		ug/L	1	0.89	2.5	2B16031	EPA 8260D	02/17/22 04:53	KKW	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	2B16031	EPA 8260D	02/17/22 04:53	KKW	
Vinyl chloride [75-01-4]^	0.71	U	ug/L	1	0.71	2.5	2B16031	EPA 8260D	02/17/22 04:53	KKW	
Xylenes (Total) [1330-20-7]	1.3	U	ug/L	1	1.3	5.0	2B16031	EPA 8260D	02/17/22 04:53	KKW	

ANALYTICAL RESULTS

Description: LC34PS-PZE-073.0-20220214 **Lab Sample ID:** AF00827-61 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 13:06 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*54*	*1*	*50.0*	*108 %*	*41-142*	*2B16031*	*EPA 8260D*	*02/17/22 04:53*	*KKW*	
Dibromofluoromethane	*53*	*1*	*50.0*	*106 %*	*53-146*	*2B16031*	*EPA 8260D*	*02/17/22 04:53*	*KKW*	
Toluene-d8	*51*	*1*	*50.0*	*102 %*	*41-146*	*2B16031*	*EPA 8260D*	*02/17/22 04:53*	*KKW*	

ANALYTICAL RESULTS

Description: LC34PS-PZE-080.0-20220214 **Lab Sample ID:** AF00827-62 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 13:08 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	2B16031	EPA 8260D	02/17/22 05:21	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	2B16031	EPA 8260D	02/17/22 05:21	KKW	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	2B16031	EPA 8260D	02/17/22 05:21	KKW	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	2B16031	EPA 8260D	02/17/22 05:21	KKW	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	2B16031	EPA 8260D	02/17/22 05:21	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	2B16031	EPA 8260D	02/17/22 05:21	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	2B16031	EPA 8260D	02/17/22 05:21	KKW	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	2B16031	EPA 8260D	02/17/22 05:21	KKW	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	2B16031	EPA 8260D	02/17/22 05:21	KKW	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	2B16031	EPA 8260D	02/17/22 05:21	KKW	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	2B16031	EPA 8260D	02/17/22 05:21	KKW	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	2B16031	EPA 8260D	02/17/22 05:21	KKW	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	2B16031	EPA 8260D	02/17/22 05:21	KKW	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	2B16031	EPA 8260D	02/17/22 05:21	KKW	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	2B16031	EPA 8260D	02/17/22 05:21	KKW	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	2B16031	EPA 8260D	02/17/22 05:21	KKW	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	2B16031	EPA 8260D	02/17/22 05:21	KKW	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	2B16031	EPA 8260D	02/17/22 05:21	KKW	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	2B16031	EPA 8260D	02/17/22 05:21	KKW	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	2B16031	EPA 8260D	02/17/22 05:21	KKW	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	2B16031	EPA 8260D	02/17/22 05:21	KKW	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	2B16031	EPA 8260D	02/17/22 05:21	KKW	QV-01
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	2B16031	EPA 8260D	02/17/22 05:21	KKW	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	2B16031	EPA 8260D	02/17/22 05:21	KKW	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	2B16031	EPA 8260D	02/17/22 05:21	KKW	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	2B16031	EPA 8260D	02/17/22 05:21	KKW	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	2B16031	EPA 8260D	02/17/22 05:21	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**96**		ug/L	1	0.53	2.5	2B16031	EPA 8260D	02/17/22 05:21	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	2B16031	EPA 8260D	02/17/22 05:21	KKW	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	2B16031	EPA 8260D	02/17/22 05:21	KKW	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	2B16031	EPA 8260D	02/17/22 05:21	KKW	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	2B16031	EPA 8260D	02/17/22 05:21	KKW	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	2B16031	EPA 8260D	02/17/22 05:21	KKW	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	2B16031	EPA 8260D	02/17/22 05:21	KKW	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	2B16031	EPA 8260D	02/17/22 05:21	KKW	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	2B16031	EPA 8260D	02/17/22 05:21	KKW	QV-01
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	2B16031	EPA 8260D	02/17/22 05:21	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	2B16031	EPA 8260D	02/17/22 05:21	KKW	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	2B16031	EPA 8260D	02/17/22 05:21	KKW	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	2B16031	EPA 8260D	02/17/22 05:21	KKW	QV-01
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	2B16031	EPA 8260D	02/17/22 05:21	KKW	
trans-1,2-Dichloroethene [156-60-5]^	**24**		ug/L	1	0.73	2.5	2B16031	EPA 8260D	02/17/22 05:21	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	2B16031	EPA 8260D	02/17/22 05:21	KKW	
Trichloroethene [79-01-6]^	**17**		ug/L	1	0.89	2.5	2B16031	EPA 8260D	02/17/22 05:21	KKW	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	2B16031	EPA 8260D	02/17/22 05:21	KKW	
Vinyl chloride [75-01-4]^	0.71	U	ug/L	1	0.71	2.5	2B16031	EPA 8260D	02/17/22 05:21	KKW	
Xylenes (Total) [1330-20-7]	1.3	U	ug/L	1	1.3	5.0	2B16031	EPA 8260D	02/17/22 05:21	KKW	

ANALYTICAL RESULTS

Description: LC34PS-PZE-080.0-20220214 **Lab Sample ID:** AF00827-62 **Received:** 02/14/22 15:40

Matrix: Ground Water **Sampled:** 02/14/22 13:08 **Work Order:** AF00827

Project: NASA KSC LC34 **Sampled By:** Dan Forester / James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*55*	*1*	*50.0*	*110 %*	*41-142*	*2B16031*	*EPA 8260D*	*02/17/22 05:21*	*KKW*	
Dibromofluoromethane	*53*	*1*	*50.0*	*107 %*	*53-146*	*2B16031*	*EPA 8260D*	*02/17/22 05:21*	*KKW*	
Toluene-d8	*51*	*1*	*50.0*	*102 %*	*41-146*	*2B16031*	*EPA 8260D*	*02/17/22 05:21*	*KKW*	

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2B16003 - EPA 5030B_MS

Blank (2B16003-BLK1) Prepared: 02/16/2022 00:00 Analyzed: 02/16/2022 11:04

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	0.80	U	2.5	ug/L							
1,1,2,2-Tetrachloroethane	0.54	U	2.5	ug/L							
1,1,2-Trichloroethane	0.76	U	2.5	ug/L							
1,1-Dichloroethane	0.62	U	2.5	ug/L							
1,1-Dichloroethene	0.94	U	2.5	ug/L							
1,2,4-Trichlorobenzene	0.70	U	2.5	ug/L							
1,2-Dibromo-3-chloropropane	0.96	U	2.5	ug/L							
1,2-Dibromoethane	0.78	U	2.5	ug/L							
1,2-Dichlorobenzene	0.73	U	2.5	ug/L							
1,2-Dichloroethane	0.63	U	2.5	ug/L							
1,2-Dichloropropane	0.80	U	2.5	ug/L							
1,3-Dichlorobenzene	0.77	U	2.5	ug/L							
1,4-Dichlorobenzene	0.76	U	2.5	ug/L							
2-Butanone	4.5	U	12	ug/L							
2-Hexanone	2.5	U	12	ug/L							
4-Methyl-2-pentanone	2.5	U	12	ug/L							
Acetone	10	U	25	ug/L							
Benzene	0.71	U	2.5	ug/L							
Bromodichloromethane	0.52	U	2.5	ug/L							
Bromoform	0.75	U	2.5	ug/L							
Bromomethane	0.95	U	2.5	ug/L							
Carbon disulfide	2.5	U	12	ug/L							
Carbon Tetrachloride	0.94	U	2.5	ug/L							
Chlorobenzene	0.72	U	2.5	ug/L							
Chloroethane	0.98	U	2.5	ug/L							
Chloroform	0.80	U	2.5	ug/L							
Chloromethane	0.82	U	2.5	ug/L							
cis-1,2-Dichloroethene	0.53	U	2.5	ug/L							
cis-1,3-Dichloropropene	0.59	U	2.5	ug/L							
Cyclohexane	0.93	U	2.5	ug/L							
Dibromochloromethane	0.50	U	2.5	ug/L							
Dichlorodifluoromethane	0.74	U	2.5	ug/L							
Ethylbenzene	0.69	U	2.5	ug/L							
Freon 113	0.73	U	2.5	ug/L							
Isopropylbenzene	0.67	U	2.5	ug/L							
Methyl acetate	0.95	U	2.5	ug/L							
Methylene Chloride	2.5	U	12	ug/L							
Methyl-tert-Butyl Ether	0.60	U	2.5	ug/L							
Styrene	0.61	U	2.5	ug/L							
Tetrachloroethene	0.76	U	2.5	ug/L							
Toluene	0.72	U	2.5	ug/L							
trans-1,2-Dichloroethene	0.73	U	2.5	ug/L							
trans-1,3-Dichloropropene	0.73	U	2.5	ug/L							
Trichloroethene	0.89	U	2.5	ug/L							
Trichlorofluoromethane	0.94	U	2.5	ug/L							
Vinyl chloride	0.71	U	2.5	ug/L							
Xylenes (Total)	1.3	U	5.0	ug/L							
4-Bromofluorobenzene	*47*	*I*		*ug/L*	*50.0*		*95*	*41-142*			
Dibromofluoromethane	*51*			*ug/L*	*50.0*		*102*	*53-146*			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2B16003 - EPA 5030B_MS - Continued

Blank (2B16003-BLK1) Continued Prepared: 02/16/2022 00:00 Analyzed: 02/16/2022 11:04

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Toluene-d8	*55*			*ug/L*	*50.0*		*110*	*41-146*			

LCS (2B16003-BS1) Prepared: 02/16/2022 00:00 Analyzed: 02/16/2022 09:08

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	18		2.5	ug/L	20.0		88	57-148			
1,1,2,2-Tetrachloroethane	19		2.5	ug/L	20.0		97	60-139			
1,1,2-Trichloroethane	19		2.5	ug/L	20.0		97	57-141			
1,1-Dichloroethane	18		2.5	ug/L	20.0		88	57-142			
1,1-Dichloroethene	20		2.5	ug/L	20.0		98	47-139			
1,2,4-Trichlorobenzene	24		2.5	ug/L	20.0		118	52-159			
1,2-Dibromo-3-chloropropane	16		2.5	ug/L	20.0		81	48-150			
1,2-Dibromoethane	19		2.5	ug/L	20.0		96	57-140			
1,2-Dichlorobenzene	19		2.5	ug/L	20.0		94	63-131			
1,2-Dichloroethane	16		2.5	ug/L	20.0		81	50-156			
1,2-Dichloropropane	17		2.5	ug/L	20.0		87	61-133			
1,3-Dichlorobenzene	18		2.5	ug/L	20.0		92	66-129			
1,4-Dichlorobenzene	18		2.5	ug/L	20.0		88	65-133			
2-Butanone	140		12	ug/L	100		135	10-180			
2-Hexanone	84		12	ug/L	100		84	12-180			
4-Methyl-2-pentanone	100		12	ug/L	100		102	19-180			
Acetone	80		25	ug/L	100		80	10-180			
Benzene	20		2.5	ug/L	20.0		98	56-136			
Bromodichloromethane	19		2.5	ug/L	20.0		96	58-135			
Bromoform	22		2.5	ug/L	20.0		112	46-148			
Bromomethane	13		2.5	ug/L	20.0		63	10-173			
Carbon disulfide	26		12	ug/L	20.0		131	43-153			
Carbon Tetrachloride	18		2.5	ug/L	20.0		92	54-156			
Chlorobenzene	20		2.5	ug/L	20.0		99	51-139			
Chloroethane	18		2.5	ug/L	20.0		92	27-180			
Chloroform	18		2.5	ug/L	20.0		91	58-139			
Chloromethane	14		2.5	ug/L	20.0		68	33-154			
cis-1,2-Dichloroethene	19		2.5	ug/L	20.0		93	56-128			
cis-1,3-Dichloropropene	18		2.5	ug/L	20.0		89	64-128			
Cyclohexane	17		2.5	ug/L	20.0		85	70-130			
Dibromochloromethane	18		2.5	ug/L	20.0		92	50-140			
Dichlorodifluoromethane	16		2.5	ug/L	20.0		80	10-180			
Ethylbenzene	19		2.5	ug/L	20.0		96	63-133			
Freon 113	19		2.5	ug/L	20.0		94	47-173			
Isopropylbenzene	19		2.5	ug/L	20.0		96	60-132			
m,p-Xylenes	38		5.0	ug/L	40.0		95	64-133			
Methyl acetate	20		2.5	ug/L	20.0		102	70-130			
Methylene Chloride	19		12	ug/L	20.0		93	43-142			
Methyl-tert-Butyl Ether	18		2.5	ug/L	20.0		91	51-145			
o-Xylene	20		2.5	ug/L	20.0		99	61-129			
Styrene	21		2.5	ug/L	20.0		107	59-136			
Tetrachloroethene	22		2.5	ug/L	20.0		111	60-147			
Toluene	20		2.5	ug/L	20.0		101	64-131			
trans-1,2-Dichloroethene	20		2.5	ug/L	20.0		100	54-134			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2B16003 - EPA 5030B_MS - Continued

LCS (2B16003-BS1) Continued Prepared: 02/16/2022 00:00 Analyzed: 02/16/2022 09:08

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
trans-1,3-Dichloropropene	19		2.5	ug/L	20.0		96	65-149			
Trichloroethene	19		2.5	ug/L	20.0		95	62-135			
Trichlorofluoromethane	17		2.5	ug/L	20.0		83	56-155			
Vinyl chloride	17		2.5	ug/L	20.0		83	20-167			
4-Bromofluorobenzene	*49*	*I*		*ug/L*	*50.0*		*98*	*41-142*			
Dibromofluoromethane	*52*			*ug/L*	*50.0*		*103*	*53-146*			
Toluene-d8	*55*			*ug/L*	*50.0*		*110*	*41-146*			

Matrix Spike (2B16003-MS1) Prepared: 02/16/2022 00:00 Analyzed: 02/16/2022 09:37

Source: AF00827-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	20		2.5	ug/L	20.0	0.80 U	101	57-148			
1,1,2,2-Tetrachloroethane	21		2.5	ug/L	20.0	0.54 U	107	60-139			
1,1,2-Trichloroethane	22		2.5	ug/L	20.0	0.76 U	112	57-141			
1,1-Dichloroethane	20		2.5	ug/L	20.0	0.62 U	100	57-142			
1,1-Dichloroethene	23		2.5	ug/L	20.0	0.94 U	115	47-139			
1,2,4-Trichlorobenzene	25		2.5	ug/L	20.0	0.70 U	125	52-159			
1,2-Dibromo-3-chloropropane	18		2.5	ug/L	20.0	0.96 U	88	48-150			
1,2-Dibromoethane	21		2.5	ug/L	20.0	0.78 U	106	57-140			
1,2-Dichlorobenzene	21		2.5	ug/L	20.0	0.73 U	106	63-131			
1,2-Dichloroethane	18		2.5	ug/L	20.0	0.63 U	91	50-156			
1,2-Dichloropropane	20		2.5	ug/L	20.0	0.80 U	102	61-133			
1,3-Dichlorobenzene	21		2.5	ug/L	20.0	0.77 U	103	66-129			
1,4-Dichlorobenzene	20		2.5	ug/L	20.0	0.76 U	100	65-133			
2-Butanone	150		12	ug/L	100	4.5 U	146	10-180			
2-Hexanone	91		12	ug/L	100	2.5 U	91	12-180			
4-Methyl-2-pentanone	110		12	ug/L	100	2.5 U	114	19-180			
Acetone	82		25	ug/L	100	10 U	82	10-180			
Benzene	23		2.5	ug/L	20.0	0.71 U	113	56-136			
Bromodichloromethane	22		2.5	ug/L	20.0	0.52 U	110	58-135			
Bromoform	24		2.5	ug/L	20.0	0.75 U	122	46-148			
Bromomethane	17		2.5	ug/L	20.0	0.95 U	84	10-173			
Carbon disulfide	27		12	ug/L	20.0	2.5 U	136	43-153			
Carbon Tetrachloride	22		2.5	ug/L	20.0	0.94 U	110	54-156			
Chlorobenzene	23		2.5	ug/L	20.0	0.72 U	114	51-139			
Chloroethane	22		2.5	ug/L	20.0	0.98 U	111	27-180			
Chloroform	21		2.5	ug/L	20.0	0.80 U	105	58-139			
Chloromethane	16		2.5	ug/L	20.0	0.82 U	82	33-154			
cis-1,2-Dichloroethene	22		2.5	ug/L	20.0	0.53 U	108	56-128			
cis-1,3-Dichloropropene	20		2.5	ug/L	20.0	0.59 U	101	64-128			
Cyclohexane	20		2.5	ug/L	20.0	0.93 U	101	70-130			
Dibromochloromethane	21		2.5	ug/L	20.0	0.50 U	104	50-140			
Dichlorodifluoromethane	20		2.5	ug/L	20.0	0.74 U	98	10-180			
Ethylbenzene	22		2.5	ug/L	20.0	0.69 U	110	63-133			
Freon 113	22		2.5	ug/L	20.0	0.73 U	110	47-173			
Isopropylbenzene	23		2.5	ug/L	20.0	0.67 U	113	60-132			
m,p-Xylenes	44		5.0	ug/L	40.0	1.3 U	111	64-133			
Methyl acetate	21		2.5	ug/L	20.0	0.95 U	105	70-130			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2B16003 - EPA 5030B_MS - Continued

Matrix Spike (2B16003-MS1) Continued Prepared: 02/16/2022 00:00 Analyzed: 02/16/2022 09:37

Source: AF00827-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Methylene Chloride	21		12	ug/L	20.0	2.5 U	106	43-142			
Methyl-tert-Butyl Ether	20		2.5	ug/L	20.0	0.60 U	101	51-145			
o-Xylene	23		2.5	ug/L	20.0	0.53 U	113	61-129			
Styrene	24		2.5	ug/L	20.0	0.61 U	120	59-136			
Tetrachloroethene	23		2.5	ug/L	20.0	0.76 U	113	60-147			
Toluene	23		2.5	ug/L	20.0	0.72 U	117	64-131			
trans-1,2-Dichloroethene	23		2.5	ug/L	20.0	0.73 U	114	54-134			
trans-1,3-Dichloropropene	21		2.5	ug/L	20.0	0.73 U	106	65-149			
Trichloroethene	22		2.5	ug/L	20.0	0.89 U	110	62-135			
Trichlorofluoromethane	20		2.5	ug/L	20.0	0.94 U	100	56-155			
Vinyl chloride	20		2.5	ug/L	20.0	0.71 U	101	20-167			
4-Bromofluorobenzene	*49*	*I*		*ug/L*	*50.0*		*98*	*41-142*			
Dibromofluoromethane	*51*			*ug/L*	*50.0*		*103*	*53-146*			
Toluene-d8	*57*			*ug/L*	*50.0*		*114*	*41-146*			

Matrix Spike Dup (2B16003-MSD1) Prepared: 02/16/2022 00:00 Analyzed: 02/16/2022 10:06

Source: AF00827-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	20		2.5	ug/L	20.0	0.80 U	101	57-148	0.7	25	
1,1,2,2-Tetrachloroethane	21		2.5	ug/L	20.0	0.54 U	103	60-139	4	17	
1,1,2-Trichloroethane	22		2.5	ug/L	20.0	0.76 U	108	57-141	4	16	
1,1-Dichloroethane	20		2.5	ug/L	20.0	0.62 U	99	57-142	0.8	24	
1,1-Dichloroethene	23		2.5	ug/L	20.0	0.94 U	113	47-139	2	16	
1,2,4-Trichlorobenzene	25		2.5	ug/L	20.0	0.70 U	123	52-159	2	24	
1,2-Dibromo-3-chloropropane	18		2.5	ug/L	20.0	0.96 U	90	48-150	3	21	
1,2-Dibromoethane	20		2.5	ug/L	20.0	0.78 U	102	57-140	3	16	
1,2-Dichlorobenzene	21		2.5	ug/L	20.0	0.73 U	104	63-131	2	25	
1,2-Dichloroethane	18		2.5	ug/L	20.0	0.63 U	91	50-156	0.6	18	
1,2-Dichloropropane	20		2.5	ug/L	20.0	0.80 U	98	61-133	4	26	
1,3-Dichlorobenzene	20		2.5	ug/L	20.0	0.77 U	102	66-129	0.9	23	
1,4-Dichlorobenzene	20		2.5	ug/L	20.0	0.76 U	101	65-133	0.5	23	
2-Butanone	140		12	ug/L	100	4.5 U	145	10-180	1	29	
2-Hexanone	89		12	ug/L	100	2.5 U	89	12-180	3	28	
4-Methyl-2-pentanone	110		12	ug/L	100	2.5 U	110	19-180	4	24	
Acetone	80		25	ug/L	100	10 U	80	10-180	3	19	
Benzene	23		2.5	ug/L	20.0	0.71 U	113	56-136	0.2	14	
Bromodichloromethane	21		2.5	ug/L	20.0	0.52 U	107	58-135	2	19	
Bromoform	24		2.5	ug/L	20.0	0.75 U	121	46-148	0.7	18	
Bromomethane	18		2.5	ug/L	20.0	0.95 U	92	10-173	8	29	
Carbon disulfide	26		12	ug/L	20.0	2.5 U	131	43-153	4	26	
Carbon Tetrachloride	22		2.5	ug/L	20.0	0.94 U	108	54-156	1	27	
Chlorobenzene	23		2.5	ug/L	20.0	0.72 U	113	51-139	1	13	
Chloroethane	22		2.5	ug/L	20.0	0.98 U	108	27-180	3	22	
Chloroform	21		2.5	ug/L	20.0	0.80 U	103	58-139	2	17	
Chloromethane	16		2.5	ug/L	20.0	0.82 U	81	33-154	1	31	
cis-1,2-Dichloroethene	21		2.5	ug/L	20.0	0.53 U	106	56-128	2	17	
cis-1,3-Dichloropropene	20		2.5	ug/L	20.0	0.59 U	100	64-128	0.2	20	
Cyclohexane	20		2.5	ug/L	20.0	0.93 U	100	70-130	1	20	

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2B16003 - EPA 5030B_MS - Continued

Matrix Spike Dup (2B16003-MSD1) Continued Prepared: 02/16/2022 00:00 Analyzed: 02/16/2022 10:06

Source: AF00827-01

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Dibromochloromethane	20		2.5	ug/L	20.0	0.50 U	102	50-140	2	18	
Dichlorodifluoromethane	19		2.5	ug/L	20.0	0.74 U	97	10-180	1	26	
Ethylbenzene	22		2.5	ug/L	20.0	0.69 U	110	63-133	0.9	18	
Freon 113	22		2.5	ug/L	20.0	0.73 U	108	47-173	2	30	
Isopropylbenzene	22		2.5	ug/L	20.0	0.67 U	110	60-132	3	23	
m,p-Xylenes	43		5.0	ug/L	40.0	1.3 U	107	64-133	4	18	
Methyl acetate	21		2.5	ug/L	20.0	0.95 U	106	70-130	1	20	
Methylene Chloride	21		12	ug/L	20.0	2.5 U	105	43-142	0.6	23	
Methyl-tert-Butyl Ether	20		2.5	ug/L	20.0	0.60 U	99	51-145	2	22	
o-Xylene	22		2.5	ug/L	20.0	0.53 U	108	61-129	5	16	
Styrene	24		2.5	ug/L	20.0	0.61 U	118	59-136	1	32	
Tetrachloroethene	22		2.5	ug/L	20.0	0.76 U	111	60-147	2	21	
Toluene	23		2.5	ug/L	20.0	0.72 U	114	64-131	3	16	
trans-1,2-Dichloroethene	22		2.5	ug/L	20.0	0.73 U	110	54-134	3	20	
trans-1,3-Dichloropropene	21		2.5	ug/L	20.0	0.73 U	103	65-149	3	17	
Trichloroethene	22		2.5	ug/L	20.0	0.89 U	110	62-135	0.09	20	
Trichlorofluoromethane	20		2.5	ug/L	20.0	0.94 U	99	56-155	1	22	
Vinyl chloride	20		2.5	ug/L	20.0	0.71 U	99	20-167	2	24	
4-Bromofluorobenzene	*49*	*I*		*ug/L*	*50.0*		*98*	*41-142*			
Dibromofluoromethane	*52*			*ug/L*	*50.0*		*103*	*53-146*			
Toluene-d8	*57*			*ug/L*	*50.0*		*113*	*41-146*			

Batch 2B16006 - EPA 5030B_MS

Blank (2B16006-BLK1) Prepared: 02/16/2022 00:00 Analyzed: 02/16/2022 09:54

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	0.80	U	2.5	ug/L							
1,1,2,2-Tetrachloroethane	0.54	U	2.5	ug/L							
1,1,2-Trichloroethane	0.76	U	2.5	ug/L							
1,1-Dichloroethane	0.62	U	2.5	ug/L							
1,1-Dichloroethene	0.94	U	2.5	ug/L							
1,2,4-Trichlorobenzene	0.70	U	2.5	ug/L							
1,2-Dibromo-3-chloropropane	0.96	U	2.5	ug/L							
1,2-Dibromoethane	0.78	U	2.5	ug/L							
1,2-Dichlorobenzene	0.73	U	2.5	ug/L							
1,2-Dichloroethane	0.63	U	2.5	ug/L							
1,2-Dichloropropane	0.80	U	2.5	ug/L							
1,3-Dichlorobenzene	0.77	U	2.5	ug/L							
1,4-Dichlorobenzene	0.76	U	2.5	ug/L							
2-Butanone	4.5	U	12	ug/L							
2-Hexanone	2.5	U	12	ug/L							
4-Methyl-2-pentanone	2.5	U	12	ug/L							
Acetone	10	U	25	ug/L							
Benzene	0.71	U	2.5	ug/L							
Bromodichloromethane	0.52	U	2.5	ug/L							
Bromoform	0.75	U	2.5	ug/L							
Bromomethane	0.95	U	2.5	ug/L							
Carbon disulfide	2.5	U	12	ug/L							

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2B16006 - EPA 5030B_MS - Continued

Blank (2B16006-BLK1) Continued Prepared: 02/16/2022 00:00 Analyzed: 02/16/2022 09:54

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Carbon Tetrachloride	0.94	U	2.5	ug/L							
Chlorobenzene	0.72	U	2.5	ug/L							
Chloroethane	0.98	U	2.5	ug/L							
Chloroform	0.80	U	2.5	ug/L							
Chloromethane	0.82	U	2.5	ug/L							
cis-1,2-Dichloroethene	0.53	U	2.5	ug/L							
cis-1,3-Dichloropropene	0.59	U	2.5	ug/L							
Cyclohexane	0.93	U	2.5	ug/L							
Dibromochloromethane	0.50	U	2.5	ug/L							
Dichlorodifluoromethane	0.74	U	2.5	ug/L							
Ethylbenzene	0.69	U	2.5	ug/L							
Freon 113	0.73	U	2.5	ug/L							
Isopropylbenzene	0.67	U	2.5	ug/L							
Methyl acetate	0.95	U	2.5	ug/L							
Methylene Chloride	2.5	U	12	ug/L							
Methyl-tert-Butyl Ether	0.60	U	2.5	ug/L							
Styrene	0.61	U	2.5	ug/L							
Tetrachloroethene	0.76	U	2.5	ug/L							
Toluene	0.72	U	2.5	ug/L							
trans-1,2-Dichloroethene	0.73	U	2.5	ug/L							
trans-1,3-Dichloropropene	0.73	U	2.5	ug/L							
Trichloroethene	0.89	U	2.5	ug/L							
Trichlorofluoromethane	0.94	U	2.5	ug/L							
Vinyl chloride	0.71	U	2.5	ug/L							
Xylenes (Total)	1.3	U	5.0	ug/L							
4-Bromofluorobenzene	*55*			*ug/L*	*50.0*		*110*	*41-142*			
Dibromofluoromethane	*54*			*ug/L*	*50.0*		*108*	*53-146*			
Toluene-d8	*54*			*ug/L*	*50.0*		*109*	*41-146*			

LCS (2B16006-BS1) Prepared: 02/16/2022 00:00 Analyzed: 02/16/2022 08:58

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	24		2.5	ug/L	20.0		119	57-148			
1,1,2,2-Tetrachloroethane	20		2.5	ug/L	20.0		98	60-139			
1,1,2-Trichloroethane	19		2.5	ug/L	20.0		93	57-141			
1,1-Dichloroethane	24		2.5	ug/L	20.0		118	57-142			
1,1-Dichloroethene	23		2.5	ug/L	20.0		113	47-139			
1,2,4-Trichlorobenzene	18		2.5	ug/L	20.0		88	52-159			
1,2-Dibromo-3-chloropropane	18		2.5	ug/L	20.0		90	48-150			
1,2-Dibromoethane	18		2.5	ug/L	20.0		90	57-140			
1,2-Dichlorobenzene	21		2.5	ug/L	20.0		103	63-131			
1,2-Dichloroethane	20		2.5	ug/L	20.0		100	50-156			
1,2-Dichloropropane	22		2.5	ug/L	20.0		110	61-133			
1,3-Dichlorobenzene	20		2.5	ug/L	20.0		102	66-129			
1,4-Dichlorobenzene	19		2.5	ug/L	20.0		95	65-133			
2-Butanone	110		12	ug/L	100		105	10-180			
2-Hexanone	84		12	ug/L	100		84	12-180			
4-Methyl-2-pentanone	94		12	ug/L	100		94	19-180			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2B16006 - EPA 5030B_MS - Continued

LCS (2B16006-BS1) Continued Prepared: 02/16/2022 00:00 Analyzed: 02/16/2022 08:58

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Acetone	110		25	ug/L	100		105	10-180			
Benzene	22		2.5	ug/L	20.0		110	56-136			
Bromodichloromethane	19		2.5	ug/L	20.0		96	58-135			
Bromoform	24		2.5	ug/L	20.0		118	46-148			
Bromomethane	20		2.5	ug/L	20.0		101	10-173			
Carbon disulfide	25		12	ug/L	20.0		124	43-153			
Carbon Tetrachloride	30		2.5	ug/L	20.0		148	54-156			
Chlorobenzene	19		2.5	ug/L	20.0		96	51-139			
Chloroethane	24		2.5	ug/L	20.0		119	27-180			
Chloroform	23		2.5	ug/L	20.0		113	58-139			
Chloromethane	20		2.5	ug/L	20.0		99	33-154			
cis-1,2-Dichloroethene	23		2.5	ug/L	20.0		117	56-128			
cis-1,3-Dichloropropene	19		2.5	ug/L	20.0		97	64-128			
Cyclohexane	24		2.5	ug/L	20.0		119	70-130			
Dibromochloromethane	17		2.5	ug/L	20.0		85	50-140			
Dichlorodifluoromethane	18		2.5	ug/L	20.0		88	10-180			
Ethylbenzene	19		2.5	ug/L	20.0		97	63-133			
Freon 113	20		2.5	ug/L	20.0		102	47-173			
Isopropylbenzene	20		2.5	ug/L	20.0		102	60-132			
m,p-Xylenes	39		5.0	ug/L	40.0		98	64-133			
Methyl acetate	23		2.5	ug/L	20.0		117	70-130			
Methylene Chloride	24		12	ug/L	20.0		118	43-142			
Methyl-tert-Butyl Ether	26		2.5	ug/L	20.0		128	51-145			
o-Xylene	21		2.5	ug/L	20.0		103	61-129			
Styrene	18		2.5	ug/L	20.0		91	59-136			
Tetrachloroethene	17		2.5	ug/L	20.0		83	60-147			
Toluene	18		2.5	ug/L	20.0		92	64-131			
trans-1,2-Dichloroethene	23		2.5	ug/L	20.0		116	54-134			
trans-1,3-Dichloropropene	19		2.5	ug/L	20.0		93	65-149			
Trichloroethene	19		2.5	ug/L	20.0		93	62-135			
Trichlorofluoromethane	21		2.5	ug/L	20.0		104	56-155			
Vinyl chloride	22		2.5	ug/L	20.0		108	20-167			
4-Bromofluorobenzene	*55*			*ug/L*	*50.0*		*110*	*41-142*			
Dibromofluoromethane	*58*			*ug/L*	*50.0*		*117*	*53-146*			
Toluene-d8	*56*			*ug/L*	*50.0*		*111*	*41-146*			

Matrix Spike (2B16006-MS1) Prepared: 02/16/2022 00:00 Analyzed: 02/16/2022 19:09

Source: AF00827-02

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	27		2.5	ug/L	20.0	0.80 U	133	57-148			
1,1,2,2-Tetrachloroethane	21		2.5	ug/L	20.0	0.54 U	105	60-139			
1,1,2-Trichloroethane	21		2.5	ug/L	20.0	0.76 U	106	57-141			
1,1-Dichloroethane	25		2.5	ug/L	20.0	0.62 U	124	57-142			
1,1-Dichloroethene	24		2.5	ug/L	20.0	0.94 U	118	47-139			
1,2,4-Trichlorobenzene	19		2.5	ug/L	20.0	0.70 U	96	52-159			
1,2-Dibromo-3-chloropropane	19		2.5	ug/L	20.0	0.96 U	97	48-150			
1,2-Dibromoethane	20		2.5	ug/L	20.0	0.78 U	101	57-140			
1,2-Dichlorobenzene	23		2.5	ug/L	20.0	0.73 U	114	63-131			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2B16006 - EPA 5030B_MS - Continued

Matrix Spike (2B16006-MS1) Continued Prepared: 02/16/2022 00:00 Analyzed: 02/16/2022 19:09

Source: AF00827-02

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,2-Dichloroethane	20		2.5	ug/L	20.0	0.63 U	100	50-156			
1,2-Dichloropropane	22		2.5	ug/L	20.0	0.80 U	108	61-133			
1,3-Dichlorobenzene	23		2.5	ug/L	20.0	0.77 U	115	66-129			
1,4-Dichlorobenzene	21		2.5	ug/L	20.0	0.76 U	107	65-133			
2-Butanone	100		12	ug/L	100	4.5 U	105	10-180			
2-Hexanone	85		12	ug/L	100	2.5 U	85	12-180			
4-Methyl-2-pentanone	94		12	ug/L	100	2.5 U	94	19-180			
Acetone	92		25	ug/L	100	10 U	92	10-180			
Benzene	23		2.5	ug/L	20.0	0.71 U	114	56-136			
Bromodichloromethane	19		2.5	ug/L	20.0	0.52 U	96	58-135			
Bromoform	25		2.5	ug/L	20.0	0.75 U	123	46-148			
Bromomethane	23		2.5	ug/L	20.0	0.95 U	115	10-173			
Carbon disulfide	27		12	ug/L	20.0	2.5 U	136	43-153			
Carbon Tetrachloride	31		2.5	ug/L	20.0	0.94 U	155	54-156			
Chlorobenzene	23		2.5	ug/L	20.0	0.72 U	114	51-139			
Chloroethane	27		2.5	ug/L	20.0	0.98 U	137	27-180			
Chloroform	23		2.5	ug/L	20.0	0.80 U	117	58-139			
Chloromethane	21		2.5	ug/L	20.0	0.82 U	105	33-154			
cis-1,2-Dichloroethene	24		2.5	ug/L	20.0	0.74	117	56-128			
cis-1,3-Dichloropropene	18		2.5	ug/L	20.0	0.59 U	91	64-128			
Cyclohexane	26		2.5	ug/L	20.0	0.93 U	129	70-130			
Dibromochloromethane	18		2.5	ug/L	20.0	0.50 U	91	50-140			
Dichlorodifluoromethane	19		2.5	ug/L	20.0	0.74 U	95	10-180			
Ethylbenzene	22		2.5	ug/L	20.0	0.69 U	112	63-133			
Freon 113	24		2.5	ug/L	20.0	0.73 U	118	47-173			
Isopropylbenzene	24		2.5	ug/L	20.0	0.67 U	119	60-132			
m,p-Xylenes	46		5.0	ug/L	40.0	1.3 U	115	64-133			
Methyl acetate	21		2.5	ug/L	20.0	0.95 U	103	70-130			
Methylene Chloride	25		12	ug/L	20.0	2.5 U	125	43-142			
Methyl-tert-Butyl Ether	24		2.5	ug/L	20.0	0.60 U	122	51-145			
o-Xylene	23		2.5	ug/L	20.0	0.53 U	116	61-129			
Styrene	20		2.5	ug/L	20.0	0.61 U	102	59-136			
Tetrachloroethene	19		2.5	ug/L	20.0	0.76 U	96	60-147			
Toluene	21		2.5	ug/L	20.0	0.72 U	105	64-131			
trans-1,2-Dichloroethene	25		2.5	ug/L	20.0	0.73 U	126	54-134			
trans-1,3-Dichloropropene	20		2.5	ug/L	20.0	0.73 U	99	65-149			
Trichloroethene	21		2.5	ug/L	20.0	0.89 U	103	62-135			
Trichlorofluoromethane	23		2.5	ug/L	20.0	0.94 U	117	56-155			
Vinyl chloride	23		2.5	ug/L	20.0	0.71 U	115	20-167			
4-Bromofluorobenzene	*56*			*ug/L*	*50.0*		*111*	*41-142*			
Dibromofluoromethane	*56*			*ug/L*	*50.0*		*112*	*53-146*			
Toluene-d8	*52*			*ug/L*	*50.0*		*103*	*41-146*			

Matrix Spike Dup (2B16006-MSD1) Prepared: 02/16/2022 00:00 Analyzed: 02/16/2022 19:37

Source: AF00827-02

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	25		2.5	ug/L	20.0	0.80 U	123	57-148	7	25	
1,1,2,2-Tetrachloroethane	20		2.5	ug/L	20.0	0.54 U	99	60-139	6	17	

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2B16006 - EPA 5030B_MS - Continued

Matrix Spike Dup (2B16006-MSD1) Continued Prepared: 02/16/2022 00:00 Analyzed: 02/16/2022 19:37

Source: AF00827-02

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,2-Trichloroethane	20		2.5	ug/L	20.0	0.76 U	99	57-141	7	16	
1,1-Dichloroethane	23		2.5	ug/L	20.0	0.62 U	116	57-142	6	24	
1,1-Dichloroethene	23		2.5	ug/L	20.0	0.94 U	116	47-139	2	16	
1,2,4-Trichlorobenzene	19		2.5	ug/L	20.0	0.70 U	93	52-159	3	24	
1,2-Dibromo-3-chloropropane	19		2.5	ug/L	20.0	0.96 U	94	48-150	3	21	
1,2-Dibromoethane	19		2.5	ug/L	20.0	0.78 U	94	57-140	8	16	
1,2-Dichlorobenzene	22		2.5	ug/L	20.0	0.73 U	108	63-131	6	25	
1,2-Dichloroethane	20		2.5	ug/L	20.0	0.63 U	99	50-156	1	18	
1,2-Dichloropropane	21		2.5	ug/L	20.0	0.80 U	103	61-133	4	26	
1,3-Dichlorobenzene	22		2.5	ug/L	20.0	0.77 U	112	66-129	3	23	
1,4-Dichlorobenzene	21		2.5	ug/L	20.0	0.76 U	106	65-133	1	23	
2-Butanone	100		12	ug/L	100	4.5 U	100	10-180	5	29	
2-Hexanone	81		12	ug/L	100	2.5 U	81	12-180	5	28	
4-Methyl-2-pentanone	83		12	ug/L	100	2.5 U	83	19-180	13	24	
Acetone	85		25	ug/L	100	10 U	85	10-180	7	19	
Benzene	22		2.5	ug/L	20.0	0.71 U	108	56-136	5	14	
Bromodichloromethane	19		2.5	ug/L	20.0	0.52 U	93	58-135	4	19	
Bromoform	24		2.5	ug/L	20.0	0.75 U	118	46-148	4	18	
Bromomethane	25		2.5	ug/L	20.0	0.95 U	127	10-173	10	29	
Carbon disulfide	26		12	ug/L	20.0	2.5 U	128	43-153	6	26	
Carbon Tetrachloride	29		2.5	ug/L	20.0	0.94 U	146	54-156	6	27	
Chlorobenzene	22		2.5	ug/L	20.0	0.72 U	109	51-139	4	13	
Chloroethane	27		2.5	ug/L	20.0	0.98 U	137	27-180	0.1	22	
Chloroform	23		2.5	ug/L	20.0	0.80 U	114	58-139	3	17	
Chloromethane	20		2.5	ug/L	20.0	0.82 U	101	33-154	4	31	
cis-1,2-Dichloroethene	23		2.5	ug/L	20.0	0.74	114	56-128	3	17	
cis-1,3-Dichloropropene	17		2.5	ug/L	20.0	0.59 U	85	64-128	7	20	
Cyclohexane	26		2.5	ug/L	20.0	0.93 U	130	70-130	0.5	20	
Dibromochloromethane	19		2.5	ug/L	20.0	0.50 U	95	50-140	4	18	
Dichlorodifluoromethane	18		2.5	ug/L	20.0	0.74 U	92	10-180	3	26	
Ethylbenzene	22		2.5	ug/L	20.0	0.69 U	111	63-133	0.5	18	
Freon 113	24		2.5	ug/L	20.0	0.73 U	119	47-173	1	30	
Isopropylbenzene	24		2.5	ug/L	20.0	0.67 U	119	60-132	0.4	23	
m,p-Xylenes	43		5.0	ug/L	40.0	1.3 U	108	64-133	6	18	
Methyl acetate	22		2.5	ug/L	20.0	0.95 U	109	70-130	6	20	
Methylene Chloride	24		12	ug/L	20.0	2.5 U	120	43-142	4	23	
Methyl-tert-Butyl Ether	24		2.5	ug/L	20.0	0.60 U	121	51-145	1	22	
o-Xylene	23		2.5	ug/L	20.0	0.53 U	113	61-129	3	16	
Styrene	20		2.5	ug/L	20.0	0.61 U	98	59-136	4	32	
Tetrachloroethene	19		2.5	ug/L	20.0	0.76 U	95	60-147	1	21	
Toluene	21		2.5	ug/L	20.0	0.72 U	103	64-131	2	16	
trans-1,2-Dichloroethene	25		2.5	ug/L	20.0	0.73 U	124	54-134	2	20	
trans-1,3-Dichloropropene	19		2.5	ug/L	20.0	0.73 U	97	65-149	2	17	
Trichloroethene	20		2.5	ug/L	20.0	0.89 U	98	62-135	5	20	
Trichlorofluoromethane	22		2.5	ug/L	20.0	0.94 U	110	56-155	6	22	
Vinyl chloride	21		2.5	ug/L	20.0	0.71 U	106	20-167	8	24	
4-Bromofluorobenzene	*55*			*ug/L*	*50.0*		*110*	*41-142*			
Dibromofluoromethane	*54*			*ug/L*	*50.0*		*107*	*53-146*			
Toluene-d8	*51*			*ug/L*	*50.0*		*102*	*41-146*			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2B16024 - EPA 5030B_MS

Blank (2B16024-BLK1) Prepared: 02/16/2022 00:00 Analyzed: 02/16/2022 23:33

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	0.80	U	2.5	ug/L							
1,1,2,2-Tetrachloroethane	0.54	U	2.5	ug/L							
1,1,2-Trichloroethane	0.76	U	2.5	ug/L							
1,1-Dichloroethane	0.62	U	2.5	ug/L							
1,1-Dichloroethene	0.94	U	2.5	ug/L							
1,2,4-Trichlorobenzene	0.70	U	2.5	ug/L							
1,2-Dibromo-3-chloropropane	0.96	U	2.5	ug/L							
1,2-Dibromoethane	0.78	U	2.5	ug/L							
1,2-Dichlorobenzene	0.73	U	2.5	ug/L							
1,2-Dichloroethane	0.63	U	2.5	ug/L							
1,2-Dichloropropane	0.80	U	2.5	ug/L							
1,3-Dichlorobenzene	0.77	U	2.5	ug/L							
1,4-Dichlorobenzene	0.76	U	2.5	ug/L							
2-Butanone	4.5	U	12	ug/L							
2-Hexanone	2.5	U	12	ug/L							
4-Methyl-2-pentanone	2.5	U	12	ug/L							
Acetone	10	U	25	ug/L							
Benzene	0.71	U	2.5	ug/L							
Bromodichloromethane	0.52	U	2.5	ug/L							
Bromoform	0.75	U	2.5	ug/L							
Bromomethane	0.95	U	2.5	ug/L							
Carbon disulfide	2.5	U	12	ug/L							
Carbon Tetrachloride	0.94	U	2.5	ug/L							
Chlorobenzene	0.72	U	2.5	ug/L							
Chloroethane	0.98	U	2.5	ug/L							
Chloroform	0.80	U	2.5	ug/L							
Chloromethane	0.82	U	2.5	ug/L							
cis-1,2-Dichloroethene	0.53	U	2.5	ug/L							
cis-1,3-Dichloropropene	0.59	U	2.5	ug/L							
Cyclohexane	0.93	U	2.5	ug/L							
Dibromochloromethane	0.50	U	2.5	ug/L							
Dichlorodifluoromethane	0.74	U	2.5	ug/L							
Ethylbenzene	0.69	U	2.5	ug/L							
Freon 113	0.73	U	2.5	ug/L							
Isopropylbenzene	0.67	U	2.5	ug/L							
Methyl acetate	0.95	U	2.5	ug/L							
Methylene Chloride	2.5	U	12	ug/L							
Methyl-tert-Butyl Ether	0.60	U	2.5	ug/L							
Styrene	0.61	U	2.5	ug/L							
Tetrachloroethene	0.76	U	2.5	ug/L							
Toluene	0.72	U	2.5	ug/L							
trans-1,2-Dichloroethene	0.73	U	2.5	ug/L							
trans-1,3-Dichloropropene	0.73	U	2.5	ug/L							
Trichloroethene	0.89	U	2.5	ug/L							
Trichlorofluoromethane	0.94	U	2.5	ug/L							
Vinyl chloride	0.71	U	2.5	ug/L							
Xylenes (Total)	1.3	U	5.0	ug/L							
4-Bromofluorobenzene	*47*	*I*		*ug/L*	*50.0*		*93*	*41-142*			
Dibromofluoromethane	*54*			*ug/L*	*50.0*		*108*	*53-146*			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2B16024 - EPA 5030B_MS - Continued

Blank (2B16024-BLK1) Continued Prepared: 02/16/2022 00:00 Analyzed: 02/16/2022 23:33

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Toluene-d8	*56*			*ug/L*	*50.0*		*111*	*41-146*			

LCS (2B16024-BS1) Prepared: 02/16/2022 00:00 Analyzed: 02/16/2022 21:09

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	20		2.5	ug/L	20.0		98	57-148			
1,1,2,2-Tetrachloroethane	18		2.5	ug/L	20.0		91	60-139			
1,1,2-Trichloroethane	19		2.5	ug/L	20.0		93	57-141			
1,1-Dichloroethane	19		2.5	ug/L	20.0		96	57-142			
1,1-Dichloroethene	20		2.5	ug/L	20.0		100	47-139			
1,2,4-Trichlorobenzene	22		2.5	ug/L	20.0		111	52-159			
1,2-Dibromo-3-chloropropane	17		2.5	ug/L	20.0		86	48-150			
1,2-Dibromoethane	19		2.5	ug/L	20.0		95	57-140			
1,2-Dichlorobenzene	19		2.5	ug/L	20.0		96	63-131			
1,2-Dichloroethane	20		2.5	ug/L	20.0		98	50-156			
1,2-Dichloropropane	19		2.5	ug/L	20.0		95	61-133			
1,3-Dichlorobenzene	19		2.5	ug/L	20.0		94	66-129			
1,4-Dichlorobenzene	18		2.5	ug/L	20.0		91	65-133			
2-Butanone	140		12	ug/L	100		137	10-180			
2-Hexanone	92		12	ug/L	100		92	12-180			
4-Methyl-2-pentanone	100		12	ug/L	100		105	19-180			
Acetone	86		25	ug/L	100		86	10-180			
Benzene	21		2.5	ug/L	20.0		106	56-136			
Bromodichloromethane	22		2.5	ug/L	20.0		109	58-135			
Bromoform	22		2.5	ug/L	20.0		110	46-148			
Bromomethane	13		2.5	ug/L	20.0		67	10-173			
Carbon disulfide	27		12	ug/L	20.0		136	43-153			
Carbon Tetrachloride	20		2.5	ug/L	20.0		101	54-156			
Chlorobenzene	20		2.5	ug/L	20.0		101	51-139			
Chloroethane	19		2.5	ug/L	20.0		94	27-180			
Chloroform	20		2.5	ug/L	20.0		102	58-139			
Chloromethane	16		2.5	ug/L	20.0		78	33-154			
cis-1,2-Dichloroethene	19		2.5	ug/L	20.0		97	56-128			
cis-1,3-Dichloropropene	19		2.5	ug/L	20.0		96	64-128			
Cyclohexane	18		2.5	ug/L	20.0		88	70-130			
Dibromochloromethane	19		2.5	ug/L	20.0		96	50-140			
Dichlorodifluoromethane	18		2.5	ug/L	20.0		88	10-180			
Ethylbenzene	19		2.5	ug/L	20.0		96	63-133			
Freon 113	19		2.5	ug/L	20.0		94	47-173			
Isopropylbenzene	19		2.5	ug/L	20.0		94	60-132			
m,p-Xylenes	38		5.0	ug/L	40.0		94	64-133			
Methyl acetate	21		2.5	ug/L	20.0		103	70-130			
Methylene Chloride	20		12	ug/L	20.0		100	43-142			
Methyl-tert-Butyl Ether	20		2.5	ug/L	20.0		99	51-145			
o-Xylene	19		2.5	ug/L	20.0		95	61-129			
Styrene	21		2.5	ug/L	20.0		104	59-136			
Tetrachloroethene	33		2.5	ug/L	20.0		164	60-147			QL-02
Toluene	20		2.5	ug/L	20.0		100	64-131			
trans-1,2-Dichloroethene	21		2.5	ug/L	20.0		103	54-134			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2B16024 - EPA 5030B_MS - Continued

LCS (2B16024-BS1) Continued Prepared: 02/16/2022 00:00 Analyzed: 02/16/2022 21:09

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
trans-1,3-Dichloropropene	19		2.5	ug/L	20.0		95	65-149			
Trichloroethene	21		2.5	ug/L	20.0		105	62-135			
Trichlorofluoromethane	17		2.5	ug/L	20.0		87	56-155			
Vinyl chloride	18		2.5	ug/L	20.0		88	20-167			
4-Bromofluorobenzene	*46*	*I*		*ug/L*	*50.0*		*92*	*41-142*			
Dibromofluoromethane	*53*			*ug/L*	*50.0*		*106*	*53-146*			
Toluene-d8	*55*			*ug/L*	*50.0*		*111*	*41-146*			

Matrix Spike (2B16024-MS1) Prepared: 02/16/2022 00:00 Analyzed: 02/16/2022 21:38

Source: AF00827-37

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	24		2.5	ug/L	20.0	0.80 U	118	57-148			
1,1,2,2-Tetrachloroethane	22		2.5	ug/L	20.0	0.54 U	108	60-139			
1,1,2-Trichloroethane	21		2.5	ug/L	20.0	0.76 U	103	57-141			
1,1-Dichloroethane	23		2.5	ug/L	20.0	0.62 U	113	57-142			
1,1-Dichloroethene	25		2.5	ug/L	20.0	0.94 U	125	47-139			
1,2,4-Trichlorobenzene	24		2.5	ug/L	20.0	0.70 U	122	52-159			
1,2-Dibromo-3-chloropropane	20		2.5	ug/L	20.0	0.96 U	98	48-150			
1,2-Dibromoethane	21		2.5	ug/L	20.0	0.78 U	105	57-140			
1,2-Dichlorobenzene	22		2.5	ug/L	20.0	0.73 U	108	63-131			
1,2-Dichloroethane	22		2.5	ug/L	20.0	0.63 U	111	50-156			
1,2-Dichloropropane	21		2.5	ug/L	20.0	0.80 U	106	61-133			
1,3-Dichlorobenzene	21		2.5	ug/L	20.0	0.77 U	107	66-129			
1,4-Dichlorobenzene	21		2.5	ug/L	20.0	0.76 U	105	65-133			
2-Butanone	150		12	ug/L	100	4.5 U	153	10-180			
2-Hexanone	100		12	ug/L	100	2.5 U	103	12-180			
4-Methyl-2-pentanone	120		12	ug/L	100	2.5 U	118	19-180			
Acetone	95		25	ug/L	100	10 U	95	10-180			
Benzene	25		2.5	ug/L	20.0	0.71 U	124	56-136			
Bromodichloromethane	24		2.5	ug/L	20.0	0.52 U	122	58-135			
Bromoform	24		2.5	ug/L	20.0	0.75 U	122	46-148			
Bromomethane	18		2.5	ug/L	20.0	0.95 U	90	10-173			
Carbon disulfide	30		12	ug/L	20.0	2.5 U	149	43-153			
Carbon Tetrachloride	25		2.5	ug/L	20.0	0.94 U	123	54-156			
Chlorobenzene	23		2.5	ug/L	20.0	0.72 U	116	51-139			
Chloroethane	21		2.5	ug/L	20.0	0.98 U	106	27-180			
Chloroform	24		2.5	ug/L	20.0	0.80 U	119	58-139			
Chloromethane	18		2.5	ug/L	20.0	0.82 U	88	33-154			
cis-1,2-Dichloroethene	49		2.5	ug/L	20.0	26	119	56-128			
cis-1,3-Dichloropropene	21		2.5	ug/L	20.0	0.59 U	106	64-128			
Cyclohexane	22		2.5	ug/L	20.0	0.93 U	112	70-130			
Dibromochloromethane	21		2.5	ug/L	20.0	0.50 U	107	50-140			
Dichlorodifluoromethane	21		2.5	ug/L	20.0	0.74 U	106	10-180			
Ethylbenzene	23		2.5	ug/L	20.0	0.69 U	113	63-133			
Freon 113	24		2.5	ug/L	20.0	0.73 U	121	47-173			
Isopropylbenzene	22		2.5	ug/L	20.0	0.67 U	112	60-132			
m,p-Xylenes	44		5.0	ug/L	40.0	1.3 U	111	64-133			
Methyl acetate	22		2.5	ug/L	20.0	0.95 U	111	70-130			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2B16024 - EPA 5030B_MS - Continued

Matrix Spike (2B16024-MS1) Continued Prepared: 02/16/2022 00:00 Analyzed: 02/16/2022 21:38

Source: AF00827-37

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Methylene Chloride	23		12	ug/L	20.0	2.5 U	115	43-142			
Methyl-tert-Butyl Ether	23		2.5	ug/L	20.0	0.60 U	114	51-145			
o-Xylene	22		2.5	ug/L	20.0	0.53 U	110	61-129			
Styrene	24		2.5	ug/L	20.0	0.61 U	119	59-136			
Tetrachloroethene	23		2.5	ug/L	20.0	0.76 U	114	60-147			
Toluene	23		2.5	ug/L	20.0	0.72 U	117	64-131			
trans-1,2-Dichloroethene	27		2.5	ug/L	20.0	2.4	125	54-134			
trans-1,3-Dichloropropene	21		2.5	ug/L	20.0	0.73 U	107	65-149			
Trichloroethene	170	L	2.5	ug/L	20.0	130	225	62-135			QM-07
Trichlorofluoromethane	21		2.5	ug/L	20.0	0.94 U	103	56-155			
Vinyl chloride	28		2.5	ug/L	20.0	6.9	106	20-167			
4-Bromofluorobenzene	*47*	*I*		*ug/L*	*50.0*		*95*	*41-142*			
Dibromofluoromethane	*54*			*ug/L*	*50.0*		*108*	*53-146*			
Toluene-d8	*56*			*ug/L*	*50.0*		*111*	*41-146*			

Matrix Spike Dup (2B16024-MSD1) Prepared: 02/16/2022 00:00 Analyzed: 02/16/2022 22:07

Source: AF00827-37

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	23		2.5	ug/L	20.0	0.80 U	113	57-148	4	25	
1,1,2,2-Tetrachloroethane	21		2.5	ug/L	20.0	0.54 U	106	60-139	2	17	
1,1,2-Trichloroethane	21		2.5	ug/L	20.0	0.76 U	104	57-141	0.4	16	
1,1-Dichloroethane	22		2.5	ug/L	20.0	0.62 U	108	57-142	5	24	
1,1-Dichloroethene	24		2.5	ug/L	20.0	0.94 U	118	47-139	6	16	
1,2,4-Trichlorobenzene	24		2.5	ug/L	20.0	0.70 U	119	52-159	2	24	
1,2-Dibromo-3-chloropropane	19		2.5	ug/L	20.0	0.96 U	94	48-150	4	21	
1,2-Dibromoethane	20		2.5	ug/L	20.0	0.78 U	99	57-140	5	16	
1,2-Dichlorobenzene	21		2.5	ug/L	20.0	0.73 U	105	63-131	3	25	
1,2-Dichloroethane	21		2.5	ug/L	20.0	0.63 U	104	50-156	7	18	
1,2-Dichloropropane	21		2.5	ug/L	20.0	0.80 U	104	61-133	2	26	
1,3-Dichlorobenzene	20		2.5	ug/L	20.0	0.77 U	102	66-129	4	23	
1,4-Dichlorobenzene	20		2.5	ug/L	20.0	0.76 U	98	65-133	7	23	
2-Butanone	150		12	ug/L	100	4.5 U	150	10-180	2	29	
2-Hexanone	99		12	ug/L	100	2.5 U	99	12-180	4	28	
4-Methyl-2-pentanone	110		12	ug/L	100	2.5 U	112	19-180	6	24	
Acetone	90		25	ug/L	100	10 U	90	10-180	5	19	
Benzene	23		2.5	ug/L	20.0	0.71 U	117	56-136	5	14	
Bromodichloromethane	24		2.5	ug/L	20.0	0.52 U	118	58-135	4	19	
Bromoform	24		2.5	ug/L	20.0	0.75 U	119	46-148	2	18	
Bromomethane	18		2.5	ug/L	20.0	0.95 U	92	10-173	2	29	
Carbon disulfide	28		12	ug/L	20.0	2.5 U	138	43-153	8	26	
Carbon Tetrachloride	23		2.5	ug/L	20.0	0.94 U	116	54-156	6	27	
Chlorobenzene	22		2.5	ug/L	20.0	0.72 U	112	51-139	3	13	
Chloroethane	20		2.5	ug/L	20.0	0.98 U	100	27-180	5	22	
Chloroform	23		2.5	ug/L	20.0	0.80 U	113	58-139	5	17	
Chloromethane	17		2.5	ug/L	20.0	0.82 U	86	33-154	2	31	
cis-1,2-Dichloroethene	47		2.5	ug/L	20.0	26	109	56-128	4	17	
cis-1,3-Dichloropropene	20		2.5	ug/L	20.0	0.59 U	102	64-128	3	20	
Cyclohexane	21		2.5	ug/L	20.0	0.93 U	105	70-130	6	20	

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2B16024 - EPA 5030B_MS - Continued

Matrix Spike Dup (2B16024-MSD1) Continued Prepared: 02/16/2022 00:00 Analyzed: 02/16/2022 22:07

Source: AF00827-37

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Dibromochloromethane	21		2.5	ug/L	20.0	0.50 U	103	50-140	4	18	
Dichlorodifluoromethane	20		2.5	ug/L	20.0	0.74 U	102	10-180	5	26	
Ethylbenzene	21		2.5	ug/L	20.0	0.69 U	106	63-133	6	18	
Freon 113	23		2.5	ug/L	20.0	0.73 U	114	47-173	6	30	
Isopropylbenzene	21		2.5	ug/L	20.0	0.67 U	107	60-132	4	23	
m,p-Xylenes	42		5.0	ug/L	40.0	1.3 U	105	64-133	5	18	
Methyl acetate	20		2.5	ug/L	20.0	0.95 U	101	70-130	10	20	
Methylene Chloride	22		12	ug/L	20.0	2.5 U	111	43-142	4	23	
Methyl-tert-Butyl Ether	22		2.5	ug/L	20.0	0.60 U	108	51-145	6	22	
o-Xylene	21		2.5	ug/L	20.0	0.53 U	106	61-129	4	16	
Styrene	23		2.5	ug/L	20.0	0.61 U	114	59-136	5	32	
Tetrachloroethene	22		2.5	ug/L	20.0	0.76 U	111	60-147	3	21	
Toluene	22		2.5	ug/L	20.0	0.72 U	112	64-131	4	16	
trans-1,2-Dichloroethene	26		2.5	ug/L	20.0	2.4	116	54-134	7	20	
trans-1,3-Dichloropropene	21		2.5	ug/L	20.0	0.73 U	103	65-149	3	17	
Trichloroethene	170	L	2.5	ug/L	20.0	130	183	62-135	5	20	QM-07
Trichlorofluoromethane	20		2.5	ug/L	20.0	0.94 U	98	56-155	5	22	
Vinyl chloride	26		2.5	ug/L	20.0	6.9	97	20-167	7	24	
4-Bromofluorobenzene	*45*	*I*		*ug/L*	*50.0*		*91*	*41-142*			
Dibromofluoromethane	*52*			*ug/L*	*50.0*		*104*	*53-146*			
Toluene-d8	*54*			*ug/L*	*50.0*		*108*	*41-146*			

Batch 2B16031 - EPA 5030B_MS

Blank (2B16031-BLK1) Prepared: 02/16/2022 13:20 Analyzed: 02/16/2022 22:51

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	0.80	U	2.5	ug/L							
1,1,2,2-Tetrachloroethane	0.54	U	2.5	ug/L							
1,1,2-Trichloroethane	0.76	U	2.5	ug/L							
1,1-Dichloroethane	0.62	U	2.5	ug/L							
1,1-Dichloroethene	0.94	U	2.5	ug/L							
1,2,4-Trichlorobenzene	0.70	U	2.5	ug/L							
1,2-Dibromo-3-chloropropane	0.96	U	2.5	ug/L							
1,2-Dibromoethane	0.78	U	2.5	ug/L							
1,2-Dichlorobenzene	0.73	U	2.5	ug/L							
1,2-Dichloroethane	0.63	U	2.5	ug/L							
1,2-Dichloropropane	0.80	U	2.5	ug/L							
1,3-Dichlorobenzene	0.77	U	2.5	ug/L							
1,4-Dichlorobenzene	0.76	U	2.5	ug/L							
2-Butanone	4.5	U	12	ug/L							
2-Hexanone	2.5	U	12	ug/L							
4-Methyl-2-pentanone	2.5	U	12	ug/L							
Acetone	10	U	25	ug/L							
Benzene	0.71	U	2.5	ug/L							
Bromodichloromethane	0.52	U	2.5	ug/L							
Bromoform	0.75	U	2.5	ug/L							
Bromomethane	0.95	U	2.5	ug/L							
Carbon disulfide	2.5	U	12	ug/L							

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2B16031 - EPA 5030B_MS - Continued

Blank (2B16031-BLK1) Continued Prepared: 02/16/2022 13:20 Analyzed: 02/16/2022 22:51

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Carbon Tetrachloride	0.94	U	2.5	ug/L							
Chlorobenzene	0.72	U	2.5	ug/L							
Chloroethane	0.98	U	2.5	ug/L							
Chloroform	0.80	U	2.5	ug/L							
Chloromethane	0.82	U	2.5	ug/L							
cis-1,2-Dichloroethene	0.53	U	2.5	ug/L							
cis-1,3-Dichloropropene	0.59	U	2.5	ug/L							
Cyclohexane	0.93	U	2.5	ug/L							
Dibromochloromethane	0.50	U	2.5	ug/L							
Dichlorodifluoromethane	0.74	U	2.5	ug/L							
Ethylbenzene	0.69	U	2.5	ug/L							
Freon 113	0.73	U	2.5	ug/L							
Isopropylbenzene	0.67	U	2.5	ug/L							
Methyl acetate	0.95	U	2.5	ug/L							
Methylene Chloride	2.5	U	12	ug/L							
Methyl-tert-Butyl Ether	0.60	U	2.5	ug/L							
Styrene	0.61	U	2.5	ug/L							
Tetrachloroethene	0.76	U	2.5	ug/L							
Toluene	0.72	U	2.5	ug/L							
trans-1,2-Dichloroethene	0.73	U	2.5	ug/L							
trans-1,3-Dichloropropene	0.73	U	2.5	ug/L							
Trichloroethene	0.89	U	2.5	ug/L							
Trichlorofluoromethane	0.94	U	2.5	ug/L							
Vinyl chloride	0.71	U	2.5	ug/L							
Xylenes (Total)	1.3	U	5.0	ug/L							
4-Bromofluorobenzene	*56*			*ug/L*	*50.0*		*111*	*41-142*			
Dibromofluoromethane	*53*			*ug/L*	*50.0*		*105*	*53-146*			
Toluene-d8	*51*			*ug/L*	*50.0*		*102*	*41-146*			

LCS (2B16031-BS1) Prepared: 02/16/2022 13:20 Analyzed: 02/16/2022 21:00

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	22		2.5	ug/L	20.0		109	57-148			
1,1,2,2-Tetrachloroethane	18		2.5	ug/L	20.0		92	60-139			
1,1,2-Trichloroethane	18		2.5	ug/L	20.0		88	57-141			
1,1-Dichloroethane	22		2.5	ug/L	20.0		109	57-142			
1,1-Dichloroethene	20		2.5	ug/L	20.0		98	47-139			
1,2,4-Trichlorobenzene	19		2.5	ug/L	20.0		96	52-159			
1,2-Dibromo-3-chloropropane	19		2.5	ug/L	20.0		96	48-150			
1,2-Dibromoethane	18		2.5	ug/L	20.0		89	57-140			
1,2-Dichlorobenzene	20		2.5	ug/L	20.0		102	63-131			
1,2-Dichloroethane	19		2.5	ug/L	20.0		96	50-156			
1,2-Dichloropropane	18		2.5	ug/L	20.0		91	61-133			
1,3-Dichlorobenzene	20		2.5	ug/L	20.0		102	66-129			
1,4-Dichlorobenzene	19		2.5	ug/L	20.0		96	65-133			
2-Butanone	100		12	ug/L	100		100	10-180			
2-Hexanone	82		12	ug/L	100		82	12-180			
4-Methyl-2-pentanone	90		12	ug/L	100		90	19-180			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2B16031 - EPA 5030B_MS - Continued

LCS (2B16031-BS1) Continued Prepared: 02/16/2022 13:20 Analyzed: 02/16/2022 21:00

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Acetone	91		25	ug/L	100		91	10-180			
Benzene	20		2.5	ug/L	20.0		99	56-136			
Bromodichloromethane	18		2.5	ug/L	20.0		89	58-135			
Bromoform	22		2.5	ug/L	20.0		109	46-148			
Bromomethane	16		2.5	ug/L	20.0		78	10-173			
Carbon disulfide	23		12	ug/L	20.0		114	43-153			
Carbon Tetrachloride	27		2.5	ug/L	20.0		134	54-156			
Chlorobenzene	19		2.5	ug/L	20.0		96	51-139			
Chloroethane	23		2.5	ug/L	20.0		114	27-180			
Chloroform	20		2.5	ug/L	20.0		100	58-139			
Chloromethane	18		2.5	ug/L	20.0		91	33-154			
cis-1,2-Dichloroethene	21		2.5	ug/L	20.0		103	56-128			
cis-1,3-Dichloropropene	16		2.5	ug/L	20.0		82	64-128			
Cyclohexane	21		2.5	ug/L	20.0		107	70-130			
Dibromochloromethane	17		2.5	ug/L	20.0		83	50-140			
Dichlorodifluoromethane	16		2.5	ug/L	20.0		81	10-180			
Ethylbenzene	19		2.5	ug/L	20.0		93	63-133			
Freon 113	19		2.5	ug/L	20.0		96	47-173			
Isopropylbenzene	19		2.5	ug/L	20.0		97	60-132			
m,p-Xylenes	38		5.0	ug/L	40.0		95	64-133			
Methyl acetate	23		2.5	ug/L	20.0		116	70-130			
Methylene Chloride	22		12	ug/L	20.0		110	43-142			
Methyl-tert-Butyl Ether	22		2.5	ug/L	20.0		111	51-145			
o-Xylene	20		2.5	ug/L	20.0		100	61-129			
Styrene	17		2.5	ug/L	20.0		86	59-136			
Tetrachloroethene	24		2.5	ug/L	20.0		119	60-147			
Toluene	17		2.5	ug/L	20.0		87	64-131			
trans-1,2-Dichloroethene	21		2.5	ug/L	20.0		106	54-134			
trans-1,3-Dichloropropene	17		2.5	ug/L	20.0		87	65-149			
Trichloroethene	17		2.5	ug/L	20.0		87	62-135			
Trichlorofluoromethane	19		2.5	ug/L	20.0		93	56-155			
Vinyl chloride	18		2.5	ug/L	20.0		90	20-167			
4-Bromofluorobenzene	*55*			*ug/L*	*50.0*		*109*	*41-142*			
Dibromofluoromethane	*54*			*ug/L*	*50.0*		*108*	*53-146*			
Toluene-d8	*52*			*ug/L*	*50.0*		*105*	*41-146*			

Matrix Spike (2B16031-MS1) Prepared: 02/16/2022 13:20 Analyzed: 02/16/2022 21:28

Source: AF01020-03

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	2500		250	ug/L	2000	80 U	123	57-148			
1,1,2,2-Tetrachloroethane	1800		250	ug/L	2000	54 U	92	60-139			
1,1,2-Trichloroethane	2000		250	ug/L	2000	76 U	98	57-141			
1,1-Dichloroethane	2300		250	ug/L	2000	62 U	117	57-142			
1,1-Dichloroethene	2300		250	ug/L	2000	94 U	114	47-139			
1,2,4-Trichlorobenzene	1800		250	ug/L	2000	70 U	90	52-159			
1,2-Dibromo-3-chloropropane	1600		250	ug/L	2000	96 U	82	48-150			
1,2-Dibromoethane	1900		250	ug/L	2000	78 U	94	57-140			
1,2-Dichlorobenzene	2100		250	ug/L	2000	73 U	106	63-131			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2B16031 - EPA 5030B_MS - Continued

Matrix Spike (2B16031-MS1) Continued Prepared: 02/16/2022 13:20 Analyzed: 02/16/2022 21:28

Source: AF01020-03

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,2-Dichloroethane	2000		250	ug/L	2000	63 U	98	50-156			
1,2-Dichloropropane	2100		250	ug/L	2000	80 U	107	61-133			
1,3-Dichlorobenzene	2200		250	ug/L	2000	77 U	111	66-129			
1,4-Dichlorobenzene	2000		250	ug/L	2000	76 U	100	65-133			
2-Butanone	11000		1200	ug/L	10000	450 U	107	10-180			
2-Hexanone	8500		1200	ug/L	10000	250 U	85	12-180			
4-Methyl-2-pentanone	9000		1200	ug/L	10000	250 U	90	19-180			
Acetone	9300		2500	ug/L	10000	1000 U	93	10-180			
Benzene	2200		250	ug/L	2000	71 U	111	56-136			
Bromodichloromethane	1900		250	ug/L	2000	52 U	97	58-135			
Bromoform	2300		250	ug/L	2000	75 U	116	46-148			
Bromomethane	2300		250	ug/L	2000	95 U	116	10-173			
Carbon disulfide	2700		1200	ug/L	2000	250 U	133	43-153			
Carbon Tetrachloride	2700		250	ug/L	2000	94 U	134	54-156			
Chlorobenzene	2100		250	ug/L	2000	72 U	107	51-139			
Chloroethane	2500		250	ug/L	2000	98 U	126	27-180			
Chloroform	2200		250	ug/L	2000	80 U	109	58-139			
Chloromethane	2100		250	ug/L	2000	82 U	103	33-154			
cis-1,2-Dichloroethene	2100		250	ug/L	2000	53 U	107	56-128			
cis-1,3-Dichloropropene	1900		250	ug/L	2000	59 U	94	64-128			
Cyclohexane	2500		250	ug/L	2000	93 U	126	70-130			
Dibromochloromethane	1900		250	ug/L	2000	50 U	93	50-140			
Dichlorodifluoromethane	1900		250	ug/L	2000	74 U	95	10-180			
Ethylbenzene	2100		250	ug/L	2000	69 U	106	63-133			
Freon 113	2300		250	ug/L	2000	73 U	114	47-173			
Isopropylbenzene	2300		250	ug/L	2000	67 U	113	60-132			
m,p-Xylenes	4300		500	ug/L	4000	130 U	107	64-133			
Methyl acetate	2200		250	ug/L	2000	95 U	108	70-130			
Methylene Chloride	2400		1200	ug/L	2000	250 U	120	43-142			
Methyl-tert-Butyl Ether	2400		250	ug/L	2000	60 U	122	51-145			
o-Xylene	2200		250	ug/L	2000	53 U	111	61-129			
Styrene	2000		250	ug/L	2000	61 U	101	59-136			
Tetrachloroethene	2900		250	ug/L	2000	76 U	143	60-147			
Toluene	2100		250	ug/L	2000	72 U	103	64-131			
trans-1,2-Dichloroethene	2400		250	ug/L	2000	73 U	122	54-134			
trans-1,3-Dichloropropene	1900		250	ug/L	2000	73 U	97	65-149			
Trichloroethene	2000		250	ug/L	2000	89 U	100	62-135			
Trichlorofluoromethane	2300		250	ug/L	2000	94 U	115	56-155			
Vinyl chloride	2200		250	ug/L	2000	71 U	111	20-167			
4-Bromofluorobenzene	*5600*			*ug/L*	*5000*		*111*	*41-142*			
Dibromofluoromethane	*5300*			*ug/L*	*5000*		*105*	*53-146*			
Toluene-d8	*5300*			*ug/L*	*5000*		*106*	*41-146*			

Matrix Spike Dup (2B16031-MSD1) Prepared: 02/16/2022 13:20 Analyzed: 02/16/2022 21:56

Source: AF01020-03

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	2500		250	ug/L	2000	80 U	123	57-148	0.04	25	
1,1,2,2-Tetrachloroethane	1700		250	ug/L	2000	54 U	87	60-139	6	17	

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2B16031 - EPA 5030B_MS - Continued

Matrix Spike Dup (2B16031-MSD1) Continued Prepared: 02/16/2022 13:20 Analyzed: 02/16/2022 21:56

Source: AF01020-03

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,2-Trichloroethane	1900		250	ug/L	2000	76 U	94	57-141	4	16	
1,1-Dichloroethane	2300		250	ug/L	2000	62 U	114	57-142	2	24	
1,1-Dichloroethene	2100		250	ug/L	2000	94 U	105	47-139	8	16	
1,2,4-Trichlorobenzene	1800		250	ug/L	2000	70 U	89	52-159	1	24	
1,2-Dibromo-3-chloropropane	2000		250	ug/L	2000	96 U	98	48-150	18	21	
1,2-Dibromoethane	1700		250	ug/L	2000	78 U	87	57-140	7	16	
1,2-Dichlorobenzene	2100		250	ug/L	2000	73 U	106	63-131	0	25	
1,2-Dichloroethane	1900		250	ug/L	2000	63 U	97	50-156	1	18	
1,2-Dichloropropane	2200		250	ug/L	2000	80 U	109	61-133	2	26	
1,3-Dichlorobenzene	2200		250	ug/L	2000	77 U	109	66-129	1	23	
1,4-Dichlorobenzene	2000		250	ug/L	2000	76 U	100	65-133	0.5	23	
2-Butanone	10000		1200	ug/L	10000	450 U	101	10-180	5	29	
2-Hexanone	7900		1200	ug/L	10000	250 U	79	12-180	7	28	
4-Methyl-2-pentanone	8800		1200	ug/L	10000	250 U	88	19-180	3	24	
Acetone	9200		2500	ug/L	10000	1000 U	92	10-180	2	19	
Benzene	2200		250	ug/L	2000	71 U	109	56-136	2	14	
Bromodichloromethane	1900		250	ug/L	2000	52 U	95	58-135	2	19	
Bromoform	2300		250	ug/L	2000	75 U	113	46-148	3	18	
Bromomethane	2400		250	ug/L	2000	95 U	121	10-173	4	29	
Carbon disulfide	2500		1200	ug/L	2000	250 U	123	43-153	8	26	
Carbon Tetrachloride	3100		250	ug/L	2000	94 U	153	54-156	13	27	
Chlorobenzene	2000		250	ug/L	2000	72 U	102	51-139	5	13	
Chloroethane	2600		250	ug/L	2000	98 U	131	27-180	4	22	
Chloroform	2200		250	ug/L	2000	80 U	111	58-139	2	17	
Chloromethane	2100		250	ug/L	2000	82 U	105	33-154	2	31	
cis-1,2-Dichloroethene	2200		250	ug/L	2000	53 U	109	56-128	2	17	
cis-1,3-Dichloropropene	1800		250	ug/L	2000	59 U	90	64-128	5	20	
Cyclohexane	2400		250	ug/L	2000	93 U	120	70-130	5	20	
Dibromochloromethane	1800		250	ug/L	2000	50 U	89	50-140	4	18	
Dichlorodifluoromethane	2000		250	ug/L	2000	74 U	98	10-180	2	26	
Ethylbenzene	2100		250	ug/L	2000	69 U	103	63-133	3	18	
Freon 113	2200		250	ug/L	2000	73 U	110	47-173	4	30	
Isopropylbenzene	2200		250	ug/L	2000	67 U	108	60-132	5	23	
m,p-Xylenes	4100		500	ug/L	4000	130 U	102	64-133	5	18	
Methyl acetate	2300		250	ug/L	2000	95 U	113	70-130	4	20	
Methylene Chloride	2300		1200	ug/L	2000	250 U	117	43-142	3	23	
Methyl-tert-Butyl Ether	2300		250	ug/L	2000	60 U	115	51-145	6	22	
o-Xylene	2000		250	ug/L	2000	53 U	101	61-129	9	16	
Styrene	1800		250	ug/L	2000	61 U	92	59-136	10	32	
Tetrachloroethene	2800		250	ug/L	2000	76 U	141	60-147	2	21	
Toluene	1900		250	ug/L	2000	72 U	97	64-131	6	16	
trans-1,2-Dichloroethene	2300		250	ug/L	2000	73 U	116	54-134	5	20	
trans-1,3-Dichloropropene	1900		250	ug/L	2000	73 U	95	65-149	2	17	
Trichloroethene	2000		250	ug/L	2000	89 U	99	62-135	0.3	20	
Trichlorofluoromethane	2100		250	ug/L	2000	94 U	106	56-155	8	22	
Vinyl chloride	2100		250	ug/L	2000	71 U	105	20-167	5	24	
4-Bromofluorobenzene	*5400*			*ug/L*	*5000*		*107*	*41-142*			
Dibromofluoromethane	*5300*			*ug/L*	*5000*		*106*	*53-146*			
Toluene-d8	*5300*			*ug/L*	*5000*		*105*	*41-146*			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2B17011 - EPA 5030B_MS

Blank (2B17011-BLK1) Prepared: 02/17/2022 00:00 Analyzed: 02/17/2022 12:17

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	0.80	U	2.5	ug/L							
1,1,2,2-Tetrachloroethane	0.54	U	2.5	ug/L							
1,1,2-Trichloroethane	0.76	U	2.5	ug/L							
1,1-Dichloroethane	0.62	U	2.5	ug/L							
1,1-Dichloroethene	0.94	U	2.5	ug/L							
1,2,4-Trichlorobenzene	0.70	U	2.5	ug/L							
1,2-Dibromo-3-chloropropane	0.96	U	2.5	ug/L							
1,2-Dibromoethane	0.78	U	2.5	ug/L							
1,2-Dichlorobenzene	0.73	U	2.5	ug/L							
1,2-Dichloroethane	0.63	U	2.5	ug/L							
1,2-Dichloropropane	0.80	U	2.5	ug/L							
1,3-Dichlorobenzene	0.77	U	2.5	ug/L							
1,4-Dichlorobenzene	0.76	U	2.5	ug/L							
2-Butanone	4.5	U	12	ug/L							
2-Hexanone	2.5	U	12	ug/L							
4-Methyl-2-pentanone	2.5	U	12	ug/L							
Acetone	10	U	25	ug/L							
Benzene	0.71	U	2.5	ug/L							
Bromodichloromethane	0.52	U	2.5	ug/L							
Bromoform	0.75	U	2.5	ug/L							
Bromomethane	0.95	U	2.5	ug/L							
Carbon disulfide	2.5	U	12	ug/L							
Carbon Tetrachloride	0.94	U	2.5	ug/L							
Chlorobenzene	0.72	U	2.5	ug/L							
Chloroethane	0.98	U	2.5	ug/L							
Chloroform	0.80	U	2.5	ug/L							
Chloromethane	0.82	U	2.5	ug/L							
cis-1,2-Dichloroethene	0.53	U	2.5	ug/L							
cis-1,3-Dichloropropene	0.59	U	2.5	ug/L							
Cyclohexane	0.93	U	2.5	ug/L							
Dibromochloromethane	0.50	U	2.5	ug/L							
Dichlorodifluoromethane	0.74	U	2.5	ug/L							
Ethylbenzene	0.69	U	2.5	ug/L							
Freon 113	0.73	U	2.5	ug/L							
Isopropylbenzene	0.67	U	2.5	ug/L							
Methyl acetate	0.95	U	2.5	ug/L							
Methylene Chloride	2.5	U	12	ug/L							
Methyl-tert-Butyl Ether	0.60	U	2.5	ug/L							
Styrene	0.61	U	2.5	ug/L							
Tetrachloroethene	0.76	U	2.5	ug/L							
Toluene	0.72	U	2.5	ug/L							
trans-1,2-Dichloroethene	0.73	U	2.5	ug/L							
trans-1,3-Dichloropropene	0.73	U	2.5	ug/L							
Trichloroethene	0.89	U	2.5	ug/L							
Trichlorofluoromethane	0.94	U	2.5	ug/L							
Vinyl chloride	0.71	U	2.5	ug/L							
Xylenes (Total)	1.3	U	5.0	ug/L							
4-Bromofluorobenzene	*45*	*I*		*ug/L*	*50.0*		*91*	*41-142*			
Dibromofluoromethane	*52*			*ug/L*	*50.0*		*105*	*53-146*			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2B17011 - EPA 5030B_MS - Continued

Blank (2B17011-BLK1) Continued Prepared: 02/17/2022 00:00 Analyzed: 02/17/2022 12:17

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Toluene-d8	*54*			*ug/L*	*50.0*		*108*	*41-146*			

LCS (2B17011-BS1) Prepared: 02/17/2022 00:00 Analyzed: 02/17/2022 09:52

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	21		2.5	ug/L	20.0		104	57-148			
1,1,2,2-Tetrachloroethane	20		2.5	ug/L	20.0		102	60-139			
1,1,2-Trichloroethane	20		2.5	ug/L	20.0		99	57-141			
1,1-Dichloroethane	20		2.5	ug/L	20.0		102	57-142			
1,1-Dichloroethene	21		2.5	ug/L	20.0		106	47-139			
1,2,4-Trichlorobenzene	24		2.5	ug/L	20.0		120	52-159			
1,2-Dibromo-3-chloropropane	19		2.5	ug/L	20.0		93	48-150			
1,2-Dibromoethane	20		2.5	ug/L	20.0		99	57-140			
1,2-Dichlorobenzene	21		2.5	ug/L	20.0		103	63-131			
1,2-Dichloroethane	20		2.5	ug/L	20.0		100	50-156			
1,2-Dichloropropane	20		2.5	ug/L	20.0		98	61-133			
1,3-Dichlorobenzene	20		2.5	ug/L	20.0		102	66-129			
1,4-Dichlorobenzene	20		2.5	ug/L	20.0		100	65-133			
2-Butanone	150		12	ug/L	100		148	10-180			
2-Hexanone	97		12	ug/L	100		97	12-180			
4-Methyl-2-pentanone	110		12	ug/L	100		113	19-180			
Acetone	90		25	ug/L	100		90	10-180			
Benzene	23		2.5	ug/L	20.0		113	56-136			
Bromodichloromethane	23		2.5	ug/L	20.0		113	58-135			
Bromoform	23		2.5	ug/L	20.0		116	46-148			
Bromomethane	14		2.5	ug/L	20.0		69	10-173			
Carbon disulfide	29		12	ug/L	20.0		145	43-153			
Carbon Tetrachloride	21		2.5	ug/L	20.0		106	54-156			
Chlorobenzene	22		2.5	ug/L	20.0		108	51-139			
Chloroethane	20		2.5	ug/L	20.0		101	27-180			
Chloroform	21		2.5	ug/L	20.0		107	58-139			
Chloromethane	16		2.5	ug/L	20.0		82	33-154			
cis-1,2-Dichloroethene	21		2.5	ug/L	20.0		106	56-128			
cis-1,3-Dichloropropene	21		2.5	ug/L	20.0		103	64-128			
Cyclohexane	18		2.5	ug/L	20.0		91	70-130			
Dibromochloromethane	20		2.5	ug/L	20.0		99	50-140			
Dichlorodifluoromethane	19		2.5	ug/L	20.0		93	10-180			
Ethylbenzene	20		2.5	ug/L	20.0		101	63-133			
Freon 113	20		2.5	ug/L	20.0		99	47-173			
Isopropylbenzene	20		2.5	ug/L	20.0		102	60-132			
m,p-Xylenes	41		5.0	ug/L	40.0		102	64-133			
Methyl acetate	22		2.5	ug/L	20.0		111	70-130			
Methylene Chloride	22		12	ug/L	20.0		108	43-142			
Methyl-tert-Butyl Ether	21		2.5	ug/L	20.0		106	51-145			
o-Xylene	20		2.5	ug/L	20.0		102	61-129			
Styrene	22		2.5	ug/L	20.0		111	59-136			
Tetrachloroethene	23		2.5	ug/L	20.0		114	60-147			
Toluene	21		2.5	ug/L	20.0		105	64-131			
trans-1,2-Dichloroethene	22		2.5	ug/L	20.0		108	54-134			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2B17011 - EPA 5030B_MS - Continued

LCS (2B17011-BS1) Continued Prepared: 02/17/2022 00:00 Analyzed: 02/17/2022 09:52

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
trans-1,3-Dichloropropene	20		2.5	ug/L	20.0		100	65-149			
Trichloroethene	22		2.5	ug/L	20.0		110	62-135			
Trichlorofluoromethane	18		2.5	ug/L	20.0		92	56-155			
Vinyl chloride	19		2.5	ug/L	20.0		94	20-167			
4-Bromofluorobenzene	*48*	*I*		*ug/L*	*50.0*		*96*	*41-142*			
Dibromofluoromethane	*54*			*ug/L*	*50.0*		*108*	*53-146*			
Toluene-d8	*57*			*ug/L*	*50.0*		*115*	*41-146*			

Matrix Spike (2B17011-MS1) Prepared: 02/17/2022 00:00 Analyzed: 02/17/2022 10:21

Source: AF00917-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	2300		250	ug/L	2000	80 U	114	57-148			
1,1,2,2-Tetrachloroethane	2100		250	ug/L	2000	54 U	104	60-139			
1,1,2-Trichloroethane	2100		250	ug/L	2000	76 U	105	57-141			
1,1-Dichloroethane	2200		250	ug/L	2000	62 U	111	57-142			
1,1-Dichloroethene	2500		250	ug/L	2000	94 U	123	47-139			
1,2,4-Trichlorobenzene	2400		250	ug/L	2000	70 U	121	52-159			
1,2-Dibromo-3-chloropropane	1900		250	ug/L	2000	96 U	93	48-150			
1,2-Dibromoethane	2000		250	ug/L	2000	78 U	101	57-140			
1,2-Dichlorobenzene	2100		250	ug/L	2000	73 U	106	63-131			
1,2-Dichloroethane	2100		250	ug/L	2000	63 U	104	50-156			
1,2-Dichloropropane	2100		250	ug/L	2000	80 U	105	61-133			
1,3-Dichlorobenzene	2100		250	ug/L	2000	77 U	106	66-129			
1,4-Dichlorobenzene	2000		250	ug/L	2000	76 U	101	65-133			
2-Butanone	16000		1200	ug/L	10000	450 U	156	10-180			
2-Hexanone	9500		1200	ug/L	10000	250 U	95	12-180			
4-Methyl-2-pentanone	11000		1200	ug/L	10000	250 U	110	19-180			
Acetone	9400		2500	ug/L	10000	1000 U	94	10-180			
Benzene	2400		250	ug/L	2000	71 U	120	56-136			
Bromodichloromethane	2300		250	ug/L	2000	52 U	117	58-135			
Bromoform	2300		250	ug/L	2000	75 U	116	46-148			
Bromomethane	1800		250	ug/L	2000	95 U	90	10-173			
Carbon disulfide	2900		1200	ug/L	2000	250 U	147	43-153			
Carbon Tetrachloride	2300		250	ug/L	2000	94 U	117	54-156			
Chlorobenzene	2200		250	ug/L	2000	72 U	111	51-139			
Chloroethane	2300		250	ug/L	2000	98 U	113	27-180			
Chloroform	2300		250	ug/L	2000	80 U	115	58-139			
Chloromethane	1900		250	ug/L	2000	82 U	93	33-154			
cis-1,2-Dichloroethene	2300		250	ug/L	2000	53 U	113	56-128			
cis-1,3-Dichloropropene	2100		250	ug/L	2000	59 U	106	64-128			
Cyclohexane	2200		250	ug/L	2000	93 U	109	70-130			
Dibromochloromethane	2100		250	ug/L	2000	50 U	103	50-140			
Dichlorodifluoromethane	2200		250	ug/L	2000	74 U	110	10-180			
Ethylbenzene	2200		250	ug/L	2000	69 U	109	63-133			
Freon 113	2400		250	ug/L	2000	73 U	119	47-173			
Isopropylbenzene	2200		250	ug/L	2000	67 U	110	60-132			
m,p-Xylenes	4300		500	ug/L	4000	130 U	108	64-133			
Methyl acetate	2400		250	ug/L	2000	95 U	119	70-130			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2B17011 - EPA 5030B_MS - Continued

Matrix Spike (2B17011-MS1) Continued Prepared: 02/17/2022 00:00 Analyzed: 02/17/2022 10:21

Source: AF00917-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Methylene Chloride	2300		1200	ug/L	2000	250 U	114	43-142			
Methyl-tert-Butyl Ether	2200		250	ug/L	2000	60 U	110	51-145			
o-Xylene	2200		250	ug/L	2000	53 U	108	61-129			
Styrene	2300		250	ug/L	2000	61 U	116	59-136			
Tetrachloroethene	2200		250	ug/L	2000	76 U	112	60-147			
Toluene	2600		250	ug/L	2000	290	113	64-131			
trans-1,2-Dichloroethene	2400		250	ug/L	2000	73 U	120	54-134			
trans-1,3-Dichloropropene	2200		250	ug/L	2000	73 U	108	65-149			
Trichloroethene	2400		250	ug/L	2000	89 U	118	62-135			
Trichlorofluoromethane	2100		250	ug/L	2000	94 U	106	56-155			
Vinyl chloride	2100		250	ug/L	2000	71 U	104	20-167			
4-Bromofluorobenzene	*4800*	*I*		*ug/L*	*5000*		*95*	*41-142*			
Dibromofluoromethane	*5500*			*ug/L*	*5000*		*109*	*53-146*			
Toluene-d8	*5600*			*ug/L*	*5000*		*112*	*41-146*			

Matrix Spike Dup (2B17011-MSD1) Prepared: 02/17/2022 00:00 Analyzed: 02/17/2022 10:50

Source: AF00917-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	2200		250	ug/L	2000	80 U	108	57-148	5	25	
1,1,2,2-Tetrachloroethane	2300		250	ug/L	2000	54 U	116	60-139	11	17	
1,1,2-Trichloroethane	2200		250	ug/L	2000	76 U	109	57-141	3	16	
1,1-Dichloroethane	2200		250	ug/L	2000	62 U	109	57-142	3	24	
1,1-Dichloroethene	2300		250	ug/L	2000	94 U	116	47-139	6	16	
1,2,4-Trichlorobenzene	2600		250	ug/L	2000	70 U	130	52-159	7	24	
1,2-Dibromo-3-chloropropane	2100		250	ug/L	2000	96 U	106	48-150	13	21	
1,2-Dibromoethane	2100		250	ug/L	2000	78 U	106	57-140	5	16	
1,2-Dichlorobenzene	2100		250	ug/L	2000	73 U	103	63-131	3	25	
1,2-Dichloroethane	2000		250	ug/L	2000	63 U	101	50-156	3	18	
1,2-Dichloropropane	2100		250	ug/L	2000	80 U	103	61-133	2	26	
1,3-Dichlorobenzene	2000		250	ug/L	2000	77 U	100	66-129	6	23	
1,4-Dichlorobenzene	2000		250	ug/L	2000	76 U	98	65-133	4	23	
2-Butanone	18000		1200	ug/L	10000	450 U	179	10-180	14	29	
2-Hexanone	11000		1200	ug/L	10000	250 U	110	12-180	14	28	
4-Methyl-2-pentanone	13000		1200	ug/L	10000	250 U	129	19-180	16	24	
Acetone	11000		2500	ug/L	10000	1000 U	105	10-180	11	19	
Benzene	2300		250	ug/L	2000	71 U	114	56-136	5	14	
Bromodichloromethane	2300		250	ug/L	2000	52 U	114	58-135	3	19	
Bromoform	2500		250	ug/L	2000	75 U	125	46-148	8	18	
Bromomethane	1900		250	ug/L	2000	95 U	94	10-173	3	29	
Carbon disulfide	2800		1200	ug/L	2000	250 U	138	43-153	6	26	
Carbon Tetrachloride	2200		250	ug/L	2000	94 U	110	54-156	6	27	
Chlorobenzene	2200		250	ug/L	2000	72 U	110	51-139	0.8	13	
Chloroethane	2200		250	ug/L	2000	98 U	110	27-180	2	22	
Chloroform	2200		250	ug/L	2000	80 U	111	58-139	4	17	
Chloromethane	1800		250	ug/L	2000	82 U	92	33-154	1	31	
cis-1,2-Dichloroethene	2200		250	ug/L	2000	53 U	110	56-128	3	17	
cis-1,3-Dichloropropene	2100		250	ug/L	2000	59 U	103	64-128	3	20	
Cyclohexane	2100		250	ug/L	2000	93 U	107	70-130	2	20	

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2B17011 - EPA 5030B_MS - Continued

Matrix Spike Dup (2B17011-MSD1) Continued Prepared: 02/17/2022 00:00 Analyzed: 02/17/2022 10:50

Source: AF00917-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Dibromochloromethane	2100		250	ug/L	2000	50 U	103	50-140	0.3	18	
Dichlorodifluoromethane	2100		250	ug/L	2000	74 U	106	10-180	4	26	
Ethylbenzene	2100		250	ug/L	2000	69 U	106	63-133	3	18	
Freon 113	2300		250	ug/L	2000	73 U	113	47-173	6	30	
Isopropylbenzene	2200		250	ug/L	2000	67 U	108	60-132	2	23	
m,p-Xylenes	4300		500	ug/L	4000	130 U	106	64-133	2	18	
Methyl acetate	2700		250	ug/L	2000	95 U	133	70-130	11	20	QM-07
Methylene Chloride	2200		1200	ug/L	2000	250 U	111	43-142	3	23	
Methyl-tert-Butyl Ether	2200		250	ug/L	2000	60 U	112	51-145	1	22	
o-Xylene	2200		250	ug/L	2000	53 U	108	61-129	0.05	16	
Styrene	2300		250	ug/L	2000	61 U	116	59-136	0.4	32	
Tetrachloroethene	2100		250	ug/L	2000	76 U	107	60-147	4	21	
Toluene	2500		250	ug/L	2000	290	110	64-131	2	16	
trans-1,2-Dichloroethene	2300		250	ug/L	2000	73 U	116	54-134	3	20	
trans-1,3-Dichloropropene	2100		250	ug/L	2000	73 U	107	65-149	2	17	
Trichloroethene	2300		250	ug/L	2000	89 U	114	62-135	4	20	
Trichlorofluoromethane	2000		250	ug/L	2000	94 U	99	56-155	6	22	
Vinyl chloride	2100		250	ug/L	2000	71 U	104	20-167	0.3	24	
4-Bromofluorobenzene	*4800*	*I*		*ug/L*	*5000*		*96*	*41-142*			
Dibromofluoromethane	*5400*			*ug/L*	*5000*		*108*	*53-146*			
Toluene-d8	*5600*			*ug/L*	*5000*		*111*	*41-146*			

Batch 2B17014 - EPA 5030B_MS

Blank (2B17014-BLK1) Prepared: 02/17/2022 00:00 Analyzed: 02/17/2022 09:30

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	0.80	U	2.5	ug/L							
1,1,2,2-Tetrachloroethane	0.54	U	2.5	ug/L							
1,1,2-Trichloroethane	0.76	U	2.5	ug/L							
1,1-Dichloroethane	0.62	U	2.5	ug/L							
1,1-Dichloroethene	0.94	U	2.5	ug/L							
1,2,4-Trichlorobenzene	0.70	U	2.5	ug/L							
1,2-Dibromo-3-chloropropane	0.96	U	2.5	ug/L							
1,2-Dibromoethane	0.78	U	2.5	ug/L							
1,2-Dichlorobenzene	0.73	U	2.5	ug/L							
1,2-Dichloroethane	0.63	U	2.5	ug/L							
1,2-Dichloropropane	0.80	U	2.5	ug/L							
1,3-Dichlorobenzene	0.77	U	2.5	ug/L							
1,4-Dichlorobenzene	0.76	U	2.5	ug/L							
2-Butanone	4.5	U	12	ug/L							
2-Hexanone	2.5	U	12	ug/L							
4-Methyl-2-pentanone	2.5	U	12	ug/L							
Acetone	10	U	25	ug/L							
Benzene	0.71	U	2.5	ug/L							
Bromodichloromethane	0.52	U	2.5	ug/L							
Bromoform	0.75	U	2.5	ug/L							
Bromomethane	0.95	U	2.5	ug/L							
Carbon disulfide	2.5	U	12	ug/L							

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2B17014 - EPA 5030B_MS - Continued

Blank (2B17014-BLK1) Continued Prepared: 02/17/2022 00:00 Analyzed: 02/17/2022 09:30

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Carbon Tetrachloride	0.94	U	2.5	ug/L							
Chlorobenzene	0.72	U	2.5	ug/L							
Chloroethane	0.98	U	2.5	ug/L							
Chloroform	0.80	U	2.5	ug/L							
Chloromethane	0.82	U	2.5	ug/L							
cis-1,2-Dichloroethene	0.53	U	2.5	ug/L							
cis-1,3-Dichloropropene	0.59	U	2.5	ug/L							
Cyclohexane	0.93	U	2.5	ug/L							
Dibromochloromethane	0.50	U	2.5	ug/L							
Dichlorodifluoromethane	0.74	U	2.5	ug/L							
Ethylbenzene	0.69	U	2.5	ug/L							
Freon 113	0.73	U	2.5	ug/L							
Isopropylbenzene	0.67	U	2.5	ug/L							
Methyl acetate	0.95	U	2.5	ug/L							
Methylene Chloride	2.5	U	12	ug/L							
Methyl-tert-Butyl Ether	0.60	U	2.5	ug/L							
Styrene	0.61	U	2.5	ug/L							
Tetrachloroethene	0.76	U	2.5	ug/L							
Toluene	0.72	U	2.5	ug/L							
trans-1,2-Dichloroethene	0.73	U	2.5	ug/L							
trans-1,3-Dichloropropene	0.73	U	2.5	ug/L							
Trichloroethene	0.89	U	2.5	ug/L							
Trichlorofluoromethane	0.94	U	2.5	ug/L							
Vinyl chloride	0.71	U	2.5	ug/L							
Xylenes (Total)	1.3	U	5.0	ug/L							
4-Bromofluorobenzene	*55*			*ug/L*	*50.0*		*109*	*41-142*			
Dibromofluoromethane	*53*			*ug/L*	*50.0*		*105*	*53-146*			
Toluene-d8	*51*			*ug/L*	*50.0*		*102*	*41-146*			

LCS (2B17014-BS1) Prepared: 02/17/2022 00:00 Analyzed: 02/17/2022 08:35

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	23		2.5	ug/L	20.0		115	57-148			
1,1,2,2-Tetrachloroethane	21		2.5	ug/L	20.0		103	60-139			
1,1,2-Trichloroethane	19		2.5	ug/L	20.0		97	57-141			
1,1-Dichloroethane	22		2.5	ug/L	20.0		110	57-142			
1,1-Dichloroethene	21		2.5	ug/L	20.0		103	47-139			
1,2,4-Trichlorobenzene	18		2.5	ug/L	20.0		92	52-159			
1,2-Dibromo-3-chloropropane	19		2.5	ug/L	20.0		94	48-150			
1,2-Dibromoethane	19		2.5	ug/L	20.0		97	57-140			
1,2-Dichlorobenzene	21		2.5	ug/L	20.0		107	63-131			
1,2-Dichloroethane	20		2.5	ug/L	20.0		98	50-156			
1,2-Dichloropropane	20		2.5	ug/L	20.0		101	61-133			
1,3-Dichlorobenzene	22		2.5	ug/L	20.0		110	66-129			
1,4-Dichlorobenzene	20		2.5	ug/L	20.0		100	65-133			
2-Butanone	110		12	ug/L	100		107	10-180			
2-Hexanone	92		12	ug/L	100		92	12-180			
4-Methyl-2-pentanone	98		12	ug/L	100		98	19-180			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2B17014 - EPA 5030B_MS - Continued

LCS (2B17014-BS1) Continued Prepared: 02/17/2022 00:00 Analyzed: 02/17/2022 08:35

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Acetone	89		25	ug/L	100		89	10-180			
Benzene	21		2.5	ug/L	20.0		103	56-136			
Bromodichloromethane	19		2.5	ug/L	20.0		93	58-135			
Bromoform	25		2.5	ug/L	20.0		123	46-148			
Bromomethane	13		2.5	ug/L	20.0		67	10-173			
Carbon disulfide	24		12	ug/L	20.0		120	43-153			
Carbon Tetrachloride	28		2.5	ug/L	20.0		140	54-156			
Chlorobenzene	20		2.5	ug/L	20.0		101	51-139			
Chloroethane	23		2.5	ug/L	20.0		116	27-180			
Chloroform	21		2.5	ug/L	20.0		106	58-139			
Chloromethane	18		2.5	ug/L	20.0		91	33-154			
cis-1,2-Dichloroethene	21		2.5	ug/L	20.0		104	56-128			
cis-1,3-Dichloropropene	18		2.5	ug/L	20.0		90	64-128			
Cyclohexane	22		2.5	ug/L	20.0		108	70-130			
Dibromochloromethane	18		2.5	ug/L	20.0		92	50-140			
Dichlorodifluoromethane	17		2.5	ug/L	20.0		85	10-180			
Ethylbenzene	20		2.5	ug/L	20.0		100	63-133			
Freon 113	20		2.5	ug/L	20.0		101	47-173			
Isopropylbenzene	21		2.5	ug/L	20.0		105	60-132			
m,p-Xylenes	40		5.0	ug/L	40.0		101	64-133			
Methyl acetate	25		2.5	ug/L	20.0		125	70-130			
Methylene Chloride	22		12	ug/L	20.0		112	43-142			
Methyl-tert-Butyl Ether	23		2.5	ug/L	20.0		116	51-145			
o-Xylene	21		2.5	ug/L	20.0		104	61-129			
Styrene	19		2.5	ug/L	20.0		94	59-136			
Tetrachloroethene	17		2.5	ug/L	20.0		87	60-147			
Toluene	19		2.5	ug/L	20.0		96	64-131			
trans-1,2-Dichloroethene	22		2.5	ug/L	20.0		108	54-134			
trans-1,3-Dichloropropene	20		2.5	ug/L	20.0		99	65-149			
Trichloroethene	18		2.5	ug/L	20.0		88	62-135			
Trichlorofluoromethane	20		2.5	ug/L	20.0		99	56-155			
Vinyl chloride	19		2.5	ug/L	20.0		96	20-167			
4-Bromofluorobenzene	*56*			*ug/L*	*50.0*		*113*	*41-142*			
Dibromofluoromethane	*53*			*ug/L*	*50.0*		*105*	*53-146*			
Toluene-d8	*52*			*ug/L*	*50.0*		*103*	*41-146*			

Matrix Spike (2B17014-MS1) Prepared: 02/17/2022 00:00 Analyzed: 02/17/2022 11:21

Source: AF00916-01

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	2500		250	ug/L	2000	80 U	125	57-148			
1,1,2,2-Tetrachloroethane	2100		250	ug/L	2000	54 U	104	60-139			
1,1,2-Trichloroethane	2100		250	ug/L	2000	76 U	107	57-141			
1,1-Dichloroethane	2300		250	ug/L	2000	62 U	114	57-142			
1,1-Dichloroethene	2200		250	ug/L	2000	94 U	111	47-139			
1,2,4-Trichlorobenzene	2000		250	ug/L	2000	70 U	98	52-159			
1,2-Dibromo-3-chloropropane	1800		250	ug/L	2000	96 U	91	48-150			
1,2-Dibromoethane	2000		250	ug/L	2000	78 U	99	57-140			
1,2-Dichlorobenzene	2200		250	ug/L	2000	73 U	110	63-131			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2B17014 - EPA 5030B_MS - Continued

Matrix Spike (2B17014-MS1) Continued Prepared: 02/17/2022 00:00 Analyzed: 02/17/2022 11:21

Source: AF00916-01

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,2-Dichloroethane	2000		250	ug/L	2000	63 U	99	50-156			
1,2-Dichloropropane	2100		250	ug/L	2000	80 U	105	61-133			
1,3-Dichlorobenzene	2200		250	ug/L	2000	77 U	112	66-129			
1,4-Dichlorobenzene	2100		250	ug/L	2000	76 U	106	65-133			
2-Butanone	10000		1200	ug/L	10000	450 U	101	10-180			
2-Hexanone	8800		1200	ug/L	10000	250 U	88	12-180			
4-Methyl-2-pentanone	9500		1200	ug/L	10000	250 U	95	19-180			
Acetone	8800		2500	ug/L	10000	1000 U	88	10-180			
Benzene	2200		250	ug/L	2000	71 U	108	56-136			
Bromodichloromethane	1900		250	ug/L	2000	52 U	94	58-135			
Bromoform	2300		250	ug/L	2000	75 U	116	46-148			
Bromomethane	2000		250	ug/L	2000	95 U	99	10-173			
Carbon disulfide	2500		1200	ug/L	2000	250 U	124	43-153			
Carbon Tetrachloride	2600		250	ug/L	2000	94 U	128	54-156			
Chlorobenzene	2100		250	ug/L	2000	72 U	105	51-139			
Chloroethane	2500		250	ug/L	2000	98 U	126	27-180			
Chloroform	2200		250	ug/L	2000	80 U	110	58-139			
Chloromethane	1900		250	ug/L	2000	82 U	93	33-154			
cis-1,2-Dichloroethene	2100		250	ug/L	2000	53 U	104	56-128			
cis-1,3-Dichloropropene	1800		250	ug/L	2000	59 U	92	64-128			
Cyclohexane	2500		250	ug/L	2000	93 U	124	70-130			
Dibromochloromethane	1900		250	ug/L	2000	50 U	94	50-140			
Dichlorodifluoromethane	1700		250	ug/L	2000	74 U	86	10-180			
Ethylbenzene	2100		250	ug/L	2000	69 U	107	63-133			
Freon 113	2200		250	ug/L	2000	73 U	109	47-173			
Isopropylbenzene	2300		250	ug/L	2000	67 U	116	60-132			
m,p-Xylenes	4200		500	ug/L	4000	130 U	106	64-133			
Methyl acetate	2300		250	ug/L	2000	95 U	114	70-130			
Methylene Chloride	2400		1200	ug/L	2000	250 U	119	43-142			
Methyl-tert-Butyl Ether	2400		250	ug/L	2000	60 U	120	51-145			
o-Xylene	2200		250	ug/L	2000	53 U	110	61-129			
Styrene	2000		250	ug/L	2000	61 U	100	59-136			
Tetrachloroethene	1800		250	ug/L	2000	76 U	92	60-147			
Toluene	2100		250	ug/L	2000	72 U	106	64-131			
trans-1,2-Dichloroethene	2300		250	ug/L	2000	73 U	117	54-134			
trans-1,3-Dichloropropene	2000		250	ug/L	2000	73 U	102	65-149			
Trichloroethene	2000		250	ug/L	2000	89 U	98	62-135			
Trichlorofluoromethane	2000		250	ug/L	2000	94 U	99	56-155			
Vinyl chloride	2000		250	ug/L	2000	71 U	101	20-167			
4-Bromofluorobenzene	*5600*			*ug/L*	*5000*		*111*	*41-142*			
Dibromofluoromethane	*5200*			*ug/L*	*5000*		*104*	*53-146*			
Toluene-d8	*5200*			*ug/L*	*5000*		*103*	*41-146*			

Matrix Spike Dup (2B17014-MSD1) Prepared: 02/17/2022 00:00 Analyzed: 02/17/2022 11:49

Source: AF00916-01

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	2500		250	ug/L	2000	80 U	123	57-148	2	25	
1,1,2,2-Tetrachloroethane	1900		250	ug/L	2000	54 U	97	60-139	7	17	

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2B17014 - EPA 5030B_MS - Continued

Matrix Spike Dup (2B17014-MSD1) Continued Prepared: 02/17/2022 00:00 Analyzed: 02/17/2022 11:49

Source: AF00916-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,2-Trichloroethane	1900		250	ug/L	2000	76 U	93	57-141	14	16	
1,1-Dichloroethane	2300		250	ug/L	2000	62 U	116	57-142	2	24	
1,1-Dichloroethene	2200		250	ug/L	2000	94 U	110	47-139	0.4	16	
1,2,4-Trichlorobenzene	1900		250	ug/L	2000	70 U	96	52-159	2	24	
1,2-Dibromo-3-chloropropane	1800		250	ug/L	2000	96 U	89	48-150	2	21	
1,2-Dibromoethane	1800		250	ug/L	2000	78 U	89	57-140	11	16	
1,2-Dichlorobenzene	2100		250	ug/L	2000	73 U	104	63-131	6	25	
1,2-Dichloroethane	2000		250	ug/L	2000	63 U	102	50-156	3	18	
1,2-Dichloropropane	2000		250	ug/L	2000	80 U	102	61-133	3	26	
1,3-Dichlorobenzene	2200		250	ug/L	2000	77 U	110	66-129	1	23	
1,4-Dichlorobenzene	1900		250	ug/L	2000	76 U	97	65-133	9	23	
2-Butanone	10000		1200	ug/L	10000	450 U	103	10-180	2	29	
2-Hexanone	8300		1200	ug/L	10000	250 U	83	12-180	6	28	
4-Methyl-2-pentanone	9400		1200	ug/L	10000	250 U	94	19-180	0.6	24	
Acetone	9000		2500	ug/L	10000	1000 U	90	10-180	2	19	
Benzene	2200		250	ug/L	2000	71 U	110	56-136	3	14	
Bromodichloromethane	1900		250	ug/L	2000	52 U	94	58-135	0.5	19	
Bromoform	2400		250	ug/L	2000	75 U	121	46-148	4	18	
Bromomethane	2200		250	ug/L	2000	95 U	110	10-173	11	29	
Carbon disulfide	2500		1200	ug/L	2000	250 U	125	43-153	0.3	26	
Carbon Tetrachloride	3000		250	ug/L	2000	94 U	150	54-156	16	27	
Chlorobenzene	2100		250	ug/L	2000	72 U	104	51-139	1	13	
Chloroethane	2600		250	ug/L	2000	98 U	130	27-180	3	22	
Chloroform	2200		250	ug/L	2000	80 U	108	58-139	2	17	
Chloromethane	1900		250	ug/L	2000	82 U	97	33-154	4	31	
cis-1,2-Dichloroethene	2100		250	ug/L	2000	53 U	105	56-128	0.6	17	
cis-1,3-Dichloropropene	1800		250	ug/L	2000	59 U	90	64-128	2	20	
Cyclohexane	2500		250	ug/L	2000	93 U	124	70-130	0.4	20	
Dibromochloromethane	1800		250	ug/L	2000	50 U	89	50-140	5	18	
Dichlorodifluoromethane	1700		250	ug/L	2000	74 U	85	10-180	1	26	
Ethylbenzene	2100		250	ug/L	2000	69 U	106	63-133	2	18	
Freon 113	2200		250	ug/L	2000	73 U	112	47-173	2	30	
Isopropylbenzene	2300		250	ug/L	2000	67 U	114	60-132	1	23	
m,p-Xylenes	4200		500	ug/L	4000	130 U	105	64-133	0.6	18	
Methyl acetate	2500		250	ug/L	2000	95 U	126	70-130	10	20	
Methylene Chloride	2200		1200	ug/L	2000	250 U	112	43-142	5	23	
Methyl-tert-Butyl Ether	2300		250	ug/L	2000	60 U	115	51-145	4	22	
o-Xylene	2200		250	ug/L	2000	53 U	110	61-129	0.1	16	
Styrene	2000		250	ug/L	2000	61 U	98	59-136	2	32	
Tetrachloroethene	1800		250	ug/L	2000	76 U	89	60-147	4	21	
Toluene	2000		250	ug/L	2000	72 U	100	64-131	5	16	
trans-1,2-Dichloroethene	2300		250	ug/L	2000	73 U	116	54-134	1	20	
trans-1,3-Dichloropropene	1900		250	ug/L	2000	73 U	95	65-149	6	17	
Trichloroethene	1900		250	ug/L	2000	89 U	97	62-135	1	20	
Trichlorofluoromethane	1900		250	ug/L	2000	94 U	96	56-155	4	22	
Vinyl chloride	2000		250	ug/L	2000	71 U	98	20-167	3	24	
4-Bromofluorobenzene	*5700*			*ug/L*	*5000*		*114*	*41-142*			
Dibromofluoromethane	*5300*			*ug/L*	*5000*		*106*	*53-146*			
Toluene-d8	*5200*			*ug/L*	*5000*		*104*	*41-146*			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2B18005 - EPA 5030B_MS

Blank (2B18005-BLK1) Prepared: 02/18/2022 00:00 Analyzed: 02/18/2022 09:23

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	0.80	U	2.5	ug/L							
1,1,2,2-Tetrachloroethane	0.54	U	2.5	ug/L							
1,1,2-Trichloroethane	0.76	U	2.5	ug/L							
1,1-Dichloroethane	0.62	U	2.5	ug/L							
1,1-Dichloroethene	0.94	U	2.5	ug/L							
1,2,4-Trichlorobenzene	0.70	U	2.5	ug/L							
1,2-Dibromo-3-chloropropane	0.96	U	2.5	ug/L							
1,2-Dibromoethane	0.78	U	2.5	ug/L							
1,2-Dichlorobenzene	0.73	U	2.5	ug/L							
1,2-Dichloroethane	0.63	U	2.5	ug/L							
1,2-Dichloropropane	0.80	U	2.5	ug/L							
1,3-Dichlorobenzene	0.77	U	2.5	ug/L							
1,4-Dichlorobenzene	0.76	U	2.5	ug/L							
2-Butanone	4.5	U	12	ug/L							
2-Hexanone	2.5	U	12	ug/L							
4-Methyl-2-pentanone	2.5	U	12	ug/L							
Acetone	10	U	25	ug/L							
Benzene	0.71	U	2.5	ug/L							
Bromodichloromethane	0.52	U	2.5	ug/L							
Bromoform	0.75	U	2.5	ug/L							
Bromomethane	0.95	U	2.5	ug/L							
Carbon disulfide	2.5	U	12	ug/L							
Carbon Tetrachloride	0.94	U	2.5	ug/L							
Chlorobenzene	0.72	U	2.5	ug/L							
Chloroethane	0.98	U	2.5	ug/L							
Chloroform	0.80	U	2.5	ug/L							
Chloromethane	0.82	U	2.5	ug/L							
cis-1,2-Dichloroethene	0.53	U	2.5	ug/L							
cis-1,3-Dichloropropene	0.59	U	2.5	ug/L							
Cyclohexane	0.93	U	2.5	ug/L							
Dibromochloromethane	0.50	U	2.5	ug/L							
Dichlorodifluoromethane	0.74	U	2.5	ug/L							
Ethylbenzene	0.69	U	2.5	ug/L							
Freon 113	0.73	U	2.5	ug/L							
Isopropylbenzene	0.67	U	2.5	ug/L							
Methyl acetate	0.95	U	2.5	ug/L							
Methylene Chloride	2.5	U	12	ug/L							
Methyl-tert-Butyl Ether	0.60	U	2.5	ug/L							
Styrene	0.61	U	2.5	ug/L							
Tetrachloroethene	0.76	U	2.5	ug/L							
Toluene	0.72	U	2.5	ug/L							
trans-1,2-Dichloroethene	0.73	U	2.5	ug/L							
trans-1,3-Dichloropropene	0.73	U	2.5	ug/L							
Trichloroethene	0.89	U	2.5	ug/L							
Trichlorofluoromethane	0.94	U	2.5	ug/L							
Vinyl chloride	0.71	U	2.5	ug/L							
Xylenes (Total)	1.3	U	5.0	ug/L							
4-Bromofluorobenzene	*55*			*ug/L*	*50.0*		*111*	*41-142*			
Dibromofluoromethane	*51*			*ug/L*	*50.0*		*101*	*53-146*			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2B18005 - EPA 5030B_MS - Continued

Blank (2B18005-BLK1) Continued Prepared: 02/18/2022 00:00 Analyzed: 02/18/2022 09:23

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Toluene-d8	*51*			*ug/L*	*50.0*		*102*	*41-146*			

LCS (2B18005-BS1) Prepared: 02/18/2022 00:00 Analyzed: 02/18/2022 08:28

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	23		2.5	ug/L	20.0		113	57-148			
1,1,2,2-Tetrachloroethane	19		2.5	ug/L	20.0		96	60-139			
1,1,2-Trichloroethane	19		2.5	ug/L	20.0		95	57-141			
1,1-Dichloroethane	22		2.5	ug/L	20.0		110	57-142			
1,1-Dichloroethene	21		2.5	ug/L	20.0		104	47-139			
1,2,4-Trichlorobenzene	19		2.5	ug/L	20.0		93	52-159			
1,2-Dibromo-3-chloropropane	17		2.5	ug/L	20.0		85	48-150			
1,2-Dibromoethane	17		2.5	ug/L	20.0		87	57-140			
1,2-Dichlorobenzene	21		2.5	ug/L	20.0		104	63-131			
1,2-Dichloroethane	19		2.5	ug/L	20.0		96	50-156			
1,2-Dichloropropane	20		2.5	ug/L	20.0		98	61-133			
1,3-Dichlorobenzene	20		2.5	ug/L	20.0		102	66-129			
1,4-Dichlorobenzene	20		2.5	ug/L	20.0		98	65-133			
2-Butanone	110		12	ug/L	100		109	10-180			
2-Hexanone	91		12	ug/L	100		91	12-180			
4-Methyl-2-pentanone	100		12	ug/L	100		100	19-180			
Acetone	93		25	ug/L	100		93	10-180			
Benzene	20		2.5	ug/L	20.0		101	56-136			
Bromodichloromethane	18		2.5	ug/L	20.0		91	58-135			
Bromoform	22		2.5	ug/L	20.0		111	46-148			
Bromomethane	10		2.5	ug/L	20.0		50	10-173			
Carbon disulfide	23		12	ug/L	20.0		115	43-153			
Carbon Tetrachloride	26		2.5	ug/L	20.0		128	54-156			
Chlorobenzene	19		2.5	ug/L	20.0		96	51-139			
Chloroethane	22		2.5	ug/L	20.0		111	27-180			
Chloroform	20		2.5	ug/L	20.0		102	58-139			
Chloromethane	16		2.5	ug/L	20.0		80	33-154			
cis-1,2-Dichloroethene	21		2.5	ug/L	20.0		104	56-128			
cis-1,3-Dichloropropene	18		2.5	ug/L	20.0		88	64-128			
Cyclohexane	23		2.5	ug/L	20.0		114	70-130			
Dibromochloromethane	17		2.5	ug/L	20.0		86	50-140			
Dichlorodifluoromethane	15		2.5	ug/L	20.0		75	10-180			
Ethylbenzene	19		2.5	ug/L	20.0		97	63-133			
Freon 113	20		2.5	ug/L	20.0		99	47-173			
Isopropylbenzene	20		2.5	ug/L	20.0		102	60-132			
m,p-Xylenes	40		5.0	ug/L	40.0		99	64-133			
Methyl acetate	24		2.5	ug/L	20.0		119	70-130			
Methylene Chloride	21		12	ug/L	20.0		103	43-142			
Methyl-tert-Butyl Ether	24		2.5	ug/L	20.0		118	51-145			
o-Xylene	20		2.5	ug/L	20.0		100	61-129			
Styrene	18		2.5	ug/L	20.0		90	59-136			
Tetrachloroethene	17		2.5	ug/L	20.0		85	60-147			
Toluene	20		2.5	ug/L	20.0		100	64-131			
trans-1,2-Dichloroethene	22		2.5	ug/L	20.0		112	54-134			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2B18005 - EPA 5030B_MS - Continued

LCS (2B18005-BS1) Continued Prepared: 02/18/2022 00:00 Analyzed: 02/18/2022 08:28

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
trans-1,3-Dichloropropene	20		2.5	ug/L	20.0		98	65-149			
Trichloroethene	18		2.5	ug/L	20.0		88	62-135			
Trichlorofluoromethane	18		2.5	ug/L	20.0		88	56-155			
Vinyl chloride	17		2.5	ug/L	20.0		84	20-167			
4-Bromofluorobenzene	*55*			*ug/L*	*50.0*		*109*	*41-142*			
Dibromofluoromethane	*53*			*ug/L*	*50.0*		*106*	*53-146*			
Toluene-d8	*50*			*ug/L*	*50.0*		*101*	*41-146*			

Matrix Spike (2B18005-MS1) Prepared: 02/18/2022 00:00 Analyzed: 02/18/2022 12:38

Source: AF00074-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	26		2.5	ug/L	20.0	0.80 U	130	57-148			
1,1,2,2-Tetrachloroethane	20		2.5	ug/L	20.0	0.54 U	102	60-139			
1,1,2-Trichloroethane	20		2.5	ug/L	20.0	0.76 U	100	57-141			
1,1-Dichloroethane	24		2.5	ug/L	20.0	0.62 U	122	57-142			
1,1-Dichloroethene	24		2.5	ug/L	20.0	0.94 U	118	47-139			
1,2,4-Trichlorobenzene	17		2.5	ug/L	20.0	0.70 U	85	52-159			
1,2-Dibromo-3-chloropropane	20		2.5	ug/L	20.0	0.96 U	98	48-150			
1,2-Dibromoethane	19		2.5	ug/L	20.0	0.78 U	97	57-140			
1,2-Dichlorobenzene	22		2.5	ug/L	20.0	0.73 U	111	63-131			
1,2-Dichloroethane	20		2.5	ug/L	20.0	0.63 U	101	50-156			
1,2-Dichloropropane	21		2.5	ug/L	20.0	0.80 U	107	61-133			
1,3-Dichlorobenzene	22		2.5	ug/L	20.0	0.77 U	112	66-129			
1,4-Dichlorobenzene	21		2.5	ug/L	20.0	0.76 U	107	65-133			
2-Butanone	110		12	ug/L	100	4.5 U	106	10-180			
2-Hexanone	85		12	ug/L	100	2.5 U	85	12-180			
4-Methyl-2-pentanone	91		12	ug/L	100	2.5 U	91	19-180			
Acetone	85		25	ug/L	100	10 U	85	10-180			
Benzene	23		2.5	ug/L	20.0	0.71 U	113	56-136			
Bromodichloromethane	20		2.5	ug/L	20.0	0.52 U	99	58-135			
Bromoform	26		2.5	ug/L	20.0	0.75 U	129	46-148			
Bromomethane	21		2.5	ug/L	20.0	0.95 U	104	10-173			
Carbon disulfide	27		12	ug/L	20.0	2.5 U	135	43-153			
Carbon Tetrachloride	28		2.5	ug/L	20.0	0.94 U	140	54-156			
Chlorobenzene	23		2.5	ug/L	20.0	0.72 U	113	51-139			
Chloroethane	28		2.5	ug/L	20.0	0.98 U	141	27-180			
Chloroform	23		2.5	ug/L	20.0	0.80 U	115	58-139			
Chloromethane	20		2.5	ug/L	20.0	0.82 U	100	33-154			
cis-1,2-Dichloroethene	24		2.5	ug/L	20.0	0.53 U	120	56-128			
cis-1,3-Dichloropropene	18		2.5	ug/L	20.0	0.59 U	90	64-128			
Cyclohexane	26		2.5	ug/L	20.0	0.93 U	128	70-130			
Dibromochloromethane	19		2.5	ug/L	20.0	0.50 U	94	50-140			
Dichlorodifluoromethane	19		2.5	ug/L	20.0	0.74 U	93	10-180			
Ethylbenzene	23		2.5	ug/L	20.0	0.69 U	113	63-133			
Freon 113	23		2.5	ug/L	20.0	0.73 U	117	47-173			
Isopropylbenzene	24		2.5	ug/L	20.0	0.67 U	119	60-132			
m,p-Xylenes	46		5.0	ug/L	40.0	1.3 U	115	64-133			
Methyl acetate	20		2.5	ug/L	20.0	0.95 U	102	70-130			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2B18005 - EPA 5030B_MS - Continued

Matrix Spike (2B18005-MS1) Continued Prepared: 02/18/2022 00:00 Analyzed: 02/18/2022 12:38

Source: AF00074-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Methylene Chloride	25		12	ug/L	20.0	2.5 U	126	43-142			
Methyl-tert-Butyl Ether	24		2.5	ug/L	20.0	0.60 U	121	51-145			
o-Xylene	23		2.5	ug/L	20.0	0.53 U	115	61-129			
Styrene	20		2.5	ug/L	20.0	0.61 U	99	59-136			
Tetrachloroethene	19		2.5	ug/L	20.0	0.76 U	95	60-147			
Toluene	21		2.5	ug/L	20.0	0.72 U	106	64-131			
trans-1,2-Dichloroethene	25		2.5	ug/L	20.0	0.73 U	125	54-134			
trans-1,3-Dichloropropene	20		2.5	ug/L	20.0	0.73 U	99	65-149			
Trichloroethene	20		2.5	ug/L	20.0	0.89 U	101	62-135			
Trichlorofluoromethane	22		2.5	ug/L	20.0	0.94 U	110	56-155			
Vinyl chloride	21		2.5	ug/L	20.0	0.71 U	105	20-167			
4-Bromofluorobenzene	*57*			*ug/L*	*50.0*		*113*	*41-142*			
Dibromofluoromethane	*53*			*ug/L*	*50.0*		*106*	*53-146*			
Toluene-d8	*51*			*ug/L*	*50.0*		*102*	*41-146*			

Matrix Spike Dup (2B18005-MSD1) Prepared: 02/18/2022 00:00 Analyzed: 02/18/2022 13:05

Source: AF00074-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	25		2.5	ug/L	20.0	0.80 U	126	57-148	3	25	
1,1,2,2-Tetrachloroethane	20		2.5	ug/L	20.0	0.54 U	98	60-139	5	17	
1,1,2-Trichloroethane	18		2.5	ug/L	20.0	0.76 U	92	57-141	8	16	
1,1-Dichloroethane	24		2.5	ug/L	20.0	0.62 U	122	57-142	0.2	24	
1,1-Dichloroethene	22		2.5	ug/L	20.0	0.94 U	111	47-139	6	16	
1,2,4-Trichlorobenzene	18		2.5	ug/L	20.0	0.70 U	91	52-159	6	24	
1,2-Dibromo-3-chloropropane	18		2.5	ug/L	20.0	0.96 U	90	48-150	9	21	
1,2-Dibromoethane	19		2.5	ug/L	20.0	0.78 U	96	57-140	2	16	
1,2-Dichlorobenzene	22		2.5	ug/L	20.0	0.73 U	109	63-131	2	25	
1,2-Dichloroethane	20		2.5	ug/L	20.0	0.63 U	101	50-156	0.5	18	
1,2-Dichloropropane	22		2.5	ug/L	20.0	0.80 U	112	61-133	5	26	
1,3-Dichlorobenzene	22		2.5	ug/L	20.0	0.77 U	108	66-129	3	23	
1,4-Dichlorobenzene	21		2.5	ug/L	20.0	0.76 U	103	65-133	4	23	
2-Butanone	100		12	ug/L	100	4.5 U	103	10-180	3	29	
2-Hexanone	85		12	ug/L	100	2.5 U	85	12-180	0.5	28	
4-Methyl-2-pentanone	95		12	ug/L	100	2.5 U	95	19-180	4	24	
Acetone	92		25	ug/L	100	10 U	92	10-180	8	19	
Benzene	22		2.5	ug/L	20.0	0.71 U	110	56-136	3	14	
Bromodichloromethane	19		2.5	ug/L	20.0	0.52 U	96	58-135	3	19	
Bromoform	24		2.5	ug/L	20.0	0.75 U	121	46-148	7	18	
Bromomethane	23		2.5	ug/L	20.0	0.95 U	117	10-173	12	29	
Carbon disulfide	25		12	ug/L	20.0	2.5 U	126	43-153	7	26	
Carbon Tetrachloride	27		2.5	ug/L	20.0	0.94 U	134	54-156	5	27	
Chlorobenzene	21		2.5	ug/L	20.0	0.72 U	105	51-139	7	13	
Chloroethane	26		2.5	ug/L	20.0	0.98 U	132	27-180	7	22	
Chloroform	22		2.5	ug/L	20.0	0.80 U	112	58-139	3	17	
Chloromethane	19		2.5	ug/L	20.0	0.82 U	96	33-154	4	31	
cis-1,2-Dichloroethene	23		2.5	ug/L	20.0	0.53 U	114	56-128	5	17	
cis-1,3-Dichloropropene	17		2.5	ug/L	20.0	0.59 U	87	64-128	3	20	
Cyclohexane	25		2.5	ug/L	20.0	0.93 U	127	70-130	0.7	20	

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2B18005 - EPA 5030B_MS - Continued

Matrix Spike Dup (2B18005-MSD1) Continued Prepared: 02/18/2022 00:00 Analyzed: 02/18/2022 13:05

Source: AF00074-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Dibromochloromethane	18		2.5	ug/L	20.0	0.50 U	92	50-140	3	18	
Dichlorodifluoromethane	18		2.5	ug/L	20.0	0.74 U	88	10-180	5	26	
Ethylbenzene	21		2.5	ug/L	20.0	0.69 U	107	63-133	5	18	
Freon 113	21		2.5	ug/L	20.0	0.73 U	106	47-173	10	30	
Isopropylbenzene	22		2.5	ug/L	20.0	0.67 U	112	60-132	6	23	
m,p-Xylenes	43		5.0	ug/L	40.0	1.3 U	107	64-133	7	18	
Methyl acetate	20		2.5	ug/L	20.0	0.95 U	101	70-130	0.4	20	
Methylene Chloride	25		12	ug/L	20.0	2.5 U	123	43-142	3	23	
Methyl-tert-Butyl Ether	24		2.5	ug/L	20.0	0.60 U	121	51-145	0.5	22	
o-Xylene	22		2.5	ug/L	20.0	0.53 U	108	61-129	6	16	
Styrene	19		2.5	ug/L	20.0	0.61 U	97	59-136	2	32	
Tetrachloroethene	17		2.5	ug/L	20.0	0.76 U	87	60-147	9	21	
Toluene	20		2.5	ug/L	20.0	0.72 U	102	64-131	3	16	
trans-1,2-Dichloroethene	24		2.5	ug/L	20.0	0.73 U	120	54-134	4	20	
trans-1,3-Dichloropropene	19		2.5	ug/L	20.0	0.73 U	95	65-149	4	17	
Trichloroethene	20		2.5	ug/L	20.0	0.89 U	101	62-135	0.3	20	
Trichlorofluoromethane	21		2.5	ug/L	20.0	0.94 U	107	56-155	3	22	
Vinyl chloride	21		2.5	ug/L	20.0	0.71 U	105	20-167	0.4	24	
4-Bromofluorobenzene	*55*			*ug/L*	*50.0*		*111*	*41-142*			
Dibromofluoromethane	*53*			*ug/L*	*50.0*		*106*	*53-146*			
Toluene-d8	*52*			*ug/L*	*50.0*		*103*	*41-146*			

FLAGS/NOTES AND DEFINITIONS

PQL	PQL: Practical Quantitation Limit. The PQL presented is the laboratory MRL.
B	Results are based upon membrane filter colony counts that are outside the method indicated ideal range.
I	The reported value is between the laboratory method detection limit (MDL) and the practical quantitation limit (PQL).
J	Estimated value.
K	Off-scale low; Actual value is known to be less than the value given.
L	Off-scale high; Actual value is known to be greater than value given.
M	Presence of analyte is verified but not quantified; the actual value is less than the MRL but greater than the MDL.
N	Presumptive evidence of presence of material.
O	Sampled, but analysis lost or not performed.
Q	Sample exceeded the accepted holding time.
T	Value reported is less than the laboratory method detection limit. The value is reported for informational purposes only and shall not be used in statistical analysis.
U	Indicates that the compound was analyzed for but not detected.
V	Indicates that the analyte was detected in both the sample and the associated method blank.
Y	The laboratory analysis was from an improperly preserved sample. The data may not be accurate.
Z	Too many colonies were present (TNTC); the numeric value represents the filtration volume.
?	Data are rejected and should not be used. Some or all of the quality control data for the analyte were outside criteria, and the presence or absence of the analyte cannot be determined from the data.
*	Not reported due to interference.
[CALC]	Calculated analyte - MDL/MRL reported to the highest reporting limit of the component analyses.
QL-02	The associated laboratory control sample exhibited high bias; since the result is ND, there is no impact.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
QV-01	The associated continuing calibration verification standard exhibited high bias; since the result is ND, there is no impact.

Tetra Tech, Inc.

CHAIN OF CUSTODY NUMBER AF 000827 No. 2574 PAGE 1 OF 6

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G08985	LC34	Mark Jornet	412-921-8622	ENCO
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER	PHONE NUMBER	ADDRESS
Dan Forester		Dan Forester	304-780-1426	
		CARRIER/WAYBILL NUMBER		CITY, STATE
				Orlando, FL

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR 2022	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	CONTAINER TYPE PLASTIC (P) or GLASS (G)	PRESERVATIVE USED	TYPE OF ANALYSIS 8260								COMMENTS
									G	HCL									Cooled on Ice
14 Feb	0700	LC34-GAC-20220214	LC34	—	—	GW	G	3	X										
	0710	LC34-AS1-20220214																	
	0715	LC34-AS2-20220214																	
	0720	LC34-RW17C-20220214																	
	0730	LC34-RW18C-20220214																	
	0740	LC34-RW19C-20220214																	
X	0750	LC34-RW20C-20220214	X	X	X	X	X	X	X										

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	14 FEB 22	1510	1. RECEIVED BY	2/14/22	1540
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS Q-4010 0.4°C, Q-8270 4.3°C

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TINUS-001

Tetra Tech, Inc.

CHAIN OF CUSTODY | NUMBER AT00827 No. 2572 | PAGE 2 OF 6

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G08985	~~LC34~~ LC34 PS	Mark Jonet	412-921-8622	ENCO
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER	PHONE NUMBER	ADDRESS
James Lloyd, Dan Forester		Dan Forester	304-780-1426	
		CARRIER/WAYBILL NUMBER		CITY, STATE: Orlando, FL

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR 2022	TIME	SAMPLE ID	LOCATION ID LC34PS	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	CONTAINER TYPE PLASTIC (P) or GLASS (G): G	PRESERVATIVE USED: HCL	TYPE OF ANALYSIS: 8260								COMMENTS: Cooled on Ice
14 Feb	0800	LC34PS-PZI-040.0-20220214		30	40	GW	G	3	X										
	0802	LC34PS-PZI-050.0-20220214		45	50														
	0804	LC34PS-PZI-058.0-20220214		53	58														
	0806	LC34PS-PZI-073.0-20220214		68	73														
	0808	LC34PS-PZI-080.0-20220214		75	80														
	0830	LC34PS-PZH-040.0-20220214		30	40														
	0832	LC34PS-PZH-050.0-20220214		45	50														
	0834	LC34PS-PZH-058.0-20220214		53	58														
	0836	LC34PS-PZH-073.0-20220214		68	73														
	0838	LC34PS-PZH-080.0-20220214		75	80														
	0900	LC34PS-PZK-040.0-20220214		30	40														
	0902	LC34PS-PZK-050.0-20220214		45	50														
	0904	LC34PS-PZK-058.0-20220214		53	58														

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	14FEB22	1540	1. RECEIVED BY	2/14/22	1540
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

Tetra Tech, Inc.

CHAIN OF CUSTODY NUMBER AF00827 No. 2573 | PAGE 3 OF 6

PROJECT NO: 112G00985	FACILITY: LC34PS	PROJECT MANAGER Mark Jonnet	PHONE NUMBER 412-921-8622	LABORATORY NAME AND CONTACT: ENCO
SAMPLERS (SIGNATURE) James Lloyd, Dan Forester		FIELD OPERATIONS LEADER Dan Forester	PHONE NUMBER 304-780-1426	ADDRESS
		CARRIER/WAYBILL NUMBER		CITY, STATE Orlando, FL

STANDARD TAT ☒ RUSH TAT ☐ ☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR 2022	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	CONTAINER TYPE PLASTIC (P) or GLASS (G): G	PRESERVATIVE USED: HCL	TYPE OF ANALYSIS: 8260	COMMENTS: Cooled on Ice
14 Feb	0906	LC34PS-PZK-073.0-20220214	LC34PS	68	73	GW	G	3			X	
	0908	LC34PSPZK-080.0-20220214		75	80							
	0930	LC34PS-PZJ-040.0-20220214		30	40							
	0932	LC34PS-PZJ-050.0-20220214		45	50							
	0934	LC34PS-PZJ-058.0-20220214		53	58							
	0936	LC34PS-PZJ-073.0-20220214		68	73							
	0938	LC34PS-PZJ-080.0-20220214		75	80							
	1000	LC34PS-PZG-040.0-20220214		30	40							
	1002	LC34PS-PZG-050.0-20220214		45	56							
	1004	LC34PS-PZG-058.0-20220214		53	58							
	1006	LC34PS-PZG-073.0-20220214		68	73							
	1008	LC34PS-PZG-080.0-20220214		75	80							
	1030	LC34PS-PZF-040.0-20220214		30	40							

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	14 FEB 22	1540	1. RECEIVED BY	2/14/22	1540
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

Tetra Tech, Inc.

CHAIN OF CUSTODY NUMBER No. 2577 (AR-00827)

PAGE 4 OF 6

PROJECT NO: TZG08985	FACILITY: LC34PS	PROJECT MANAGER: Mark Jarrett	PHONE NUMBER: 412-921-8622	LABORATORY NAME AND CONTACT: ENCO
SAMPLERS (SIGNATURE): James Lloyd, Dan Forester		FIELD OPERATIONS LEADER: Dan Forester	PHONE NUMBER: 304-780-1426	ADDRESS:
		CARRIER/WAYBILL NUMBER:		CITY, STATE: Orlando, FL

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

	DATE YEAR	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS: 8260	CONTAINER TYPE PLASTIC (P) or GLASS (G): G	PRESERVATIVE USED: HCl	COMMENTS: Cooled on Ice
14	Feb 2022	1032	LC34PS-PZF-050.0-20220214	LC34PS	45	50	GW	G	3	X			
		1034	LC34PS-PZF-058.0-20220214		53	58							
		1036	LC34PS-PZF-073.0-20220214		68	73							
		1038	LC34PS-PZF-080.0-20220214		75	80							
		1100	LC34PS-PZA-040.0-20220214		30	40							
		1102	LC34PS-PZA-050.0-20220214		45	50							
		1104	LC34PS-PZA-058.0-20220214		53	58							
		1106	LC34PS-PZA-073.0-20220214		68	73							
		1108	LC34PS-PZA-080.0-20220214		75	80							
		1130	LC34PS-PZB-040.0-20220214		30	40							
		1132	LC34PS-PZB-050.0-20220214		45	50							
		1134	LC34PS-PZB-058.0-20220214		53	58							
		1136	LC34PS-PZB-073.0-20220214		68	73							

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	14 FEB 22	2/14/22 1540	1. RECEIVED BY	2/14/22	1540
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

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FORM NO. TtNUS-001

AF 000827

Tetra Tech, Inc. CHAIN OF CUSTODY NUMBER No. 2575 PAGE 5 OF 6

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G08985		Mark Jarrett	412-921-8622	ENCO
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER	PHONE NUMBER	ADDRESS
James Lloyd Dan Forester		Dan Forester	304-780-1426	
		CARRIER/WAYBILL NUMBER		CITY, STATE: Orlando, FL

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

	DATE YEAR 2022	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	CONTAINER TYPE PLASTIC (P) or GLASS (G): G	PRESERVATIVE USED: HCL	TYPE OF ANALYSIS: 8260	COMMENTS: Cooled on Ice
14	Feb	1138	LC34PS-PZB-080.0-20220214	LC34PS	75	80	GW	G	3	X			
		1200	LC34PS-PZC-040.0-20220214		30	40							
		1202	LC34PS-PZC-050.0-20220214		45	50							
		1204	LC34PS-PZC-058.0-20220214		53	58							
		1206	LC34PS-PZC-073.0-20220214		68	73							
		1208	LC34PS-PZC-080.0-20220214		75	80							
		1236	LC34PS-PZD-040.0-20220214		30	40							
		1232	LC34PS-PZD-050.0-20220214		45	50							
		1234	LC34PS-PZD-058.0-20220214		53	58							
		1236	LC34PS-PZD-073.0-20220214		68	73							
		1238	LC34PS-PZD-080.0-20220214		75	80							
		1300	LC34PS-PZE-040.0-20220214		30	40							
		1302	LC34PS-PZE-050.0-20220214		45	50							

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	2/14/22	1540	1. RECEIVED BY	2/14/22	1546
2. RELINQUISHED BY			2. RECEIVED BY		
3. RELINQUISHED BY			3. RECEIVED BY		

COMMENTS

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FORM NO. TtNUS-001

Tetra Tech, Inc.

CHAIN OF CUSTODY | NUMBER AF00827 No. 2576 | PAGE 6 OF 6

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G08985	LC34PS	Mark Jamet	412-921-8622	ENCO
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER	PHONE NUMBER	ADDRESS
James Lloyd Dan Forester		Dan Forester	304-780-1426	
		CARRIER/WAYBILL NUMBER		CITY, STATE: Orlando, FL

STANDARD TAT [X]
RUSH TAT [ ]
[ ] 24 hr. [ ] 48 hr. [ ] 72 hr. [ ] 7 day [ ] 14 day

DATE YEAR 2022	TIME	SAMPLE ID	LOCATION ID LC34PS	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	CONTAINER TYPE PLASTIC (P) or GLASS (G): G	PRESERVATIVE USED: HCL	TYPE OF ANALYSIS: 8260	COMMENTS: Cooled on Ice
14 Feb	1304	LC34PS-PZE-058.0-20220214		53	58	GW	G	3			X	
↓	1306	LC34PS-PZE-073.0-20220214		68	73	↓	↓	↓			↓	
↓	1308	LC34PS-PZE-080.0-20220214		75	80	↓	↓	↓			↓	

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	14FEB22	1540	1. RECEIVED BY	2/14/22	1540
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

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FORM NO. TtNUS-001

ENCO Laboratories

Accurate. Timely. Responsive. Innovative.

10775 Central Port Drive
Orlando FL, 32824
Phone: 407.826.5314 FAX: 407.850.6945

Tuesday, March 29, 2022
Tetra Tech NUS, Inc. (TE015)
Attn: Mark Jonnet
Foster Plaza 7, 661 Anderson Drive
Pittsburgh, PA 15220

RE: Laboratory Results for
Project Number: 112G08985, Project Name/Desc: NASA KSC LC34
ENCO Workorder(s): AF02214

Dear Mark Jonnet,

Enclosed is a copy of your laboratory report for test samples received by our laboratory on Tuesday, March 22, 2022.

Unless otherwise noted in an attached project narrative, all samples were received in acceptable condition and processed in accordance with the referenced methods/procedures. Results for these procedures apply only to the samples as submitted.

The analytical results contained in this report are in compliance with NELAC standards, except as noted in the project narrative if applicable. This report shall not be reproduced except in full, without the written approval of the Laboratory.

This report contains only those analyses performed by Environmental Conservation Laboratories. Unless otherwise noted, all analyses were performed at ENCO Orlando. Data from outside organizations will be reported under separate cover.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

Kaitlin Dylnicki

Project Manager

Enclosure(s)

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SAMPLE SUMMARY/LABORATORY CHRONICLE

Client ID: LC34-IW162-110.0-20220322 **Lab ID: AF02214-01** **Sampled: 03/22/22 07:00** **Received: 03/22/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	04/05/22	03/23/22 12:42	03/24/22 04:18

Client ID: LC34-GAC-20220322 **Lab ID: AF02214-02** **Sampled: 03/22/22 08:00** **Received: 03/22/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	04/05/22	03/23/22 12:42	03/24/22 04:46

Client ID: LC34-AS1-20220322 **Lab ID: AF02214-03** **Sampled: 03/22/22 08:10** **Received: 03/22/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	04/05/22	03/23/22 12:42	03/24/22 05:14

Client ID: LC34-AS2-20220322 **Lab ID: AF02214-04** **Sampled: 03/22/22 08:20** **Received: 03/22/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	04/05/22	03/23/22 12:42	03/24/22 05:41

Client ID: LC34-INFLUENT-20220322 **Lab ID: AF02214-05** **Sampled: 03/22/22 08:30** **Received: 03/22/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	04/05/22	03/25/22 00:00	03/25/22 11:30

Client ID: LC34-INFLUENT-20220322 **Lab ID: AF02214-05RE1** **Sampled: 03/22/22 08:30** **Received: 03/22/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	04/05/22	03/28/22 00:00	03/28/22 13:48

Client ID: LC34-RW1A-20220322 **Lab ID: AF02214-06** **Sampled: 03/22/22 08:40** **Received: 03/22/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	04/05/22	03/25/22 00:00	03/25/22 11:59

Client ID: LC34-RW1A-20220322 **Lab ID: AF02214-06RE1** **Sampled: 03/22/22 08:40** **Received: 03/22/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	04/05/22	03/28/22 00:00	03/28/22 14:17

Client ID: LC34-RW1B-20220322 **Lab ID: AF02214-07** **Sampled: 03/22/22 08:50** **Received: 03/22/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	04/05/22	03/25/22 00:00	03/25/22 12:28

Client ID: LC34-RW2A-20220322 **Lab ID: AF02214-08** **Sampled: 03/22/22 09:00** **Received: 03/22/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	04/05/22	03/24/22 09:32	03/24/22 12:19

Client ID: LC34-RW2B-20220322 **Lab ID: AF02214-09RE1** **Sampled: 03/22/22 09:10** **Received: 03/22/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	04/05/22	03/25/22 00:00	03/25/22 12:57

Client ID: LC34-RW3B-20220322 **Lab ID: AF02214-10** **Sampled: 03/22/22 09:20** **Received: 03/22/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	04/05/22	03/25/22 00:00	03/25/22 13:26

Client ID: LC34-RW3A-20220322 **Lab ID: AF02214-11** **Sampled: 03/22/22 09:30** **Received: 03/22/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	04/05/22	03/25/22 00:00	03/25/22 13:54

Client ID: LC34-RW5B-20220322 **Lab ID: AF02214-12** **Sampled: 03/22/22 09:40** **Received: 03/22/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	04/05/22	03/23/22 12:42	03/24/22 06:09

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SAMPLE SUMMARY/LABORATORY CHRONICLE

Client ID: LC34-RW9A-20220322 **Lab ID: AF02214-13** **Sampled: 03/22/22 09:50** **Received: 03/22/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	04/05/22	03/24/22 09:32	03/24/22 13:15

Client ID: LC34-RW12A-20220322 **Lab ID: AF02214-14** **Sampled: 03/22/22 10:00** **Received: 03/22/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	04/05/22	03/24/22 09:32	03/24/22 13:42

Client ID: LC34-RW13A-20220322 **Lab ID: AF02214-15** **Sampled: 03/22/22 10:10** **Received: 03/22/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	04/05/22	03/24/22 09:32	03/24/22 14:10

Client ID: LC34-RW14A-20220322 **Lab ID: AF02214-16** **Sampled: 03/22/22 10:20** **Received: 03/22/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	04/05/22	03/24/22 09:32	03/24/22 14:38

Client ID: LC34-RW15A-20220322 **Lab ID: AF02214-17** **Sampled: 03/22/22 10:30** **Received: 03/22/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	04/05/22	03/24/22 09:32	03/24/22 15:05

Client ID: LC34-1RW16B-20220322 **Lab ID: AF02214-18** **Sampled: 03/22/22 10:40** **Received: 03/22/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	04/05/22	03/24/22 09:32	03/24/22 15:33

Client ID: LC34-1RW16B-20220322 **Lab ID: AF02214-18RE1** **Sampled: 03/22/22 10:40** **Received: 03/22/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	04/05/22	03/25/22 00:00	03/25/22 14:23

Client ID: LC34-RW17C-20220322 **Lab ID: AF02214-19** **Sampled: 03/22/22 10:50** **Received: 03/22/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	04/05/22	03/24/22 09:32	03/24/22 16:01

Client ID: LC34-RW18C-20220322 **Lab ID: AF02214-20** **Sampled: 03/22/22 11:00** **Received: 03/22/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	04/05/22	03/24/22 09:32	03/24/22 16:28

Client ID: LC34-RW19C-20220322 **Lab ID: AF02214-21** **Sampled: 03/22/22 11:10** **Received: 03/22/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	04/05/22	03/24/22 09:32	03/24/22 16:56

Client ID: LC34-RW20C-20220322 **Lab ID: AF02214-22RE1** **Sampled: 03/22/22 11:20** **Received: 03/22/22 15:30**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	04/05/22	03/25/22 00:00	03/25/22 14:52

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SAMPLE DETECTION SUMMARY

Client ID: LC34-IW162-110.0-20220322 **Lab ID:** AF02214-01

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Trichloroethene	33		0.89	2.5	ug/L	EPA 8260D	

Client ID: LC34-AS1-20220322 **Lab ID:** AF02214-03

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	1.1	I	0.53	2.5	ug/L	EPA 8260D	

Client ID: LC34-AS2-20220322 **Lab ID:** AF02214-04

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	76		0.53	2.5	ug/L	EPA 8260D	
Trichloroethene	84		0.89	2.5	ug/L	EPA 8260D	
Vinyl chloride	0.93	I	0.71	2.5	ug/L	EPA 8260D	

Client ID: LC34-INFLUENT-20220322 **Lab ID:** AF02214-05

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	3900		53	250	ug/L	EPA 8260D	
Vinyl chloride	360		71	250	ug/L	EPA 8260D	

Client ID: LC34-INFLUENT-20220322 **Lab ID:** AF02214-05RE1

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Trichloroethene	12000		440	1200	ug/L	EPA 8260D	

Client ID: LC34-RW1A-20220322 **Lab ID:** AF02214-06

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	17000		110	500	ug/L	EPA 8260D	
trans-1,2-Dichloroethene	310	I	150	500	ug/L	EPA 8260D	
Vinyl chloride	630		140	500	ug/L	EPA 8260D	

Client ID: LC34-RW1A-20220322 **Lab ID:** AF02214-06RE1

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Trichloroethene	35000		890	2500	ug/L	EPA 8260D	

Client ID: LC34-RW1B-20220322 **Lab ID:** AF02214-07

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	2100		53	250	ug/L	EPA 8260D	
Trichloroethene	6700		89	250	ug/L	EPA 8260D	
Vinyl chloride	96	I	71	250	ug/L	EPA 8260D	

Client ID: LC34-RW2A-20220322 **Lab ID:** AF02214-08

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	13000		260	1200	ug/L	EPA 8260D	
Trichloroethene	36000		440	1200	ug/L	EPA 8260D	
Vinyl chloride	1100	I	360	1200	ug/L	EPA 8260D	

Client ID: LC34-RW2B-20220322 **Lab ID:** AF02214-09RE1

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	1700		110	500	ug/L	EPA 8260D	
Trichloroethene	19000		180	500	ug/L	EPA 8260D	
Vinyl chloride	250	I	140	500	ug/L	EPA 8260D	

Client ID: LC34-RW3B-20220322 **Lab ID:** AF02214-10

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	1800		26	120	ug/L	EPA 8260D	
Trichloroethene	4700		44	120	ug/L	EPA 8260D	
Vinyl chloride	150		36	120	ug/L	EPA 8260D	

Client ID: LC34-RW3A-20220322 **Lab ID:** AF02214-11

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	9700		260	1200	ug/L	EPA 8260D	
Trichloroethene	34000		440	1200	ug/L	EPA 8260D	
Vinyl chloride	520	I	360	1200	ug/L	EPA 8260D	

SAMPLE DETECTION SUMMARY

Client ID: LC34-RW5B-20220322 **Lab ID: AF02214-12**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	91		0.53	2.5	ug/L	EPA 8260D	
trans-1,2-Dichloroethene	3.5		0.73	2.5	ug/L	EPA 8260D	
Trichloroethene	6.6		0.89	2.5	ug/L	EPA 8260D	
Vinyl chloride	24		0.71	2.5	ug/L	EPA 8260D	

Client ID: LC34-RW9A-20220322 **Lab ID: AF02214-13**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	3300		26	120	ug/L	EPA 8260D	
trans-1,2-Dichloroethene	74	I	36	120	ug/L	EPA 8260D	
Vinyl chloride	1600		36	120	ug/L	EPA 8260D	

Client ID: LC34-RW12A-20220322 **Lab ID: AF02214-14**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	4800		26	120	ug/L	EPA 8260D	
trans-1,2-Dichloroethene	130		36	120	ug/L	EPA 8260D	
Vinyl chloride	1500		36	120	ug/L	EPA 8260D	

Client ID: LC34-RW13A-20220322 **Lab ID: AF02214-15**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	7400		53	250	ug/L	EPA 8260D	
trans-1,2-Dichloroethene	120	I	73	250	ug/L	EPA 8260D	
Vinyl chloride	2100		71	250	ug/L	EPA 8260D	

Client ID: LC34-RW14A-20220322 **Lab ID: AF02214-16**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	3800		26	120	ug/L	EPA 8260D	
trans-1,2-Dichloroethene	86	I	36	120	ug/L	EPA 8260D	
Vinyl chloride	1200		36	120	ug/L	EPA 8260D	

Client ID: LC34-RW15A-20220322 **Lab ID: AF02214-17**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	1700		13	62	ug/L	EPA 8260D	
trans-1,2-Dichloroethene	36	I	18	62	ug/L	EPA 8260D	
Vinyl chloride	520		18	62	ug/L	EPA 8260D	

Client ID: LC34-1RW16B-20220322 **Lab ID: AF02214-18**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	190		2.6	12	ug/L	EPA 8260D	

Client ID: LC34-1RW16B-20220322 **Lab ID: AF02214-18RE1**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
trans-1,2-Dichloroethene	7.1		1.5	5.0	ug/L	EPA 8260D	
Trichloroethene	22		1.8	5.0	ug/L	EPA 8260D	
Vinyl chloride	36		1.4	5.0	ug/L	EPA 8260D	

Client ID: LC34-RW17C-20220322 **Lab ID: AF02214-19**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	4400	I	1300	6200	ug/L	EPA 8260D	
Trichloroethene	130000		2200	6200	ug/L	EPA 8260D	

Client ID: LC34-RW18C-20220322 **Lab ID: AF02214-20**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	5800	I	2600	12000	ug/L	EPA 8260D	
Trichloroethene	240000		4400	12000	ug/L	EPA 8260D	

Client ID: LC34-RW19C-20220322 **Lab ID: AF02214-21**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Trichloroethene	470000		8900	25000	ug/L	EPA 8260D	

Client ID: LC34-RW20C-20220322 **Lab ID: AF02214-22RE1**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	8100		530	2500	ug/L	EPA 8260D	
Freon 113	1600	I	730	2500	ug/L	EPA 8260D	
Trichloroethene	98000		890	2500	ug/L	EPA 8260D	

ANALYTICAL RESULTS

Description: LC34-IW162-110.0-20220322 **Lab Sample ID:** AF02214-01 **Received:** 03/22/22 15:30

Matrix: Ground Water **Sampled:** 03/22/22 07:00 **Work Order:** AF02214

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	2C23020	EPA 8260D	03/24/22 04:18	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	2C23020	EPA 8260D	03/24/22 04:18	KKW	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	2C23020	EPA 8260D	03/24/22 04:18	KKW	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	2C23020	EPA 8260D	03/24/22 04:18	KKW	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	2C23020	EPA 8260D	03/24/22 04:18	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	2C23020	EPA 8260D	03/24/22 04:18	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	2C23020	EPA 8260D	03/24/22 04:18	KKW	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	2C23020	EPA 8260D	03/24/22 04:18	KKW	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	2C23020	EPA 8260D	03/24/22 04:18	KKW	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	2C23020	EPA 8260D	03/24/22 04:18	KKW	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	2C23020	EPA 8260D	03/24/22 04:18	KKW	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	2C23020	EPA 8260D	03/24/22 04:18	KKW	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	2C23020	EPA 8260D	03/24/22 04:18	KKW	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	2C23020	EPA 8260D	03/24/22 04:18	KKW	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	2C23020	EPA 8260D	03/24/22 04:18	KKW	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	2C23020	EPA 8260D	03/24/22 04:18	KKW	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	2C23020	EPA 8260D	03/24/22 04:18	KKW	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	2C23020	EPA 8260D	03/24/22 04:18	KKW	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	2C23020	EPA 8260D	03/24/22 04:18	KKW	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	2C23020	EPA 8260D	03/24/22 04:18	KKW	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	2C23020	EPA 8260D	03/24/22 04:18	KKW	
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	2C23020	EPA 8260D	03/24/22 04:18	KKW	
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	2C23020	EPA 8260D	03/24/22 04:18	KKW	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	2C23020	EPA 8260D	03/24/22 04:18	KKW	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	2C23020	EPA 8260D	03/24/22 04:18	KKW	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	2C23020	EPA 8260D	03/24/22 04:18	KKW	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	2C23020	EPA 8260D	03/24/22 04:18	KKW	
cis-1,2-Dichloroethene [156-59-2]^	0.53	U	ug/L	1	0.53	2.5	2C23020	EPA 8260D	03/24/22 04:18	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	2C23020	EPA 8260D	03/24/22 04:18	KKW	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	2C23020	EPA 8260D	03/24/22 04:18	KKW	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	2C23020	EPA 8260D	03/24/22 04:18	KKW	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	2C23020	EPA 8260D	03/24/22 04:18	KKW	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	2C23020	EPA 8260D	03/24/22 04:18	KKW	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	2C23020	EPA 8260D	03/24/22 04:18	KKW	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	2C23020	EPA 8260D	03/24/22 04:18	KKW	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	2C23020	EPA 8260D	03/24/22 04:18	KKW	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	2C23020	EPA 8260D	03/24/22 04:18	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	2C23020	EPA 8260D	03/24/22 04:18	KKW	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	2C23020	EPA 8260D	03/24/22 04:18	KKW	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	2C23020	EPA 8260D	03/24/22 04:18	KKW	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	2C23020	EPA 8260D	03/24/22 04:18	KKW	
trans-1,2-Dichloroethene [156-60-5]^	0.73	U	ug/L	1	0.73	2.5	2C23020	EPA 8260D	03/24/22 04:18	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	2C23020	EPA 8260D	03/24/22 04:18	KKW	
Trichloroethene [79-01-6]^	**33**		ug/L	1	0.89	2.5	2C23020	EPA 8260D	03/24/22 04:18	KKW	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	2C23020	EPA 8260D	03/24/22 04:18	KKW	
Vinyl chloride [75-01-4]^	0.71	U	ug/L	1	0.71	2.5	2C23020	EPA 8260D	03/24/22 04:18	KKW	
Xylenes (Total) [1330-20-7]	1.3	U	ug/L	1	1.3	5.0	2C23020	EPA 8260D	03/24/22 04:18	KKW	

ANALYTICAL RESULTS

Description: LC34-IW162-110.0-20220322 | **Lab Sample ID:** AF02214-01 | **Received:** 03/22/22 15:30

Matrix: Ground Water | **Sampled:** 03/22/22 07:00 | **Work Order:** AF02214

Project: NASA KSC LC34 | **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*52*	*1*	*50.0*	*104 %*	*41-142*	*2C23020*	*EPA 8260D*	*03/24/22 04:18*	*KKW*	
Dibromofluoromethane	*46*	*1*	*50.0*	*92 %*	*53-146*	*2C23020*	*EPA 8260D*	*03/24/22 04:18*	*KKW*	
Toluene-d8	*48*	*1*	*50.0*	*95 %*	*41-146*	*2C23020*	*EPA 8260D*	*03/24/22 04:18*	*KKW*	

ANALYTICAL RESULTS

Description: LC34-GAC-20220322 **Lab Sample ID:** AF02214-02 **Received:** 03/22/22 15:30

Matrix: Ground Water **Sampled:** 03/22/22 08:00 **Work Order:** AF02214

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	2C23020	EPA 8260D	03/24/22 04:46	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	2C23020	EPA 8260D	03/24/22 04:46	KKW	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	2C23020	EPA 8260D	03/24/22 04:46	KKW	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	2C23020	EPA 8260D	03/24/22 04:46	KKW	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	2C23020	EPA 8260D	03/24/22 04:46	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	2C23020	EPA 8260D	03/24/22 04:46	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	2C23020	EPA 8260D	03/24/22 04:46	KKW	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	2C23020	EPA 8260D	03/24/22 04:46	KKW	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	2C23020	EPA 8260D	03/24/22 04:46	KKW	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	2C23020	EPA 8260D	03/24/22 04:46	KKW	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	2C23020	EPA 8260D	03/24/22 04:46	KKW	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	2C23020	EPA 8260D	03/24/22 04:46	KKW	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	2C23020	EPA 8260D	03/24/22 04:46	KKW	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	2C23020	EPA 8260D	03/24/22 04:46	KKW	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	2C23020	EPA 8260D	03/24/22 04:46	KKW	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	2C23020	EPA 8260D	03/24/22 04:46	KKW	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	2C23020	EPA 8260D	03/24/22 04:46	KKW	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	2C23020	EPA 8260D	03/24/22 04:46	KKW	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	2C23020	EPA 8260D	03/24/22 04:46	KKW	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	2C23020	EPA 8260D	03/24/22 04:46	KKW	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	2C23020	EPA 8260D	03/24/22 04:46	KKW	
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	2C23020	EPA 8260D	03/24/22 04:46	KKW	
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	2C23020	EPA 8260D	03/24/22 04:46	KKW	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	2C23020	EPA 8260D	03/24/22 04:46	KKW	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	2C23020	EPA 8260D	03/24/22 04:46	KKW	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	2C23020	EPA 8260D	03/24/22 04:46	KKW	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	2C23020	EPA 8260D	03/24/22 04:46	KKW	
cis-1,2-Dichloroethene [156-59-2]^	0.53	U	ug/L	1	0.53	2.5	2C23020	EPA 8260D	03/24/22 04:46	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	2C23020	EPA 8260D	03/24/22 04:46	KKW	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	2C23020	EPA 8260D	03/24/22 04:46	KKW	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	2C23020	EPA 8260D	03/24/22 04:46	KKW	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	2C23020	EPA 8260D	03/24/22 04:46	KKW	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	2C23020	EPA 8260D	03/24/22 04:46	KKW	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	2C23020	EPA 8260D	03/24/22 04:46	KKW	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	2C23020	EPA 8260D	03/24/22 04:46	KKW	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	2C23020	EPA 8260D	03/24/22 04:46	KKW	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	2C23020	EPA 8260D	03/24/22 04:46	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	2C23020	EPA 8260D	03/24/22 04:46	KKW	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	2C23020	EPA 8260D	03/24/22 04:46	KKW	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	2C23020	EPA 8260D	03/24/22 04:46	KKW	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	2C23020	EPA 8260D	03/24/22 04:46	KKW	
trans-1,2-Dichloroethene [156-60-5]^	0.73	U	ug/L	1	0.73	2.5	2C23020	EPA 8260D	03/24/22 04:46	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	2C23020	EPA 8260D	03/24/22 04:46	KKW	
Trichloroethene [79-01-6]^	0.89	U	ug/L	1	0.89	2.5	2C23020	EPA 8260D	03/24/22 04:46	KKW	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	2C23020	EPA 8260D	03/24/22 04:46	KKW	
Vinyl chloride [75-01-4]^	0.71	U	ug/L	1	0.71	2.5	2C23020	EPA 8260D	03/24/22 04:46	KKW	
Xylenes (Total) [1330-20-7]	1.3	U	ug/L	1	1.3	5.0	2C23020	EPA 8260D	03/24/22 04:46	KKW	

ANALYTICAL RESULTS

Description: LC34-GAC-20220322	**Lab Sample ID:** AF02214-02	**Received:** 03/22/22 15:30
Matrix: Ground Water	**Sampled:** 03/22/22 08:00	**Work Order:** AF02214
Project: NASA KSC LC34	**Sampled By:** Dan Forester	

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*51*	*1*	*50.0*	*102 %*	*41-142*	*2C23020*	*EPA 8260D*	*03/24/22 04:46*	*KKW*	
Dibromofluoromethane	*46*	*1*	*50.0*	*91 %*	*53-146*	*2C23020*	*EPA 8260D*	*03/24/22 04:46*	*KKW*	
Toluene-d8	*48*	*1*	*50.0*	*96 %*	*41-146*	*2C23020*	*EPA 8260D*	*03/24/22 04:46*	*KKW*	

ANALYTICAL RESULTS

Description: LC34-AS1-20220322 **Lab Sample ID:** AF02214-03 **Received:** 03/22/22 15:30

Matrix: Ground Water **Sampled:** 03/22/22 08:10 **Work Order:** AF02214

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	2C23020	EPA 8260D	03/24/22 05:14	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	2C23020	EPA 8260D	03/24/22 05:14	KKW	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	2C23020	EPA 8260D	03/24/22 05:14	KKW	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	2C23020	EPA 8260D	03/24/22 05:14	KKW	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	2C23020	EPA 8260D	03/24/22 05:14	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	2C23020	EPA 8260D	03/24/22 05:14	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	2C23020	EPA 8260D	03/24/22 05:14	KKW	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	2C23020	EPA 8260D	03/24/22 05:14	KKW	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	2C23020	EPA 8260D	03/24/22 05:14	KKW	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	2C23020	EPA 8260D	03/24/22 05:14	KKW	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	2C23020	EPA 8260D	03/24/22 05:14	KKW	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	2C23020	EPA 8260D	03/24/22 05:14	KKW	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	2C23020	EPA 8260D	03/24/22 05:14	KKW	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	2C23020	EPA 8260D	03/24/22 05:14	KKW	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	2C23020	EPA 8260D	03/24/22 05:14	KKW	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	2C23020	EPA 8260D	03/24/22 05:14	KKW	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	2C23020	EPA 8260D	03/24/22 05:14	KKW	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	2C23020	EPA 8260D	03/24/22 05:14	KKW	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	2C23020	EPA 8260D	03/24/22 05:14	KKW	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	2C23020	EPA 8260D	03/24/22 05:14	KKW	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	2C23020	EPA 8260D	03/24/22 05:14	KKW	
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	2C23020	EPA 8260D	03/24/22 05:14	KKW	
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	2C23020	EPA 8260D	03/24/22 05:14	KKW	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	2C23020	EPA 8260D	03/24/22 05:14	KKW	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	2C23020	EPA 8260D	03/24/22 05:14	KKW	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	2C23020	EPA 8260D	03/24/22 05:14	KKW	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	2C23020	EPA 8260D	03/24/22 05:14	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**1.1**	I	ug/L	1	0.53	2.5	2C23020	EPA 8260D	03/24/22 05:14	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	2C23020	EPA 8260D	03/24/22 05:14	KKW	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	2C23020	EPA 8260D	03/24/22 05:14	KKW	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	2C23020	EPA 8260D	03/24/22 05:14	KKW	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	2C23020	EPA 8260D	03/24/22 05:14	KKW	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	2C23020	EPA 8260D	03/24/22 05:14	KKW	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	2C23020	EPA 8260D	03/24/22 05:14	KKW	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	2C23020	EPA 8260D	03/24/22 05:14	KKW	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	2C23020	EPA 8260D	03/24/22 05:14	KKW	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	2C23020	EPA 8260D	03/24/22 05:14	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	2C23020	EPA 8260D	03/24/22 05:14	KKW	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	2C23020	EPA 8260D	03/24/22 05:14	KKW	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	2C23020	EPA 8260D	03/24/22 05:14	KKW	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	2C23020	EPA 8260D	03/24/22 05:14	KKW	
trans-1,2-Dichloroethene [156-60-5]^	0.73	U	ug/L	1	0.73	2.5	2C23020	EPA 8260D	03/24/22 05:14	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	2C23020	EPA 8260D	03/24/22 05:14	KKW	
Trichloroethene [79-01-6]^	0.89	U	ug/L	1	0.89	2.5	2C23020	EPA 8260D	03/24/22 05:14	KKW	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	2C23020	EPA 8260D	03/24/22 05:14	KKW	
Vinyl chloride [75-01-4]^	0.71	U	ug/L	1	0.71	2.5	2C23020	EPA 8260D	03/24/22 05:14	KKW	
Xylenes (Total) [1330-20-7]	1.3	U	ug/L	1	1.3	5.0	2C23020	EPA 8260D	03/24/22 05:14	KKW	

ANALYTICAL RESULTS

Description: LC34-AS1-20220322 | **Lab Sample ID:** AF02214-03 | **Received:** 03/22/22 15:30

Matrix: Ground Water | **Sampled:** 03/22/22 08:10 | **Work Order:** AF02214

Project: NASA KSC LC34 | **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*51*	*1*	*50.0*	*102 %*	*41-142*	*2C23020*	*EPA 8260D*	*03/24/22 05:14*	*KKW*	
Dibromofluoromethane	*47*	*1*	*50.0*	*95 %*	*53-146*	*2C23020*	*EPA 8260D*	*03/24/22 05:14*	*KKW*	
Toluene-d8	*48*	*1*	*50.0*	*96 %*	*41-146*	*2C23020*	*EPA 8260D*	*03/24/22 05:14*	*KKW*	

ANALYTICAL RESULTS

Description: LC34-AS2-20220322 **Lab Sample ID:** AF02214-04 **Received:** 03/22/22 15:30

Matrix: Ground Water **Sampled:** 03/22/22 08:20 **Work Order:** AF02214

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	2C23020	EPA 8260D	03/24/22 05:41	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	2C23020	EPA 8260D	03/24/22 05:41	KKW	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	2C23020	EPA 8260D	03/24/22 05:41	KKW	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	2C23020	EPA 8260D	03/24/22 05:41	KKW	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	2C23020	EPA 8260D	03/24/22 05:41	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	2C23020	EPA 8260D	03/24/22 05:41	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	2C23020	EPA 8260D	03/24/22 05:41	KKW	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	2C23020	EPA 8260D	03/24/22 05:41	KKW	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	2C23020	EPA 8260D	03/24/22 05:41	KKW	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	2C23020	EPA 8260D	03/24/22 05:41	KKW	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	2C23020	EPA 8260D	03/24/22 05:41	KKW	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	2C23020	EPA 8260D	03/24/22 05:41	KKW	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	2C23020	EPA 8260D	03/24/22 05:41	KKW	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	2C23020	EPA 8260D	03/24/22 05:41	KKW	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	2C23020	EPA 8260D	03/24/22 05:41	KKW	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	2C23020	EPA 8260D	03/24/22 05:41	KKW	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	2C23020	EPA 8260D	03/24/22 05:41	KKW	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	2C23020	EPA 8260D	03/24/22 05:41	KKW	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	2C23020	EPA 8260D	03/24/22 05:41	KKW	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	2C23020	EPA 8260D	03/24/22 05:41	KKW	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	2C23020	EPA 8260D	03/24/22 05:41	KKW	
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	2C23020	EPA 8260D	03/24/22 05:41	KKW	
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	2C23020	EPA 8260D	03/24/22 05:41	KKW	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	2C23020	EPA 8260D	03/24/22 05:41	KKW	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	2C23020	EPA 8260D	03/24/22 05:41	KKW	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	2C23020	EPA 8260D	03/24/22 05:41	KKW	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	2C23020	EPA 8260D	03/24/22 05:41	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**76**		ug/L	1	0.53	2.5	2C23020	EPA 8260D	03/24/22 05:41	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	2C23020	EPA 8260D	03/24/22 05:41	KKW	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	2C23020	EPA 8260D	03/24/22 05:41	KKW	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	2C23020	EPA 8260D	03/24/22 05:41	KKW	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	2C23020	EPA 8260D	03/24/22 05:41	KKW	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	2C23020	EPA 8260D	03/24/22 05:41	KKW	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	2C23020	EPA 8260D	03/24/22 05:41	KKW	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	2C23020	EPA 8260D	03/24/22 05:41	KKW	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	2C23020	EPA 8260D	03/24/22 05:41	KKW	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	2C23020	EPA 8260D	03/24/22 05:41	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	2C23020	EPA 8260D	03/24/22 05:41	KKW	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	2C23020	EPA 8260D	03/24/22 05:41	KKW	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	2C23020	EPA 8260D	03/24/22 05:41	KKW	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	2C23020	EPA 8260D	03/24/22 05:41	KKW	
trans-1,2-Dichloroethene [156-60-5]^	0.73	U	ug/L	1	0.73	2.5	2C23020	EPA 8260D	03/24/22 05:41	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	2C23020	EPA 8260D	03/24/22 05:41	KKW	
Trichloroethene [79-01-6]^	**84**		ug/L	1	0.89	2.5	2C23020	EPA 8260D	03/24/22 05:41	KKW	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	2C23020	EPA 8260D	03/24/22 05:41	KKW	
Vinyl chloride [75-01-4]^	**0.93**	I	ug/L	1	0.71	2.5	2C23020	EPA 8260D	03/24/22 05:41	KKW	
Xylenes (Total) [1330-20-7]	1.3	U	ug/L	1	1.3	5.0	2C23020	EPA 8260D	03/24/22 05:41	KKW	

ANALYTICAL RESULTS

Description: LC34-AS2-20220322 **Lab Sample ID:** AF02214-04 **Received:** 03/22/22 15:30

Matrix: Ground Water **Sampled:** 03/22/22 08:20 **Work Order:** AF02214

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*50*	*1*	*50.0*	*101 %*	*41-142*	*2C23020*	*EPA 8260D*	*03/24/22 05:41*	*KKW*	
Dibromofluoromethane	*46*	*1*	*50.0*	*93 %*	*53-146*	*2C23020*	*EPA 8260D*	*03/24/22 05:41*	*KKW*	
Toluene-d8	*48*	*1*	*50.0*	*97 %*	*41-146*	*2C23020*	*EPA 8260D*	*03/24/22 05:41*	*KKW*	

ANALYTICAL RESULTS

Description: LC34-INFLUENT-20220322 **Lab Sample ID:** AF02214-05 **Received:** 03/22/22 15:30

Matrix: Ground Water **Sampled:** 03/22/22 08:30 **Work Order:** AF02214

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	80	U	ug/L	100	80	250	2C25003	EPA 8260D	03/25/22 11:30	JMW	
1,1,2,2-Tetrachloroethane [79-34-5]^	54	U	ug/L	100	54	250	2C25003	EPA 8260D	03/25/22 11:30	JMW	
1,1,2-Trichloroethane [79-00-5]^	76	U	ug/L	100	76	250	2C25003	EPA 8260D	03/25/22 11:30	JMW	
1,1-Dichloroethane [75-34-3]^	62	U	ug/L	100	62	250	2C25003	EPA 8260D	03/25/22 11:30	JMW	
1,1-Dichloroethene [75-35-4]^	94	U	ug/L	100	94	250	2C25003	EPA 8260D	03/25/22 11:30	JMW	
1,2,4-Trichlorobenzene [120-82-1]^	70	U	ug/L	100	70	250	2C25003	EPA 8260D	03/25/22 11:30	JMW	QB-02
1,2-Dibromo-3-chloropropane [96-12-8]^	96	U	ug/L	100	96	250	2C25003	EPA 8260D	03/25/22 11:30	JMW	
1,2-Dibromoethane [106-93-4]^	78	U	ug/L	100	78	250	2C25003	EPA 8260D	03/25/22 11:30	JMW	
1,2-Dichlorobenzene [95-50-1]^	73	U	ug/L	100	73	250	2C25003	EPA 8260D	03/25/22 11:30	JMW	
1,2-Dichloroethane [107-06-2]^	63	U	ug/L	100	63	250	2C25003	EPA 8260D	03/25/22 11:30	JMW	
1,2-Dichloropropane [78-87-5]^	80	U	ug/L	100	80	250	2C25003	EPA 8260D	03/25/22 11:30	JMW	
1,3-Dichlorobenzene [541-73-1]^	77	U	ug/L	100	77	250	2C25003	EPA 8260D	03/25/22 11:30	JMW	
1,4-Dichlorobenzene [106-46-7]^	76	U	ug/L	100	76	250	2C25003	EPA 8260D	03/25/22 11:30	JMW	
2-Butanone [78-93-3]^	450	U	ug/L	100	450	1200	2C25003	EPA 8260D	03/25/22 11:30	JMW	
2-Hexanone [591-78-6]^	250	U	ug/L	100	250	1200	2C25003	EPA 8260D	03/25/22 11:30	JMW	
4-Methyl-2-pentanone [108-10-1]^	250	U	ug/L	100	250	1200	2C25003	EPA 8260D	03/25/22 11:30	JMW	
Acetone [67-64-1]^	1000	U	ug/L	100	1000	2500	2C25003	EPA 8260D	03/25/22 11:30	JMW	
Benzene [71-43-2]^	71	U	ug/L	100	71	250	2C25003	EPA 8260D	03/25/22 11:30	JMW	
Bromodichloromethane [75-27-4]^	52	U	ug/L	100	52	250	2C25003	EPA 8260D	03/25/22 11:30	JMW	QV-01
Bromoform [75-25-2]^	75	U	ug/L	100	75	250	2C25003	EPA 8260D	03/25/22 11:30	JMW	QV-01
Bromomethane [74-83-9]^	95	U	ug/L	100	95	250	2C25003	EPA 8260D	03/25/22 11:30	JMW	QV-01
Carbon disulfide [75-15-0]^	250	U	ug/L	100	250	1200	2C25003	EPA 8260D	03/25/22 11:30	JMW	
Carbon Tetrachloride [56-23-5]^	94	U	ug/L	100	94	250	2C25003	EPA 8260D	03/25/22 11:30	JMW	
Chlorobenzene [108-90-7]^	72	U	ug/L	100	72	250	2C25003	EPA 8260D	03/25/22 11:30	JMW	
Chloroethane [75-00-3]^	98	U	ug/L	100	98	250	2C25003	EPA 8260D	03/25/22 11:30	JMW	
Chloroform [67-66-3]^	80	U	ug/L	100	80	250	2C25003	EPA 8260D	03/25/22 11:30	JMW	
Chloromethane [74-87-3]^	82	U	ug/L	100	82	250	2C25003	EPA 8260D	03/25/22 11:30	JMW	
cis-1,2-Dichloroethene [156-59-2]^	**3900**		ug/L	100	53	250	2C25003	EPA 8260D	03/25/22 11:30	JMW	
cis-1,3-Dichloropropene [10061-01-5]^	59	U	ug/L	100	59	250	2C25003	EPA 8260D	03/25/22 11:30	JMW	
Cyclohexane [110-82-7]^	93	U	ug/L	100	93	250	2C25003	EPA 8260D	03/25/22 11:30	JMW	
Dibromochloromethane [124-48-1]^	50	U	ug/L	100	50	250	2C25003	EPA 8260D	03/25/22 11:30	JMW	
Dichlorodifluoromethane [75-71-8]^	74	U	ug/L	100	74	250	2C25003	EPA 8260D	03/25/22 11:30	JMW	QV-01
Ethylbenzene [100-41-4]^	69	U	ug/L	100	69	250	2C25003	EPA 8260D	03/25/22 11:30	JMW	
Freon 113 [76-13-1]^	73	U	ug/L	100	73	250	2C25003	EPA 8260D	03/25/22 11:30	JMW	
Isopropylbenzene [98-82-8]^	67	U	ug/L	100	67	250	2C25003	EPA 8260D	03/25/22 11:30	JMW	
Methyl acetate [79-20-9]^	95	U	ug/L	100	95	250	2C25003	EPA 8260D	03/25/22 11:30	JMW	
Methylene Chloride [75-09-2]^	250	U	ug/L	100	250	1200	2C25003	EPA 8260D	03/25/22 11:30	JMW	
Methyl-tert-Butyl Ether [1634-04-4]^	60	U	ug/L	100	60	250	2C25003	EPA 8260D	03/25/22 11:30	JMW	
Styrene [100-42-5]^	61	U	ug/L	100	61	250	2C25003	EPA 8260D	03/25/22 11:30	JMW	
Tetrachloroethene [127-18-4]^	76	U	ug/L	100	76	250	2C25003	EPA 8260D	03/25/22 11:30	JMW	
Toluene [108-88-3]^	72	U	ug/L	100	72	250	2C25003	EPA 8260D	03/25/22 11:30	JMW	
trans-1,2-Dichloroethene [156-60-5]^	73	U	ug/L	100	73	250	2C25003	EPA 8260D	03/25/22 11:30	JMW	
trans-1,3-Dichloropropene [10061-02-6]^	73	U	ug/L	100	73	250	2C25003	EPA 8260D	03/25/22 11:30	JMW	
Trichloroethene [79-01-6]^	**12000**		ug/L	500	440	1200	2C28004	EPA 8260D	03/28/22 13:48	JMW	
Trichlorofluoromethane [75-69-4]^	94	U	ug/L	100	94	250	2C25003	EPA 8260D	03/25/22 11:30	JMW	
Vinyl chloride [75-01-4]^	**360**		ug/L	100	71	250	2C25003	EPA 8260D	03/25/22 11:30	JMW	
Xylenes (Total) [1330-20-7]	130	U	ug/L	100	130	500	2C25003	EPA 8260D	03/25/22 11:30	JMW	

ANALYTICAL RESULTS

Description: LC34-INFLUENT-20220322 **Lab Sample ID:** AF02214-05 **Received:** 03/22/22 15:30

Matrix: Ground Water **Sampled:** 03/22/22 08:30 **Work Order:** AF02214

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*50*	*1*	*50.0*	*99 %*	*41-142*	*2C25003*	*EPA 8260D*	*03/25/22 11:30*	*JMW*	
4-Bromofluorobenzene	*53*	*1*	*50.0*	*106 %*	*41-142*	*2C28004*	*EPA 8260D*	*03/28/22 13:48*	*JMW*	
Dibromofluoromethane	*46*	*1*	*50.0*	*93 %*	*53-146*	*2C25003*	*EPA 8260D*	*03/25/22 11:30*	*JMW*	
Dibromofluoromethane	*44*	*1*	*50.0*	*87 %*	*53-146*	*2C28004*	*EPA 8260D*	*03/28/22 13:48*	*JMW*	
Toluene-d8	*49*	*1*	*50.0*	*99 %*	*41-146*	*2C25003*	*EPA 8260D*	*03/25/22 11:30*	*JMW*	
Toluene-d8	*49*	*1*	*50.0*	*99 %*	*41-146*	*2C28004*	*EPA 8260D*	*03/28/22 13:48*	*JMW*	

ANALYTICAL RESULTS

Description: LC34-RW1A-20220322 **Lab Sample ID:** AF02214-06 **Received:** 03/22/22 15:30

Matrix: Ground Water **Sampled:** 03/22/22 08:40 **Work Order:** AF02214

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	160	U	ug/L	200	160	500	2C25003	EPA 8260D	03/25/22 11:59	JMW	
1,1,2,2-Tetrachloroethane [79-34-5]^	110	U	ug/L	200	110	500	2C25003	EPA 8260D	03/25/22 11:59	JMW	
1,1,2-Trichloroethane [79-00-5]^	150	U	ug/L	200	150	500	2C25003	EPA 8260D	03/25/22 11:59	JMW	
1,1-Dichloroethane [75-34-3]^	120	U	ug/L	200	120	500	2C25003	EPA 8260D	03/25/22 11:59	JMW	
1,1-Dichloroethene [75-35-4]^	190	U	ug/L	200	190	500	2C25003	EPA 8260D	03/25/22 11:59	JMW	
1,2,4-Trichlorobenzene [120-82-1]^	140	U	ug/L	200	140	500	2C25003	EPA 8260D	03/25/22 11:59	JMW	QB-02
1,2-Dibromo-3-chloropropane [96-12-8]^	190	U	ug/L	200	190	500	2C25003	EPA 8260D	03/25/22 11:59	JMW	
1,2-Dibromoethane [106-93-4]^	160	U	ug/L	200	160	500	2C25003	EPA 8260D	03/25/22 11:59	JMW	
1,2-Dichlorobenzene [95-50-1]^	150	U	ug/L	200	150	500	2C25003	EPA 8260D	03/25/22 11:59	JMW	
1,2-Dichloroethane [107-06-2]^	130	U	ug/L	200	130	500	2C25003	EPA 8260D	03/25/22 11:59	JMW	
1,2-Dichloropropane [78-87-5]^	160	U	ug/L	200	160	500	2C25003	EPA 8260D	03/25/22 11:59	JMW	
1,3-Dichlorobenzene [541-73-1]^	150	U	ug/L	200	150	500	2C25003	EPA 8260D	03/25/22 11:59	JMW	
1,4-Dichlorobenzene [106-46-7]^	150	U	ug/L	200	150	500	2C25003	EPA 8260D	03/25/22 11:59	JMW	
2-Butanone [78-93-3]^	900	U	ug/L	200	900	2500	2C25003	EPA 8260D	03/25/22 11:59	JMW	
2-Hexanone [591-78-6]^	500	U	ug/L	200	500	2500	2C25003	EPA 8260D	03/25/22 11:59	JMW	
4-Methyl-2-pentanone [108-10-1]^	500	U	ug/L	200	500	2500	2C25003	EPA 8260D	03/25/22 11:59	JMW	
Acetone [67-64-1]^	2000	U	ug/L	200	2000	5000	2C25003	EPA 8260D	03/25/22 11:59	JMW	
Benzene [71-43-2]^	140	U	ug/L	200	140	500	2C25003	EPA 8260D	03/25/22 11:59	JMW	
Bromodichloromethane [75-27-4]^	100	U	ug/L	200	100	500	2C25003	EPA 8260D	03/25/22 11:59	JMW	QV-01
Bromoform [75-25-2]^	150	U	ug/L	200	150	500	2C25003	EPA 8260D	03/25/22 11:59	JMW	QV-01
Bromomethane [74-83-9]^	190	U	ug/L	200	190	500	2C25003	EPA 8260D	03/25/22 11:59	JMW	QV-01
Carbon disulfide [75-15-0]^	500	U	ug/L	200	500	2500	2C25003	EPA 8260D	03/25/22 11:59	JMW	
Carbon Tetrachloride [56-23-5]^	190	U	ug/L	200	190	500	2C25003	EPA 8260D	03/25/22 11:59	JMW	
Chlorobenzene [108-90-7]^	140	U	ug/L	200	140	500	2C25003	EPA 8260D	03/25/22 11:59	JMW	
Chloroethane [75-00-3]^	200	U	ug/L	200	200	500	2C25003	EPA 8260D	03/25/22 11:59	JMW	
Chloroform [67-66-3]^	160	U	ug/L	200	160	500	2C25003	EPA 8260D	03/25/22 11:59	JMW	
Chloromethane [74-87-3]^	160	U	ug/L	200	160	500	2C25003	EPA 8260D	03/25/22 11:59	JMW	
cis-1,2-Dichloroethene [156-59-2]^	**17000**		ug/L	200	110	500	2C25003	EPA 8260D	03/25/22 11:59	JMW	
cis-1,3-Dichloropropene [10061-01-5]^	120	U	ug/L	200	120	500	2C25003	EPA 8260D	03/25/22 11:59	JMW	
Cyclohexane [110-82-7]^	190	U	ug/L	200	190	500	2C25003	EPA 8260D	03/25/22 11:59	JMW	
Dibromochloromethane [124-48-1]^	100	U	ug/L	200	100	500	2C25003	EPA 8260D	03/25/22 11:59	JMW	
Dichlorodifluoromethane [75-71-8]^	150	U	ug/L	200	150	500	2C25003	EPA 8260D	03/25/22 11:59	JMW	QV-01
Ethylbenzene [100-41-4]^	140	U	ug/L	200	140	500	2C25003	EPA 8260D	03/25/22 11:59	JMW	
Freon 113 [76-13-1]^	150	U	ug/L	200	150	500	2C25003	EPA 8260D	03/25/22 11:59	JMW	
Isopropylbenzene [98-82-8]^	130	U	ug/L	200	130	500	2C25003	EPA 8260D	03/25/22 11:59	JMW	
Methyl acetate [79-20-9]^	190	U	ug/L	200	190	500	2C25003	EPA 8260D	03/25/22 11:59	JMW	
Methylene Chloride [75-09-2]^	500	U	ug/L	200	500	2500	2C25003	EPA 8260D	03/25/22 11:59	JMW	
Methyl-tert-Butyl Ether [1634-04-4]^	120	U	ug/L	200	120	500	2C25003	EPA 8260D	03/25/22 11:59	JMW	
Styrene [100-42-5]^	120	U	ug/L	200	120	500	2C25003	EPA 8260D	03/25/22 11:59	JMW	
Tetrachloroethene [127-18-4]^	150	U	ug/L	200	150	500	2C25003	EPA 8260D	03/25/22 11:59	JMW	
Toluene [108-88-3]^	140	U	ug/L	200	140	500	2C25003	EPA 8260D	03/25/22 11:59	JMW	
trans-1,2-Dichloroethene [156-60-5]^	**310**	I	ug/L	200	150	500	2C25003	EPA 8260D	03/25/22 11:59	JMW	
trans-1,3-Dichloropropene [10061-02-6]^	150	U	ug/L	200	150	500	2C25003	EPA 8260D	03/25/22 11:59	JMW	
Trichloroethene [79-01-6]^	**35000**		ug/L	1000	890	2500	2C28004	EPA 8260D	03/28/22 14:17	JMW	
Trichlorofluoromethane [75-69-4]^	190	U	ug/L	200	190	500	2C25003	EPA 8260D	03/25/22 11:59	JMW	
Vinyl chloride [75-01-4]^	**630**		ug/L	200	140	500	2C25003	EPA 8260D	03/25/22 11:59	JMW	
Xylenes (Total) [1330-20-7]	260	U	ug/L	200	260	1000	2C25003	EPA 8260D	03/25/22 11:59	JMW	

ANALYTICAL RESULTS

Description: LC34-RW1A-20220322 **Lab Sample ID:** AF02214-06 **Received:** 03/22/22 15:30

Matrix: Ground Water **Sampled:** 03/22/22 08:40 **Work Order:** AF02214

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*48*	*1*	*50.0*	*96 %*	*41-142*	*2C25003*	*EPA 8260D*	*03/25/22 11:59*	*JMW*	
4-Bromofluorobenzene	*52*	*1*	*50.0*	*103 %*	*41-142*	*2C28004*	*EPA 8260D*	*03/28/22 14:17*	*JMW*	
Dibromofluoromethane	*44*	*1*	*50.0*	*88 %*	*53-146*	*2C25003*	*EPA 8260D*	*03/25/22 11:59*	*JMW*	
Dibromofluoromethane	*43*	*1*	*50.0*	*86 %*	*53-146*	*2C28004*	*EPA 8260D*	*03/28/22 14:17*	*JMW*	
Toluene-d8	*49*	*1*	*50.0*	*98 %*	*41-146*	*2C25003*	*EPA 8260D*	*03/25/22 11:59*	*JMW*	
Toluene-d8	*48*	*1*	*50.0*	*97 %*	*41-146*	*2C28004*	*EPA 8260D*	*03/28/22 14:17*	*JMW*	

ANALYTICAL RESULTS

Description: LC34-RW1B-20220322 **Lab Sample ID:** AF02214-07 **Received:** 03/22/22 15:30

Matrix: Ground Water **Sampled:** 03/22/22 08:50 **Work Order:** AF02214

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	80	U	ug/L	100	80	250	2C25003	EPA 8260D	03/25/22 12:28	JMW	
1,1,2,2-Tetrachloroethane [79-34-5]^	54	U	ug/L	100	54	250	2C25003	EPA 8260D	03/25/22 12:28	JMW	
1,1,2-Trichloroethane [79-00-5]^	76	U	ug/L	100	76	250	2C25003	EPA 8260D	03/25/22 12:28	JMW	
1,1-Dichloroethane [75-34-3]^	62	U	ug/L	100	62	250	2C25003	EPA 8260D	03/25/22 12:28	JMW	
1,1-Dichloroethene [75-35-4]^	94	U	ug/L	100	94	250	2C25003	EPA 8260D	03/25/22 12:28	JMW	
1,2,4-Trichlorobenzene [120-82-1]^	70	U	ug/L	100	70	250	2C25003	EPA 8260D	03/25/22 12:28	JMW	QB-02
1,2-Dibromo-3-chloropropane [96-12-8]^	96	U	ug/L	100	96	250	2C25003	EPA 8260D	03/25/22 12:28	JMW	
1,2-Dibromoethane [106-93-4]^	78	U	ug/L	100	78	250	2C25003	EPA 8260D	03/25/22 12:28	JMW	
1,2-Dichlorobenzene [95-50-1]^	73	U	ug/L	100	73	250	2C25003	EPA 8260D	03/25/22 12:28	JMW	
1,2-Dichloroethane [107-06-2]^	63	U	ug/L	100	63	250	2C25003	EPA 8260D	03/25/22 12:28	JMW	
1,2-Dichloropropane [78-87-5]^	80	U	ug/L	100	80	250	2C25003	EPA 8260D	03/25/22 12:28	JMW	
1,3-Dichlorobenzene [541-73-1]^	77	U	ug/L	100	77	250	2C25003	EPA 8260D	03/25/22 12:28	JMW	
1,4-Dichlorobenzene [106-46-7]^	76	U	ug/L	100	76	250	2C25003	EPA 8260D	03/25/22 12:28	JMW	
2-Butanone [78-93-3]^	450	U	ug/L	100	450	1200	2C25003	EPA 8260D	03/25/22 12:28	JMW	
2-Hexanone [591-78-6]^	250	U	ug/L	100	250	1200	2C25003	EPA 8260D	03/25/22 12:28	JMW	
4-Methyl-2-pentanone [108-10-1]^	250	U	ug/L	100	250	1200	2C25003	EPA 8260D	03/25/22 12:28	JMW	
Acetone [67-64-1]^	1000	U	ug/L	100	1000	2500	2C25003	EPA 8260D	03/25/22 12:28	JMW	
Benzene [71-43-2]^	71	U	ug/L	100	71	250	2C25003	EPA 8260D	03/25/22 12:28	JMW	
Bromodichloromethane [75-27-4]^	52	U	ug/L	100	52	250	2C25003	EPA 8260D	03/25/22 12:28	JMW	QV-01
Bromoform [75-25-2]^	75	U	ug/L	100	75	250	2C25003	EPA 8260D	03/25/22 12:28	JMW	QV-01
Bromomethane [74-83-9]^	95	U	ug/L	100	95	250	2C25003	EPA 8260D	03/25/22 12:28	JMW	QV-01
Carbon disulfide [75-15-0]^	250	U	ug/L	100	250	1200	2C25003	EPA 8260D	03/25/22 12:28	JMW	
Carbon Tetrachloride [56-23-5]^	94	U	ug/L	100	94	250	2C25003	EPA 8260D	03/25/22 12:28	JMW	
Chlorobenzene [108-90-7]^	72	U	ug/L	100	72	250	2C25003	EPA 8260D	03/25/22 12:28	JMW	
Chloroethane [75-00-3]^	98	U	ug/L	100	98	250	2C25003	EPA 8260D	03/25/22 12:28	JMW	
Chloroform [67-66-3]^	80	U	ug/L	100	80	250	2C25003	EPA 8260D	03/25/22 12:28	JMW	
Chloromethane [74-87-3]^	82	U	ug/L	100	82	250	2C25003	EPA 8260D	03/25/22 12:28	JMW	
cis-1,2-Dichloroethene [156-59-2]^	**2100**		ug/L	100	53	250	2C25003	EPA 8260D	03/25/22 12:28	JMW	
cis-1,3-Dichloropropene [10061-01-5]^	59	U	ug/L	100	59	250	2C25003	EPA 8260D	03/25/22 12:28	JMW	
Cyclohexane [110-82-7]^	93	U	ug/L	100	93	250	2C25003	EPA 8260D	03/25/22 12:28	JMW	
Dibromochloromethane [124-48-1]^	50	U	ug/L	100	50	250	2C25003	EPA 8260D	03/25/22 12:28	JMW	
Dichlorodifluoromethane [75-71-8]^	74	U	ug/L	100	74	250	2C25003	EPA 8260D	03/25/22 12:28	JMW	QV-01
Ethylbenzene [100-41-4]^	69	U	ug/L	100	69	250	2C25003	EPA 8260D	03/25/22 12:28	JMW	
Freon 113 [76-13-1]^	73	U	ug/L	100	73	250	2C25003	EPA 8260D	03/25/22 12:28	JMW	
Isopropylbenzene [98-82-8]^	67	U	ug/L	100	67	250	2C25003	EPA 8260D	03/25/22 12:28	JMW	
Methyl acetate [79-20-9]^	95	U	ug/L	100	95	250	2C25003	EPA 8260D	03/25/22 12:28	JMW	
Methylene Chloride [75-09-2]^	250	U	ug/L	100	250	1200	2C25003	EPA 8260D	03/25/22 12:28	JMW	
Methyl-tert-Butyl Ether [1634-04-4]^	60	U	ug/L	100	60	250	2C25003	EPA 8260D	03/25/22 12:28	JMW	
Styrene [100-42-5]^	61	U	ug/L	100	61	250	2C25003	EPA 8260D	03/25/22 12:28	JMW	
Tetrachloroethene [127-18-4]^	76	U	ug/L	100	76	250	2C25003	EPA 8260D	03/25/22 12:28	JMW	
Toluene [108-88-3]^	72	U	ug/L	100	72	250	2C25003	EPA 8260D	03/25/22 12:28	JMW	
trans-1,2-Dichloroethene [156-60-5]^	73	U	ug/L	100	73	250	2C25003	EPA 8260D	03/25/22 12:28	JMW	
trans-1,3-Dichloropropene [10061-02-6]^	73	U	ug/L	100	73	250	2C25003	EPA 8260D	03/25/22 12:28	JMW	
Trichloroethene [79-01-6]^	**6700**		ug/L	100	89	250	2C25003	EPA 8260D	03/25/22 12:28	JMW	
Trichlorofluoromethane [75-69-4]^	94	U	ug/L	100	94	250	2C25003	EPA 8260D	03/25/22 12:28	JMW	
Vinyl chloride [75-01-4]^	**96**	I	ug/L	100	71	250	2C25003	EPA 8260D	03/25/22 12:28	JMW	
Xylenes (Total) [1330-20-7]	130	U	ug/L	100	130	500	2C25003	EPA 8260D	03/25/22 12:28	JMW	

ANALYTICAL RESULTS

Description: LC34-RW1B-20220322 **Lab Sample ID:** AF02214-07 **Received:** 03/22/22 15:30

Matrix: Ground Water **Sampled:** 03/22/22 08:50 **Work Order:** AF02214

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*48*	*1*	*50.0*	*95 %*	*41-142*	*2C25003*	*EPA 8260D*	*03/25/22 12:28*	*JMW*	
Dibromofluoromethane	*45*	*1*	*50.0*	*89 %*	*53-146*	*2C25003*	*EPA 8260D*	*03/25/22 12:28*	*JMW*	
Toluene-d8	*48*	*1*	*50.0*	*96 %*	*41-146*	*2C25003*	*EPA 8260D*	*03/25/22 12:28*	*JMW*	

ANALYTICAL RESULTS

Description: LC34-RW2A-20220322 **Lab Sample ID:** AF02214-08 **Received:** 03/22/22 15:30

Matrix: Ground Water **Sampled:** 03/22/22 09:00 **Work Order:** AF02214

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	400	U	ug/L	500	400	1200	2C24007	EPA 8260D	03/24/22 12:19	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	270	U	ug/L	500	270	1200	2C24007	EPA 8260D	03/24/22 12:19	KKW	
1,1,2-Trichloroethane [79-00-5]^	380	U	ug/L	500	380	1200	2C24007	EPA 8260D	03/24/22 12:19	KKW	
1,1-Dichloroethane [75-34-3]^	310	U	ug/L	500	310	1200	2C24007	EPA 8260D	03/24/22 12:19	KKW	
1,1-Dichloroethene [75-35-4]^	470	U	ug/L	500	470	1200	2C24007	EPA 8260D	03/24/22 12:19	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	350	U	ug/L	500	350	1200	2C24007	EPA 8260D	03/24/22 12:19	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	480	U	ug/L	500	480	1200	2C24007	EPA 8260D	03/24/22 12:19	KKW	
1,2-Dibromoethane [106-93-4]^	390	U	ug/L	500	390	1200	2C24007	EPA 8260D	03/24/22 12:19	KKW	
1,2-Dichlorobenzene [95-50-1]^	360	U	ug/L	500	360	1200	2C24007	EPA 8260D	03/24/22 12:19	KKW	
1,2-Dichloroethane [107-06-2]^	320	U	ug/L	500	320	1200	2C24007	EPA 8260D	03/24/22 12:19	KKW	
1,2-Dichloropropane [78-87-5]^	400	U	ug/L	500	400	1200	2C24007	EPA 8260D	03/24/22 12:19	KKW	
1,3-Dichlorobenzene [541-73-1]^	380	U	ug/L	500	380	1200	2C24007	EPA 8260D	03/24/22 12:19	KKW	
1,4-Dichlorobenzene [106-46-7]^	380	U	ug/L	500	380	1200	2C24007	EPA 8260D	03/24/22 12:19	KKW	
2-Butanone [78-93-3]^	2200	U	ug/L	500	2200	6200	2C24007	EPA 8260D	03/24/22 12:19	KKW	
2-Hexanone [591-78-6]^	1200	U	ug/L	500	1200	6200	2C24007	EPA 8260D	03/24/22 12:19	KKW	
4-Methyl-2-pentanone [108-10-1]^	1200	U	ug/L	500	1200	6200	2C24007	EPA 8260D	03/24/22 12:19	KKW	
Acetone [67-64-1]^	5000	U	ug/L	500	5000	12000	2C24007	EPA 8260D	03/24/22 12:19	KKW	
Benzene [71-43-2]^	360	U	ug/L	500	360	1200	2C24007	EPA 8260D	03/24/22 12:19	KKW	
Bromodichloromethane [75-27-4]^	260	U	ug/L	500	260	1200	2C24007	EPA 8260D	03/24/22 12:19	KKW	
Bromoform [75-25-2]^	380	U	ug/L	500	380	1200	2C24007	EPA 8260D	03/24/22 12:19	KKW	
Bromomethane [74-83-9]^	480	U	ug/L	500	480	1200	2C24007	EPA 8260D	03/24/22 12:19	KKW	
Carbon disulfide [75-15-0]^	1200	U	ug/L	500	1200	6200	2C24007	EPA 8260D	03/24/22 12:19	KKW	
Carbon Tetrachloride [56-23-5]^	470	U	ug/L	500	470	1200	2C24007	EPA 8260D	03/24/22 12:19	KKW	
Chlorobenzene [108-90-7]^	360	U	ug/L	500	360	1200	2C24007	EPA 8260D	03/24/22 12:19	KKW	
Chloroethane [75-00-3]^	490	U	ug/L	500	490	1200	2C24007	EPA 8260D	03/24/22 12:19	KKW	
Chloroform [67-66-3]^	400	U	ug/L	500	400	1200	2C24007	EPA 8260D	03/24/22 12:19	KKW	
Chloromethane [74-87-3]^	410	U	ug/L	500	410	1200	2C24007	EPA 8260D	03/24/22 12:19	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**13000**		ug/L	500	260	1200	2C24007	EPA 8260D	03/24/22 12:19	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	300	U	ug/L	500	300	1200	2C24007	EPA 8260D	03/24/22 12:19	KKW	
Cyclohexane [110-82-7]^	460	U	ug/L	500	460	1200	2C24007	EPA 8260D	03/24/22 12:19	KKW	
Dibromochloromethane [124-48-1]^	250	U	ug/L	500	250	1200	2C24007	EPA 8260D	03/24/22 12:19	KKW	
Dichlorodifluoromethane [75-71-8]^	370	U	ug/L	500	370	1200	2C24007	EPA 8260D	03/24/22 12:19	KKW	
Ethylbenzene [100-41-4]^	340	U	ug/L	500	340	1200	2C24007	EPA 8260D	03/24/22 12:19	KKW	
Freon 113 [76-13-1]^	360	U	ug/L	500	360	1200	2C24007	EPA 8260D	03/24/22 12:19	KKW	
Isopropylbenzene [98-82-8]^	340	U	ug/L	500	340	1200	2C24007	EPA 8260D	03/24/22 12:19	KKW	
Methyl acetate [79-20-9]^	480	U	ug/L	500	480	1200	2C24007	EPA 8260D	03/24/22 12:19	KKW	A-07
Methylene Chloride [75-09-2]^	1200	U	ug/L	500	1200	6200	2C24007	EPA 8260D	03/24/22 12:19	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	300	U	ug/L	500	300	1200	2C24007	EPA 8260D	03/24/22 12:19	KKW	
Styrene [100-42-5]^	300	U	ug/L	500	300	1200	2C24007	EPA 8260D	03/24/22 12:19	KKW	
Tetrachloroethene [127-18-4]^	380	U	ug/L	500	380	1200	2C24007	EPA 8260D	03/24/22 12:19	KKW	
Toluene [108-88-3]^	360	U	ug/L	500	360	1200	2C24007	EPA 8260D	03/24/22 12:19	KKW	
trans-1,2-Dichloroethene [156-60-5]^	360	U	ug/L	500	360	1200	2C24007	EPA 8260D	03/24/22 12:19	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	360	U	ug/L	500	360	1200	2C24007	EPA 8260D	03/24/22 12:19	KKW	
Trichloroethene [79-01-6]^	**36000**		ug/L	500	440	1200	2C24007	EPA 8260D	03/24/22 12:19	KKW	
Trichlorofluoromethane [75-69-4]^	470	U	ug/L	500	470	1200	2C24007	EPA 8260D	03/24/22 12:19	KKW	
Vinyl chloride [75-01-4]^	**1100**	I	ug/L	500	360	1200	2C24007	EPA 8260D	03/24/22 12:19	KKW	
Xylenes (Total) [1330-20-7]	650	U	ug/L	500	650	2500	2C24007	EPA 8260D	03/24/22 12:19	KKW	

ANALYTICAL RESULTS

Description: LC34-RW2A-20220322 **Lab Sample ID:** AF02214-08 **Received:** 03/22/22 15:30

Matrix: Ground Water **Sampled:** 03/22/22 09:00 **Work Order:** AF02214

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*52*	*1*	*50.0*	*103 %*	*41-142*	*2C24007*	*EPA 8260D*	*03/24/22 12:19*	*KKW*	
Dibromofluoromethane	*45*	*1*	*50.0*	*90 %*	*53-146*	*2C24007*	*EPA 8260D*	*03/24/22 12:19*	*KKW*	
Toluene-d8	*50*	*1*	*50.0*	*99 %*	*41-146*	*2C24007*	*EPA 8260D*	*03/24/22 12:19*	*KKW*	

ANALYTICAL RESULTS

Description: LC34-RW2B-20220322 **Lab Sample ID:** AF02214-09 **Received:** 03/22/22 15:30

Matrix: Ground Water **Sampled:** 03/22/22 09:10 **Work Order:** AF02214

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	160	U	ug/L	200	160	500	2C25003	EPA 8260D	03/25/22 12:57	JMW	
1,1,2,2-Tetrachloroethane [79-34-5]^	110	U	ug/L	200	110	500	2C25003	EPA 8260D	03/25/22 12:57	JMW	
1,1,2-Trichloroethane [79-00-5]^	150	U	ug/L	200	150	500	2C25003	EPA 8260D	03/25/22 12:57	JMW	
1,1-Dichloroethane [75-34-3]^	120	U	ug/L	200	120	500	2C25003	EPA 8260D	03/25/22 12:57	JMW	
1,1-Dichloroethene [75-35-4]^	190	U	ug/L	200	190	500	2C25003	EPA 8260D	03/25/22 12:57	JMW	
1,2,4-Trichlorobenzene [120-82-1]^	140	U	ug/L	200	140	500	2C25003	EPA 8260D	03/25/22 12:57	JMW	QB-02
1,2-Dibromo-3-chloropropane [96-12-8]^	190	U	ug/L	200	190	500	2C25003	EPA 8260D	03/25/22 12:57	JMW	
1,2-Dibromoethane [106-93-4]^	160	U	ug/L	200	160	500	2C25003	EPA 8260D	03/25/22 12:57	JMW	
1,2-Dichlorobenzene [95-50-1]^	150	U	ug/L	200	150	500	2C25003	EPA 8260D	03/25/22 12:57	JMW	
1,2-Dichloroethane [107-06-2]^	130	U	ug/L	200	130	500	2C25003	EPA 8260D	03/25/22 12:57	JMW	
1,2-Dichloropropane [78-87-5]^	160	U	ug/L	200	160	500	2C25003	EPA 8260D	03/25/22 12:57	JMW	
1,3-Dichlorobenzene [541-73-1]^	150	U	ug/L	200	150	500	2C25003	EPA 8260D	03/25/22 12:57	JMW	
1,4-Dichlorobenzene [106-46-7]^	150	U	ug/L	200	150	500	2C25003	EPA 8260D	03/25/22 12:57	JMW	
2-Butanone [78-93-3]^	900	U	ug/L	200	900	2500	2C25003	EPA 8260D	03/25/22 12:57	JMW	
2-Hexanone [591-78-6]^	500	U	ug/L	200	500	2500	2C25003	EPA 8260D	03/25/22 12:57	JMW	
4-Methyl-2-pentanone [108-10-1]^	500	U	ug/L	200	500	2500	2C25003	EPA 8260D	03/25/22 12:57	JMW	
Acetone [67-64-1]^	2000	U	ug/L	200	2000	5000	2C25003	EPA 8260D	03/25/22 12:57	JMW	
Benzene [71-43-2]^	140	U	ug/L	200	140	500	2C25003	EPA 8260D	03/25/22 12:57	JMW	
Bromodichloromethane [75-27-4]^	100	U	ug/L	200	100	500	2C25003	EPA 8260D	03/25/22 12:57	JMW	QV-01
Bromoform [75-25-2]^	150	U	ug/L	200	150	500	2C25003	EPA 8260D	03/25/22 12:57	JMW	QV-01
Bromomethane [74-83-9]^	190	U	ug/L	200	190	500	2C25003	EPA 8260D	03/25/22 12:57	JMW	QV-01
Carbon disulfide [75-15-0]^	500	U	ug/L	200	500	2500	2C25003	EPA 8260D	03/25/22 12:57	JMW	
Carbon Tetrachloride [56-23-5]^	190	U	ug/L	200	190	500	2C25003	EPA 8260D	03/25/22 12:57	JMW	
Chlorobenzene [108-90-7]^	140	U	ug/L	200	140	500	2C25003	EPA 8260D	03/25/22 12:57	JMW	
Chloroethane [75-00-3]^	200	U	ug/L	200	200	500	2C25003	EPA 8260D	03/25/22 12:57	JMW	
Chloroform [67-66-3]^	160	U	ug/L	200	160	500	2C25003	EPA 8260D	03/25/22 12:57	JMW	
Chloromethane [74-87-3]^	160	U	ug/L	200	160	500	2C25003	EPA 8260D	03/25/22 12:57	JMW	
cis-1,2-Dichloroethene [156-59-2]^	**1700**		ug/L	200	110	500	2C25003	EPA 8260D	03/25/22 12:57	JMW	
cis-1,3-Dichloropropene [10061-01-5]^	120	U	ug/L	200	120	500	2C25003	EPA 8260D	03/25/22 12:57	JMW	
Cyclohexane [110-82-7]^	190	U	ug/L	200	190	500	2C25003	EPA 8260D	03/25/22 12:57	JMW	
Dibromochloromethane [124-48-1]^	100	U	ug/L	200	100	500	2C25003	EPA 8260D	03/25/22 12:57	JMW	
Dichlorodifluoromethane [75-71-8]^	150	U	ug/L	200	150	500	2C25003	EPA 8260D	03/25/22 12:57	JMW	QV-01
Ethylbenzene [100-41-4]^	140	U	ug/L	200	140	500	2C25003	EPA 8260D	03/25/22 12:57	JMW	
Freon 113 [76-13-1]^	150	U	ug/L	200	150	500	2C25003	EPA 8260D	03/25/22 12:57	JMW	
Isopropylbenzene [98-82-8]^	130	U	ug/L	200	130	500	2C25003	EPA 8260D	03/25/22 12:57	JMW	
Methyl acetate [79-20-9]^	190	U	ug/L	200	190	500	2C25003	EPA 8260D	03/25/22 12:57	JMW	
Methylene Chloride [75-09-2]^	500	U	ug/L	200	500	2500	2C25003	EPA 8260D	03/25/22 12:57	JMW	
Methyl-tert-Butyl Ether [1634-04-4]^	120	U	ug/L	200	120	500	2C25003	EPA 8260D	03/25/22 12:57	JMW	
Styrene [100-42-5]^	120	U	ug/L	200	120	500	2C25003	EPA 8260D	03/25/22 12:57	JMW	
Tetrachloroethene [127-18-4]^	150	U	ug/L	200	150	500	2C25003	EPA 8260D	03/25/22 12:57	JMW	
Toluene [108-88-3]^	140	U	ug/L	200	140	500	2C25003	EPA 8260D	03/25/22 12:57	JMW	
trans-1,2-Dichloroethene [156-60-5]^	150	U	ug/L	200	150	500	2C25003	EPA 8260D	03/25/22 12:57	JMW	
trans-1,3-Dichloropropene [10061-02-6]^	150	U	ug/L	200	150	500	2C25003	EPA 8260D	03/25/22 12:57	JMW	
Trichloroethene [79-01-6]^	**19000**		ug/L	200	180	500	2C25003	EPA 8260D	03/25/22 12:57	JMW	
Trichlorofluoromethane [75-69-4]^	190	U	ug/L	200	190	500	2C25003	EPA 8260D	03/25/22 12:57	JMW	
Vinyl chloride [75-01-4]^	**250**	I	ug/L	200	140	500	2C25003	EPA 8260D	03/25/22 12:57	JMW	
Xylenes (Total) [1330-20-7]	260	U	ug/L	200	260	1000	2C25003	EPA 8260D	03/25/22 12:57	JMW	

ANALYTICAL RESULTS

Description: LC34-RW2B-20220322 **Lab Sample ID:** AF02214-09 **Received:** 03/22/22 15:30

Matrix: Ground Water **Sampled:** 03/22/22 09:10 **Work Order:** AF02214

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*48*	*1*	*50.0*	*96 %*	*41-142*	*2C25003*	*EPA 8260D*	*03/25/22 12:57*	*JMW*	
Dibromofluoromethane	*45*	*1*	*50.0*	*90 %*	*53-146*	*2C25003*	*EPA 8260D*	*03/25/22 12:57*	*JMW*	
Toluene-d8	*48*	*1*	*50.0*	*96 %*	*41-146*	*2C25003*	*EPA 8260D*	*03/25/22 12:57*	*JMW*	

ANALYTICAL RESULTS

Description: LC34-RW3B-20220322 **Lab Sample ID:** AF02214-10 **Received:** 03/22/22 15:30

Matrix: Ground Water **Sampled:** 03/22/22 09:20 **Work Order:** AF02214

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	40	U	ug/L	50	40	120	2C25003	EPA 8260D	03/25/22 13:26	JMW	
1,1,2,2-Tetrachloroethane [79-34-5]^	27	U	ug/L	50	27	120	2C25003	EPA 8260D	03/25/22 13:26	JMW	
1,1,2-Trichloroethane [79-00-5]^	38	U	ug/L	50	38	120	2C25003	EPA 8260D	03/25/22 13:26	JMW	
1,1-Dichloroethane [75-34-3]^	31	U	ug/L	50	31	120	2C25003	EPA 8260D	03/25/22 13:26	JMW	
1,1-Dichloroethene [75-35-4]^	47	U	ug/L	50	47	120	2C25003	EPA 8260D	03/25/22 13:26	JMW	
1,2,4-Trichlorobenzene [120-82-1]^	35	U	ug/L	50	35	120	2C25003	EPA 8260D	03/25/22 13:26	JMW	QB-02
1,2-Dibromo-3-chloropropane [96-12-8]^	48	U	ug/L	50	48	120	2C25003	EPA 8260D	03/25/22 13:26	JMW	
1,2-Dibromoethane [106-93-4]^	39	U	ug/L	50	39	120	2C25003	EPA 8260D	03/25/22 13:26	JMW	
1,2-Dichlorobenzene [95-50-1]^	36	U	ug/L	50	36	120	2C25003	EPA 8260D	03/25/22 13:26	JMW	
1,2-Dichloroethane [107-06-2]^	32	U	ug/L	50	32	120	2C25003	EPA 8260D	03/25/22 13:26	JMW	
1,2-Dichloropropane [78-87-5]^	40	U	ug/L	50	40	120	2C25003	EPA 8260D	03/25/22 13:26	JMW	
1,3-Dichlorobenzene [541-73-1]^	38	U	ug/L	50	38	120	2C25003	EPA 8260D	03/25/22 13:26	JMW	
1,4-Dichlorobenzene [106-46-7]^	38	U	ug/L	50	38	120	2C25003	EPA 8260D	03/25/22 13:26	JMW	
2-Butanone [78-93-3]^	220	U	ug/L	50	220	620	2C25003	EPA 8260D	03/25/22 13:26	JMW	
2-Hexanone [591-78-6]^	120	U	ug/L	50	120	620	2C25003	EPA 8260D	03/25/22 13:26	JMW	
4-Methyl-2-pentanone [108-10-1]^	120	U	ug/L	50	120	620	2C25003	EPA 8260D	03/25/22 13:26	JMW	
Acetone [67-64-1]^	500	U	ug/L	50	500	1200	2C25003	EPA 8260D	03/25/22 13:26	JMW	
Benzene [71-43-2]^	36	U	ug/L	50	36	120	2C25003	EPA 8260D	03/25/22 13:26	JMW	
Bromodichloromethane [75-27-4]^	26	U	ug/L	50	26	120	2C25003	EPA 8260D	03/25/22 13:26	JMW	QV-01
Bromoform [75-25-2]^	38	U	ug/L	50	38	120	2C25003	EPA 8260D	03/25/22 13:26	JMW	QV-01
Bromomethane [74-83-9]^	48	U	ug/L	50	48	120	2C25003	EPA 8260D	03/25/22 13:26	JMW	QV-01
Carbon disulfide [75-15-0]^	120	U	ug/L	50	120	620	2C25003	EPA 8260D	03/25/22 13:26	JMW	
Carbon Tetrachloride [56-23-5]^	47	U	ug/L	50	47	120	2C25003	EPA 8260D	03/25/22 13:26	JMW	
Chlorobenzene [108-90-7]^	36	U	ug/L	50	36	120	2C25003	EPA 8260D	03/25/22 13:26	JMW	
Chloroethane [75-00-3]^	49	U	ug/L	50	49	120	2C25003	EPA 8260D	03/25/22 13:26	JMW	
Chloroform [67-66-3]^	40	U	ug/L	50	40	120	2C25003	EPA 8260D	03/25/22 13:26	JMW	
Chloromethane [74-87-3]^	41	U	ug/L	50	41	120	2C25003	EPA 8260D	03/25/22 13:26	JMW	
cis-1,2-Dichloroethene [156-59-2]^	**1800**		ug/L	50	26	120	2C25003	EPA 8260D	03/25/22 13:26	JMW	
cis-1,3-Dichloropropene [10061-01-5]^	30	U	ug/L	50	30	120	2C25003	EPA 8260D	03/25/22 13:26	JMW	
Cyclohexane [110-82-7]^	46	U	ug/L	50	46	120	2C25003	EPA 8260D	03/25/22 13:26	JMW	
Dibromochloromethane [124-48-1]^	25	U	ug/L	50	25	120	2C25003	EPA 8260D	03/25/22 13:26	JMW	
Dichlorodifluoromethane [75-71-8]^	37	U	ug/L	50	37	120	2C25003	EPA 8260D	03/25/22 13:26	JMW	QV-01
Ethylbenzene [100-41-4]^	34	U	ug/L	50	34	120	2C25003	EPA 8260D	03/25/22 13:26	JMW	
Freon 113 [76-13-1]^	36	U	ug/L	50	36	120	2C25003	EPA 8260D	03/25/22 13:26	JMW	
Isopropylbenzene [98-82-8]^	34	U	ug/L	50	34	120	2C25003	EPA 8260D	03/25/22 13:26	JMW	
Methyl acetate [79-20-9]^	48	U	ug/L	50	48	120	2C25003	EPA 8260D	03/25/22 13:26	JMW	
Methylene Chloride [75-09-2]^	120	U	ug/L	50	120	620	2C25003	EPA 8260D	03/25/22 13:26	JMW	
Methyl-tert-Butyl Ether [1634-04-4]^	30	U	ug/L	50	30	120	2C25003	EPA 8260D	03/25/22 13:26	JMW	
Styrene [100-42-5]^	30	U	ug/L	50	30	120	2C25003	EPA 8260D	03/25/22 13:26	JMW	
Tetrachloroethene [127-18-4]^	38	U	ug/L	50	38	120	2C25003	EPA 8260D	03/25/22 13:26	JMW	
Toluene [108-88-3]^	36	U	ug/L	50	36	120	2C25003	EPA 8260D	03/25/22 13:26	JMW	
trans-1,2-Dichloroethene [156-60-5]^	36	U	ug/L	50	36	120	2C25003	EPA 8260D	03/25/22 13:26	JMW	
trans-1,3-Dichloropropene [10061-02-6]^	36	U	ug/L	50	36	120	2C25003	EPA 8260D	03/25/22 13:26	JMW	
Trichloroethene [79-01-6]^	**4700**		ug/L	50	44	120	2C25003	EPA 8260D	03/25/22 13:26	JMW	
Trichlorofluoromethane [75-69-4]^	47	U	ug/L	50	47	120	2C25003	EPA 8260D	03/25/22 13:26	JMW	
Vinyl chloride [75-01-4]^	**150**		ug/L	50	36	120	2C25003	EPA 8260D	03/25/22 13:26	JMW	
Xylenes (Total) [1330-20-7]	65	U	ug/L	50	65	250	2C25003	EPA 8260D	03/25/22 13:26	JMW	

ANALYTICAL RESULTS

Description: LC34-RW3B-20220322 **Lab Sample ID:** AF02214-10 **Received:** 03/22/22 15:30

Matrix: Ground Water **Sampled:** 03/22/22 09:20 **Work Order:** AF02214

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*48*	*1*	*50.0*	*96 %*	*41-142*	*2C25003*	*EPA 8260D*	*03/25/22 13:26*	*JMW*	
Dibromofluoromethane	*44*	*1*	*50.0*	*89 %*	*53-146*	*2C25003*	*EPA 8260D*	*03/25/22 13:26*	*JMW*	
Toluene-d8	*49*	*1*	*50.0*	*97 %*	*41-146*	*2C25003*	*EPA 8260D*	*03/25/22 13:26*	*JMW*	

ANALYTICAL RESULTS

Description: LC34-RW3A-20220322 **Lab Sample ID:** AF02214-11 **Received:** 03/22/22 15:30

Matrix: Ground Water **Sampled:** 03/22/22 09:30 **Work Order:** AF02214

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	400	U	ug/L	500	400	1200	2C25003	EPA 8260D	03/25/22 13:54	JMW	
1,1,2,2-Tetrachloroethane [79-34-5]^	270	U	ug/L	500	270	1200	2C25003	EPA 8260D	03/25/22 13:54	JMW	
1,1,2-Trichloroethane [79-00-5]^	380	U	ug/L	500	380	1200	2C25003	EPA 8260D	03/25/22 13:54	JMW	
1,1-Dichloroethane [75-34-3]^	310	U	ug/L	500	310	1200	2C25003	EPA 8260D	03/25/22 13:54	JMW	
1,1-Dichloroethene [75-35-4]^	470	U	ug/L	500	470	1200	2C25003	EPA 8260D	03/25/22 13:54	JMW	
1,2,4-Trichlorobenzene [120-82-1]^	350	U	ug/L	500	350	1200	2C25003	EPA 8260D	03/25/22 13:54	JMW	QB-02
1,2-Dibromo-3-chloropropane [96-12-8]^	480	U	ug/L	500	480	1200	2C25003	EPA 8260D	03/25/22 13:54	JMW	
1,2-Dibromoethane [106-93-4]^	390	U	ug/L	500	390	1200	2C25003	EPA 8260D	03/25/22 13:54	JMW	
1,2-Dichlorobenzene [95-50-1]^	360	U	ug/L	500	360	1200	2C25003	EPA 8260D	03/25/22 13:54	JMW	
1,2-Dichloroethane [107-06-2]^	320	U	ug/L	500	320	1200	2C25003	EPA 8260D	03/25/22 13:54	JMW	
1,2-Dichloropropane [78-87-5]^	400	U	ug/L	500	400	1200	2C25003	EPA 8260D	03/25/22 13:54	JMW	
1,3-Dichlorobenzene [541-73-1]^	380	U	ug/L	500	380	1200	2C25003	EPA 8260D	03/25/22 13:54	JMW	
1,4-Dichlorobenzene [106-46-7]^	380	U	ug/L	500	380	1200	2C25003	EPA 8260D	03/25/22 13:54	JMW	
2-Butanone [78-93-3]^	2200	U	ug/L	500	2200	6200	2C25003	EPA 8260D	03/25/22 13:54	JMW	
2-Hexanone [591-78-6]^	1200	U	ug/L	500	1200	6200	2C25003	EPA 8260D	03/25/22 13:54	JMW	
4-Methyl-2-pentanone [108-10-1]^	1200	U	ug/L	500	1200	6200	2C25003	EPA 8260D	03/25/22 13:54	JMW	
Acetone [67-64-1]^	5000	U	ug/L	500	5000	12000	2C25003	EPA 8260D	03/25/22 13:54	JMW	
Benzene [71-43-2]^	360	U	ug/L	500	360	1200	2C25003	EPA 8260D	03/25/22 13:54	JMW	
Bromodichloromethane [75-27-4]^	260	U	ug/L	500	260	1200	2C25003	EPA 8260D	03/25/22 13:54	JMW	QV-01
Bromoform [75-25-2]^	380	U	ug/L	500	380	1200	2C25003	EPA 8260D	03/25/22 13:54	JMW	QV-01
Bromomethane [74-83-9]^	480	U	ug/L	500	480	1200	2C25003	EPA 8260D	03/25/22 13:54	JMW	QV-01
Carbon disulfide [75-15-0]^	1200	U	ug/L	500	1200	6200	2C25003	EPA 8260D	03/25/22 13:54	JMW	
Carbon Tetrachloride [56-23-5]^	470	U	ug/L	500	470	1200	2C25003	EPA 8260D	03/25/22 13:54	JMW	
Chlorobenzene [108-90-7]^	360	U	ug/L	500	360	1200	2C25003	EPA 8260D	03/25/22 13:54	JMW	
Chloroethane [75-00-3]^	490	U	ug/L	500	490	1200	2C25003	EPA 8260D	03/25/22 13:54	JMW	
Chloroform [67-66-3]^	400	U	ug/L	500	400	1200	2C25003	EPA 8260D	03/25/22 13:54	JMW	
Chloromethane [74-87-3]^	410	U	ug/L	500	410	1200	2C25003	EPA 8260D	03/25/22 13:54	JMW	
cis-1,2-Dichloroethene [156-59-2]^	**9700**		ug/L	500	260	1200	2C25003	EPA 8260D	03/25/22 13:54	JMW	
cis-1,3-Dichloropropene [10061-01-5]^	300	U	ug/L	500	300	1200	2C25003	EPA 8260D	03/25/22 13:54	JMW	
Cyclohexane [110-82-7]^	460	U	ug/L	500	460	1200	2C25003	EPA 8260D	03/25/22 13:54	JMW	
Dibromochloromethane [124-48-1]^	250	U	ug/L	500	250	1200	2C25003	EPA 8260D	03/25/22 13:54	JMW	
Dichlorodifluoromethane [75-71-8]^	370	U	ug/L	500	370	1200	2C25003	EPA 8260D	03/25/22 13:54	JMW	QV-01
Ethylbenzene [100-41-4]^	340	U	ug/L	500	340	1200	2C25003	EPA 8260D	03/25/22 13:54	JMW	
Freon 113 [76-13-1]^	360	U	ug/L	500	360	1200	2C25003	EPA 8260D	03/25/22 13:54	JMW	
Isopropylbenzene [98-82-8]^	340	U	ug/L	500	340	1200	2C25003	EPA 8260D	03/25/22 13:54	JMW	
Methyl acetate [79-20-9]^	480	U	ug/L	500	480	1200	2C25003	EPA 8260D	03/25/22 13:54	JMW	
Methylene Chloride [75-09-2]^	1200	U	ug/L	500	1200	6200	2C25003	EPA 8260D	03/25/22 13:54	JMW	
Methyl-tert-Butyl Ether [1634-04-4]^	300	U	ug/L	500	300	1200	2C25003	EPA 8260D	03/25/22 13:54	JMW	
Styrene [100-42-5]^	300	U	ug/L	500	300	1200	2C25003	EPA 8260D	03/25/22 13:54	JMW	
Tetrachloroethene [127-18-4]^	380	U	ug/L	500	380	1200	2C25003	EPA 8260D	03/25/22 13:54	JMW	
Toluene [108-88-3]^	360	U	ug/L	500	360	1200	2C25003	EPA 8260D	03/25/22 13:54	JMW	
trans-1,2-Dichloroethene [156-60-5]^	360	U	ug/L	500	360	1200	2C25003	EPA 8260D	03/25/22 13:54	JMW	
trans-1,3-Dichloropropene [10061-02-6]^	360	U	ug/L	500	360	1200	2C25003	EPA 8260D	03/25/22 13:54	JMW	
Trichloroethene [79-01-6]^	**34000**		ug/L	500	440	1200	2C25003	EPA 8260D	03/25/22 13:54	JMW	
Trichlorofluoromethane [75-69-4]^	470	U	ug/L	500	470	1200	2C25003	EPA 8260D	03/25/22 13:54	JMW	
Vinyl chloride [75-01-4]^	**520**	I	ug/L	500	360	1200	2C25003	EPA 8260D	03/25/22 13:54	JMW	
Xylenes (Total) [1330-20-7]	650	U	ug/L	500	650	2500	2C25003	EPA 8260D	03/25/22 13:54	JMW	

ANALYTICAL RESULTS

Description: LC34-RW3A-20220322 **Lab Sample ID:** AF02214-11 **Received:** 03/22/22 15:30

Matrix: Ground Water **Sampled:** 03/22/22 09:30 **Work Order:** AF02214

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*49*	*1*	*50.0*	*98 %*	*41-142*	*2C25003*	*EPA 8260D*	*03/25/22 13:54*	*JMW*	
Dibromofluoromethane	*47*	*1*	*50.0*	*93 %*	*53-146*	*2C25003*	*EPA 8260D*	*03/25/22 13:54*	*JMW*	
Toluene-d8	*49*	*1*	*50.0*	*97 %*	*41-146*	*2C25003*	*EPA 8260D*	*03/25/22 13:54*	*JMW*	

ANALYTICAL RESULTS

Description: LC34-RW5B-20220322 **Lab Sample ID:** AF02214-12 **Received:** 03/22/22 15:30

Matrix: Ground Water **Sampled:** 03/22/22 09:40 **Work Order:** AF02214

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	2C23020	EPA 8260D	03/24/22 06:09	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	2C23020	EPA 8260D	03/24/22 06:09	KKW	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	2C23020	EPA 8260D	03/24/22 06:09	KKW	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	2C23020	EPA 8260D	03/24/22 06:09	KKW	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	2C23020	EPA 8260D	03/24/22 06:09	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	2C23020	EPA 8260D	03/24/22 06:09	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	2C23020	EPA 8260D	03/24/22 06:09	KKW	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	2C23020	EPA 8260D	03/24/22 06:09	KKW	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	2C23020	EPA 8260D	03/24/22 06:09	KKW	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	2C23020	EPA 8260D	03/24/22 06:09	KKW	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	2C23020	EPA 8260D	03/24/22 06:09	KKW	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	2C23020	EPA 8260D	03/24/22 06:09	KKW	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	2C23020	EPA 8260D	03/24/22 06:09	KKW	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	2C23020	EPA 8260D	03/24/22 06:09	KKW	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	2C23020	EPA 8260D	03/24/22 06:09	KKW	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	2C23020	EPA 8260D	03/24/22 06:09	KKW	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	2C23020	EPA 8260D	03/24/22 06:09	KKW	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	2C23020	EPA 8260D	03/24/22 06:09	KKW	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	2C23020	EPA 8260D	03/24/22 06:09	KKW	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	2C23020	EPA 8260D	03/24/22 06:09	KKW	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	2C23020	EPA 8260D	03/24/22 06:09	KKW	
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	2C23020	EPA 8260D	03/24/22 06:09	KKW	
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	2C23020	EPA 8260D	03/24/22 06:09	KKW	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	2C23020	EPA 8260D	03/24/22 06:09	KKW	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	2C23020	EPA 8260D	03/24/22 06:09	KKW	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	2C23020	EPA 8260D	03/24/22 06:09	KKW	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	2C23020	EPA 8260D	03/24/22 06:09	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**91**		ug/L	1	0.53	2.5	2C23020	EPA 8260D	03/24/22 06:09	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	2C23020	EPA 8260D	03/24/22 06:09	KKW	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	2C23020	EPA 8260D	03/24/22 06:09	KKW	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	2C23020	EPA 8260D	03/24/22 06:09	KKW	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	2C23020	EPA 8260D	03/24/22 06:09	KKW	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	2C23020	EPA 8260D	03/24/22 06:09	KKW	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	2C23020	EPA 8260D	03/24/22 06:09	KKW	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	2C23020	EPA 8260D	03/24/22 06:09	KKW	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	2C23020	EPA 8260D	03/24/22 06:09	KKW	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	2C23020	EPA 8260D	03/24/22 06:09	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	2C23020	EPA 8260D	03/24/22 06:09	KKW	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	2C23020	EPA 8260D	03/24/22 06:09	KKW	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	2C23020	EPA 8260D	03/24/22 06:09	KKW	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	2C23020	EPA 8260D	03/24/22 06:09	KKW	
trans-1,2-Dichloroethene [156-60-5]^	**3.5**		ug/L	1	0.73	2.5	2C23020	EPA 8260D	03/24/22 06:09	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	2C23020	EPA 8260D	03/24/22 06:09	KKW	
Trichloroethene [79-01-6]^	**6.6**		ug/L	1	0.89	2.5	2C23020	EPA 8260D	03/24/22 06:09	KKW	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	2C23020	EPA 8260D	03/24/22 06:09	KKW	
Vinyl chloride [75-01-4]^	**24**		ug/L	1	0.71	2.5	2C23020	EPA 8260D	03/24/22 06:09	KKW	
Xylenes (Total) [1330-20-7]	1.3	U	ug/L	1	1.3	5.0	2C23020	EPA 8260D	03/24/22 06:09	KKW	

ANALYTICAL RESULTS

Description: LC34-RW5B-20220322 **Lab Sample ID:** AF02214-12 **Received:** 03/22/22 15:30

Matrix: Ground Water **Sampled:** 03/22/22 09:40 **Work Order:** AF02214

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*53*	*1*	*50.0*	*106 %*	*41-142*	*2C23020*	*EPA 8260D*	*03/24/22 06:09*	*KKW*	
Dibromofluoromethane	*48*	*1*	*50.0*	*96 %*	*53-146*	*2C23020*	*EPA 8260D*	*03/24/22 06:09*	*KKW*	
Toluene-d8	*48*	*1*	*50.0*	*96 %*	*41-146*	*2C23020*	*EPA 8260D*	*03/24/22 06:09*	*KKW*	

ANALYTICAL RESULTS

Description: LC34-RW9A-20220322 **Lab Sample ID:** AF02214-13 **Received:** 03/22/22 15:30

Matrix: Ground Water **Sampled:** 03/22/22 09:50 **Work Order:** AF02214

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	40	U	ug/L	50	40	120	2C24007	EPA 8260D	03/24/22 13:15	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	27	U	ug/L	50	27	120	2C24007	EPA 8260D	03/24/22 13:15	KKW	
1,1,2-Trichloroethane [79-00-5]^	38	U	ug/L	50	38	120	2C24007	EPA 8260D	03/24/22 13:15	KKW	
1,1-Dichloroethane [75-34-3]^	31	U	ug/L	50	31	120	2C24007	EPA 8260D	03/24/22 13:15	KKW	
1,1-Dichloroethene [75-35-4]^	47	U	ug/L	50	47	120	2C24007	EPA 8260D	03/24/22 13:15	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	35	U	ug/L	50	35	120	2C24007	EPA 8260D	03/24/22 13:15	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	48	U	ug/L	50	48	120	2C24007	EPA 8260D	03/24/22 13:15	KKW	
1,2-Dibromoethane [106-93-4]^	39	U	ug/L	50	39	120	2C24007	EPA 8260D	03/24/22 13:15	KKW	
1,2-Dichlorobenzene [95-50-1]^	36	U	ug/L	50	36	120	2C24007	EPA 8260D	03/24/22 13:15	KKW	
1,2-Dichloroethane [107-06-2]^	32	U	ug/L	50	32	120	2C24007	EPA 8260D	03/24/22 13:15	KKW	
1,2-Dichloropropane [78-87-5]^	40	U	ug/L	50	40	120	2C24007	EPA 8260D	03/24/22 13:15	KKW	
1,3-Dichlorobenzene [541-73-1]^	38	U	ug/L	50	38	120	2C24007	EPA 8260D	03/24/22 13:15	KKW	
1,4-Dichlorobenzene [106-46-7]^	38	U	ug/L	50	38	120	2C24007	EPA 8260D	03/24/22 13:15	KKW	
2-Butanone [78-93-3]^	220	U	ug/L	50	220	620	2C24007	EPA 8260D	03/24/22 13:15	KKW	
2-Hexanone [591-78-6]^	120	U	ug/L	50	120	620	2C24007	EPA 8260D	03/24/22 13:15	KKW	
4-Methyl-2-pentanone [108-10-1]^	120	U	ug/L	50	120	620	2C24007	EPA 8260D	03/24/22 13:15	KKW	
Acetone [67-64-1]^	500	U	ug/L	50	500	1200	2C24007	EPA 8260D	03/24/22 13:15	KKW	
Benzene [71-43-2]^	36	U	ug/L	50	36	120	2C24007	EPA 8260D	03/24/22 13:15	KKW	
Bromodichloromethane [75-27-4]^	26	U	ug/L	50	26	120	2C24007	EPA 8260D	03/24/22 13:15	KKW	
Bromoform [75-25-2]^	38	U	ug/L	50	38	120	2C24007	EPA 8260D	03/24/22 13:15	KKW	
Bromomethane [74-83-9]^	48	U	ug/L	50	48	120	2C24007	EPA 8260D	03/24/22 13:15	KKW	
Carbon disulfide [75-15-0]^	120	U	ug/L	50	120	620	2C24007	EPA 8260D	03/24/22 13:15	KKW	
Carbon Tetrachloride [56-23-5]^	47	U	ug/L	50	47	120	2C24007	EPA 8260D	03/24/22 13:15	KKW	
Chlorobenzene [108-90-7]^	36	U	ug/L	50	36	120	2C24007	EPA 8260D	03/24/22 13:15	KKW	
Chloroethane [75-00-3]^	49	U	ug/L	50	49	120	2C24007	EPA 8260D	03/24/22 13:15	KKW	
Chloroform [67-66-3]^	40	U	ug/L	50	40	120	2C24007	EPA 8260D	03/24/22 13:15	KKW	
Chloromethane [74-87-3]^	41	U	ug/L	50	41	120	2C24007	EPA 8260D	03/24/22 13:15	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**3300**		ug/L	50	26	120	2C24007	EPA 8260D	03/24/22 13:15	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	30	U	ug/L	50	30	120	2C24007	EPA 8260D	03/24/22 13:15	KKW	
Cyclohexane [110-82-7]^	46	U	ug/L	50	46	120	2C24007	EPA 8260D	03/24/22 13:15	KKW	
Dibromochloromethane [124-48-1]^	25	U	ug/L	50	25	120	2C24007	EPA 8260D	03/24/22 13:15	KKW	
Dichlorodifluoromethane [75-71-8]^	37	U	ug/L	50	37	120	2C24007	EPA 8260D	03/24/22 13:15	KKW	
Ethylbenzene [100-41-4]^	34	U	ug/L	50	34	120	2C24007	EPA 8260D	03/24/22 13:15	KKW	
Freon 113 [76-13-1]^	36	U	ug/L	50	36	120	2C24007	EPA 8260D	03/24/22 13:15	KKW	
Isopropylbenzene [98-82-8]^	34	U	ug/L	50	34	120	2C24007	EPA 8260D	03/24/22 13:15	KKW	
Methyl acetate [79-20-9]^	48	U	ug/L	50	48	120	2C24007	EPA 8260D	03/24/22 13:15	KKW	A-07
Methylene Chloride [75-09-2]^	120	U	ug/L	50	120	620	2C24007	EPA 8260D	03/24/22 13:15	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	30	U	ug/L	50	30	120	2C24007	EPA 8260D	03/24/22 13:15	KKW	
Styrene [100-42-5]^	30	U	ug/L	50	30	120	2C24007	EPA 8260D	03/24/22 13:15	KKW	
Tetrachloroethene [127-18-4]^	38	U	ug/L	50	38	120	2C24007	EPA 8260D	03/24/22 13:15	KKW	
Toluene [108-88-3]^	36	U	ug/L	50	36	120	2C24007	EPA 8260D	03/24/22 13:15	KKW	
trans-1,2-Dichloroethene [156-60-5]^	**74**	I	ug/L	50	36	120	2C24007	EPA 8260D	03/24/22 13:15	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	36	U	ug/L	50	36	120	2C24007	EPA 8260D	03/24/22 13:15	KKW	
Trichloroethene [79-01-6]^	44	U	ug/L	50	44	120	2C24007	EPA 8260D	03/24/22 13:15	KKW	
Trichlorofluoromethane [75-69-4]^	47	U	ug/L	50	47	120	2C24007	EPA 8260D	03/24/22 13:15	KKW	
Vinyl chloride [75-01-4]^	**1600**		ug/L	50	36	120	2C24007	EPA 8260D	03/24/22 13:15	KKW	
Xylenes (Total) [1330-20-7]	65	U	ug/L	50	65	250	2C24007	EPA 8260D	03/24/22 13:15	KKW	

ANALYTICAL RESULTS

Description: LC34-RW9A-20220322 | **Lab Sample ID:** AF02214-13 | **Received:** 03/22/22 15:30

Matrix: Ground Water | **Sampled:** 03/22/22 09:50 | **Work Order:** AF02214

Project: NASA KSC LC34 | **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*52*	*1*	*50.0*	*103 %*	*41-142*	*2C24007*	*EPA 8260D*	*03/24/22 13:15*	*KKW*	
Dibromofluoromethane	*46*	*1*	*50.0*	*91 %*	*53-146*	*2C24007*	*EPA 8260D*	*03/24/22 13:15*	*KKW*	
Toluene-d8	*47*	*1*	*50.0*	*95 %*	*41-146*	*2C24007*	*EPA 8260D*	*03/24/22 13:15*	*KKW*	

ANALYTICAL RESULTS

Description: LC34-RW12A-20220322 **Lab Sample ID:** AF02214-14 **Received:** 03/22/22 15:30

Matrix: Ground Water **Sampled:** 03/22/22 10:00 **Work Order:** AF02214

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	40	U	ug/L	50	40	120	2C24007	EPA 8260D	03/24/22 13:42	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	27	U	ug/L	50	27	120	2C24007	EPA 8260D	03/24/22 13:42	KKW	
1,1,2-Trichloroethane [79-00-5]^	38	U	ug/L	50	38	120	2C24007	EPA 8260D	03/24/22 13:42	KKW	
1,1-Dichloroethane [75-34-3]^	31	U	ug/L	50	31	120	2C24007	EPA 8260D	03/24/22 13:42	KKW	
1,1-Dichloroethene [75-35-4]^	47	U	ug/L	50	47	120	2C24007	EPA 8260D	03/24/22 13:42	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	35	U	ug/L	50	35	120	2C24007	EPA 8260D	03/24/22 13:42	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	48	U	ug/L	50	48	120	2C24007	EPA 8260D	03/24/22 13:42	KKW	
1,2-Dibromoethane [106-93-4]^	39	U	ug/L	50	39	120	2C24007	EPA 8260D	03/24/22 13:42	KKW	
1,2-Dichlorobenzene [95-50-1]^	36	U	ug/L	50	36	120	2C24007	EPA 8260D	03/24/22 13:42	KKW	
1,2-Dichloroethane [107-06-2]^	32	U	ug/L	50	32	120	2C24007	EPA 8260D	03/24/22 13:42	KKW	
1,2-Dichloropropane [78-87-5]^	40	U	ug/L	50	40	120	2C24007	EPA 8260D	03/24/22 13:42	KKW	
1,3-Dichlorobenzene [541-73-1]^	38	U	ug/L	50	38	120	2C24007	EPA 8260D	03/24/22 13:42	KKW	
1,4-Dichlorobenzene [106-46-7]^	38	U	ug/L	50	38	120	2C24007	EPA 8260D	03/24/22 13:42	KKW	
2-Butanone [78-93-3]^	220	U	ug/L	50	220	620	2C24007	EPA 8260D	03/24/22 13:42	KKW	
2-Hexanone [591-78-6]^	120	U	ug/L	50	120	620	2C24007	EPA 8260D	03/24/22 13:42	KKW	
4-Methyl-2-pentanone [108-10-1]^	120	U	ug/L	50	120	620	2C24007	EPA 8260D	03/24/22 13:42	KKW	
Acetone [67-64-1]^	500	U	ug/L	50	500	1200	2C24007	EPA 8260D	03/24/22 13:42	KKW	
Benzene [71-43-2]^	36	U	ug/L	50	36	120	2C24007	EPA 8260D	03/24/22 13:42	KKW	
Bromodichloromethane [75-27-4]^	26	U	ug/L	50	26	120	2C24007	EPA 8260D	03/24/22 13:42	KKW	
Bromoform [75-25-2]^	38	U	ug/L	50	38	120	2C24007	EPA 8260D	03/24/22 13:42	KKW	
Bromomethane [74-83-9]^	48	U	ug/L	50	48	120	2C24007	EPA 8260D	03/24/22 13:42	KKW	
Carbon disulfide [75-15-0]^	120	U	ug/L	50	120	620	2C24007	EPA 8260D	03/24/22 13:42	KKW	
Carbon Tetrachloride [56-23-5]^	47	U	ug/L	50	47	120	2C24007	EPA 8260D	03/24/22 13:42	KKW	
Chlorobenzene [108-90-7]^	36	U	ug/L	50	36	120	2C24007	EPA 8260D	03/24/22 13:42	KKW	
Chloroethane [75-00-3]^	49	U	ug/L	50	49	120	2C24007	EPA 8260D	03/24/22 13:42	KKW	
Chloroform [67-66-3]^	40	U	ug/L	50	40	120	2C24007	EPA 8260D	03/24/22 13:42	KKW	
Chloromethane [74-87-3]^	41	U	ug/L	50	41	120	2C24007	EPA 8260D	03/24/22 13:42	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**4800**		ug/L	50	26	120	2C24007	EPA 8260D	03/24/22 13:42	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	30	U	ug/L	50	30	120	2C24007	EPA 8260D	03/24/22 13:42	KKW	
Cyclohexane [110-82-7]^	46	U	ug/L	50	46	120	2C24007	EPA 8260D	03/24/22 13:42	KKW	
Dibromochloromethane [124-48-1]^	25	U	ug/L	50	25	120	2C24007	EPA 8260D	03/24/22 13:42	KKW	
Dichlorodifluoromethane [75-71-8]^	37	U	ug/L	50	37	120	2C24007	EPA 8260D	03/24/22 13:42	KKW	
Ethylbenzene [100-41-4]^	34	U	ug/L	50	34	120	2C24007	EPA 8260D	03/24/22 13:42	KKW	
Freon 113 [76-13-1]^	36	U	ug/L	50	36	120	2C24007	EPA 8260D	03/24/22 13:42	KKW	
Isopropylbenzene [98-82-8]^	34	U	ug/L	50	34	120	2C24007	EPA 8260D	03/24/22 13:42	KKW	
Methyl acetate [79-20-9]^	48	U	ug/L	50	48	120	2C24007	EPA 8260D	03/24/22 13:42	KKW	A-07
Methylene Chloride [75-09-2]^	120	U	ug/L	50	120	620	2C24007	EPA 8260D	03/24/22 13:42	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	30	U	ug/L	50	30	120	2C24007	EPA 8260D	03/24/22 13:42	KKW	
Styrene [100-42-5]^	30	U	ug/L	50	30	120	2C24007	EPA 8260D	03/24/22 13:42	KKW	
Tetrachloroethene [127-18-4]^	38	U	ug/L	50	38	120	2C24007	EPA 8260D	03/24/22 13:42	KKW	
Toluene [108-88-3]^	36	U	ug/L	50	36	120	2C24007	EPA 8260D	03/24/22 13:42	KKW	
trans-1,2-Dichloroethene [156-60-5]^	**130**		ug/L	50	36	120	2C24007	EPA 8260D	03/24/22 13:42	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	36	U	ug/L	50	36	120	2C24007	EPA 8260D	03/24/22 13:42	KKW	
Trichloroethene [79-01-6]^	44	U	ug/L	50	44	120	2C24007	EPA 8260D	03/24/22 13:42	KKW	
Trichlorofluoromethane [75-69-4]^	47	U	ug/L	50	47	120	2C24007	EPA 8260D	03/24/22 13:42	KKW	
Vinyl chloride [75-01-4]^	**1500**		ug/L	50	36	120	2C24007	EPA 8260D	03/24/22 13:42	KKW	
Xylenes (Total) [1330-20-7]	65	U	ug/L	50	65	250	2C24007	EPA 8260D	03/24/22 13:42	KKW	

ANALYTICAL RESULTS

Description: LC34-RW12A-20220322 **Lab Sample ID:** AF02214-14 **Received:** 03/22/22 15:30

Matrix: Ground Water **Sampled:** 03/22/22 10:00 **Work Order:** AF02214

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*52*	*1*	*50.0*	*103 %*	*41-142*	*2C24007*	*EPA 8260D*	*03/24/22 13:42*	*KKW*	
Dibromofluoromethane	*47*	*1*	*50.0*	*94 %*	*53-146*	*2C24007*	*EPA 8260D*	*03/24/22 13:42*	*KKW*	
Toluene-d8	*47*	*1*	*50.0*	*94 %*	*41-146*	*2C24007*	*EPA 8260D*	*03/24/22 13:42*	*KKW*	

ANALYTICAL RESULTS

Description: LC34-RW13A-20220322 **Lab Sample ID:** AF02214-15 **Received:** 03/22/22 15:30

Matrix: Ground Water **Sampled:** 03/22/22 10:10 **Work Order:** AF02214

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	80	U	ug/L	100	80	250	2C24007	EPA 8260D	03/24/22 14:10	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	54	U	ug/L	100	54	250	2C24007	EPA 8260D	03/24/22 14:10	KKW	
1,1,2-Trichloroethane [79-00-5]^	76	U	ug/L	100	76	250	2C24007	EPA 8260D	03/24/22 14:10	KKW	
1,1-Dichloroethane [75-34-3]^	62	U	ug/L	100	62	250	2C24007	EPA 8260D	03/24/22 14:10	KKW	
1,1-Dichloroethene [75-35-4]^	94	U	ug/L	100	94	250	2C24007	EPA 8260D	03/24/22 14:10	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	70	U	ug/L	100	70	250	2C24007	EPA 8260D	03/24/22 14:10	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	96	U	ug/L	100	96	250	2C24007	EPA 8260D	03/24/22 14:10	KKW	
1,2-Dibromoethane [106-93-4]^	78	U	ug/L	100	78	250	2C24007	EPA 8260D	03/24/22 14:10	KKW	
1,2-Dichlorobenzene [95-50-1]^	73	U	ug/L	100	73	250	2C24007	EPA 8260D	03/24/22 14:10	KKW	
1,2-Dichloroethane [107-06-2]^	63	U	ug/L	100	63	250	2C24007	EPA 8260D	03/24/22 14:10	KKW	
1,2-Dichloropropane [78-87-5]^	80	U	ug/L	100	80	250	2C24007	EPA 8260D	03/24/22 14:10	KKW	
1,3-Dichlorobenzene [541-73-1]^	77	U	ug/L	100	77	250	2C24007	EPA 8260D	03/24/22 14:10	KKW	
1,4-Dichlorobenzene [106-46-7]^	76	U	ug/L	100	76	250	2C24007	EPA 8260D	03/24/22 14:10	KKW	
2-Butanone [78-93-3]^	450	U	ug/L	100	450	1200	2C24007	EPA 8260D	03/24/22 14:10	KKW	
2-Hexanone [591-78-6]^	250	U	ug/L	100	250	1200	2C24007	EPA 8260D	03/24/22 14:10	KKW	
4-Methyl-2-pentanone [108-10-1]^	250	U	ug/L	100	250	1200	2C24007	EPA 8260D	03/24/22 14:10	KKW	
Acetone [67-64-1]^	1000	U	ug/L	100	1000	2500	2C24007	EPA 8260D	03/24/22 14:10	KKW	
Benzene [71-43-2]^	71	U	ug/L	100	71	250	2C24007	EPA 8260D	03/24/22 14:10	KKW	
Bromodichloromethane [75-27-4]^	52	U	ug/L	100	52	250	2C24007	EPA 8260D	03/24/22 14:10	KKW	
Bromoform [75-25-2]^	75	U	ug/L	100	75	250	2C24007	EPA 8260D	03/24/22 14:10	KKW	
Bromomethane [74-83-9]^	95	U	ug/L	100	95	250	2C24007	EPA 8260D	03/24/22 14:10	KKW	
Carbon disulfide [75-15-0]^	250	U	ug/L	100	250	1200	2C24007	EPA 8260D	03/24/22 14:10	KKW	
Carbon Tetrachloride [56-23-5]^	94	U	ug/L	100	94	250	2C24007	EPA 8260D	03/24/22 14:10	KKW	
Chlorobenzene [108-90-7]^	72	U	ug/L	100	72	250	2C24007	EPA 8260D	03/24/22 14:10	KKW	
Chloroethane [75-00-3]^	98	U	ug/L	100	98	250	2C24007	EPA 8260D	03/24/22 14:10	KKW	
Chloroform [67-66-3]^	80	U	ug/L	100	80	250	2C24007	EPA 8260D	03/24/22 14:10	KKW	
Chloromethane [74-87-3]^	82	U	ug/L	100	82	250	2C24007	EPA 8260D	03/24/22 14:10	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**7400**		ug/L	100	53	250	2C24007	EPA 8260D	03/24/22 14:10	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	59	U	ug/L	100	59	250	2C24007	EPA 8260D	03/24/22 14:10	KKW	
Cyclohexane [110-82-7]^	93	U	ug/L	100	93	250	2C24007	EPA 8260D	03/24/22 14:10	KKW	
Dibromochloromethane [124-48-1]^	50	U	ug/L	100	50	250	2C24007	EPA 8260D	03/24/22 14:10	KKW	
Dichlorodifluoromethane [75-71-8]^	74	U	ug/L	100	74	250	2C24007	EPA 8260D	03/24/22 14:10	KKW	
Ethylbenzene [100-41-4]^	69	U	ug/L	100	69	250	2C24007	EPA 8260D	03/24/22 14:10	KKW	
Freon 113 [76-13-1]^	73	U	ug/L	100	73	250	2C24007	EPA 8260D	03/24/22 14:10	KKW	
Isopropylbenzene [98-82-8]^	67	U	ug/L	100	67	250	2C24007	EPA 8260D	03/24/22 14:10	KKW	
Methyl acetate [79-20-9]^	95	U	ug/L	100	95	250	2C24007	EPA 8260D	03/24/22 14:10	KKW	A-07
Methylene Chloride [75-09-2]^	250	U	ug/L	100	250	1200	2C24007	EPA 8260D	03/24/22 14:10	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	60	U	ug/L	100	60	250	2C24007	EPA 8260D	03/24/22 14:10	KKW	
Styrene [100-42-5]^	61	U	ug/L	100	61	250	2C24007	EPA 8260D	03/24/22 14:10	KKW	
Tetrachloroethene [127-18-4]^	76	U	ug/L	100	76	250	2C24007	EPA 8260D	03/24/22 14:10	KKW	
Toluene [108-88-3]^	72	U	ug/L	100	72	250	2C24007	EPA 8260D	03/24/22 14:10	KKW	
trans-1,2-Dichloroethene [156-60-5]^	**120**	I	ug/L	100	73	250	2C24007	EPA 8260D	03/24/22 14:10	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	73	U	ug/L	100	73	250	2C24007	EPA 8260D	03/24/22 14:10	KKW	
Trichloroethene [79-01-6]^	89	U	ug/L	100	89	250	2C24007	EPA 8260D	03/24/22 14:10	KKW	
Trichlorofluoromethane [75-69-4]^	94	U	ug/L	100	94	250	2C24007	EPA 8260D	03/24/22 14:10	KKW	
Vinyl chloride [75-01-4]^	**2100**		ug/L	100	71	250	2C24007	EPA 8260D	03/24/22 14:10	KKW	
Xylenes (Total) [1330-20-7]	130	U	ug/L	100	130	500	2C24007	EPA 8260D	03/24/22 14:10	KKW	

ANALYTICAL RESULTS

Description: LC34-RW13A-20220322 **Lab Sample ID:** AF02214-15 **Received:** 03/22/22 15:30

Matrix: Ground Water **Sampled:** 03/22/22 10:10 **Work Order:** AF02214

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*52*	*1*	*50.0*	*104 %*	*41-142*	*2C24007*	*EPA 8260D*	*03/24/22 14:10*	*KKW*	
Dibromofluoromethane	*47*	*1*	*50.0*	*93 %*	*53-146*	*2C24007*	*EPA 8260D*	*03/24/22 14:10*	*KKW*	
Toluene-d8	*47*	*1*	*50.0*	*94 %*	*41-146*	*2C24007*	*EPA 8260D*	*03/24/22 14:10*	*KKW*	

ANALYTICAL RESULTS

Description: LC34-RW14A-20220322 **Lab Sample ID:** AF02214-16 **Received:** 03/22/22 15:30

Matrix: Ground Water **Sampled:** 03/22/22 10:20 **Work Order:** AF02214

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	40	U	ug/L	50	40	120	2C24007	EPA 8260D	03/24/22 14:38	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	27	U	ug/L	50	27	120	2C24007	EPA 8260D	03/24/22 14:38	KKW	
1,1,2-Trichloroethane [79-00-5]^	38	U	ug/L	50	38	120	2C24007	EPA 8260D	03/24/22 14:38	KKW	
1,1-Dichloroethane [75-34-3]^	31	U	ug/L	50	31	120	2C24007	EPA 8260D	03/24/22 14:38	KKW	
1,1-Dichloroethene [75-35-4]^	47	U	ug/L	50	47	120	2C24007	EPA 8260D	03/24/22 14:38	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	35	U	ug/L	50	35	120	2C24007	EPA 8260D	03/24/22 14:38	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	48	U	ug/L	50	48	120	2C24007	EPA 8260D	03/24/22 14:38	KKW	
1,2-Dibromoethane [106-93-4]^	39	U	ug/L	50	39	120	2C24007	EPA 8260D	03/24/22 14:38	KKW	
1,2-Dichlorobenzene [95-50-1]^	36	U	ug/L	50	36	120	2C24007	EPA 8260D	03/24/22 14:38	KKW	
1,2-Dichloroethane [107-06-2]^	32	U	ug/L	50	32	120	2C24007	EPA 8260D	03/24/22 14:38	KKW	
1,2-Dichloropropane [78-87-5]^	40	U	ug/L	50	40	120	2C24007	EPA 8260D	03/24/22 14:38	KKW	
1,3-Dichlorobenzene [541-73-1]^	38	U	ug/L	50	38	120	2C24007	EPA 8260D	03/24/22 14:38	KKW	
1,4-Dichlorobenzene [106-46-7]^	38	U	ug/L	50	38	120	2C24007	EPA 8260D	03/24/22 14:38	KKW	
2-Butanone [78-93-3]^	220	U	ug/L	50	220	620	2C24007	EPA 8260D	03/24/22 14:38	KKW	
2-Hexanone [591-78-6]^	120	U	ug/L	50	120	620	2C24007	EPA 8260D	03/24/22 14:38	KKW	
4-Methyl-2-pentanone [108-10-1]^	120	U	ug/L	50	120	620	2C24007	EPA 8260D	03/24/22 14:38	KKW	
Acetone [67-64-1]^	500	U	ug/L	50	500	1200	2C24007	EPA 8260D	03/24/22 14:38	KKW	
Benzene [71-43-2]^	36	U	ug/L	50	36	120	2C24007	EPA 8260D	03/24/22 14:38	KKW	
Bromodichloromethane [75-27-4]^	26	U	ug/L	50	26	120	2C24007	EPA 8260D	03/24/22 14:38	KKW	
Bromoform [75-25-2]^	38	U	ug/L	50	38	120	2C24007	EPA 8260D	03/24/22 14:38	KKW	
Bromomethane [74-83-9]^	48	U	ug/L	50	48	120	2C24007	EPA 8260D	03/24/22 14:38	KKW	
Carbon disulfide [75-15-0]^	120	U	ug/L	50	120	620	2C24007	EPA 8260D	03/24/22 14:38	KKW	
Carbon Tetrachloride [56-23-5]^	47	U	ug/L	50	47	120	2C24007	EPA 8260D	03/24/22 14:38	KKW	
Chlorobenzene [108-90-7]^	36	U	ug/L	50	36	120	2C24007	EPA 8260D	03/24/22 14:38	KKW	
Chloroethane [75-00-3]^	49	U	ug/L	50	49	120	2C24007	EPA 8260D	03/24/22 14:38	KKW	
Chloroform [67-66-3]^	40	U	ug/L	50	40	120	2C24007	EPA 8260D	03/24/22 14:38	KKW	
Chloromethane [74-87-3]^	41	U	ug/L	50	41	120	2C24007	EPA 8260D	03/24/22 14:38	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**3800**		ug/L	50	26	120	2C24007	EPA 8260D	03/24/22 14:38	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	30	U	ug/L	50	30	120	2C24007	EPA 8260D	03/24/22 14:38	KKW	
Cyclohexane [110-82-7]^	46	U	ug/L	50	46	120	2C24007	EPA 8260D	03/24/22 14:38	KKW	
Dibromochloromethane [124-48-1]^	25	U	ug/L	50	25	120	2C24007	EPA 8260D	03/24/22 14:38	KKW	
Dichlorodifluoromethane [75-71-8]^	37	U	ug/L	50	37	120	2C24007	EPA 8260D	03/24/22 14:38	KKW	
Ethylbenzene [100-41-4]^	34	U	ug/L	50	34	120	2C24007	EPA 8260D	03/24/22 14:38	KKW	
Freon 113 [76-13-1]^	36	U	ug/L	50	36	120	2C24007	EPA 8260D	03/24/22 14:38	KKW	
Isopropylbenzene [98-82-8]^	34	U	ug/L	50	34	120	2C24007	EPA 8260D	03/24/22 14:38	KKW	
Methyl acetate [79-20-9]^	48	U	ug/L	50	48	120	2C24007	EPA 8260D	03/24/22 14:38	KKW	A-07
Methylene Chloride [75-09-2]^	120	U	ug/L	50	120	620	2C24007	EPA 8260D	03/24/22 14:38	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	30	U	ug/L	50	30	120	2C24007	EPA 8260D	03/24/22 14:38	KKW	
Styrene [100-42-5]^	30	U	ug/L	50	30	120	2C24007	EPA 8260D	03/24/22 14:38	KKW	
Tetrachloroethene [127-18-4]^	38	U	ug/L	50	38	120	2C24007	EPA 8260D	03/24/22 14:38	KKW	
Toluene [108-88-3]^	36	U	ug/L	50	36	120	2C24007	EPA 8260D	03/24/22 14:38	KKW	
trans-1,2-Dichloroethene [156-60-5]^	**86**	I	ug/L	50	36	120	2C24007	EPA 8260D	03/24/22 14:38	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	36	U	ug/L	50	36	120	2C24007	EPA 8260D	03/24/22 14:38	KKW	
Trichloroethene [79-01-6]^	44	U	ug/L	50	44	120	2C24007	EPA 8260D	03/24/22 14:38	KKW	
Trichlorofluoromethane [75-69-4]^	47	U	ug/L	50	47	120	2C24007	EPA 8260D	03/24/22 14:38	KKW	
Vinyl chloride [75-01-4]^	**1200**		ug/L	50	36	120	2C24007	EPA 8260D	03/24/22 14:38	KKW	
Xylenes (Total) [1330-20-7]	65	U	ug/L	50	65	250	2C24007	EPA 8260D	03/24/22 14:38	KKW	

ANALYTICAL RESULTS

Description: LC34-RW14A-20220322 **Lab Sample ID:** AF02214-16 **Received:** 03/22/22 15:30

Matrix: Ground Water **Sampled:** 03/22/22 10:20 **Work Order:** AF02214

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*50*	*1*	*50.0*	*100 %*	*41-142*	*2C24007*	*EPA 8260D*	*03/24/22 14:38*	*KKW*	
Dibromofluoromethane	*46*	*1*	*50.0*	*91 %*	*53-146*	*2C24007*	*EPA 8260D*	*03/24/22 14:38*	*KKW*	
Toluene-d8	*47*	*1*	*50.0*	*94 %*	*41-146*	*2C24007*	*EPA 8260D*	*03/24/22 14:38*	*KKW*	

ANALYTICAL RESULTS

Description: LC34-RW15A-20220322 **Lab Sample ID:** AF02214-17 **Received:** 03/22/22 15:30

Matrix: Ground Water **Sampled:** 03/22/22 10:30 **Work Order:** AF02214

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	20	U	ug/L	25	20	62	2C24007	EPA 8260D	03/24/22 15:05	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	14	U	ug/L	25	14	62	2C24007	EPA 8260D	03/24/22 15:05	KKW	
1,1,2-Trichloroethane [79-00-5]^	19	U	ug/L	25	19	62	2C24007	EPA 8260D	03/24/22 15:05	KKW	
1,1-Dichloroethane [75-34-3]^	16	U	ug/L	25	16	62	2C24007	EPA 8260D	03/24/22 15:05	KKW	
1,1-Dichloroethene [75-35-4]^	24	U	ug/L	25	24	62	2C24007	EPA 8260D	03/24/22 15:05	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	18	U	ug/L	25	18	62	2C24007	EPA 8260D	03/24/22 15:05	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	24	U	ug/L	25	24	62	2C24007	EPA 8260D	03/24/22 15:05	KKW	
1,2-Dibromoethane [106-93-4]^	20	U	ug/L	25	20	62	2C24007	EPA 8260D	03/24/22 15:05	KKW	
1,2-Dichlorobenzene [95-50-1]^	18	U	ug/L	25	18	62	2C24007	EPA 8260D	03/24/22 15:05	KKW	
1,2-Dichloroethane [107-06-2]^	16	U	ug/L	25	16	62	2C24007	EPA 8260D	03/24/22 15:05	KKW	
1,2-Dichloropropane [78-87-5]^	20	U	ug/L	25	20	62	2C24007	EPA 8260D	03/24/22 15:05	KKW	
1,3-Dichlorobenzene [541-73-1]^	19	U	ug/L	25	19	62	2C24007	EPA 8260D	03/24/22 15:05	KKW	
1,4-Dichlorobenzene [106-46-7]^	19	U	ug/L	25	19	62	2C24007	EPA 8260D	03/24/22 15:05	KKW	
2-Butanone [78-93-3]^	110	U	ug/L	25	110	310	2C24007	EPA 8260D	03/24/22 15:05	KKW	
2-Hexanone [591-78-6]^	62	U	ug/L	25	62	310	2C24007	EPA 8260D	03/24/22 15:05	KKW	
4-Methyl-2-pentanone [108-10-1]^	62	U	ug/L	25	62	310	2C24007	EPA 8260D	03/24/22 15:05	KKW	
Acetone [67-64-1]^	250	U	ug/L	25	250	620	2C24007	EPA 8260D	03/24/22 15:05	KKW	
Benzene [71-43-2]^	18	U	ug/L	25	18	62	2C24007	EPA 8260D	03/24/22 15:05	KKW	
Bromodichloromethane [75-27-4]^	13	U	ug/L	25	13	62	2C24007	EPA 8260D	03/24/22 15:05	KKW	
Bromoform [75-25-2]^	19	U	ug/L	25	19	62	2C24007	EPA 8260D	03/24/22 15:05	KKW	
Bromomethane [74-83-9]^	24	U	ug/L	25	24	62	2C24007	EPA 8260D	03/24/22 15:05	KKW	
Carbon disulfide [75-15-0]^	62	U	ug/L	25	62	310	2C24007	EPA 8260D	03/24/22 15:05	KKW	
Carbon Tetrachloride [56-23-5]^	24	U	ug/L	25	24	62	2C24007	EPA 8260D	03/24/22 15:05	KKW	
Chlorobenzene [108-90-7]^	18	U	ug/L	25	18	62	2C24007	EPA 8260D	03/24/22 15:05	KKW	
Chloroethane [75-00-3]^	24	U	ug/L	25	24	62	2C24007	EPA 8260D	03/24/22 15:05	KKW	
Chloroform [67-66-3]^	20	U	ug/L	25	20	62	2C24007	EPA 8260D	03/24/22 15:05	KKW	
Chloromethane [74-87-3]^	20	U	ug/L	25	20	62	2C24007	EPA 8260D	03/24/22 15:05	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**1700**		ug/L	25	13	62	2C24007	EPA 8260D	03/24/22 15:05	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	15	U	ug/L	25	15	62	2C24007	EPA 8260D	03/24/22 15:05	KKW	
Cyclohexane [110-82-7]^	23	U	ug/L	25	23	62	2C24007	EPA 8260D	03/24/22 15:05	KKW	
Dibromochloromethane [124-48-1]^	12	U	ug/L	25	12	62	2C24007	EPA 8260D	03/24/22 15:05	KKW	
Dichlorodifluoromethane [75-71-8]^	18	U	ug/L	25	18	62	2C24007	EPA 8260D	03/24/22 15:05	KKW	
Ethylbenzene [100-41-4]^	17	U	ug/L	25	17	62	2C24007	EPA 8260D	03/24/22 15:05	KKW	
Freon 113 [76-13-1]^	18	U	ug/L	25	18	62	2C24007	EPA 8260D	03/24/22 15:05	KKW	
Isopropylbenzene [98-82-8]^	17	U	ug/L	25	17	62	2C24007	EPA 8260D	03/24/22 15:05	KKW	
Methyl acetate [79-20-9]^	24	U	ug/L	25	24	62	2C24007	EPA 8260D	03/24/22 15:05	KKW	A-07
Methylene Chloride [75-09-2]^	62	U	ug/L	25	62	310	2C24007	EPA 8260D	03/24/22 15:05	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	15	U	ug/L	25	15	62	2C24007	EPA 8260D	03/24/22 15:05	KKW	
Styrene [100-42-5]^	15	U	ug/L	25	15	62	2C24007	EPA 8260D	03/24/22 15:05	KKW	
Tetrachloroethene [127-18-4]^	19	U	ug/L	25	19	62	2C24007	EPA 8260D	03/24/22 15:05	KKW	
Toluene [108-88-3]^	18	U	ug/L	25	18	62	2C24007	EPA 8260D	03/24/22 15:05	KKW	
trans-1,2-Dichloroethene [156-60-5]^	**36**	I	ug/L	25	18	62	2C24007	EPA 8260D	03/24/22 15:05	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	18	U	ug/L	25	18	62	2C24007	EPA 8260D	03/24/22 15:05	KKW	
Trichloroethene [79-01-6]^	22	U	ug/L	25	22	62	2C24007	EPA 8260D	03/24/22 15:05	KKW	
Trichlorofluoromethane [75-69-4]^	24	U	ug/L	25	24	62	2C24007	EPA 8260D	03/24/22 15:05	KKW	
Vinyl chloride [75-01-4]^	**520**		ug/L	25	18	62	2C24007	EPA 8260D	03/24/22 15:05	KKW	
Xylenes (Total) [1330-20-7]	32	U	ug/L	25	32	120	2C24007	EPA 8260D	03/24/22 15:05	KKW	

ANALYTICAL RESULTS

Description: LC34-RW15A-20220322 **Lab Sample ID:** AF02214-17 **Received:** 03/22/22 15:30

Matrix: Ground Water **Sampled:** 03/22/22 10:30 **Work Order:** AF02214

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*49*	*1*	*50.0*	*98 %*	*41-142*	*2C24007*	*EPA 8260D*	*03/24/22 15:05*	*KKW*	
Dibromofluoromethane	*47*	*1*	*50.0*	*94 %*	*53-146*	*2C24007*	*EPA 8260D*	*03/24/22 15:05*	*KKW*	
Toluene-d8	*47*	*1*	*50.0*	*94 %*	*41-146*	*2C24007*	*EPA 8260D*	*03/24/22 15:05*	*KKW*	

ANALYTICAL RESULTS

Description: LC34-1RW16B-20220322 **Lab Sample ID:** AF02214-18 **Received:** 03/22/22 15:30

Matrix: Ground Water **Sampled:** 03/22/22 10:40 **Work Order:** AF02214

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	1.6	U	ug/L	2	1.6	5.0	2C25003	EPA 8260D	03/25/22 14:23	JMW	
1,1,2,2-Tetrachloroethane [79-34-5]^	1.1	U	ug/L	2	1.1	5.0	2C25003	EPA 8260D	03/25/22 14:23	JMW	
1,1,2-Trichloroethane [79-00-5]^	1.5	U	ug/L	2	1.5	5.0	2C25003	EPA 8260D	03/25/22 14:23	JMW	
1,1-Dichloroethane [75-34-3]^	1.2	U	ug/L	2	1.2	5.0	2C25003	EPA 8260D	03/25/22 14:23	JMW	
1,1-Dichloroethene [75-35-4]^	1.9	U	ug/L	2	1.9	5.0	2C25003	EPA 8260D	03/25/22 14:23	JMW	
1,2,4-Trichlorobenzene [120-82-1]^	1.4	U	ug/L	2	1.4	5.0	2C25003	EPA 8260D	03/25/22 14:23	JMW	QB-02
1,2-Dibromo-3-chloropropane [96-12-8]^	1.9	U	ug/L	2	1.9	5.0	2C25003	EPA 8260D	03/25/22 14:23	JMW	
1,2-Dibromoethane [106-93-4]^	1.6	U	ug/L	2	1.6	5.0	2C25003	EPA 8260D	03/25/22 14:23	JMW	
1,2-Dichlorobenzene [95-50-1]^	1.5	U	ug/L	2	1.5	5.0	2C25003	EPA 8260D	03/25/22 14:23	JMW	
1,2-Dichloroethane [107-06-2]^	1.3	U	ug/L	2	1.3	5.0	2C25003	EPA 8260D	03/25/22 14:23	JMW	
1,2-Dichloropropane [78-87-5]^	1.6	U	ug/L	2	1.6	5.0	2C25003	EPA 8260D	03/25/22 14:23	JMW	
1,3-Dichlorobenzene [541-73-1]^	1.5	U	ug/L	2	1.5	5.0	2C25003	EPA 8260D	03/25/22 14:23	JMW	
1,4-Dichlorobenzene [106-46-7]^	1.5	U	ug/L	2	1.5	5.0	2C25003	EPA 8260D	03/25/22 14:23	JMW	
2-Butanone [78-93-3]^	9.0	U	ug/L	2	9.0	25	2C25003	EPA 8260D	03/25/22 14:23	JMW	
2-Hexanone [591-78-6]^	5.0	U	ug/L	2	5.0	25	2C25003	EPA 8260D	03/25/22 14:23	JMW	
4-Methyl-2-pentanone [108-10-1]^	5.0	U	ug/L	2	5.0	25	2C25003	EPA 8260D	03/25/22 14:23	JMW	
Acetone [67-64-1]^	20	U	ug/L	2	20	50	2C25003	EPA 8260D	03/25/22 14:23	JMW	
Benzene [71-43-2]^	1.4	U	ug/L	2	1.4	5.0	2C25003	EPA 8260D	03/25/22 14:23	JMW	
Bromodichloromethane [75-27-4]^	1.0	U	ug/L	2	1.0	5.0	2C25003	EPA 8260D	03/25/22 14:23	JMW	QV-01
Bromoform [75-25-2]^	1.5	U	ug/L	2	1.5	5.0	2C25003	EPA 8260D	03/25/22 14:23	JMW	QV-01
Bromomethane [74-83-9]^	1.9	U	ug/L	2	1.9	5.0	2C25003	EPA 8260D	03/25/22 14:23	JMW	QV-01
Carbon disulfide [75-15-0]^	5.0	U	ug/L	2	5.0	25	2C25003	EPA 8260D	03/25/22 14:23	JMW	
Carbon Tetrachloride [56-23-5]^	1.9	U	ug/L	2	1.9	5.0	2C25003	EPA 8260D	03/25/22 14:23	JMW	
Chlorobenzene [108-90-7]^	1.4	U	ug/L	2	1.4	5.0	2C25003	EPA 8260D	03/25/22 14:23	JMW	
Chloroethane [75-00-3]^	2.0	U	ug/L	2	2.0	5.0	2C25003	EPA 8260D	03/25/22 14:23	JMW	
Chloroform [67-66-3]^	1.6	U	ug/L	2	1.6	5.0	2C25003	EPA 8260D	03/25/22 14:23	JMW	
Chloromethane [74-87-3]^	1.6	U	ug/L	2	1.6	5.0	2C25003	EPA 8260D	03/25/22 14:23	JMW	
cis-1,2-Dichloroethene [156-59-2]^	**190**		ug/L	5	2.6	12	2C24007	EPA 8260D	03/24/22 15:33	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	1.2	U	ug/L	2	1.2	5.0	2C25003	EPA 8260D	03/25/22 14:23	JMW	
Cyclohexane [110-82-7]^	1.9	U	ug/L	2	1.9	5.0	2C25003	EPA 8260D	03/25/22 14:23	JMW	
Dibromochloromethane [124-48-1]^	1.0	U	ug/L	2	1.0	5.0	2C25003	EPA 8260D	03/25/22 14:23	JMW	
Dichlorodifluoromethane [75-71-8]^	1.5	U	ug/L	2	1.5	5.0	2C25003	EPA 8260D	03/25/22 14:23	JMW	QV-01
Ethylbenzene [100-41-4]^	1.4	U	ug/L	2	1.4	5.0	2C25003	EPA 8260D	03/25/22 14:23	JMW	
Freon 113 [76-13-1]^	1.5	U	ug/L	2	1.5	5.0	2C25003	EPA 8260D	03/25/22 14:23	JMW	
Isopropylbenzene [98-82-8]^	1.3	U	ug/L	2	1.3	5.0	2C25003	EPA 8260D	03/25/22 14:23	JMW	
Methyl acetate [79-20-9]^	1.9	U	ug/L	2	1.9	5.0	2C25003	EPA 8260D	03/25/22 14:23	JMW	
Methylene Chloride [75-09-2]^	5.0	U	ug/L	2	5.0	25	2C25003	EPA 8260D	03/25/22 14:23	JMW	
Methyl-tert-Butyl Ether [1634-04-4]^	1.2	U	ug/L	2	1.2	5.0	2C25003	EPA 8260D	03/25/22 14:23	JMW	
Styrene [100-42-5]^	1.2	U	ug/L	2	1.2	5.0	2C25003	EPA 8260D	03/25/22 14:23	JMW	
Tetrachloroethene [127-18-4]^	1.5	U	ug/L	2	1.5	5.0	2C25003	EPA 8260D	03/25/22 14:23	JMW	
Toluene [108-88-3]^	1.4	U	ug/L	2	1.4	5.0	2C25003	EPA 8260D	03/25/22 14:23	JMW	
trans-1,2-Dichloroethene [156-60-5]^	**7.1**		ug/L	2	1.5	5.0	2C25003	EPA 8260D	03/25/22 14:23	JMW	
trans-1,3-Dichloropropene [10061-02-6]^	1.5	U	ug/L	2	1.5	5.0	2C25003	EPA 8260D	03/25/22 14:23	JMW	
Trichloroethene [79-01-6]^	**22**		ug/L	2	1.8	5.0	2C25003	EPA 8260D	03/25/22 14:23	JMW	
Trichlorofluoromethane [75-69-4]^	1.9	U	ug/L	2	1.9	5.0	2C25003	EPA 8260D	03/25/22 14:23	JMW	
Vinyl chloride [75-01-4]^	**36**		ug/L	2	1.4	5.0	2C25003	EPA 8260D	03/25/22 14:23	JMW	
Xylenes (Total) [1330-20-7]	2.6	U	ug/L	2	2.6	10	2C25003	EPA 8260D	03/25/22 14:23	JMW	

ANALYTICAL RESULTS

Description: LC34-1RW16B-20220322 | **Lab Sample ID:** AF02214-18 | **Received:** 03/22/22 15:30

Matrix: Ground Water | **Sampled:** 03/22/22 10:40 | **Work Order:** AF02214

Project: NASA KSC LC34 | **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*52*	*1*	*50.0*	*104 %*	*41-142*	*2C24007*	*EPA 8260D*	*03/24/22 15:33*	*KKW*	
4-Bromofluorobenzene	*48*	*1*	*50.0*	*96 %*	*41-142*	*2C25003*	*EPA 8260D*	*03/25/22 14:23*	*JMW*	
Dibromofluoromethane	*46*	*1*	*50.0*	*93 %*	*53-146*	*2C24007*	*EPA 8260D*	*03/24/22 15:33*	*KKW*	
Dibromofluoromethane	*45*	*1*	*50.0*	*91 %*	*53-146*	*2C25003*	*EPA 8260D*	*03/25/22 14:23*	*JMW*	
Toluene-d8	*47*	*1*	*50.0*	*94 %*	*41-146*	*2C24007*	*EPA 8260D*	*03/24/22 15:33*	*KKW*	
Toluene-d8	*48*	*1*	*50.0*	*97 %*	*41-146*	*2C25003*	*EPA 8260D*	*03/25/22 14:23*	*JMW*	

ANALYTICAL RESULTS

Description: LC34-RW17C-20220322 **Lab Sample ID:** AF02214-19 **Received:** 03/22/22 15:30

Matrix: Ground Water **Sampled:** 03/22/22 10:50 **Work Order:** AF02214

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	2000	U	ug/L	2500	2000	6200	2C24007	EPA 8260D	03/24/22 16:01	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	1400	U	ug/L	2500	1400	6200	2C24007	EPA 8260D	03/24/22 16:01	KKW	
1,1,2-Trichloroethane [79-00-5]^	1900	U	ug/L	2500	1900	6200	2C24007	EPA 8260D	03/24/22 16:01	KKW	
1,1-Dichloroethane [75-34-3]^	1600	U	ug/L	2500	1600	6200	2C24007	EPA 8260D	03/24/22 16:01	KKW	
1,1-Dichloroethene [75-35-4]^	2400	U	ug/L	2500	2400	6200	2C24007	EPA 8260D	03/24/22 16:01	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	1800	U	ug/L	2500	1800	6200	2C24007	EPA 8260D	03/24/22 16:01	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	2400	U	ug/L	2500	2400	6200	2C24007	EPA 8260D	03/24/22 16:01	KKW	
1,2-Dibromoethane [106-93-4]^	2000	U	ug/L	2500	2000	6200	2C24007	EPA 8260D	03/24/22 16:01	KKW	
1,2-Dichlorobenzene [95-50-1]^	1800	U	ug/L	2500	1800	6200	2C24007	EPA 8260D	03/24/22 16:01	KKW	
1,2-Dichloroethane [107-06-2]^	1600	U	ug/L	2500	1600	6200	2C24007	EPA 8260D	03/24/22 16:01	KKW	
1,2-Dichloropropane [78-87-5]^	2000	U	ug/L	2500	2000	6200	2C24007	EPA 8260D	03/24/22 16:01	KKW	
1,3-Dichlorobenzene [541-73-1]^	1900	U	ug/L	2500	1900	6200	2C24007	EPA 8260D	03/24/22 16:01	KKW	
1,4-Dichlorobenzene [106-46-7]^	1900	U	ug/L	2500	1900	6200	2C24007	EPA 8260D	03/24/22 16:01	KKW	
2-Butanone [78-93-3]^	11000	U	ug/L	2500	11000	31000	2C24007	EPA 8260D	03/24/22 16:01	KKW	
2-Hexanone [591-78-6]^	6200	U	ug/L	2500	6200	31000	2C24007	EPA 8260D	03/24/22 16:01	KKW	
4-Methyl-2-pentanone [108-10-1]^	6200	U	ug/L	2500	6200	31000	2C24007	EPA 8260D	03/24/22 16:01	KKW	
Acetone [67-64-1]^	25000	U	ug/L	2500	25000	62000	2C24007	EPA 8260D	03/24/22 16:01	KKW	
Benzene [71-43-2]^	1800	U	ug/L	2500	1800	6200	2C24007	EPA 8260D	03/24/22 16:01	KKW	
Bromodichloromethane [75-27-4]^	1300	U	ug/L	2500	1300	6200	2C24007	EPA 8260D	03/24/22 16:01	KKW	
Bromoform [75-25-2]^	1900	U	ug/L	2500	1900	6200	2C24007	EPA 8260D	03/24/22 16:01	KKW	
Bromomethane [74-83-9]^	2400	U	ug/L	2500	2400	6200	2C24007	EPA 8260D	03/24/22 16:01	KKW	
Carbon disulfide [75-15-0]^	6200	U	ug/L	2500	6200	31000	2C24007	EPA 8260D	03/24/22 16:01	KKW	
Carbon Tetrachloride [56-23-5]^	2400	U	ug/L	2500	2400	6200	2C24007	EPA 8260D	03/24/22 16:01	KKW	
Chlorobenzene [108-90-7]^	1800	U	ug/L	2500	1800	6200	2C24007	EPA 8260D	03/24/22 16:01	KKW	
Chloroethane [75-00-3]^	2400	U	ug/L	2500	2400	6200	2C24007	EPA 8260D	03/24/22 16:01	KKW	
Chloroform [67-66-3]^	2000	U	ug/L	2500	2000	6200	2C24007	EPA 8260D	03/24/22 16:01	KKW	
Chloromethane [74-87-3]^	2000	U	ug/L	2500	2000	6200	2C24007	EPA 8260D	03/24/22 16:01	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**4400**	I	ug/L	2500	1300	6200	2C24007	EPA 8260D	03/24/22 16:01	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	1500	U	ug/L	2500	1500	6200	2C24007	EPA 8260D	03/24/22 16:01	KKW	
Cyclohexane [110-82-7]^	2300	U	ug/L	2500	2300	6200	2C24007	EPA 8260D	03/24/22 16:01	KKW	
Dibromochloromethane [124-48-1]^	1200	U	ug/L	2500	1200	6200	2C24007	EPA 8260D	03/24/22 16:01	KKW	
Dichlorodifluoromethane [75-71-8]^	1800	U	ug/L	2500	1800	6200	2C24007	EPA 8260D	03/24/22 16:01	KKW	
Ethylbenzene [100-41-4]^	1700	U	ug/L	2500	1700	6200	2C24007	EPA 8260D	03/24/22 16:01	KKW	
Freon 113 [76-13-1]^	1800	U	ug/L	2500	1800	6200	2C24007	EPA 8260D	03/24/22 16:01	KKW	
Isopropylbenzene [98-82-8]^	1700	U	ug/L	2500	1700	6200	2C24007	EPA 8260D	03/24/22 16:01	KKW	
Methyl acetate [79-20-9]^	2400	U	ug/L	2500	2400	6200	2C24007	EPA 8260D	03/24/22 16:01	KKW	A-07
Methylene Chloride [75-09-2]^	6200	U	ug/L	2500	6200	31000	2C24007	EPA 8260D	03/24/22 16:01	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	1500	U	ug/L	2500	1500	6200	2C24007	EPA 8260D	03/24/22 16:01	KKW	
Styrene [100-42-5]^	1500	U	ug/L	2500	1500	6200	2C24007	EPA 8260D	03/24/22 16:01	KKW	
Tetrachloroethene [127-18-4]^	1900	U	ug/L	2500	1900	6200	2C24007	EPA 8260D	03/24/22 16:01	KKW	
Toluene [108-88-3]^	1800	U	ug/L	2500	1800	6200	2C24007	EPA 8260D	03/24/22 16:01	KKW	
trans-1,2-Dichloroethene [156-60-5]^	1800	U	ug/L	2500	1800	6200	2C24007	EPA 8260D	03/24/22 16:01	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	1800	U	ug/L	2500	1800	6200	2C24007	EPA 8260D	03/24/22 16:01	KKW	
Trichloroethene [79-01-6]^	**130000**		ug/L	2500	2200	6200	2C24007	EPA 8260D	03/24/22 16:01	KKW	
Trichlorofluoromethane [75-69-4]^	2400	U	ug/L	2500	2400	6200	2C24007	EPA 8260D	03/24/22 16:01	KKW	
Vinyl chloride [75-01-4]^	1800	U	ug/L	2500	1800	6200	2C24007	EPA 8260D	03/24/22 16:01	KKW	
Xylenes (Total) [1330-20-7]	3200	U	ug/L	2500	3200	12000	2C24007	EPA 8260D	03/24/22 16:01	KKW	

ANALYTICAL RESULTS

Description: LC34-RW17C-20220322 **Lab Sample ID:** AF02214-19 **Received:** 03/22/22 15:30

Matrix: Ground Water **Sampled:** 03/22/22 10:50 **Work Order:** AF02214

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*51*	*1*	*50.0*	*102 %*	*41-142*	*2C24007*	*EPA 8260D*	*03/24/22 16:01*	*KKW*	
Dibromofluoromethane	*48*	*1*	*50.0*	*95 %*	*53-146*	*2C24007*	*EPA 8260D*	*03/24/22 16:01*	*KKW*	
Toluene-d8	*49*	*1*	*50.0*	*98 %*	*41-146*	*2C24007*	*EPA 8260D*	*03/24/22 16:01*	*KKW*	

ANALYTICAL RESULTS

Description: LC34-RW18C-20220322 **Lab Sample ID:** AF02214-20 **Received:** 03/22/22 15:30

Matrix: Ground Water **Sampled:** 03/22/22 11:00 **Work Order:** AF02214

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	4000	U	ug/L	5000	4000	12000	2C24007	EPA 8260D	03/24/22 16:28	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	2700	U	ug/L	5000	2700	12000	2C24007	EPA 8260D	03/24/22 16:28	KKW	
1,1,2-Trichloroethane [79-00-5]^	3800	U	ug/L	5000	3800	12000	2C24007	EPA 8260D	03/24/22 16:28	KKW	
1,1-Dichloroethane [75-34-3]^	3100	U	ug/L	5000	3100	12000	2C24007	EPA 8260D	03/24/22 16:28	KKW	
1,1-Dichloroethene [75-35-4]^	4700	U	ug/L	5000	4700	12000	2C24007	EPA 8260D	03/24/22 16:28	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	3500	U	ug/L	5000	3500	12000	2C24007	EPA 8260D	03/24/22 16:28	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	4800	U	ug/L	5000	4800	12000	2C24007	EPA 8260D	03/24/22 16:28	KKW	
1,2-Dibromoethane [106-93-4]^	3900	U	ug/L	5000	3900	12000	2C24007	EPA 8260D	03/24/22 16:28	KKW	
1,2-Dichlorobenzene [95-50-1]^	3600	U	ug/L	5000	3600	12000	2C24007	EPA 8260D	03/24/22 16:28	KKW	
1,2-Dichloroethane [107-06-2]^	3200	U	ug/L	5000	3200	12000	2C24007	EPA 8260D	03/24/22 16:28	KKW	
1,2-Dichloropropane [78-87-5]^	4000	U	ug/L	5000	4000	12000	2C24007	EPA 8260D	03/24/22 16:28	KKW	
1,3-Dichlorobenzene [541-73-1]^	3800	U	ug/L	5000	3800	12000	2C24007	EPA 8260D	03/24/22 16:28	KKW	
1,4-Dichlorobenzene [106-46-7]^	3800	U	ug/L	5000	3800	12000	2C24007	EPA 8260D	03/24/22 16:28	KKW	
2-Butanone [78-93-3]^	22000	U	ug/L	5000	22000	62000	2C24007	EPA 8260D	03/24/22 16:28	KKW	
2-Hexanone [591-78-6]^	12000	U	ug/L	5000	12000	62000	2C24007	EPA 8260D	03/24/22 16:28	KKW	
4-Methyl-2-pentanone [108-10-1]^	12000	U	ug/L	5000	12000	62000	2C24007	EPA 8260D	03/24/22 16:28	KKW	
Acetone [67-64-1]^	50000	U	ug/L	5000	50000	120000	2C24007	EPA 8260D	03/24/22 16:28	KKW	
Benzene [71-43-2]^	3600	U	ug/L	5000	3600	12000	2C24007	EPA 8260D	03/24/22 16:28	KKW	
Bromodichloromethane [75-27-4]^	2600	U	ug/L	5000	2600	12000	2C24007	EPA 8260D	03/24/22 16:28	KKW	
Bromoform [75-25-2]^	3800	U	ug/L	5000	3800	12000	2C24007	EPA 8260D	03/24/22 16:28	KKW	
Bromomethane [74-83-9]^	4800	U	ug/L	5000	4800	12000	2C24007	EPA 8260D	03/24/22 16:28	KKW	
Carbon disulfide [75-15-0]^	12000	U	ug/L	5000	12000	62000	2C24007	EPA 8260D	03/24/22 16:28	KKW	
Carbon Tetrachloride [56-23-5]^	4700	U	ug/L	5000	4700	12000	2C24007	EPA 8260D	03/24/22 16:28	KKW	
Chlorobenzene [108-90-7]^	3600	U	ug/L	5000	3600	12000	2C24007	EPA 8260D	03/24/22 16:28	KKW	
Chloroethane [75-00-3]^	4900	U	ug/L	5000	4900	12000	2C24007	EPA 8260D	03/24/22 16:28	KKW	
Chloroform [67-66-3]^	4000	U	ug/L	5000	4000	12000	2C24007	EPA 8260D	03/24/22 16:28	KKW	
Chloromethane [74-87-3]^	4100	U	ug/L	5000	4100	12000	2C24007	EPA 8260D	03/24/22 16:28	KKW	
cis-1,2-Dichloroethene [156-59-2]^	**5800**	I	ug/L	5000	2600	12000	2C24007	EPA 8260D	03/24/22 16:28	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	3000	U	ug/L	5000	3000	12000	2C24007	EPA 8260D	03/24/22 16:28	KKW	
Cyclohexane [110-82-7]^	4600	U	ug/L	5000	4600	12000	2C24007	EPA 8260D	03/24/22 16:28	KKW	
Dibromochloromethane [124-48-1]^	2500	U	ug/L	5000	2500	12000	2C24007	EPA 8260D	03/24/22 16:28	KKW	
Dichlorodifluoromethane [75-71-8]^	3700	U	ug/L	5000	3700	12000	2C24007	EPA 8260D	03/24/22 16:28	KKW	
Ethylbenzene [100-41-4]^	3400	U	ug/L	5000	3400	12000	2C24007	EPA 8260D	03/24/22 16:28	KKW	
Freon 113 [76-13-1]^	3600	U	ug/L	5000	3600	12000	2C24007	EPA 8260D	03/24/22 16:28	KKW	
Isopropylbenzene [98-82-8]^	3400	U	ug/L	5000	3400	12000	2C24007	EPA 8260D	03/24/22 16:28	KKW	
Methyl acetate [79-20-9]^	4800	U	ug/L	5000	4800	12000	2C24007	EPA 8260D	03/24/22 16:28	KKW	A-07
Methylene Chloride [75-09-2]^	12000	U	ug/L	5000	12000	62000	2C24007	EPA 8260D	03/24/22 16:28	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	3000	U	ug/L	5000	3000	12000	2C24007	EPA 8260D	03/24/22 16:28	KKW	
Styrene [100-42-5]^	3000	U	ug/L	5000	3000	12000	2C24007	EPA 8260D	03/24/22 16:28	KKW	
Tetrachloroethene [127-18-4]^	3800	U	ug/L	5000	3800	12000	2C24007	EPA 8260D	03/24/22 16:28	KKW	
Toluene [108-88-3]^	3600	U	ug/L	5000	3600	12000	2C24007	EPA 8260D	03/24/22 16:28	KKW	
trans-1,2-Dichloroethene [156-60-5]^	3600	U	ug/L	5000	3600	12000	2C24007	EPA 8260D	03/24/22 16:28	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	3600	U	ug/L	5000	3600	12000	2C24007	EPA 8260D	03/24/22 16:28	KKW	
Trichloroethene [79-01-6]^	**240000**		ug/L	5000	4400	12000	2C24007	EPA 8260D	03/24/22 16:28	KKW	
Trichlorofluoromethane [75-69-4]^	4700	U	ug/L	5000	4700	12000	2C24007	EPA 8260D	03/24/22 16:28	KKW	
Vinyl chloride [75-01-4]^	3600	U	ug/L	5000	3600	12000	2C24007	EPA 8260D	03/24/22 16:28	KKW	
Xylenes (Total) [1330-20-7]	6500	U	ug/L	5000	6500	25000	2C24007	EPA 8260D	03/24/22 16:28	KKW	

ANALYTICAL RESULTS

Description: LC34-RW18C-20220322 **Lab Sample ID:** AF02214-20 **Received:** 03/22/22 15:30

Matrix: Ground Water **Sampled:** 03/22/22 11:00 **Work Order:** AF02214

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*51*	*1*	*50.0*	*103 %*	*41-142*	*2C24007*	*EPA 8260D*	*03/24/22 16:28*	*KKW*	
Dibromofluoromethane	*47*	*1*	*50.0*	*94 %*	*53-146*	*2C24007*	*EPA 8260D*	*03/24/22 16:28*	*KKW*	
Toluene-d8	*49*	*1*	*50.0*	*97 %*	*41-146*	*2C24007*	*EPA 8260D*	*03/24/22 16:28*	*KKW*	

ANALYTICAL RESULTS

Description: LC34-RW19C-20220322 **Lab Sample ID:** AF02214-21 **Received:** 03/22/22 15:30

Matrix: Ground Water **Sampled:** 03/22/22 11:10 **Work Order:** AF02214

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	8000	U	ug/L	10000	8000	25000	2C24007	EPA 8260D	03/24/22 16:56	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	5400	U	ug/L	10000	5400	25000	2C24007	EPA 8260D	03/24/22 16:56	KKW	
1,1,2-Trichloroethane [79-00-5]^	7600	U	ug/L	10000	7600	25000	2C24007	EPA 8260D	03/24/22 16:56	KKW	
1,1-Dichloroethane [75-34-3]^	6200	U	ug/L	10000	6200	25000	2C24007	EPA 8260D	03/24/22 16:56	KKW	
1,1-Dichloroethene [75-35-4]^	9400	U	ug/L	10000	9400	25000	2C24007	EPA 8260D	03/24/22 16:56	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	7000	U	ug/L	10000	7000	25000	2C24007	EPA 8260D	03/24/22 16:56	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	9600	U	ug/L	10000	9600	25000	2C24007	EPA 8260D	03/24/22 16:56	KKW	
1,2-Dibromoethane [106-93-4]^	7800	U	ug/L	10000	7800	25000	2C24007	EPA 8260D	03/24/22 16:56	KKW	
1,2-Dichlorobenzene [95-50-1]^	7300	U	ug/L	10000	7300	25000	2C24007	EPA 8260D	03/24/22 16:56	KKW	
1,2-Dichloroethane [107-06-2]^	6300	U	ug/L	10000	6300	25000	2C24007	EPA 8260D	03/24/22 16:56	KKW	
1,2-Dichloropropane [78-87-5]^	8000	U	ug/L	10000	8000	25000	2C24007	EPA 8260D	03/24/22 16:56	KKW	
1,3-Dichlorobenzene [541-73-1]^	7700	U	ug/L	10000	7700	25000	2C24007	EPA 8260D	03/24/22 16:56	KKW	
1,4-Dichlorobenzene [106-46-7]^	7600	U	ug/L	10000	7600	25000	2C24007	EPA 8260D	03/24/22 16:56	KKW	
2-Butanone [78-93-3]^	45000	U	ug/L	10000	45000	120000	2C24007	EPA 8260D	03/24/22 16:56	KKW	
2-Hexanone [591-78-6]^	25000	U	ug/L	10000	25000	120000	2C24007	EPA 8260D	03/24/22 16:56	KKW	
4-Methyl-2-pentanone [108-10-1]^	25000	U	ug/L	10000	25000	120000	2C24007	EPA 8260D	03/24/22 16:56	KKW	
Acetone [67-64-1]^	100000	U	ug/L	10000	100000	250000	2C24007	EPA 8260D	03/24/22 16:56	KKW	
Benzene [71-43-2]^	7100	U	ug/L	10000	7100	25000	2C24007	EPA 8260D	03/24/22 16:56	KKW	
Bromodichloromethane [75-27-4]^	5200	U	ug/L	10000	5200	25000	2C24007	EPA 8260D	03/24/22 16:56	KKW	
Bromoform [75-25-2]^	7500	U	ug/L	10000	7500	25000	2C24007	EPA 8260D	03/24/22 16:56	KKW	
Bromomethane [74-83-9]^	9500	U	ug/L	10000	9500	25000	2C24007	EPA 8260D	03/24/22 16:56	KKW	
Carbon disulfide [75-15-0]^	25000	U	ug/L	10000	25000	120000	2C24007	EPA 8260D	03/24/22 16:56	KKW	
Carbon Tetrachloride [56-23-5]^	9400	U	ug/L	10000	9400	25000	2C24007	EPA 8260D	03/24/22 16:56	KKW	
Chlorobenzene [108-90-7]^	7200	U	ug/L	10000	7200	25000	2C24007	EPA 8260D	03/24/22 16:56	KKW	
Chloroethane [75-00-3]^	9800	U	ug/L	10000	9800	25000	2C24007	EPA 8260D	03/24/22 16:56	KKW	
Chloroform [67-66-3]^	8000	U	ug/L	10000	8000	25000	2C24007	EPA 8260D	03/24/22 16:56	KKW	
Chloromethane [74-87-3]^	8200	U	ug/L	10000	8200	25000	2C24007	EPA 8260D	03/24/22 16:56	KKW	
cis-1,2-Dichloroethene [156-59-2]^	5300	U	ug/L	10000	5300	25000	2C24007	EPA 8260D	03/24/22 16:56	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	5900	U	ug/L	10000	5900	25000	2C24007	EPA 8260D	03/24/22 16:56	KKW	
Cyclohexane [110-82-7]^	9300	U	ug/L	10000	9300	25000	2C24007	EPA 8260D	03/24/22 16:56	KKW	
Dibromochloromethane [124-48-1]^	5000	U	ug/L	10000	5000	25000	2C24007	EPA 8260D	03/24/22 16:56	KKW	
Dichlorodifluoromethane [75-71-8]^	7400	U	ug/L	10000	7400	25000	2C24007	EPA 8260D	03/24/22 16:56	KKW	
Ethylbenzene [100-41-4]^	6900	U	ug/L	10000	6900	25000	2C24007	EPA 8260D	03/24/22 16:56	KKW	
Freon 113 [76-13-1]^	7300	U	ug/L	10000	7300	25000	2C24007	EPA 8260D	03/24/22 16:56	KKW	
Isopropylbenzene [98-82-8]^	6700	U	ug/L	10000	6700	25000	2C24007	EPA 8260D	03/24/22 16:56	KKW	
Methyl acetate [79-20-9]^	9500	U	ug/L	10000	9500	25000	2C24007	EPA 8260D	03/24/22 16:56	KKW	A-07
Methylene Chloride [75-09-2]^	25000	U	ug/L	10000	25000	120000	2C24007	EPA 8260D	03/24/22 16:56	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	6000	U	ug/L	10000	6000	25000	2C24007	EPA 8260D	03/24/22 16:56	KKW	
Styrene [100-42-5]^	6100	U	ug/L	10000	6100	25000	2C24007	EPA 8260D	03/24/22 16:56	KKW	
Tetrachloroethene [127-18-4]^	7600	U	ug/L	10000	7600	25000	2C24007	EPA 8260D	03/24/22 16:56	KKW	
Toluene [108-88-3]^	7200	U	ug/L	10000	7200	25000	2C24007	EPA 8260D	03/24/22 16:56	KKW	
trans-1,2-Dichloroethene [156-60-5]^	7300	U	ug/L	10000	7300	25000	2C24007	EPA 8260D	03/24/22 16:56	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	7300	U	ug/L	10000	7300	25000	2C24007	EPA 8260D	03/24/22 16:56	KKW	
Trichloroethene [79-01-6]^	**470000**		ug/L	10000	8900	25000	2C24007	EPA 8260D	03/24/22 16:56	KKW	
Trichlorofluoromethane [75-69-4]^	9400	U	ug/L	10000	9400	25000	2C24007	EPA 8260D	03/24/22 16:56	KKW	
Vinyl chloride [75-01-4]^	7100	U	ug/L	10000	7100	25000	2C24007	EPA 8260D	03/24/22 16:56	KKW	
Xylenes (Total) [1330-20-7]	13000	U	ug/L	10000	13000	50000	2C24007	EPA 8260D	03/24/22 16:56	KKW	

ANALYTICAL RESULTS

Description: LC34-RW19C-20220322 **Lab Sample ID:** AF02214-21 **Received:** 03/22/22 15:30

Matrix: Ground Water **Sampled:** 03/22/22 11:10 **Work Order:** AF02214

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*52*	*1*	*50.0*	*105 %*	*41-142*	*2C24007*	*EPA 8260D*	*03/24/22 16:56*	*KKW*	
Dibromofluoromethane	*47*	*1*	*50.0*	*93 %*	*53-146*	*2C24007*	*EPA 8260D*	*03/24/22 16:56*	*KKW*	
Toluene-d8	*48*	*1*	*50.0*	*96 %*	*41-146*	*2C24007*	*EPA 8260D*	*03/24/22 16:56*	*KKW*	

ANALYTICAL RESULTS

Description: LC34-RW20C-20220322 **Lab Sample ID:** AF02214-22 **Received:** 03/22/22 15:30

Matrix: Ground Water **Sampled:** 03/22/22 11:20 **Work Order:** AF02214

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	800	U	ug/L	1000	800	2500	2C25003	EPA 8260D	03/25/22 14:52	JMW	
1,1,2,2-Tetrachloroethane [79-34-5]^	540	U	ug/L	1000	540	2500	2C25003	EPA 8260D	03/25/22 14:52	JMW	
1,1,2-Trichloroethane [79-00-5]^	760	U	ug/L	1000	760	2500	2C25003	EPA 8260D	03/25/22 14:52	JMW	
1,1-Dichloroethane [75-34-3]^	620	U	ug/L	1000	620	2500	2C25003	EPA 8260D	03/25/22 14:52	JMW	
1,1-Dichloroethene [75-35-4]^	940	U	ug/L	1000	940	2500	2C25003	EPA 8260D	03/25/22 14:52	JMW	
1,2,4-Trichlorobenzene [120-82-1]^	700	U	ug/L	1000	700	2500	2C25003	EPA 8260D	03/25/22 14:52	JMW	QB-02
1,2-Dibromo-3-chloropropane [96-12-8]^	960	U	ug/L	1000	960	2500	2C25003	EPA 8260D	03/25/22 14:52	JMW	
1,2-Dibromoethane [106-93-4]^	780	U	ug/L	1000	780	2500	2C25003	EPA 8260D	03/25/22 14:52	JMW	
1,2-Dichlorobenzene [95-50-1]^	730	U	ug/L	1000	730	2500	2C25003	EPA 8260D	03/25/22 14:52	JMW	
1,2-Dichloroethane [107-06-2]^	630	U	ug/L	1000	630	2500	2C25003	EPA 8260D	03/25/22 14:52	JMW	
1,2-Dichloropropane [78-87-5]^	800	U	ug/L	1000	800	2500	2C25003	EPA 8260D	03/25/22 14:52	JMW	
1,3-Dichlorobenzene [541-73-1]^	770	U	ug/L	1000	770	2500	2C25003	EPA 8260D	03/25/22 14:52	JMW	
1,4-Dichlorobenzene [106-46-7]^	760	U	ug/L	1000	760	2500	2C25003	EPA 8260D	03/25/22 14:52	JMW	
2-Butanone [78-93-3]^	4500	U	ug/L	1000	4500	12000	2C25003	EPA 8260D	03/25/22 14:52	JMW	
2-Hexanone [591-78-6]^	2500	U	ug/L	1000	2500	12000	2C25003	EPA 8260D	03/25/22 14:52	JMW	
4-Methyl-2-pentanone [108-10-1]^	2500	U	ug/L	1000	2500	12000	2C25003	EPA 8260D	03/25/22 14:52	JMW	
Acetone [67-64-1]^	10000	U	ug/L	1000	10000	25000	2C25003	EPA 8260D	03/25/22 14:52	JMW	
Benzene [71-43-2]^	710	U	ug/L	1000	710	2500	2C25003	EPA 8260D	03/25/22 14:52	JMW	
Bromodichloromethane [75-27-4]^	520	U	ug/L	1000	520	2500	2C25003	EPA 8260D	03/25/22 14:52	JMW	QV-01
Bromoform [75-25-2]^	750	U	ug/L	1000	750	2500	2C25003	EPA 8260D	03/25/22 14:52	JMW	QV-01
Bromomethane [74-83-9]^	950	U	ug/L	1000	950	2500	2C25003	EPA 8260D	03/25/22 14:52	JMW	QV-01
Carbon disulfide [75-15-0]^	2500	U	ug/L	1000	2500	12000	2C25003	EPA 8260D	03/25/22 14:52	JMW	
Carbon Tetrachloride [56-23-5]^	940	U	ug/L	1000	940	2500	2C25003	EPA 8260D	03/25/22 14:52	JMW	
Chlorobenzene [108-90-7]^	720	U	ug/L	1000	720	2500	2C25003	EPA 8260D	03/25/22 14:52	JMW	
Chloroethane [75-00-3]^	980	U	ug/L	1000	980	2500	2C25003	EPA 8260D	03/25/22 14:52	JMW	
Chloroform [67-66-3]^	800	U	ug/L	1000	800	2500	2C25003	EPA 8260D	03/25/22 14:52	JMW	
Chloromethane [74-87-3]^	820	U	ug/L	1000	820	2500	2C25003	EPA 8260D	03/25/22 14:52	JMW	
cis-1,2-Dichloroethene [156-59-2]^	**8100**		ug/L	1000	530	2500	2C25003	EPA 8260D	03/25/22 14:52	JMW	
cis-1,3-Dichloropropene [10061-01-5]^	590	U	ug/L	1000	590	2500	2C25003	EPA 8260D	03/25/22 14:52	JMW	
Cyclohexane [110-82-7]^	930	U	ug/L	1000	930	2500	2C25003	EPA 8260D	03/25/22 14:52	JMW	
Dibromochloromethane [124-48-1]^	500	U	ug/L	1000	500	2500	2C25003	EPA 8260D	03/25/22 14:52	JMW	
Dichlorodifluoromethane [75-71-8]^	740	U	ug/L	1000	740	2500	2C25003	EPA 8260D	03/25/22 14:52	JMW	QV-01
Ethylbenzene [100-41-4]^	690	U	ug/L	1000	690	2500	2C25003	EPA 8260D	03/25/22 14:52	JMW	
Freon 113 [76-13-1]^	**1600**	I	ug/L	1000	730	2500	2C25003	EPA 8260D	03/25/22 14:52	JMW	
Isopropylbenzene [98-82-8]^	670	U	ug/L	1000	670	2500	2C25003	EPA 8260D	03/25/22 14:52	JMW	
Methyl acetate [79-20-9]^	950	U	ug/L	1000	950	2500	2C25003	EPA 8260D	03/25/22 14:52	JMW	
Methylene Chloride [75-09-2]^	2500	U	ug/L	1000	2500	12000	2C25003	EPA 8260D	03/25/22 14:52	JMW	
Methyl-tert-Butyl Ether [1634-04-4]^	600	U	ug/L	1000	600	2500	2C25003	EPA 8260D	03/25/22 14:52	JMW	
Styrene [100-42-5]^	610	U	ug/L	1000	610	2500	2C25003	EPA 8260D	03/25/22 14:52	JMW	
Tetrachloroethene [127-18-4]^	760	U	ug/L	1000	760	2500	2C25003	EPA 8260D	03/25/22 14:52	JMW	
Toluene [108-88-3]^	720	U	ug/L	1000	720	2500	2C25003	EPA 8260D	03/25/22 14:52	JMW	
trans-1,2-Dichloroethene [156-60-5]^	730	U	ug/L	1000	730	2500	2C25003	EPA 8260D	03/25/22 14:52	JMW	
trans-1,3-Dichloropropene [10061-02-6]^	730	U	ug/L	1000	730	2500	2C25003	EPA 8260D	03/25/22 14:52	JMW	
Trichloroethene [79-01-6]^	**98000**		ug/L	1000	890	2500	2C25003	EPA 8260D	03/25/22 14:52	JMW	
Trichlorofluoromethane [75-69-4]^	940	U	ug/L	1000	940	2500	2C25003	EPA 8260D	03/25/22 14:52	JMW	
Vinyl chloride [75-01-4]^	710	U	ug/L	1000	710	2500	2C25003	EPA 8260D	03/25/22 14:52	JMW	
Xylenes (Total) [1330-20-7]	1300	U	ug/L	1000	1300	5000	2C25003	EPA 8260D	03/25/22 14:52	JMW	

ANALYTICAL RESULTS

Description: LC34-RW20C-20220322 **Lab Sample ID:** AF02214-22 **Received:** 03/22/22 15:30

Matrix: Ground Water **Sampled:** 03/22/22 11:20 **Work Order:** AF02214

Project: NASA KSC LC34 **Sampled By:** Dan Forester

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*48*	*1*	*50.0*	*95 %*	*41-142*	*2C25003*	*EPA 8260D*	*03/25/22 14:52*	*JMW*	
Dibromofluoromethane	*46*	*1*	*50.0*	*92 %*	*53-146*	*2C25003*	*EPA 8260D*	*03/25/22 14:52*	*JMW*	
Toluene-d8	*47*	*1*	*50.0*	*95 %*	*41-146*	*2C25003*	*EPA 8260D*	*03/25/22 14:52*	*JMW*	

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2C23020 - EPA 5030B_MS

Blank (2C23020-BLK1) Prepared: 03/23/2022 12:42 Analyzed: 03/23/2022 22:18

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	0.80	U	2.5	ug/L							
1,1,2,2-Tetrachloroethane	0.54	U	2.5	ug/L							
1,1,2-Trichloroethane	0.76	U	2.5	ug/L							
1,1-Dichloroethane	0.62	U	2.5	ug/L							
1,1-Dichloroethene	0.94	U	2.5	ug/L							
1,2,4-Trichlorobenzene	0.70	U	2.5	ug/L							
1,2-Dibromo-3-chloropropane	0.96	U	2.5	ug/L							
1,2-Dibromoethane	0.78	U	2.5	ug/L							
1,2-Dichlorobenzene	0.73	U	2.5	ug/L							
1,2-Dichloroethane	0.63	U	2.5	ug/L							
1,2-Dichloropropane	0.80	U	2.5	ug/L							
1,3-Dichlorobenzene	0.77	U	2.5	ug/L							
1,4-Dichlorobenzene	0.76	U	2.5	ug/L							
2-Butanone	4.5	U	12	ug/L							
2-Hexanone	2.5	U	12	ug/L							
4-Methyl-2-pentanone	2.5	U	12	ug/L							
Acetone	10	U	25	ug/L							
Benzene	0.71	U	2.5	ug/L							
Bromodichloromethane	0.52	U	2.5	ug/L							
Bromoform	0.75	U	2.5	ug/L							
Bromomethane	0.95	U	2.5	ug/L							
Carbon disulfide	2.5	U	12	ug/L							
Carbon Tetrachloride	0.94	U	2.5	ug/L							
Chlorobenzene	0.72	U	2.5	ug/L							
Chloroethane	0.98	U	2.5	ug/L							
Chloroform	0.80	U	2.5	ug/L							
Chloromethane	0.82	U	2.5	ug/L							
cis-1,2-Dichloroethene	0.53	U	2.5	ug/L							
cis-1,3-Dichloropropene	0.59	U	2.5	ug/L							
Cyclohexane	0.93	U	2.5	ug/L							
Dibromochloromethane	0.50	U	2.5	ug/L							
Dichlorodifluoromethane	0.74	U	2.5	ug/L							
Ethylbenzene	0.69	U	2.5	ug/L							
Freon 113	0.73	U	2.5	ug/L							
Isopropylbenzene	0.67	U	2.5	ug/L							
Methyl acetate	0.95	U	2.5	ug/L							
Methylene Chloride	2.5	U	12	ug/L							
Methyl-tert-Butyl Ether	0.60	U	2.5	ug/L							
Styrene	0.61	U	2.5	ug/L							
Tetrachloroethene	0.76	U	2.5	ug/L							
Toluene	0.72	U	2.5	ug/L							
trans-1,2-Dichloroethene	0.73	U	2.5	ug/L							
trans-1,3-Dichloropropene	0.73	U	2.5	ug/L							
Trichloroethene	0.89	U	2.5	ug/L							
Trichlorofluoromethane	0.94	U	2.5	ug/L							
Vinyl chloride	0.71	U	2.5	ug/L							
Xylenes (Total)	1.3	U	5.0	ug/L							
4-Bromofluorobenzene	*51*			*ug/L*	*50.0*		*103*	*41-142*			
Dibromofluoromethane	*46*	*I*		*ug/L*	*50.0*		*92*	*53-146*			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2C23020 - EPA 5030B_MS - Continued

Blank (2C23020-BLK1) Continued Prepared: 03/23/2022 12:42 Analyzed: 03/23/2022 22:18

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Toluene-d8	*47*	*I*		*ug/L*	*50.0*		*94*	*41-146*			

LCS (2C23020-BS1) Prepared: 03/23/2022 12:42 Analyzed: 03/23/2022 20:27

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	19		2.5	ug/L	20.0		96	57-148			
1,1,2,2-Tetrachloroethane	20		2.5	ug/L	20.0		102	60-139			
1,1,2-Trichloroethane	21		2.5	ug/L	20.0		105	57-141			
1,1-Dichloroethane	20		2.5	ug/L	20.0		99	57-142			
1,1-Dichloroethene	19		2.5	ug/L	20.0		93	47-139			
1,2,4-Trichlorobenzene	20		2.5	ug/L	20.0		101	52-159			
1,2-Dibromo-3-chloropropane	23		2.5	ug/L	20.0		115	48-150			
1,2-Dibromoethane	19		2.5	ug/L	20.0		93	57-140			
1,2-Dichlorobenzene	21		2.5	ug/L	20.0		104	63-131			
1,2-Dichloroethane	19		2.5	ug/L	20.0		97	50-156			
1,2-Dichloropropane	19		2.5	ug/L	20.0		97	61-133			
1,3-Dichlorobenzene	20		2.5	ug/L	20.0		102	66-129			
1,4-Dichlorobenzene	22		2.5	ug/L	20.0		112	65-133			
2-Butanone	92		12	ug/L	100		92	10-180			
2-Hexanone	88		12	ug/L	100		88	12-180			
4-Methyl-2-pentanone	82		12	ug/L	100		82	19-180			
Acetone	96		25	ug/L	100		96	10-180			
Benzene	21		2.5	ug/L	20.0		105	56-136			
Bromodichloromethane	20		2.5	ug/L	20.0		98	58-135			
Bromoform	20		2.5	ug/L	20.0		100	46-148			
Bromomethane	14		2.5	ug/L	20.0		68	10-173			
Carbon disulfide	19		12	ug/L	20.0		96	43-153			
Carbon Tetrachloride	20		2.5	ug/L	20.0		100	54-156			
Chlorobenzene	21		2.5	ug/L	20.0		107	51-139			
Chloroethane	19		2.5	ug/L	20.0		93	27-180			
Chloroform	18		2.5	ug/L	20.0		92	58-139			
Chloromethane	14		2.5	ug/L	20.0		68	33-154			
cis-1,2-Dichloroethene	19		2.5	ug/L	20.0		95	56-128			
cis-1,3-Dichloropropene	18		2.5	ug/L	20.0		90	64-128			
Cyclohexane	17		2.5	ug/L	20.0		85	70-130			
Dibromochloromethane	20		2.5	ug/L	20.0		99	50-140			
Dichlorodifluoromethane	10		2.5	ug/L	20.0		52	10-180			
Ethylbenzene	20		2.5	ug/L	20.0		100	63-133			
Freon 113	18		2.5	ug/L	20.0		90	47-173			
Isopropylbenzene	21		2.5	ug/L	20.0		103	60-132			
m,p-Xylenes	45		5.0	ug/L	40.0		112	64-133			
Methyl acetate	16		2.5	ug/L	20.0		80	70-130			
Methylene Chloride	20		12	ug/L	20.0		98	43-142			
Methyl-tert-Butyl Ether	19		2.5	ug/L	20.0		93	51-145			
o-Xylene	20		2.5	ug/L	20.0		101	61-129			
Styrene	19		2.5	ug/L	20.0		95	59-136			
Tetrachloroethene	21		2.5	ug/L	20.0		106	60-147			
Toluene	22		2.5	ug/L	20.0		108	64-131			
trans-1,2-Dichloroethene	18		2.5	ug/L	20.0		91	54-134			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2C23020 - EPA 5030B_MS - Continued

LCS (2C23020-BS1) Continued Prepared: 03/23/2022 12:42 Analyzed: 03/23/2022 20:27

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
trans-1,3-Dichloropropene	21		2.5	ug/L	20.0		107	65-149			
Trichloroethene	20		2.5	ug/L	20.0		99	62-135			
Trichlorofluoromethane	18		2.5	ug/L	20.0		88	56-155			
Vinyl chloride	17		2.5	ug/L	20.0		87	20-167			
4-Bromofluorobenzene	*51*			*ug/L*	*50.0*		*102*	*41-142*			
Dibromofluoromethane	*47*	*I*		*ug/L*	*50.0*		*94*	*53-146*			
Toluene-d8	*49*	*I*		*ug/L*	*50.0*		*97*	*41-146*			

Matrix Spike (2C23020-MS1) Prepared: 03/23/2022 12:42 Analyzed: 03/23/2022 20:55

Source: AF01632-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	2200		250	ug/L	2000	80 U	108	57-148			
1,1,2,2-Tetrachloroethane	2100		250	ug/L	2000	54 U	107	60-139			
1,1,2-Trichloroethane	2200		250	ug/L	2000	76 U	109	57-141			
1,1-Dichloroethane	2200		250	ug/L	2000	62 U	109	57-142			
1,1-Dichloroethene	2100		250	ug/L	2000	94 U	105	47-139			
1,2,4-Trichlorobenzene	1900		250	ug/L	2000	70 U	96	52-159			
1,2-Dibromo-3-chloropropane	2100		250	ug/L	2000	96 U	104	48-150			
1,2-Dibromoethane	1900		250	ug/L	2000	78 U	97	57-140			
1,2-Dichlorobenzene	2200		250	ug/L	2000	73 U	110	63-131			
1,2-Dichloroethane	1900		250	ug/L	2000	63 U	97	50-156			
1,2-Dichloropropane	2100		250	ug/L	2000	80 U	105	61-133			
1,3-Dichlorobenzene	2100		250	ug/L	2000	77 U	107	66-129			
1,4-Dichlorobenzene	2200		250	ug/L	2000	76 U	112	65-133			
2-Butanone	9300		1200	ug/L	10000	450 U	93	10-180			
2-Hexanone	8900		1200	ug/L	10000	250 U	89	12-180			
4-Methyl-2-pentanone	8400		1200	ug/L	10000	250 U	84	19-180			
Acetone	84000	L	2500	ug/L	10000	78000	58	10-180			
Benzene	2200		250	ug/L	2000	71 U	110	56-136			
Bromodichloromethane	2100		250	ug/L	2000	52 U	104	58-135			
Bromoform	2100		250	ug/L	2000	75 U	104	46-148			
Bromomethane	1500		250	ug/L	2000	95 U	77	10-173			
Carbon disulfide	2000		1200	ug/L	2000	250 U	101	43-153			
Carbon Tetrachloride	2200		250	ug/L	2000	94 U	108	54-156			
Chlorobenzene	2200		250	ug/L	2000	72 U	112	51-139			
Chloroethane	2200		250	ug/L	2000	98 U	108	27-180			
Chloroform	1900		250	ug/L	2000	80 U	97	58-139			
Chloromethane	1600		250	ug/L	2000	82 U	81	33-154			
cis-1,2-Dichloroethene	2100		250	ug/L	2000	53 U	107	56-128			
cis-1,3-Dichloropropene	1800		250	ug/L	2000	59 U	92	64-128			
Cyclohexane	1700		250	ug/L	2000	93 U	87	70-130			
Dibromochloromethane	2000		250	ug/L	2000	50 U	102	50-140			
Dichlorodifluoromethane	1300		250	ug/L	2000	74 U	67	10-180			
Ethylbenzene	2100		250	ug/L	2000	69 U	104	63-133			
Freon 113	2000		250	ug/L	2000	73 U	102	47-173			
Isopropylbenzene	2100		250	ug/L	2000	67 U	105	60-132			
m,p-Xylenes	4600		500	ug/L	4000	130 U	114	64-133			
Methyl acetate	2000		250	ug/L	2000	95 U	101	70-130			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2C23020 - EPA 5030B_MS - Continued

Matrix Spike (2C23020-MS1) Continued Prepared: 03/23/2022 12:42 Analyzed: 03/23/2022 20:55

Source: AF01632-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Methylene Chloride	2200		1200	ug/L	2000	250 U	108	43-142			
Methyl-tert-Butyl Ether	1900		250	ug/L	2000	60 U	96	51-145			
o-Xylene	2100		250	ug/L	2000	53 U	103	61-129			
Styrene	2000		250	ug/L	2000	61 U	100	59-136			
Tetrachloroethene	2200		250	ug/L	2000	76 U	109	60-147			
Toluene	2300		250	ug/L	2000	72 U	114	64-131			
trans-1,2-Dichloroethene	2100		250	ug/L	2000	73 U	103	54-134			
trans-1,3-Dichloropropene	2200		250	ug/L	2000	73 U	108	65-149			
Trichloroethene	2200		250	ug/L	2000	89 U	108	62-135			
Trichlorofluoromethane	2100		250	ug/L	2000	94 U	103	56-155			
Vinyl chloride	2100		250	ug/L	2000	71 U	103	20-167			
4-Bromofluorobenzene	*5200*			*ug/L*	*5000*		*103*	*41-142*			
Dibromofluoromethane	*4800*	*I*		*ug/L*	*5000*		*96*	*53-146*			
Toluene-d8	*4900*	*I*		*ug/L*	*5000*		*98*	*41-146*			

Matrix Spike Dup (2C23020-MSD1) Prepared: 03/23/2022 12:42 Analyzed: 03/23/2022 21:23

Source: AF01632-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	2000		250	ug/L	2000	80 U	101	57-148	7	25	
1,1,2,2-Tetrachloroethane	2100		250	ug/L	2000	54 U	104	60-139	3	17	
1,1,2-Trichloroethane	2100		250	ug/L	2000	76 U	105	57-141	3	16	
1,1-Dichloroethane	2000		250	ug/L	2000	62 U	100	57-142	9	24	
1,1-Dichloroethene	2000		250	ug/L	2000	94 U	98	47-139	6	16	
1,2,4-Trichlorobenzene	2000		250	ug/L	2000	70 U	100	52-159	4	24	
1,2-Dibromo-3-chloropropane	2200		250	ug/L	2000	96 U	108	48-150	3	21	
1,2-Dibromoethane	1900		250	ug/L	2000	78 U	94	57-140	3	16	
1,2-Dichlorobenzene	2000		250	ug/L	2000	73 U	101	63-131	8	25	
1,2-Dichloroethane	1900		250	ug/L	2000	63 U	96	50-156	1	18	
1,2-Dichloropropane	2100		250	ug/L	2000	80 U	103	61-133	2	26	
1,3-Dichlorobenzene	2000		250	ug/L	2000	77 U	100	66-129	7	23	
1,4-Dichlorobenzene	2200		250	ug/L	2000	76 U	108	65-133	4	23	
2-Butanone	9300		1200	ug/L	10000	450 U	93	10-180	0.4	29	
2-Hexanone	8800		1200	ug/L	10000	250 U	88	12-180	0.8	28	
4-Methyl-2-pentanone	8400		1200	ug/L	10000	250 U	84	19-180	0.7	24	
Acetone	83000	L	2500	ug/L	10000	78000	55	10-180	0.4	19	
Benzene	2100		250	ug/L	2000	71 U	106	56-136	3	14	
Bromodichloromethane	2100		250	ug/L	2000	52 U	106	58-135	2	19	
Bromoform	2100		250	ug/L	2000	75 U	104	46-148	0.4	18	
Bromomethane	1800		250	ug/L	2000	95 U	89	10-173	15	29	
Carbon disulfide	1800		1200	ug/L	2000	250 U	89	43-153	12	26	
Carbon Tetrachloride	2000		250	ug/L	2000	94 U	101	54-156	6	27	
Chlorobenzene	2100		250	ug/L	2000	72 U	106	51-139	5	13	
Chloroethane	2000		250	ug/L	2000	98 U	98	27-180	10	22	
Chloroform	1900		250	ug/L	2000	80 U	94	58-139	4	17	
Chloromethane	1500		250	ug/L	2000	82 U	76	33-154	6	31	
cis-1,2-Dichloroethene	2000		250	ug/L	2000	53 U	99	56-128	7	17	
cis-1,3-Dichloropropene	1800		250	ug/L	2000	59 U	91	64-128	0.9	20	
Cyclohexane	1700		250	ug/L	2000	93 U	83	70-130	5	20	

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2C23020 - EPA 5030B_MS - Continued

Matrix Spike Dup (2C23020-MSD1) Continued Prepared: 03/23/2022 12:42 Analyzed: 03/23/2022 21:23

Source: AF01632-01

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Dibromochloromethane	2000		250	ug/L	2000	50 U	99	50-140	3	18	
Dichlorodifluoromethane	1200		250	ug/L	2000	74 U	61	10-180	9	26	
Ethylbenzene	2000		250	ug/L	2000	69 U	100	63-133	4	18	
Freon 113	1900		250	ug/L	2000	73 U	97	47-173	5	30	
Isopropylbenzene	2000		250	ug/L	2000	67 U	100	60-132	5	23	
m,p-Xylenes	4300		500	ug/L	4000	130 U	108	64-133	5	18	
Methyl acetate	1900		250	ug/L	2000	95 U	95	70-130	6	20	
Methylene Chloride	2100		1200	ug/L	2000	250 U	105	43-142	3	23	
Methyl-tert-Butyl Ether	1800		250	ug/L	2000	60 U	92	51-145	4	22	
o-Xylene	2000		250	ug/L	2000	53 U	99	61-129	4	16	
Styrene	2000		250	ug/L	2000	61 U	100	59-136	0.4	32	
Tetrachloroethene	2100		250	ug/L	2000	76 U	104	60-147	4	21	
Toluene	2200		250	ug/L	2000	72 U	110	64-131	3	16	
trans-1,2-Dichloroethene	1900		250	ug/L	2000	73 U	95	54-134	8	20	
trans-1,3-Dichloropropene	2100		250	ug/L	2000	73 U	106	65-149	1	17	
Trichloroethene	2000		250	ug/L	2000	89 U	102	62-135	5	20	
Trichlorofluoromethane	1900		250	ug/L	2000	94 U	96	56-155	7	22	
Vinyl chloride	2000		250	ug/L	2000	71 U	98	20-167	5	24	
4-Bromofluorobenzene	*5200*			*ug/L*	*5000*		*104*	*41-142*			
Dibromofluoromethane	*4800*	*I*		*ug/L*	*5000*		*95*	*53-146*			
Toluene-d8	*5000*			*ug/L*	*5000*		*100*	*41-146*			

Batch 2C24007 - EPA 5030B_MS

Blank (2C24007-BLK1) Prepared: 03/24/2022 00:00 Analyzed: 03/24/2022 10:01

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	0.80	U	2.5	ug/L							
1,1,2,2-Tetrachloroethane	0.54	U	2.5	ug/L							
1,1,2-Trichloroethane	0.76	U	2.5	ug/L							
1,1-Dichloroethane	0.62	U	2.5	ug/L							
1,1-Dichloroethene	0.94	U	2.5	ug/L							
1,2,4-Trichlorobenzene	0.70	U	2.5	ug/L							
1,2-Dibromo-3-chloropropane	0.96	U	2.5	ug/L							
1,2-Dibromoethane	0.78	U	2.5	ug/L							
1,2-Dichlorobenzene	0.73	U	2.5	ug/L							
1,2-Dichloroethane	0.63	U	2.5	ug/L							
1,2-Dichloropropane	0.80	U	2.5	ug/L							
1,3-Dichlorobenzene	0.77	U	2.5	ug/L							
1,4-Dichlorobenzene	0.76	U	2.5	ug/L							
2-Butanone	4.5	U	12	ug/L							
2-Hexanone	2.5	U	12	ug/L							
4-Methyl-2-pentanone	2.5	U	12	ug/L							
Acetone	10	U	25	ug/L							
Benzene	0.71	U	2.5	ug/L							
Bromodichloromethane	0.52	U	2.5	ug/L							
Bromoform	0.75	U	2.5	ug/L							
Bromomethane	0.95	U	2.5	ug/L							
Carbon disulfide	2.5	U	12	ug/L							

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2C24007 - EPA 5030B_MS - Continued

Blank (2C24007-BLK1) Continued Prepared: 03/24/2022 00:00 Analyzed: 03/24/2022 10:01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Carbon Tetrachloride	0.94	U	2.5	ug/L							
Chlorobenzene	0.72	U	2.5	ug/L							
Chloroethane	0.98	U	2.5	ug/L							
Chloroform	0.80	U	2.5	ug/L							
Chloromethane	0.82	U	2.5	ug/L							
cis-1,2-Dichloroethene	0.53	U	2.5	ug/L							
cis-1,3-Dichloropropene	0.59	U	2.5	ug/L							
Cyclohexane	0.93	U	2.5	ug/L							
Dibromochloromethane	0.50	U	2.5	ug/L							
Dichlorodifluoromethane	0.74	U	2.5	ug/L							
Ethylbenzene	0.69	U	2.5	ug/L							
Freon 113	0.73	U	2.5	ug/L							
Isopropylbenzene	0.67	U	2.5	ug/L							
Methyl acetate	0.95	U	2.5	ug/L							
Methylene Chloride	2.5	U	12	ug/L							
Methyl-tert-Butyl Ether	0.60	U	2.5	ug/L							
Styrene	0.61	U	2.5	ug/L							
Tetrachloroethene	0.76	U	2.5	ug/L							
Toluene	0.72	U	2.5	ug/L							
trans-1,2-Dichloroethene	0.73	U	2.5	ug/L							
trans-1,3-Dichloropropene	0.73	U	2.5	ug/L							
Trichloroethene	0.89	U	2.5	ug/L							
Trichlorofluoromethane	0.94	U	2.5	ug/L							
Vinyl chloride	0.71	U	2.5	ug/L							
Xylenes (Total)	1.3	U	5.0	ug/L							
4-Bromofluorobenzene	*52*			*ug/L*	*50.0*		*103*	*41-142*			
Dibromofluoromethane	*47*	*I*		*ug/L*	*50.0*		*94*	*53-146*			
Toluene-d8	*48*	*I*		*ug/L*	*50.0*		*96*	*41-146*			

LCS (2C24007-BS1) Prepared: 03/24/2022 00:00 Analyzed: 03/24/2022 09:05

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	20		2.5	ug/L	20.0		102	57-148			
1,1,2,2-Tetrachloroethane	13		2.5	ug/L	20.0		67	60-139			
1,1,2-Trichloroethane	17		2.5	ug/L	20.0		84	57-141			
1,1-Dichloroethane	20		2.5	ug/L	20.0		99	57-142			
1,1-Dichloroethene	20		2.5	ug/L	20.0		102	47-139			
1,2,4-Trichlorobenzene	19		2.5	ug/L	20.0		94	52-159			
1,2-Dibromo-3-chloropropane	11		2.5	ug/L	20.0		54	48-150			
1,2-Dibromoethane	14		2.5	ug/L	20.0		69	57-140			
1,2-Dichlorobenzene	18		2.5	ug/L	20.0		91	63-131			
1,2-Dichloroethane	17		2.5	ug/L	20.0		85	50-156			
1,2-Dichloropropane	19		2.5	ug/L	20.0		97	61-133			
1,3-Dichlorobenzene	18		2.5	ug/L	20.0		92	66-129			
1,4-Dichlorobenzene	20		2.5	ug/L	20.0		99	65-133			
2-Butanone	55		12	ug/L	100		55	10-180			
2-Hexanone	48		12	ug/L	100		48	12-180			
4-Methyl-2-pentanone	51		12	ug/L	100		51	19-180			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2C24007 - EPA 5030B_MS - Continued

LCS (2C24007-BS1) Continued Prepared: 03/24/2022 00:00 Analyzed: 03/24/2022 09:05

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Acetone	52		25	ug/L	100		52	10-180			
Benzene	21		2.5	ug/L	20.0		103	56-136			
Bromodichloromethane	19		2.5	ug/L	20.0		93	58-135			
Bromoform	15		2.5	ug/L	20.0		73	46-148			
Bromomethane	14		2.5	ug/L	20.0		71	10-173			
Carbon disulfide	19		12	ug/L	20.0		97	43-153			
Carbon Tetrachloride	19		2.5	ug/L	20.0		94	54-156			
Chlorobenzene	21		2.5	ug/L	20.0		107	51-139			
Chloroethane	18		2.5	ug/L	20.0		92	27-180			
Chloroform	19		2.5	ug/L	20.0		97	58-139			
Chloromethane	14		2.5	ug/L	20.0		71	33-154			
cis-1,2-Dichloroethene	20		2.5	ug/L	20.0		100	56-128			
cis-1,3-Dichloropropene	17		2.5	ug/L	20.0		84	64-128			
Cyclohexane	18		2.5	ug/L	20.0		89	70-130			
Dibromochloromethane	17		2.5	ug/L	20.0		84	50-140			
Dichlorodifluoromethane	11		2.5	ug/L	20.0		55	10-180			
Ethylbenzene	20		2.5	ug/L	20.0		102	63-133			
Freon 113	17		2.5	ug/L	20.0		87	47-173			
Isopropylbenzene	20		2.5	ug/L	20.0		100	60-132			
m,p-Xylenes	43		5.0	ug/L	40.0		108	64-133			
Methyl acetate	9.5		2.5	ug/L	20.0		48	70-130			A-07
Methylene Chloride	21		12	ug/L	20.0		103	43-142			
Methyl-tert-Butyl Ether	14		2.5	ug/L	20.0		72	51-145			
o-Xylene	20		2.5	ug/L	20.0		102	61-129			
Styrene	18		2.5	ug/L	20.0		92	59-136			
Tetrachloroethene	20		2.5	ug/L	20.0		100	60-147			
Toluene	22		2.5	ug/L	20.0		110	64-131			
trans-1,2-Dichloroethene	18		2.5	ug/L	20.0		92	54-134			
trans-1,3-Dichloropropene	18		2.5	ug/L	20.0		92	65-149			
Trichloroethene	20		2.5	ug/L	20.0		98	62-135			
Trichlorofluoromethane	19		2.5	ug/L	20.0		94	56-155			
Vinyl chloride	19		2.5	ug/L	20.0		94	20-167			
4-Bromofluorobenzene	*55*			*ug/L*	*50.0*		*110*	*41-142*			
Dibromofluoromethane	*52*			*ug/L*	*50.0*		*103*	*53-146*			
Toluene-d8	*48*	*I*		*ug/L*	*50.0*		*97*	*41-146*			

Matrix Spike (2C24007-MS1) Prepared: 03/24/2022 00:00 Analyzed: 03/24/2022 18:47

Source: AF02223-01

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	21		2.5	ug/L	20.0	0.80 U	105	57-148			
1,1,2,2-Tetrachloroethane	22		2.5	ug/L	20.0	0.54 U	108	60-139			
1,1,2-Trichloroethane	22		2.5	ug/L	20.0	0.76 U	109	57-141			
1,1-Dichloroethane	21		2.5	ug/L	20.0	0.62 U	103	57-142			
1,1-Dichloroethene	21		2.5	ug/L	20.0	0.94 U	106	47-139			
1,2,4-Trichlorobenzene	20		2.5	ug/L	20.0	0.70 U	101	52-159			
1,2-Dibromo-3-chloropropane	21		2.5	ug/L	20.0	0.96 U	104	48-150			
1,2-Dibromoethane	19		2.5	ug/L	20.0	0.78 U	94	57-140			
1,2-Dichlorobenzene	20		2.5	ug/L	20.0	0.73 U	102	63-131			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2C24007 - EPA 5030B_MS - Continued

Matrix Spike (2C24007-MS1) Continued Prepared: 03/24/2022 00:00 Analyzed: 03/24/2022 18:47

Source: AF02223-01

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,2-Dichloroethane	19		2.5	ug/L	20.0	0.63 U	97	50-156			
1,2-Dichloropropane	20		2.5	ug/L	20.0	0.80 U	99	61-133			
1,3-Dichlorobenzene	20		2.5	ug/L	20.0	0.77 U	101	66-129			
1,4-Dichlorobenzene	22		2.5	ug/L	20.0	0.76 U	108	65-133			
2-Butanone	100		12	ug/L	100	4.5 U	103	10-180			
2-Hexanone	97		12	ug/L	100	2.5 U	97	12-180			
4-Methyl-2-pentanone	98		12	ug/L	100	2.5 U	98	19-180			
Acetone	110		25	ug/L	100	11	101	10-180			
Benzene	21		2.5	ug/L	20.0	0.71 U	103	56-136			
Bromodichloromethane	19		2.5	ug/L	20.0	0.52 U	95	58-135			
Bromoform	19		2.5	ug/L	20.0	0.75 U	97	46-148			
Bromomethane	15		2.5	ug/L	20.0	0.95 U	73	10-173			
Carbon disulfide	21		12	ug/L	20.0	2.5 U	104	43-153			
Carbon Tetrachloride	23		2.5	ug/L	20.0	0.94 U	117	54-156			
Chlorobenzene	22		2.5	ug/L	20.0	0.72 U	111	51-139			
Chloroethane	21		2.5	ug/L	20.0	0.98 U	103	27-180			
Chloroform	19		2.5	ug/L	20.0	0.80 U	96	58-139			
Chloromethane	15		2.5	ug/L	20.0	0.82 U	77	33-154			
cis-1,2-Dichloroethene	40		2.5	ug/L	20.0	19	106	56-128			
cis-1,3-Dichloropropene	17		2.5	ug/L	20.0	0.59 U	84	64-128			
Cyclohexane	17		2.5	ug/L	20.0	0.93 U	87	70-130			
Dibromochloromethane	19		2.5	ug/L	20.0	0.50 U	95	50-140			
Dichlorodifluoromethane	12		2.5	ug/L	20.0	0.74 U	59	10-180			
Ethylbenzene	22		2.5	ug/L	20.0	0.69 U	108	63-133			
Freon 113	21		2.5	ug/L	20.0	0.73 U	106	47-173			
Isopropylbenzene	21		2.5	ug/L	20.0	0.67 U	106	60-132			
m,p-Xylenes	45		5.0	ug/L	40.0	1.3 U	113	64-133			
Methyl acetate	15		2.5	ug/L	20.0	0.95 U	74	70-130			
Methylene Chloride	20		12	ug/L	20.0	2.5 U	102	43-142			
Methyl-tert-Butyl Ether	19		2.5	ug/L	20.0	0.60 U	93	51-145			
o-Xylene	21		2.5	ug/L	20.0	0.53 U	103	61-129			
Styrene	19		2.5	ug/L	20.0	0.61 U	94	59-136			
Tetrachloroethene	22		2.5	ug/L	20.0	0.76 U	111	60-147			
Toluene	22		2.5	ug/L	20.0	0.72 U	111	64-131			
trans-1,2-Dichloroethene	21		2.5	ug/L	20.0	1.6	99	54-134			
trans-1,3-Dichloropropene	21		2.5	ug/L	20.0	0.73 U	104	65-149			
Trichloroethene	27		2.5	ug/L	20.0	6.2	105	62-135			
Trichlorofluoromethane	21		2.5	ug/L	20.0	0.94 U	103	56-155			
Vinyl chloride	22		2.5	ug/L	20.0	1.6	102	20-167			
4-Bromofluorobenzene	*51*			*ug/L*	*50.0*		*102*	*41-142*			
Dibromofluoromethane	*48*	*I*		*ug/L*	*50.0*		*96*	*53-146*			
Toluene-d8	*48*	*I*		*ug/L*	*50.0*		*96*	*41-146*			

Matrix Spike Dup (2C24007-MSD1) Prepared: 03/24/2022 00:00 Analyzed: 03/24/2022 19:15

Source: AF02223-01

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	21		2.5	ug/L	20.0	0.80 U	103	57-148	3	25	
1,1,2,2-Tetrachloroethane	20		2.5	ug/L	20.0	0.54 U	100	60-139	7	17	

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2C24007 - EPA 5030B_MS - Continued

Matrix Spike Dup (2C24007-MSD1) Continued Prepared: 03/24/2022 00:00 Analyzed: 03/24/2022 19:15

Source: AF02223-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,2-Trichloroethane	22		2.5	ug/L	20.0	0.76 U	108	57-141	1	16	
1,1-Dichloroethane	20		2.5	ug/L	20.0	0.62 U	101	57-142	2	24	
1,1-Dichloroethene	20		2.5	ug/L	20.0	0.94 U	101	47-139	5	16	
1,2,4-Trichlorobenzene	21		2.5	ug/L	20.0	0.70 U	105	52-159	4	24	
1,2-Dibromo-3-chloropropane	20		2.5	ug/L	20.0	0.96 U	102	48-150	2	21	
1,2-Dibromoethane	19		2.5	ug/L	20.0	0.78 U	93	57-140	2	16	
1,2-Dichlorobenzene	21		2.5	ug/L	20.0	0.73 U	104	63-131	2	25	
1,2-Dichloroethane	18		2.5	ug/L	20.0	0.63 U	91	50-156	6	18	
1,2-Dichloropropane	19		2.5	ug/L	20.0	0.80 U	97	61-133	2	26	
1,3-Dichlorobenzene	20		2.5	ug/L	20.0	0.77 U	100	66-129	0.3	23	
1,4-Dichlorobenzene	22		2.5	ug/L	20.0	0.76 U	108	65-133	0.1	23	
2-Butanone	97		12	ug/L	100	4.5 U	97	10-180	6	29	
2-Hexanone	89		12	ug/L	100	2.5 U	89	12-180	9	28	
4-Methyl-2-pentanone	91		12	ug/L	100	2.5 U	91	19-180	8	24	
Acetone	99		25	ug/L	100	11	88	10-180	12	19	
Benzene	21		2.5	ug/L	20.0	0.71 U	105	56-136	2	14	
Bromodichloromethane	19		2.5	ug/L	20.0	0.52 U	94	58-135	2	19	
Bromoform	20		2.5	ug/L	20.0	0.75 U	102	46-148	5	18	
Bromomethane	15		2.5	ug/L	20.0	0.95 U	73	10-173	0.9	29	
Carbon disulfide	20		12	ug/L	20.0	2.5 U	101	43-153	2	26	
Carbon Tetrachloride	19		2.5	ug/L	20.0	0.94 U	96	54-156	19	27	
Chlorobenzene	22		2.5	ug/L	20.0	0.72 U	109	51-139	2	13	
Chloroethane	21		2.5	ug/L	20.0	0.98 U	103	27-180	0.05	22	
Chloroform	19		2.5	ug/L	20.0	0.80 U	95	58-139	0.5	17	
Chloromethane	15		2.5	ug/L	20.0	0.82 U	76	33-154	1	31	
cis-1,2-Dichloroethene	39		2.5	ug/L	20.0	19	96	56-128	5	17	
cis-1,3-Dichloropropene	17		2.5	ug/L	20.0	0.59 U	84	64-128	0.5	20	
Cyclohexane	17		2.5	ug/L	20.0	0.93 U	83	70-130	5	20	
Dibromochloromethane	19		2.5	ug/L	20.0	0.50 U	96	50-140	1	18	
Dichlorodifluoromethane	12		2.5	ug/L	20.0	0.74 U	61	10-180	3	26	
Ethylbenzene	21		2.5	ug/L	20.0	0.69 U	106	63-133	2	18	
Freon 113	20		2.5	ug/L	20.0	0.73 U	102	47-173	3	30	
Isopropylbenzene	21		2.5	ug/L	20.0	0.67 U	107	60-132	0.7	23	
m,p-Xylenes	45		5.0	ug/L	40.0	1.3 U	112	64-133	1	18	
Methyl acetate	15		2.5	ug/L	20.0	0.95 U	74	70-130	0.1	20	
Methylene Chloride	20		12	ug/L	20.0	2.5 U	101	43-142	2	23	
Methyl-tert-Butyl Ether	18		2.5	ug/L	20.0	0.60 U	92	51-145	1	22	
o-Xylene	20		2.5	ug/L	20.0	0.53 U	101	61-129	2	16	
Styrene	19		2.5	ug/L	20.0	0.61 U	93	59-136	0.5	32	
Tetrachloroethene	21		2.5	ug/L	20.0	0.76 U	104	60-147	6	21	
Toluene	22		2.5	ug/L	20.0	0.72 U	108	64-131	3	16	
trans-1,2-Dichloroethene	21		2.5	ug/L	20.0	1.6	97	54-134	2	20	
trans-1,3-Dichloropropene	21		2.5	ug/L	20.0	0.73 U	103	65-149	0.1	17	
Trichloroethene	26		2.5	ug/L	20.0	6.2	101	62-135	3	20	
Trichlorofluoromethane	20		2.5	ug/L	20.0	0.94 U	101	56-155	2	22	
Vinyl chloride	23		2.5	ug/L	20.0	1.6	105	20-167	2	24	
4-Bromofluorobenzene	*51*			*ug/L*	*50.0*		*102*	*41-142*			
Dibromofluoromethane	*50*			*ug/L*	*50.0*		*99*	*53-146*			
Toluene-d8	*49*	*I*		*ug/L*	*50.0*		*97*	*41-146*			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2C25003 - EPA 5030B_MS

Blank (2C25003-BLK1) Prepared: 03/25/2022 00:00 Analyzed: 03/25/2022 10:04

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	0.80	U	2.5	ug/L							
1,1,2,2-Tetrachloroethane	0.54	U	2.5	ug/L							
1,1,2-Trichloroethane	0.76	U	2.5	ug/L							
1,1-Dichloroethane	0.62	U	2.5	ug/L							
1,1-Dichloroethene	0.94	U	2.5	ug/L							
1,2,4-Trichlorobenzene	**0.72**	**I**	2.5	ug/L							QB-02
1,2-Dibromo-3-chloropropane	0.96	U	2.5	ug/L							
1,2-Dibromoethane	0.78	U	2.5	ug/L							
1,2-Dichlorobenzene	0.73	U	2.5	ug/L							
1,2-Dichloroethane	0.63	U	2.5	ug/L							
1,2-Dichloropropane	0.80	U	2.5	ug/L							
1,3-Dichlorobenzene	0.77	U	2.5	ug/L							
1,4-Dichlorobenzene	0.76	U	2.5	ug/L							
2-Butanone	4.5	U	12	ug/L							
2-Hexanone	2.5	U	12	ug/L							
4-Methyl-2-pentanone	2.5	U	12	ug/L							
Acetone	10	U	25	ug/L							
Benzene	0.71	U	2.5	ug/L							
Bromodichloromethane	0.52	U	2.5	ug/L							
Bromoform	0.75	U	2.5	ug/L							
Bromomethane	0.95	U	2.5	ug/L							
Carbon disulfide	2.5	U	12	ug/L							
Carbon Tetrachloride	0.94	U	2.5	ug/L							
Chlorobenzene	0.72	U	2.5	ug/L							
Chloroethane	0.98	U	2.5	ug/L							
Chloroform	0.80	U	2.5	ug/L							
Chloromethane	0.82	U	2.5	ug/L							
cis-1,2-Dichloroethene	0.53	U	2.5	ug/L							
cis-1,3-Dichloropropene	0.59	U	2.5	ug/L							
Cyclohexane	0.93	U	2.5	ug/L							
Dibromochloromethane	0.50	U	2.5	ug/L							
Dichlorodifluoromethane	0.74	U	2.5	ug/L							
Ethylbenzene	0.69	U	2.5	ug/L							
Freon 113	0.73	U	2.5	ug/L							
Isopropylbenzene	0.67	U	2.5	ug/L							
Methyl acetate	0.95	U	2.5	ug/L							
Methylene Chloride	2.5	U	12	ug/L							
Methyl-tert-Butyl Ether	0.60	U	2.5	ug/L							
Styrene	0.61	U	2.5	ug/L							
Tetrachloroethene	0.76	U	2.5	ug/L							
Toluene	0.72	U	2.5	ug/L							
trans-1,2-Dichloroethene	0.73	U	2.5	ug/L							
trans-1,3-Dichloropropene	0.73	U	2.5	ug/L							
Trichloroethene	0.89	U	2.5	ug/L							
Trichlorofluoromethane	0.94	U	2.5	ug/L							
Vinyl chloride	0.71	U	2.5	ug/L							
Xylenes (Total)	1.3	U	5.0	ug/L							
4-Bromofluorobenzene	*48*	*I*		*ug/L*	*50.0*		*97*	*41-142*			
Dibromofluoromethane	*45*	*I*		*ug/L*	*50.0*		*90*	*53-146*			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2C25003 - EPA 5030B_MS - Continued

Blank (2C25003-BLK1) Continued Prepared: 03/25/2022 00:00 Analyzed: 03/25/2022 10:04

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Toluene-d8	*49*	*I*		*ug/L*	*50.0*		*99*	*41-146*			

LCS (2C25003-BS1) Prepared: 03/25/2022 00:00 Analyzed: 03/25/2022 08:08

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	22		2.5	ug/L	20.0		109	57-148			
1,1,2,2-Tetrachloroethane	22		2.5	ug/L	20.0		109	60-139			
1,1,2-Trichloroethane	22		2.5	ug/L	20.0		109	57-141			
1,1-Dichloroethane	20		2.5	ug/L	20.0		102	57-142			
1,1-Dichloroethene	21		2.5	ug/L	20.0		104	47-139			
1,2,4-Trichlorobenzene	27		2.5	ug/L	20.0		134	52-159			
1,2-Dibromo-3-chloropropane	21		2.5	ug/L	20.0		103	48-150			
1,2-Dibromoethane	21		2.5	ug/L	20.0		106	57-140			
1,2-Dichlorobenzene	21		2.5	ug/L	20.0		107	63-131			
1,2-Dichloroethane	23		2.5	ug/L	20.0		116	50-156			
1,2-Dichloropropane	21		2.5	ug/L	20.0		103	61-133			
1,3-Dichlorobenzene	21		2.5	ug/L	20.0		105	66-129			
1,4-Dichlorobenzene	20		2.5	ug/L	20.0		101	65-133			
2-Butanone	140		12	ug/L	100		140	10-180			
2-Hexanone	100		12	ug/L	100		101	12-180			
4-Methyl-2-pentanone	110		12	ug/L	100		113	19-180			
Acetone	87		25	ug/L	100		87	10-180			
Benzene	22		2.5	ug/L	20.0		112	56-136			
Bromodichloromethane	25		2.5	ug/L	20.0		125	58-135			
Bromoform	27		2.5	ug/L	20.0		135	46-148			
Bromomethane	14		2.5	ug/L	20.0		68	10-173			
Carbon disulfide	27		12	ug/L	20.0		136	43-153			
Carbon Tetrachloride	25		2.5	ug/L	20.0		124	54-156			
Chlorobenzene	22		2.5	ug/L	20.0		111	51-139			
Chloroethane	19		2.5	ug/L	20.0		97	27-180			
Chloroform	22		2.5	ug/L	20.0		108	58-139			
Chloromethane	14		2.5	ug/L	20.0		68	33-154			
cis-1,2-Dichloroethene	20		2.5	ug/L	20.0		102	56-128			
cis-1,3-Dichloropropene	22		2.5	ug/L	20.0		108	64-128			
Cyclohexane	18		2.5	ug/L	20.0		89	70-130			
Dibromochloromethane	23		2.5	ug/L	20.0		113	50-140			
Dichlorodifluoromethane	11		2.5	ug/L	20.0		56	10-180			
Ethylbenzene	21		2.5	ug/L	20.0		104	63-133			
Freon 113	20		2.5	ug/L	20.0		101	47-173			
Isopropylbenzene	21		2.5	ug/L	20.0		106	60-132			
m,p-Xylenes	41		5.0	ug/L	40.0		102	64-133			
Methyl acetate	20		2.5	ug/L	20.0		100	70-130			
Methylene Chloride	20		12	ug/L	20.0		100	43-142			
Methyl-tert-Butyl Ether	20		2.5	ug/L	20.0		98	51-145			
o-Xylene	21		2.5	ug/L	20.0		104	61-129			
Styrene	24		2.5	ug/L	20.0		118	59-136			
Tetrachloroethene	23		2.5	ug/L	20.0		113	60-147			
Toluene	21		2.5	ug/L	20.0		107	64-131			
trans-1,2-Dichloroethene	20		2.5	ug/L	20.0		102	54-134			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2C25003 - EPA 5030B_MS - Continued

LCS (2C25003-BS1) Continued Prepared: 03/25/2022 00:00 Analyzed: 03/25/2022 08:08

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
trans-1,3-Dichloropropene	23		2.5	ug/L	20.0		114	65-149			
Trichloroethene	22		2.5	ug/L	20.0		111	62-135			
Trichlorofluoromethane	20		2.5	ug/L	20.0		99	56-155			
Vinyl chloride	16		2.5	ug/L	20.0		82	20-167			
4-Bromofluorobenzene	*50*			*ug/L*	*50.0*		*101*	*41-142*			
Dibromofluoromethane	*45*	*I*		*ug/L*	*50.0*		*91*	*53-146*			
Toluene-d8	*50*			*ug/L*	*50.0*		*100*	*41-146*			

Matrix Spike (2C25003-MS1) Prepared: 03/25/2022 00:00 Analyzed: 03/25/2022 08:37

Source: AF02228-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	28		2.5	ug/L	20.0	0.80 U	140	57-148			
1,1,2,2-Tetrachloroethane	25		2.5	ug/L	20.0	0.54 U	123	60-139			
1,1,2-Trichloroethane	25		2.5	ug/L	20.0	0.76 U	126	57-141			
1,1-Dichloroethane	26		2.5	ug/L	20.0	0.62 U	129	57-142			QM-11
1,1-Dichloroethene	27		2.5	ug/L	20.0	0.94 U	135	47-139			QM-11
1,2,4-Trichlorobenzene	33		2.5	ug/L	20.0	0.70 U	163	52-159			QM-07
1,2-Dibromo-3-chloropropane	24		2.5	ug/L	20.0	0.96 U	121	48-150			
1,2-Dibromoethane	25		2.5	ug/L	20.0	0.78 U	124	57-140			QM-11
1,2-Dichlorobenzene	26		2.5	ug/L	20.0	0.73 U	128	63-131			
1,2-Dichloroethane	29		2.5	ug/L	20.0	0.63 U	147	50-156			
1,2-Dichloropropane	26		2.5	ug/L	20.0	0.80 U	128	61-133			
1,3-Dichlorobenzene	26		2.5	ug/L	20.0	0.77 U	129	66-129			
1,4-Dichlorobenzene	25		2.5	ug/L	20.0	0.76 U	123	65-133			
2-Butanone	110		12	ug/L	100	4.5 U	115	10-180			
2-Hexanone	130		12	ug/L	100	2.5 U	129	12-180			
4-Methyl-2-pentanone	140		12	ug/L	100	2.5 U	145	19-180			
Acetone	110		25	ug/L	100	10 U	107	10-180			
Benzene	29		2.5	ug/L	20.0	0.71 U	143	56-136			QM-07, QM-11
Bromodichloromethane	31		2.5	ug/L	20.0	0.52 U	153	58-135			QM-07
Bromoform	31		2.5	ug/L	20.0	0.75 U	155	46-148			QM-07
Bromomethane	18		2.5	ug/L	20.0	0.95 U	90	10-173			
Carbon disulfide	32		12	ug/L	20.0	2.5 U	159	43-153			QM-07
Carbon Tetrachloride	32		2.5	ug/L	20.0	0.94 U	162	54-156			QM-07
Chlorobenzene	27		2.5	ug/L	20.0	0.72 U	136	51-139			QM-11
Chloroethane	23		2.5	ug/L	20.0	0.98 U	115	27-180			
Chloroform	27		2.5	ug/L	20.0	0.80 U	137	58-139			QM-11
Chloromethane	15		2.5	ug/L	20.0	0.82 U	76	33-154			
cis-1,2-Dichloroethene	25		2.5	ug/L	20.0	0.53 U	126	56-128			QM-11
cis-1,3-Dichloropropene	26		2.5	ug/L	20.0	0.59 U	130	64-128			QM-07
Cyclohexane	25		2.5	ug/L	20.0	0.93 U	125	70-130			QM-11
Dibromochloromethane	26		2.5	ug/L	20.0	0.50 U	130	50-140			
Dichlorodifluoromethane	15		2.5	ug/L	20.0	0.74 U	74	10-180			
Ethylbenzene	26		2.5	ug/L	20.0	0.69 U	129	63-133			QM-11
Freon 113	28		2.5	ug/L	20.0	0.73 U	141	47-173			
Isopropylbenzene	26		2.5	ug/L	20.0	0.67 U	131	60-132			
m,p-Xylenes	51		5.0	ug/L	40.0	1.3 U	128	64-133			QM-11
Methyl acetate	23		2.5	ug/L	20.0	0.95 U	116	70-130			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2C25003 - EPA 5030B_MS - Continued

Matrix Spike (2C25003-MS1) Continued Prepared: 03/25/2022 00:00 Analyzed: 03/25/2022 08:37

Source: AF02228-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Methylene Chloride	25		12	ug/L	20.0	2.5 U	125	43-142			
Methyl-tert-Butyl Ether	24		2.5	ug/L	20.0	0.60 U	122	51-145			
o-Xylene	26		2.5	ug/L	20.0	0.53 U	130	61-129			QM-07, QM-11
Styrene	28		2.5	ug/L	20.0	0.61 U	141	59-136			QM-07
Tetrachloroethene	29		2.5	ug/L	20.0	0.76 U	144	60-147			
Toluene	26		2.5	ug/L	20.0	0.72 U	130	64-131			QM-11
trans-1,2-Dichloroethene	27		2.5	ug/L	20.0	0.73 U	135	54-134			QM-07, QM-11
trans-1,3-Dichloropropene	27		2.5	ug/L	20.0	0.73 U	134	65-149			QM-11
Trichloroethene	29		2.5	ug/L	20.0	0.89 U	147	62-135			QM-07, QM-11
Trichlorofluoromethane	25		2.5	ug/L	20.0	0.94 U	125	56-155			
Vinyl chloride	20		2.5	ug/L	20.0	0.71 U	100	20-167			
4-Bromofluorobenzene	*51*			*ug/L*	*50.0*		*101*	*41-142*			
Dibromofluoromethane	*46*	*I*		*ug/L*	*50.0*		*93*	*53-146*			
Toluene-d8	*51*			*ug/L*	*50.0*		*102*	*41-146*			

Matrix Spike Dup (2C25003-MSD1) Prepared: 03/25/2022 00:00 Analyzed: 03/25/2022 09:06

Source: AF02228-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	22		2.5	ug/L	20.0	0.80 U	111	57-148	23	25	
1,1,2,2-Tetrachloroethane	21		2.5	ug/L	20.0	0.54 U	106	60-139	15	17	
1,1,2-Trichloroethane	22		2.5	ug/L	20.0	0.76 U	108	57-141	15	16	
1,1-Dichloroethane	20		2.5	ug/L	20.0	0.62 U	101	57-142	25	24	QM-11
1,1-Dichloroethene	21		2.5	ug/L	20.0	0.94 U	107	47-139	24	16	QM-11
1,2,4-Trichlorobenzene	26		2.5	ug/L	20.0	0.70 U	129	52-159	23	24	
1,2-Dibromo-3-chloropropane	21		2.5	ug/L	20.0	0.96 U	105	48-150	14	21	
1,2-Dibromoethane	20		2.5	ug/L	20.0	0.78 U	102	57-140	20	16	QM-11
1,2-Dichlorobenzene	21		2.5	ug/L	20.0	0.73 U	104	63-131	20	25	
1,2-Dichloroethane	24		2.5	ug/L	20.0	0.63 U	122	50-156	18	18	
1,2-Dichloropropane	21		2.5	ug/L	20.0	0.80 U	104	61-133	20	26	
1,3-Dichlorobenzene	20		2.5	ug/L	20.0	0.77 U	102	66-129	23	23	
1,4-Dichlorobenzene	20		2.5	ug/L	20.0	0.76 U	100	65-133	21	23	
2-Butanone	110		12	ug/L	100	4.5 U	113	10-180	1	29	
2-Hexanone	110		12	ug/L	100	2.5 U	111	12-180	16	28	
4-Methyl-2-pentanone	120		12	ug/L	100	2.5 U	119	19-180	20	24	
Acetone	90		25	ug/L	100	10 U	90	10-180	17	19	
Benzene	23		2.5	ug/L	20.0	0.71 U	114	56-136	22	14	QM-11
Bromodichloromethane	25		2.5	ug/L	20.0	0.52 U	126	58-135	19	19	
Bromoform	26		2.5	ug/L	20.0	0.75 U	130	46-148	18	18	
Bromomethane	18		2.5	ug/L	20.0	0.95 U	91	10-173	1	29	
Carbon disulfide	24		12	ug/L	20.0	2.5 U	122	43-153	26	26	
Carbon Tetrachloride	26		2.5	ug/L	20.0	0.94 U	130	54-156	22	27	
Chlorobenzene	22		2.5	ug/L	20.0	0.72 U	110	51-139	21	13	QM-11
Chloroethane	20		2.5	ug/L	20.0	0.98 U	101	27-180	13	22	
Chloroform	22		2.5	ug/L	20.0	0.80 U	110	58-139	22	17	QM-11
Chloromethane	14		2.5	ug/L	20.0	0.82 U	69	33-154	10	31	
cis-1,2-Dichloroethene	20		2.5	ug/L	20.0	0.53 U	100	56-128	23	17	QM-11

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2C25003 - EPA 5030B_MS - Continued

Matrix Spike Dup (2C25003-MSD1) Continued Prepared: 03/25/2022 00:00 Analyzed: 03/25/2022 09:06

Source: AF02228-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
cis-1,3-Dichloropropene	22		2.5	ug/L	20.0	0.59 U	109	64-128	18	20	
Cyclohexane	20		2.5	ug/L	20.0	0.93 U	98	70-130	24	20	QM-11
Dibromochloromethane	22		2.5	ug/L	20.0	0.50 U	109	50-140	17	18	
Dichlorodifluoromethane	13		2.5	ug/L	20.0	0.74 U	67	10-180	10	26	
Ethylbenzene	21		2.5	ug/L	20.0	0.69 U	106	63-133	19	18	QM-11
Freon 113	22		2.5	ug/L	20.0	0.73 U	112	47-173	23	30	
Isopropylbenzene	21		2.5	ug/L	20.0	0.67 U	107	60-132	20	23	
m,p-Xylenes	42		5.0	ug/L	40.0	1.3 U	105	64-133	19	18	QM-11
Methyl acetate	19		2.5	ug/L	20.0	0.95 U	97	70-130	18	20	
Methylene Chloride	20		12	ug/L	20.0	2.5 U	100	43-142	22	23	
Methyl-tert-Butyl Ether	20		2.5	ug/L	20.0	0.60 U	100	51-145	20	22	
o-Xylene	21		2.5	ug/L	20.0	0.53 U	106	61-129	21	16	QM-11
Styrene	23		2.5	ug/L	20.0	0.61 U	117	59-136	19	32	
Tetrachloroethene	23		2.5	ug/L	20.0	0.76 U	117	60-147	21	21	
Toluene	21		2.5	ug/L	20.0	0.72 U	107	64-131	19	16	QM-11
trans-1,2-Dichloroethene	21		2.5	ug/L	20.0	0.73 U	104	54-134	26	20	QM-11
trans-1,3-Dichloropropene	22		2.5	ug/L	20.0	0.73 U	108	65-149	21	17	QM-11
Trichloroethene	24		2.5	ug/L	20.0	0.89 U	118	62-135	21	20	QM-11
Trichlorofluoromethane	22		2.5	ug/L	20.0	0.94 U	111	56-155	12	22	
Vinyl chloride	18		2.5	ug/L	20.0	0.71 U	91	20-167	9	24	
4-Bromofluorobenzene	*51*			*ug/L*	*50.0*		*102*	*41-142*			
Dibromofluoromethane	*46*	*I*		*ug/L*	*50.0*		*92*	*53-146*			
Toluene-d8	*52*			*ug/L*	*50.0*		*103*	*41-146*			

Batch 2C28004 - EPA 5030B_MS

Blank (2C28004-BLK1) Prepared: 03/28/2022 00:00 Analyzed: 03/28/2022 10:55

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	0.80	U	2.5	ug/L							
1,1,2,2-Tetrachloroethane	0.54	U	2.5	ug/L							
1,1,2-Trichloroethane	0.76	U	2.5	ug/L							
1,1-Dichloroethane	0.62	U	2.5	ug/L							
1,1-Dichloroethene	0.94	U	2.5	ug/L							
1,2,4-Trichlorobenzene	0.70	U	2.5	ug/L							
1,2-Dibromo-3-chloropropane	0.96	U	2.5	ug/L							
1,2-Dibromoethane	0.78	U	2.5	ug/L							
1,2-Dichlorobenzene	0.73	U	2.5	ug/L							
1,2-Dichloroethane	0.63	U	2.5	ug/L							
1,2-Dichloropropane	0.80	U	2.5	ug/L							
1,3-Dichlorobenzene	0.77	U	2.5	ug/L							
1,4-Dichlorobenzene	0.76	U	2.5	ug/L							
2-Butanone	4.5	U	12	ug/L							
2-Hexanone	2.5	U	12	ug/L							
4-Methyl-2-pentanone	2.5	U	12	ug/L							
Acetone	10	U	25	ug/L							
Benzene	0.71	U	2.5	ug/L							
Bromodichloromethane	0.52	U	2.5	ug/L							
Bromoform	0.75	U	2.5	ug/L							

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2C28004 - EPA 5030B_MS - Continued

Blank (2C28004-BLK1) Continued Prepared: 03/28/2022 00:00 Analyzed: 03/28/2022 10:55

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Bromomethane	0.95	U	2.5	ug/L							
Carbon disulfide	2.5	U	12	ug/L							
Carbon Tetrachloride	0.94	U	2.5	ug/L							
Chlorobenzene	0.72	U	2.5	ug/L							
Chloroethane	0.98	U	2.5	ug/L							
Chloroform	0.80	U	2.5	ug/L							
Chloromethane	0.82	U	2.5	ug/L							
cis-1,2-Dichloroethene	0.53	U	2.5	ug/L							
cis-1,3-Dichloropropene	0.59	U	2.5	ug/L							
Cyclohexane	0.93	U	2.5	ug/L							
Dibromochloromethane	0.50	U	2.5	ug/L							
Dichlorodifluoromethane	0.74	U	2.5	ug/L							
Ethylbenzene	0.69	U	2.5	ug/L							
Freon 113	0.73	U	2.5	ug/L							
Isopropylbenzene	0.67	U	2.5	ug/L							
Methyl acetate	0.95	U	2.5	ug/L							
Methylene Chloride	2.5	U	12	ug/L							
Methyl-tert-Butyl Ether	0.60	U	2.5	ug/L							
Styrene	0.61	U	2.5	ug/L							
Tetrachloroethene	0.76	U	2.5	ug/L							
Toluene	0.72	U	2.5	ug/L							
trans-1,2-Dichloroethene	0.73	U	2.5	ug/L							
trans-1,3-Dichloropropene	0.73	U	2.5	ug/L							
Trichloroethene	0.89	U	2.5	ug/L							
Trichlorofluoromethane	0.94	U	2.5	ug/L							
Vinyl chloride	0.71	U	2.5	ug/L							
Xylenes (Total)	1.3	U	5.0	ug/L							
4-Bromofluorobenzene	*52*			*ug/L*	*50.0*		*104*	*41-142*			
Dibromofluoromethane	*42*	*I*		*ug/L*	*50.0*		*85*	*53-146*			
Toluene-d8	*49*	*I*		*ug/L*	*50.0*		*98*	*41-146*			

LCS (2C28004-BS1) Prepared: 03/28/2022 00:00 Analyzed: 03/28/2022 08:31

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	20		2.5	ug/L	20.0		101	57-148			
1,1,2,2-Tetrachloroethane	22		2.5	ug/L	20.0		108	60-139			
1,1,2-Trichloroethane	22		2.5	ug/L	20.0		108	57-141			
1,1-Dichloroethane	19		2.5	ug/L	20.0		94	57-142			
1,1-Dichloroethene	19		2.5	ug/L	20.0		96	47-139			
1,2,4-Trichlorobenzene	29		2.5	ug/L	20.0		145	52-159			
1,2-Dibromo-3-chloropropane	23		2.5	ug/L	20.0		114	48-150			
1,2-Dibromoethane	21		2.5	ug/L	20.0		107	57-140			
1,2-Dichlorobenzene	23		2.5	ug/L	20.0		113	63-131			
1,2-Dichloroethane	22		2.5	ug/L	20.0		112	50-156			
1,2-Dichloropropane	20		2.5	ug/L	20.0		100	61-133			
1,3-Dichlorobenzene	22		2.5	ug/L	20.0		109	66-129			
1,4-Dichlorobenzene	21		2.5	ug/L	20.0		105	65-133			
2-Butanone	130		12	ug/L	100		135	10-180			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2C28004 - EPA 5030B_MS - Continued

LCS (2C28004-BS1) Continued Prepared: 03/28/2022 00:00 Analyzed: 03/28/2022 08:31

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
2-Hexanone	100		12	ug/L	100		100	12-180			
4-Methyl-2-pentanone	110		12	ug/L	100		106	19-180			
Acetone	82		25	ug/L	100		82	10-180			
Benzene	22		2.5	ug/L	20.0		110	56-136			
Bromodichloromethane	24		2.5	ug/L	20.0		121	58-135			
Bromoform	27		2.5	ug/L	20.0		136	46-148			
Bromomethane	10		2.5	ug/L	20.0		52	10-173			
Carbon disulfide	26		12	ug/L	20.0		129	43-153			
Carbon Tetrachloride	24		2.5	ug/L	20.0		118	54-156			
Chlorobenzene	23		2.5	ug/L	20.0		113	51-139			
Chloroethane	17		2.5	ug/L	20.0		84	27-180			
Chloroform	20		2.5	ug/L	20.0		101	58-139			
Chloromethane	10		2.5	ug/L	20.0		52	33-154			
cis-1,2-Dichloroethene	19		2.5	ug/L	20.0		93	56-128			
cis-1,3-Dichloropropene	21		2.5	ug/L	20.0		106	64-128			
Cyclohexane	17		2.5	ug/L	20.0		83	70-130			
Dibromochloromethane	23		2.5	ug/L	20.0		114	50-140			
Dichlorodifluoromethane	7.2		2.5	ug/L	20.0		36	10-180			
Ethylbenzene	21		2.5	ug/L	20.0		106	63-133			
Freon 113	18		2.5	ug/L	20.0		91	47-173			
Isopropylbenzene	22		2.5	ug/L	20.0		108	60-132			
m,p-Xylenes	42		5.0	ug/L	40.0		104	64-133			
Methyl acetate	20		2.5	ug/L	20.0		98	70-130			
Methylene Chloride	19		12	ug/L	20.0		95	43-142			
Methyl-tert-Butyl Ether	19		2.5	ug/L	20.0		93	51-145			
o-Xylene	22		2.5	ug/L	20.0		108	61-129			
Styrene	23		2.5	ug/L	20.0		115	59-136			
Tetrachloroethene	23		2.5	ug/L	20.0		114	60-147			
Toluene	22		2.5	ug/L	20.0		108	64-131			
trans-1,2-Dichloroethene	19		2.5	ug/L	20.0		96	54-134			
trans-1,3-Dichloropropene	23		2.5	ug/L	20.0		114	65-149			
Trichloroethene	22		2.5	ug/L	20.0		109	62-135			
Trichlorofluoromethane	17		2.5	ug/L	20.0		85	56-155			
Vinyl chloride	14		2.5	ug/L	20.0		68	20-167			
4-Bromofluorobenzene	*55*			*ug/L*	*50.0*		*110*	*41-142*			
Dibromofluoromethane	*45*	*I*		*ug/L*	*50.0*		*89*	*53-146*			
Toluene-d8	*51*			*ug/L*	*50.0*		*102*	*41-146*			

Matrix Spike (2C28004-MS1) Prepared: 03/28/2022 00:00 Analyzed: 03/28/2022 09:00

Source: AF02229-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	2200		250	ug/L	2000	80 U	112	57-148			
1,1,2,2-Tetrachloroethane	2200		250	ug/L	2000	54 U	111	60-139			
1,1,2-Trichloroethane	2200		250	ug/L	2000	76 U	110	57-141			
1,1-Dichloroethane	2000		250	ug/L	2000	62 U	102	57-142			
1,1-Dichloroethene	2100		250	ug/L	2000	94 U	104	47-139			
1,2,4-Trichlorobenzene	2900		250	ug/L	2000	70 U	146	52-159			
1,2-Dibromo-3-chloropropane	2200		250	ug/L	2000	96 U	111	48-150			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2C28004 - EPA 5030B_MS - Continued

Matrix Spike (2C28004-MS1) Continued Prepared: 03/28/2022 00:00 Analyzed: 03/28/2022 09:00

Source: AF02229-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,2-Dibromoethane	2200		250	ug/L	2000	78 U	108	57-140			
1,2-Dichlorobenzene	2400		250	ug/L	2000	73 U	118	63-131			
1,2-Dichloroethane	2300		250	ug/L	2000	63 U	117	50-156			
1,2-Dichloropropane	2100		250	ug/L	2000	80 U	107	61-133			
1,3-Dichlorobenzene	2300		250	ug/L	2000	77 U	115	66-129			
1,4-Dichlorobenzene	2200		250	ug/L	2000	76 U	111	65-133			
2-Butanone	13000		1200	ug/L	10000	450 U	135	10-180			
2-Hexanone	10000		1200	ug/L	10000	250 U	101	12-180			
4-Methyl-2-pentanone	11000		1200	ug/L	10000	250 U	113	19-180			
Acetone	8300		2500	ug/L	10000	1000 U	83	10-180			
Benzene	2300		250	ug/L	2000	71 U	117	56-136			
Bromodichloromethane	2600		250	ug/L	2000	52 U	128	58-135			
Bromoform	2800		250	ug/L	2000	75 U	140	46-148			
Bromomethane	1300		250	ug/L	2000	95 U	67	10-173			
Carbon disulfide	2500		1200	ug/L	2000	250 U	127	43-153			
Carbon Tetrachloride	2700		250	ug/L	2000	94 U	133	54-156			
Chlorobenzene	2400		250	ug/L	2000	72 U	119	51-139			
Chloroethane	1900		250	ug/L	2000	98 U	93	27-180			
Chloroform	2200		250	ug/L	2000	80 U	108	58-139			
Chloromethane	1100		250	ug/L	2000	82 U	57	33-154			
cis-1,2-Dichloroethene	2000		250	ug/L	2000	53 U	100	56-128			
cis-1,3-Dichloropropene	2200		250	ug/L	2000	59 U	109	64-128			
Cyclohexane	2000		250	ug/L	2000	93 U	99	70-130			
Dibromochloromethane	2300		250	ug/L	2000	50 U	114	50-140			
Dichlorodifluoromethane	870		250	ug/L	2000	74 U	43	10-180			
Ethylbenzene	2300		250	ug/L	2000	69 U	115	63-133			
Freon 113	2200		250	ug/L	2000	73 U	109	47-173			
Isopropylbenzene	2400		250	ug/L	2000	67 U	118	60-132			
m,p-Xylenes	4500		500	ug/L	4000	130 U	113	64-133			
Methyl acetate	1900		250	ug/L	2000	95 U	97	70-130			
Methylene Chloride	2000		1200	ug/L	2000	250 U	100	43-142			
Methyl-tert-Butyl Ether	1900		250	ug/L	2000	60 U	96	51-145			
o-Xylene	2300		250	ug/L	2000	53 U	115	61-129			
Styrene	2500		250	ug/L	2000	61 U	124	59-136			
Tetrachloroethene	2500		250	ug/L	2000	76 U	126	60-147			
Toluene	2400		250	ug/L	2000	72 U	119	64-131			
trans-1,2-Dichloroethene	2100		250	ug/L	2000	73 U	107	54-134			
trans-1,3-Dichloropropene	2300		250	ug/L	2000	73 U	116	65-149			
Trichloroethene	2400		250	ug/L	2000	89 U	121	62-135			
Trichlorofluoromethane	2000		250	ug/L	2000	94 U	101	56-155			
Vinyl chloride	1500		250	ug/L	2000	71 U	77	20-167			
4-Bromofluorobenzene	*5400*			*ug/L*	*5000*		*108*	*41-142*			
Dibromofluoromethane	*4300*	*I*		*ug/L*	*5000*		*86*	*53-146*			
Toluene-d8	*5100*			*ug/L*	*5000*		*101*	*41-146*			

Matrix Spike Dup (2C28004-MSD1) Prepared: 03/28/2022 00:00 Analyzed: 03/28/2022 09:29

Source: AF02229-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2C28004 - EPA 5030B_MS - Continued

Matrix Spike Dup (2C28004-MSD1) Continued Prepared: 03/28/2022 00:00 Analyzed: 03/28/2022 09:29

Source: AF02229-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	2200		250	ug/L	2000	80 U	110	57-148	2	25	
1,1,2,2-Tetrachloroethane	2200		250	ug/L	2000	54 U	109	60-139	2	17	
1,1,2-Trichloroethane	2200		250	ug/L	2000	76 U	108	57-141	2	16	
1,1-Dichloroethane	2000		250	ug/L	2000	62 U	99	57-142	3	24	
1,1-Dichloroethene	2100		250	ug/L	2000	94 U	106	47-139	1	16	
1,2,4-Trichlorobenzene	2800		250	ug/L	2000	70 U	142	52-159	3	24	
1,2-Dibromo-3-chloropropane	2300		250	ug/L	2000	96 U	114	48-150	3	21	
1,2-Dibromoethane	2200		250	ug/L	2000	78 U	110	57-140	2	16	
1,2-Dichlorobenzene	2300		250	ug/L	2000	73 U	114	63-131	3	25	
1,2-Dichloroethane	2400		250	ug/L	2000	63 U	118	50-156	0.9	18	
1,2-Dichloropropane	2100		250	ug/L	2000	80 U	106	61-133	1	26	
1,3-Dichlorobenzene	2300		250	ug/L	2000	77 U	113	66-129	2	23	
1,4-Dichlorobenzene	2200		250	ug/L	2000	76 U	108	65-133	3	23	
2-Butanone	13000		1200	ug/L	10000	450 U	130	10-180	3	29	
2-Hexanone	10000		1200	ug/L	10000	250 U	100	12-180	1	28	
4-Methyl-2-pentanone	11000		1200	ug/L	10000	250 U	111	19-180	2	24	
Acetone	8000		2500	ug/L	10000	1000 U	80	10-180	4	19	
Benzene	2300		250	ug/L	2000	71 U	116	56-136	1	14	
Bromodichloromethane	2500		250	ug/L	2000	52 U	127	58-135	1	19	
Bromoform	2800		250	ug/L	2000	75 U	142	46-148	2	18	
Bromomethane	1400		250	ug/L	2000	95 U	72	10-173	8	29	
Carbon disulfide	2400		1200	ug/L	2000	250 U	122	43-153	4	26	
Carbon Tetrachloride	2600		250	ug/L	2000	94 U	132	54-156	1	27	
Chlorobenzene	2300		250	ug/L	2000	72 U	117	51-139	2	13	
Chloroethane	1800		250	ug/L	2000	98 U	90	27-180	3	22	
Chloroform	2100		250	ug/L	2000	80 U	106	58-139	1	17	
Chloromethane	1100		250	ug/L	2000	82 U	55	33-154	3	31	
cis-1,2-Dichloroethene	2000		250	ug/L	2000	53 U	99	56-128	0.9	17	
cis-1,3-Dichloropropene	2200		250	ug/L	2000	59 U	108	64-128	1	20	
Cyclohexane	1900		250	ug/L	2000	93 U	96	70-130	3	20	
Dibromochloromethane	2300		250	ug/L	2000	50 U	117	50-140	3	18	
Dichlorodifluoromethane	830		250	ug/L	2000	74 U	42	10-180	4	26	
Ethylbenzene	2300		250	ug/L	2000	69 U	113	63-133	1	18	
Freon 113	2100		250	ug/L	2000	73 U	106	47-173	3	30	
Isopropylbenzene	2300		250	ug/L	2000	67 U	117	60-132	0.9	23	
m,p-Xylenes	4400		500	ug/L	4000	130 U	111	64-133	2	18	
Methyl acetate	2000		250	ug/L	2000	95 U	99	70-130	2	20	
Methylene Chloride	2000		1200	ug/L	2000	250 U	100	43-142	0	23	
Methyl-tert-Butyl Ether	1900		250	ug/L	2000	60 U	94	51-145	3	22	
o-Xylene	2300		250	ug/L	2000	53 U	113	61-129	2	16	
Styrene	2400		250	ug/L	2000	61 U	120	59-136	3	32	
Tetrachloroethene	2500		250	ug/L	2000	76 U	123	60-147	3	21	
Toluene	2300		250	ug/L	2000	72 U	116	64-131	3	16	
trans-1,2-Dichloroethene	2100		250	ug/L	2000	73 U	104	54-134	4	20	
trans-1,3-Dichloropropene	2300		250	ug/L	2000	73 U	116	65-149	0.6	17	
Trichloroethene	2300		250	ug/L	2000	89 U	116	62-135	4	20	
Trichlorofluoromethane	2000		250	ug/L	2000	94 U	98	56-155	2	22	
Vinyl chloride	1500		250	ug/L	2000	71 U	74	20-167	3	24	
4-Bromofluorobenzene	*5400*			*ug/L*	*5000*		*107*	*41-142*			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2C28004 - EPA 5030B_MS - Continued

Matrix Spike Dup (2C28004-MSD1) Continued Prepared: 03/28/2022 00:00 Analyzed: 03/28/2022 09:29

Source: AF02229-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Dibromofluoromethane	*4200*	*I*		*ug/L*	*5000*		*85*	*53-146*			
Toluene-d8	*5000*			*ug/L*	*5000*		*100*	*41-146*			

FLAGS/NOTES AND DEFINITIONS

PQL	PQL: Practical Quantitation Limit. The PQL presented is the laboratory MRL.
B	Results are based upon membrane filter colony counts that are outside the method indicated ideal range.
I	The reported value is between the laboratory method detection limit (MDL) and the practical quantitation limit (PQL).
J	Estimated value.
K	Off-scale low; Actual value is known to be less than the value given.
L	Off-scale high; Actual value is known to be greater than value given.
M	Presence of analyte is verified but not quantified; the actual value is less than the MRL but greater than the MDL.
N	Presumptive evidence of presence of material.
O	Sampled, but analysis lost or not performed.
Q	Sample exceeded the accepted holding time.
T	Value reported is less than the laboratory method detection limit. The value is reported for informational purposes only and shall not be used in statistical analysis.
U	Indicates that the compound was analyzed for but not detected.
V	Indicates that the analyte was detected in both the sample and the associated method blank.
Y	The laboratory analysis was from an improperly preserved sample. The data may not be accurate.
Z	Too many colonies were present (TNTC); the numeric value represents the filtration volume.
?	Data are rejected and should not be used. Some or all of the quality control data for the analyte were outside criteria, and the presence or absence of the analyte cannot be determined from the data.
*	Not reported due to interference.
[CALC]	Calculated analyte - MDL/MRL reported to the highest reporting limit of the component analyses.
A-07	Analyte biased low in LCS but detected in the reporting limit standard. Since the analyte in the associated sample was not detected, there is no impact on data quality.
QB-02	The method blank contains analyte at a concentration above the MDL and/or greater than one-half the MRL. The analyte was not detected in the sample.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
QM-11	Precision between duplicate matrix spikes of the same sample was outside acceptance limits.
QV-01	The associated continuing calibration verification standard exhibited high bias; since the result is ND, there is no impact.

AF02214

Tetra Tech, Inc. CHAIN OF CUSTODY | NUMBER No. 2658 | PAGE 1 OF 2

PROJECT NO: 112G08985	FACILITY: LC34	PROJECT MANAGER MARK JENNETT	PHONE NUMBER 412 921-8622	LABORATORY NAME AND CONTACT: ENCO
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER DAN FORESTER	PHONE NUMBER 304-780-1426	ADDRESS
		CARRIER/WAYBILL NUMBER		CITY, STATE

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

	DATE YEAR 2022	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	CONTAINER TYPE PLASTIC (P) or GLASS (G): G	PRESERVATIVE USED: HCl	TYPE OF ANALYSIS: VOC's	COMMENTS
22, MAR		0800	LC34-RW162-110.0-20220322	LC34	105	115	GW	G	3	Y			
2		0800	LC34-GAC-20220322										
3		0810	LC34-AS1-20220322										
4		0820	LC34-AS2-20220322										
5		0830	LC34-INFLUENT-20220322										
6		0840	LC34-RW1A-20220322										
7		0850	LC34-RW1B-20220322										
8		0900	LC34-RW2A-20220322										
9		0910	LC34-RW2B-20220322										
10		0920	LC34-RW3B-20220322										
11		0930	LC34-RW3A-20220322										
12		0940	LC34-RW5B-20220322										
13		0950	LC34-RW9A-20220322										

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	22MAR22	1530	1. RECEIVED BY James W Gregory	3/22/22	1530
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS C,13B 0.4°C, C-1898 1.8°C

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

AF02214

Tetra Tech, Inc. CHAIN OF CUSTODY | NUMBER No. 2730 | PAGE 2 OF 2

PROJECT NO: 112G0E785	FACILITY: LC34	PROJECT MANAGER MARK JENNET	PHONE NUMBER 412-921-8622	LABORATORY NAME AND CONTACT: ENCO
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER DAN ROLOSTER	PHONE NUMBER 304-780-1426	ADDRESS
		CARRIER/WAYBILL NUMBER		CITY, STATE

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR 2022	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	CONTAINER TYPE PLASTIC (P) or GLASS (G): G	PRESERVATIVE USED: HCl	TYPE OF ANALYSIS: VOC	COMMENTS
22 MAR 14	1000	LC34-RW12A-20220322	LC34	/	/	GW	G	3	X			
15	1010	LC34-RW13A-20220322										
16	1020	LC34-RW14A-20220322										
17	1030	LC34-RW15A-20220322										
18	1040	LC34-RW16B-20220322										
19	1050	LC34-RW17C-20220322										
20	1100	LC34-RW18C-20220322										
21	1110	LC34-RW19C-20220323										
22	1120	LC34-RW20C-20220322	X	X	X	X	X	X	X			

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	22 MAR 22	1530	1. RECEIVED BY James W Gregory	3/23/22	1530
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS: Cl-138 0.46C, Cl-1898 1.89C

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TINUS-001

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

Tetra Tech NUS

NASA-LC 34, Freedom Rd, CCAFS, FL

112G08985

SGS Job Number: FA84993

Sampling Date: 04/23/21

Report to:

Tetra-Tech, Inc.
661 Andersen Dr Foster Plaza 7
Pittsburgh, PA 15220
mark.jonnet@tetratech.com

ATTN: Mark Jonnet

Total number of pages in report: **32**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Norm Farmer
Technical Director

Client Service contact: Andrea Colby 407-425-6700

Certifications: FL(E83510), LA(03051), KS(E-10327), IL(200063), NC(573), NJ(FL002), NY(12022), SC(96038001) DoD ELAP(ANAB L2229), AZ(AZ0806), CA(2937), TX(T104704404), PA(68-03573), VA(460177), AK, AR, IA, KY, MA, MS, ND, NH, NV, OK, OR, UT, WA, WV

Sections: 1 2 3 4 5 6

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SGS North America Inc.

Sample Summary

Tetra Tech NUS

Job No: FA84993

NASA-LC 34, Freedom Rd, CCAFS, FL
Project No: 112G08985

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
FA84993-1	04/23/21	09:30	MB	04/23/21	AQ	Ground Water	LC34-IW0136-024.0-20210423
FA84993-2	04/23/21	10:10	MB	04/23/21	AQ	Ground Water	LC34-IW0137-024.0-20210423
FA84993-3	04/23/21	10:40	MB	04/23/21	AQ	Ground Water	LC34-IW0138-031.5-20210423
FA84993-4	04/23/21	11:50	MB	04/23/21	AQ	Ground Water	LC34-IW0134-024.0-20210423
FA84993-5	04/23/21	12:45	MB	04/23/21	AQ	Ground Water	LC34-IW0140-024.0-20210423
FA84993-6	04/23/21	13:25	MB	04/23/21	AQ	Ground Water	LC34-IW0139-018.0-20210423
FA84993-7	04/23/21	14:20	MB	04/23/21	AQ	Ground Water	LC34-IW0006I-025.5-20210423
FA84993-8	04/23/21	15:00	MB	04/23/21	AQ	Ground Water	LC34-IW0135-024.0-20210423

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	Tetra Tech NUS	**Job No:**	FA84993
Site:	NASA-LC 34, Freedom Rd, CCAFS, FL	**Report Date**	5/7/2021 3:31:25 PM

8 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were collected on 04/23/2021 and were received at SGS North America Inc - Orlando on 04/23/2021 properly preserved, at 1 Deg. C and intact. These Samples received an SGS Orlando job number of FA84993. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section. Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

MS Volatiles By Method SW846 8260B

Matrix: AQ **Batch ID:** V1A1461

All samples were analyzed within the recommended method holding time.

Sample(s) FA84993-8MS, FA84993-8MSD were used as the QC samples indicated.

All method blanks for this batch meet method specific criteria.

For Sample(s) FA84993-1, FA84993-2, FA84993-3, FA84993-4, FA84993-5, FA84993-6, FA84993-7, FA84993-8 are associated with an CCV that has a recovery for 2-Butanone (MEK), Acetone, Dichlorodifluoromethane, 2-Butanone (MEK) outside low control limit.

FA84993-1 for 2-Butanone (MEK): Associated CCV outside of control limits low.

FA84993-1 for Acetone: Associated CCV outside of control limits low.

FA84993-1 for Dichlorodifluoromethane: Associated CCV outside of control limits low.

FA84993-2 for 2-Butanone (MEK): Associated CCV outside of control limits low.

FA84993-2 for Acetone: Associated CCV outside of control limits low.

FA84993-2 for Dichlorodifluoromethane: Associated CCV outside of control limits low.

FA84993-3 for 2-Butanone (MEK): Associated CCV outside of control limits low.

FA84993-3 for Acetone: Associated CCV outside of control limits low.

FA84993-3 for Dichlorodifluoromethane: Associated CCV outside of control limits low.

FA84993-4 for 2-Butanone (MEK): Associated CCV outside of control limits low.

FA84993-4 for Acetone: Associated CCV outside of control limits low.

FA84993-4 for Dichlorodifluoromethane: Associated CCV outside of control limits low.

FA84993-5 for 2-Butanone (MEK): Associated CCV outside of control limits low.

FA84993-5 for Acetone: Associated CCV outside of control limits low.

FA84993-5 for Dichlorodifluoromethane: Associated CCV outside of control limits low.

FA84993-6 for 2-Butanone (MEK): Associated CCV outside of control limits low.

FA84993-6 for Acetone: Associated CCV outside of control limits low.

FA84993-6 for Dichlorodifluoromethane: Associated CCV outside of control limits low.

FA84993-7 for 2-Butanone (MEK): Associated CCV outside of control limits low.

FA84993-7 for Acetone: Associated CCV outside of control limits low.

FA84993-7 for Dichlorodifluoromethane: Associated CCV outside of control limits low.

FA84993-8 for 2-Butanone (MEK): Associated CCV outside of control limits low.

FA84993-8 for Acetone: Associated CCV outside of control limits low.

FA84993-8 for Dichlorodifluoromethane: Associated CCV outside of control limits low.

SGS Orlando certifies that this report meets the project requirements for analytical data produced for the samples as received at SGS Orlando and as stated on the COC. SGS Orlando certifies that the data meets the Data Quality Objectives for precision, accuracy and completeness as specified in the SGS Orlando Quality Manual except as noted above. This report is to be used in its entirety. SGS Orlando is not responsible for any assumptions of data quality if partial data packages are used.

Narrative prepared by:

_____

Ariel Hartney, Client Services (signature on file)

Summary of Hits

Job Number: FA84993
Account: Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL
Collected: 04/23/21

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	PQL	MDL	Units	Method
FA84993-1	**LC34-IW0136-024.0-20210423**					
cis-1,2-Dichloroethylene		0.33 I	1.0	0.28	ug/l	SW846 8260B
FA84993-2	**LC34-IW0137-024.0-20210423**					
cis-1,2-Dichloroethylene		13.6	1.0	0.28	ug/l	SW846 8260B
trans-1,2-Dichloroethylene		0.39 I	1.0	0.22	ug/l	SW846 8260B
FA84993-3	**LC34-IW0138-031.5-20210423**					
cis-1,2-Dichloroethylene		1.9	1.0	0.28	ug/l	SW846 8260B
FA84993-4	**LC34-IW0134-024.0-20210423**					
cis-1,2-Dichloroethylene		14200	200	55	ug/l	SW846 8260B
trans-1,2-Dichloroethylene		175 I	200	44	ug/l	SW846 8260B
Vinyl Chloride		1230	200	82	ug/l	SW846 8260B
FA84993-5	**LC34-IW0140-024.0-20210423**					
No hits reported in this sample.						
FA84993-6	**LC34-IW0139-018.0-20210423**					
cis-1,2-Dichloroethylene		0.29 I	1.0	0.28	ug/l	SW846 8260B
FA84993-7	**LC34-IW0006I-025.5-20210423**					
cis-1,2-Dichloroethylene		34.4	1.0	0.28	ug/l	SW846 8260B
Vinyl Chloride		7.5	1.0	0.41	ug/l	SW846 8260B
FA84993-8	**LC34-IW0135-024.0-20210423**					
cis-1,2-Dichloroethylene		5230	100	28	ug/l	SW846 8260B
trans-1,2-Dichloroethylene		228	100	22	ug/l	SW846 8260B
Vinyl Chloride		284	100	41	ug/l	SW846 8260B

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	LC34-IW0136-024.0-20210423		
Lab Sample ID:	FA84993-1	**Date Sampled:**	04/23/21
Matrix:	AQ - Ground Water	**Date Received:**	04/23/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1A35022.D	1	05/07/21 06:27	CV	n/a	n/a	V1A1461
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone [a]	10 U	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK) [a]	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.67 U	2.0	0.67	ug/l	
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane [a]	0.50 U	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.32 U	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.33	1.0	0.28	ug/l	I
156-60-5	trans-1,2-Dichloroethylene	0.22 U	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113	0.48 U	1.0	0.48	ug/l	
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-IW0136-024.0-20210423		
Lab Sample ID:	FA84993-1	**Date Sampled:**	04/23/21
Matrix:	AQ - Ground Water	**Date Received:**	04/23/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	2.0 U	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.30 U	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	0.35 U	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	0.41 U	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	93%		83-118%
17060-07-0	1,2-Dichloroethane-D4	103%		79-125%
2037-26-5	Toluene-D8	104%		85-112%
460-00-4	4-Bromofluorobenzene	99%		83-118%

(a) Associated CCV outside of control limits low.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-IW0137-024.0-20210423		
Lab Sample ID:	FA84993-2	**Date Sampled:**	04/23/21
Matrix:	AQ - Ground Water	**Date Received:**	04/23/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1A35023.D	1	05/07/21 06:53	CV	n/a	n/a	V1A1461
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone [a]	10 U	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK) [a]	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.67 U	2.0	0.67	ug/l	
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane [a]	0.50 U	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.32 U	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	13.6	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.39	1.0	0.22	ug/l	I
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113	0.48 U	1.0	0.48	ug/l	
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-IW0137-024.0-20210423		
Lab Sample ID:	FA84993-2	**Date Sampled:**	04/23/21
Matrix:	AQ - Ground Water	**Date Received:**	04/23/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	2.0 U	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.30 U	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	0.35 U	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	0.41 U	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		83-118%
17060-07-0	1,2-Dichloroethane-D4	104%		79-125%
2037-26-5	Toluene-D8	104%		85-112%
460-00-4	4-Bromofluorobenzene	99%		83-118%

(a) Associated CCV outside of control limits low.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-IW0138-031.5-20210423		
Lab Sample ID:	FA84993-3	**Date Sampled:**	04/23/21
Matrix:	AQ - Ground Water	**Date Received:**	04/23/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1A35024.D	1	05/07/21 07:19	CV	n/a	n/a	V1A1461
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone [a]	10 U	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK) [a]	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.67 U	2.0	0.67	ug/l	
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane [a]	0.50 U	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.32 U	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	1.9	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.22 U	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113	0.48 U	1.0	0.48	ug/l	
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-IW0138-031.5-20210423		
Lab Sample ID:	FA84993-3	**Date Sampled:**	04/23/21
Matrix:	AQ - Ground Water	**Date Received:**	04/23/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	2.0 U	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.30 U	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	0.35 U	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	0.41 U	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		83-118%
17060-07-0	1,2-Dichloroethane-D4	102%		79-125%
2037-26-5	Toluene-D8	104%		85-112%
460-00-4	4-Bromofluorobenzene	98%		83-118%

(a) Associated CCV outside of control limits low.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-IW0134-024.0-20210423		
Lab Sample ID:	FA84993-4	**Date Sampled:**	04/23/21
Matrix:	AQ - Ground Water	**Date Received:**	04/23/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1A35025.D	200	05/07/21 07:45	CV	n/a	n/a	V1A1461
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone [a]	2000 U	5000	2000	ug/l	
71-43-2	Benzene	62 U	200	62	ug/l	
74-97-5	Bromochloromethane	90 U	200	90	ug/l	
75-27-4	Bromodichloromethane	48 U	200	48	ug/l	
75-25-2	Bromoform	81 U	200	81	ug/l	
78-93-3	2-Butanone (MEK) [a]	400 U	1000	400	ug/l	
75-15-0	Carbon Disulfide	110 U	400	110	ug/l	
56-23-5	Carbon Tetrachloride	71 U	200	71	ug/l	
108-90-7	Chlorobenzene	40 U	200	40	ug/l	
75-00-3	Chloroethane	130 U	400	130	ug/l	
67-66-3	Chloroform	60 U	200	60	ug/l	
110-82-7	Cyclohexane	78 U	200	78	ug/l	
124-48-1	Dibromochloromethane	55 U	200	55	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	210 U	1000	210	ug/l	
106-93-4	1,2-Dibromoethane	55 U	400	55	ug/l	
75-71-8	Dichlorodifluoromethane [a]	100 U	400	100	ug/l	
95-50-1	1,2-Dichlorobenzene	65 U	200	65	ug/l	
541-73-1	1,3-Dichlorobenzene	43 U	200	43	ug/l	
106-46-7	1,4-Dichlorobenzene	51 U	200	51	ug/l	
75-34-3	1,1-Dichloroethane	68 U	200	68	ug/l	
107-06-2	1,2-Dichloroethane	62 U	200	62	ug/l	
75-35-4	1,1-Dichloroethylene	64 U	200	64	ug/l	
156-59-2	cis-1,2-Dichloroethylene	14200	200	55	ug/l	
156-60-5	trans-1,2-Dichloroethylene	175	200	44	ug/l	I
78-87-5	1,2-Dichloropropane	85 U	200	85	ug/l	
10061-01-5	cis-1,3-Dichloropropene	58 U	200	58	ug/l	
10061-02-6	trans-1,3-Dichloropropene	43 U	200	43	ug/l	
100-41-4	Ethylbenzene	71 U	200	71	ug/l	
76-13-1	Freon 113	96 U	200	96	ug/l	
591-78-6	2-Hexanone	400 U	2000	400	ug/l	
98-82-8	Isopropylbenzene	44 U	200	44	ug/l	
79-20-9	Methyl Acetate	1000 U	4000	1000	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-IW0134-024.0-20210423		
Lab Sample ID:	FA84993-4	**Date Sampled:**	04/23/21
Matrix:	AQ - Ground Water	**Date Received:**	04/23/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	400 U	1000	400	ug/l	
74-87-3	Methyl Chloride	100 U	400	100	ug/l	
75-09-2	Methylene Chloride	400 U	1000	400	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	200 U	1000	200	ug/l	
1634-04-4	Methyl Tert Butyl Ether	46 U	200	46	ug/l	
100-42-5	Styrene	44 U	200	44	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	55 U	200	55	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	60 U	200	60	ug/l	
127-18-4	Tetrachloroethylene	43 U	200	43	ug/l	
108-88-3	Toluene	60 U	200	60	ug/l	
87-61-6	1,2,3-Trichlorobenzene	120 U	400	120	ug/l	
120-82-1	1,2,4-Trichlorobenzene	100 U	400	100	ug/l	
71-55-6	1,1,1-Trichloroethane	50 U	200	50	ug/l	
79-00-5	1,1,2-Trichloroethane	93 U	200	93	ug/l	
79-01-6	Trichloroethylene	69 U	200	69	ug/l	
75-69-4	Trichlorofluoromethane	100 U	400	100	ug/l	
75-01-4	Vinyl Chloride	1230	200	82	ug/l	
1330-20-7	Xylene (total)	140 U	600	140	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	93%		83-118%
17060-07-0	1,2-Dichloroethane-D4	101%		79-125%
2037-26-5	Toluene-D8	104%		85-112%
460-00-4	4-Bromofluorobenzene	98%		83-118%

(a) Associated CCV outside of control limits low.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-IW0140-024.0-20210423		
Lab Sample ID:	FA84993-5	**Date Sampled:**	04/23/21
Matrix:	AQ - Ground Water	**Date Received:**	04/23/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1A35026.D	1	05/07/21 08:11	CV	n/a	n/a	V1A1461
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone [a]	10 U	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK) [a]	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.67 U	2.0	0.67	ug/l	
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane [a]	0.50 U	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.32 U	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.28 U	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.22 U	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113	0.48 U	1.0	0.48	ug/l	
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-IW0140-024.0-20210423		
Lab Sample ID:	FA84993-5	**Date Sampled:**	04/23/21
Matrix:	AQ - Ground Water	**Date Received:**	04/23/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	2.0 U	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.30 U	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	0.35 U	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	0.41 U	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		83-118%
17060-07-0	1,2-Dichloroethane-D4	103%		79-125%
2037-26-5	Toluene-D8	105%		85-112%
460-00-4	4-Bromofluorobenzene	98%		83-118%

(a) Associated CCV outside of control limits low.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-IW0139-018.0-20210423		
Lab Sample ID:	FA84993-6	**Date Sampled:**	04/23/21
Matrix:	AQ - Ground Water	**Date Received:**	04/23/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1A35027.D	1	05/07/21 08:37	CV	n/a	n/a	V1A1461
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone [a]	10 U	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK) [a]	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.67 U	2.0	0.67	ug/l	
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane [a]	0.50 U	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.32 U	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.29	1.0	0.28	ug/l	I
156-60-5	trans-1,2-Dichloroethylene	0.22 U	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113	0.48 U	1.0	0.48	ug/l	
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-IW0139-018.0-20210423		
Lab Sample ID:	FA84993-6	**Date Sampled:**	04/23/21
Matrix:	AQ - Ground Water	**Date Received:**	04/23/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	2.0 U	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.30 U	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	0.35 U	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	0.41 U	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		83-118%
17060-07-0	1,2-Dichloroethane-D4	101%		79-125%
2037-26-5	Toluene-D8	105%		85-112%
460-00-4	4-Bromofluorobenzene	98%		83-118%

(a) Associated CCV outside of control limits low.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-IW0006I-025.5-20210423		
Lab Sample ID:	FA84993-7	**Date Sampled:**	04/23/21
Matrix:	AQ - Ground Water	**Date Received:**	04/23/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1A35028.D	1	05/07/21 09:03	CV	n/a	n/a	V1A1461
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone [a]	10 U	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK) [a]	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.67 U	2.0	0.67	ug/l	
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane [a]	0.50 U	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.32 U	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	34.4	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.22 U	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113	0.48 U	1.0	0.48	ug/l	
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-IW0006I-025.5-20210423		
Lab Sample ID:	FA84993-7	**Date Sampled:**	04/23/21
Matrix:	AQ - Ground Water	**Date Received:**	04/23/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	2.0 U	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.30 U	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	0.35 U	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	7.5	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		83-118%
17060-07-0	1,2-Dichloroethane-D4	103%		79-125%
2037-26-5	Toluene-D8	104%		85-112%
460-00-4	4-Bromofluorobenzene	99%		83-118%

(a) Associated CCV outside of control limits low.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-IW0135-024.0-20210423		
Lab Sample ID:	FA84993-8	**Date Sampled:**	04/23/21
Matrix:	AQ - Ground Water	**Date Received:**	04/23/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1A35029.D	100	05/07/21 09:29	CV	n/a	n/a	V1A1461
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone [a]	1000 U	2500	1000	ug/l	
71-43-2	Benzene	31 U	100	31	ug/l	
74-97-5	Bromochloromethane	45 U	100	45	ug/l	
75-27-4	Bromodichloromethane	24 U	100	24	ug/l	
75-25-2	Bromoform	41 U	100	41	ug/l	
78-93-3	2-Butanone (MEK) [a]	200 U	500	200	ug/l	
75-15-0	Carbon Disulfide	53 U	200	53	ug/l	
56-23-5	Carbon Tetrachloride	36 U	100	36	ug/l	
108-90-7	Chlorobenzene	20 U	100	20	ug/l	
75-00-3	Chloroethane	67 U	200	67	ug/l	
67-66-3	Chloroform	30 U	100	30	ug/l	
110-82-7	Cyclohexane	39 U	100	39	ug/l	
124-48-1	Dibromochloromethane	28 U	100	28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	100 U	500	100	ug/l	
106-93-4	1,2-Dibromoethane	28 U	200	28	ug/l	
75-71-8	Dichlorodifluoromethane [a]	50 U	200	50	ug/l	
95-50-1	1,2-Dichlorobenzene	32 U	100	32	ug/l	
541-73-1	1,3-Dichlorobenzene	22 U	100	22	ug/l	
106-46-7	1,4-Dichlorobenzene	26 U	100	26	ug/l	
75-34-3	1,1-Dichloroethane	34 U	100	34	ug/l	
107-06-2	1,2-Dichloroethane	31 U	100	31	ug/l	
75-35-4	1,1-Dichloroethylene	32 U	100	32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	5230	100	28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	228	100	22	ug/l	
78-87-5	1,2-Dichloropropane	43 U	100	43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	29 U	100	29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	21 U	100	21	ug/l	
100-41-4	Ethylbenzene	36 U	100	36	ug/l	
76-13-1	Freon 113	48 U	100	48	ug/l	
591-78-6	2-Hexanone	200 U	1000	200	ug/l	
98-82-8	Isopropylbenzene	22 U	100	22	ug/l	
79-20-9	Methyl Acetate	500 U	2000	500	ug/l	

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PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-IW0135-024.0-20210423		
Lab Sample ID:	FA84993-8	**Date Sampled:**	04/23/21
Matrix:	AQ - Ground Water	**Date Received:**	04/23/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	200 U	500	200	ug/l	
74-87-3	Methyl Chloride	50 U	200	50	ug/l	
75-09-2	Methylene Chloride	200 U	500	200	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	100 U	500	100	ug/l	
1634-04-4	Methyl Tert Butyl Ether	23 U	100	23	ug/l	
100-42-5	Styrene	22 U	100	22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	28 U	100	28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	30 U	100	30	ug/l	
127-18-4	Tetrachloroethylene	22 U	100	22	ug/l	
108-88-3	Toluene	30 U	100	30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	61 U	200	61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	50 U	200	50	ug/l	
71-55-6	1,1,1-Trichloroethane	25 U	100	25	ug/l	
79-00-5	1,1,2-Trichloroethane	47 U	100	47	ug/l	
79-01-6	Trichloroethylene	35 U	100	35	ug/l	
75-69-4	Trichlorofluoromethane	50 U	200	50	ug/l	
75-01-4	Vinyl Chloride	284	100	41	ug/l	
1330-20-7	Xylene (total)	72 U	300	72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		83-118%
17060-07-0	1,2-Dichloroethane-D4	104%		79-125%
2037-26-5	Toluene-D8	104%		85-112%
460-00-4	4-Bromofluorobenzene	97%		83-118%

(a) Associated CCV outside of control limits low.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

5

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

SGS North America Inc - Orlando

FA84993

Chain of Custody

4405 Vineland Road, Suite C-15 Orlando, Fl 32811
TEL: 407-425-6700 FAX: 407-425-0707
www.sgs.com

SGS - ORLANDO JOB # : PAGE 1 OF 1

SGS - ORLANDO Quote # SKIFF #

Client / Reporting Information

Company Name: Tetra Tech
Address: 661 Anderson Dr Foster Plaza 7
City: Pittsburgh State: Zip:
Project Contact: Mark.Jonnet@tetratech.com Email:
Phone #: 412-921-2622
Sampler(s) Name(s) (Printed) Melissa Bennett
Sampler 1: Sampler 2:

Project Information

Project Name: LC34
Street Freedom Rd
City CCAFS State FL
Project #
Fax #
Client Purchase Order #

Analytical Information

8260 VOC

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid

SGS Orlando Sample #	Field ID / Point of Collection	COLLECTION DATE	COLLECTION TIME	SAMPLED BY:	CONTAINER INFORMATION MATRIX	TOTAL # OF BOTTLES	OTHER	NONE	HCl	NaOH	HNO3	H2SO4	NAOH+ZNAC	DI WATER	MEOH	LAB USE ONLY
1	LC34-IW0136-024.0-20210423	4/23	0930	MB	GW	3			✓							
2	LC34-IW0137-024.0-20210423	4/23	1010						✓							
3	LC34-IW0138-031.5-20210423	4/23	1040						✓							
4	LC34-IW0134-024.0-20210423	4/23	1150						✓							
5	LC34-IW0140-024.0-20210423	4/23	1245						✓							
6	LC34-IW0139-018.0-20210423	4/23	1325						✓							
7	LC34-IW0006I-025.5-20210423	4/23	1420						✓							
8	LC34-IW0135-024.0-20210423	4/23	1500	↓	↓	↓			✓							

Turnaround Time (Business days)

10 Day (Business) Approved By: / Date:
7 Day
5 Day
3 Day *RUSH*
2 Day *RUSH*
1 Day *RUSH*
Other
Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [ ] COMMERCIAL "B" (RESULTS PLUS QC)
- [ ] REDT1 (EPA LEVEL 3)
- [ ] FULLT1 (EPA LEVEL 4)
- [ ] EDD'S

INITIAL ASSESSMENT NK
LABEL VERIFICATION PH

Comments / Remarks

Temp @ 1749 1°

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler/Affiliation	Date Time:	Received By/Affiliation	Relinquished By/Affiliation	Date Time:	Received By/Affiliation
1		1620 4-23-21	2 JS 4/23 1620	3 JS 4/23 1749	4/24/21 930	4
5	Relinquished by/Affiliation	Date Time:	6 Received By/Affiliation	7 Relinquished By/Affiliation	Date Time:	8 Received By/Affiliation

Lab Use Only : Cooler Temperature (s) Celsius (corrected):

http://www.sgs.com/en/terms-and-conditions

ORLD-SMT-0001-03-FORM-COC (1) Rev 031318

5.1 5

FA84993: Chain of Custody
Page 1 of 2

SGS Sample Receipt Summary

Job Number: FA84993 **Client:** TETRA TECH **Project:** CC34

Date / Time Received: 4/23/2021 5:49:00 PM **Delivery Method:** COURIER **Airbill #'s:**

Therm ID: IR 1; **Therm CF:** -1.8; **# of Coolers:** 1

Cooler Temps (Raw Measured) °C: Cooler 1: (2.8);

Cooler Temps (Corrected) °C: Cooler 1: (1.0);

Cooler Information	Y	or	N
1. Custody Seals Present	☑		☐
2. Custody Seals Intact	☑		☐
3. Temp criteria achieved	☑		☐
4. Cooler temp verification	IR Gun		
5. Cooler media	Ice (Bag)		

Trip Blank Information	Y	or	N	N/A
1. Trip Blank present / cooler	☐		☐	☑
2. Trip Blank listed on COC	☐		☐	☑

	W	or	S	N/A
3. Type Of TB Received	☐		☐	☑

Sample Information	Y	or	N	N/A
1. Sample labels present on bottles	☑		☐	
2. Samples preserved properly	☑		☐	
3. Sufficient volume/containers recvd for analysis:	☑		☐	
4. Condition of sample	Intact			
5. Sample recvd within HT	☑		☐	
6. Dates/Times/IDs on COC match Sample Label	☑		☐	
7. VOCs have headspace	☐		☑	☐
8. Bottles received for unspecified tests	☐		☑	
9. Compositing instructions clear	☐		☐	☑
10. Voa Soil Kits/Jars received past 48hrs?	☐		☐	☑
11. % Solids Jar received?	☐		☐	☑
12. Residual Chlorine Present?	☐		☐	☑

Misc. Information

Number of Encores: 25-Gram _____ 5-Gram _____ Number of 5035 Field Kits: _____ Number of Lab Filtered Metals: _____

Test Strip Lot #s: pH 0-3 230315 pH 10-12 219813A Other: (Specify) _____ _____

Residual Chlorine Test Strip Lot #: _____

Comments

SM001
Rev. Date 05/24/17

Technician: NATHANS Date: 4/23/2021 5:49:00 PM Reviewer: _____ Date: _____

5.1 5

FA84993: Chain of Custody
Page 2 of 2

MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: FA84993
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1461-MB	1A35021.D	1	05/07/21	CV	n/a	n/a	V1A1461

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA84993-1, FA84993-2, FA84993-3, FA84993-4, FA84993-5, FA84993-6, FA84993-7, FA84993-8

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
71-43-2	Benzene	ND	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.24	ug/l	
75-25-2	Bromoform	ND	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	ND	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.67	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
110-82-7	Cyclohexane	ND	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.36	ug/l	
76-13-1	Freon 113	ND	1.0	0.48	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	ND	20	5.0	ug/l	
74-83-9	Methyl Bromide	ND	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	ND	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	ND	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.0	ug/l	

Method Blank Summary

Job Number: FA84993
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1461-MB	1A35021.D	1	05/07/21	CV	n/a	n/a	V1A1461

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA84993-1, FA84993-2, FA84993-3, FA84993-4, FA84993-5, FA84993-6, FA84993-7, FA84993-8

CAS No.	Compound	Result	RL	MDL	Units	Q
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.23	ug/l	
100-42-5	Styrene	ND	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	93%	83-118%
17060-07-0	1,2-Dichloroethane-D4	102%	79-125%
2037-26-5	Toluene-D8	103%	85-112%
460-00-4	4-Bromofluorobenzene	98%	83-118%

Blank Spike Summary

Job Number: FA84993
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1461-BS	1A35036.D	1	05/07/21	CV	n/a	n/a	V1A1461

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA84993-1, FA84993-2, FA84993-3, FA84993-4, FA84993-5, FA84993-6, FA84993-7, FA84993-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	88.4	71	50-147
71-43-2	Benzene	25	26.4	106	81-122
74-97-5	Bromochloromethane	25	23.0	92	76-123
75-27-4	Bromodichloromethane	25	27.1	108	79-123
75-25-2	Bromoform	25	20.1	80	66-123
78-93-3	2-Butanone (MEK)	125	87.0	70	56-143
75-15-0	Carbon Disulfide	25	24.8	99	66-148
56-23-5	Carbon Tetrachloride	25	28.2	113	76-136
108-90-7	Chlorobenzene	25	26.6	106	82-124
75-00-3	Chloroethane	25	26.5	106	62-144
67-66-3	Chloroform	25	25.7	103	80-124
110-82-7	Cyclohexane	25	27.9	112	73-138
124-48-1	Dibromochloromethane	25	23.4	94	78-122
96-12-8	1,2-Dibromo-3-chloropropane	25	20.0	80	64-123
106-93-4	1,2-Dibromoethane	25	22.9	92	75-120
75-71-8	Dichlorodifluoromethane	25	20.5	82	42-167
95-50-1	1,2-Dichlorobenzene	25	26.1	104	82-124
541-73-1	1,3-Dichlorobenzene	25	26.7	107	84-125
106-46-7	1,4-Dichlorobenzene	25	26.4	106	78-120
75-34-3	1,1-Dichloroethane	25	29.1	116	81-122
107-06-2	1,2-Dichloroethane	25	25.0	100	75-125
75-35-4	1,1-Dichloroethylene	25	28.5	114	78-137
156-59-2	cis-1,2-Dichloroethylene	25	26.1	104	78-120
156-60-5	trans-1,2-Dichloroethylene	25	27.8	111	76-127
78-87-5	1,2-Dichloropropane	25	26.1	104	76-124
10061-01-5	cis-1,3-Dichloropropene	25	23.7	95	75-118
10061-02-6	trans-1,3-Dichloropropene	25	25.9	104	80-120
100-41-4	Ethylbenzene	25	27.5	110	81-121
76-13-1	Freon 113	25	23.7	95	72-134
591-78-6	2-Hexanone	125	103	82	61-129
98-82-8	Isopropylbenzene	25	27.5	110	83-132
79-20-9	Methyl Acetate	125	102	82	65-126
74-83-9	Methyl Bromide	25	20.5	82	59-143
74-87-3	Methyl Chloride	25	22.2	89	50-159
75-09-2	Methylene Chloride	25	25.4	102	69-135
108-10-1	4-Methyl-2-pentanone (MIBK)	125	101	81	66-122

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA84993
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1461-BS	1A35036.D	1	05/07/21	CV	n/a	n/a	V1A1461

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA84993-1, FA84993-2, FA84993-3, FA84993-4, FA84993-5, FA84993-6, FA84993-7, FA84993-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
1634-04-4	Methyl Tert Butyl Ether	25	20.7	83	72-117
100-42-5	Styrene	25	26.9	108	78-119
630-20-6	1,1,1,2-Tetrachloroethane	25	26.8	107	77-122
79-34-5	1,1,2,2-Tetrachloroethane	25	22.5	90	72-120
127-18-4	Tetrachloroethylene	25	27.3	109	76-135
108-88-3	Toluene	25	26.0	104	80-120
87-61-6	1,2,3-Trichlorobenzene	25	23.7	95	68-131
120-82-1	1,2,4-Trichlorobenzene	25	24.2	97	73-129
71-55-6	1,1,1-Trichloroethane	25	27.0	108	75-130
79-00-5	1,1,2-Trichloroethane	25	25.3	101	76-119
79-01-6	Trichloroethylene	25	26.1	104	81-126
75-69-4	Trichlorofluoromethane	25	27.0	108	71-156
75-01-4	Vinyl Chloride	25	24.6	98	69-159
1330-20-7	Xylene (total)	75	82.3	110	80-126

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	95%	83-118%
17060-07-0	1,2-Dichloroethane-D4	103%	79-125%
2037-26-5	Toluene-D8	103%	85-112%
460-00-4	4-Bromofluorobenzene	96%	83-118%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA84993
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA84993-8MS	1A35037.D	100	05/07/21	CV	n/a	n/a	V1A1461
FA84993-8MSD	1A35038.D	100	05/07/21	CV	n/a	n/a	V1A1461
FA84993-8	1A35029.D	100	05/07/21	CV	n/a	n/a	V1A1461

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA84993-1, FA84993-2, FA84993-3, FA84993-4, FA84993-5, FA84993-6, FA84993-7, FA84993-8

CAS No.	Compound	FA84993-8 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	2500	U	12500	8240	66	12500	8010	64	3	50-147/21
71-43-2	Benzene	100	U	2500	2500	100	2500	2540	102	2	81-122/14
74-97-5	Bromochloromethane	100	U	2500	2180	87	2500	2210	88	1	76-123/14
75-27-4	Bromodichloromethane	100	U	2500	2590	104	2500	2630	105	2	79-123/19
75-25-2	Bromoform	100	U	2500	1960	78	2500	2010	80	3	66-123/21
78-93-3	2-Butanone (MEK)	500	U	12500	7970	64	12500	7860	63	1	56-143/18
75-15-0	Carbon Disulfide	200	U	2500	2380	95	2500	2440	98	2	66-148/23
56-23-5	Carbon Tetrachloride	100	U	2500	2700	108	2500	2700	108	0	76-136/23
108-90-7	Chlorobenzene	100	U	2500	2510	100	2500	2560	102	2	82-124/14
75-00-3	Chloroethane	200	U	2500	2710	108	2500	2710	108	0	62-144/20
67-66-3	Chloroform	100	U	2500	2440	98	2500	2470	99	1	80-124/15
110-82-7	Cyclohexane	100	U	2500	2630	105	2500	2690	108	2	73-138/18
124-48-1	Dibromochloromethane	100	U	2500	2280	91	2500	2360	94	3	78-122/19
96-12-8	1,2-Dibromo-3-chloropropane	500	U	2500	1880	75	2500	1870	75	1	64-123/18
106-93-4	1,2-Dibromoethane	200	U	2500	2170	87	2500	2210	88	2	75-120/13
75-71-8	Dichlorodifluoromethane	200	U	2500	2070	83	2500	2070	83	0	42-167/19
95-50-1	1,2-Dichlorobenzene	100	U	2500	2440	98	2500	2480	99	2	82-124/14
541-73-1	1,3-Dichlorobenzene	100	U	2500	2490	100	2500	2520	101	1	84-125/14
106-46-7	1,4-Dichlorobenzene	100	U	2500	2460	98	2500	2470	99	0	78-120/15
75-34-3	1,1-Dichloroethane	100	U	2500	2740	110	2500	2790	112	2	81-122/15
107-06-2	1,2-Dichloroethane	100	U	2500	2350	94	2500	2360	94	0	75-125/14
75-35-4	1,1-Dichloroethylene	100	U	2500	2710	108	2500	2760	110	2	78-137/18
156-59-2	cis-1,2-Dichloroethylene	5230		2500	7830	104	2500	7940	108	1	78-120/15
156-60-5	trans-1,2-Dichloroethylene	228		2500	2870	106	2500	2930	108	2	76-127/17
78-87-5	1,2-Dichloropropane	100	U	2500	2490	100	2500	2550	102	2	76-124/14
10061-01-5	cis-1,3-Dichloropropene	100	U	2500	2140	86	2500	2190	88	2	75-118/23
10061-02-6	trans-1,3-Dichloropropene	100	U	2500	2350	94	2500	2410	96	3	80-120/22
100-41-4	Ethylbenzene	100	U	2500	2570	103	2500	2630	105	2	81-121/14
76-13-1	Freon 113	100	U	2500	2180	87	2500	2230	89	2	72-134/20
591-78-6	2-Hexanone	1000	U	12500	9790	78	12500	9460	76	3	61-129/18
98-82-8	Isopropylbenzene	100	U	2500	2580	103	2500	2630	105	2	83-132/15
79-20-9	Methyl Acetate	2000	U	12500	9550	76	12500	9380	75	2	65-126/18
74-83-9	Methyl Bromide	500	U	2500	2350	94	2500	2380	95	1	59-143/19
74-87-3	Methyl Chloride	200	U	2500	2250	90	2500	2260	90	0	50-159/19
75-09-2	Methylene Chloride	500	U	2500	2420	97	2500	2430	97	0	69-135/16
108-10-1	4-Methyl-2-pentanone (MIBK)	500	U	12500	9700	78	12500	9540	76	2	66-122/16

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA84993
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA84993-8MS	1A35037.D	100	05/07/21	CV	n/a	n/a	V1A1461
FA84993-8MSD	1A35038.D	100	05/07/21	CV	n/a	n/a	V1A1461
FA84993-8	1A35029.D	100	05/07/21	CV	n/a	n/a	V1A1461

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA84993-1, FA84993-2, FA84993-3, FA84993-4, FA84993-5, FA84993-6, FA84993-7, FA84993-8

CAS No.	Compound	FA84993-8 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
1634-04-4	Methyl Tert Butyl Ether	100	U	2500	2000	80	2500	1990	80	1	72-117/14
100-42-5	Styrene	100	U	2500	2530	101	2500	2580	103	2	78-119/23
630-20-6	1,1,1,2-Tetrachloroethane	100	U	2500	2570	103	2500	2610	104	2	77-122/19
79-34-5	1,1,2,2-Tetrachloroethane	100	U	2500	2080	83	2500	2050	82	1	72-120/14
127-18-4	Tetrachloroethylene	100	U	2500	2740	110	2500	2840	114	4	76-135/16
108-88-3	Toluene	100	U	2500	2460	98	2500	2510	100	2	80-120/14
87-61-6	1,2,3-Trichlorobenzene	200	U	2500	2220	89	2500	2240	90	1	68-131/25
120-82-1	1,2,4-Trichlorobenzene	200	U	2500	2250	90	2500	2300	92	2	73-129/20
71-55-6	1,1,1-Trichloroethane	100	U	2500	2560	102	2500	2600	104	2	75-130/16
79-00-5	1,1,2-Trichloroethane	100	U	2500	2380	95	2500	2390	96	0	76-119/14
79-01-6	Trichloroethylene	100	U	2500	2440	98	2500	2470	99	1	81-126/15
75-69-4	Trichlorofluoromethane	200	U	2500	2640	106	2500	2670	107	1	71-156/21
75-01-4	Vinyl Chloride	284		2500	2790	100	2500	2800	101	0	69-159/18
1330-20-7	Xylene (total)	300	U	7500	7740	103	7500	7890	105	2	80-126/15

CAS No.	Surrogate Recoveries	MS	MSD	FA84993-8	Limits
1868-53-7	Dibromofluoromethane	95%	96%	95%	83-118%
17060-07-0	1,2-Dichloroethane-D4	102%	102%	104%	79-125%
2037-26-5	Toluene-D8	104%	105%	104%	85-112%
460-00-4	4-Bromofluorobenzene	97%	97%	97%	83-118%

* = Outside of Control Limits.

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

Tetra Tech NUS

NASA-LC 34, Freedom Rd, CCAFS, FL

112G08985

SGS Job Number: FA85173

Sampling Dates: 04/28/21 - 04/29/21

Report to:

Tetra-Tech, Inc.
661 Andersen Dr Foster Plaza 7
Pittsburgh, PA 15220
mark.jonnet@tetratech.com

ATTN: Mark Jonnet

Total number of pages in report: **58**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Norm Farmer
Technical Director

Client Service contact: Andrea Colby 407-425-6700

Certifications: FL(E83510), LA(03051), KS(E-10327), NC(573), NJ(FL002), NY(12022), SC(96038001) DoD ELAP(ANAB L2229), AZ(AZ0806), CA(2937), TX(T104704404), PA(68-03573), VA(460177), AL, AK, AR, CT, IA, KY, MA, MI. MS, ND, NH, NV, OK, OR, UT, VT, WA, WV

Test results relate only to samples analyzed.

Sections: 1 2 3 4 5 6

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SGS North America Inc.

Sample Summary

Tetra Tech NUS

Job No: FA85173

NASA-LC 34, Freedom Rd, CCAFS, FL
Project No: 112G08985

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
FA85173-1	04/28/21	12:20	CS	04/30/21	AQ	Ground Water	LC34-IW0133-018.0-20210428
FA85173-2	04/28/21	12:55	CS	04/30/21	AQ	Ground Water	LC34-IW0132-018.0-20210428
FA85173-3	04/28/21	13:25	CS	04/30/21	AQ	Ground Water	LC34-IW0131-018.0-20210428
FA85173-4	04/28/21	14:15	CS	04/30/21	AQ	Ground Water	LC34-IW0129-018.0-20210428
FA85173-5	04/28/21	14:40	CS	04/30/21	AQ	Ground Water	LC34-IW0130-024.0-20210428
FA85173-6	04/28/21	15:10	CS	04/30/21	AQ	Ground Water	LC34-IW0125-018.0-20210428
FA85173-7	04/28/21	15:30	CS	04/30/21	AQ	Surface Water	LC34-SW1001-000.5-20210428
FA85173-8	04/28/21	15:50	CS	04/30/21	AQ	Surface Water	LC34-SW1002-000.5-20210428
FA85173-9	04/28/21	16:10	CS	04/30/21	AQ	Surface Water	LC34-SW1004-000.5-20210428
FA85173-10	04/29/21	10:10	CS	04/30/21	AQ	Ground Water	LC34-IW0108-024.0-20210429
FA85173-11	04/29/21	11:10	CS	04/30/21	AQ	Ground Water	LC34-IW0124-018.0-20210429
FA85173-12	04/29/21	11:50	CS	04/30/21	AQ	Ground Water	LC34-IW0128-018.0-20210429
FA85173-13	04/29/21	12:50	CS	04/30/21	AQ	Ground Water	LC34-IW0142-024.0-20210429

Sample Summary
(continued)

Tetra Tech NUS

Job No: FA85173

NASA-LC 34, Freedom Rd, CCAFS, FL
Project No: 112G08985

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
FA85173-14	04/29/21	13:45	CS	04/30/21	AQ	Ground Water	LC34-IW0127-024.0-20210429
FA85173-15	04/29/21	14:40	CS	04/30/21	AQ	Ground Water	LC34-IW0141-024.0-20210429
FA85173-16	04/29/21	15:30	CS	04/30/21	AQ	Ground Water	LC34-IW0057S-007.7-20210429

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Tetra Tech NUS **Job No:** FA85173

Site: NASA-LC 34, Freedom Rd, CCAFS, FL **Report Date** 5/25/2021 3:24:25 PM

16 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were collected on between 04/28/2021 and 04/29/2021 and were received at SGS North America Inc - Orlando on 04/30/2021 properly preserved, at 0.4 Deg. C and intact. These Samples received an SGS Orlando job number of FA85173. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section. Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

MS Volatiles By Method SW846 8260B

Matrix: AQ **Batch ID:** V1A1467

All samples were analyzed within the recommended method holding time.

Sample(s) FA85072-8MS, FA85072-8MSD were used as the QC samples indicated.

All method blanks for this batch meet method specific criteria.

V1A1467-BS for Freon 113: Sporadic marginal failure.

Blank Spike Recovery(s) for Freon 113 are outside control limits.

FA85173-1 for Freon 113: Associated BS recovery outside control limits low.

FA85173-2 for Freon 113: Associated BS recovery outside control limits low.

FA85173-3 for Freon 113: Associated BS recovery outside control limits low.

FA85173-4 for Freon 113: Associated BS recovery outside control limits low.

FA85173-5 for Freon 113: Associated BS recovery outside control limits low.

FA85173-6 for Freon 113: Associated BS recovery outside control limits low.

FA85173-7 for Freon 113: Associated BS recovery outside control limits low.

FA85173-8 for Freon 113: Associated BS recovery outside control limits low.

FA85173-9 for Freon 113: Associated BS recovery outside control limits low.

Matrix: AQ **Batch ID:** V1A1470

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

V1A1470-MB: Sample was treated with an anti-foaming agent.

Sample(s) FA85182-2MS, FA85182-2MSD were used as the QC samples indicated.

Matrix Spike Recovery(s) for 1,1,1,2-Tetrachloroethane, 1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1-Dichloroethane, 1,1-Dichloroethylene, 1,2,3-Trichlorobenzene, 1,2-Dibromo-3-chloropropane, 1,2-Dibromoethane, 1,2-Dichlorobenzene, 1,2-Dichloropropane, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, 2-Butanone (MEK), 2-Hexanone, 4-Methyl-2-pentanone (MIBK), Acetone, Benzene, Bromodichloromethane, Bromoform, Carbon Disulfide, Carbon Tetrachloride, Chlorobenzene, Chloroethane, Chloroform, cis-1,2-Dichloroethylene, Cyclohexane, Ethylbenzene, Isopropylbenzene, Methyl Acetate, Methylene Chloride, Styrene, Tetrachloroethylene, Toluene, trans-1,2-Dichloroethylene, Trichloroethylene, Trichlorofluoromethane, Xylene (total) are outside control limits. Probable cause is due to matrix interference.

Matrix Spike Duplicate Recovery(s) for 1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1-Dichloroethane, 1,1-Dichloroethylene, 1,2,3-Trichlorobenzene, 1,2-Dibromo-3-chloropropane, 1,2-Dibromoethane, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, 2-Butanone (MEK), 2-Hexanone, 4-Methyl-2-pentanone (MIBK), Acetone, Benzene, Bromoform, Carbon Tetrachloride, Chlorobenzene, Chloroethane, Chloroform, cis-1,2-Dichloroethylene, Ethylbenzene, Isopropylbenzene, Methyl Acetate, Methyl Tert Butyl Ether, Styrene, Tetrachloroethylene, Toluene, trans-1,2-Dichloroethylene, Trichloroethylene, Xylene (total) are outside control limits. Probable cause is due to matrix interference.

RPD(s) for MSD for Benzene, Chlorobenzene, Ethylbenzene, Toluene, Trichloroethylene, Trichlorofluoromethane are outside control limits for sample FA85182-2MSD. Probable cause is due to sample non-homogeneity.

Sample(s) FA85173-16 have surrogates outside control limits.

Sample(s) FA85173-10, FA85173-11, FA85173-12, FA85173-13, FA85173-14, FA85173-15, FA85173-16 are associated with an CCV that has a recovery for 2-Butanone (MEK), 2-Hexanone, Acetone, 2-Butanone (MEK) outside low control limit.

FA85173-10 for 2-Butanone (MEK): Associated CCV outside of control limits low.

FA85173-10: Sample was treated with an anti-foaming agent.

FA85173-11 for 2-Butanone (MEK): Associated CCV outside of control limits low.

FA85173-11: Sample was treated with an anti-foaming agent.

FA85173-12 for 2-Butanone (MEK): Associated CCV outside of control limits low.

FA85173-12: Sample was treated with an anti-foaming agent.

FA85173-13 for 2-Butanone (MEK): Associated CCV outside of control limits low.

FA85173-13: Sample was treated with an anti-foaming agent.

FA85173-14 for 2-Butanone (MEK): Associated CCV outside of control limits low.

FA85173-14: Sample was treated with an anti-foaming agent.

FA85173-15 for 2-Butanone (MEK): Associated CCV outside of control limits low.

FA85173-15: Sample was treated with an anti-foaming agent.

FA85173-16 for 1,2-Dichloroethane-D4: Outside control limits. Confirmed by reanalysis.

FA85173-16: Sample was treated with an anti-foaming agent. No ECC available for this run.

Matrix: AQ **Batch ID:** VY2382

FA85173-16: Sample re-analyzed beyond hold time; reported results are considered minimum values. Confirmation run for surrogate recoveries.

SGS Orlando certifies that this report meets the project requirements for analytical data produced for the samples as received at SGS Orlando and as stated on the COC. SGS Orlando certifies that the data meets the Data Quality Objectives for precision, accuracy and completeness as specified in the SGS Orlando Quality Manual except as noted above. This report is to be used in its entirety. SGS Orlando is not responsible for any assumptions of data quality if partial data packages are used.

Narrative prepared by:

_____

Ariel Hartney, Client Services (signature on file)

Summary of Hits

Job Number: FA85173
Account: Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL
Collected: 04/28/21 thru 04/29/21

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	PQL	MDL	Units	Method
FA85173-1	**LC34-IW0133-018.0-20210428**					
cis-1,2-Dichloroethylene		1.6	1.0	0.28	ug/l	SW846 8260B
FA85173-2	**LC34-IW0132-018.0-20210428**					
cis-1,2-Dichloroethylene		1.0	1.0	0.28	ug/l	SW846 8260B
FA85173-3	**LC34-IW0131-018.0-20210428**					
No hits reported in this sample.						
FA85173-4	**LC34-IW0129-018.0-20210428**					
cis-1,2-Dichloroethylene		0.48 I	1.0	0.28	ug/l	SW846 8260B
Vinyl Chloride		9.5	1.0	0.41	ug/l	SW846 8260B
FA85173-5	**LC34-IW0130-024.0-20210428**					
cis-1,2-Dichloroethylene		0.73 I	1.0	0.28	ug/l	SW846 8260B
Vinyl Chloride		20.9	1.0	0.41	ug/l	SW846 8260B
FA85173-6	**LC34-IW0125-018.0-20210428**					
cis-1,2-Dichloroethylene		3.6	1.0	0.28	ug/l	SW846 8260B
Vinyl Chloride		3.6	1.0	0.41	ug/l	SW846 8260B
FA85173-7	**LC34-SW1001-000.5-20210428**					
cis-1,2-Dichloroethylene		0.42 I	1.0	0.28	ug/l	SW846 8260B
FA85173-8	**LC34-SW1002-000.5-20210428**					
cis-1,2-Dichloroethylene		1.2	1.0	0.28	ug/l	SW846 8260B
FA85173-9	**LC34-SW1004-000.5-20210428**					
No hits reported in this sample.						
FA85173-10	**LC34-IW0108-024.0-20210429**					
No hits reported in this sample.						

Summary of Hits

Job Number: FA85173
Account: Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL
Collected: 04/28/21 thru 04/29/21

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	PQL	MDL	Units	Method
FA85173-11	**LC34-IW0124-018.0-20210429**					
No hits reported in this sample.						
FA85173-12	**LC34-IW0128-018.0-20210429**					
No hits reported in this sample.						
FA85173-13	**LC34-IW0142-024.0-20210429**					
No hits reported in this sample.						
FA85173-14	**LC34-IW0127-024.0-20210429**					
No hits reported in this sample.						
FA85173-15	**LC34-IW0141-024.0-20210429**					
No hits reported in this sample.						
FA85173-16	**LC34-IW0057S-007.7-20210429**					
cis-1,2-Dichloroethylene [a]		0.43 I	1.0	0.28	ug/l	SW846 8260B

(a) Sample was treated with an anti-foaming agent. No ECC available for this run.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	LC34-IW0133-018.0-20210428		
Lab Sample ID:	FA85173-1	**Date Sampled:**	04/28/21
Matrix:	AQ - Ground Water	**Date Received:**	04/30/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1A35165.D	1	05/11/21 20:11	CV	n/a	n/a	V1A1467
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	10 U	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.67 U	2.0	0.67	ug/l	
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	0.50 U	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.32 U	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	1.6	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.22 U	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113 [a]	0.48 U	1.0	0.48	ug/l	
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-IW0133-018.0-20210428		
Lab Sample ID:	FA85173-1	**Date Sampled:**	04/28/21
Matrix:	AQ - Ground Water	**Date Received:**	04/30/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	2.0 U	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.30 U	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	0.35 U	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	0.41 U	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		83-118%
17060-07-0	1,2-Dichloroethane-D4	104%		79-125%
2037-26-5	Toluene-D8	104%		85-112%
460-00-4	4-Bromofluorobenzene	95%		83-118%

(a) Associated BS recovery outside control limits low.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-IW0132-018.0-20210428		
Lab Sample ID:	FA85173-2	**Date Sampled:**	04/28/21
Matrix:	AQ - Ground Water	**Date Received:**	04/30/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1A35166.D	1	05/11/21 20:37	CV	n/a	n/a	V1A1467
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	10 U	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.67 U	2.0	0.67	ug/l	
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	0.50 U	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.32 U	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	1.0	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.22 U	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113 [a]	0.48 U	1.0	0.48	ug/l	
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-IW0132-018.0-20210428		
Lab Sample ID:	FA85173-2	**Date Sampled:**	04/28/21
Matrix:	AQ - Ground Water	**Date Received:**	04/30/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	2.0 U	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.30 U	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	0.35 U	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	0.41 U	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		83-118%
17060-07-0	1,2-Dichloroethane-D4	104%		79-125%
2037-26-5	Toluene-D8	103%		85-112%
460-00-4	4-Bromofluorobenzene	96%		83-118%

(a) Associated BS recovery outside control limits low.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-IW0131-018.0-20210428		
Lab Sample ID:	FA85173-3	**Date Sampled:**	04/28/21
Matrix:	AQ - Ground Water	**Date Received:**	04/30/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1A35167.D	1	05/11/21 21:03	CV	n/a	n/a	V1A1467
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	10 U	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.67 U	2.0	0.67	ug/l	
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	0.50 U	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.32 U	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.28 U	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.22 U	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113 [a]	0.48 U	1.0	0.48	ug/l	
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-IW0131-018.0-20210428		
Lab Sample ID:	FA85173-3	**Date Sampled:**	04/28/21
Matrix:	AQ - Ground Water	**Date Received:**	04/30/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	2.0 U	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.30 U	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	0.35 U	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	0.41 U	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		83-118%
17060-07-0	1,2-Dichloroethane-D4	105%		79-125%
2037-26-5	Toluene-D8	103%		85-112%
460-00-4	4-Bromofluorobenzene	96%		83-118%

(a) Associated BS recovery outside control limits low.

U = Not detected MDL = Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range

I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-IW0129-018.0-20210428		
Lab Sample ID:	FA85173-4	**Date Sampled:**	04/28/21
Matrix:	AQ - Ground Water	**Date Received:**	04/30/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1A35168.D	1	05/11/21 21:29	CV	n/a	n/a	V1A1467
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	10 U	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.67 U	2.0	0.67	ug/l	
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	0.50 U	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.32 U	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.48	1.0	0.28	ug/l	I
156-60-5	trans-1,2-Dichloroethylene	0.22 U	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113 [a]	0.48 U	1.0	0.48	ug/l	
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-IW0129-018.0-20210428		
Lab Sample ID:	FA85173-4	**Date Sampled:**	04/28/21
Matrix:	AQ - Ground Water	**Date Received:**	04/30/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	2.0 U	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.30 U	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	0.35 U	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	9.5	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		83-118%
17060-07-0	1,2-Dichloroethane-D4	104%		79-125%
2037-26-5	Toluene-D8	103%		85-112%
460-00-4	4-Bromofluorobenzene	95%		83-118%

(a) Associated BS recovery outside control limits low.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-IW0130-024.0-20210428		
Lab Sample ID:	FA85173-5	**Date Sampled:**	04/28/21
Matrix:	AQ - Ground Water	**Date Received:**	04/30/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1A35169.D	1	05/11/21 21:55	CV	n/a	n/a	V1A1467
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	10 U	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.67 U	2.0	0.67	ug/l	
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	0.50 U	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.32 U	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.73	1.0	0.28	ug/l	I
156-60-5	trans-1,2-Dichloroethylene	0.22 U	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113 [a]	0.48 U	1.0	0.48	ug/l	
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-IW0130-024.0-20210428		
Lab Sample ID:	FA85173-5	**Date Sampled:**	04/28/21
Matrix:	AQ - Ground Water	**Date Received:**	04/30/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	2.0 U	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.30 U	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	0.35 U	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	20.9	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		83-118%
17060-07-0	1,2-Dichloroethane-D4	104%		79-125%
2037-26-5	Toluene-D8	103%		85-112%
460-00-4	4-Bromofluorobenzene	95%		83-118%

(a) Associated BS recovery outside control limits low.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-IW0125-018.0-20210428		
Lab Sample ID:	FA85173-6	**Date Sampled:**	04/28/21
Matrix:	AQ - Ground Water	**Date Received:**	04/30/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1A35170.D	1	05/11/21 22:21	CV	n/a	n/a	V1A1467
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	10 U	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.67 U	2.0	0.67	ug/l	
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	0.50 U	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.32 U	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	3.6	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.22 U	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113 [a]	0.48 U	1.0	0.48	ug/l	
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-IW0125-018.0-20210428		
Lab Sample ID:	FA85173-6	**Date Sampled:**	04/28/21
Matrix:	AQ - Ground Water	**Date Received:**	04/30/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	2.0 U	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.30 U	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	0.35 U	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	3.6	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		83-118%
17060-07-0	1,2-Dichloroethane-D4	106%		79-125%
2037-26-5	Toluene-D8	103%		85-112%
460-00-4	4-Bromofluorobenzene	96%		83-118%

(a) Associated BS recovery outside control limits low.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-SW1001-000.5-20210428		
Lab Sample ID:	FA85173-7	**Date Sampled:**	04/28/21
Matrix:	AQ - Surface Water	**Date Received:**	04/30/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1A35171.D	1	05/11/21 22:47	CV	n/a	n/a	V1A1467
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	10 U	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.67 U	2.0	0.67	ug/l	
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	0.50 U	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.32 U	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.42	1.0	0.28	ug/l	I
156-60-5	trans-1,2-Dichloroethylene	0.22 U	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113 [a]	0.48 U	1.0	0.48	ug/l	
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-SW1001-000.5-20210428		
Lab Sample ID:	FA85173-7	**Date Sampled:**	04/28/21
Matrix:	AQ - Surface Water	**Date Received:**	04/30/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	2.0 U	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.30 U	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	0.35 U	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	0.41 U	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		83-118%
17060-07-0	1,2-Dichloroethane-D4	103%		79-125%
2037-26-5	Toluene-D8	103%		85-112%
460-00-4	4-Bromofluorobenzene	95%		83-118%

(a) Associated BS recovery outside control limits low.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-SW1002-000.5-20210428		
Lab Sample ID:	FA85173-8	**Date Sampled:**	04/28/21
Matrix:	AQ - Surface Water	**Date Received:**	04/30/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1A35172.D	1	05/11/21 23:14	CV	n/a	n/a	V1A1467
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	10 U	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.67 U	2.0	0.67	ug/l	
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	0.50 U	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.32 U	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	1.2	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.22 U	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113 [a]	0.48 U	1.0	0.48	ug/l	
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-SW1002-000.5-20210428		
Lab Sample ID:	FA85173-8	**Date Sampled:**	04/28/21
Matrix:	AQ - Surface Water	**Date Received:**	04/30/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	2.0 U	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.30 U	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	0.35 U	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	0.41 U	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		83-118%
17060-07-0	1,2-Dichloroethane-D4	104%		79-125%
2037-26-5	Toluene-D8	103%		85-112%
460-00-4	4-Bromofluorobenzene	95%		83-118%

(a) Associated BS recovery outside control limits low.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-SW1004-000.5-20210428		
Lab Sample ID:	FA85173-9	**Date Sampled:**	04/28/21
Matrix:	AQ - Surface Water	**Date Received:**	04/30/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1A35173.D	1	05/11/21 23:40	CV	n/a	n/a	V1A1467
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone	10 U	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.67 U	2.0	0.67	ug/l	
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	0.50 U	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.32 U	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.28 U	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.22 U	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113 [a]	0.48 U	1.0	0.48	ug/l	
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-SW1004-000.5-20210428		
Lab Sample ID:	FA85173-9	**Date Sampled:**	04/28/21
Matrix:	AQ - Surface Water	**Date Received:**	04/30/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	2.0 U	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.30 U	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	0.35 U	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	0.41 U	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		83-118%
17060-07-0	1,2-Dichloroethane-D4	105%		79-125%
2037-26-5	Toluene-D8	103%		85-112%
460-00-4	4-Bromofluorobenzene	95%		83-118%

(a) Associated BS recovery outside control limits low.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-IW0108-024.0-20210429		
Lab Sample ID:	FA85173-10	**Date Sampled:**	04/29/21
Matrix:	AQ - Ground Water	**Date Received:**	04/30/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1A35209.D	1	05/13/21 01:12	LR	n/a	n/a	V1A1470
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone [b]	10 U	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK) [b]	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.67 U	2.0	0.67	ug/l	
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	0.50 U	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.32 U	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.28 U	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.22 U	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113	0.48 U	1.0	0.48	ug/l	
591-78-6	2-Hexanone [b]	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-IW0108-024.0-20210429		
Lab Sample ID:	FA85173-10	**Date Sampled:**	04/29/21
Matrix:	AQ - Ground Water	**Date Received:**	04/30/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	2.0 U	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.30 U	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	0.35 U	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	0.41 U	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		83-118%
17060-07-0	1,2-Dichloroethane-D4	99%		79-125%
2037-26-5	Toluene-D8	103%		85-112%
460-00-4	4-Bromofluorobenzene	100%		83-118%

(a) Sample was treated with an anti-foaming agent.
(b) Associated CCV outside of control limits low.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-IW0124-018.0-20210429		
Lab Sample ID:	FA85173-11	**Date Sampled:**	04/29/21
Matrix:	AQ - Ground Water	**Date Received:**	04/30/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1A35210.D	1	05/13/21 01:37	LR	n/a	n/a	V1A1470
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone [b]	10 U	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK) [b]	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.67 U	2.0	0.67	ug/l	
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	0.50 U	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.32 U	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.28 U	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.22 U	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113	0.48 U	1.0	0.48	ug/l	
591-78-6	2-Hexanone [b]	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-IW0124-018.0-20210429		
Lab Sample ID:	FA85173-11	**Date Sampled:**	04/29/21
Matrix:	AQ - Ground Water	**Date Received:**	04/30/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	2.0 U	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.30 U	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	0.35 U	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	0.41 U	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		83-118%
17060-07-0	1,2-Dichloroethane-D4	98%		79-125%
2037-26-5	Toluene-D8	103%		85-112%
460-00-4	4-Bromofluorobenzene	100%		83-118%

(a) Sample was treated with an anti-foaming agent.
(b) Associated CCV outside of control limits low.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-IW0128-018.0-20210429		
Lab Sample ID:	FA85173-12	**Date Sampled:**	04/29/21
Matrix:	AQ - Ground Water	**Date Received:**	04/30/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1A35211.D	1	05/13/21 02:04	LR	n/a	n/a	V1A1470
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone [b]	10 U	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK) [b]	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.67 U	2.0	0.67	ug/l	
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	0.50 U	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.32 U	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.28 U	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.22 U	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113	0.48 U	1.0	0.48	ug/l	
591-78-6	2-Hexanone [b]	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-IW0128-018.0-20210429		
Lab Sample ID:	FA85173-12	**Date Sampled:**	04/29/21
Matrix:	AQ - Ground Water	**Date Received:**	04/30/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	2.0 U	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.30 U	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	0.35 U	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	0.41 U	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		83-118%
17060-07-0	1,2-Dichloroethane-D4	97%		79-125%
2037-26-5	Toluene-D8	103%		85-112%
460-00-4	4-Bromofluorobenzene	100%		83-118%

(a) Sample was treated with an anti-foaming agent.
(b) Associated CCV outside of control limits low.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-IW0142-024.0-20210429		
Lab Sample ID:	FA85173-13	**Date Sampled:**	04/29/21
Matrix:	AQ - Ground Water	**Date Received:**	04/30/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1A35212.D	1	05/13/21 02:30	LR	n/a	n/a	V1A1470
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone [b]	10 U	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK) [b]	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.67 U	2.0	0.67	ug/l	
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	0.50 U	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.32 U	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.28 U	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.22 U	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113	0.48 U	1.0	0.48	ug/l	
591-78-6	2-Hexanone [b]	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-IW0142-024.0-20210429		
Lab Sample ID:	FA85173-13	**Date Sampled:**	04/29/21
Matrix:	AQ - Ground Water	**Date Received:**	04/30/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	2.0 U	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.30 U	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	0.35 U	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	0.41 U	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		83-118%
17060-07-0	1,2-Dichloroethane-D4	91%		79-125%
2037-26-5	Toluene-D8	103%		85-112%
460-00-4	4-Bromofluorobenzene	100%		83-118%

(a) Sample was treated with an anti-foaming agent.
(b) Associated CCV outside of control limits low.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-IW0127-024.0-20210429		
Lab Sample ID:	FA85173-14	**Date Sampled:**	04/29/21
Matrix:	AQ - Ground Water	**Date Received:**	04/30/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1A35213.D	1	05/13/21 02:56	LR	n/a	n/a	V1A1470
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone [b]	10 U	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK) [b]	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.67 U	2.0	0.67	ug/l	
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	0.50 U	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.32 U	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.28 U	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.22 U	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113	0.48 U	1.0	0.48	ug/l	
591-78-6	2-Hexanone [b]	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-IW0127-024.0-20210429		
Lab Sample ID:	FA85173-14	**Date Sampled:**	04/29/21
Matrix:	AQ - Ground Water	**Date Received:**	04/30/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	2.0 U	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.30 U	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	0.35 U	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	0.41 U	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		83-118%
17060-07-0	1,2-Dichloroethane-D4	88%		79-125%
2037-26-5	Toluene-D8	104%		85-112%
460-00-4	4-Bromofluorobenzene	100%		83-118%

(a) Sample was treated with an anti-foaming agent.
(b) Associated CCV outside of control limits low.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-IW0141-024.0-20210429		
Lab Sample ID:	FA85173-15	**Date Sampled:**	04/29/21
Matrix:	AQ - Ground Water	**Date Received:**	04/30/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1A35214.D	1	05/13/21 03:22	LR	n/a	n/a	V1A1470
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone [b]	10 U	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK) [b]	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.67 U	2.0	0.67	ug/l	
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	0.50 U	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.32 U	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.28 U	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.22 U	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113	0.48 U	1.0	0.48	ug/l	
591-78-6	2-Hexanone [b]	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-IW0141-024.0-20210429		
Lab Sample ID:	FA85173-15	**Date Sampled:**	04/29/21
Matrix:	AQ - Ground Water	**Date Received:**	04/30/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	2.0 U	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.30 U	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	0.35 U	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	0.41 U	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	93%		83-118%
17060-07-0	1,2-Dichloroethane-D4	79%		79-125%
2037-26-5	Toluene-D8	106%		85-112%
460-00-4	4-Bromofluorobenzene	100%		83-118%

(a) Sample was treated with an anti-foaming agent.
(b) Associated CCV outside of control limits low.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-IW0057S-007.7-20210429		
Lab Sample ID:	FA85173-16	**Date Sampled:**	04/29/21
Matrix:	AQ - Ground Water	**Date Received:**	04/30/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1A35215.D	1	05/13/21 03:48	LR	n/a	n/a	V1A1470
Run #2 [b]	Y57344.D	1	05/14/21 22:35	SO	n/a	n/a	VY2382

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone [c]	10 U	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK) [c]	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.67 U	2.0	0.67	ug/l	
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	0.50 U	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.32 U	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.43	1.0	0.28	ug/l	I
156-60-5	trans-1,2-Dichloroethylene	0.22 U	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113	0.48 U	1.0	0.48	ug/l	
591-78-6	2-Hexanone [c]	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-IW0057S-007.7-20210429		
Lab Sample ID:	FA85173-16	**Date Sampled:**	04/29/21
Matrix:	AQ - Ground Water	**Date Received:**	04/30/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	2.0 U	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.30 U	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	0.35 U	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	0.41 U	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	92%	107%	83-118%
17060-07-0	1,2-Dichloroethane-D4	78% [d]	109%	79-125%
2037-26-5	Toluene-D8	106%	95%	85-112%
460-00-4	4-Bromofluorobenzene	102%	99%	83-118%

(a) Sample was treated with an anti-foaming agent. No ECC available for this run.
(b) Sample re-analyzed beyond hold time; reported results are considered minimum values. Confirmation run for surrogate recoveries.
(c) Associated CCV outside control limits low. Associated CCV outside of control limits low.
(d) Outside control limits. Confirmed by reanalysis.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

5

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

FA85173

Tetra Tech, Inc. CHAIN OF CUSTODY | NUMBER No. 2180 | PAGE 1 OF 2

PROJECT NO: 112G08985	FACILITY: ITSL-LC34	PROJECT MANAGER: Mark Sonnen	PHONE NUMBER: (412) 921-8622	LABORATORY NAME AND CONTACT: SGS - Andrea Colby
SAMPLERS (SIGNATURE): Chuck Sorden		FIELD OPERATIONS LEADER: Chuck Sorden	PHONE NUMBER: (321) 591-7580	ADDRESS: 4405 Vineland Rd. Ste. C-15
		CARRIER/WAYBILL NUMBER		CITY, STATE: Orlando, FL

STANDARD TAT ☒ RUSH TAT ☐ ☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G

PRESERVATIVE USED: HCl

TYPE OF ANALYSIS: VOA 260 SL

	DATE (YEAR 2021)	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	COMMENTS
1	04/28	1220	LC34-IW0133-018.0-20210428		13	23	GW	G	3	
2		1255	LC34-IW0132-018.0-20210428		13	23				
3		1325	LC34-IW0131-018.0-20210428		13	23				
4		1415	LC34-IW0129-018.0-20210428		13	23				
5		1440	LC34-IW0130-024.0-20210428		20	28				
6		1510	LC34-IW0125-018.0-20210428		13	23	GW			
7		1530	LC34-SW1001-000.5-20210428		0.0	0.5	SW			
8		1550	LC34-SW1002-000.5-20210428		0.0	0.5				
9	04/28	1610	LC34-SW1004-000.5-20210428		0.0	0.5	SW			Temp @ 1759 2°
10	04/29	1010	LC34-IW0108-024.0-20210429		20	28	GW			
11		1110	LC34-IW0124-018.0-20210429		13	23				
12		1150	LC34-IW0128-018.0-20210429		13	23				
13	04/29	1250	LC34-IW0142-024.0-20210429		20	28	GW	G	3	

INITIAL ASSESSMENT LABEL VERIFICATION

	DATE	TIME
1. RELINQUISHED BY	04/29/2021	1605
2. RELINQUISHED BY	4/29	1750
3. RELINQUISHED BY		

	DATE	TIME
1. RECEIVED BY	4/29	1605
2. RECEIVED BY	4/30/21	1000
3. RECEIVED BY		

COMMENTS: 0.4 JR4

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R FORM NO. TtNUS-001

5.1 5

FA85173: Chain of Custody
Page 1 of 3

FA85173

Tetra Tech, Inc. CHAIN OF CUSTODY | NUMBER No. 2181 | PAGE 2 OF 2

PROJECT NO: 112G08985	FACILITY: KSC-LC34	PROJECT MANAGER Mark Sonnet	PHONE NUMBER (412) 921-8622	LABORATORY NAME AND CONTACT: SGS - Andrew Colby
SAMPLERS (SIGNATURE) Chuck Sorden		FIELD OPERATIONS LEADER Chuck Sorden	PHONE NUMBER (321) 591-7580	ADDRESS 4405 Vineland Rd. Ste. C-15
		CARRIER/WAYBILL NUMBER		CITY, STATE Orlando, FL

STANDARD TAT ☒ RUSH TAT ☐ ☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G
PRESERVATIVE USED: 4°C
TYPE OF ANALYSIS: VOC 8260 SL

	DATE YEAR 2021	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS	COMMENTS
14	04/29	1345	LC34-IW0127-024.0-20210429		20	28	GW	G	3	X	
15	〃	1440	LC34-IW0141-024.0-20210429		20	28	〃	〃	〃	〃	
16	04/29	1530	LC34-~~IW0141-0~~ IW00575-0027-20210429		~~24~~ 4	11	GW	G	3	X	

Temp @ 1759 2°

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	04/29/2021	1605	1. RECEIVED BY JS	4/29	1605
2. RELINQUISHED BY JS	4/29	1752	2. RECEIVED BY		
3. RELINQUISHED BY			3. RECEIVED BY		

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY) 4/02R FORM NO. TtNUS-001

5.1 5

FA85173: Chain of Custody
Page 2 of 3

SGS Sample Receipt Summary

Job Number: FA85173 **Client:** TETRA TECH,INC **Project:** 112G08985

Date / Time Received: 4/30/2021 10:00:00 AM **Delivery Method:** FED EX **Airbill #'s:**

Therm ID: IR4; **Therm CF:** -0.8; **# of Coolers:** 1

Cooler Temps (Raw Measured) °C: Cooler 1: (1.2);

Cooler Temps (Corrected) °C: Cooler 1: (0.4);

Cooler Information	Y	or	N
1. Custody Seals Present	☑		☐
2. Custody Seals Intact	☑		☐
3. Temp criteria achieved	☑		☐
4. Cooler temp verification	IR Gun		
5. Cooler media	Ice (Bag)		

Trip Blank Information	Y	or	N	N/A
1. Trip Blank present / cooler	☐		☐	☑
2. Trip Blank listed on COC	☐		☐	☑

	W	or	S	N/A
3. Type Of TB Received	☐		☐	☑

Sample Information	Y	or	N	N/A
1. Sample labels present on bottles	☑		☐	
2. Samples preserved properly	☑		☐	
3. Sufficient volume/containers recvd for analysis:	☑		☐	
4. Condition of sample	Intact			
5. Sample recvd within HT	☑		☐	
6. Dates/Times/IDs on COC match Sample Label	☑		☐	
7. VOCs have headspace	☐		☑	☐
8. Bottles received for unspecified tests	☐		☑	
9. Compositing instructions clear	☐		☐	☑
10. Voa Soil Kits/Jars received past 48hrs?	☐		☐	☑
11. % Solids Jar received?	☐		☐	☑
12. Residual Chlorine Present?	☐		☐	☑

Misc. Information

Number of Encores: 25-Gram _____ 5-Gram _____ Number of 5035 Field Kits: _____ Number of Lab Filtered Metals: _____

Test Strip Lot #s: pH 0-3 230315 pH 10-12 219813A Other: (Specify) _____ _____

Residual Chlorine Test Strip Lot #: _____

Comments

SM001
Rev. Date 05/24/17

Technician: CARLOSD Date: 4/30/2021 10:00:00 A Reviewer: _____ Date: _____

FA85173: Chain of Custody
Page 3 of 3

MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: FA85173
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1467-MB	1A35150.D	1	05/11/21	CV	n/a	n/a	V1A1467

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA85173-1, FA85173-2, FA85173-3, FA85173-4, FA85173-5, FA85173-6, FA85173-7, FA85173-8, FA85173-9

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
71-43-2	Benzene	ND	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.24	ug/l	
75-25-2	Bromoform	ND	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	ND	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.67	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
110-82-7	Cyclohexane	ND	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.36	ug/l	
76-13-1	Freon 113	ND	1.0	0.48	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	ND	20	5.0	ug/l	
74-83-9	Methyl Bromide	ND	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	ND	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	ND	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.0	ug/l	

Method Blank Summary

Job Number: FA85173
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1467-MB	1A35150.D	1	05/11/21	CV	n/a	n/a	V1A1467

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA85173-1, FA85173-2, FA85173-3, FA85173-4, FA85173-5, FA85173-6, FA85173-7, FA85173-8, FA85173-9

CAS No.	Compound	Result	RL	MDL	Units	Q
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.23	ug/l	
100-42-5	Styrene	ND	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	93%	83-118%
17060-07-0	1,2-Dichloroethane-D4	101%	79-125%
2037-26-5	Toluene-D8	103%	85-112%
460-00-4	4-Bromofluorobenzene	96%	83-118%

Method Blank Summary

Job Number: FA85173
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1470-MB [a]	1A35207.D	1	05/13/21	LR	n/a	n/a	V1A1470

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA85173-10, FA85173-11, FA85173-12, FA85173-13, FA85173-14, FA85173-15, FA85173-16

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
71-43-2	Benzene	ND	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.24	ug/l	
75-25-2	Bromoform	ND	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	ND	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.67	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
110-82-7	Cyclohexane	ND	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.36	ug/l	
76-13-1	Freon 113	ND	1.0	0.48	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	ND	20	5.0	ug/l	
74-83-9	Methyl Bromide	ND	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	ND	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	ND	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.0	ug/l	

Method Blank Summary

Job Number: FA85173
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1470-MB [a]	1A35207.D	1	05/13/21	LR	n/a	n/a	V1A1470

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA85173-10, FA85173-11, FA85173-12, FA85173-13, FA85173-14, FA85173-15, FA85173-16

CAS No.	Compound	Result	RL	MDL	Units	Q
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.23	ug/l	
100-42-5	Styrene	ND	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	94%	83-118%
17060-07-0	1,2-Dichloroethane-D4	96%	79-125%
2037-26-5	Toluene-D8	103%	85-112%
460-00-4	4-Bromofluorobenzene	99%	83-118%

(a) Sample was treated with an anti-foaming agent.

Blank Spike Summary

Job Number: FA85173
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1467-BS	1A35148.D	1	05/11/21	CV	n/a	n/a	V1A1467

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA85173-1, FA85173-2, FA85173-3, FA85173-4, FA85173-5, FA85173-6, FA85173-7, FA85173-8, FA85173-9

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	112	90	50-147
71-43-2	Benzene	25	22.9	92	81-122
74-97-5	Bromochloromethane	25	20.9	84	76-123
75-27-4	Bromodichloromethane	25	24.9	100	79-123
75-25-2	Bromoform	25	24.7	99	66-123
78-93-3	2-Butanone (MEK)	125	111	89	56-143
75-15-0	Carbon Disulfide	25	18.6	74	66-148
56-23-5	Carbon Tetrachloride	25	24.5	98	76-136
108-90-7	Chlorobenzene	25	24.4	98	82-124
75-00-3	Chloroethane	25	24.5	98	62-144
67-66-3	Chloroform	25	22.8	91	80-124
110-82-7	Cyclohexane	25	23.1	92	73-138
124-48-1	Dibromochloromethane	25	24.8	99	78-122
96-12-8	1,2-Dibromo-3-chloropropane	25	25.6	102	64-123
106-93-4	1,2-Dibromoethane	25	24.3	97	75-120
75-71-8	Dichlorodifluoromethane	25	19.5	78	42-167
95-50-1	1,2-Dichlorobenzene	25	24.6	98	82-124
541-73-1	1,3-Dichlorobenzene	25	24.9	100	84-125
106-46-7	1,4-Dichlorobenzene	25	24.4	98	78-120
75-34-3	1,1-Dichloroethane	25	24.8	99	81-122
107-06-2	1,2-Dichloroethane	25	22.6	90	75-125
75-35-4	1,1-Dichloroethylene	25	22.5	90	78-137
156-59-2	cis-1,2-Dichloroethylene	25	23.6	94	78-120
156-60-5	trans-1,2-Dichloroethylene	25	23.7	95	76-127
78-87-5	1,2-Dichloropropane	25	23.7	95	76-124
10061-01-5	cis-1,3-Dichloropropene	25	23.0	92	75-118
10061-02-6	trans-1,3-Dichloropropene	25	27.0	108	80-120
100-41-4	Ethylbenzene	25	24.9	100	81-121
76-13-1	Freon 113	25	17.8	71* [a]	72-134
591-78-6	2-Hexanone	125	123	98	61-129
98-82-8	Isopropylbenzene	25	25.8	103	83-132
79-20-9	Methyl Acetate	125	112	90	65-126
74-83-9	Methyl Bromide	25	19.9	80	59-143
74-87-3	Methyl Chloride	25	21.8	87	50-159
75-09-2	Methylene Chloride	25	20.9	84	69-135
108-10-1	4-Methyl-2-pentanone (MIBK)	125	123	98	66-122

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA85173
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1467-BS	1A35148.D	1	05/11/21	CV	n/a	n/a	V1A1467

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA85173-1, FA85173-2, FA85173-3, FA85173-4, FA85173-5, FA85173-6, FA85173-7, FA85173-8, FA85173-9

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
1634-04-4	Methyl Tert Butyl Ether	25	20.4	82	72-117
100-42-5	Styrene	25	25.3	101	78-119
630-20-6	1,1,1,2-Tetrachloroethane	25	25.3	101	77-122
79-34-5	1,1,2,2-Tetrachloroethane	25	24.4	98	72-120
127-18-4	Tetrachloroethylene	25	25.3	101	76-135
108-88-3	Toluene	25	23.9	96	80-120
87-61-6	1,2,3-Trichlorobenzene	25	25.7	103	68-131
120-82-1	1,2,4-Trichlorobenzene	25	24.8	99	73-129
71-55-6	1,1,1-Trichloroethane	25	23.8	95	75-130
79-00-5	1,1,2-Trichloroethane	25	25.1	100	76-119
79-01-6	Trichloroethylene	25	23.1	92	81-126
75-69-4	Trichlorofluoromethane	25	22.8	91	71-156
75-01-4	Vinyl Chloride	25	23.6	94	69-159
1330-20-7	Xylene (total)	75	76.2	102	80-126

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	95%	83-118%
17060-07-0	1,2-Dichloroethane-D4	101%	79-125%
2037-26-5	Toluene-D8	105%	85-112%
460-00-4	4-Bromofluorobenzene	97%	83-118%

(a) Sporadic marginal failure.

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA85173
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1470-BS	1A35205.D	1	05/12/21	LR	n/a	n/a	V1A1470

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA85173-10, FA85173-11, FA85173-12, FA85173-13, FA85173-14, FA85173-15, FA85173-16

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	82.0	66	50-147
71-43-2	Benzene	25	27.2	109	81-122
74-97-5	Bromochloromethane	25	23.8	95	76-123
75-27-4	Bromodichloromethane	25	28.5	114	79-123
75-25-2	Bromoform	25	21.9	88	66-123
78-93-3	2-Butanone (MEK)	125	82.7	66	56-143
75-15-0	Carbon Disulfide	25	27.2	109	66-148
56-23-5	Carbon Tetrachloride	25	29.5	118	76-136
108-90-7	Chlorobenzene	25	27.0	108	82-124
75-00-3	Chloroethane	25	29.9	120	62-144
67-66-3	Chloroform	25	26.7	107	80-124
110-82-7	Cyclohexane	25	29.0	116	73-138
124-48-1	Dibromochloromethane	25	25.2	101	78-122
96-12-8	1,2-Dibromo-3-chloropropane	25	20.8	83	64-123
106-93-4	1,2-Dibromoethane	25	23.8	95	75-120
75-71-8	Dichlorodifluoromethane	25	20.8	83	42-167
95-50-1	1,2-Dichlorobenzene	25	26.5	106	82-124
541-73-1	1,3-Dichlorobenzene	25	26.7	107	84-125
106-46-7	1,4-Dichlorobenzene	25	26.3	105	78-120
75-34-3	1,1-Dichloroethane	25	29.9	120	81-122
107-06-2	1,2-Dichloroethane	25	25.2	101	75-125
75-35-4	1,1-Dichloroethylene	25	30.3	121	78-137
156-59-2	cis-1,2-Dichloroethylene	25	27.6	110	78-120
156-60-5	trans-1,2-Dichloroethylene	25	28.9	116	76-127
78-87-5	1,2-Dichloropropane	25	27.4	110	76-124
10061-01-5	cis-1,3-Dichloropropene	25	25.2	101	75-118
10061-02-6	trans-1,3-Dichloropropene	25	27.5	110	80-120
100-41-4	Ethylbenzene	25	27.8	111	81-121
76-13-1	Freon 113	25	25.0	100	72-134
591-78-6	2-Hexanone	125	90.1	72	61-129
98-82-8	Isopropylbenzene	25	28.0	112	83-132
79-20-9	Methyl Acetate	125	103	82	65-126
74-83-9	Methyl Bromide	25	27.0	108	59-143
74-87-3	Methyl Chloride	25	24.0	96	50-159
75-09-2	Methylene Chloride	25	26.3	105	69-135
108-10-1	4-Methyl-2-pentanone (MIBK)	125	97.7	78	66-122

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA85173
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1470-BS	1A35205.D	1	05/12/21	LR	n/a	n/a	V1A1470

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA85173-10, FA85173-11, FA85173-12, FA85173-13, FA85173-14, FA85173-15, FA85173-16

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
1634-04-4	Methyl Tert Butyl Ether	25	22.1	88	72-117
100-42-5	Styrene	25	27.4	110	78-119
630-20-6	1,1,1,2-Tetrachloroethane	25	27.7	111	77-122
79-34-5	1,1,2,2-Tetrachloroethane	25	22.1	88	72-120
127-18-4	Tetrachloroethylene	25	29.5	118	76-135
108-88-3	Toluene	25	27.0	108	80-120
87-61-6	1,2,3-Trichlorobenzene	25	25.4	102	68-131
120-82-1	1,2,4-Trichlorobenzene	25	25.6	102	73-129
71-55-6	1,1,1-Trichloroethane	25	28.1	112	75-130
79-00-5	1,1,2-Trichloroethane	25	25.7	103	76-119
79-01-6	Trichloroethylene	25	26.4	106	81-126
75-69-4	Trichlorofluoromethane	25	26.6	106	71-156
75-01-4	Vinyl Chloride	25	25.8	103	69-159
1330-20-7	Xylene (total)	75	83.7	112	80-126

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	96%	83-118%
17060-07-0	1,2-Dichloroethane-D4	101%	79-125%
2037-26-5	Toluene-D8	104%	85-112%
460-00-4	4-Bromofluorobenzene	97%	83-118%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA85173
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA85072-8MS	1A35161.D	20	05/11/21	CV	n/a	n/a	V1A1467
FA85072-8MSD	1A35162.D	20	05/11/21	CV	n/a	n/a	V1A1467
FA85072-8	1A35160.D	20	05/11/21	CV	n/a	n/a	V1A1467

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA85173-1, FA85173-2, FA85173-3, FA85173-4, FA85173-5, FA85173-6, FA85173-7, FA85173-8, FA85173-9

CAS No.	Compound	FA85072-8 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	500 U		2500	2120	85	2500	2130	85	0	50-147/21
71-43-2	Benzene	20 U		500	504	101	500	516	103	2	81-122/14
74-97-5	Bromochloromethane	20 U		500	441	88	500	458	92	4	76-123/14
75-27-4	Bromodichloromethane	20 U		500	513	103	500	533	107	4	79-123/19
75-25-2	Bromoform	20 U		500	433	87	500	475	95	9	66-123/21
78-93-3	2-Butanone (MEK)	100 U		2500	2130	85	2500	2160	86	1	56-143/18
75-15-0	Carbon Disulfide	40 U		500	488	98	500	508	102	4	66-148/23
56-23-5	Carbon Tetrachloride	20 U		500	529	106	500	547	109	3	76-136/23
108-90-7	Chlorobenzene	20 U		500	495	99	500	515	103	4	82-124/14
75-00-3	Chloroethane	40 U		500	485	97	500	512	102	5	62-144/20
67-66-3	Chloroform	20 U		500	489	98	500	502	100	3	80-124/15
110-82-7	Cyclohexane	20 U		500	534	107	500	550	110	3	73-138/18
124-48-1	Dibromochloromethane	20 U		500	471	94	500	496	99	5	78-122/19
96-12-8	1,2-Dibromo-3-chloropropane	100 U		500	500	100	500	531	106	6	64-123/18
106-93-4	1,2-Dibromoethane	40 U		500	489	98	500	512	102	5	75-120/13
75-71-8	Dichlorodifluoromethane	40 U		500	378	76	500	398	80	5	42-167/19
95-50-1	1,2-Dichlorobenzene	20 U		500	491	98	500	509	102	4	82-124/14
541-73-1	1,3-Dichlorobenzene	20 U		500	490	98	500	511	102	4	84-125/14
106-46-7	1,4-Dichlorobenzene	20 U		500	485	97	500	499	100	3	78-120/15
75-34-3	1,1-Dichloroethane	9.0	J	500	557	110	500	573	113	3	81-122/15
107-06-2	1,2-Dichloroethane	20 U		500	488	98	500	498	100	2	75-125/14
75-35-4	1,1-Dichloroethylene	339		500	883	109	500	901	112	2	78-137/18
156-59-2	cis-1,2-Dichloroethylene	20 U		500	500	100	500	519	104	4	78-120/15
156-60-5	trans-1,2-Dichloroethylene	20 U		500	526	105	500	545	109	4	76-127/17
78-87-5	1,2-Dichloropropane	20 U		500	500	100	500	514	103	3	76-124/14
10061-01-5	cis-1,3-Dichloropropene	20 U		500	466	93	500	482	96	3	75-118/23
10061-02-6	trans-1,3-Dichloropropene	20 U		500	529	106	500	553	111	4	80-120/22
100-41-4	Ethylbenzene	20 U		500	512	102	500	529	106	3	81-121/14
76-13-1	Freon 113	20 U		500	461	92	500	471	94	2	72-134/20
591-78-6	2-Hexanone	200 U		2500	2320	93	2500	2360	94	2	61-129/18
98-82-8	Isopropylbenzene	20 U		500	517	103	500	537	107	4	83-132/15
79-20-9	Methyl Acetate	400 U		2500	2550	102	2500	2630	105	3	65-126/18
74-83-9	Methyl Bromide	100 U		500	409	82	500	460	92	12	59-143/19
74-87-3	Methyl Chloride	40 U		500	428	86	500	457	91	7	50-159/19
75-09-2	Methylene Chloride	100 U		500	488	98	500	501	100	3	69-135/16
108-10-1	4-Methyl-2-pentanone (MIBK)	100 U		2500	2440	98	2500	2480	99	2	66-122/16

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA85173
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA85072-8MS	1A35161.D	20	05/11/21	CV	n/a	n/a	V1A1467
FA85072-8MSD	1A35162.D	20	05/11/21	CV	n/a	n/a	V1A1467
FA85072-8	1A35160.D	20	05/11/21	CV	n/a	n/a	V1A1467

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA85173-1, FA85173-2, FA85173-3, FA85173-4, FA85173-5, FA85173-6, FA85173-7, FA85173-8, FA85173-9

CAS No.	Compound	FA85072-8 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
1634-04-4	Methyl Tert Butyl Ether	20 U		500	437	87	500	453	91	4	72-117/14
100-42-5	Styrene	20 U		500	501	100	500	522	104	4	78-119/23
630-20-6	1,1,1,2-Tetrachloroethane	20 U		500	508	102	500	524	105	3	77-122/19
79-34-5	1,1,2,2-Tetrachloroethane	20 U		500	494	99	500	507	101	3	72-120/14
127-18-4	Tetrachloroethylene	20 U		500	515	103	500	535	107	4	76-135/16
108-88-3	Toluene	20 U		500	494	99	500	511	102	3	80-120/14
87-61-6	1,2,3-Trichlorobenzene	40 U		500	491	98	500	512	102	4	68-131/25
120-82-1	1,2,4-Trichlorobenzene	40 U		500	469	94	500	493	99	5	73-129/20
71-55-6	1,1,1-Trichloroethane	20 U		500	512	102	500	528	106	3	75-130/16
79-00-5	1,1,2-Trichloroethane	20 U		500	518	104	500	534	107	3	76-119/14
79-01-6	Trichloroethylene	20 U		500	495	99	500	510	102	3	81-126/15
75-69-4	Trichlorofluoromethane	40 U		500	469	94	500	479	96	2	71-156/21
75-01-4	Vinyl Chloride	20 U		500	453	91	500	485	97	7	69-159/18
1330-20-7	Xylene (total)	60 U		1500	1540	103	1500	1600	107	4	80-126/15

CAS No.	Surrogate Recoveries	MS	MSD	FA85072-8	Limits
1868-53-7	Dibromofluoromethane	95%	95%	94%	83-118%
17060-07-0	1,2-Dichloroethane-D4	106%	105%	102%	79-125%
2037-26-5	Toluene-D8	104%	104%	103%	85-112%
460-00-4	4-Bromofluorobenzene	95%	95%	95%	83-118%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA85173
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA85182-2MS [a]	1A35224.D	1	05/13/21	LR	n/a	n/a	V1A1470
FA85182-2MSD [a]	1A35225.D	1	05/13/21	LR	n/a	n/a	V1A1470
FA85182-2 [a]	1A35217.D	1	05/13/21	LR	n/a	n/a	V1A1470

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA85173-10, FA85173-11, FA85173-12, FA85173-13, FA85173-14, FA85173-15, FA85173-16

CAS No.	Compound	FA85182-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	25 U		125	51.8	41*	125	46.6	37*	11	50-147/21
71-43-2	Benzene	1.0 U		25	37.4	150*	25	32.1	128*	15*	81-122/14
74-97-5	Bromochloromethane	1.0 U		25	24.1	96	25	21.5	86	11	76-123/14
75-27-4	Bromodichloromethane	1.0 U		25	32.7	131*	25	28.8	115	13	79-123/19
75-25-2	Bromoform	1.0 U		25	16.0	64*	25	14.5	58*	10	66-123/21
78-93-3	2-Butanone (MEK)	5.0 U		125	45.9	37*	125	41.1	33*	11	56-143/18
75-15-0	Carbon Disulfide	2.0 U		25	40.0	160*	25	33.1	132	19	66-148/23
56-23-5	Carbon Tetrachloride	1.0 U		25	41.4	166*	25	35.9	144*	14	76-136/23
108-90-7	Chlorobenzene	1.0 U		25	37.1	148*	25	32.0	128*	15*	82-124/14
75-00-3	Chloroethane	2.0 U		25	120	480*	25	98.6	394*	20	62-144/20
67-66-3	Chloroform	1.0 U		25	36.2	145*	25	31.4	126*	14	80-124/15
110-82-7	Cyclohexane	1.0 U		25	38.8	155*	25	34.0	136	13	73-138/18
124-48-1	Dibromochloromethane	1.0 U		25	22.8	91	25	20.4	82	11	78-122/19
96-12-8	1,2-Dibromo-3-chloropropane	5.0 U		25	11.8	47*	25	11.0	44*	7	64-123/18
106-93-4	1,2-Dibromoethane	2.0 U		25	18.5	74*	25	16.6	66*	11	75-120/13
75-71-8	Dichlorodifluoromethane	2.0 U		25	30.1	120	25	26.4	106	13	42-167/19
95-50-1	1,2-Dichlorobenzene	1.0 U		25	33.3	133*	25	28.9	116	14	82-124/14
541-73-1	1,3-Dichlorobenzene	1.0 U		25	36.5	146*	25	31.6	126*	14	84-125/14
106-46-7	1,4-Dichlorobenzene	1.0 U		25	35.3	141*	25	30.5	122*	15	78-120/15
75-34-3	1,1-Dichloroethane	1.0 U		25	43.0	172*	25	36.9	148*	15	81-122/15
107-06-2	1,2-Dichloroethane	1.0 U		25	24.4	98	25	21.7	87	12	75-125/14
75-35-4	1,1-Dichloroethylene	1.0 U		25	41.7	167*	25	36.1	144*	14	78-137/18
156-59-2	cis-1,2-Dichloroethylene	1.0 U		25	34.7	139*	25	30.4	122*	13	78-120/15
156-60-5	trans-1,2-Dichloroethylene	1.0 U		25	39.9	160*	25	34.2	137*	15	76-127/17
78-87-5	1,2-Dichloropropane	1.0 U		25	33.6	134*	25	29.3	117	14	76-124/14
10061-01-5	cis-1,3-Dichloropropene	1.0 U		25	26.0	104	25	22.9	92	13	75-118/23
10061-02-6	trans-1,3-Dichloropropene	1.0 U		25	25.0	100	25	22.1	88	12	80-120/22
100-41-4	Ethylbenzene	1.0 U		25	40.1	160*	25	34.4	138*	15*	81-121/14
76-13-1	Freon 113	1.0 U		25	33.1	132	25	29.8	119	10	72-134/20
591-78-6	2-Hexanone	10 U		125	58.1	46*	125	56.8	45*	2	61-129/18
98-82-8	Isopropylbenzene	1.0 U		25	40.4	162*	25	35.3	141*	13	83-132/15
79-20-9	Methyl Acetate	20 U		125	75.1	60*	125	68.6	55*	9	65-126/18
74-83-9	Methyl Bromide	5.0 U		25	34.2	137	25	33.2	133	3	59-143/19
74-87-3	Methyl Chloride	2.0 U		25	36.1	144	25	31.9	128	12	50-159/19
75-09-2	Methylene Chloride	5.0 U		25	34.4	138*	25	29.4	118	16	69-135/16
108-10-1	4-Methyl-2-pentanone (MIBK)	5.0 U		125	65.9	53*	125	58.2	47*	12	66-122/16

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA85173
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA85182-2MS [a]	1A35224.D	1	05/13/21	LR	n/a	n/a	V1A1470
FA85182-2MSD [a]	1A35225.D	1	05/13/21	LR	n/a	n/a	V1A1470
FA85182-2 [a]	1A35217.D	1	05/13/21	LR	n/a	n/a	V1A1470

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA85173-10, FA85173-11, FA85173-12, FA85173-13, FA85173-14, FA85173-15, FA85173-16

CAS No.	Compound	FA85182-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
1634-04-4	Methyl Tert Butyl Ether	1.0 U		25	18.1	72	25	16.2	65*	11	72-117/14
100-42-5	Styrene	1.0 U		25	35.2	141*	25	30.4	122*	15	78-119/23
630-20-6	1,1,1,2-Tetrachloroethane	1.0 U		25	35.0	140*	25	30.5	122	14	77-122/19
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U		25	15.7	63*	25	14.0	56*	11	72-120/14
127-18-4	Tetrachloroethylene	1.0 U		25	68.4	274*	25	58.7	235*	15	76-135/16
108-88-3	Toluene	0.44	J	25	39.1	155*	25	33.5	132*	15*	80-120/14
87-61-6	1,2,3-Trichlorobenzene	2.0 U		25	14.5	58*	25	13.8	55*	5	68-131/25
120-82-1	1,2,4-Trichlorobenzene	2.0 U		25	21.8	87	25	20.3	81	7	73-129/20
71-55-6	1,1,1-Trichloroethane	1.0 U		25	39.7	159*	25	34.2	137*	15	75-130/16
79-00-5	1,1,2-Trichloroethane	1.0 U		25	23.0	92	25	20.0	80	14	76-119/14
79-01-6	Trichloroethylene	1.0 U		25	40.1	160*	25	34.3	137*	16*	81-126/15
75-69-4	Trichlorofluoromethane	2.0 U		25	47.9	192*	25	37.9	152	23*	71-156/21
75-01-4	Vinyl Chloride	1.0 U		25	37.3	149	25	33.2	133	12	69-159/18
1330-20-7	Xylene (total)	3.0 U		75	118	157*	75	102	136*	15	80-126/15

CAS No.	Surrogate Recoveries	MS	MSD	FA85182-2	Limits
1868-53-7	Dibromofluoromethane	88%	90%	93%	83-118%
17060-07-0	1,2-Dichloroethane-D4	72%* [b]	73%* [b]	78%* [b]	79-125%
2037-26-5	Toluene-D8	109%	109%	106%	85-112%
460-00-4	4-Bromofluorobenzene	94%	95%	101%	83-118%

(a) Sample was not preserved to a pH < 2. Sample was treated with an anti-foaming agent.
(b) Outside DOD QSM control limits.

* = Outside of Control Limits.

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

Tetra Tech NUS

NASA-LC 34, Freedom Rd, CCAFS, FL

112G08985

SGS Job Number: FA85181

Sampling Date: 04/30/21

Report to:

Tetra-Tech, Inc.
661 Andersen Dr Foster Plaza 7
Pittsburgh, PA 15220
mark.jonnet@tetratech.com

ATTN: Mark Jonnet

Total number of pages in report: **36**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Norm Farmer
Technical Director

Client Service contact: Andrea Colby 407-425-6700

Certifications: FL(E83510), LA(03051), KS(E-10327), NC(573), NJ(FL002), NY(12022), SC(96038001) DoD ELAP(ANAB L2229), AZ(AZ0806), CA(2937), TX(T104704404), PA(68-03573), VA(460177), AL, AK, AR, CT, IA, KY, MA, MI. MS, ND, NH, NV, OK, OR, UT, VT, WA, WV

Test results relate only to samples analyzed.

Sections: 1 2 3 4 5 6

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SGS North America Inc.

Sample Summary

Tetra Tech NUS

Job No: FA85181

NASA-LC 34, Freedom Rd, CCAFS, FL
Project No: 112G08985

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
FA85181-1	04/30/21	09:20	CS	04/30/21	AQ	Ground Water	LC34-IW0057I-025.5-20210430
FA85181-2	04/30/21	10:25	CS	04/30/21	AQ	Ground Water	LC34-IW0146-018.0-20210430
FA85181-3	04/30/21	11:15	CS	04/30/21	AQ	Ground Water	LC34-IW0147-024.0-20210430
FA85181-4	04/30/21	12:00	CS	04/30/21	AQ	Ground Water	LC34-IW0144-024.0-20210430
FA85181-5	04/30/21	12:25	CS	04/30/21	AQ	Ground Water	LC34-IW0145-031.5-20210430
FA85181-6	04/30/21	12:55	CS	04/30/21	AQ	Ground Water	LC34-IW0123-024.0-20210430
FA85181-7	04/30/21	13:40	CS	04/30/21	AQ	Ground Water	LC34-IW0143-024.0-20210430
FA85181-8	04/30/21	14:10	CS	04/30/21	AQ	Ground Water	LC34-IW0126-024.0-20210430
FA85181-9	04/30/21	15:25	CS	04/30/21	AQ	Ground Water	LC34-IW0045D2-110.0-20210430

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Tetra Tech NUS **Job No:** FA85181

Site: NASA-LC 34, Freedom Rd, CCAFS, FL **Report Date** 5/26/2021 6:24:11 PM

9 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were collected on 04/30/2021 and were received at SGS North America Inc - Orlando on 04/30/2021 properly preserved, at 1.8 Deg. C and intact. These Samples received an SGS Orlando job number of FA85181. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section. Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

MS Volatiles By Method SW846 8260B

Matrix: AQ **Batch ID:** V5E1299

All samples were analyzed within the recommended method holding time.

Sample(s) FA85181-9MS, FA85181-9MSD were used as the QC samples indicated.

All method blanks for this batch meet method specific criteria.

Blank Spike Recovery(s) for Acetone, Methyl Acetate are outside control limits.

Matrix Spike Recovery(s) for 1,1,1-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethylene, 1,2-Dichloroethane, Acetone, Methyl Acetate, Trichloroethylene are outside control limits. Outside control limits due to high level in sample relative to spike amount.

Matrix Spike Duplicate Recovery(s) for 1,1,1-Trichloroethane, 1,2-Dichloroethane, Carbon Tetrachloride, Trichloroethylene are outside control limits. Probable cause is due to matrix interference.

RPD(s) for MSD for 1,2,3-Trichlorobenzene, 2-Butanone (MEK), Acetone, Bromoform, Methyl Acetate are outside control limits for sample FA85181-9MSD. Probable cause is due to sample non-homogeneity.

Sample(s) FA85181-7, FA85181-9 have surrogates outside control limits.

FA85181-2 for Methyl Acetate: Associated BS recovery outside control limits high; however sample is ND.

FA85181-7 for Acetone: Associated CCV and BS recovery outside control limits high; however sample is ND. Associated CCV outside of control limits high, sample was ND.

FA85181-1 for 1,1,1-Trichloroethane: Associated CCV outside of control limits high, sample was ND.

FA85181-1 for Methyl Acetate: Associated BS recovery outside control limits high; however sample is ND.

FA85181-1 for Acetone: Associated BS recovery outside control limits high; however sample is ND. Associated CCV outside of control limits high, sample was ND.

FA85181-4 for Carbon Tetrachloride: Associated CCV outside of control limits high, sample was ND.

FA85181-7 for Carbon Tetrachloride: Associated CCV outside of control limits high, sample was ND. Associated CCV outside of control limits high, sample was ND.

FA85181-4 for 1,1,1-Trichloroethane: Associated CCV outside of control limits high, sample was ND.

FA85181-2 for Acetone: Associated BS recovery outside control limits high; however sample is ND. Associated CCV outside of control limits high, sample was ND.

FA85181-2 for 1,1,1-Trichloroethane: Associated CCV outside of control limits high, sample was ND.

FA85181-2 for Carbon Tetrachloride: Associated CCV outside of control limits high, sample was ND.

FA85181-2 for Trichlorofluoromethane: Associated CCV outside of control limits high, sample was ND.

FA85181-3 for Methyl Acetate: Associated BS recovery outside control limits high; however sample is ND.

FA85181-3 for Acetone: Associated BS recovery outside control limits high; however sample is ND. Associated CCV outside of control limits high, sample was ND.

FA85181-3 for 1,1,1-Trichloroethane: Associated CCV outside of control limits high, sample was ND.

FA85181-3 for Carbon Tetrachloride: Associated CCV outside of control limits high, sample was ND.

MS Volatiles By Method SW846 8260B

Matrix: AQ **Batch ID:** V5E1299

FA85181-3 for Trichlorofluoromethane: Associated CCV outside of control limits high, sample was ND.

FA85181-4 for Methyl Acetate: Associated BS recovery outside control limits high; however sample is ND.

FA85181-1 for Carbon Tetrachloride: Associated CCV outside of control limits high, sample was ND.

FA85181-7 for Trichlorofluoromethane: Associated CCV outside of control limits high, sample was ND. Associated CCV outside of control limits high, sample was ND.

FA85181-4 for Trichlorofluoromethane: Associated CCV outside of control limits high, sample was ND.

FA85181-5 for Methyl Acetate: Associated BS recovery outside control limits high; however sample is ND.

FA85181-5 for Acetone: Associated CCV and BS recovery outside control limits high; however sample is ND.

FA85181-5 for 1,1,1-Trichloroethane: Associated CCV outside of control limits high, sample was ND.

FA85181-5 for Carbon Tetrachloride: Associated CCV outside of control limits high, sample was ND.

FA85181-5 for Trichlorofluoromethane: Associated CCV outside of control limits high, sample was ND.

FA85181-6 for Methyl Acetate: Associated BS recovery outside control limits high; however sample is ND.

FA85181-6 for Acetone: Associated BS recovery outside control limits high; however sample is ND. Associated CCV outside of control limits high, sample was ND.

FA85181-6 for 1,1,1-Trichloroethane: Associated CCV outside of control limits high, sample was ND.

FA85181-6 for Carbon Tetrachloride: Associated CCV outside of control limits high, sample was ND.

FA85181-6 for Trichlorofluoromethane: Associated CCV outside of control limits high, sample was ND.

FA85181-7 for Methyl Acetate: Associated BS recovery outside control limits high; however sample is ND.

FA85181-9 for 1,2-Dichloroethane-D4: Outside control limits. Confirmed by reanalysis.

FA85181-1 for Trichlorofluoromethane: Associated CCV outside of control limits high, sample was ND.

FA85181-8 for Acetone: Associated BS recovery outside control limits high; however sample is ND. Associated CCV outside of control limits high, sample was ND.

FA85181-9 for Carbon Tetrachloride: Associated CCV outside of control limits high, sample was ND.

FA85181-9 for 1,1,1-Trichloroethane: Associated CCV outside of control limits high, sample was ND.

FA85181-9 for Acetone: Associated BS recovery outside control limits high; however sample is ND. Associated CCV outside of control limits high, sample was ND.

FA85181-9 for Methyl Acetate: Associated BS recovery outside control limits high; however sample is ND.

FA85181-8 for Trichlorofluoromethane: Associated CCV outside of control limits high, sample was ND.

FA85181-7 for 1,1,1-Trichloroethane: Associated CCV outside of control limits high, sample was ND. Associated CCV outside of control limits high, sample was ND.

FA85181-8 for 1,1,1-Trichloroethane: Associated CCV outside of control limits high, sample was ND.

FA85181-4 for Acetone: Associated CCV and BS recovery outside control limits high; however sample is ND.

FA85181-8 for Methyl Acetate: Associated BS recovery outside control limits high; however sample is ND.

FA85181-7 for 1,2-Dichloroethane-D4: Outside control limits. Confirmed by reanalysis.

FA85181-9 for Trichlorofluoromethane: Associated CCV outside of control limits high, sample was ND.

FA85181-8 for Carbon Tetrachloride: Associated CCV outside of control limits high, sample was ND.

Matrix: AQ **Batch ID:** VY2382

FA85181-6: Sample re-analyzed beyond hold time; reported results are considered minimum values. Confirmation run.

FA85181-7: Sample re-analyzed beyond hold time; reported results are considered minimum values. Confirmation run for surrogate recoveries.

FA85181-9: Sample re-analyzed beyond hold time; reported results are considered minimum values. Confirmation run.

SGS Orlando certifies that this report meets the project requirements for analytical data produced for the samples as received at SGS Orlando and as stated on the COC. SGS Orlando certifies that the data meets the Data Quality Objectives for precision,accuracy and completeness as specified in the SGS Orlando Quality Manual except as noted above. This report is to be used in its entirety. SGS Orlando is not responsible for any assumptions of data quality if partial data packages are used.

Summary of Hits

Job Number: FA85181
Account: Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL
Collected: 04/30/21

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	PQL	MDL	Units	Method
FA85181-1	**LC34-IW0057I-025.5-20210430**					
cis-1,2-Dichloroethylene		11.0	1.0	0.28	ug/l	SW846 8260B
trans-1,2-Dichloroethylene		3.5	1.0	0.22	ug/l	SW846 8260B
Vinyl Chloride		7.1	1.0	0.41	ug/l	SW846 8260B
FA85181-2	**LC34-IW0146-018.0-20210430**					
cis-1,2-Dichloroethylene		0.69 I	1.0	0.28	ug/l	SW846 8260B
FA85181-3	**LC34-IW0147-024.0-20210430**					
No hits reported in this sample.						
FA85181-4	**LC34-IW0144-024.0-20210430**					
cis-1,2-Dichloroethylene		5.2	1.0	0.28	ug/l	SW846 8260B
trans-1,2-Dichloroethylene		0.72 I	1.0	0.22	ug/l	SW846 8260B
FA85181-5	**LC34-IW0145-031.5-20210430**					
cis-1,2-Dichloroethylene		1.3	1.0	0.28	ug/l	SW846 8260B
Vinyl Chloride		1.5	1.0	0.41	ug/l	SW846 8260B
FA85181-6	**LC34-IW0123-024.0-20210430**					
cis-1,2-Dichloroethylene		90.7	2.0	0.55	ug/l	SW846 8260B
trans-1,2-Dichloroethylene		3.0	2.0	0.44	ug/l	SW846 8260B
Vinyl Chloride		25.5	2.0	0.82	ug/l	SW846 8260B
FA85181-7	**LC34-IW0143-024.0-20210430**					
cis-1,2-Dichloroethylene		5.9	1.0	0.28	ug/l	SW846 8260B
FA85181-8	**LC34-IW0126-024.0-20210430**					
No hits reported in this sample.						
FA85181-9	**LC34-IW0045D2-110.0-20210430**					
cis-1,2-Dichloroethylene		922	50	14	ug/l	SW846 8260B
trans-1,2-Dichloroethylene		27.0 I	50	11	ug/l	SW846 8260B
Trichloroethylene		2810	50	17	ug/l	SW846 8260B
Vinyl Chloride		166	50	20	ug/l	SW846 8260B

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	LC34-IW0057I-025.5-20210430		
Lab Sample ID:	FA85181-1	**Date Sampled:**	04/30/21
Matrix:	AQ - Ground Water	**Date Received:**	04/30/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5E28208.D	1	05/13/21 14:13	SO	n/a	n/a	V5E1299
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone [a]	10 U	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride [b]	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.67 U	2.0	0.67	ug/l	
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	0.50 U	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.32 U	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	11.0	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	3.5	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113	0.48 U	1.0	0.48	ug/l	
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate [c]	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-IW0057I-025.5-20210430		
Lab Sample ID:	FA85181-1	**Date Sampled:**	04/30/21
Matrix:	AQ - Ground Water	**Date Received:**	04/30/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	2.0 U	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.30 U	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane [b]	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	0.35 U	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane [b]	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	7.1	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	108%		83-118%
17060-07-0	1,2-Dichloroethane-D4	119%		79-125%
2037-26-5	Toluene-D8	98%		85-112%
460-00-4	4-Bromofluorobenzene	100%		83-118%

(a) Associated BS recovery outside control limits high; however sample is ND. Associated CCV outside of control limits high, sample was ND.
(b) Associated CCV outside of control limits high, sample was ND.
(c) Associated BS recovery outside control limits high; however sample is ND.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-IW0146-018.0-20210430		
Lab Sample ID:	FA85181-2	**Date Sampled:**	04/30/21
Matrix:	AQ - Ground Water	**Date Received:**	04/30/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5E28209.D	1	05/13/21 14:36	SO	n/a	n/a	V5E1299
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone [a]	10 U	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride [b]	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.67 U	2.0	0.67	ug/l	
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	0.50 U	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.32 U	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.69	1.0	0.28	ug/l	I
156-60-5	trans-1,2-Dichloroethylene	0.22 U	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113	0.48 U	1.0	0.48	ug/l	
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate [c]	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-IW0146-018.0-20210430		
Lab Sample ID:	FA85181-2	**Date Sampled:**	04/30/21
Matrix:	AQ - Ground Water	**Date Received:**	04/30/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	2.0 U	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.30 U	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane [b]	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	0.35 U	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane [b]	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	0.41 U	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%		83-118%
17060-07-0	1,2-Dichloroethane-D4	119%		79-125%
2037-26-5	Toluene-D8	97%		85-112%
460-00-4	4-Bromofluorobenzene	104%		83-118%

(a) Associated BS recovery outside control limits high; however sample is ND. Associated CCV outside of control limits high, sample was ND.
(b) Associated CCV outside of control limits high, sample was ND.
(c) Associated BS recovery outside control limits high; however sample is ND.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-IW0147-024.0-20210430		
Lab Sample ID:	FA85181-3	**Date Sampled:**	04/30/21
Matrix:	AQ - Ground Water	**Date Received:**	04/30/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5E28210.D	1	05/13/21 15:00	SO	n/a	n/a	V5E1299
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone [a]	10 U	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride [b]	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.67 U	2.0	0.67	ug/l	
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	0.50 U	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.32 U	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.28 U	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.22 U	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113	0.48 U	1.0	0.48	ug/l	
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate [c]	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-IW0147-024.0-20210430		
Lab Sample ID:	FA85181-3	**Date Sampled:**	04/30/21
Matrix:	AQ - Ground Water	**Date Received:**	04/30/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	2.0 U	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.30 U	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane [b]	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	0.35 U	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane [b]	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	0.41 U	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%		83-118%
17060-07-0	1,2-Dichloroethane-D4	120%		79-125%
2037-26-5	Toluene-D8	99%		85-112%
460-00-4	4-Bromofluorobenzene	100%		83-118%

(a) Associated BS recovery outside control limits high; however sample is ND. Associated CCV outside of control limits high, sample was ND.
(b) Associated CCV outside of control limits high, sample was ND.
(c) Associated BS recovery outside control limits high; however sample is ND.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-IW0144-024.0-20210430		
Lab Sample ID:	FA85181-4	**Date Sampled:**	04/30/21
Matrix:	AQ - Ground Water	**Date Received:**	04/30/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5E28211.D	1	05/13/21 15:23	SO	n/a	n/a	V5E1299
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone [a]	10 U	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride [b]	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.67 U	2.0	0.67	ug/l	
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	0.50 U	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.32 U	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	5.2	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.72	1.0	0.22	ug/l	I
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113	0.48 U	1.0	0.48	ug/l	
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate [c]	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-IW0144-024.0-20210430		
Lab Sample ID:	FA85181-4	**Date Sampled:**	04/30/21
Matrix:	AQ - Ground Water	**Date Received:**	04/30/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	2.0 U	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.30 U	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane [b]	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	0.35 U	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane [b]	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	0.41 U	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	108%		83-118%
17060-07-0	1,2-Dichloroethane-D4	122%		79-125%
2037-26-5	Toluene-D8	100%		85-112%
460-00-4	4-Bromofluorobenzene	101%		83-118%

(a) Associated CCV and BS recovery outside control limits high; however sample is ND.
(b) Associated CCV outside of control limits high, sample was ND.
(c) Associated BS recovery outside control limits high; however sample is ND.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-IW0145-031.5-20210430		
Lab Sample ID:	FA85181-5	**Date Sampled:**	04/30/21
Matrix:	AQ - Ground Water	**Date Received:**	04/30/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5E28212.D	1	05/13/21 15:47	SO	n/a	n/a	V5E1299
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone [a]	10 U	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride [b]	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.67 U	2.0	0.67	ug/l	
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	0.50 U	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.32 U	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	1.3	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.22 U	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113	0.48 U	1.0	0.48	ug/l	
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate [c]	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-IW0145-031.5-20210430		
Lab Sample ID:	FA85181-5	**Date Sampled:**	04/30/21
Matrix:	AQ - Ground Water	**Date Received:**	04/30/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	2.0 U	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.30 U	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane [b]	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	0.35 U	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane [b]	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	1.5	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	110%		83-118%
17060-07-0	1,2-Dichloroethane-D4	123%		79-125%
2037-26-5	Toluene-D8	98%		85-112%
460-00-4	4-Bromofluorobenzene	100%		83-118%

(a) Associated CCV and BS recovery outside control limits high; however sample is ND.
(b) Associated CCV outside of control limits high, sample was ND.
(c) Associated BS recovery outside control limits high; however sample is ND.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-IW0123-024.0-20210430		
Lab Sample ID:	FA85181-6	**Date Sampled:**	04/30/21
Matrix:	AQ - Ground Water	**Date Received:**	04/30/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	Y57341.D	1	05/14/21 21:10	SO	n/a	n/a	VY2382
Run #2	5E28213.D	2	05/13/21 16:11	SO	n/a	n/a	V5E1299

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone [b]	20 U [c]	50	20	ug/l	
71-43-2	Benzene	0.62 U [c]	2.0	0.62	ug/l	
74-97-5	Bromochloromethane	0.90 U [c]	2.0	0.90	ug/l	
75-27-4	Bromodichloromethane	0.48 U [c]	2.0	0.48	ug/l	
75-25-2	Bromoform	0.81 U [c]	2.0	0.81	ug/l	
78-93-3	2-Butanone (MEK)	4.0 U [c]	10	4.0	ug/l	
75-15-0	Carbon Disulfide	1.1 U [c]	4.0	1.1	ug/l	
56-23-5	Carbon Tetrachloride [d]	0.71 U [c]	2.0	0.71	ug/l	
108-90-7	Chlorobenzene	0.40 U [c]	2.0	0.40	ug/l	
75-00-3	Chloroethane	1.3 U [c]	4.0	1.3	ug/l	
67-66-3	Chloroform	0.60 U [c]	2.0	0.60	ug/l	
110-82-7	Cyclohexane	0.78 U [c]	2.0	0.78	ug/l	
124-48-1	Dibromochloromethane	0.55 U [c]	2.0	0.55	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	2.1 U [c]	10	2.1	ug/l	
106-93-4	1,2-Dibromoethane	0.55 U [c]	4.0	0.55	ug/l	
75-71-8	Dichlorodifluoromethane	1.0 U [c]	4.0	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	0.65 U [c]	2.0	0.65	ug/l	
541-73-1	1,3-Dichlorobenzene	0.43 U [c]	2.0	0.43	ug/l	
106-46-7	1,4-Dichlorobenzene	0.51 U [c]	2.0	0.51	ug/l	
75-34-3	1,1-Dichloroethane	0.68 U [c]	2.0	0.68	ug/l	
107-06-2	1,2-Dichloroethane	0.62 U [c]	2.0	0.62	ug/l	
75-35-4	1,1-Dichloroethylene	0.64 U [c]	2.0	0.64	ug/l	
156-59-2	cis-1,2-Dichloroethylene	90.7 [c]	2.0	0.55	ug/l	
156-60-5	trans-1,2-Dichloroethylene	3.0 [c]	2.0	0.44	ug/l	
78-87-5	1,2-Dichloropropane	0.85 U [c]	2.0	0.85	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.58 U [c]	2.0	0.58	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.43 U [c]	2.0	0.43	ug/l	
100-41-4	Ethylbenzene	0.71 U [c]	2.0	0.71	ug/l	
76-13-1	Freon 113	0.96 U [c]	2.0	0.96	ug/l	
591-78-6	2-Hexanone	4.0 U [c]	20	4.0	ug/l	
98-82-8	Isopropylbenzene	0.44 U [c]	2.0	0.44	ug/l	
79-20-9	Methyl Acetate [e]	10 U [c]	40	10	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-IW0123-024.0-20210430		
Lab Sample ID:	FA85181-6	**Date Sampled:**	04/30/21
Matrix:	AQ - Ground Water	**Date Received:**	04/30/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	4.0 U [c]	10	4.0	ug/l	
74-87-3	Methyl Chloride	1.0 U [c]	4.0	1.0	ug/l	
75-09-2	Methylene Chloride	4.0 U [c]	10	4.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	2.0 U [c]	10	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.46 U [c]	2.0	0.46	ug/l	
100-42-5	Styrene	0.44 U [c]	2.0	0.44	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.55 U [c]	2.0	0.55	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.60 U [c]	2.0	0.60	ug/l	
127-18-4	Tetrachloroethylene	0.43 U [c]	2.0	0.43	ug/l	
108-88-3	Toluene	0.60 U [c]	2.0	0.60	ug/l	
87-61-6	1,2,3-Trichlorobenzene	1.2 U [c]	4.0	1.2	ug/l	
120-82-1	1,2,4-Trichlorobenzene	1.0 U [c]	4.0	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane [d]	0.50 U [c]	2.0	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	0.93 U [c]	2.0	0.93	ug/l	
79-01-6	Trichloroethylene	0.69 U [c]	2.0	0.69	ug/l	
75-69-4	Trichlorofluoromethane [d]	1.0 U [c]	4.0	1.0	ug/l	
75-01-4	Vinyl Chloride	25.5 [c]	2.0	0.82	ug/l	
1330-20-7	Xylene (total)	1.4 U [c]	6.0	1.4	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%	109%	83-118%
17060-07-0	1,2-Dichloroethane-D4	107%	123%	79-125%
2037-26-5	Toluene-D8	96%	99%	85-112%
460-00-4	4-Bromofluorobenzene	101%	98%	83-118%

(a) Sample re-analyzed beyond hold time; reported results are considered minimum values. Confirmation run.
(b) Associated BS recovery outside control limits high; however sample is ND. Associated CCV outside of control limits high, sample was ND.
(c) Result is from Run# 2
(d) Associated CCV outside of control limits high, sample was ND.
(e) Associated BS recovery outside control limits high; however sample is ND.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-IW0143-024.0-20210430		
Lab Sample ID:	FA85181-7	**Date Sampled:**	04/30/21
Matrix:	AQ - Ground Water	**Date Received:**	04/30/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5E28214.D	1	05/13/21 16:34	SO	n/a	n/a	V5E1299
Run #2 [a]	Y57342.D	1	05/14/21 21:38	SO	n/a	n/a	VY2382

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone [b]	10 U	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride [c]	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.67 U	2.0	0.67	ug/l	
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	0.50 U	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.32 U	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	5.9	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.22 U	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113	0.48 U	1.0	0.48	ug/l	
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate [d]	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-IW0143-024.0-20210430		
Lab Sample ID:	FA85181-7	**Date Sampled:**	04/30/21
Matrix:	AQ - Ground Water	**Date Received:**	04/30/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	2.0 U	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.30 U	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane [c]	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	0.35 U	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane [c]	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	0.41 U	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	110%	104%	83-118%
17060-07-0	1,2-Dichloroethane-D4	126% [e]	107%	79-125%
2037-26-5	Toluene-D8	98%	96%	85-112%
460-00-4	4-Bromofluorobenzene	98%	102%	83-118%

(a) Sample re-analyzed beyond hold time; reported results are considered minimum values. Confirmation run for surrogate recoveries.
(b) Associated CCV and BS recovery outside control limits high; however sample is ND. Associated CCV outside of control limits high, sample was ND.
(c) Associated CCV outside of control limits high, sample was ND. Associated CCV outside of control limits high, sample was ND.
(d) Associated BS recovery outside control limits high; however sample is ND.
(e) Outside control limits. Confirmed by reanalysis.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-IW0126-024.0-20210430		
Lab Sample ID:	FA85181-8	**Date Sampled:**	04/30/21
Matrix:	AQ - Ground Water	**Date Received:**	04/30/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5E28215.D	1	05/13/21 16:58	SO	n/a	n/a	V5E1299
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone [a]	10 U	25	10	ug/l	
71-43-2	Benzene	0.31 U	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	0.45 U	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	0.24 U	1.0	0.24	ug/l	
75-25-2	Bromoform	0.41 U	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	2.0 U	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	0.53 U	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride [b]	0.36 U	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.67 U	2.0	0.67	ug/l	
67-66-3	Chloroform	0.30 U	1.0	0.30	ug/l	
110-82-7	Cyclohexane	0.39 U	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	0.28 U	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.28 U	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	0.50 U	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.32 U	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.26 U	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.34 U	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.31 U	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.32 U	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.28 U	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.22 U	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.43 U	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.29 U	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.36 U	1.0	0.36	ug/l	
76-13-1	Freon 113	0.48 U	1.0	0.48	ug/l	
591-78-6	2-Hexanone	2.0 U	10	2.0	ug/l	
98-82-8	Isopropylbenzene	0.22 U	1.0	0.22	ug/l	
79-20-9	Methyl Acetate [c]	5.0 U	20	5.0	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-IW0126-024.0-20210430		
Lab Sample ID:	FA85181-8	**Date Sampled:**	04/30/21
Matrix:	AQ - Ground Water	**Date Received:**	04/30/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	2.0 U	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	0.50 U	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	2.0 U	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.23 U	1.0	0.23	ug/l	
100-42-5	Styrene	0.22 U	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.28 U	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.22 U	1.0	0.22	ug/l	
108-88-3	Toluene	0.30 U	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.61 U	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane [b]	0.25 U	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.47 U	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	0.35 U	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane [b]	0.50 U	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	0.41 U	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	0.72 U	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	109%		83-118%
17060-07-0	1,2-Dichloroethane-D4	125%		79-125%
2037-26-5	Toluene-D8	98%		85-112%
460-00-4	4-Bromofluorobenzene	98%		83-118%

(a) Associated BS recovery outside control limits high; however sample is ND. Associated CCV outside of control limits high, sample was ND.
(b) Associated CCV outside of control limits high, sample was ND.
(c) Associated BS recovery outside control limits high; however sample is ND.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-IW0045D2-110.0-20210430		
Lab Sample ID:	FA85181-9	**Date Sampled:**	04/30/21
Matrix:	AQ - Ground Water	**Date Received:**	04/30/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5E28216.D	50	05/13/21 17:21	SO	n/a	n/a	V5E1299
Run #2 [a]	Y57343.D	50	05/14/21 22:07	SO	n/a	n/a	VY2382

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
67-64-1	Acetone [b]	500 U	1300	500	ug/l	
71-43-2	Benzene	16 U	50	16	ug/l	
74-97-5	Bromochloromethane	23 U	50	23	ug/l	
75-27-4	Bromodichloromethane	12 U	50	12	ug/l	
75-25-2	Bromoform	20 U	50	20	ug/l	
78-93-3	2-Butanone (MEK)	100 U	250	100	ug/l	
75-15-0	Carbon Disulfide	27 U	100	27	ug/l	
56-23-5	Carbon Tetrachloride [c]	18 U	50	18	ug/l	
108-90-7	Chlorobenzene	10 U	50	10	ug/l	
75-00-3	Chloroethane	33 U	100	33	ug/l	
67-66-3	Chloroform	15 U	50	15	ug/l	
110-82-7	Cyclohexane	20 U	50	20	ug/l	
124-48-1	Dibromochloromethane	14 U	50	14	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	52 U	250	52	ug/l	
106-93-4	1,2-Dibromoethane	14 U	100	14	ug/l	
75-71-8	Dichlorodifluoromethane	25 U	100	25	ug/l	
95-50-1	1,2-Dichlorobenzene	16 U	50	16	ug/l	
541-73-1	1,3-Dichlorobenzene	11 U	50	11	ug/l	
106-46-7	1,4-Dichlorobenzene	13 U	50	13	ug/l	
75-34-3	1,1-Dichloroethane	17 U	50	17	ug/l	
107-06-2	1,2-Dichloroethane	16 U	50	16	ug/l	
75-35-4	1,1-Dichloroethylene	16 U	50	16	ug/l	
156-59-2	cis-1,2-Dichloroethylene	922	50	14	ug/l	
156-60-5	trans-1,2-Dichloroethylene	27.0	50	11	ug/l	I
78-87-5	1,2-Dichloropropane	21 U	50	21	ug/l	
10061-01-5	cis-1,3-Dichloropropene	15 U	50	15	ug/l	
10061-02-6	trans-1,3-Dichloropropene	11 U	50	11	ug/l	
100-41-4	Ethylbenzene	18 U	50	18	ug/l	
76-13-1	Freon 113	24 U	50	24	ug/l	
591-78-6	2-Hexanone	100 U	500	100	ug/l	
98-82-8	Isopropylbenzene	11 U	50	11	ug/l	
79-20-9	Methyl Acetate [d]	250 U	1000	250	ug/l	

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	LC34-IW0045D2-110.0-20210430		
Lab Sample ID:	FA85181-9	**Date Sampled:**	04/30/21
Matrix:	AQ - Ground Water	**Date Received:**	04/30/21
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	NASA-LC 34, Freedom Rd, CCAFS, FL		

VOA Special List

CAS No.	Compound	Result	PQL	MDL	Units	Q
74-83-9	Methyl Bromide	100 U	250	100	ug/l	
74-87-3	Methyl Chloride	25 U	100	25	ug/l	
75-09-2	Methylene Chloride	100 U	250	100	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	50 U	250	50	ug/l	
1634-04-4	Methyl Tert Butyl Ether	11 U	50	11	ug/l	
100-42-5	Styrene	11 U	50	11	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	14 U	50	14	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	15 U	50	15	ug/l	
127-18-4	Tetrachloroethylene	11 U	50	11	ug/l	
108-88-3	Toluene	15 U	50	15	ug/l	
87-61-6	1,2,3-Trichlorobenzene	31 U	100	31	ug/l	
120-82-1	1,2,4-Trichlorobenzene	25 U	100	25	ug/l	
71-55-6	1,1,1-Trichloroethane [c]	12 U	50	12	ug/l	
79-00-5	1,1,2-Trichloroethane	23 U	50	23	ug/l	
79-01-6	Trichloroethylene	2810	50	17	ug/l	
75-69-4	Trichlorofluoromethane [c]	25 U	100	25	ug/l	
75-01-4	Vinyl Chloride	166	50	20	ug/l	
1330-20-7	Xylene (total)	36 U	150	36	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	110%	108%	83-118%
17060-07-0	1,2-Dichloroethane-D4	128% [e]	108%	79-125%
2037-26-5	Toluene-D8	97%	95%	85-112%
460-00-4	4-Bromofluorobenzene	100%	99%	83-118%

(a) Sample re-analyzed beyond hold time; reported results are considered minimum values. Confirmation run.
(b) Associated BS recovery outside control limits high; however sample is ND. Associated CCV outside of control limits high, sample was ND.
(c) Associated CCV outside of control limits high, sample was ND.
(d) Associated BS recovery outside control limits high; however sample is ND.
(e) Outside control limits. Confirmed by reanalysis.

U = Not detected MDL = Method Detection Limit I = Result > = MDL but < PQL J = Estimated value
PQL = Practical Quantitation Limit V = Indicates analyte found in associated method blank
L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

5

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

FA85181

Tetra Tech, Inc. CHAIN OF CUSTODY | NUMBER No. 2182 | PAGE 1 OF 1

PROJECT NO: 112G08985	FACILITY: KSC-LC34	PROJECT MANAGER Mark Jonnet	PHONE NUMBER (412) 921-8622	LABORATORY NAME AND CONTACT: SGS — Andrew Colby
SAMPLERS (SIGNATURE) Chuck Serden		FIELD OPERATIONS LEADER Chuck Serden	PHONE NUMBER (321) 591-7580	ADDRESS 4405 Vineland Rd. Ste. C-15
		CARRIER/WAYBILL NUMBER		CITY, STATE Orlando, FL

STANDARD TAT ☒ RUSH TAT ☐ ☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

	DATE YEAR	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	CONTAINER TYPE PLASTIC (P) or GLASS (G): G	PRESERVATIVE USED: HCl	TYPE OF ANALYSIS: V8260 SL	COMMENTS
1	04/30/2021	0920	LC34-IW0057I-025.5-202	0430	23	28	GW	G	3			X	
2	"	1025	LC34-IW0146-018.0-202	0430	13	23	"	"	"			"	
3		1115	LC34-IW0147-024.0-202	0430	20	28							
4		1200	LC34-IW0144-024.0-202	0430	20	28							INITIAL ASSESSMENT LABEL VERIFIED BB 4/30/21
5		1225	LC34-IW0145-031.5-202	0430	29	34							
6		1255	LC34-IW0123-024.0-202	0430	20	28							
7		1340	LC34-IW0143-024.0-202	0430	20	28							
8	V	1410	LC34-IW0126-024.0-202	0430	20	28	V	V	V			V	
9	04/30/2021	1525	LC34-IW0045D2-110.0-202	0430	105	115	GW	G	3			X	

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	04/30/2021	1605	1. RECEIVED BY JS	4/30	1605
2. RELINQUISHED BY JS	4/30	1709	2. RECEIVED BY		1709 4/30/21
3. RELINQUISHED BY			3. RECEIVED BY		

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY) 4/02R FORM NO. TtNUS-001

1.8 IR#4

5.1 5

FA85181: Chain of Custody
Page 1 of 2

SGS Sample Receipt Summary

Job Number: FA85181 **Client:** TETRA TECH **Project:** 112G08985

Date / Time Received: 4/30/2021 5:09:00 PM **Delivery Method:** COURIER **Airbill #'s:**

Therm ID: IR 1; **Therm CF:** -1.8; **# of Coolers:** 1

Cooler Temps (Raw Measured) °C: Cooler 1: (3.6);

Cooler Temps (Corrected) °C: Cooler 1: (1.8);

Cooler Information	Y	or	N
1. Custody Seals Present	☑		☐
2. Custody Seals Intact	☑		☐
3. Temp criteria achieved	☑		☐
4. Cooler temp verification	IR Gun		
5. Cooler media	Ice (Bag)		

Trip Blank Information	Y	or	N	N/A
1. Trip Blank present / cooler	☐		☐	☑
2. Trip Blank listed on COC	☐		☐	☑

	W	or	S	N/A
3. Type Of TB Received	☐		☐	☑

Sample Information	Y	or	N	N/A
1. Sample labels present on bottles	☑		☐	
2. Samples preserved properly	☑		☐	
3. Sufficient volume/containers recvd for analysis:	☑		☐	
4. Condition of sample	Intact			
5. Sample recvd within HT	☑		☐	
6. Dates/Times/IDs on COC match Sample Label	☑		☐	
7. VOCs have headspace	☐		☑	☐
8. Bottles received for unspecified tests	☐		☑	
9. Compositing instructions clear	☐		☐	☑
10. Voa Soil Kits/Jars received past 48hrs?	☐		☐	☑
11. % Solids Jar received?	☐		☐	☑
12. Residual Chlorine Present?	☐		☐	☑

Misc. Information

Number of Encores: 25-Gram _____ 5-Gram _____ Number of 5035 Field Kits: _____ Number of Lab Filtered Metals: _____

Test Strip Lot #s: pH 0-3 230315 pH 10-12 219813A Other: (Specify) _____ _____

Residual Chlorine Test Strip Lot #: _____

Comments

SM001
Rev. Date 05/24/17

Technician: NATHANS Date: 4/30/2021 5:09:00 PM Reviewer: _____ Date: _____

5.1

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FA85181: Chain of Custody
Page 2 of 2

MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: FA85181
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5E1299-MB	5E28205.D	1	05/13/21	SO	n/a	n/a	V5E1299

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA85181-1, FA85181-2, FA85181-3, FA85181-4, FA85181-5, FA85181-6, FA85181-7, FA85181-8, FA85181-9

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
71-43-2	Benzene	ND	1.0	0.31	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.24	ug/l	
75-25-2	Bromoform	ND	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	ND	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.67	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
110-82-7	Cyclohexane	ND	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.36	ug/l	
76-13-1	Freon 113	ND	1.0	0.48	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	ND	20	5.0	ug/l	
74-83-9	Methyl Bromide	ND	5.0	2.0	ug/l	
74-87-3	Methyl Chloride	ND	2.0	0.50	ug/l	
75-09-2	Methylene Chloride	ND	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.0	ug/l	

Method Blank Summary

Job Number: FA85181
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5E1299-MB	5E28205.D	1	05/13/21	SO	n/a	n/a	V5E1299

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA85181-1, FA85181-2, FA85181-3, FA85181-4, FA85181-5, FA85181-6, FA85181-7, FA85181-8, FA85181-9

CAS No.	Compound	Result	RL	MDL	Units	Q
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.23	ug/l	
100-42-5	Styrene	ND	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	105%	83-118%
17060-07-0	1,2-Dichloroethane-D4	115%	79-125%
2037-26-5	Toluene-D8	97%	85-112%
460-00-4	4-Bromofluorobenzene	99%	83-118%

Blank Spike Summary

Job Number: FA85181
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5E1299-BS	5E28202.D	1	05/13/21	SO	n/a	n/a	V5E1299

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA85181-1, FA85181-2, FA85181-3, FA85181-4, FA85181-5, FA85181-6, FA85181-7, FA85181-8, FA85181-9

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	230	184*	50-147
71-43-2	Benzene	25	24.1	96	81-122
74-97-5	Bromochloromethane	25	23.7	95	76-123
75-27-4	Bromodichloromethane	25	27.0	108	79-123
75-25-2	Bromoform	25	23.5	94	66-123
78-93-3	2-Butanone (MEK)	125	153	122	56-143
75-15-0	Carbon Disulfide	25	21.3	85	66-148
56-23-5	Carbon Tetrachloride	25	29.2	117	76-136
108-90-7	Chlorobenzene	25	23.7	95	82-124
75-00-3	Chloroethane	25	23.4	94	62-144
67-66-3	Chloroform	25	25.9	104	80-124
110-82-7	Cyclohexane	25	25.0	100	73-138
124-48-1	Dibromochloromethane	25	24.7	99	78-122
96-12-8	1,2-Dibromo-3-chloropropane	25	25.9	104	64-123
106-93-4	1,2-Dibromoethane	25	23.7	95	75-120
75-71-8	Dichlorodifluoromethane	25	21.9	88	42-167
95-50-1	1,2-Dichlorobenzene	25	23.8	95	82-124
541-73-1	1,3-Dichlorobenzene	25	24.2	97	84-125
106-46-7	1,4-Dichlorobenzene	25	23.5	94	78-120
75-34-3	1,1-Dichloroethane	25	27.2	109	81-122
107-06-2	1,2-Dichloroethane	25	26.5	106	75-125
75-35-4	1,1-Dichloroethylene	25	28.3	113	78-137
156-59-2	cis-1,2-Dichloroethylene	25	25.6	102	78-120
156-60-5	trans-1,2-Dichloroethylene	25	26.9	108	76-127
78-87-5	1,2-Dichloropropane	25	23.7	95	76-124
10061-01-5	cis-1,3-Dichloropropene	25	23.5	94	75-118
10061-02-6	trans-1,3-Dichloropropene	25	25.4	102	80-120
100-41-4	Ethylbenzene	25	24.3	97	81-121
76-13-1	Freon 113	25	22.8	91	72-134
591-78-6	2-Hexanone	125	124	99	61-129
98-82-8	Isopropylbenzene	25	25.8	103	83-132
79-20-9	Methyl Acetate	125	164	131*	65-126
74-83-9	Methyl Bromide	25	23.5	94	59-143
74-87-3	Methyl Chloride	25	19.3	77	50-159
75-09-2	Methylene Chloride	25	25.2	101	69-135
108-10-1	4-Methyl-2-pentanone (MIBK)	125	121	97	66-122

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA85181
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5E1299-BS	5E28202.D	1	05/13/21	SO	n/a	n/a	V5E1299

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA85181-1, FA85181-2, FA85181-3, FA85181-4, FA85181-5, FA85181-6, FA85181-7, FA85181-8, FA85181-9

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
1634-04-4	Methyl Tert Butyl Ether	25	24.1	96	72-117
100-42-5	Styrene	25	24.7	99	78-119
630-20-6	1,1,1,2-Tetrachloroethane	25	25.4	102	77-122
79-34-5	1,1,2,2-Tetrachloroethane	25	22.2	89	72-120
127-18-4	Tetrachloroethylene	25	25.7	103	76-135
108-88-3	Toluene	25	22.9	92	80-120
87-61-6	1,2,3-Trichlorobenzene	25	26.6	106	68-131
120-82-1	1,2,4-Trichlorobenzene	25	26.7	107	73-129
71-55-6	1,1,1-Trichloroethane	25	28.1	112	75-130
79-00-5	1,1,2-Trichloroethane	25	22.9	92	76-119
79-01-6	Trichloroethylene	25	25.1	100	81-126
75-69-4	Trichlorofluoromethane	25	30.2	121	71-156
75-01-4	Vinyl Chloride	25	23.2	93	69-159
1330-20-7	Xylene (total)	75	75.1	100	80-126

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	107%	83-118%
17060-07-0	1,2-Dichloroethane-D4	114%	79-125%
2037-26-5	Toluene-D8	99%	85-112%
460-00-4	4-Bromofluorobenzene	99%	83-118%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA85181
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA85181-9MS	5E28225.D	50	05/13/21	SO	n/a	n/a	V5E1299
FA85181-9MSD	5E28226.D	50	05/13/21	SO	n/a	n/a	V5E1299
FA85181-9	5E28216.D	50	05/13/21	SO	n/a	n/a	V5E1299

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA85181-1, FA85181-2, FA85181-3, FA85181-4, FA85181-5, FA85181-6, FA85181-7, FA85181-8, FA85181-9

CAS No.	Compound	FA85181-9 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	1300 U		6250	11800	189*	6250	6760	108	54*	50-147/21
71-43-2	Benzene	50 U		1250	1310	105	1250	1330	106	2	81-122/14
74-97-5	Bromochloromethane	50 U		1250	1320	106	1250	1270	102	4	76-123/14
75-27-4	Bromodichloromethane	50 U		1250	1350	108	1250	1440	115	6	79-123/19
75-25-2	Bromoform	50 U		1250	830	66	1250	1030	82	22*	66-123/21
78-93-3	2-Butanone (MEK)	250 U		6250	8570	137	6250	6720	108	24*	56-143/18
75-15-0	Carbon Disulfide	100 U		1250	1200	96	1250	1220	98	2	66-148/23
56-23-5	Carbon Tetrachloride	50 U		1250	1540	123	1250	1770	142*	14	76-136/23
108-90-7	Chlorobenzene	50 U		1250	1270	102	1250	1280	102	1	82-124/14
75-00-3	Chloroethane	100 U		1250	1480	118	1250	1430	114	3	62-144/20
67-66-3	Chloroform	50 U		1250	1540	123	1250	1510	121	2	80-124/15
110-82-7	Cyclohexane	50 U		1250	1330	106	1250	1390	111	4	73-138/18
124-48-1	Dibromochloromethane	50 U		1250	1020	82	1250	1170	94	14	78-122/19
96-12-8	1,2-Dibromo-3-chloropropane	250 U		1250	1200	96	1250	1290	103	7	64-123/18
106-93-4	1,2-Dibromoethane	100 U		1250	1260	101	1250	1260	101	0	75-120/13
75-71-8	Dichlorodifluoromethane	100 U		1250	1300	104	1250	1300	104	0	42-167/19
95-50-1	1,2-Dichlorobenzene	50 U		1250	1260	101	1250	1280	102	2	82-124/14
541-73-1	1,3-Dichlorobenzene	50 U		1250	1270	102	1250	1310	105	3	84-125/14
106-46-7	1,4-Dichlorobenzene	50 U		1250	1270	102	1250	1280	102	1	78-120/15
75-34-3	1,1-Dichloroethane	50 U		1250	1560	125*	1250	1520	122	3	81-122/15
107-06-2	1,2-Dichloroethane	50 U		1250	1670	134*	1250	1600	128*	4	75-125/14
75-35-4	1,1-Dichloroethylene	50 U		1250	1740	139*	1250	1660	133	5	78-137/18
156-59-2	cis-1,2-Dichloroethylene	922		1250	2410	119	1250	2380	117	1	78-120/15
156-60-5	trans-1,2-Dichloroethylene	27.0	I	1250	1580	124	1250	1560	123	1	76-127/17
78-87-5	1,2-Dichloropropane	50 U		1250	1250	100	1250	1240	99	1	76-124/14
10061-01-5	cis-1,3-Dichloropropene	50 U		1250	1010	81	1250	1140	91	12	75-118/23
10061-02-6	trans-1,3-Dichloropropene	50 U		1250	1010	81	1250	1170	94	15	80-120/22
100-41-4	Ethylbenzene	50 U		1250	1290	103	1250	1330	106	3	81-121/14
76-13-1	Freon 113	50 U		1250	1470	118	1250	1410	113	4	72-134/20
591-78-6	2-Hexanone	500 U		6250	6890	110	6250	6620	106	4	61-129/18
98-82-8	Isopropylbenzene	50 U		1250	1350	108	1250	1400	112	4	83-132/15
79-20-9	Methyl Acetate	1000 U		6250	9410	151*	6250	6750	108	33*	65-126/18
74-83-9	Methyl Bromide	250 U		1250	1370	110	1250	1410	113	3	59-143/19
74-87-3	Methyl Chloride	100 U		1250	1140	91	1250	1110	89	3	50-159/19
75-09-2	Methylene Chloride	250 U		1250	1530	122	1250	1420	114	7	69-135/16
108-10-1	4-Methyl-2-pentanone (MIBK)	250 U		6250	6760	108	6250	6550	105	3	66-122/16

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA85181
Account: TTNASA Tetra Tech NUS
Project: NASA-LC 34, Freedom Rd, CCAFS, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA85181-9MS	5E28225.D	50	05/13/21	SO	n/a	n/a	V5E1299
FA85181-9MSD	5E28226.D	50	05/13/21	SO	n/a	n/a	V5E1299
FA85181-9	5E28216.D	50	05/13/21	SO	n/a	n/a	V5E1299

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA85181-1, FA85181-2, FA85181-3, FA85181-4, FA85181-5, FA85181-6, FA85181-7, FA85181-8, FA85181-9

CAS No.	Compound	FA85181-9 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
1634-04-4	Methyl Tert Butyl Ether	50 U		1250	1370	110	1250	1320	106	4	72-117/14
100-42-5	Styrene	50 U		1250	1290	103	1250	1340	107	4	78-119/23
630-20-6	1,1,1,2-Tetrachloroethane	50 U		1250	1220	98	1250	1360	109	11	77-122/19
79-34-5	1,1,2,2-Tetrachloroethane	50 U		1250	1130	90	1250	1150	92	2	72-120/14
127-18-4	Tetrachloroethylene	50 U		1250	1380	110	1250	1420	114	3	76-135/16
108-88-3	Toluene	50 U		1250	1190	95	1250	1210	97	2	80-120/14
87-61-6	1,2,3-Trichlorobenzene	100 U		1250	1040	83	1250	1360	109	27*	68-131/25
120-82-1	1,2,4-Trichlorobenzene	100 U		1250	1160	93	1250	1400	112	19	73-129/20
71-55-6	1,1,1-Trichloroethane	50 U		1250	1690	135*	1250	1730	138*	2	75-130/16
79-00-5	1,1,2-Trichloroethane	50 U		1250	1210	97	1250	1230	98	2	76-119/14
79-01-6	Trichloroethylene	2810		1250	4510	136* [a]	1250	4440	130* [a]	2	81-126/15
75-69-4	Trichlorofluoromethane	100 U		1250	1770	142	1250	1770	142	0	71-156/21
75-01-4	Vinyl Chloride	166		1250	1530	109	1250	1550	111	1	69-159/18
1330-20-7	Xylene (total)	150 U		3750	4020	107	3750	4130	110	3	80-126/15

CAS No.	Surrogate Recoveries	MS	MSD	FA85181-9	Limits
1868-53-7	Dibromofluoromethane	115%	111%	110%	83-118%
17060-07-0	1,2-Dichloroethane-D4	133%*	118%	128%* [b]	79-125%
2037-26-5	Toluene-D8	95%	96%	97%	85-112%
460-00-4	4-Bromofluorobenzene	96%	99%	100%	83-118%

(a) Outside control limits due to high level in sample relative to spike amount.
(b) Outside control limits. Confirmed by reanalysis.

* = Outside of Control Limits.

ENCO Laboratories

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10775 Central Port Drive
Orlando FL, 32824
Phone: 407.826.5314 FAX: 407.850.6945

Tuesday, October 12, 2021
Tetra Tech NUS, Inc. (TE015)
Attn: Mark Jonnet
Foster Plaza 7, 661 Anderson Drive
Pittsburgh, PA 15220

RE: Laboratory Results for
Project Number: 112G08985, Project Name/Desc: NASA KSC LC34
ENCO Workorder(s): AE07771

Dear Mark Jonnet,

Enclosed is a copy of your laboratory report for test samples received by our laboratory on Tuesday, October 5, 2021.

Unless otherwise noted in an attached project narrative, all samples were received in acceptable condition and processed in accordance with the referenced methods/procedures. Results for these procedures apply only to the samples as submitted.

The analytical results contained in this report are in compliance with NELAC standards, except as noted in the project narrative if applicable. This report shall not be reproduced except in full, without the written approval of the Laboratory.

This report contains only those analyses performed by Environmental Conservation Laboratories. Unless otherwise noted, all analyses were performed at ENCO Orlando. Data from outside organizations will be reported under separate cover.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

Kaitlin Dylnicki

Project Manager

Enclosure(s)

SAMPLE SUMMARY/LABORATORY CHRONICLE

Client ID: LC34-IW0133-018.0-20211005 **Lab ID: AE07771-01** **Sampled: 10/05/21 12:50** **Received: 10/05/21 15:00**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	10/19/21	10/11/21 08:25	10/11/21 13:17

Client ID: LC34-IW0132-018.0-20211005 **Lab ID: AE07771-02** **Sampled: 10/05/21 13:20** **Received: 10/05/21 15:00**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	10/19/21	10/11/21 08:25	10/11/21 13:46

Client ID: LC34-IW0129-018.0-20211005 **Lab ID: AE07771-03** **Sampled: 10/05/21 13:50** **Received: 10/05/21 15:00**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	10/19/21	10/11/21 08:25	10/11/21 14:14

Client ID: LC34-IW0130-024.0-20211005 **Lab ID: AE07771-04** **Sampled: 10/05/21 14:20** **Received: 10/05/21 15:00**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	10/19/21	10/11/21 08:25	10/11/21 14:43

SAMPLE DETECTION SUMMARY

Client ID: LC34-IW0133-018.0-20211005 **Lab ID:** AE07771-01

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	3.6		0.53	2.5	ug/L	EPA 8260D	
Vinyl chloride	1.0	I	0.71	2.5	ug/L	EPA 8260D	

Client ID: LC34-IW0132-018.0-20211005 **Lab ID:** AE07771-02

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	1.0	I	0.53	2.5	ug/L	EPA 8260D	

Client ID: LC34-IW0129-018.0-20211005 **Lab ID:** AE07771-03

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	0.72	I	0.53	2.5	ug/L	EPA 8260D	
Vinyl chloride	6.6		0.71	2.5	ug/L	EPA 8260D	

Client ID: LC34-IW0130-024.0-20211005 **Lab ID:** AE07771-04

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	1.2	I	0.53	2.5	ug/L	EPA 8260D	
Vinyl chloride	23		0.71	2.5	ug/L	EPA 8260D	

ANALYTICAL RESULTS

Description: LC34-IW0133-018.0-20211005 **Lab Sample ID:** AE07771-01 **Received:** 10/05/21 15:00

Matrix: Ground Water **Sampled:** 10/05/21 12:50 **Work Order:** AE07771

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	1J11008	EPA 8260D	10/11/21 13:17	kkw	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	1J11008	EPA 8260D	10/11/21 13:17	kkw	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	1J11008	EPA 8260D	10/11/21 13:17	kkw	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	1J11008	EPA 8260D	10/11/21 13:17	kkw	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	1J11008	EPA 8260D	10/11/21 13:17	kkw	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	1J11008	EPA 8260D	10/11/21 13:17	kkw	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	1J11008	EPA 8260D	10/11/21 13:17	kkw	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	1J11008	EPA 8260D	10/11/21 13:17	kkw	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	1J11008	EPA 8260D	10/11/21 13:17	kkw	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	1J11008	EPA 8260D	10/11/21 13:17	kkw	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	1J11008	EPA 8260D	10/11/21 13:17	kkw	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	1J11008	EPA 8260D	10/11/21 13:17	kkw	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	1J11008	EPA 8260D	10/11/21 13:17	kkw	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	1J11008	EPA 8260D	10/11/21 13:17	kkw	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	1J11008	EPA 8260D	10/11/21 13:17	kkw	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	1J11008	EPA 8260D	10/11/21 13:17	kkw	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	1J11008	EPA 8260D	10/11/21 13:17	kkw	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	1J11008	EPA 8260D	10/11/21 13:17	kkw	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	1J11008	EPA 8260D	10/11/21 13:17	kkw	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	1J11008	EPA 8260D	10/11/21 13:17	kkw	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	1J11008	EPA 8260D	10/11/21 13:17	kkw	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	1J11008	EPA 8260D	10/11/21 13:17	kkw	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	1J11008	EPA 8260D	10/11/21 13:17	kkw	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	1J11008	EPA 8260D	10/11/21 13:17	kkw	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	1J11008	EPA 8260D	10/11/21 13:17	kkw	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	1J11008	EPA 8260D	10/11/21 13:17	kkw	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	1J11008	EPA 8260D	10/11/21 13:17	kkw	
cis-1,2-Dichloroethene [156-59-2]^	**3.6**		ug/L	1	0.53	2.5	1J11008	EPA 8260D	10/11/21 13:17	kkw	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	1J11008	EPA 8260D	10/11/21 13:17	kkw	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	1J11008	EPA 8260D	10/11/21 13:17	kkw	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	1J11008	EPA 8260D	10/11/21 13:17	kkw	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	1J11008	EPA 8260D	10/11/21 13:17	kkw	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	1J11008	EPA 8260D	10/11/21 13:17	kkw	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	1J11008	EPA 8260D	10/11/21 13:17	kkw	QV-01
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	1J11008	EPA 8260D	10/11/21 13:17	kkw	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	1J11008	EPA 8260D	10/11/21 13:17	kkw	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	1J11008	EPA 8260D	10/11/21 13:17	kkw	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	1J11008	EPA 8260D	10/11/21 13:17	kkw	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	1J11008	EPA 8260D	10/11/21 13:17	kkw	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	1J11008	EPA 8260D	10/11/21 13:17	kkw	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	1J11008	EPA 8260D	10/11/21 13:17	kkw	
trans-1,2-Dichloroethene [156-60-5]^	0.73	U	ug/L	1	0.73	2.5	1J11008	EPA 8260D	10/11/21 13:17	kkw	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	1J11008	EPA 8260D	10/11/21 13:17	kkw	
Trichloroethene [79-01-6]^	0.89	U	ug/L	1	0.89	2.5	1J11008	EPA 8260D	10/11/21 13:17	kkw	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	1J11008	EPA 8260D	10/11/21 13:17	kkw	
Vinyl chloride [75-01-4]^	**1.0**	I	ug/L	1	0.71	2.5	1J11008	EPA 8260D	10/11/21 13:17	kkw	

ANALYTICAL RESULTS

Description: LC34-IW0133-018.0-20211005 **Lab Sample ID:** AE07771-01 **Received:** 10/05/21 15:00

Matrix: Ground Water **Sampled:** 10/05/21 12:50 **Work Order:** AE07771

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*48*	*1*	*50.0*	*96 %*	*41-142*	*1J11008*	*EPA 8260D*	*10/11/21 13:17*	*kkw*	
Dibromofluoromethane	*55*	*1*	*50.0*	*110 %*	*53-146*	*1J11008*	*EPA 8260D*	*10/11/21 13:17*	*kkw*	
Toluene-d8	*51*	*1*	*50.0*	*102 %*	*41-146*	*1J11008*	*EPA 8260D*	*10/11/21 13:17*	*kkw*	

ANALYTICAL RESULTS

Description: LC34-IW0132-018.0-20211005 **Lab Sample ID:** AE07771-02 **Received:** 10/05/21 15:00

Matrix: Ground Water **Sampled:** 10/05/21 13:20 **Work Order:** AE07771

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	1J11008	EPA 8260D	10/11/21 13:46	kkw	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	1J11008	EPA 8260D	10/11/21 13:46	kkw	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	1J11008	EPA 8260D	10/11/21 13:46	kkw	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	1J11008	EPA 8260D	10/11/21 13:46	kkw	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	1J11008	EPA 8260D	10/11/21 13:46	kkw	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	1J11008	EPA 8260D	10/11/21 13:46	kkw	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	1J11008	EPA 8260D	10/11/21 13:46	kkw	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	1J11008	EPA 8260D	10/11/21 13:46	kkw	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	1J11008	EPA 8260D	10/11/21 13:46	kkw	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	1J11008	EPA 8260D	10/11/21 13:46	kkw	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	1J11008	EPA 8260D	10/11/21 13:46	kkw	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	1J11008	EPA 8260D	10/11/21 13:46	kkw	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	1J11008	EPA 8260D	10/11/21 13:46	kkw	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	1J11008	EPA 8260D	10/11/21 13:46	kkw	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	1J11008	EPA 8260D	10/11/21 13:46	kkw	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	1J11008	EPA 8260D	10/11/21 13:46	kkw	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	1J11008	EPA 8260D	10/11/21 13:46	kkw	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	1J11008	EPA 8260D	10/11/21 13:46	kkw	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	1J11008	EPA 8260D	10/11/21 13:46	kkw	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	1J11008	EPA 8260D	10/11/21 13:46	kkw	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	1J11008	EPA 8260D	10/11/21 13:46	kkw	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	1J11008	EPA 8260D	10/11/21 13:46	kkw	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	1J11008	EPA 8260D	10/11/21 13:46	kkw	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	1J11008	EPA 8260D	10/11/21 13:46	kkw	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	1J11008	EPA 8260D	10/11/21 13:46	kkw	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	1J11008	EPA 8260D	10/11/21 13:46	kkw	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	1J11008	EPA 8260D	10/11/21 13:46	kkw	
cis-1,2-Dichloroethene [156-59-2]^	**1.0**	I	ug/L	1	0.53	2.5	1J11008	EPA 8260D	10/11/21 13:46	kkw	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	1J11008	EPA 8260D	10/11/21 13:46	kkw	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	1J11008	EPA 8260D	10/11/21 13:46	kkw	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	1J11008	EPA 8260D	10/11/21 13:46	kkw	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	1J11008	EPA 8260D	10/11/21 13:46	kkw	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	1J11008	EPA 8260D	10/11/21 13:46	kkw	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	1J11008	EPA 8260D	10/11/21 13:46	kkw	QV-01
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	1J11008	EPA 8260D	10/11/21 13:46	kkw	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	1J11008	EPA 8260D	10/11/21 13:46	kkw	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	1J11008	EPA 8260D	10/11/21 13:46	kkw	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	1J11008	EPA 8260D	10/11/21 13:46	kkw	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	1J11008	EPA 8260D	10/11/21 13:46	kkw	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	1J11008	EPA 8260D	10/11/21 13:46	kkw	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	1J11008	EPA 8260D	10/11/21 13:46	kkw	
trans-1,2-Dichloroethene [156-60-5]^	0.73	U	ug/L	1	0.73	2.5	1J11008	EPA 8260D	10/11/21 13:46	kkw	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	1J11008	EPA 8260D	10/11/21 13:46	kkw	
Trichloroethene [79-01-6]^	0.89	U	ug/L	1	0.89	2.5	1J11008	EPA 8260D	10/11/21 13:46	kkw	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	1J11008	EPA 8260D	10/11/21 13:46	kkw	
Vinyl chloride [75-01-4]^	0.71	U	ug/L	1	0.71	2.5	1J11008	EPA 8260D	10/11/21 13:46	kkw	

ANALYTICAL RESULTS

Description: LC34-IW0132-018.0-20211005 **Lab Sample ID:** AE07771-02 **Received:** 10/05/21 15:00

Matrix: Ground Water **Sampled:** 10/05/21 13:20 **Work Order:** AE07771

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*45*	*1*	*50.0*	*91 %*	*41-142*	*1J11008*	*EPA 8260D*	*10/11/21 13:46*	*kkw*	
Dibromofluoromethane	*53*	*1*	*50.0*	*106 %*	*53-146*	*1J11008*	*EPA 8260D*	*10/11/21 13:46*	*kkw*	
Toluene-d8	*50*	*1*	*50.0*	*100 %*	*41-146*	*1J11008*	*EPA 8260D*	*10/11/21 13:46*	*kkw*	

ANALYTICAL RESULTS

Description: LC34-IW0129-018.0-20211005 **Lab Sample ID:** AE07771-03 **Received:** 10/05/21 15:00

Matrix: Ground Water **Sampled:** 10/05/21 13:50 **Work Order:** AE07771

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	1J11008	EPA 8260D	10/11/21 14:14	kkw	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	1J11008	EPA 8260D	10/11/21 14:14	kkw	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	1J11008	EPA 8260D	10/11/21 14:14	kkw	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	1J11008	EPA 8260D	10/11/21 14:14	kkw	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	1J11008	EPA 8260D	10/11/21 14:14	kkw	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	1J11008	EPA 8260D	10/11/21 14:14	kkw	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	1J11008	EPA 8260D	10/11/21 14:14	kkw	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	1J11008	EPA 8260D	10/11/21 14:14	kkw	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	1J11008	EPA 8260D	10/11/21 14:14	kkw	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	1J11008	EPA 8260D	10/11/21 14:14	kkw	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	1J11008	EPA 8260D	10/11/21 14:14	kkw	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	1J11008	EPA 8260D	10/11/21 14:14	kkw	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	1J11008	EPA 8260D	10/11/21 14:14	kkw	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	1J11008	EPA 8260D	10/11/21 14:14	kkw	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	1J11008	EPA 8260D	10/11/21 14:14	kkw	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	1J11008	EPA 8260D	10/11/21 14:14	kkw	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	1J11008	EPA 8260D	10/11/21 14:14	kkw	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	1J11008	EPA 8260D	10/11/21 14:14	kkw	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	1J11008	EPA 8260D	10/11/21 14:14	kkw	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	1J11008	EPA 8260D	10/11/21 14:14	kkw	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	1J11008	EPA 8260D	10/11/21 14:14	kkw	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	1J11008	EPA 8260D	10/11/21 14:14	kkw	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	1J11008	EPA 8260D	10/11/21 14:14	kkw	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	1J11008	EPA 8260D	10/11/21 14:14	kkw	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	1J11008	EPA 8260D	10/11/21 14:14	kkw	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	1J11008	EPA 8260D	10/11/21 14:14	kkw	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	1J11008	EPA 8260D	10/11/21 14:14	kkw	
cis-1,2-Dichloroethene [156-59-2]^	**0.72**	I	ug/L	1	0.53	2.5	1J11008	EPA 8260D	10/11/21 14:14	kkw	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	1J11008	EPA 8260D	10/11/21 14:14	kkw	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	1J11008	EPA 8260D	10/11/21 14:14	kkw	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	1J11008	EPA 8260D	10/11/21 14:14	kkw	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	1J11008	EPA 8260D	10/11/21 14:14	kkw	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	1J11008	EPA 8260D	10/11/21 14:14	kkw	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	1J11008	EPA 8260D	10/11/21 14:14	kkw	QV-01
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	1J11008	EPA 8260D	10/11/21 14:14	kkw	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	1J11008	EPA 8260D	10/11/21 14:14	kkw	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	1J11008	EPA 8260D	10/11/21 14:14	kkw	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	1J11008	EPA 8260D	10/11/21 14:14	kkw	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	1J11008	EPA 8260D	10/11/21 14:14	kkw	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	1J11008	EPA 8260D	10/11/21 14:14	kkw	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	1J11008	EPA 8260D	10/11/21 14:14	kkw	
trans-1,2-Dichloroethene [156-60-5]^	0.73	U	ug/L	1	0.73	2.5	1J11008	EPA 8260D	10/11/21 14:14	kkw	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	1J11008	EPA 8260D	10/11/21 14:14	kkw	
Trichloroethene [79-01-6]^	0.89	U	ug/L	1	0.89	2.5	1J11008	EPA 8260D	10/11/21 14:14	kkw	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	1J11008	EPA 8260D	10/11/21 14:14	kkw	
Vinyl chloride [75-01-4]^	**6.6**		ug/L	1	0.71	2.5	1J11008	EPA 8260D	10/11/21 14:14	kkw	

ANALYTICAL RESULTS

Description: LC34-IW0129-018.0-20211005 **Lab Sample ID:** AE07771-03 **Received:** 10/05/21 15:00

Matrix: Ground Water **Sampled:** 10/05/21 13:50 **Work Order:** AE07771

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*46*	*1*	*50.0*	*91 %*	*41-142*	*1J11008*	*EPA 8260D*	*10/11/21 14:14*	*kkw*	
Dibromofluoromethane	*52*	*1*	*50.0*	*105 %*	*53-146*	*1J11008*	*EPA 8260D*	*10/11/21 14:14*	*kkw*	
Toluene-d8	*48*	*1*	*50.0*	*96 %*	*41-146*	*1J11008*	*EPA 8260D*	*10/11/21 14:14*	*kkw*	

ANALYTICAL RESULTS

Description: LC34-IW0130-024.0-20211005 **Lab Sample ID:** AE07771-04 **Received:** 10/05/21 15:00

Matrix: Ground Water **Sampled:** 10/05/21 14:20 **Work Order:** AE07771

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	1J11008	EPA 8260D	10/11/21 14:43	kkw	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	1J11008	EPA 8260D	10/11/21 14:43	kkw	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	1J11008	EPA 8260D	10/11/21 14:43	kkw	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	1J11008	EPA 8260D	10/11/21 14:43	kkw	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	1J11008	EPA 8260D	10/11/21 14:43	kkw	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	1J11008	EPA 8260D	10/11/21 14:43	kkw	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	1J11008	EPA 8260D	10/11/21 14:43	kkw	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	1J11008	EPA 8260D	10/11/21 14:43	kkw	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	1J11008	EPA 8260D	10/11/21 14:43	kkw	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	1J11008	EPA 8260D	10/11/21 14:43	kkw	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	1J11008	EPA 8260D	10/11/21 14:43	kkw	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	1J11008	EPA 8260D	10/11/21 14:43	kkw	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	1J11008	EPA 8260D	10/11/21 14:43	kkw	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	1J11008	EPA 8260D	10/11/21 14:43	kkw	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	1J11008	EPA 8260D	10/11/21 14:43	kkw	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	1J11008	EPA 8260D	10/11/21 14:43	kkw	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	1J11008	EPA 8260D	10/11/21 14:43	kkw	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	1J11008	EPA 8260D	10/11/21 14:43	kkw	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	1J11008	EPA 8260D	10/11/21 14:43	kkw	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	1J11008	EPA 8260D	10/11/21 14:43	kkw	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	1J11008	EPA 8260D	10/11/21 14:43	kkw	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	1J11008	EPA 8260D	10/11/21 14:43	kkw	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	1J11008	EPA 8260D	10/11/21 14:43	kkw	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	1J11008	EPA 8260D	10/11/21 14:43	kkw	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	1J11008	EPA 8260D	10/11/21 14:43	kkw	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	1J11008	EPA 8260D	10/11/21 14:43	kkw	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	1J11008	EPA 8260D	10/11/21 14:43	kkw	
cis-1,2-Dichloroethene [156-59-2]^	**1.2**	I	ug/L	1	0.53	2.5	1J11008	EPA 8260D	10/11/21 14:43	kkw	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	1J11008	EPA 8260D	10/11/21 14:43	kkw	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	1J11008	EPA 8260D	10/11/21 14:43	kkw	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	1J11008	EPA 8260D	10/11/21 14:43	kkw	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	1J11008	EPA 8260D	10/11/21 14:43	kkw	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	1J11008	EPA 8260D	10/11/21 14:43	kkw	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	1J11008	EPA 8260D	10/11/21 14:43	kkw	QV-01
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	1J11008	EPA 8260D	10/11/21 14:43	kkw	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	1J11008	EPA 8260D	10/11/21 14:43	kkw	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	1J11008	EPA 8260D	10/11/21 14:43	kkw	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	1J11008	EPA 8260D	10/11/21 14:43	kkw	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	1J11008	EPA 8260D	10/11/21 14:43	kkw	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	1J11008	EPA 8260D	10/11/21 14:43	kkw	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	1J11008	EPA 8260D	10/11/21 14:43	kkw	
trans-1,2-Dichloroethene [156-60-5]^	0.73	U	ug/L	1	0.73	2.5	1J11008	EPA 8260D	10/11/21 14:43	kkw	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	1J11008	EPA 8260D	10/11/21 14:43	kkw	
Trichloroethene [79-01-6]^	0.89	U	ug/L	1	0.89	2.5	1J11008	EPA 8260D	10/11/21 14:43	kkw	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	1J11008	EPA 8260D	10/11/21 14:43	kkw	
Vinyl chloride [75-01-4]^	**23**		ug/L	1	0.71	2.5	1J11008	EPA 8260D	10/11/21 14:43	kkw	

ANALYTICAL RESULTS

Description: LC34-IW0130-024.0-20211005 **Lab Sample ID:** AE07771-04 **Received:** 10/05/21 15:00

Matrix: Ground Water **Sampled:** 10/05/21 14:20 **Work Order:** AE07771

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*46*	*1*	*50.0*	*91 %*	*41-142*	*1J11008*	*EPA 8260D*	*10/11/21 14:43*	*kkw*	
Dibromofluoromethane	*55*	*1*	*50.0*	*110 %*	*53-146*	*1J11008*	*EPA 8260D*	*10/11/21 14:43*	*kkw*	
Toluene-d8	*51*	*1*	*50.0*	*103 %*	*41-146*	*1J11008*	*EPA 8260D*	*10/11/21 14:43*	*kkw*	

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1J11008 - EPA 5030B_MS

Blank (1J11008-BLK1) Prepared: 10/11/2021 00:00 Analyzed: 10/11/2021 10:54

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	0.80	U	2.5	ug/L							
1,1,2,2-Tetrachloroethane	0.54	U	2.5	ug/L							
1,1,2-Trichloroethane	0.76	U	2.5	ug/L							
1,1-Dichloroethane	0.62	U	2.5	ug/L							
1,1-Dichloroethene	0.94	U	2.5	ug/L							
1,2,4-Trichlorobenzene	0.70	U	2.5	ug/L							
1,2-Dibromo-3-chloropropane	0.96	U	2.5	ug/L							
1,2-Dibromoethane	0.78	U	2.5	ug/L							
1,2-Dichlorobenzene	0.73	U	2.5	ug/L							
1,2-Dichloroethane	0.63	U	2.5	ug/L							
1,2-Dichloropropane	0.80	U	2.5	ug/L							
1,3-Dichlorobenzene	0.77	U	2.5	ug/L							
1,4-Dichlorobenzene	0.76	U	2.5	ug/L							
2-Butanone	4.5	U	12	ug/L							
2-Hexanone	2.5	U	12	ug/L							
4-Methyl-2-pentanone	2.5	U	12	ug/L							
Acetone	10	U	25	ug/L							
Benzene	0.71	U	2.5	ug/L							
Bromodichloromethane	0.52	U	2.5	ug/L							
Bromoform	0.75	U	2.5	ug/L							
Bromomethane	0.95	U	2.5	ug/L							
Carbon disulfide	2.5	U	12	ug/L							
Carbon Tetrachloride	0.94	U	2.5	ug/L							
Chlorobenzene	0.72	U	2.5	ug/L							
Chloroethane	0.98	U	2.5	ug/L							
Chloroform	0.80	U	2.5	ug/L							
Chloromethane	0.82	U	2.5	ug/L							
cis-1,2-Dichloroethene	0.53	U	2.5	ug/L							
cis-1,3-Dichloropropene	0.59	U	2.5	ug/L							
Cyclohexane	0.93	U	2.5	ug/L							
Dibromochloromethane	0.50	U	2.5	ug/L							
Dichlorodifluoromethane	0.74	U	2.5	ug/L							
Ethylbenzene	0.69	U	2.5	ug/L							
Freon 113	0.73	U	2.5	ug/L							
Isopropylbenzene	0.67	U	2.5	ug/L							
Methyl acetate	0.95	U	2.5	ug/L							
Methylene Chloride	2.5	U	12	ug/L							
Methyl-tert-Butyl Ether	0.60	U	2.5	ug/L							
Styrene	0.61	U	2.5	ug/L							
Tetrachloroethene	0.76	U	2.5	ug/L							
Toluene	0.72	U	2.5	ug/L							
trans-1,2-Dichloroethene	0.73	U	2.5	ug/L							
trans-1,3-Dichloropropene	0.73	U	2.5	ug/L							
Trichloroethene	0.89	U	2.5	ug/L							
Trichlorofluoromethane	0.94	U	2.5	ug/L							
Vinyl chloride	0.71	U	2.5	ug/L							
4-Bromofluorobenzene	*46*	*I*		*ug/L*	*50.0*		*93*	*41-142*			
Dibromofluoromethane	*53*			*ug/L*	*50.0*		*106*	*53-146*			
Toluene-d8	*49*	*I*		*ug/L*	*50.0*		*98*	*41-146*			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1J11008 - EPA 5030B_MS - Continued

LCS (1J11008-BS1) Prepared: 10/11/2021 00:00 Analyzed: 10/11/2021 08:30

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	24		2.5	ug/L	20.0		119	57-148			
1,1,2,2-Tetrachloroethane	18		2.5	ug/L	20.0		88	60-139			
1,1,2-Trichloroethane	18		2.5	ug/L	20.0		90	57-141			
1,1-Dichloroethane	23		2.5	ug/L	20.0		115	57-142			
1,1-Dichloroethene	26		2.5	ug/L	20.0		128	47-139			
1,2,4-Trichlorobenzene	21		2.5	ug/L	20.0		104	52-159			
1,2-Dibromo-3-chloropropane	18		2.5	ug/L	20.0		88	48-150			
1,2-Dibromoethane	18		2.5	ug/L	20.0		89	57-140			
1,2-Dichlorobenzene	19		2.5	ug/L	20.0		93	63-131			
1,2-Dichloroethane	22		2.5	ug/L	20.0		110	50-156			
1,2-Dichloropropane	20		2.5	ug/L	20.0		100	61-133			
1,3-Dichlorobenzene	18		2.5	ug/L	20.0		91	66-129			
1,4-Dichlorobenzene	19		2.5	ug/L	20.0		93	65-133			
2-Butanone	150		12	ug/L	100		147	10-180			
2-Hexanone	100		12	ug/L	100		104	12-180			
4-Methyl-2-pentanone	98		12	ug/L	100		98	19-180			
Acetone	120		25	ug/L	100		116	10-180			
Benzene	22		2.5	ug/L	20.0		110	56-136			
Bromodichloromethane	22		2.5	ug/L	20.0		109	58-135			
Bromoform	19		2.5	ug/L	20.0		96	46-148			
Bromomethane	16		2.5	ug/L	20.0		81	10-173			
Carbon disulfide	43		12	ug/L	20.0		217	43-153			QL-02
Carbon Tetrachloride	23		2.5	ug/L	20.0		113	54-156			
Chlorobenzene	19		2.5	ug/L	20.0		94	51-139			
Chloroethane	24		2.5	ug/L	20.0		120	27-180			
Chloroform	23		2.5	ug/L	20.0		116	58-139			
Chloromethane	16		2.5	ug/L	20.0		80	33-154			
cis-1,2-Dichloroethene	22		2.5	ug/L	20.0		109	56-128			
cis-1,3-Dichloropropene	20		2.5	ug/L	20.0		99	64-128			
Cyclohexane	24		2.5	ug/L	20.0		118	70-130			
Dibromochloromethane	17		2.5	ug/L	20.0		85	50-140			
Dichlorodifluoromethane	13		2.5	ug/L	20.0		65	10-180			
Ethylbenzene	18		2.5	ug/L	20.0		92	63-133			
Freon 113	26		2.5	ug/L	20.0		128	47-173			
Isopropylbenzene	18		2.5	ug/L	20.0		92	60-132			
m,p-Xylenes	37		5.0	ug/L	40.0		92	64-133			
Methyl acetate	22		2.5	ug/L	20.0		110	70-130			
Methylene Chloride	23		12	ug/L	20.0		115	43-142			
Methyl-tert-Butyl Ether	22		2.5	ug/L	20.0		111	51-145			
o-Xylene	18		2.5	ug/L	20.0		91	61-129			
Styrene	19		2.5	ug/L	20.0		95	59-136			
Tetrachloroethene	20		2.5	ug/L	20.0		98	60-147			
Toluene	18		2.5	ug/L	20.0		91	64-131			
trans-1,2-Dichloroethene	23		2.5	ug/L	20.0		115	54-134			
trans-1,3-Dichloropropene	18		2.5	ug/L	20.0		91	65-149			
Trichloroethene	22		2.5	ug/L	20.0		109	62-135			
Trichlorofluoromethane	22		2.5	ug/L	20.0		111	56-155			
Vinyl chloride	19		2.5	ug/L	20.0		93	20-167			
4-Bromofluorobenzene	*46*	*I*		*ug/L*	*50.0*		*93*	*41-142*			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1J11008 - EPA 5030B_MS - Continued

LCS (1J11008-BS1) Continued Prepared: 10/11/2021 00:00 Analyzed: 10/11/2021 08:30

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Dibromofluoromethane	*54*			*ug/L*	*50.0*		*107*	*53-146*			
Toluene-d8	*52*			*ug/L*	*50.0*		*105*	*41-146*			

Matrix Spike (1J11008-MS1) Prepared: 10/11/2021 00:00 Analyzed: 10/11/2021 08:59

Source: AE08047-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	25		2.5	ug/L	20.0	0.80 U	127	57-148			
1,1,2,2-Tetrachloroethane	16		2.5	ug/L	20.0	0.54 U	82	60-139			
1,1,2-Trichloroethane	18		2.5	ug/L	20.0	0.76 U	91	57-141			
1,1-Dichloroethane	23		2.5	ug/L	20.0	0.62 U	116	57-142			
1,1-Dichloroethene	27		2.5	ug/L	20.0	0.94 U	133	47-139			
1,2,4-Trichlorobenzene	20		2.5	ug/L	20.0	0.70 U	101	52-159			
1,2-Dibromo-3-chloropropane	17		2.5	ug/L	20.0	0.96 U	85	48-150			
1,2-Dibromoethane	18		2.5	ug/L	20.0	0.78 U	88	57-140			
1,2-Dichlorobenzene	18		2.5	ug/L	20.0	0.73 U	92	63-131			
1,2-Dichloroethane	21		2.5	ug/L	20.0	0.63 U	106	50-156			
1,2-Dichloropropane	20		2.5	ug/L	20.0	0.80 U	99	61-133			
1,3-Dichlorobenzene	19		2.5	ug/L	20.0	0.77 U	94	66-129			
1,4-Dichlorobenzene	18		2.5	ug/L	20.0	0.76 U	92	65-133			
2-Butanone	140		12	ug/L	100	4.5 U	141	10-180			
2-Hexanone	110		12	ug/L	100	2.5 U	107	12-180			
4-Methyl-2-pentanone	100		12	ug/L	100	2.5 U	101	19-180			
Acetone	110		25	ug/L	100	10 U	109	10-180			
Benzene	23		2.5	ug/L	20.0	0.71 U	115	56-136			
Bromodichloromethane	22		2.5	ug/L	20.0	0.52 U	109	58-135			
Bromoform	19		2.5	ug/L	20.0	0.75 U	94	46-148			
Bromomethane	21		2.5	ug/L	20.0	0.95 U	103	10-173			
Carbon disulfide	40		12	ug/L	20.0	2.5 U	199	43-153			QM-19
Carbon Tetrachloride	24		2.5	ug/L	20.0	0.94 U	122	54-156			
Chlorobenzene	20		2.5	ug/L	20.0	0.72 U	98	51-139			
Chloroethane	28		2.5	ug/L	20.0	0.98 U	138	27-180			
Chloroform	24		2.5	ug/L	20.0	0.80 U	120	58-139			
Chloromethane	18		2.5	ug/L	20.0	0.82 U	92	33-154			
cis-1,2-Dichloroethene	23		2.5	ug/L	20.0	0.53 U	114	56-128			
cis-1,3-Dichloropropene	20		2.5	ug/L	20.0	0.59 U	98	64-128			
Cyclohexane	25		2.5	ug/L	20.0	0.93 U	126	70-130			
Dibromochloromethane	17		2.5	ug/L	20.0	0.50 U	86	50-140			
Dichlorodifluoromethane	16		2.5	ug/L	20.0	0.74 U	80	10-180			
Ethylbenzene	19		2.5	ug/L	20.0	0.69 U	96	63-133			
Freon 113	27		2.5	ug/L	20.0	0.73 U	135	47-173			
Isopropylbenzene	20		2.5	ug/L	20.0	0.67 U	101	60-132			
m,p-Xylenes	38		5.0	ug/L	40.0	1.3 U	96	64-133			
Methyl acetate	21		2.5	ug/L	20.0	0.95 U	105	70-130			
Methylene Chloride	23		12	ug/L	20.0	2.5 U	113	43-142			
Methyl-tert-Butyl Ether	22		2.5	ug/L	20.0	0.60 U	108	51-145			
o-Xylene	19		2.5	ug/L	20.0	0.53 U	94	61-129			
Styrene	20		2.5	ug/L	20.0	0.61 U	98	59-136			
Tetrachloroethene	20		2.5	ug/L	20.0	0.76 U	98	60-147			
Toluene	20		2.5	ug/L	20.0	0.72 U	98	64-131			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1J11008 - EPA 5030B_MS - Continued

Matrix Spike (1J11008-MS1) Continued Prepared: 10/11/2021 00:00 Analyzed: 10/11/2021 08:59

Source: AE08047-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
trans-1,2-Dichloroethene	25		2.5	ug/L	20.0	0.73 U	123	54-134			
trans-1,3-Dichloropropene	18		2.5	ug/L	20.0	0.73 U	90	65-149			
Trichloroethene	23		2.5	ug/L	20.0	0.89 U	114	62-135			
Trichlorofluoromethane	27		2.5	ug/L	20.0	0.94 U	134	56-155			
Vinyl chloride	21		2.5	ug/L	20.0	0.71 U	106	20-167			
4-Bromofluorobenzene	*46*	*I*		*ug/L*	*50.0*		*92*	*41-142*			
Dibromofluoromethane	*53*			*ug/L*	*50.0*		*106*	*53-146*			
Toluene-d8	*52*			*ug/L*	*50.0*		*103*	*41-146*			

Matrix Spike Dup (1J11008-MSD1) Prepared: 10/11/2021 00:00 Analyzed: 10/11/2021 09:28

Source: AE08047-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	25		2.5	ug/L	20.0	0.80 U	126	57-148	0.8	25	
1,1,2,2-Tetrachloroethane	16		2.5	ug/L	20.0	0.54 U	82	60-139	0	17	
1,1,2-Trichloroethane	18		2.5	ug/L	20.0	0.76 U	92	57-141	2	16	
1,1-Dichloroethane	23		2.5	ug/L	20.0	0.62 U	116	57-142	0	24	
1,1-Dichloroethene	26		2.5	ug/L	20.0	0.94 U	129	47-139	2	16	
1,2,4-Trichlorobenzene	20		2.5	ug/L	20.0	0.70 U	101	52-159	0	24	
1,2-Dibromo-3-chloropropane	17		2.5	ug/L	20.0	0.96 U	85	48-150	0	21	
1,2-Dibromoethane	18		2.5	ug/L	20.0	0.78 U	92	57-140	4	16	
1,2-Dichlorobenzene	19		2.5	ug/L	20.0	0.73 U	94	63-131	2	25	
1,2-Dichloroethane	21		2.5	ug/L	20.0	0.63 U	106	50-156	0	18	
1,2-Dichloropropane	20		2.5	ug/L	20.0	0.80 U	99	61-133	0	26	
1,3-Dichlorobenzene	19		2.5	ug/L	20.0	0.77 U	94	66-129	0	23	
1,4-Dichlorobenzene	18		2.5	ug/L	20.0	0.76 U	92	65-133	0	23	
2-Butanone	140		12	ug/L	100	4.5 U	141	10-180	0	29	
2-Hexanone	100		12	ug/L	100	2.5 U	102	12-180	4	28	
4-Methyl-2-pentanone	100		12	ug/L	100	2.5 U	101	19-180	0	24	
Acetone	110		25	ug/L	100	10 U	109	10-180	0	19	
Benzene	22		2.5	ug/L	20.0	0.71 U	112	56-136	2	14	
Bromodichloromethane	22		2.5	ug/L	20.0	0.52 U	109	58-135	0	19	
Bromoform	20		2.5	ug/L	20.0	0.75 U	100	46-148	6	18	
Bromomethane	21		2.5	ug/L	20.0	0.95 U	103	10-173	0	29	
Carbon disulfide	38		12	ug/L	20.0	2.5 U	190	43-153	5	26	QM-19
Carbon Tetrachloride	24		2.5	ug/L	20.0	0.94 U	120	54-156	2	27	
Chlorobenzene	20		2.5	ug/L	20.0	0.72 U	100	51-139	3	13	
Chloroethane	27		2.5	ug/L	20.0	0.98 U	135	27-180	2	22	
Chloroform	24		2.5	ug/L	20.0	0.80 U	120	58-139	0	17	
Chloromethane	18		2.5	ug/L	20.0	0.82 U	89	33-154	3	31	
cis-1,2-Dichloroethene	23		2.5	ug/L	20.0	0.53 U	114	56-128	0	17	
cis-1,3-Dichloropropene	20		2.5	ug/L	20.0	0.59 U	98	64-128	0	20	
Cyclohexane	25		2.5	ug/L	20.0	0.93 U	126	70-130	0	20	
Dibromochloromethane	19		2.5	ug/L	20.0	0.50 U	93	50-140	8	18	
Dichlorodifluoromethane	16		2.5	ug/L	20.0	0.74 U	80	10-180	0	26	
Ethylbenzene	20		2.5	ug/L	20.0	0.69 U	100	63-133	3	18	
Freon 113	26		2.5	ug/L	20.0	0.73 U	131	47-173	3	30	
Isopropylbenzene	20		2.5	ug/L	20.0	0.67 U	101	60-132	0	23	
m,p-Xylenes	39		5.0	ug/L	40.0	1.3 U	98	64-133	2	18	

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1J11008 - EPA 5030B_MS - Continued

Matrix Spike Dup (1J11008-MSD1) Continued Prepared: 10/11/2021 00:00 Analyzed: 10/11/2021 09:28

Source: AE08047-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Methyl acetate	21		2.5	ug/L	20.0	0.95 U	103	70-130	2	20	
Methylene Chloride	23		12	ug/L	20.0	2.5 U	113	43-142	0	23	
Methyl-tert-Butyl Ether	22		2.5	ug/L	20.0	0.60 U	108	51-145	0	22	
o-Xylene	20		2.5	ug/L	20.0	0.53 U	100	61-129	6	16	
Styrene	20		2.5	ug/L	20.0	0.61 U	99	59-136	1	32	
Tetrachloroethene	20		2.5	ug/L	20.0	0.76 U	101	60-147	3	21	
Toluene	20		2.5	ug/L	20.0	0.72 U	98	64-131	0	16	
trans-1,2-Dichloroethene	24		2.5	ug/L	20.0	0.73 U	119	54-134	3	20	
trans-1,3-Dichloropropene	18		2.5	ug/L	20.0	0.73 U	91	65-149	1	17	
Trichloroethene	23		2.5	ug/L	20.0	0.89 U	114	62-135	0	20	
Trichlorofluoromethane	26		2.5	ug/L	20.0	0.94 U	129	56-155	4	22	
Vinyl chloride	21		2.5	ug/L	20.0	0.71 U	103	20-167	3	24	
4-Bromofluorobenzene	*46*	*I*		*ug/L*	*50.0*		*92*	*41-142*			
Dibromofluoromethane	*52*			*ug/L*	*50.0*		*104*	*53-146*			
Toluene-d8	*50*			*ug/L*	*50.0*		*101*	*41-146*			

FLAGS/NOTES AND DEFINITIONS

PQL	PQL: Practical Quantitation Limit. The PQL presented is the laboratory MRL.
B	Results are based upon membrane filter colony counts that are outside the method indicated ideal range.
I	The reported value is between the laboratory method detection limit (MDL) and the practical quantitation limit (PQL).
J	Estimated value.
K	Off-scale low; Actual value is known to be less than the value given.
L	Off-scale high; Actual value is known to be greater than value given.
M	Presence of analyte is verified but not quantified; the actual value is less than the MRL but greater than the MDL.
N	Presumptive evidence of presence of material.
O	Sampled, but analysis lost or not performed.
Q	Sample exceeded the accepted holding time.
T	Value reported is less than the laboratory method detection limit. The value is reported for informational purposes only and shall not be used in statistical analysis.
U	Indicates that the compound was analyzed for but not detected.
V	Indicates that the analyte was detected in both the sample and the associated method blank.
Y	The laboratory analysis was from an improperly preserved sample. The data may not be accurate.
Z	Too many colonies were present (TNTC); the numeric value represents the filtration volume.
?	Data are rejected and should not be used. Some or all of the quality control data for the analyte were outside criteria, and the presence or absence of the analyte cannot be determined from the data.
*	Not reported due to interference.
[CALC]	Calculated analyte - MDL/MRL reported to the highest reporting limit of the component analyses.
QL-02	The associated laboratory control sample exhibited high bias; since the result is ND, there is no impact.
QM-19	The spike recovery was outside acceptance limits for the MS and/or MSD.
QV-01	The associated continuing calibration verification standard exhibited high bias; since the result is ND, there is no impact.

AC07771

Tetra Tech, Inc. CHAIN OF CUSTODY | NUMBER No. 3249 | PAGE 1 OF 1

PROJECT NO: 112G 08985	FACILITY: KSC-LC34	PROJECT MANAGER Mark Sonner	PHONE NUMBER (412) 921-8622	LABORATORY NAME AND CONTACT: ENCO — Kaitlin Dylnicki
SAMPLERS (SIGNATURE) Chuck Sorden		FIELD OPERATIONS LEADER Chuck Sorden	PHONE NUMBER (321) 591-7580	ADDRESS 10775 Central Port Dr.
		CARRIER/WAYBILL NUMBER		CITY, STATE Orlando, FL

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR 2021	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	CONTAINER TYPE PLASTIC (P) or GLASS (G): G; PRESERVATIVE USED: HCl; TYPE OF ANALYSIS: 8260D TCL SOM01	COMMENTS
10/05	1250	LC34-IW0133-018.0-2021	1005	13	23	GW	G	3	X	
1	1320	LC34-IW0132-018.0-2021	1005	13	23	1	1	1	1	
	1350	LC34-IW0129-018.0-2021	1005	13	23	1	1	1	1	
10/05	1420	LC34-IW0130-024.0-2021	1005	20	28	GW	G	3	X	

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	10/05/21	1500	1. RECEIVED BY James W Gregory	10/6/21	1500
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS: Mud Pad 0.5

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

ENCO Laboratories

Accurate. Timely. Responsive. Innovative.

10775 Central Port Drive
Orlando FL, 32824
Phone: 407.826.5314 FAX: 407.850.6945

Friday, October 15, 2021
Tetra Tech NUS, Inc. (TE015)
Attn: Mark Jonnet
Foster Plaza 7, 661 Anderson Drive
Pittsburgh, PA 15220

RE: Laboratory Results for
Project Number: 112G08985, Project Name/Desc: NASA KSC LC34
ENCO Workorder(s): AE08058

Dear Mark Jonnet,

Enclosed is a copy of your laboratory report for test samples received by our laboratory on Thursday, October 7, 2021.

Unless otherwise noted in an attached project narrative, all samples were received in acceptable condition and processed in accordance with the referenced methods/procedures. Results for these procedures apply only to the samples as submitted.

The analytical results contained in this report are in compliance with NELAC standards, except as noted in the project narrative if applicable. This report shall not be reproduced except in full, without the written approval of the Laboratory.

This report contains only those analyses performed by Environmental Conservation Laboratories. Unless otherwise noted, all analyses were performed at ENCO Orlando. Data from outside organizations will be reported under separate cover.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

Kaitlin Dylnicki

Project Manager

Enclosure(s)

SAMPLE SUMMARY/LABORATORY CHRONICLE

Client ID: LC34-IW0125-018.0-20211005 **Lab ID: AE08058-01** **Sampled: 10/05/21 16:00** **Received: 10/07/21 15:15**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	10/19/21	10/11/21 08:25	10/11/21 15:40

Client ID: LC34-IW0131-018.0-20211005 **Lab ID: AE08058-02** **Sampled: 10/05/21 16:30** **Received: 10/07/21 15:15**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	10/19/21	10/11/21 08:25	10/11/21 16:09

Client ID: LC34-IW0108-024.0-20211005 **Lab ID: AE08058-03** **Sampled: 10/05/21 17:25** **Received: 10/07/21 15:15**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	10/19/21	10/11/21 08:25	10/11/21 16:38

Client ID: LC34-IW0124-018.0-20211006 **Lab ID: AE08058-04** **Sampled: 10/06/21 12:05** **Received: 10/07/21 15:15**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	10/20/21	10/11/21 08:25	10/11/21 17:06

Client ID: LC34-IW0128-018.0-20211006 **Lab ID: AE08058-05** **Sampled: 10/06/21 14:10** **Received: 10/07/21 15:15**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	10/20/21	10/11/21 08:25	10/11/21 17:35

Client ID: LC34-IW0127-024.0-20211006 **Lab ID: AE08058-06** **Sampled: 10/06/21 15:00** **Received: 10/07/21 15:15**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	10/20/21	10/11/21 08:25	10/11/21 18:04

Client ID: LC34-IW0057S-008.1-20211006 **Lab ID: AE08058-07** **Sampled: 10/06/21 15:30** **Received: 10/07/21 15:15**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	10/20/21	10/11/21 08:25	10/11/21 18:32

Client ID: LC34-IW0057I-025.5-20211006 **Lab ID: AE08058-08** **Sampled: 10/06/21 16:00** **Received: 10/07/21 15:15**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	10/20/21	10/11/21 08:25	10/11/21 19:01

Client ID: LC34-IW0141-024.0-20211006 **Lab ID: AE08058-09** **Sampled: 10/06/21 17:05** **Received: 10/07/21 15:15**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	10/20/21	10/12/21 00:00	10/13/21 01:11

Client ID: LC34-IW0142-024.0-20211007 **Lab ID: AE08058-10** **Sampled: 10/07/21 10:15** **Received: 10/07/21 15:15**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	10/21/21	10/13/21 00:00	10/13/21 11:43

Client ID: LC34-IW0144-024.0-20211007 **Lab ID: AE08058-11** **Sampled: 10/07/21 10:50** **Received: 10/07/21 15:15**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	10/21/21	10/13/21 00:00	10/13/21 12:12

Client ID: LC34-IW0145-031.5-20211007 **Lab ID: AE08058-12** **Sampled: 10/07/21 11:20** **Received: 10/07/21 15:15**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	10/21/21	10/13/21 00:00	10/13/21 12:40

Client ID: LC34-IW0123-024.0-20211007 **Lab ID: AE08058-13** **Sampled: 10/07/21 11:50** **Received: 10/07/21 15:15**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	10/21/21	10/13/21 00:00	10/13/21 13:09

Client ID: LC34-IW0123-024.0-20211007 **Lab ID: AE08058-13RE1** **Sampled: 10/07/21 11:50** **Received: 10/07/21 15:15**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	10/21/21	10/14/21 00:00	10/14/21 18:14

SAMPLE SUMMARY/LABORATORY CHRONICLE

Client ID: LC34-IW0147-024.0-20211007 **Lab ID: AE08058-14** **Sampled: 10/07/21 12:50** **Received: 10/07/21 15:15**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	10/21/21	10/13/21 00:00	10/13/21 13:38

Client ID: LC34-IW0146-018.0-20211007 **Lab ID: AE08058-15** **Sampled: 10/07/21 14:10** **Received: 10/07/21 15:15**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	10/21/21	10/13/21 00:00	10/13/21 14:07

Client ID: LC34-IW0143-024.0-20211007 **Lab ID: AE08058-16** **Sampled: 10/07/21 14:50** **Received: 10/07/21 15:15**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	10/21/21	10/13/21 00:00	10/13/21 14:35

SAMPLE DETECTION SUMMARY

Client ID: LC34-IW0125-018.0-20211005 **Lab ID:** AE08058-01

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	2.1	I	0.53	2.5	ug/L	EPA 8260D	
Vinyl chloride	2.9		0.71	2.5	ug/L	EPA 8260D	

Client ID: LC34-IW0131-018.0-20211005 **Lab ID:** AE08058-02

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	0.80	I	0.53	2.5	ug/L	EPA 8260D	

Client ID: LC34-IW0057S-008.1-20211006 **Lab ID:** AE08058-07

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	0.57	I	0.53	2.5	ug/L	EPA 8260D	

Client ID: LC34-IW0057I-025.5-20211006 **Lab ID:** AE08058-08

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	6.2		0.53	2.5	ug/L	EPA 8260D	
trans-1,2-Dichloroethene	1.8	I	0.73	2.5	ug/L	EPA 8260D	
Vinyl chloride	2.6		0.71	2.5	ug/L	EPA 8260D	

Client ID: LC34-IW0144-024.0-20211007 **Lab ID:** AE08058-11

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	3.2		0.53	2.5	ug/L	EPA 8260D	

Client ID: LC34-IW0145-031.5-20211007 **Lab ID:** AE08058-12

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	1.5	I	0.53	2.5	ug/L	EPA 8260D	
Vinyl chloride	1.1	I	0.71	2.5	ug/L	EPA 8260D	

Client ID: LC34-IW0123-024.0-20211007 **Lab ID:** AE08058-13

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
trans-1,2-Dichloroethene	2.4	I	0.73	2.5	ug/L	EPA 8260D	
Vinyl chloride	28		0.71	2.5	ug/L	EPA 8260D	

Client ID: LC34-IW0123-024.0-20211007 **Lab ID:** AE08058-13RE1

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	97		2.6	12	ug/L	EPA 8260D	

Client ID: LC34-IW0143-024.0-20211007 **Lab ID:** AE08058-16

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	4.4		0.53	2.5	ug/L	EPA 8260D	

ANALYTICAL RESULTS

Description: LC34-IW0125-018.0-20211005 **Lab Sample ID:** AE08058-01 **Received:** 10/07/21 15:15

Matrix: Ground Water **Sampled:** 10/05/21 16:00 **Work Order:** AE08058

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	1J11008	EPA 8260D	10/11/21 15:40	kkw	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	1J11008	EPA 8260D	10/11/21 15:40	kkw	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	1J11008	EPA 8260D	10/11/21 15:40	kkw	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	1J11008	EPA 8260D	10/11/21 15:40	kkw	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	1J11008	EPA 8260D	10/11/21 15:40	kkw	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	1J11008	EPA 8260D	10/11/21 15:40	kkw	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	1J11008	EPA 8260D	10/11/21 15:40	kkw	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	1J11008	EPA 8260D	10/11/21 15:40	kkw	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	1J11008	EPA 8260D	10/11/21 15:40	kkw	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	1J11008	EPA 8260D	10/11/21 15:40	kkw	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	1J11008	EPA 8260D	10/11/21 15:40	kkw	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	1J11008	EPA 8260D	10/11/21 15:40	kkw	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	1J11008	EPA 8260D	10/11/21 15:40	kkw	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	1J11008	EPA 8260D	10/11/21 15:40	kkw	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	1J11008	EPA 8260D	10/11/21 15:40	kkw	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	1J11008	EPA 8260D	10/11/21 15:40	kkw	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	1J11008	EPA 8260D	10/11/21 15:40	kkw	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	1J11008	EPA 8260D	10/11/21 15:40	kkw	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	1J11008	EPA 8260D	10/11/21 15:40	kkw	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	1J11008	EPA 8260D	10/11/21 15:40	kkw	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	1J11008	EPA 8260D	10/11/21 15:40	kkw	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	1J11008	EPA 8260D	10/11/21 15:40	kkw	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	1J11008	EPA 8260D	10/11/21 15:40	kkw	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	1J11008	EPA 8260D	10/11/21 15:40	kkw	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	1J11008	EPA 8260D	10/11/21 15:40	kkw	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	1J11008	EPA 8260D	10/11/21 15:40	kkw	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	1J11008	EPA 8260D	10/11/21 15:40	kkw	
cis-1,2-Dichloroethene [156-59-2]^	**2.1**	I	ug/L	1	0.53	2.5	1J11008	EPA 8260D	10/11/21 15:40	kkw	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	1J11008	EPA 8260D	10/11/21 15:40	kkw	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	1J11008	EPA 8260D	10/11/21 15:40	kkw	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	1J11008	EPA 8260D	10/11/21 15:40	kkw	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	1J11008	EPA 8260D	10/11/21 15:40	kkw	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	1J11008	EPA 8260D	10/11/21 15:40	kkw	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	1J11008	EPA 8260D	10/11/21 15:40	kkw	QV-01
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	1J11008	EPA 8260D	10/11/21 15:40	kkw	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	1J11008	EPA 8260D	10/11/21 15:40	kkw	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	1J11008	EPA 8260D	10/11/21 15:40	kkw	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	1J11008	EPA 8260D	10/11/21 15:40	kkw	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	1J11008	EPA 8260D	10/11/21 15:40	kkw	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	1J11008	EPA 8260D	10/11/21 15:40	kkw	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	1J11008	EPA 8260D	10/11/21 15:40	kkw	
trans-1,2-Dichloroethene [156-60-5]^	0.73	U	ug/L	1	0.73	2.5	1J11008	EPA 8260D	10/11/21 15:40	kkw	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	1J11008	EPA 8260D	10/11/21 15:40	kkw	
Trichloroethene [79-01-6]^	0.89	U	ug/L	1	0.89	2.5	1J11008	EPA 8260D	10/11/21 15:40	kkw	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	1J11008	EPA 8260D	10/11/21 15:40	kkw	
Vinyl chloride [75-01-4]^	**2.9**		ug/L	1	0.71	2.5	1J11008	EPA 8260D	10/11/21 15:40	kkw	

ANALYTICAL RESULTS

Description: LC34-IW0125-018.0-20211005 **Lab Sample ID:** AE08058-01 **Received:** 10/07/21 15:15

Matrix: Ground Water **Sampled:** 10/05/21 16:00 **Work Order:** AE08058

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*46*	*1*	*50.0*	*91 %*	*41-142*	*1J11008*	*EPA 8260D*	*10/11/21 15:40*	*kkw*	
Dibromofluoromethane	*52*	*1*	*50.0*	*104 %*	*53-146*	*1J11008*	*EPA 8260D*	*10/11/21 15:40*	*kkw*	
Toluene-d8	*48*	*1*	*50.0*	*96 %*	*41-146*	*1J11008*	*EPA 8260D*	*10/11/21 15:40*	*kkw*	

ANALYTICAL RESULTS

Description: LC34-IW0131-018.0-20211005 **Lab Sample ID:** AE08058-02 **Received:** 10/07/21 15:15

Matrix: Ground Water **Sampled:** 10/05/21 16:30 **Work Order:** AE08058

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	1J11008	EPA 8260D	10/11/21 16:09	kkw	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	1J11008	EPA 8260D	10/11/21 16:09	kkw	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	1J11008	EPA 8260D	10/11/21 16:09	kkw	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	1J11008	EPA 8260D	10/11/21 16:09	kkw	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	1J11008	EPA 8260D	10/11/21 16:09	kkw	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	1J11008	EPA 8260D	10/11/21 16:09	kkw	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	1J11008	EPA 8260D	10/11/21 16:09	kkw	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	1J11008	EPA 8260D	10/11/21 16:09	kkw	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	1J11008	EPA 8260D	10/11/21 16:09	kkw	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	1J11008	EPA 8260D	10/11/21 16:09	kkw	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	1J11008	EPA 8260D	10/11/21 16:09	kkw	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	1J11008	EPA 8260D	10/11/21 16:09	kkw	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	1J11008	EPA 8260D	10/11/21 16:09	kkw	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	1J11008	EPA 8260D	10/11/21 16:09	kkw	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	1J11008	EPA 8260D	10/11/21 16:09	kkw	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	1J11008	EPA 8260D	10/11/21 16:09	kkw	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	1J11008	EPA 8260D	10/11/21 16:09	kkw	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	1J11008	EPA 8260D	10/11/21 16:09	kkw	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	1J11008	EPA 8260D	10/11/21 16:09	kkw	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	1J11008	EPA 8260D	10/11/21 16:09	kkw	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	1J11008	EPA 8260D	10/11/21 16:09	kkw	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	1J11008	EPA 8260D	10/11/21 16:09	kkw	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	1J11008	EPA 8260D	10/11/21 16:09	kkw	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	1J11008	EPA 8260D	10/11/21 16:09	kkw	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	1J11008	EPA 8260D	10/11/21 16:09	kkw	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	1J11008	EPA 8260D	10/11/21 16:09	kkw	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	1J11008	EPA 8260D	10/11/21 16:09	kkw	
cis-1,2-Dichloroethene [156-59-2]^	**0.80**	I	ug/L	1	0.53	2.5	1J11008	EPA 8260D	10/11/21 16:09	kkw	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	1J11008	EPA 8260D	10/11/21 16:09	kkw	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	1J11008	EPA 8260D	10/11/21 16:09	kkw	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	1J11008	EPA 8260D	10/11/21 16:09	kkw	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	1J11008	EPA 8260D	10/11/21 16:09	kkw	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	1J11008	EPA 8260D	10/11/21 16:09	kkw	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	1J11008	EPA 8260D	10/11/21 16:09	kkw	QV-01
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	1J11008	EPA 8260D	10/11/21 16:09	kkw	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	1J11008	EPA 8260D	10/11/21 16:09	kkw	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	1J11008	EPA 8260D	10/11/21 16:09	kkw	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	1J11008	EPA 8260D	10/11/21 16:09	kkw	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	1J11008	EPA 8260D	10/11/21 16:09	kkw	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	1J11008	EPA 8260D	10/11/21 16:09	kkw	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	1J11008	EPA 8260D	10/11/21 16:09	kkw	
trans-1,2-Dichloroethene [156-60-5]^	0.73	U	ug/L	1	0.73	2.5	1J11008	EPA 8260D	10/11/21 16:09	kkw	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	1J11008	EPA 8260D	10/11/21 16:09	kkw	
Trichloroethene [79-01-6]^	0.89	U	ug/L	1	0.89	2.5	1J11008	EPA 8260D	10/11/21 16:09	kkw	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	1J11008	EPA 8260D	10/11/21 16:09	kkw	
Vinyl chloride [75-01-4]^	0.71	U	ug/L	1	0.71	2.5	1J11008	EPA 8260D	10/11/21 16:09	kkw	

ANALYTICAL RESULTS

Description: LC34-IW0131-018.0-20211005 **Lab Sample ID:** AE08058-02 **Received:** 10/07/21 15:15

Matrix: Ground Water **Sampled:** 10/05/21 16:30 **Work Order:** AE08058

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*47*	*1*	*50.0*	*94 %*	*41-142*	*1J11008*	*EPA 8260D*	*10/11/21 16:09*	*kkw*	
Dibromofluoromethane	*55*	*1*	*50.0*	*111 %*	*53-146*	*1J11008*	*EPA 8260D*	*10/11/21 16:09*	*kkw*	
Toluene-d8	*53*	*1*	*50.0*	*105 %*	*41-146*	*1J11008*	*EPA 8260D*	*10/11/21 16:09*	*kkw*	

ANALYTICAL RESULTS

Description: LC34-IW0108-024.0-20211005 **Lab Sample ID:** AE08058-03 **Received:** 10/07/21 15:15

Matrix: Ground Water **Sampled:** 10/05/21 17:25 **Work Order:** AE08058

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	1J11008	EPA 8260D	10/11/21 16:38	kkw	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	1J11008	EPA 8260D	10/11/21 16:38	kkw	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	1J11008	EPA 8260D	10/11/21 16:38	kkw	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	1J11008	EPA 8260D	10/11/21 16:38	kkw	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	1J11008	EPA 8260D	10/11/21 16:38	kkw	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	1J11008	EPA 8260D	10/11/21 16:38	kkw	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	1J11008	EPA 8260D	10/11/21 16:38	kkw	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	1J11008	EPA 8260D	10/11/21 16:38	kkw	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	1J11008	EPA 8260D	10/11/21 16:38	kkw	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	1J11008	EPA 8260D	10/11/21 16:38	kkw	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	1J11008	EPA 8260D	10/11/21 16:38	kkw	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	1J11008	EPA 8260D	10/11/21 16:38	kkw	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	1J11008	EPA 8260D	10/11/21 16:38	kkw	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	1J11008	EPA 8260D	10/11/21 16:38	kkw	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	1J11008	EPA 8260D	10/11/21 16:38	kkw	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	1J11008	EPA 8260D	10/11/21 16:38	kkw	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	1J11008	EPA 8260D	10/11/21 16:38	kkw	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	1J11008	EPA 8260D	10/11/21 16:38	kkw	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	1J11008	EPA 8260D	10/11/21 16:38	kkw	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	1J11008	EPA 8260D	10/11/21 16:38	kkw	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	1J11008	EPA 8260D	10/11/21 16:38	kkw	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	1J11008	EPA 8260D	10/11/21 16:38	kkw	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	1J11008	EPA 8260D	10/11/21 16:38	kkw	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	1J11008	EPA 8260D	10/11/21 16:38	kkw	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	1J11008	EPA 8260D	10/11/21 16:38	kkw	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	1J11008	EPA 8260D	10/11/21 16:38	kkw	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	1J11008	EPA 8260D	10/11/21 16:38	kkw	
cis-1,2-Dichloroethene [156-59-2]^	0.53	U	ug/L	1	0.53	2.5	1J11008	EPA 8260D	10/11/21 16:38	kkw	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	1J11008	EPA 8260D	10/11/21 16:38	kkw	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	1J11008	EPA 8260D	10/11/21 16:38	kkw	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	1J11008	EPA 8260D	10/11/21 16:38	kkw	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	1J11008	EPA 8260D	10/11/21 16:38	kkw	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	1J11008	EPA 8260D	10/11/21 16:38	kkw	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	1J11008	EPA 8260D	10/11/21 16:38	kkw	QV-01
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	1J11008	EPA 8260D	10/11/21 16:38	kkw	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	1J11008	EPA 8260D	10/11/21 16:38	kkw	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	1J11008	EPA 8260D	10/11/21 16:38	kkw	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	1J11008	EPA 8260D	10/11/21 16:38	kkw	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	1J11008	EPA 8260D	10/11/21 16:38	kkw	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	1J11008	EPA 8260D	10/11/21 16:38	kkw	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	1J11008	EPA 8260D	10/11/21 16:38	kkw	
trans-1,2-Dichloroethene [156-60-5]^	0.73	U	ug/L	1	0.73	2.5	1J11008	EPA 8260D	10/11/21 16:38	kkw	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	1J11008	EPA 8260D	10/11/21 16:38	kkw	
Trichloroethene [79-01-6]^	0.89	U	ug/L	1	0.89	2.5	1J11008	EPA 8260D	10/11/21 16:38	kkw	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	1J11008	EPA 8260D	10/11/21 16:38	kkw	
Vinyl chloride [75-01-4]^	0.71	U	ug/L	1	0.71	2.5	1J11008	EPA 8260D	10/11/21 16:38	kkw	

ANALYTICAL RESULTS

Description: LC34-IW0108-024.0-20211005 **Lab Sample ID:** AE08058-03 **Received:** 10/07/21 15:15

Matrix: Ground Water **Sampled:** 10/05/21 17:25 **Work Order:** AE08058

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*46*	*1*	*50.0*	*92 %*	*41-142*	*1J11008*	*EPA 8260D*	*10/11/21 16:38*	*kkw*	
Dibromofluoromethane	*54*	*1*	*50.0*	*108 %*	*53-146*	*1J11008*	*EPA 8260D*	*10/11/21 16:38*	*kkw*	
Toluene-d8	*50*	*1*	*50.0*	*100 %*	*41-146*	*1J11008*	*EPA 8260D*	*10/11/21 16:38*	*kkw*	

ANALYTICAL RESULTS

Description: LC34-IW0124-018.0-20211006 **Lab Sample ID:** AE08058-04 **Received:** 10/07/21 15:15

Matrix: Ground Water **Sampled:** 10/06/21 12:05 **Work Order:** AE08058

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	1J11008	EPA 8260D	10/11/21 17:06	kkw	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	1J11008	EPA 8260D	10/11/21 17:06	kkw	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	1J11008	EPA 8260D	10/11/21 17:06	kkw	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	1J11008	EPA 8260D	10/11/21 17:06	kkw	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	1J11008	EPA 8260D	10/11/21 17:06	kkw	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	1J11008	EPA 8260D	10/11/21 17:06	kkw	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	1J11008	EPA 8260D	10/11/21 17:06	kkw	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	1J11008	EPA 8260D	10/11/21 17:06	kkw	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	1J11008	EPA 8260D	10/11/21 17:06	kkw	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	1J11008	EPA 8260D	10/11/21 17:06	kkw	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	1J11008	EPA 8260D	10/11/21 17:06	kkw	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	1J11008	EPA 8260D	10/11/21 17:06	kkw	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	1J11008	EPA 8260D	10/11/21 17:06	kkw	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	1J11008	EPA 8260D	10/11/21 17:06	kkw	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	1J11008	EPA 8260D	10/11/21 17:06	kkw	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	1J11008	EPA 8260D	10/11/21 17:06	kkw	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	1J11008	EPA 8260D	10/11/21 17:06	kkw	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	1J11008	EPA 8260D	10/11/21 17:06	kkw	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	1J11008	EPA 8260D	10/11/21 17:06	kkw	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	1J11008	EPA 8260D	10/11/21 17:06	kkw	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	1J11008	EPA 8260D	10/11/21 17:06	kkw	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	1J11008	EPA 8260D	10/11/21 17:06	kkw	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	1J11008	EPA 8260D	10/11/21 17:06	kkw	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	1J11008	EPA 8260D	10/11/21 17:06	kkw	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	1J11008	EPA 8260D	10/11/21 17:06	kkw	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	1J11008	EPA 8260D	10/11/21 17:06	kkw	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	1J11008	EPA 8260D	10/11/21 17:06	kkw	
cis-1,2-Dichloroethene [156-59-2]^	0.53	U	ug/L	1	0.53	2.5	1J11008	EPA 8260D	10/11/21 17:06	kkw	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	1J11008	EPA 8260D	10/11/21 17:06	kkw	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	1J11008	EPA 8260D	10/11/21 17:06	kkw	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	1J11008	EPA 8260D	10/11/21 17:06	kkw	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	1J11008	EPA 8260D	10/11/21 17:06	kkw	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	1J11008	EPA 8260D	10/11/21 17:06	kkw	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	1J11008	EPA 8260D	10/11/21 17:06	kkw	QV-01
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	1J11008	EPA 8260D	10/11/21 17:06	kkw	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	1J11008	EPA 8260D	10/11/21 17:06	kkw	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	1J11008	EPA 8260D	10/11/21 17:06	kkw	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	1J11008	EPA 8260D	10/11/21 17:06	kkw	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	1J11008	EPA 8260D	10/11/21 17:06	kkw	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	1J11008	EPA 8260D	10/11/21 17:06	kkw	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	1J11008	EPA 8260D	10/11/21 17:06	kkw	
trans-1,2-Dichloroethene [156-60-5]^	0.73	U	ug/L	1	0.73	2.5	1J11008	EPA 8260D	10/11/21 17:06	kkw	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	1J11008	EPA 8260D	10/11/21 17:06	kkw	
Trichloroethene [79-01-6]^	0.89	U	ug/L	1	0.89	2.5	1J11008	EPA 8260D	10/11/21 17:06	kkw	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	1J11008	EPA 8260D	10/11/21 17:06	kkw	
Vinyl chloride [75-01-4]^	0.71	U	ug/L	1	0.71	2.5	1J11008	EPA 8260D	10/11/21 17:06	kkw	

ANALYTICAL RESULTS

Description: LC34-IW0124-018.0-20211006 **Lab Sample ID:** AE08058-04 **Received:** 10/07/21 15:15

Matrix: Ground Water **Sampled:** 10/06/21 12:05 **Work Order:** AE08058

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*46*	*1*	*50.0*	*91 %*	*41-142*	*1J11008*	*EPA 8260D*	*10/11/21 17:06*	*kkw*	
Dibromofluoromethane	*55*	*1*	*50.0*	*110 %*	*53-146*	*1J11008*	*EPA 8260D*	*10/11/21 17:06*	*kkw*	
Toluene-d8	*52*	*1*	*50.0*	*104 %*	*41-146*	*1J11008*	*EPA 8260D*	*10/11/21 17:06*	*kkw*	

ANALYTICAL RESULTS

Description: LC34-IW0128-018.0-20211006 **Lab Sample ID:** AE08058-05 **Received:** 10/07/21 15:15

Matrix: Ground Water **Sampled:** 10/06/21 14:10 **Work Order:** AE08058

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	1J11008	EPA 8260D	10/11/21 17:35	kkw	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	1J11008	EPA 8260D	10/11/21 17:35	kkw	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	1J11008	EPA 8260D	10/11/21 17:35	kkw	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	1J11008	EPA 8260D	10/11/21 17:35	kkw	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	1J11008	EPA 8260D	10/11/21 17:35	kkw	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	1J11008	EPA 8260D	10/11/21 17:35	kkw	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	1J11008	EPA 8260D	10/11/21 17:35	kkw	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	1J11008	EPA 8260D	10/11/21 17:35	kkw	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	1J11008	EPA 8260D	10/11/21 17:35	kkw	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	1J11008	EPA 8260D	10/11/21 17:35	kkw	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	1J11008	EPA 8260D	10/11/21 17:35	kkw	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	1J11008	EPA 8260D	10/11/21 17:35	kkw	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	1J11008	EPA 8260D	10/11/21 17:35	kkw	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	1J11008	EPA 8260D	10/11/21 17:35	kkw	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	1J11008	EPA 8260D	10/11/21 17:35	kkw	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	1J11008	EPA 8260D	10/11/21 17:35	kkw	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	1J11008	EPA 8260D	10/11/21 17:35	kkw	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	1J11008	EPA 8260D	10/11/21 17:35	kkw	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	1J11008	EPA 8260D	10/11/21 17:35	kkw	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	1J11008	EPA 8260D	10/11/21 17:35	kkw	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	1J11008	EPA 8260D	10/11/21 17:35	kkw	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	1J11008	EPA 8260D	10/11/21 17:35	kkw	QV-01, QL-02
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	1J11008	EPA 8260D	10/11/21 17:35	kkw	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	1J11008	EPA 8260D	10/11/21 17:35	kkw	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	1J11008	EPA 8260D	10/11/21 17:35	kkw	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	1J11008	EPA 8260D	10/11/21 17:35	kkw	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	1J11008	EPA 8260D	10/11/21 17:35	kkw	
cis-1,2-Dichloroethene [156-59-2]^	0.53	U	ug/L	1	0.53	2.5	1J11008	EPA 8260D	10/11/21 17:35	kkw	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	1J11008	EPA 8260D	10/11/21 17:35	kkw	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	1J11008	EPA 8260D	10/11/21 17:35	kkw	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	1J11008	EPA 8260D	10/11/21 17:35	kkw	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	1J11008	EPA 8260D	10/11/21 17:35	kkw	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	1J11008	EPA 8260D	10/11/21 17:35	kkw	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	1J11008	EPA 8260D	10/11/21 17:35	kkw	QV-01
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	1J11008	EPA 8260D	10/11/21 17:35	kkw	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	1J11008	EPA 8260D	10/11/21 17:35	kkw	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	1J11008	EPA 8260D	10/11/21 17:35	kkw	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	1J11008	EPA 8260D	10/11/21 17:35	kkw	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	1J11008	EPA 8260D	10/11/21 17:35	kkw	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	1J11008	EPA 8260D	10/11/21 17:35	kkw	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	1J11008	EPA 8260D	10/11/21 17:35	kkw	
trans-1,2-Dichloroethene [156-60-5]^	0.73	U	ug/L	1	0.73	2.5	1J11008	EPA 8260D	10/11/21 17:35	kkw	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	1J11008	EPA 8260D	10/11/21 17:35	kkw	
Trichloroethene [79-01-6]^	0.89	U	ug/L	1	0.89	2.5	1J11008	EPA 8260D	10/11/21 17:35	kkw	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	1J11008	EPA 8260D	10/11/21 17:35	kkw	
Vinyl chloride [75-01-4]^	0.71	U	ug/L	1	0.71	2.5	1J11008	EPA 8260D	10/11/21 17:35	kkw	

ANALYTICAL RESULTS

Description: LC34-IW0128-018.0-20211006 **Lab Sample ID:** AE08058-05 **Received:** 10/07/21 15:15

Matrix: Ground Water **Sampled:** 10/06/21 14:10 **Work Order:** AE08058

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*45*	*1*	*50.0*	*91 %*	*41-142*	*1J11008*	*EPA 8260D*	*10/11/21 17:35*	*kkw*	
Dibromofluoromethane	*55*	*1*	*50.0*	*110 %*	*53-146*	*1J11008*	*EPA 8260D*	*10/11/21 17:35*	*kkw*	
Toluene-d8	*52*	*1*	*50.0*	*104 %*	*41-146*	*1J11008*	*EPA 8260D*	*10/11/21 17:35*	*kkw*	

ANALYTICAL RESULTS

Description: LC34-IW0127-024.0-20211006 **Lab Sample ID:** AE08058-06 **Received:** 10/07/21 15:15

Matrix: Ground Water **Sampled:** 10/06/21 15:00 **Work Order:** AE08058

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	1J11008	EPA 8260D	10/11/21 18:04	kkw	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	1J11008	EPA 8260D	10/11/21 18:04	kkw	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	1J11008	EPA 8260D	10/11/21 18:04	kkw	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	1J11008	EPA 8260D	10/11/21 18:04	kkw	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	1J11008	EPA 8260D	10/11/21 18:04	kkw	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	1J11008	EPA 8260D	10/11/21 18:04	kkw	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	1J11008	EPA 8260D	10/11/21 18:04	kkw	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	1J11008	EPA 8260D	10/11/21 18:04	kkw	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	1J11008	EPA 8260D	10/11/21 18:04	kkw	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	1J11008	EPA 8260D	10/11/21 18:04	kkw	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	1J11008	EPA 8260D	10/11/21 18:04	kkw	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	1J11008	EPA 8260D	10/11/21 18:04	kkw	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	1J11008	EPA 8260D	10/11/21 18:04	kkw	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	1J11008	EPA 8260D	10/11/21 18:04	kkw	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	1J11008	EPA 8260D	10/11/21 18:04	kkw	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	1J11008	EPA 8260D	10/11/21 18:04	kkw	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	1J11008	EPA 8260D	10/11/21 18:04	kkw	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	1J11008	EPA 8260D	10/11/21 18:04	kkw	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	1J11008	EPA 8260D	10/11/21 18:04	kkw	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	1J11008	EPA 8260D	10/11/21 18:04	kkw	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	1J11008	EPA 8260D	10/11/21 18:04	kkw	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	1J11008	EPA 8260D	10/11/21 18:04	kkw	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	1J11008	EPA 8260D	10/11/21 18:04	kkw	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	1J11008	EPA 8260D	10/11/21 18:04	kkw	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	1J11008	EPA 8260D	10/11/21 18:04	kkw	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	1J11008	EPA 8260D	10/11/21 18:04	kkw	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	1J11008	EPA 8260D	10/11/21 18:04	kkw	
cis-1,2-Dichloroethene [156-59-2]^	0.53	U	ug/L	1	0.53	2.5	1J11008	EPA 8260D	10/11/21 18:04	kkw	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	1J11008	EPA 8260D	10/11/21 18:04	kkw	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	1J11008	EPA 8260D	10/11/21 18:04	kkw	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	1J11008	EPA 8260D	10/11/21 18:04	kkw	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	1J11008	EPA 8260D	10/11/21 18:04	kkw	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	1J11008	EPA 8260D	10/11/21 18:04	kkw	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	1J11008	EPA 8260D	10/11/21 18:04	kkw	QV-01
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	1J11008	EPA 8260D	10/11/21 18:04	kkw	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	1J11008	EPA 8260D	10/11/21 18:04	kkw	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	1J11008	EPA 8260D	10/11/21 18:04	kkw	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	1J11008	EPA 8260D	10/11/21 18:04	kkw	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	1J11008	EPA 8260D	10/11/21 18:04	kkw	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	1J11008	EPA 8260D	10/11/21 18:04	kkw	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	1J11008	EPA 8260D	10/11/21 18:04	kkw	
trans-1,2-Dichloroethene [156-60-5]^	0.73	U	ug/L	1	0.73	2.5	1J11008	EPA 8260D	10/11/21 18:04	kkw	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	1J11008	EPA 8260D	10/11/21 18:04	kkw	
Trichloroethene [79-01-6]^	0.89	U	ug/L	1	0.89	2.5	1J11008	EPA 8260D	10/11/21 18:04	kkw	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	1J11008	EPA 8260D	10/11/21 18:04	kkw	
Vinyl chloride [75-01-4]^	0.71	U	ug/L	1	0.71	2.5	1J11008	EPA 8260D	10/11/21 18:04	kkw	

ANALYTICAL RESULTS

Description: LC34-IW0127-024.0-20211006 **Lab Sample ID:** AE08058-06 **Received:** 10/07/21 15:15

Matrix: Ground Water **Sampled:** 10/06/21 15:00 **Work Order:** AE08058

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*45*	*1*	*50.0*	*90 %*	*41-142*	*1J11008*	*EPA 8260D*	*10/11/21 18:04*	*kkw*	
Dibromofluoromethane	*53*	*1*	*50.0*	*106 %*	*53-146*	*1J11008*	*EPA 8260D*	*10/11/21 18:04*	*kkw*	
Toluene-d8	*51*	*1*	*50.0*	*101 %*	*41-146*	*1J11008*	*EPA 8260D*	*10/11/21 18:04*	*kkw*	

ANALYTICAL RESULTS

Description: LC34-IW0057S-008.1-20211006 **Lab Sample ID:** AE08058-07 **Received:** 10/07/21 15:15

Matrix: Ground Water **Sampled:** 10/06/21 15:30 **Work Order:** AE08058

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	1J11008	EPA 8260D	10/11/21 18:32	kkw	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	1J11008	EPA 8260D	10/11/21 18:32	kkw	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	1J11008	EPA 8260D	10/11/21 18:32	kkw	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	1J11008	EPA 8260D	10/11/21 18:32	kkw	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	1J11008	EPA 8260D	10/11/21 18:32	kkw	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	1J11008	EPA 8260D	10/11/21 18:32	kkw	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	1J11008	EPA 8260D	10/11/21 18:32	kkw	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	1J11008	EPA 8260D	10/11/21 18:32	kkw	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	1J11008	EPA 8260D	10/11/21 18:32	kkw	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	1J11008	EPA 8260D	10/11/21 18:32	kkw	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	1J11008	EPA 8260D	10/11/21 18:32	kkw	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	1J11008	EPA 8260D	10/11/21 18:32	kkw	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	1J11008	EPA 8260D	10/11/21 18:32	kkw	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	1J11008	EPA 8260D	10/11/21 18:32	kkw	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	1J11008	EPA 8260D	10/11/21 18:32	kkw	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	1J11008	EPA 8260D	10/11/21 18:32	kkw	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	1J11008	EPA 8260D	10/11/21 18:32	kkw	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	1J11008	EPA 8260D	10/11/21 18:32	kkw	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	1J11008	EPA 8260D	10/11/21 18:32	kkw	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	1J11008	EPA 8260D	10/11/21 18:32	kkw	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	1J11008	EPA 8260D	10/11/21 18:32	kkw	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	1J11008	EPA 8260D	10/11/21 18:32	kkw	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	1J11008	EPA 8260D	10/11/21 18:32	kkw	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	1J11008	EPA 8260D	10/11/21 18:32	kkw	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	1J11008	EPA 8260D	10/11/21 18:32	kkw	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	1J11008	EPA 8260D	10/11/21 18:32	kkw	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	1J11008	EPA 8260D	10/11/21 18:32	kkw	
cis-1,2-Dichloroethene [156-59-2]^	**0.57**	I	ug/L	1	0.53	2.5	1J11008	EPA 8260D	10/11/21 18:32	kkw	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	1J11008	EPA 8260D	10/11/21 18:32	kkw	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	1J11008	EPA 8260D	10/11/21 18:32	kkw	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	1J11008	EPA 8260D	10/11/21 18:32	kkw	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	1J11008	EPA 8260D	10/11/21 18:32	kkw	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	1J11008	EPA 8260D	10/11/21 18:32	kkw	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	1J11008	EPA 8260D	10/11/21 18:32	kkw	QV-01
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	1J11008	EPA 8260D	10/11/21 18:32	kkw	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	1J11008	EPA 8260D	10/11/21 18:32	kkw	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	1J11008	EPA 8260D	10/11/21 18:32	kkw	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	1J11008	EPA 8260D	10/11/21 18:32	kkw	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	1J11008	EPA 8260D	10/11/21 18:32	kkw	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	1J11008	EPA 8260D	10/11/21 18:32	kkw	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	1J11008	EPA 8260D	10/11/21 18:32	kkw	
trans-1,2-Dichloroethene [156-60-5]^	0.73	U	ug/L	1	0.73	2.5	1J11008	EPA 8260D	10/11/21 18:32	kkw	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	1J11008	EPA 8260D	10/11/21 18:32	kkw	
Trichloroethene [79-01-6]^	0.89	U	ug/L	1	0.89	2.5	1J11008	EPA 8260D	10/11/21 18:32	kkw	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	1J11008	EPA 8260D	10/11/21 18:32	kkw	
Vinyl chloride [75-01-4]^	0.71	U	ug/L	1	0.71	2.5	1J11008	EPA 8260D	10/11/21 18:32	kkw	

ANALYTICAL RESULTS

Description: LC34-IW0057S-008.1-20211006 **Lab Sample ID:** AE08058-07 **Received:** 10/07/21 15:15

Matrix: Ground Water **Sampled:** 10/06/21 15:30 **Work Order:** AE08058

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*46*	*1*	*50.0*	*92 %*	*41-142*	*1J11008*	*EPA 8260D*	*10/11/21 18:32*	*kkw*	
Dibromofluoromethane	*52*	*1*	*50.0*	*104 %*	*53-146*	*1J11008*	*EPA 8260D*	*10/11/21 18:32*	*kkw*	
Toluene-d8	*50*	*1*	*50.0*	*100 %*	*41-146*	*1J11008*	*EPA 8260D*	*10/11/21 18:32*	*kkw*	

ANALYTICAL RESULTS

Description: LC34-IW0057I-025.5-20211006 **Lab Sample ID:** AE08058-08 **Received:** 10/07/21 15:15

Matrix: Ground Water **Sampled:** 10/06/21 16:00 **Work Order:** AE08058

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	1J11008	EPA 8260D	10/11/21 19:01	kkw	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	1J11008	EPA 8260D	10/11/21 19:01	kkw	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	1J11008	EPA 8260D	10/11/21 19:01	kkw	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	1J11008	EPA 8260D	10/11/21 19:01	kkw	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	1J11008	EPA 8260D	10/11/21 19:01	kkw	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	1J11008	EPA 8260D	10/11/21 19:01	kkw	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	1J11008	EPA 8260D	10/11/21 19:01	kkw	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	1J11008	EPA 8260D	10/11/21 19:01	kkw	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	1J11008	EPA 8260D	10/11/21 19:01	kkw	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	1J11008	EPA 8260D	10/11/21 19:01	kkw	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	1J11008	EPA 8260D	10/11/21 19:01	kkw	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	1J11008	EPA 8260D	10/11/21 19:01	kkw	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	1J11008	EPA 8260D	10/11/21 19:01	kkw	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	1J11008	EPA 8260D	10/11/21 19:01	kkw	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	1J11008	EPA 8260D	10/11/21 19:01	kkw	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	1J11008	EPA 8260D	10/11/21 19:01	kkw	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	1J11008	EPA 8260D	10/11/21 19:01	kkw	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	1J11008	EPA 8260D	10/11/21 19:01	kkw	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	1J11008	EPA 8260D	10/11/21 19:01	kkw	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	1J11008	EPA 8260D	10/11/21 19:01	kkw	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	1J11008	EPA 8260D	10/11/21 19:01	kkw	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	1J11008	EPA 8260D	10/11/21 19:01	kkw	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	1J11008	EPA 8260D	10/11/21 19:01	kkw	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	1J11008	EPA 8260D	10/11/21 19:01	kkw	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	1J11008	EPA 8260D	10/11/21 19:01	kkw	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	1J11008	EPA 8260D	10/11/21 19:01	kkw	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	1J11008	EPA 8260D	10/11/21 19:01	kkw	
cis-1,2-Dichloroethene [156-59-2]^	**6.2**		ug/L	1	0.53	2.5	1J11008	EPA 8260D	10/11/21 19:01	kkw	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	1J11008	EPA 8260D	10/11/21 19:01	kkw	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	1J11008	EPA 8260D	10/11/21 19:01	kkw	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	1J11008	EPA 8260D	10/11/21 19:01	kkw	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	1J11008	EPA 8260D	10/11/21 19:01	kkw	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	1J11008	EPA 8260D	10/11/21 19:01	kkw	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	1J11008	EPA 8260D	10/11/21 19:01	kkw	QV-01
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	1J11008	EPA 8260D	10/11/21 19:01	kkw	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	1J11008	EPA 8260D	10/11/21 19:01	kkw	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	1J11008	EPA 8260D	10/11/21 19:01	kkw	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	1J11008	EPA 8260D	10/11/21 19:01	kkw	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	1J11008	EPA 8260D	10/11/21 19:01	kkw	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	1J11008	EPA 8260D	10/11/21 19:01	kkw	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	1J11008	EPA 8260D	10/11/21 19:01	kkw	
trans-1,2-Dichloroethene [156-60-5]^	**1.8**	I	ug/L	1	0.73	2.5	1J11008	EPA 8260D	10/11/21 19:01	kkw	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	1J11008	EPA 8260D	10/11/21 19:01	kkw	
Trichloroethene [79-01-6]^	0.89	U	ug/L	1	0.89	2.5	1J11008	EPA 8260D	10/11/21 19:01	kkw	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	1J11008	EPA 8260D	10/11/21 19:01	kkw	
Vinyl chloride [75-01-4]^	**2.6**		ug/L	1	0.71	2.5	1J11008	EPA 8260D	10/11/21 19:01	kkw	

ANALYTICAL RESULTS

Description: LC34-IW0057I-025.5-20211006 **Lab Sample ID:** AE08058-08 **Received:** 10/07/21 15:15

Matrix: Ground Water **Sampled:** 10/06/21 16:00 **Work Order:** AE08058

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*44*	*1*	*50.0*	*88 %*	*41-142*	*1J11008*	*EPA 8260D*	*10/11/21 19:01*	*kkw*	
Dibromofluoromethane	*54*	*1*	*50.0*	*107 %*	*53-146*	*1J11008*	*EPA 8260D*	*10/11/21 19:01*	*kkw*	
Toluene-d8	*51*	*1*	*50.0*	*102 %*	*41-146*	*1J11008*	*EPA 8260D*	*10/11/21 19:01*	*kkw*	

ANALYTICAL RESULTS

Description: LC34-IW0141-024.0-20211006 **Lab Sample ID:** AE08058-09 **Received:** 10/07/21 15:15

Matrix: Ground Water **Sampled:** 10/06/21 17:05 **Work Order:** AE08058

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	1J12028	EPA 8260D	10/13/21 01:11	kkw	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	1J12028	EPA 8260D	10/13/21 01:11	kkw	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	1J12028	EPA 8260D	10/13/21 01:11	kkw	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	1J12028	EPA 8260D	10/13/21 01:11	kkw	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	1J12028	EPA 8260D	10/13/21 01:11	kkw	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	1J12028	EPA 8260D	10/13/21 01:11	kkw	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	1J12028	EPA 8260D	10/13/21 01:11	kkw	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	1J12028	EPA 8260D	10/13/21 01:11	kkw	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	1J12028	EPA 8260D	10/13/21 01:11	kkw	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	1J12028	EPA 8260D	10/13/21 01:11	kkw	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	1J12028	EPA 8260D	10/13/21 01:11	kkw	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	1J12028	EPA 8260D	10/13/21 01:11	kkw	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	1J12028	EPA 8260D	10/13/21 01:11	kkw	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	1J12028	EPA 8260D	10/13/21 01:11	kkw	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	1J12028	EPA 8260D	10/13/21 01:11	kkw	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	1J12028	EPA 8260D	10/13/21 01:11	kkw	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	1J12028	EPA 8260D	10/13/21 01:11	kkw	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	1J12028	EPA 8260D	10/13/21 01:11	kkw	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	1J12028	EPA 8260D	10/13/21 01:11	kkw	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	1J12028	EPA 8260D	10/13/21 01:11	kkw	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	1J12028	EPA 8260D	10/13/21 01:11	kkw	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	1J12028	EPA 8260D	10/13/21 01:11	kkw	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	1J12028	EPA 8260D	10/13/21 01:11	kkw	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	1J12028	EPA 8260D	10/13/21 01:11	kkw	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	1J12028	EPA 8260D	10/13/21 01:11	kkw	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	1J12028	EPA 8260D	10/13/21 01:11	kkw	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	1J12028	EPA 8260D	10/13/21 01:11	kkw	
cis-1,2-Dichloroethene [156-59-2]^	0.53	U	ug/L	1	0.53	2.5	1J12028	EPA 8260D	10/13/21 01:11	kkw	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	1J12028	EPA 8260D	10/13/21 01:11	kkw	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	1J12028	EPA 8260D	10/13/21 01:11	kkw	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	1J12028	EPA 8260D	10/13/21 01:11	kkw	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	1J12028	EPA 8260D	10/13/21 01:11	kkw	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	1J12028	EPA 8260D	10/13/21 01:11	kkw	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	1J12028	EPA 8260D	10/13/21 01:11	kkw	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	1J12028	EPA 8260D	10/13/21 01:11	kkw	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	1J12028	EPA 8260D	10/13/21 01:11	kkw	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	1J12028	EPA 8260D	10/13/21 01:11	kkw	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	1J12028	EPA 8260D	10/13/21 01:11	kkw	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	1J12028	EPA 8260D	10/13/21 01:11	kkw	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	1J12028	EPA 8260D	10/13/21 01:11	kkw	QL-02, QV-01
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	1J12028	EPA 8260D	10/13/21 01:11	kkw	
trans-1,2-Dichloroethene [156-60-5]^	0.73	U	ug/L	1	0.73	2.5	1J12028	EPA 8260D	10/13/21 01:11	kkw	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	1J12028	EPA 8260D	10/13/21 01:11	kkw	
Trichloroethene [79-01-6]^	0.89	U	ug/L	1	0.89	2.5	1J12028	EPA 8260D	10/13/21 01:11	kkw	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	1J12028	EPA 8260D	10/13/21 01:11	kkw	

ANALYTICAL RESULTS

Description: LC34-IW0141-024.0-20211006 **Lab Sample ID:** AE08058-09 **Received:** 10/07/21 15:15

Matrix: Ground Water **Sampled:** 10/06/21 17:05 **Work Order:** AE08058

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Vinyl chloride [75-01-4]^	0.71	U	ug/L	1	0.71	2.5	1J12028	EPA 8260D	10/13/21 01:11	kkw	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*49*	*1*	*50.0*	*97 %*	*41-142*	*1J12028*	*EPA 8260D*	*10/13/21 01:11*	*kkw*	
Dibromofluoromethane	*46*	*1*	*50.0*	*91 %*	*53-146*	*1J12028*	*EPA 8260D*	*10/13/21 01:11*	*kkw*	
Toluene-d8	*44*	*1*	*50.0*	*87 %*	*41-146*	*1J12028*	*EPA 8260D*	*10/13/21 01:11*	*kkw*	

ANALYTICAL RESULTS

Description: LC34-IW0142-024.0-20211007 **Lab Sample ID:** AE08058-10 **Received:** 10/07/21 15:15

Matrix: Ground Water **Sampled:** 10/07/21 10:15 **Work Order:** AE08058

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	1J13009	EPA 8260D	10/13/21 11:43	kkw	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	1J13009	EPA 8260D	10/13/21 11:43	kkw	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	1J13009	EPA 8260D	10/13/21 11:43	kkw	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	1J13009	EPA 8260D	10/13/21 11:43	kkw	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	1J13009	EPA 8260D	10/13/21 11:43	kkw	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	1J13009	EPA 8260D	10/13/21 11:43	kkw	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	1J13009	EPA 8260D	10/13/21 11:43	kkw	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	1J13009	EPA 8260D	10/13/21 11:43	kkw	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	1J13009	EPA 8260D	10/13/21 11:43	kkw	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	1J13009	EPA 8260D	10/13/21 11:43	kkw	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	1J13009	EPA 8260D	10/13/21 11:43	kkw	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	1J13009	EPA 8260D	10/13/21 11:43	kkw	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	1J13009	EPA 8260D	10/13/21 11:43	kkw	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	1J13009	EPA 8260D	10/13/21 11:43	kkw	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	1J13009	EPA 8260D	10/13/21 11:43	kkw	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	1J13009	EPA 8260D	10/13/21 11:43	kkw	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	1J13009	EPA 8260D	10/13/21 11:43	kkw	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	1J13009	EPA 8260D	10/13/21 11:43	kkw	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	1J13009	EPA 8260D	10/13/21 11:43	kkw	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	1J13009	EPA 8260D	10/13/21 11:43	kkw	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	1J13009	EPA 8260D	10/13/21 11:43	kkw	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	1J13009	EPA 8260D	10/13/21 11:43	kkw	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	1J13009	EPA 8260D	10/13/21 11:43	kkw	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	1J13009	EPA 8260D	10/13/21 11:43	kkw	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	1J13009	EPA 8260D	10/13/21 11:43	kkw	QV-01
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	1J13009	EPA 8260D	10/13/21 11:43	kkw	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	1J13009	EPA 8260D	10/13/21 11:43	kkw	
cis-1,2-Dichloroethene [156-59-2]^	0.53	U	ug/L	1	0.53	2.5	1J13009	EPA 8260D	10/13/21 11:43	kkw	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	1J13009	EPA 8260D	10/13/21 11:43	kkw	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	1J13009	EPA 8260D	10/13/21 11:43	kkw	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	1J13009	EPA 8260D	10/13/21 11:43	kkw	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	1J13009	EPA 8260D	10/13/21 11:43	kkw	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	1J13009	EPA 8260D	10/13/21 11:43	kkw	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	1J13009	EPA 8260D	10/13/21 11:43	kkw	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	1J13009	EPA 8260D	10/13/21 11:43	kkw	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	1J13009	EPA 8260D	10/13/21 11:43	kkw	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	1J13009	EPA 8260D	10/13/21 11:43	kkw	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	1J13009	EPA 8260D	10/13/21 11:43	kkw	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	1J13009	EPA 8260D	10/13/21 11:43	kkw	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	1J13009	EPA 8260D	10/13/21 11:43	kkw	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	1J13009	EPA 8260D	10/13/21 11:43	kkw	
trans-1,2-Dichloroethene [156-60-5]^	0.73	U	ug/L	1	0.73	2.5	1J13009	EPA 8260D	10/13/21 11:43	kkw	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	1J13009	EPA 8260D	10/13/21 11:43	kkw	
Trichloroethene [79-01-6]^	0.89	U	ug/L	1	0.89	2.5	1J13009	EPA 8260D	10/13/21 11:43	kkw	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	1J13009	EPA 8260D	10/13/21 11:43	kkw	
Vinyl chloride [75-01-4]^	0.71	U	ug/L	1	0.71	2.5	1J13009	EPA 8260D	10/13/21 11:43	kkw	

ANALYTICAL RESULTS

Description: LC34-IW0142-024.0-20211007 **Lab Sample ID:** AE08058-10 **Received:** 10/07/21 15:15

Matrix: Ground Water **Sampled:** 10/07/21 10:15 **Work Order:** AE08058

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*45*	*1*	*50.0*	*90 %*	*41-142*	*1J13009*	*EPA 8260D*	*10/13/21 11:43*	*kkw*	
Dibromofluoromethane	*48*	*1*	*50.0*	*96 %*	*53-146*	*1J13009*	*EPA 8260D*	*10/13/21 11:43*	*kkw*	
Toluene-d8	*48*	*1*	*50.0*	*96 %*	*41-146*	*1J13009*	*EPA 8260D*	*10/13/21 11:43*	*kkw*	

ANALYTICAL RESULTS

Description: LC34-IW0144-024.0-20211007 **Lab Sample ID:** AE08058-11 **Received:** 10/07/21 15:15

Matrix: Ground Water **Sampled:** 10/07/21 10:50 **Work Order:** AE08058

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	1J13009	EPA 8260D	10/13/21 12:12	kkw	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	1J13009	EPA 8260D	10/13/21 12:12	kkw	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	1J13009	EPA 8260D	10/13/21 12:12	kkw	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	1J13009	EPA 8260D	10/13/21 12:12	kkw	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	1J13009	EPA 8260D	10/13/21 12:12	kkw	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	1J13009	EPA 8260D	10/13/21 12:12	kkw	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	1J13009	EPA 8260D	10/13/21 12:12	kkw	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	1J13009	EPA 8260D	10/13/21 12:12	kkw	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	1J13009	EPA 8260D	10/13/21 12:12	kkw	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	1J13009	EPA 8260D	10/13/21 12:12	kkw	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	1J13009	EPA 8260D	10/13/21 12:12	kkw	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	1J13009	EPA 8260D	10/13/21 12:12	kkw	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	1J13009	EPA 8260D	10/13/21 12:12	kkw	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	1J13009	EPA 8260D	10/13/21 12:12	kkw	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	1J13009	EPA 8260D	10/13/21 12:12	kkw	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	1J13009	EPA 8260D	10/13/21 12:12	kkw	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	1J13009	EPA 8260D	10/13/21 12:12	kkw	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	1J13009	EPA 8260D	10/13/21 12:12	kkw	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	1J13009	EPA 8260D	10/13/21 12:12	kkw	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	1J13009	EPA 8260D	10/13/21 12:12	kkw	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	1J13009	EPA 8260D	10/13/21 12:12	kkw	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	1J13009	EPA 8260D	10/13/21 12:12	kkw	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	1J13009	EPA 8260D	10/13/21 12:12	kkw	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	1J13009	EPA 8260D	10/13/21 12:12	kkw	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	1J13009	EPA 8260D	10/13/21 12:12	kkw	QV-01
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	1J13009	EPA 8260D	10/13/21 12:12	kkw	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	1J13009	EPA 8260D	10/13/21 12:12	kkw	
cis-1,2-Dichloroethene [156-59-2]^	**3.2**		ug/L	1	0.53	2.5	1J13009	EPA 8260D	10/13/21 12:12	kkw	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	1J13009	EPA 8260D	10/13/21 12:12	kkw	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	1J13009	EPA 8260D	10/13/21 12:12	kkw	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	1J13009	EPA 8260D	10/13/21 12:12	kkw	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	1J13009	EPA 8260D	10/13/21 12:12	kkw	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	1J13009	EPA 8260D	10/13/21 12:12	kkw	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	1J13009	EPA 8260D	10/13/21 12:12	kkw	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	1J13009	EPA 8260D	10/13/21 12:12	kkw	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	1J13009	EPA 8260D	10/13/21 12:12	kkw	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	1J13009	EPA 8260D	10/13/21 12:12	kkw	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	1J13009	EPA 8260D	10/13/21 12:12	kkw	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	1J13009	EPA 8260D	10/13/21 12:12	kkw	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	1J13009	EPA 8260D	10/13/21 12:12	kkw	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	1J13009	EPA 8260D	10/13/21 12:12	kkw	
trans-1,2-Dichloroethene [156-60-5]^	0.73	U	ug/L	1	0.73	2.5	1J13009	EPA 8260D	10/13/21 12:12	kkw	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	1J13009	EPA 8260D	10/13/21 12:12	kkw	
Trichloroethene [79-01-6]^	0.89	U	ug/L	1	0.89	2.5	1J13009	EPA 8260D	10/13/21 12:12	kkw	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	1J13009	EPA 8260D	10/13/21 12:12	kkw	
Vinyl chloride [75-01-4]^	0.71	U	ug/L	1	0.71	2.5	1J13009	EPA 8260D	10/13/21 12:12	kkw	

ANALYTICAL RESULTS

Description: LC34-IW0144-024.0-20211007 **Lab Sample ID:** AE08058-11 **Received:** 10/07/21 15:15

Matrix: Ground Water **Sampled:** 10/07/21 10:50 **Work Order:** AE08058

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*44*	*1*	*50.0*	*87 %*	*41-142*	*1J13009*	*EPA 8260D*	*10/13/21 12:12*	*kkw*	
Dibromofluoromethane	*47*	*1*	*50.0*	*94 %*	*53-146*	*1J13009*	*EPA 8260D*	*10/13/21 12:12*	*kkw*	
Toluene-d8	*47*	*1*	*50.0*	*93 %*	*41-146*	*1J13009*	*EPA 8260D*	*10/13/21 12:12*	*kkw*	

ANALYTICAL RESULTS

Description: LC34-IW0145-031.5-20211007 **Lab Sample ID:** AE08058-12 **Received:** 10/07/21 15:15

Matrix: Ground Water **Sampled:** 10/07/21 11:20 **Work Order:** AE08058

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	1J13009	EPA 8260D	10/13/21 12:40	kkw	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	1J13009	EPA 8260D	10/13/21 12:40	kkw	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	1J13009	EPA 8260D	10/13/21 12:40	kkw	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	1J13009	EPA 8260D	10/13/21 12:40	kkw	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	1J13009	EPA 8260D	10/13/21 12:40	kkw	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	1J13009	EPA 8260D	10/13/21 12:40	kkw	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	1J13009	EPA 8260D	10/13/21 12:40	kkw	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	1J13009	EPA 8260D	10/13/21 12:40	kkw	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	1J13009	EPA 8260D	10/13/21 12:40	kkw	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	1J13009	EPA 8260D	10/13/21 12:40	kkw	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	1J13009	EPA 8260D	10/13/21 12:40	kkw	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	1J13009	EPA 8260D	10/13/21 12:40	kkw	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	1J13009	EPA 8260D	10/13/21 12:40	kkw	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	1J13009	EPA 8260D	10/13/21 12:40	kkw	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	1J13009	EPA 8260D	10/13/21 12:40	kkw	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	1J13009	EPA 8260D	10/13/21 12:40	kkw	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	1J13009	EPA 8260D	10/13/21 12:40	kkw	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	1J13009	EPA 8260D	10/13/21 12:40	kkw	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	1J13009	EPA 8260D	10/13/21 12:40	kkw	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	1J13009	EPA 8260D	10/13/21 12:40	kkw	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	1J13009	EPA 8260D	10/13/21 12:40	kkw	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	1J13009	EPA 8260D	10/13/21 12:40	kkw	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	1J13009	EPA 8260D	10/13/21 12:40	kkw	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	1J13009	EPA 8260D	10/13/21 12:40	kkw	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	1J13009	EPA 8260D	10/13/21 12:40	kkw	QV-01
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	1J13009	EPA 8260D	10/13/21 12:40	kkw	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	1J13009	EPA 8260D	10/13/21 12:40	kkw	
cis-1,2-Dichloroethene [156-59-2]^	**1.5**	I	ug/L	1	0.53	2.5	1J13009	EPA 8260D	10/13/21 12:40	kkw	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	1J13009	EPA 8260D	10/13/21 12:40	kkw	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	1J13009	EPA 8260D	10/13/21 12:40	kkw	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	1J13009	EPA 8260D	10/13/21 12:40	kkw	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	1J13009	EPA 8260D	10/13/21 12:40	kkw	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	1J13009	EPA 8260D	10/13/21 12:40	kkw	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	1J13009	EPA 8260D	10/13/21 12:40	kkw	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	1J13009	EPA 8260D	10/13/21 12:40	kkw	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	1J13009	EPA 8260D	10/13/21 12:40	kkw	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	1J13009	EPA 8260D	10/13/21 12:40	kkw	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	1J13009	EPA 8260D	10/13/21 12:40	kkw	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	1J13009	EPA 8260D	10/13/21 12:40	kkw	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	1J13009	EPA 8260D	10/13/21 12:40	kkw	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	1J13009	EPA 8260D	10/13/21 12:40	kkw	
trans-1,2-Dichloroethene [156-60-5]^	0.73	U	ug/L	1	0.73	2.5	1J13009	EPA 8260D	10/13/21 12:40	kkw	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	1J13009	EPA 8260D	10/13/21 12:40	kkw	
Trichloroethene [79-01-6]^	0.89	U	ug/L	1	0.89	2.5	1J13009	EPA 8260D	10/13/21 12:40	kkw	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	1J13009	EPA 8260D	10/13/21 12:40	kkw	
Vinyl chloride [75-01-4]^	**1.1**	I	ug/L	1	0.71	2.5	1J13009	EPA 8260D	10/13/21 12:40	kkw	

ANALYTICAL RESULTS

Description: LC34-IW0145-031.5-20211007 **Lab Sample ID:** AE08058-12 **Received:** 10/07/21 15:15

Matrix: Ground Water **Sampled:** 10/07/21 11:20 **Work Order:** AE08058

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*45*	*1*	*50.0*	*90 %*	*41-142*	*1J13009*	*EPA 8260D*	*10/13/21 12:40*	*kkw*	
Dibromofluoromethane	*48*	*1*	*50.0*	*97 %*	*53-146*	*1J13009*	*EPA 8260D*	*10/13/21 12:40*	*kkw*	
Toluene-d8	*48*	*1*	*50.0*	*96 %*	*41-146*	*1J13009*	*EPA 8260D*	*10/13/21 12:40*	*kkw*	

ANALYTICAL RESULTS

Description: LC34-IW0123-024.0-20211007 **Lab Sample ID:** AE08058-13 **Received:** 10/07/21 15:15

Matrix: Ground Water **Sampled:** 10/07/21 11:50 **Work Order:** AE08058

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	1J13009	EPA 8260D	10/13/21 13:09	kkw	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	1J13009	EPA 8260D	10/13/21 13:09	kkw	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	1J13009	EPA 8260D	10/13/21 13:09	kkw	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	1J13009	EPA 8260D	10/13/21 13:09	kkw	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	1J13009	EPA 8260D	10/13/21 13:09	kkw	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	1J13009	EPA 8260D	10/13/21 13:09	kkw	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	1J13009	EPA 8260D	10/13/21 13:09	kkw	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	1J13009	EPA 8260D	10/13/21 13:09	kkw	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	1J13009	EPA 8260D	10/13/21 13:09	kkw	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	1J13009	EPA 8260D	10/13/21 13:09	kkw	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	1J13009	EPA 8260D	10/13/21 13:09	kkw	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	1J13009	EPA 8260D	10/13/21 13:09	kkw	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	1J13009	EPA 8260D	10/13/21 13:09	kkw	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	1J13009	EPA 8260D	10/13/21 13:09	kkw	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	1J13009	EPA 8260D	10/13/21 13:09	kkw	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	1J13009	EPA 8260D	10/13/21 13:09	kkw	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	1J13009	EPA 8260D	10/13/21 13:09	kkw	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	1J13009	EPA 8260D	10/13/21 13:09	kkw	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	1J13009	EPA 8260D	10/13/21 13:09	kkw	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	1J13009	EPA 8260D	10/13/21 13:09	kkw	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	1J13009	EPA 8260D	10/13/21 13:09	kkw	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	1J13009	EPA 8260D	10/13/21 13:09	kkw	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	1J13009	EPA 8260D	10/13/21 13:09	kkw	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	1J13009	EPA 8260D	10/13/21 13:09	kkw	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	1J13009	EPA 8260D	10/13/21 13:09	kkw	QV-01
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	1J13009	EPA 8260D	10/13/21 13:09	kkw	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	1J13009	EPA 8260D	10/13/21 13:09	kkw	
cis-1,2-Dichloroethene [156-59-2]^	**97**		ug/L	5	2.6	12	1J14017	EPA 8260D	10/14/21 18:14	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	1J13009	EPA 8260D	10/13/21 13:09	kkw	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	1J13009	EPA 8260D	10/13/21 13:09	kkw	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	1J13009	EPA 8260D	10/13/21 13:09	kkw	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	1J13009	EPA 8260D	10/13/21 13:09	kkw	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	1J13009	EPA 8260D	10/13/21 13:09	kkw	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	1J13009	EPA 8260D	10/13/21 13:09	kkw	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	1J13009	EPA 8260D	10/13/21 13:09	kkw	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	1J13009	EPA 8260D	10/13/21 13:09	kkw	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	1J13009	EPA 8260D	10/13/21 13:09	kkw	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	1J13009	EPA 8260D	10/13/21 13:09	kkw	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	1J13009	EPA 8260D	10/13/21 13:09	kkw	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	1J13009	EPA 8260D	10/13/21 13:09	kkw	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	1J13009	EPA 8260D	10/13/21 13:09	kkw	
trans-1,2-Dichloroethene [156-60-5]^	**2.4**	I	ug/L	1	0.73	2.5	1J13009	EPA 8260D	10/13/21 13:09	kkw	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	1J13009	EPA 8260D	10/13/21 13:09	kkw	
Trichloroethene [79-01-6]^	0.89	U	ug/L	1	0.89	2.5	1J13009	EPA 8260D	10/13/21 13:09	kkw	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	1J13009	EPA 8260D	10/13/21 13:09	kkw	
Vinyl chloride [75-01-4]^	**28**		ug/L	1	0.71	2.5	1J13009	EPA 8260D	10/13/21 13:09	kkw	

ANALYTICAL RESULTS

Description: LC34-IW0123-024.0-20211007 **Lab Sample ID:** AE08058-13 **Received:** 10/07/21 15:15

Matrix: Ground Water **Sampled:** 10/07/21 11:50 **Work Order:** AE08058

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*46*	*1*	*50.0*	*91 %*	*41-142*	*1J13009*	*EPA 8260D*	*10/13/21 13:09*	*kkw*	
4-Bromofluorobenzene	*45*	*1*	*50.0*	*90 %*	*41-142*	*1J14017*	*EPA 8260D*	*10/14/21 18:14*	*nmc*	
Dibromofluoromethane	*48*	*1*	*50.0*	*95 %*	*53-146*	*1J13009*	*EPA 8260D*	*10/13/21 13:09*	*kkw*	
Dibromofluoromethane	*49*	*1*	*50.0*	*99 %*	*53-146*	*1J14017*	*EPA 8260D*	*10/14/21 18:14*	*nmc*	
Toluene-d8	*45*	*1*	*50.0*	*91 %*	*41-146*	*1J13009*	*EPA 8260D*	*10/13/21 13:09*	*kkw*	
Toluene-d8	*50*	*1*	*50.0*	*99 %*	*41-146*	*1J14017*	*EPA 8260D*	*10/14/21 18:14*	*nmc*	

ANALYTICAL RESULTS

Description: LC34-IW0147-024.0-20211007 **Lab Sample ID:** AE08058-14 **Received:** 10/07/21 15:15

Matrix: Ground Water **Sampled:** 10/07/21 12:50 **Work Order:** AE08058

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	1J13009	EPA 8260D	10/13/21 13:38	kkw	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	1J13009	EPA 8260D	10/13/21 13:38	kkw	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	1J13009	EPA 8260D	10/13/21 13:38	kkw	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	1J13009	EPA 8260D	10/13/21 13:38	kkw	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	1J13009	EPA 8260D	10/13/21 13:38	kkw	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	1J13009	EPA 8260D	10/13/21 13:38	kkw	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	1J13009	EPA 8260D	10/13/21 13:38	kkw	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	1J13009	EPA 8260D	10/13/21 13:38	kkw	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	1J13009	EPA 8260D	10/13/21 13:38	kkw	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	1J13009	EPA 8260D	10/13/21 13:38	kkw	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	1J13009	EPA 8260D	10/13/21 13:38	kkw	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	1J13009	EPA 8260D	10/13/21 13:38	kkw	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	1J13009	EPA 8260D	10/13/21 13:38	kkw	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	1J13009	EPA 8260D	10/13/21 13:38	kkw	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	1J13009	EPA 8260D	10/13/21 13:38	kkw	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	1J13009	EPA 8260D	10/13/21 13:38	kkw	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	1J13009	EPA 8260D	10/13/21 13:38	kkw	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	1J13009	EPA 8260D	10/13/21 13:38	kkw	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	1J13009	EPA 8260D	10/13/21 13:38	kkw	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	1J13009	EPA 8260D	10/13/21 13:38	kkw	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	1J13009	EPA 8260D	10/13/21 13:38	kkw	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	1J13009	EPA 8260D	10/13/21 13:38	kkw	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	1J13009	EPA 8260D	10/13/21 13:38	kkw	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	1J13009	EPA 8260D	10/13/21 13:38	kkw	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	1J13009	EPA 8260D	10/13/21 13:38	kkw	QV-01
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	1J13009	EPA 8260D	10/13/21 13:38	kkw	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	1J13009	EPA 8260D	10/13/21 13:38	kkw	
cis-1,2-Dichloroethene [156-59-2]^	0.53	U	ug/L	1	0.53	2.5	1J13009	EPA 8260D	10/13/21 13:38	kkw	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	1J13009	EPA 8260D	10/13/21 13:38	kkw	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	1J13009	EPA 8260D	10/13/21 13:38	kkw	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	1J13009	EPA 8260D	10/13/21 13:38	kkw	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	1J13009	EPA 8260D	10/13/21 13:38	kkw	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	1J13009	EPA 8260D	10/13/21 13:38	kkw	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	1J13009	EPA 8260D	10/13/21 13:38	kkw	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	1J13009	EPA 8260D	10/13/21 13:38	kkw	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	1J13009	EPA 8260D	10/13/21 13:38	kkw	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	1J13009	EPA 8260D	10/13/21 13:38	kkw	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	1J13009	EPA 8260D	10/13/21 13:38	kkw	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	1J13009	EPA 8260D	10/13/21 13:38	kkw	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	1J13009	EPA 8260D	10/13/21 13:38	kkw	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	1J13009	EPA 8260D	10/13/21 13:38	kkw	
trans-1,2-Dichloroethene [156-60-5]^	0.73	U	ug/L	1	0.73	2.5	1J13009	EPA 8260D	10/13/21 13:38	kkw	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	1J13009	EPA 8260D	10/13/21 13:38	kkw	
Trichloroethene [79-01-6]^	0.89	U	ug/L	1	0.89	2.5	1J13009	EPA 8260D	10/13/21 13:38	kkw	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	1J13009	EPA 8260D	10/13/21 13:38	kkw	
Vinyl chloride [75-01-4]^	0.71	U	ug/L	1	0.71	2.5	1J13009	EPA 8260D	10/13/21 13:38	kkw	

ANALYTICAL RESULTS

Description: LC34-IW0147-024.0-20211007 **Lab Sample ID:** AE08058-14 **Received:** 10/07/21 15:15

Matrix: Ground Water **Sampled:** 10/07/21 12:50 **Work Order:** AE08058

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*45*	*1*	*50.0*	*90 %*	*41-142*	*1J13009*	*EPA 8260D*	*10/13/21 13:38*	*kkw*	
Dibromofluoromethane	*48*	*1*	*50.0*	*96 %*	*53-146*	*1J13009*	*EPA 8260D*	*10/13/21 13:38*	*kkw*	
Toluene-d8	*48*	*1*	*50.0*	*96 %*	*41-146*	*1J13009*	*EPA 8260D*	*10/13/21 13:38*	*kkw*	

ANALYTICAL RESULTS

Description: LC34-IW0146-018.0-20211007 **Lab Sample ID:** AE08058-15 **Received:** 10/07/21 15:15

Matrix: Ground Water **Sampled:** 10/07/21 14:10 **Work Order:** AE08058

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	1J13009	EPA 8260D	10/13/21 14:07	kkw	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	1J13009	EPA 8260D	10/13/21 14:07	kkw	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	1J13009	EPA 8260D	10/13/21 14:07	kkw	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	1J13009	EPA 8260D	10/13/21 14:07	kkw	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	1J13009	EPA 8260D	10/13/21 14:07	kkw	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	1J13009	EPA 8260D	10/13/21 14:07	kkw	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	1J13009	EPA 8260D	10/13/21 14:07	kkw	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	1J13009	EPA 8260D	10/13/21 14:07	kkw	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	1J13009	EPA 8260D	10/13/21 14:07	kkw	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	1J13009	EPA 8260D	10/13/21 14:07	kkw	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	1J13009	EPA 8260D	10/13/21 14:07	kkw	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	1J13009	EPA 8260D	10/13/21 14:07	kkw	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	1J13009	EPA 8260D	10/13/21 14:07	kkw	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	1J13009	EPA 8260D	10/13/21 14:07	kkw	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	1J13009	EPA 8260D	10/13/21 14:07	kkw	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	1J13009	EPA 8260D	10/13/21 14:07	kkw	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	1J13009	EPA 8260D	10/13/21 14:07	kkw	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	1J13009	EPA 8260D	10/13/21 14:07	kkw	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	1J13009	EPA 8260D	10/13/21 14:07	kkw	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	1J13009	EPA 8260D	10/13/21 14:07	kkw	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	1J13009	EPA 8260D	10/13/21 14:07	kkw	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	1J13009	EPA 8260D	10/13/21 14:07	kkw	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	1J13009	EPA 8260D	10/13/21 14:07	kkw	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	1J13009	EPA 8260D	10/13/21 14:07	kkw	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	1J13009	EPA 8260D	10/13/21 14:07	kkw	QV-01
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	1J13009	EPA 8260D	10/13/21 14:07	kkw	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	1J13009	EPA 8260D	10/13/21 14:07	kkw	
cis-1,2-Dichloroethene [156-59-2]^	0.53	U	ug/L	1	0.53	2.5	1J13009	EPA 8260D	10/13/21 14:07	kkw	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	1J13009	EPA 8260D	10/13/21 14:07	kkw	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	1J13009	EPA 8260D	10/13/21 14:07	kkw	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	1J13009	EPA 8260D	10/13/21 14:07	kkw	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	1J13009	EPA 8260D	10/13/21 14:07	kkw	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	1J13009	EPA 8260D	10/13/21 14:07	kkw	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	1J13009	EPA 8260D	10/13/21 14:07	kkw	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	1J13009	EPA 8260D	10/13/21 14:07	kkw	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	1J13009	EPA 8260D	10/13/21 14:07	kkw	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	1J13009	EPA 8260D	10/13/21 14:07	kkw	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	1J13009	EPA 8260D	10/13/21 14:07	kkw	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	1J13009	EPA 8260D	10/13/21 14:07	kkw	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	1J13009	EPA 8260D	10/13/21 14:07	kkw	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	1J13009	EPA 8260D	10/13/21 14:07	kkw	
trans-1,2-Dichloroethene [156-60-5]^	0.73	U	ug/L	1	0.73	2.5	1J13009	EPA 8260D	10/13/21 14:07	kkw	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	1J13009	EPA 8260D	10/13/21 14:07	kkw	
Trichloroethene [79-01-6]^	0.89	U	ug/L	1	0.89	2.5	1J13009	EPA 8260D	10/13/21 14:07	kkw	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	1J13009	EPA 8260D	10/13/21 14:07	kkw	
Vinyl chloride [75-01-4]^	0.71	U	ug/L	1	0.71	2.5	1J13009	EPA 8260D	10/13/21 14:07	kkw	

ANALYTICAL RESULTS

Description: LC34-IW0146-018.0-20211007 **Lab Sample ID:** AE08058-15 **Received:** 10/07/21 15:15

Matrix: Ground Water **Sampled:** 10/07/21 14:10 **Work Order:** AE08058

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*45*	*1*	*50.0*	*91 %*	*41-142*	*1J13009*	*EPA 8260D*	*10/13/21 14:07*	*kkw*	
Dibromofluoromethane	*48*	*1*	*50.0*	*97 %*	*53-146*	*1J13009*	*EPA 8260D*	*10/13/21 14:07*	*kkw*	
Toluene-d8	*48*	*1*	*50.0*	*96 %*	*41-146*	*1J13009*	*EPA 8260D*	*10/13/21 14:07*	*kkw*	

ANALYTICAL RESULTS

Description: LC34-IW0143-024.0-20211007 **Lab Sample ID:** AE08058-16 **Received:** 10/07/21 15:15

Matrix: Ground Water **Sampled:** 10/07/21 14:50 **Work Order:** AE08058

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	1J13009	EPA 8260D	10/13/21 14:35	kkw	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	1J13009	EPA 8260D	10/13/21 14:35	kkw	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	1J13009	EPA 8260D	10/13/21 14:35	kkw	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	1J13009	EPA 8260D	10/13/21 14:35	kkw	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	1J13009	EPA 8260D	10/13/21 14:35	kkw	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	1J13009	EPA 8260D	10/13/21 14:35	kkw	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	1J13009	EPA 8260D	10/13/21 14:35	kkw	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	1J13009	EPA 8260D	10/13/21 14:35	kkw	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	1J13009	EPA 8260D	10/13/21 14:35	kkw	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	1J13009	EPA 8260D	10/13/21 14:35	kkw	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	1J13009	EPA 8260D	10/13/21 14:35	kkw	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	1J13009	EPA 8260D	10/13/21 14:35	kkw	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	1J13009	EPA 8260D	10/13/21 14:35	kkw	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	1J13009	EPA 8260D	10/13/21 14:35	kkw	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	1J13009	EPA 8260D	10/13/21 14:35	kkw	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	1J13009	EPA 8260D	10/13/21 14:35	kkw	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	1J13009	EPA 8260D	10/13/21 14:35	kkw	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	1J13009	EPA 8260D	10/13/21 14:35	kkw	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	1J13009	EPA 8260D	10/13/21 14:35	kkw	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	1J13009	EPA 8260D	10/13/21 14:35	kkw	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	1J13009	EPA 8260D	10/13/21 14:35	kkw	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	1J13009	EPA 8260D	10/13/21 14:35	kkw	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	1J13009	EPA 8260D	10/13/21 14:35	kkw	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	1J13009	EPA 8260D	10/13/21 14:35	kkw	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	1J13009	EPA 8260D	10/13/21 14:35	kkw	QV-01
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	1J13009	EPA 8260D	10/13/21 14:35	kkw	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	1J13009	EPA 8260D	10/13/21 14:35	kkw	
cis-1,2-Dichloroethene [156-59-2]^	**4.4**		ug/L	1	0.53	2.5	1J13009	EPA 8260D	10/13/21 14:35	kkw	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	1J13009	EPA 8260D	10/13/21 14:35	kkw	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	1J13009	EPA 8260D	10/13/21 14:35	kkw	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	1J13009	EPA 8260D	10/13/21 14:35	kkw	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	1J13009	EPA 8260D	10/13/21 14:35	kkw	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	1J13009	EPA 8260D	10/13/21 14:35	kkw	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	1J13009	EPA 8260D	10/13/21 14:35	kkw	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	1J13009	EPA 8260D	10/13/21 14:35	kkw	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	1J13009	EPA 8260D	10/13/21 14:35	kkw	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	1J13009	EPA 8260D	10/13/21 14:35	kkw	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	1J13009	EPA 8260D	10/13/21 14:35	kkw	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	1J13009	EPA 8260D	10/13/21 14:35	kkw	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	1J13009	EPA 8260D	10/13/21 14:35	kkw	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	1J13009	EPA 8260D	10/13/21 14:35	kkw	
trans-1,2-Dichloroethene [156-60-5]^	0.73	U	ug/L	1	0.73	2.5	1J13009	EPA 8260D	10/13/21 14:35	kkw	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	1J13009	EPA 8260D	10/13/21 14:35	kkw	
Trichloroethene [79-01-6]^	0.89	U	ug/L	1	0.89	2.5	1J13009	EPA 8260D	10/13/21 14:35	kkw	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	1J13009	EPA 8260D	10/13/21 14:35	kkw	
Vinyl chloride [75-01-4]^	0.71	U	ug/L	1	0.71	2.5	1J13009	EPA 8260D	10/13/21 14:35	kkw	

ANALYTICAL RESULTS

Description: LC34-IW0143-024.0-20211007 **Lab Sample ID:** AE08058-16 **Received:** 10/07/21 15:15

Matrix: Ground Water **Sampled:** 10/07/21 14:50 **Work Order:** AE08058

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*46*	*1*	*50.0*	*91 %*	*41-142*	*1J13009*	*EPA 8260D*	*10/13/21 14:35*	*kkw*	
Dibromofluoromethane	*50*	*1*	*50.0*	*100 %*	*53-146*	*1J13009*	*EPA 8260D*	*10/13/21 14:35*	*kkw*	
Toluene-d8	*49*	*1*	*50.0*	*98 %*	*41-146*	*1J13009*	*EPA 8260D*	*10/13/21 14:35*	*kkw*	

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1J11008 - EPA 5030B_MS

Blank (1J11008-BLK1) Prepared: 10/11/2021 00:00 Analyzed: 10/11/2021 10:54

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	0.80	U	2.5	ug/L							
1,1,2,2-Tetrachloroethane	0.54	U	2.5	ug/L							
1,1,2-Trichloroethane	0.76	U	2.5	ug/L							
1,1-Dichloroethane	0.62	U	2.5	ug/L							
1,1-Dichloroethene	0.94	U	2.5	ug/L							
1,2,4-Trichlorobenzene	0.70	U	2.5	ug/L							
1,2-Dibromo-3-chloropropane	0.96	U	2.5	ug/L							
1,2-Dibromoethane	0.78	U	2.5	ug/L							
1,2-Dichlorobenzene	0.73	U	2.5	ug/L							
1,2-Dichloroethane	0.63	U	2.5	ug/L							
1,2-Dichloropropane	0.80	U	2.5	ug/L							
1,3-Dichlorobenzene	0.77	U	2.5	ug/L							
1,4-Dichlorobenzene	0.76	U	2.5	ug/L							
2-Butanone	4.5	U	12	ug/L							
2-Hexanone	2.5	U	12	ug/L							
4-Methyl-2-pentanone	2.5	U	12	ug/L							
Acetone	10	U	25	ug/L							
Benzene	0.71	U	2.5	ug/L							
Bromodichloromethane	0.52	U	2.5	ug/L							
Bromoform	0.75	U	2.5	ug/L							
Bromomethane	0.95	U	2.5	ug/L							
Carbon disulfide	2.5	U	12	ug/L							
Carbon Tetrachloride	0.94	U	2.5	ug/L							
Chlorobenzene	0.72	U	2.5	ug/L							
Chloroethane	0.98	U	2.5	ug/L							
Chloroform	0.80	U	2.5	ug/L							
Chloromethane	0.82	U	2.5	ug/L							
cis-1,2-Dichloroethene	0.53	U	2.5	ug/L							
cis-1,3-Dichloropropene	0.59	U	2.5	ug/L							
Cyclohexane	0.93	U	2.5	ug/L							
Dibromochloromethane	0.50	U	2.5	ug/L							
Dichlorodifluoromethane	0.74	U	2.5	ug/L							
Ethylbenzene	0.69	U	2.5	ug/L							
Freon 113	0.73	U	2.5	ug/L							
Isopropylbenzene	0.67	U	2.5	ug/L							
Methyl acetate	0.95	U	2.5	ug/L							
Methylene Chloride	2.5	U	12	ug/L							
Methyl-tert-Butyl Ether	0.60	U	2.5	ug/L							
Styrene	0.61	U	2.5	ug/L							
Tetrachloroethene	0.76	U	2.5	ug/L							
Toluene	0.72	U	2.5	ug/L							
trans-1,2-Dichloroethene	0.73	U	2.5	ug/L							
trans-1,3-Dichloropropene	0.73	U	2.5	ug/L							
Trichloroethene	0.89	U	2.5	ug/L							
Trichlorofluoromethane	0.94	U	2.5	ug/L							
Vinyl chloride	0.71	U	2.5	ug/L							
4-Bromofluorobenzene	*46*	*I*		*ug/L*	*50.0*		*93*	*41-142*			
Dibromofluoromethane	*53*			*ug/L*	*50.0*		*106*	*53-146*			
Toluene-d8	*49*	*I*		*ug/L*	*50.0*		*98*	*41-146*			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1J11008 - EPA 5030B_MS - Continued

LCS (1J11008-BS1) Prepared: 10/11/2021 00:00 Analyzed: 10/11/2021 08:30

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	24		2.5	ug/L	20.0		119	57-148			
1,1,2,2-Tetrachloroethane	18		2.5	ug/L	20.0		88	60-139			
1,1,2-Trichloroethane	18		2.5	ug/L	20.0		90	57-141			
1,1-Dichloroethane	23		2.5	ug/L	20.0		115	57-142			
1,1-Dichloroethene	26		2.5	ug/L	20.0		128	47-139			
1,2,4-Trichlorobenzene	21		2.5	ug/L	20.0		104	52-159			
1,2-Dibromo-3-chloropropane	18		2.5	ug/L	20.0		88	48-150			
1,2-Dibromoethane	18		2.5	ug/L	20.0		89	57-140			
1,2-Dichlorobenzene	19		2.5	ug/L	20.0		93	63-131			
1,2-Dichloroethane	22		2.5	ug/L	20.0		110	50-156			
1,2-Dichloropropane	20		2.5	ug/L	20.0		100	61-133			
1,3-Dichlorobenzene	18		2.5	ug/L	20.0		91	66-129			
1,4-Dichlorobenzene	19		2.5	ug/L	20.0		93	65-133			
2-Butanone	150		12	ug/L	100		147	10-180			
2-Hexanone	100		12	ug/L	100		104	12-180			
4-Methyl-2-pentanone	98		12	ug/L	100		98	19-180			
Acetone	120		25	ug/L	100		116	10-180			
Benzene	22		2.5	ug/L	20.0		110	56-136			
Bromodichloromethane	22		2.5	ug/L	20.0		109	58-135			
Bromoform	19		2.5	ug/L	20.0		96	46-148			
Bromomethane	16		2.5	ug/L	20.0		81	10-173			
Carbon disulfide	43		12	ug/L	20.0		217	43-153			QL-02
Carbon Tetrachloride	23		2.5	ug/L	20.0		113	54-156			
Chlorobenzene	19		2.5	ug/L	20.0		94	51-139			
Chloroethane	24		2.5	ug/L	20.0		120	27-180			
Chloroform	23		2.5	ug/L	20.0		116	58-139			
Chloromethane	16		2.5	ug/L	20.0		80	33-154			
cis-1,2-Dichloroethene	22		2.5	ug/L	20.0		109	56-128			
cis-1,3-Dichloropropene	20		2.5	ug/L	20.0		99	64-128			
Cyclohexane	24		2.5	ug/L	20.0		118	70-130			
Dibromochloromethane	17		2.5	ug/L	20.0		85	50-140			
Dichlorodifluoromethane	13		2.5	ug/L	20.0		65	10-180			
Ethylbenzene	18		2.5	ug/L	20.0		92	63-133			
Freon 113	26		2.5	ug/L	20.0		128	47-173			
Isopropylbenzene	18		2.5	ug/L	20.0		92	60-132			
m,p-Xylenes	37		5.0	ug/L	40.0		92	64-133			
Methyl acetate	22		2.5	ug/L	20.0		110	70-130			
Methylene Chloride	23		12	ug/L	20.0		115	43-142			
Methyl-tert-Butyl Ether	22		2.5	ug/L	20.0		111	51-145			
o-Xylene	18		2.5	ug/L	20.0		91	61-129			
Styrene	19		2.5	ug/L	20.0		95	59-136			
Tetrachloroethene	20		2.5	ug/L	20.0		98	60-147			
Toluene	18		2.5	ug/L	20.0		91	64-131			
trans-1,2-Dichloroethene	23		2.5	ug/L	20.0		115	54-134			
trans-1,3-Dichloropropene	18		2.5	ug/L	20.0		91	65-149			
Trichloroethene	22		2.5	ug/L	20.0		109	62-135			
Trichlorofluoromethane	22		2.5	ug/L	20.0		111	56-155			
Vinyl chloride	19		2.5	ug/L	20.0		93	20-167			
4-Bromofluorobenzene	*46*	*I*		*ug/L*	*50.0*		*93*	*41-142*			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1J11008 - EPA 5030B_MS - Continued

LCS (1J11008-BS1) Continued Prepared: 10/11/2021 00:00 Analyzed: 10/11/2021 08:30

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Dibromofluoromethane	*54*			*ug/L*	*50.0*		*107*	*53-146*			
Toluene-d8	*52*			*ug/L*	*50.0*		*105*	*41-146*			

Matrix Spike (1J11008-MS1) Prepared: 10/11/2021 00:00 Analyzed: 10/11/2021 08:59

Source: AE08047-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	25		2.5	ug/L	20.0	0.80 U	127	57-148			
1,1,2,2-Tetrachloroethane	16		2.5	ug/L	20.0	0.54 U	82	60-139			
1,1,2-Trichloroethane	18		2.5	ug/L	20.0	0.76 U	91	57-141			
1,1-Dichloroethane	23		2.5	ug/L	20.0	0.62 U	116	57-142			
1,1-Dichloroethene	27		2.5	ug/L	20.0	0.94 U	133	47-139			
1,2,4-Trichlorobenzene	20		2.5	ug/L	20.0	0.70 U	101	52-159			
1,2-Dibromo-3-chloropropane	17		2.5	ug/L	20.0	0.96 U	85	48-150			
1,2-Dibromoethane	18		2.5	ug/L	20.0	0.78 U	88	57-140			
1,2-Dichlorobenzene	18		2.5	ug/L	20.0	0.73 U	92	63-131			
1,2-Dichloroethane	21		2.5	ug/L	20.0	0.63 U	106	50-156			
1,2-Dichloropropane	20		2.5	ug/L	20.0	0.80 U	99	61-133			
1,3-Dichlorobenzene	19		2.5	ug/L	20.0	0.77 U	94	66-129			
1,4-Dichlorobenzene	18		2.5	ug/L	20.0	0.76 U	92	65-133			
2-Butanone	140		12	ug/L	100	4.5 U	141	10-180			
2-Hexanone	110		12	ug/L	100	2.5 U	107	12-180			
4-Methyl-2-pentanone	100		12	ug/L	100	2.5 U	101	19-180			
Acetone	110		25	ug/L	100	10 U	109	10-180			
Benzene	23		2.5	ug/L	20.0	0.71 U	115	56-136			
Bromodichloromethane	22		2.5	ug/L	20.0	0.52 U	109	58-135			
Bromoform	19		2.5	ug/L	20.0	0.75 U	94	46-148			
Bromomethane	21		2.5	ug/L	20.0	0.95 U	103	10-173			
Carbon disulfide	40		12	ug/L	20.0	2.5 U	199	43-153			QM-19
Carbon Tetrachloride	24		2.5	ug/L	20.0	0.94 U	122	54-156			
Chlorobenzene	20		2.5	ug/L	20.0	0.72 U	98	51-139			
Chloroethane	28		2.5	ug/L	20.0	0.98 U	138	27-180			
Chloroform	24		2.5	ug/L	20.0	0.80 U	120	58-139			
Chloromethane	18		2.5	ug/L	20.0	0.82 U	92	33-154			
cis-1,2-Dichloroethene	23		2.5	ug/L	20.0	0.53 U	114	56-128			
cis-1,3-Dichloropropene	20		2.5	ug/L	20.0	0.59 U	98	64-128			
Cyclohexane	25		2.5	ug/L	20.0	0.93 U	126	70-130			
Dibromochloromethane	17		2.5	ug/L	20.0	0.50 U	86	50-140			
Dichlorodifluoromethane	16		2.5	ug/L	20.0	0.74 U	80	10-180			
Ethylbenzene	19		2.5	ug/L	20.0	0.69 U	96	63-133			
Freon 113	27		2.5	ug/L	20.0	0.73 U	135	47-173			
Isopropylbenzene	20		2.5	ug/L	20.0	0.67 U	101	60-132			
m,p-Xylenes	38		5.0	ug/L	40.0	1.3 U	96	64-133			
Methyl acetate	21		2.5	ug/L	20.0	0.95 U	105	70-130			
Methylene Chloride	23		12	ug/L	20.0	2.5 U	113	43-142			
Methyl-tert-Butyl Ether	22		2.5	ug/L	20.0	0.60 U	108	51-145			
o-Xylene	19		2.5	ug/L	20.0	0.53 U	94	61-129			
Styrene	20		2.5	ug/L	20.0	0.61 U	98	59-136			
Tetrachloroethene	20		2.5	ug/L	20.0	0.76 U	98	60-147			
Toluene	20		2.5	ug/L	20.0	0.72 U	98	64-131			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1J11008 - EPA 5030B_MS - Continued

Matrix Spike (1J11008-MS1) Continued Prepared: 10/11/2021 00:00 Analyzed: 10/11/2021 08:59

Source: AE08047-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
trans-1,2-Dichloroethene	25		2.5	ug/L	20.0	0.73 U	123	54-134			
trans-1,3-Dichloropropene	18		2.5	ug/L	20.0	0.73 U	90	65-149			
Trichloroethene	23		2.5	ug/L	20.0	0.89 U	114	62-135			
Trichlorofluoromethane	27		2.5	ug/L	20.0	0.94 U	134	56-155			
Vinyl chloride	21		2.5	ug/L	20.0	0.71 U	106	20-167			
4-Bromofluorobenzene	*46*	*I*		*ug/L*	*50.0*		*92*	*41-142*			
Dibromofluoromethane	*53*			*ug/L*	*50.0*		*106*	*53-146*			
Toluene-d8	*52*			*ug/L*	*50.0*		*103*	*41-146*			

Matrix Spike Dup (1J11008-MSD1) Prepared: 10/11/2021 00:00 Analyzed: 10/11/2021 09:28

Source: AE08047-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	25		2.5	ug/L	20.0	0.80 U	126	57-148	0.8	25	
1,1,2,2-Tetrachloroethane	16		2.5	ug/L	20.0	0.54 U	82	60-139	0	17	
1,1,2-Trichloroethane	18		2.5	ug/L	20.0	0.76 U	92	57-141	2	16	
1,1-Dichloroethane	23		2.5	ug/L	20.0	0.62 U	116	57-142	0	24	
1,1-Dichloroethene	26		2.5	ug/L	20.0	0.94 U	129	47-139	2	16	
1,2,4-Trichlorobenzene	20		2.5	ug/L	20.0	0.70 U	101	52-159	0	24	
1,2-Dibromo-3-chloropropane	17		2.5	ug/L	20.0	0.96 U	85	48-150	0	21	
1,2-Dibromoethane	18		2.5	ug/L	20.0	0.78 U	92	57-140	4	16	
1,2-Dichlorobenzene	19		2.5	ug/L	20.0	0.73 U	94	63-131	2	25	
1,2-Dichloroethane	21		2.5	ug/L	20.0	0.63 U	106	50-156	0	18	
1,2-Dichloropropane	20		2.5	ug/L	20.0	0.80 U	99	61-133	0	26	
1,3-Dichlorobenzene	19		2.5	ug/L	20.0	0.77 U	94	66-129	0	23	
1,4-Dichlorobenzene	18		2.5	ug/L	20.0	0.76 U	92	65-133	0	23	
2-Butanone	140		12	ug/L	100	4.5 U	141	10-180	0	29	
2-Hexanone	100		12	ug/L	100	2.5 U	102	12-180	4	28	
4-Methyl-2-pentanone	100		12	ug/L	100	2.5 U	101	19-180	0	24	
Acetone	110		25	ug/L	100	10 U	109	10-180	0	19	
Benzene	22		2.5	ug/L	20.0	0.71 U	112	56-136	2	14	
Bromodichloromethane	22		2.5	ug/L	20.0	0.52 U	109	58-135	0	19	
Bromoform	20		2.5	ug/L	20.0	0.75 U	100	46-148	6	18	
Bromomethane	21		2.5	ug/L	20.0	0.95 U	103	10-173	0	29	
Carbon disulfide	38		12	ug/L	20.0	2.5 U	190	43-153	5	26	QM-19
Carbon Tetrachloride	24		2.5	ug/L	20.0	0.94 U	120	54-156	2	27	
Chlorobenzene	20		2.5	ug/L	20.0	0.72 U	100	51-139	3	13	
Chloroethane	27		2.5	ug/L	20.0	0.98 U	135	27-180	2	22	
Chloroform	24		2.5	ug/L	20.0	0.80 U	120	58-139	0	17	
Chloromethane	18		2.5	ug/L	20.0	0.82 U	89	33-154	3	31	
cis-1,2-Dichloroethene	23		2.5	ug/L	20.0	0.53 U	114	56-128	0	17	
cis-1,3-Dichloropropene	20		2.5	ug/L	20.0	0.59 U	98	64-128	0	20	
Cyclohexane	25		2.5	ug/L	20.0	0.93 U	126	70-130	0	20	
Dibromochloromethane	19		2.5	ug/L	20.0	0.50 U	93	50-140	8	18	
Dichlorodifluoromethane	16		2.5	ug/L	20.0	0.74 U	80	10-180	0	26	
Ethylbenzene	20		2.5	ug/L	20.0	0.69 U	100	63-133	3	18	
Freon 113	26		2.5	ug/L	20.0	0.73 U	131	47-173	3	30	
Isopropylbenzene	20		2.5	ug/L	20.0	0.67 U	101	60-132	0	23	
m,p-Xylenes	39		5.0	ug/L	40.0	1.3 U	98	64-133	2	18	

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1J11008 - EPA 5030B_MS - Continued

Matrix Spike Dup (1J11008-MSD1) Continued Prepared: 10/11/2021 00:00 Analyzed: 10/11/2021 09:28

Source: AE08047-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Methyl acetate	21		2.5	ug/L	20.0	0.95 U	103	70-130	2	20	
Methylene Chloride	23		12	ug/L	20.0	2.5 U	113	43-142	0	23	
Methyl-tert-Butyl Ether	22		2.5	ug/L	20.0	0.60 U	108	51-145	0	22	
o-Xylene	20		2.5	ug/L	20.0	0.53 U	100	61-129	6	16	
Styrene	20		2.5	ug/L	20.0	0.61 U	99	59-136	1	32	
Tetrachloroethene	20		2.5	ug/L	20.0	0.76 U	101	60-147	3	21	
Toluene	20		2.5	ug/L	20.0	0.72 U	98	64-131	0	16	
trans-1,2-Dichloroethene	24		2.5	ug/L	20.0	0.73 U	119	54-134	3	20	
trans-1,3-Dichloropropene	18		2.5	ug/L	20.0	0.73 U	91	65-149	1	17	
Trichloroethene	23		2.5	ug/L	20.0	0.89 U	114	62-135	0	20	
Trichlorofluoromethane	26		2.5	ug/L	20.0	0.94 U	129	56-155	4	22	
Vinyl chloride	21		2.5	ug/L	20.0	0.71 U	103	20-167	3	24	
4-Bromofluorobenzene	*46*	*I*		*ug/L*	*50.0*		*92*	*41-142*			
Dibromofluoromethane	*52*			*ug/L*	*50.0*		*104*	*53-146*			
Toluene-d8	*50*			*ug/L*	*50.0*		*101*	*41-146*			

Batch 1J12028 - EPA 5030B_MS

Blank (1J12028-BLK1) Prepared: 10/12/2021 00:00 Analyzed: 10/12/2021 22:19

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	0.80	U	2.5	ug/L							
1,1,2,2-Tetrachloroethane	0.54	U	2.5	ug/L							
1,1,2-Trichloroethane	0.76	U	2.5	ug/L							
1,1-Dichloroethane	0.62	U	2.5	ug/L							
1,1-Dichloroethene	0.94	U	2.5	ug/L							
1,2,4-Trichlorobenzene	0.70	U	2.5	ug/L							
1,2-Dibromo-3-chloropropane	0.96	U	2.5	ug/L							
1,2-Dibromoethane	0.78	U	2.5	ug/L							
1,2-Dichlorobenzene	0.73	U	2.5	ug/L							
1,2-Dichloroethane	0.63	U	2.5	ug/L							
1,2-Dichloropropane	0.80	U	2.5	ug/L							
1,3-Dichlorobenzene	0.77	U	2.5	ug/L							
1,4-Dichlorobenzene	0.76	U	2.5	ug/L							
2-Butanone	4.5	U	12	ug/L							
2-Hexanone	2.5	U	12	ug/L							
4-Methyl-2-pentanone	2.5	U	12	ug/L							
Acetone	10	U	25	ug/L							
Benzene	0.71	U	2.5	ug/L							
Bromodichloromethane	0.52	U	2.5	ug/L							
Bromoform	0.75	U	2.5	ug/L							
Bromomethane	0.95	U	2.5	ug/L							
Carbon disulfide	2.5	U	12	ug/L							
Carbon Tetrachloride	0.94	U	2.5	ug/L							
Chlorobenzene	0.72	U	2.5	ug/L							
Chloroethane	0.98	U	2.5	ug/L							
Chloroform	0.80	U	2.5	ug/L							
Chloromethane	0.82	U	2.5	ug/L							
cis-1,2-Dichloroethene	0.53	U	2.5	ug/L							

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1J12028 - EPA 5030B_MS - Continued

Blank (1J12028-BLK1) Continued Prepared: 10/12/2021 00:00 Analyzed: 10/12/2021 22:19

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
cis-1,3-Dichloropropene	0.59	U	2.5	ug/L							
Cyclohexane	0.93	U	2.5	ug/L							
Dibromochloromethane	0.50	U	2.5	ug/L							
Dichlorodifluoromethane	0.74	U	2.5	ug/L							
Ethylbenzene	0.69	U	2.5	ug/L							
Freon 113	0.73	U	2.5	ug/L							
Isopropylbenzene	0.67	U	2.5	ug/L							
Methyl acetate	0.95	U	2.5	ug/L							
Methylene Chloride	2.5	U	12	ug/L							
Methyl-tert-Butyl Ether	0.60	U	2.5	ug/L							
Styrene	0.61	U	2.5	ug/L							
Tetrachloroethene	0.76	U	2.5	ug/L							
Toluene	0.72	U	2.5	ug/L							
trans-1,2-Dichloroethene	0.73	U	2.5	ug/L							
trans-1,3-Dichloropropene	0.73	U	2.5	ug/L							
Trichloroethene	0.89	U	2.5	ug/L							
Trichlorofluoromethane	0.94	U	2.5	ug/L							
Vinyl chloride	0.71	U	2.5	ug/L							
4-Bromofluorobenzene	*47*	*I*		*ug/L*	*50.0*		*94*	*41-142*			
Dibromofluoromethane	*50*			*ug/L*	*50.0*		*100*	*53-146*			
Toluene-d8	*48*	*I*		*ug/L*	*50.0*		*96*	*41-146*			

LCS (1J12028-BS1) Prepared: 10/12/2021 00:00 Analyzed: 10/12/2021 20:25

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	20		2.5	ug/L	20.0		101	57-148			
1,1,2,2-Tetrachloroethane	16		2.5	ug/L	20.0		82	60-139			
1,1,2-Trichloroethane	20		2.5	ug/L	20.0		100	57-141			
1,1-Dichloroethane	19		2.5	ug/L	20.0		95	57-142			
1,1-Dichloroethene	20		2.5	ug/L	20.0		99	47-139			
1,2,4-Trichlorobenzene	21		2.5	ug/L	20.0		104	52-159			
1,2-Dibromo-3-chloropropane	15		2.5	ug/L	20.0		76	48-150			
1,2-Dibromoethane	20		2.5	ug/L	20.0		98	57-140			
1,2-Dichlorobenzene	19		2.5	ug/L	20.0		97	63-131			
1,2-Dichloroethane	16		2.5	ug/L	20.0		81	50-156			
1,2-Dichloropropane	15		2.5	ug/L	20.0		76	61-133			
1,3-Dichlorobenzene	19		2.5	ug/L	20.0		94	66-129			
1,4-Dichlorobenzene	19		2.5	ug/L	20.0		93	65-133			
2-Butanone	130		12	ug/L	100		126	10-180			
2-Hexanone	74		12	ug/L	100		74	12-180			
4-Methyl-2-pentanone	86		12	ug/L	100		86	19-180			
Acetone	98		25	ug/L	100		98	10-180			
Benzene	19		2.5	ug/L	20.0		97	56-136			
Bromodichloromethane	17		2.5	ug/L	20.0		83	58-135			
Bromoform	22		2.5	ug/L	20.0		110	46-148			
Bromomethane	12		2.5	ug/L	20.0		58	10-173			
Carbon disulfide	33		12	ug/L	20.0		164	43-153			QL-02
Carbon Tetrachloride	21		2.5	ug/L	20.0		106	54-156			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1J12028 - EPA 5030B_MS - Continued

LCS (1J12028-BS1) Continued Prepared: 10/12/2021 00:00 Analyzed: 10/12/2021 20:25

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Chlorobenzene	21		2.5	ug/L	20.0		107	51-139			
Chloroethane	23		2.5	ug/L	20.0		115	27-180			
Chloroform	20		2.5	ug/L	20.0		101	58-139			
Chloromethane	18		2.5	ug/L	20.0		91	33-154			
cis-1,2-Dichloroethene	19		2.5	ug/L	20.0		95	56-128			
cis-1,3-Dichloropropene	15		2.5	ug/L	20.0		76	64-128			
Cyclohexane	18		2.5	ug/L	20.0		91	70-130			
Dibromochloromethane	21		2.5	ug/L	20.0		103	50-140			
Dichlorodifluoromethane	20		2.5	ug/L	20.0		98	10-180			
Ethylbenzene	20		2.5	ug/L	20.0		100	63-133			
Freon 113	20		2.5	ug/L	20.0		98	47-173			
Isopropylbenzene	20		2.5	ug/L	20.0		100	60-132			
m,p-Xylenes	41		5.0	ug/L	40.0		101	64-133			
Methyl acetate	18		2.5	ug/L	20.0		92	70-130			
Methylene Chloride	21		12	ug/L	20.0		105	43-142			
Methyl-tert-Butyl Ether	19		2.5	ug/L	20.0		94	51-145			
o-Xylene	20		2.5	ug/L	20.0		101	61-129			
Styrene	21		2.5	ug/L	20.0		106	59-136			
Tetrachloroethene	35		2.5	ug/L	20.0		176	60-147			QL-02
Toluene	19		2.5	ug/L	20.0		95	64-131			
trans-1,2-Dichloroethene	19		2.5	ug/L	20.0		95	54-134			
trans-1,3-Dichloropropene	17		2.5	ug/L	20.0		86	65-149			
Trichloroethene	22		2.5	ug/L	20.0		109	62-135			
Trichlorofluoromethane	22		2.5	ug/L	20.0		110	56-155			
Vinyl chloride	20		2.5	ug/L	20.0		99	20-167			
4-Bromofluorobenzene	*49*	*I*		*ug/L*	*50.0*		*99*	*41-142*			
Dibromofluoromethane	*48*	*I*		*ug/L*	*50.0*		*97*	*53-146*			
Toluene-d8	*45*	*I*		*ug/L*	*50.0*		*90*	*41-146*			

Matrix Spike (1J12028-MS1) Prepared: 10/12/2021 00:00 Analyzed: 10/12/2021 20:53

Source: AE07722-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	19		2.5	ug/L	20.0	0.80 U	95	57-148			
1,1,2,2-Tetrachloroethane	17		2.5	ug/L	20.0	0.54 U	84	60-139			
1,1,2-Trichloroethane	20		2.5	ug/L	20.0	0.76 U	99	57-141			
1,1-Dichloroethane	17		2.5	ug/L	20.0	0.62 U	87	57-142			
1,1-Dichloroethene	22		2.5	ug/L	20.0	0.94 U	108	47-139			
1,2,4-Trichlorobenzene	19		2.5	ug/L	20.0	0.70 U	97	52-159			
1,2-Dibromo-3-chloropropane	14		2.5	ug/L	20.0	0.96 U	72	48-150			
1,2-Dibromoethane	20		2.5	ug/L	20.0	0.78 U	100	57-140			
1,2-Dichlorobenzene	19		2.5	ug/L	20.0	0.73 U	97	63-131			
1,2-Dichloroethane	16		2.5	ug/L	20.0	0.63 U	79	50-156			QM-11
1,2-Dichloropropane	15		2.5	ug/L	20.0	0.80 U	77	61-133			
1,3-Dichlorobenzene	19		2.5	ug/L	20.0	0.77 U	95	66-129			
1,4-Dichlorobenzene	19		2.5	ug/L	20.0	0.76 U	95	65-133			
2-Butanone	110		12	ug/L	100	4.5 U	107	10-180			
2-Hexanone	73		12	ug/L	100	2.5 U	73	12-180			
4-Methyl-2-pentanone	89		12	ug/L	100	2.5 U	89	19-180			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1J12028 - EPA 5030B_MS - Continued

Matrix Spike (1J12028-MS1) Continued Prepared: 10/12/2021 00:00 Analyzed: 10/12/2021 20:53

Source: AE07722-01

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Acetone	72		25	ug/L	100	10 U	72	10-180			QM-11
Benzene	18		2.5	ug/L	20.0	0.71 U	89	56-136			QM-11
Bromodichloromethane	17		2.5	ug/L	20.0	0.52 U	85	58-135			
Bromoform	22		2.5	ug/L	20.0	0.75 U	109	46-148			
Bromomethane	17		2.5	ug/L	20.0	0.95 U	84	10-173			
Carbon disulfide	30		12	ug/L	20.0	2.5 U	151	43-153			
Carbon Tetrachloride	20		2.5	ug/L	20.0	0.94 U	102	54-156			
Chlorobenzene	23		2.5	ug/L	20.0	0.72 U	114	51-139			QM-11
Chloroethane	27		2.5	ug/L	20.0	0.98 U	136	27-180			
Chloroform	18		2.5	ug/L	20.0	0.80 U	90	58-139			
Chloromethane	22		2.5	ug/L	20.0	0.82 U	109	33-154			
cis-1,2-Dichloroethene	19		2.5	ug/L	20.0	0.53 U	95	56-128			
cis-1,3-Dichloropropene	15		2.5	ug/L	20.0	0.59 U	74	64-128			
Cyclohexane	19		2.5	ug/L	20.0	0.93 U	94	70-130			
Dibromochloromethane	21		2.5	ug/L	20.0	0.50 U	105	50-140			
Dichlorodifluoromethane	25		2.5	ug/L	20.0	0.74 U	127	10-180			
Ethylbenzene	22		2.5	ug/L	20.0	0.69 U	110	63-133			
Freon 113	21		2.5	ug/L	20.0	0.73 U	107	47-173			
Isopropylbenzene	22		2.5	ug/L	20.0	0.67 U	110	60-132			
m,p-Xylenes	44		5.0	ug/L	40.0	1.3 U	110	64-133			
Methyl acetate	15		2.5	ug/L	20.0	0.95 U	75	70-130			
Methylene Chloride	18		12	ug/L	20.0	2.5 U	91	43-142			
Methyl-tert-Butyl Ether	16		2.5	ug/L	20.0	0.60 U	79	51-145			
o-Xylene	22		2.5	ug/L	20.0	0.53 U	110	61-129			
Styrene	23		2.5	ug/L	20.0	0.61 U	113	59-136			
Tetrachloroethene	23		2.5	ug/L	20.0	0.76 U	117	60-147			
Toluene	20		2.5	ug/L	20.0	0.72 U	102	64-131			
trans-1,2-Dichloroethene	20		2.5	ug/L	20.0	0.73 U	99	54-134			
trans-1,3-Dichloropropene	17		2.5	ug/L	20.0	0.73 U	86	65-149			
Trichloroethene	23		2.5	ug/L	20.0	0.89 U	114	62-135			
Trichlorofluoromethane	27		2.5	ug/L	20.0	0.94 U	134	56-155			
Vinyl chloride	25		2.5	ug/L	20.0	0.78	121	20-167			
4-Bromofluorobenzene	*48*	*I*		*ug/L*	*50.0*		*96*	*41-142*			
Dibromofluoromethane	*45*	*I*		*ug/L*	*50.0*		*91*	*53-146*			
Toluene-d8	*44*	*I*		*ug/L*	*50.0*		*88*	*41-146*			

Matrix Spike Dup (1J12028-MSD1) Prepared: 10/12/2021 00:00 Analyzed: 10/12/2021 21:22

Source: AE07722-01

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	23		2.5	ug/L	20.0	0.80 U	113	57-148	17	25	
1,1,2,2-Tetrachloroethane	16		2.5	ug/L	20.0	0.54 U	82	60-139	3	17	
1,1,2-Trichloroethane	18		2.5	ug/L	20.0	0.76 U	90	57-141	10	16	
1,1-Dichloroethane	21		2.5	ug/L	20.0	0.62 U	103	57-142	16	24	
1,1-Dichloroethene	23		2.5	ug/L	20.0	0.94 U	113	47-139	4	16	
1,2,4-Trichlorobenzene	20		2.5	ug/L	20.0	0.70 U	98	52-159	0.6	24	
1,2-Dibromo-3-chloropropane	14		2.5	ug/L	20.0	0.96 U	69	48-150	4	21	
1,2-Dibromoethane	18		2.5	ug/L	20.0	0.78 U	91	57-140	10	16	
1,2-Dichlorobenzene	19		2.5	ug/L	20.0	0.73 U	95	63-131	1	25	

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1J12028 - EPA 5030B_MS - Continued

Matrix Spike Dup (1J12028-MSD1) Continued Prepared: 10/12/2021 00:00 Analyzed: 10/12/2021 21:22

Source: AE07722-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,2-Dichloroethane	21		2.5	ug/L	20.0	0.63 U	103	50-156	26	18	QM-11
1,2-Dichloropropane	18		2.5	ug/L	20.0	0.80 U	89	61-133	14	26	
1,3-Dichlorobenzene	19		2.5	ug/L	20.0	0.77 U	95	66-129	0	23	
1,4-Dichlorobenzene	19		2.5	ug/L	20.0	0.76 U	94	65-133	1	23	
2-Butanone	120		12	ug/L	100	4.5 U	120	10-180	11	29	
2-Hexanone	97		12	ug/L	100	2.5 U	97	12-180	27	28	
4-Methyl-2-pentanone	91		12	ug/L	100	2.5 U	91	19-180	3	24	
Acetone	95		25	ug/L	100	10 U	95	10-180	27	19	QM-11
Benzene	21		2.5	ug/L	20.0	0.71 U	103	56-136	15	14	QM-11
Bromodichloromethane	20		2.5	ug/L	20.0	0.52 U	101	58-135	17	19	
Bromoform	20		2.5	ug/L	20.0	0.75 U	98	46-148	10	18	
Bromomethane	17		2.5	ug/L	20.0	0.95 U	86	10-173	2	29	
Carbon disulfide	33		12	ug/L	20.0	2.5 U	165	43-153	9	26	QM-19
Carbon Tetrachloride	23		2.5	ug/L	20.0	0.94 U	115	54-156	11	27	
Chlorobenzene	20		2.5	ug/L	20.0	0.72 U	98	51-139	16	13	QM-11
Chloroethane	25		2.5	ug/L	20.0	0.98 U	126	27-180	8	22	
Chloroform	21		2.5	ug/L	20.0	0.80 U	106	58-139	16	17	
Chloromethane	20		2.5	ug/L	20.0	0.82 U	99	33-154	10	31	
cis-1,2-Dichloroethene	20		2.5	ug/L	20.0	0.53 U	101	56-128	6	17	
cis-1,3-Dichloropropene	17		2.5	ug/L	20.0	0.59 U	87	64-128	15	20	
Cyclohexane	22		2.5	ug/L	20.0	0.93 U	109	70-130	15	20	
Dibromochloromethane	18		2.5	ug/L	20.0	0.50 U	88	50-140	17	18	
Dichlorodifluoromethane	24		2.5	ug/L	20.0	0.74 U	121	10-180	5	26	
Ethylbenzene	20		2.5	ug/L	20.0	0.69 U	98	63-133	11	18	
Freon 113	23		2.5	ug/L	20.0	0.73 U	115	47-173	6	30	
Isopropylbenzene	20		2.5	ug/L	20.0	0.67 U	100	60-132	10	23	
m,p-Xylenes	38		5.0	ug/L	40.0	1.3 U	96	64-133	14	18	
Methyl acetate	17		2.5	ug/L	20.0	0.95 U	84	70-130	12	20	
Methylene Chloride	21		12	ug/L	20.0	2.5 U	103	43-142	13	23	
Methyl-tert-Butyl Ether	18		2.5	ug/L	20.0	0.60 U	91	51-145	14	22	
o-Xylene	19		2.5	ug/L	20.0	0.53 U	97	61-129	13	16	
Styrene	20		2.5	ug/L	20.0	0.61 U	100	59-136	12	32	
Tetrachloroethene	19		2.5	ug/L	20.0	0.76 U	96	60-147	20	21	
Toluene	19		2.5	ug/L	20.0	0.72 U	95	64-131	7	16	
trans-1,2-Dichloroethene	21		2.5	ug/L	20.0	0.73 U	105	54-134	6	20	
trans-1,3-Dichloropropene	17		2.5	ug/L	20.0	0.73 U	83	65-149	3	17	
Trichloroethene	22		2.5	ug/L	20.0	0.89 U	109	62-135	4	20	
Trichlorofluoromethane	24		2.5	ug/L	20.0	0.94 U	122	56-155	9	22	
Vinyl chloride	22		2.5	ug/L	20.0	0.78	106	20-167	13	24	
4-Bromofluorobenzene	*48*	*I*		*ug/L*	*50.0*		*96*	*41-142*			
Dibromofluoromethane	*47*	*I*		*ug/L*	*50.0*		*95*	*53-146*			
Toluene-d8	*47*	*I*		*ug/L*	*50.0*		*95*	*41-146*			

Batch 1J13009 - EPA 5030B_MS

Blank (1J13009-BLK1) Prepared: 10/13/2021 00:00 Analyzed: 10/13/2021 10:46

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	0.80	U	2.5	ug/L							

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1J13009 - EPA 5030B_MS - Continued

Blank (1J13009-BLK1) Continued Prepared: 10/13/2021 00:00 Analyzed: 10/13/2021 10:46

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,2,2-Tetrachloroethane	0.54	U	2.5	ug/L							
1,1,2-Trichloroethane	0.76	U	2.5	ug/L							
1,1-Dichloroethane	0.62	U	2.5	ug/L							
1,1-Dichloroethene	0.94	U	2.5	ug/L							
1,2,4-Trichlorobenzene	0.70	U	2.5	ug/L							
1,2-Dibromo-3-chloropropane	0.96	U	2.5	ug/L							
1,2-Dibromoethane	0.78	U	2.5	ug/L							
1,2-Dichlorobenzene	0.73	U	2.5	ug/L							
1,2-Dichloroethane	0.63	U	2.5	ug/L							
1,2-Dichloropropane	0.80	U	2.5	ug/L							
1,3-Dichlorobenzene	0.77	U	2.5	ug/L							
1,4-Dichlorobenzene	0.76	U	2.5	ug/L							
2-Butanone	4.5	U	12	ug/L							
2-Hexanone	2.5	U	12	ug/L							
4-Methyl-2-pentanone	2.5	U	12	ug/L							
Acetone	10	U	25	ug/L							
Benzene	0.71	U	2.5	ug/L							
Bromodichloromethane	0.52	U	2.5	ug/L							
Bromoform	0.75	U	2.5	ug/L							
Bromomethane	0.95	U	2.5	ug/L							
Carbon disulfide	2.5	U	12	ug/L							
Carbon Tetrachloride	0.94	U	2.5	ug/L							
Chlorobenzene	0.72	U	2.5	ug/L							
Chloroethane	0.98	U	2.5	ug/L							
Chloroform	0.80	U	2.5	ug/L							
Chloromethane	0.82	U	2.5	ug/L							
cis-1,2-Dichloroethene	0.53	U	2.5	ug/L							
cis-1,3-Dichloropropene	0.59	U	2.5	ug/L							
Cyclohexane	0.93	U	2.5	ug/L							
Dibromochloromethane	0.50	U	2.5	ug/L							
Dichlorodifluoromethane	0.74	U	2.5	ug/L							
Ethylbenzene	0.69	U	2.5	ug/L							
Freon 113	0.73	U	2.5	ug/L							
Isopropylbenzene	0.67	U	2.5	ug/L							
Methyl acetate	0.95	U	2.5	ug/L							
Methylene Chloride	2.5	U	12	ug/L							
Methyl-tert-Butyl Ether	0.60	U	2.5	ug/L							
Styrene	0.61	U	2.5	ug/L							
Tetrachloroethene	0.76	U	2.5	ug/L							
Toluene	0.72	U	2.5	ug/L							
trans-1,2-Dichloroethene	0.73	U	2.5	ug/L							
trans-1,3-Dichloropropene	0.73	U	2.5	ug/L							
Trichloroethene	0.89	U	2.5	ug/L							
Trichlorofluoromethane	0.94	U	2.5	ug/L							
Vinyl chloride	0.71	U	2.5	ug/L							
4-Bromofluorobenzene	*49*	*I*		*ug/L*	*50.0*		*98*	*41-142*			
Dibromofluoromethane	*47*	*I*		*ug/L*	*50.0*		*94*	*53-146*			
Toluene-d8	*44*	*I*		*ug/L*	*50.0*		*88*	*41-146*			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1J13009 - EPA 5030B_MS - Continued

LCS (1J13009-BS1) Prepared: 10/13/2021 00:00 Analyzed: 10/13/2021 08:22

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	25		2.5	ug/L	20.0		123	57-148			
1,1,2,2-Tetrachloroethane	18		2.5	ug/L	20.0		92	60-139			
1,1,2-Trichloroethane	20		2.5	ug/L	20.0		101	57-141			
1,1-Dichloroethane	23		2.5	ug/L	20.0		113	57-142			
1,1-Dichloroethene	24		2.5	ug/L	20.0		121	47-139			
1,2,4-Trichlorobenzene	23		2.5	ug/L	20.0		114	52-159			
1,2-Dibromo-3-chloropropane	15		2.5	ug/L	20.0		74	48-150			
1,2-Dibromoethane	20		2.5	ug/L	20.0		102	57-140			
1,2-Dichlorobenzene	20		2.5	ug/L	20.0		102	63-131			
1,2-Dichloroethane	23		2.5	ug/L	20.0		116	50-156			
1,2-Dichloropropane	20		2.5	ug/L	20.0		100	61-133			
1,3-Dichlorobenzene	22		2.5	ug/L	20.0		112	66-129			
1,4-Dichlorobenzene	21		2.5	ug/L	20.0		106	65-133			
2-Butanone	130		12	ug/L	100		134	10-180			
2-Hexanone	100		12	ug/L	100		103	12-180			
4-Methyl-2-pentanone	98		12	ug/L	100		98	19-180			
Acetone	110		25	ug/L	100		110	10-180			
Benzene	22		2.5	ug/L	20.0		109	56-136			
Bromodichloromethane	23		2.5	ug/L	20.0		114	58-135			
Bromoform	22		2.5	ug/L	20.0		108	46-148			
Bromomethane	12		2.5	ug/L	20.0		62	10-173			
Carbon disulfide	42		12	ug/L	20.0		209	43-153			QL-02
Carbon Tetrachloride	24		2.5	ug/L	20.0		121	54-156			
Chlorobenzene	22		2.5	ug/L	20.0		108	51-139			
Chloroethane	26		2.5	ug/L	20.0		129	27-180			
Chloroform	23		2.5	ug/L	20.0		116	58-139			
Chloromethane	20		2.5	ug/L	20.0		101	33-154			
cis-1,2-Dichloroethene	23		2.5	ug/L	20.0		114	56-128			
cis-1,3-Dichloropropene	20		2.5	ug/L	20.0		101	64-128			
Cyclohexane	23		2.5	ug/L	20.0		113	70-130			
Dibromochloromethane	20		2.5	ug/L	20.0		100	50-140			
Dichlorodifluoromethane	24		2.5	ug/L	20.0		119	10-180			
Ethylbenzene	21		2.5	ug/L	20.0		106	63-133			
Freon 113	25		2.5	ug/L	20.0		124	47-173			
Isopropylbenzene	21		2.5	ug/L	20.0		107	60-132			
m,p-Xylenes	42		5.0	ug/L	40.0		105	64-133			
Methyl acetate	21		2.5	ug/L	20.0		105	70-130			
Methylene Chloride	22		12	ug/L	20.0		112	43-142			
Methyl-tert-Butyl Ether	22		2.5	ug/L	20.0		108	51-145			
o-Xylene	21		2.5	ug/L	20.0		103	61-129			
Styrene	22		2.5	ug/L	20.0		109	59-136			
Tetrachloroethene	22		2.5	ug/L	20.0		112	60-147			
Toluene	21		2.5	ug/L	20.0		104	64-131			
trans-1,2-Dichloroethene	23		2.5	ug/L	20.0		114	54-134			
trans-1,3-Dichloropropene	20		2.5	ug/L	20.0		99	65-149			
Trichloroethene	24		2.5	ug/L	20.0		118	62-135			
Trichlorofluoromethane	25		2.5	ug/L	20.0		124	56-155			
Vinyl chloride	22		2.5	ug/L	20.0		110	20-167			
4-Bromofluorobenzene	*48*	*I*		*ug/L*	*50.0*		*96*	*41-142*			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1J13009 - EPA 5030B_MS - Continued

LCS (1J13009-BS1) Continued Prepared: 10/13/2021 00:00 Analyzed: 10/13/2021 08:22

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Dibromofluoromethane	*50*			*ug/L*	*50.0*		*100*	*53-146*			
Toluene-d8	*49*	*I*		*ug/L*	*50.0*		*99*	*41-146*			

Matrix Spike (1J13009-MS1) Prepared: 10/13/2021 00:00 Analyzed: 10/13/2021 08:51

Source: AE08103-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	20		2.5	ug/L	20.0	0.80 U	100	57-148			
1,1,2,2-Tetrachloroethane	17		2.5	ug/L	20.0	0.54 U	86	60-139			
1,1,2-Trichloroethane	20		2.5	ug/L	20.0	0.76 U	102	57-141			
1,1-Dichloroethane	18		2.5	ug/L	20.0	0.62 U	91	57-142			
1,1-Dichloroethene	28		2.5	ug/L	20.0	0.94 U	139	47-139			
1,2,4-Trichlorobenzene	21		2.5	ug/L	20.0	0.70 U	107	52-159			
1,2-Dibromo-3-chloropropane	14		2.5	ug/L	20.0	0.96 U	69	48-150			
1,2-Dibromoethane	21		2.5	ug/L	20.0	0.78 U	105	57-140			
1,2-Dichlorobenzene	20		2.5	ug/L	20.0	0.73 U	101	63-131			
1,2-Dichloroethane	17		2.5	ug/L	20.0	0.63 U	85	50-156			
1,2-Dichloropropane	16		2.5	ug/L	20.0	0.80 U	81	61-133			
1,3-Dichlorobenzene	20		2.5	ug/L	20.0	0.77 U	101	66-129			
1,4-Dichlorobenzene	20		2.5	ug/L	20.0	0.76 U	98	65-133			
2-Butanone	100		12	ug/L	100	4.5 U	103	10-180			
2-Hexanone	71		12	ug/L	100	2.5 U	71	12-180			QM-11
4-Methyl-2-pentanone	90		12	ug/L	100	2.5 U	90	19-180			
Acetone	110		25	ug/L	100	10 U	107	10-180			
Benzene	19		2.5	ug/L	20.0	0.71 U	93	56-136			
Bromodichloromethane	18		2.5	ug/L	20.0	0.52 U	88	58-135			
Bromoform	23		2.5	ug/L	20.0	0.75 U	113	46-148			
Bromomethane	19		2.5	ug/L	20.0	0.95 U	94	10-173			
Carbon disulfide	42		12	ug/L	20.0	2.5 U	209	43-153			QM-19
Carbon Tetrachloride	22		2.5	ug/L	20.0	0.94 U	108	54-156			
Chlorobenzene	24		2.5	ug/L	20.0	0.72 U	121	51-139			QM-11
Chloroethane	29		2.5	ug/L	20.0	0.98 U	145	27-180			
Chloroform	19		2.5	ug/L	20.0	0.80 U	94	58-139			
Chloromethane	24		2.5	ug/L	20.0	0.82 U	119	33-154			
cis-1,2-Dichloroethene	24		2.5	ug/L	20.0	5.0	97	56-128			
cis-1,3-Dichloropropene	16		2.5	ug/L	20.0	0.59 U	81	64-128			
Cyclohexane	19		2.5	ug/L	20.0	0.93 U	96	70-130			
Dibromochloromethane	22		2.5	ug/L	20.0	0.50 U	108	50-140			
Dichlorodifluoromethane	26		2.5	ug/L	20.0	0.74 U	132	10-180			
Ethylbenzene	23		2.5	ug/L	20.0	0.69 U	117	63-133			
Freon 113	29		2.5	ug/L	20.0	0.73 U	145	47-173			
Isopropylbenzene	23		2.5	ug/L	20.0	0.67 U	116	60-132			
m,p-Xylenes	46		5.0	ug/L	40.0	1.3 U	116	64-133			
Methyl acetate	21		2.5	ug/L	20.0	0.95 U	107	70-130			
Methylene Chloride	24		12	ug/L	20.0	2.5 U	119	43-142			
Methyl-tert-Butyl Ether	22		2.5	ug/L	20.0	0.60 U	111	51-145			
o-Xylene	23		2.5	ug/L	20.0	0.53 U	113	61-129			
Styrene	23		2.5	ug/L	20.0	0.61 U	116	59-136			
Tetrachloroethene	25		2.5	ug/L	20.0	0.76 U	123	60-147			
Toluene	22		2.5	ug/L	20.0	0.72 U	108	64-131			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1J13009 - EPA 5030B_MS - Continued

Matrix Spike (1J13009-MS1) Continued Prepared: 10/13/2021 00:00 Analyzed: 10/13/2021 08:51

Source: AE08103-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
trans-1,2-Dichloroethene	26		2.5	ug/L	20.0	0.73 U	128	54-134			
trans-1,3-Dichloropropene	18		2.5	ug/L	20.0	0.73 U	91	65-149			
Trichloroethene	25		2.5	ug/L	20.0	0.89 U	123	62-135			
Trichlorofluoromethane	29		2.5	ug/L	20.0	0.94 U	144	56-155			
Vinyl chloride	26		2.5	ug/L	20.0	0.71 U	130	20-167			
4-Bromofluorobenzene	*49*	*I*		*ug/L*	*50.0*		*98*	*41-142*			
Dibromofluoromethane	*45*	*I*		*ug/L*	*50.0*		*90*	*53-146*			
Toluene-d8	*44*	*I*		*ug/L*	*50.0*		*88*	*41-146*			

Matrix Spike Dup (1J13009-MSD1) Prepared: 10/13/2021 00:00 Analyzed: 10/13/2021 09:20

Source: AE08103-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	23		2.5	ug/L	20.0	0.80 U	114	57-148	14	25	
1,1,2,2-Tetrachloroethane	17		2.5	ug/L	20.0	0.54 U	84	60-139	3	17	
1,1,2-Trichloroethane	19		2.5	ug/L	20.0	0.76 U	95	57-141	7	16	
1,1-Dichloroethane	21		2.5	ug/L	20.0	0.62 U	104	57-142	13	24	
1,1-Dichloroethene	24		2.5	ug/L	20.0	0.94 U	118	47-139	16	16	
1,2,4-Trichlorobenzene	21		2.5	ug/L	20.0	0.70 U	106	52-159	1	24	
1,2-Dibromo-3-chloropropane	14		2.5	ug/L	20.0	0.96 U	71	48-150	2	21	
1,2-Dibromoethane	19		2.5	ug/L	20.0	0.78 U	93	57-140	12	16	
1,2-Dichlorobenzene	19		2.5	ug/L	20.0	0.73 U	96	63-131	5	25	
1,2-Dichloroethane	20		2.5	ug/L	20.0	0.63 U	102	50-156	18	18	
1,2-Dichloropropane	18		2.5	ug/L	20.0	0.80 U	91	61-133	11	26	
1,3-Dichlorobenzene	19		2.5	ug/L	20.0	0.77 U	97	66-129	4	23	
1,4-Dichlorobenzene	20		2.5	ug/L	20.0	0.76 U	98	65-133	0.2	23	
2-Butanone	120		12	ug/L	100	4.5 U	125	10-180	19	29	
2-Hexanone	97		12	ug/L	100	2.5 U	97	12-180	31	28	QM-11
4-Methyl-2-pentanone	93		12	ug/L	100	2.5 U	93	19-180	3	24	
Acetone	97		25	ug/L	100	10 U	97	10-180	10	19	
Benzene	21		2.5	ug/L	20.0	0.71 U	105	56-136	12	14	
Bromodichloromethane	21		2.5	ug/L	20.0	0.52 U	104	58-135	16	19	
Bromoform	20		2.5	ug/L	20.0	0.75 U	101	46-148	11	18	
Bromomethane	18		2.5	ug/L	20.0	0.95 U	92	10-173	1	29	
Carbon disulfide	34		12	ug/L	20.0	2.5 U	172	43-153	20	26	QM-19
Carbon Tetrachloride	23		2.5	ug/L	20.0	0.94 U	116	54-156	6	27	
Chlorobenzene	20		2.5	ug/L	20.0	0.72 U	100	51-139	19	13	QM-11
Chloroethane	25		2.5	ug/L	20.0	0.98 U	127	27-180	14	22	
Chloroform	21		2.5	ug/L	20.0	0.80 U	106	58-139	12	17	
Chloromethane	20		2.5	ug/L	20.0	0.82 U	101	33-154	16	31	
cis-1,2-Dichloroethene	25		2.5	ug/L	20.0	5.0	102	56-128	3	17	
cis-1,3-Dichloropropene	18		2.5	ug/L	20.0	0.59 U	92	64-128	12	20	
Cyclohexane	22		2.5	ug/L	20.0	0.93 U	110	70-130	13	20	
Dibromochloromethane	18		2.5	ug/L	20.0	0.50 U	90	50-140	18	18	
Dichlorodifluoromethane	22		2.5	ug/L	20.0	0.74 U	109	10-180	19	26	
Ethylbenzene	20		2.5	ug/L	20.0	0.69 U	98	63-133	18	18	
Freon 113	24		2.5	ug/L	20.0	0.73 U	120	47-173	19	30	
Isopropylbenzene	20		2.5	ug/L	20.0	0.67 U	102	60-132	12	23	
m,p-Xylenes	39		5.0	ug/L	40.0	1.3 U	98	64-133	16	18	

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1J13009 - EPA 5030B_MS - Continued

Matrix Spike Dup (1J13009-MSD1) Continued Prepared: 10/13/2021 00:00 Analyzed: 10/13/2021 09:20

Source: AE08103-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Methyl acetate	18		2.5	ug/L	20.0	0.95 U	91	70-130	16	20	
Methylene Chloride	20		12	ug/L	20.0	2.5 U	102	43-142	15	23	
Methyl-tert-Butyl Ether	19		2.5	ug/L	20.0	0.60 U	96	51-145	14	22	
o-Xylene	19		2.5	ug/L	20.0	0.53 U	97	61-129	15	16	
Styrene	20		2.5	ug/L	20.0	0.61 U	101	59-136	14	32	
Tetrachloroethene	20		2.5	ug/L	20.0	0.76 U	101	60-147	20	21	
Toluene	19		2.5	ug/L	20.0	0.72 U	96	64-131	11	16	
trans-1,2-Dichloroethene	22		2.5	ug/L	20.0	0.73 U	108	54-134	17	20	
trans-1,3-Dichloropropene	18		2.5	ug/L	20.0	0.73 U	90	65-149	1	17	
Trichloroethene	22		2.5	ug/L	20.0	0.89 U	111	62-135	10	20	
Trichlorofluoromethane	24		2.5	ug/L	20.0	0.94 U	121	56-155	18	22	
Vinyl chloride	22		2.5	ug/L	20.0	0.71 U	110	20-167	17	24	
4-Bromofluorobenzene	*47*	*I*		*ug/L*	*50.0*		*95*	*41-142*			
Dibromofluoromethane	*47*	*I*		*ug/L*	*50.0*		*94*	*53-146*			
Toluene-d8	*47*	*I*		*ug/L*	*50.0*		*95*	*41-146*			

Batch 1J14017 - EPA 5030B_MS

Blank (1J14017-BLK1) Prepared: 10/14/2021 00:00 Analyzed: 10/14/2021 11:32

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	0.80	U	2.5	ug/L							
1,1,2,2-Tetrachloroethane	0.54	U	2.5	ug/L							
1,1,2-Trichloroethane	0.76	U	2.5	ug/L							
1,1-Dichloroethane	0.62	U	2.5	ug/L							
1,1-Dichloroethene	0.94	U	2.5	ug/L							
1,2,4-Trichlorobenzene	0.70	U	2.5	ug/L							
1,2-Dibromo-3-chloropropane	0.96	U	2.5	ug/L							
1,2-Dibromoethane	0.78	U	2.5	ug/L							
1,2-Dichlorobenzene	0.73	U	2.5	ug/L							
1,2-Dichloroethane	0.63	U	2.5	ug/L							
1,2-Dichloropropane	0.80	U	2.5	ug/L							
1,3-Dichlorobenzene	0.77	U	2.5	ug/L							
1,4-Dichlorobenzene	0.76	U	2.5	ug/L							
2-Butanone	4.5	U	12	ug/L							
2-Hexanone	2.5	U	12	ug/L							
4-Methyl-2-pentanone	2.5	U	12	ug/L							
Acetone	10	U	25	ug/L							
Benzene	0.71	U	2.5	ug/L							
Bromodichloromethane	0.52	U	2.5	ug/L							
Bromoform	0.75	U	2.5	ug/L							
Bromomethane	0.95	U	2.5	ug/L							
Carbon disulfide	2.5	U	12	ug/L							
Carbon Tetrachloride	0.94	U	2.5	ug/L							
Chlorobenzene	0.72	U	2.5	ug/L							
Chloroethane	0.98	U	2.5	ug/L							
Chloroform	0.80	U	2.5	ug/L							
Chloromethane	0.82	U	2.5	ug/L							
cis-1,2-Dichloroethene	0.53	U	2.5	ug/L							

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1J14017 - EPA 5030B_MS - Continued

Blank (1J14017-BLK1) Continued Prepared: 10/14/2021 00:00 Analyzed: 10/14/2021 11:32

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
cis-1,3-Dichloropropene	0.59	U	2.5	ug/L							
Cyclohexane	0.93	U	2.5	ug/L							
Dibromochloromethane	0.50	U	2.5	ug/L							
Dichlorodifluoromethane	0.74	U	2.5	ug/L							
Ethylbenzene	0.69	U	2.5	ug/L							
Freon 113	0.73	U	2.5	ug/L							
Isopropylbenzene	0.67	U	2.5	ug/L							
Methyl acetate	0.95	U	2.5	ug/L							
Methylene Chloride	2.5	U	12	ug/L							
Methyl-tert-Butyl Ether	0.60	U	2.5	ug/L							
Styrene	0.61	U	2.5	ug/L							
Tetrachloroethene	0.76	U	2.5	ug/L							
Toluene	0.72	U	2.5	ug/L							
trans-1,2-Dichloroethene	0.73	U	2.5	ug/L							
trans-1,3-Dichloropropene	0.73	U	2.5	ug/L							
Trichloroethene	0.89	U	2.5	ug/L							
Trichlorofluoromethane	0.94	U	2.5	ug/L							
Vinyl chloride	0.71	U	2.5	ug/L							
4-Bromofluorobenzene	*45*	*I*		*ug/L*	*50.0*		*89*	*41-142*			
Dibromofluoromethane	*48*	*I*		*ug/L*	*50.0*		*97*	*53-146*			
Toluene-d8	*49*	*I*		*ug/L*	*50.0*		*97*	*41-146*			

LCS (1J14017-BS1) Prepared: 10/14/2021 00:00 Analyzed: 10/14/2021 09:07

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	22		2.5	ug/L	20.0		109	57-148			
1,1,2,2-Tetrachloroethane	17		2.5	ug/L	20.0		86	60-139			
1,1,2-Trichloroethane	17		2.5	ug/L	20.0		86	57-141			
1,1-Dichloroethane	21		2.5	ug/L	20.0		104	57-142			
1,1-Dichloroethene	24		2.5	ug/L	20.0		120	47-139			
1,2,4-Trichlorobenzene	20		2.5	ug/L	20.0		102	52-159			
1,2-Dibromo-3-chloropropane	16		2.5	ug/L	20.0		82	48-150			
1,2-Dibromoethane	17		2.5	ug/L	20.0		87	57-140			
1,2-Dichlorobenzene	18		2.5	ug/L	20.0		90	63-131			
1,2-Dichloroethane	19		2.5	ug/L	20.0		97	50-156			
1,2-Dichloropropane	18		2.5	ug/L	20.0		90	61-133			
1,3-Dichlorobenzene	18		2.5	ug/L	20.0		91	66-129			
1,4-Dichlorobenzene	19		2.5	ug/L	20.0		94	65-133			
2-Butanone	130		12	ug/L	100		130	10-180			
2-Hexanone	96		12	ug/L	100		96	12-180			
4-Methyl-2-pentanone	92		12	ug/L	100		92	19-180			
Acetone	100		25	ug/L	100		105	10-180			
Benzene	21		2.5	ug/L	20.0		105	56-136			
Bromodichloromethane	20		2.5	ug/L	20.0		100	58-135			
Bromoform	19		2.5	ug/L	20.0		96	46-148			
Bromomethane	13		2.5	ug/L	20.0		67	10-173			
Carbon disulfide	40		12	ug/L	20.0		200	43-153			QL-02
Carbon Tetrachloride	21		2.5	ug/L	20.0		107	54-156			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1J14017 - EPA 5030B_MS - Continued

LCS (1J14017-BS1) Continued Prepared: 10/14/2021 00:00 Analyzed: 10/14/2021 09:07

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Chlorobenzene	19		2.5	ug/L	20.0		95	51-139			
Chloroethane	26		2.5	ug/L	20.0		129	27-180			
Chloroform	21		2.5	ug/L	20.0		104	58-139			
Chloromethane	19		2.5	ug/L	20.0		97	33-154			
cis-1,2-Dichloroethene	20		2.5	ug/L	20.0		101	56-128			
cis-1,3-Dichloropropene	19		2.5	ug/L	20.0		93	64-128			
Cyclohexane	22		2.5	ug/L	20.0		108	70-130			
Dibromochloromethane	16		2.5	ug/L	20.0		80	50-140			
Dichlorodifluoromethane	22		2.5	ug/L	20.0		109	10-180			
Ethylbenzene	19		2.5	ug/L	20.0		93	63-133			
Freon 113	25		2.5	ug/L	20.0		125	47-173			
Isopropylbenzene	19		2.5	ug/L	20.0		94	60-132			
m,p-Xylenes	37		5.0	ug/L	40.0		93	64-133			
Methyl acetate	21		2.5	ug/L	20.0		103	70-130			
Methylene Chloride	22		12	ug/L	20.0		108	43-142			
Methyl-tert-Butyl Ether	20		2.5	ug/L	20.0		98	51-145			
o-Xylene	18		2.5	ug/L	20.0		90	61-129			
Styrene	19		2.5	ug/L	20.0		95	59-136			
Tetrachloroethene	18		2.5	ug/L	20.0		89	60-147			
Toluene	18		2.5	ug/L	20.0		92	64-131			
trans-1,2-Dichloroethene	22		2.5	ug/L	20.0		110	54-134			
trans-1,3-Dichloropropene	17		2.5	ug/L	20.0		85	65-149			
Trichloroethene	21		2.5	ug/L	20.0		106	62-135			
Trichlorofluoromethane	24		2.5	ug/L	20.0		121	56-155			
Vinyl chloride	21		2.5	ug/L	20.0		104	20-167			
4-Bromofluorobenzene	*45*	*I*		*ug/L*	*50.0*		*91*	*41-142*			
Dibromofluoromethane	*47*	*I*		*ug/L*	*50.0*		*95*	*53-146*			
Toluene-d8	*49*	*I*		*ug/L*	*50.0*		*97*	*41-146*			

Matrix Spike (1J14017-MS1) Prepared: 10/14/2021 00:00 Analyzed: 10/14/2021 09:38

Source: AE08103-11

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	24		2.5	ug/L	20.0	0.80 U	120	57-148			
1,1,2,2-Tetrachloroethane	18		2.5	ug/L	20.0	0.54 U	92	60-139			
1,1,2-Trichloroethane	19		2.5	ug/L	20.0	0.76 U	96	57-141			
1,1-Dichloroethane	23		2.5	ug/L	20.0	0.62 U	113	57-142			
1,1-Dichloroethene	25		2.5	ug/L	20.0	0.94 U	123	47-139			
1,2,4-Trichlorobenzene	21		2.5	ug/L	20.0	0.70 U	105	52-159			
1,2-Dibromo-3-chloropropane	17		2.5	ug/L	20.0	0.96 U	85	48-150			
1,2-Dibromoethane	19		2.5	ug/L	20.0	0.78 U	93	57-140			
1,2-Dichlorobenzene	19		2.5	ug/L	20.0	0.73 U	97	63-131			
1,2-Dichloroethane	20		2.5	ug/L	20.0	0.63 U	102	50-156			
1,2-Dichloropropane	20		2.5	ug/L	20.0	0.80 U	100	61-133			
1,3-Dichlorobenzene	19		2.5	ug/L	20.0	0.77 U	97	66-129			
1,4-Dichlorobenzene	20		2.5	ug/L	20.0	0.76 U	99	65-133			
2-Butanone	140		12	ug/L	100	4.5 U	138	10-180			
2-Hexanone	100		12	ug/L	100	2.5 U	103	12-180			
4-Methyl-2-pentanone	100		12	ug/L	100	2.5 U	101	19-180			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1J14017 - EPA 5030B_MS - Continued

Matrix Spike (1J14017-MS1) Continued Prepared: 10/14/2021 00:00 Analyzed: 10/14/2021 09:38

Source: AE08103-11

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Acetone	100		25	ug/L	100	10 U	102	10-180			
Benzene	23		2.5	ug/L	20.0	0.71 U	115	56-136			
Bromodichloromethane	22		2.5	ug/L	20.0	0.52 U	109	58-135			
Bromoform	21		2.5	ug/L	20.0	0.75 U	104	46-148			
Bromomethane	14		2.5	ug/L	20.0	0.95 U	72	10-173			
Carbon disulfide	38		12	ug/L	20.0	2.5 U	189	43-153			QM-19
Carbon Tetrachloride	24		2.5	ug/L	20.0	0.94 U	121	54-156			
Chlorobenzene	21		2.5	ug/L	20.0	0.72 U	104	51-139			
Chloroethane	24		2.5	ug/L	20.0	0.98 U	119	27-180			
Chloroform	22		2.5	ug/L	20.0	0.80 U	112	58-139			
Chloromethane	15		2.5	ug/L	20.0	0.82 U	74	33-154			
cis-1,2-Dichloroethene	24		2.5	ug/L	20.0	2.1	110	56-128			
cis-1,3-Dichloropropene	20		2.5	ug/L	20.0	0.59 U	99	64-128			
Cyclohexane	23		2.5	ug/L	20.0	0.93 U	116	70-130			
Dibromochloromethane	18		2.5	ug/L	20.0	0.50 U	88	50-140			
Dichlorodifluoromethane	11		2.5	ug/L	20.0	0.74 U	56	10-180			
Ethylbenzene	20		2.5	ug/L	20.0	0.69 U	101	63-133			
Freon 113	24		2.5	ug/L	20.0	0.73 U	118	47-173			
Isopropylbenzene	21		2.5	ug/L	20.0	0.67 U	104	60-132			
m,p-Xylenes	41		5.0	ug/L	40.0	1.3 U	103	64-133			
Methyl acetate	20		2.5	ug/L	20.0	0.95 U	101	70-130			
Methylene Chloride	22		12	ug/L	20.0	2.5 U	109	43-142			
Methyl-tert-Butyl Ether	20		2.5	ug/L	20.0	0.60 U	100	51-145			
o-Xylene	20		2.5	ug/L	20.0	0.53 U	100	61-129			
Styrene	21		2.5	ug/L	20.0	0.61 U	104	59-136			
Tetrachloroethene	20		2.5	ug/L	20.0	0.76 U	102	60-147			
Toluene	20		2.5	ug/L	20.0	0.72 U	101	64-131			
trans-1,2-Dichloroethene	22		2.5	ug/L	20.0	0.73 U	112	54-134			
trans-1,3-Dichloropropene	18		2.5	ug/L	20.0	0.73 U	92	65-149			
Trichloroethene	23		2.5	ug/L	20.0	0.89 U	114	62-135			
Trichlorofluoromethane	23		2.5	ug/L	20.0	0.94 U	114	56-155			
Vinyl chloride	18		2.5	ug/L	20.0	0.71 U	91	20-167			
4-Bromofluorobenzene	*46*	*I*		*ug/L*	*50.0*		*92*	*41-142*			
Dibromofluoromethane	*48*	*I*		*ug/L*	*50.0*		*97*	*53-146*			
Toluene-d8	*50*			*ug/L*	*50.0*		*100*	*41-146*			

Matrix Spike Dup (1J14017-MSD1) Prepared: 10/14/2021 00:00 Analyzed: 10/14/2021 10:06

Source: AE08103-11

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	23		2.5	ug/L	20.0	0.80 U	117	57-148	3	25	
1,1,2,2-Tetrachloroethane	18		2.5	ug/L	20.0	0.54 U	91	60-139	1	17	
1,1,2-Trichloroethane	19		2.5	ug/L	20.0	0.76 U	95	57-141	0.6	16	
1,1-Dichloroethane	22		2.5	ug/L	20.0	0.62 U	110	57-142	3	24	
1,1-Dichloroethene	24		2.5	ug/L	20.0	0.94 U	121	47-139	2	16	
1,2,4-Trichlorobenzene	21		2.5	ug/L	20.0	0.70 U	106	52-159	1	24	
1,2-Dibromo-3-chloropropane	18		2.5	ug/L	20.0	0.96 U	88	48-150	3	21	
1,2-Dibromoethane	18		2.5	ug/L	20.0	0.78 U	92	57-140	1	16	
1,2-Dichlorobenzene	19		2.5	ug/L	20.0	0.73 U	94	63-131	2	25	

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1J14017 - EPA 5030B_MS - Continued

Matrix Spike Dup (1J14017-MSD1) Continued Prepared: 10/14/2021 00:00 Analyzed: 10/14/2021 10:06

Source: AE08103-11

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,2-Dichloroethane	21		2.5	ug/L	20.0	0.63 U	104	50-156	2	18	
1,2-Dichloropropane	19		2.5	ug/L	20.0	0.80 U	97	61-133	4	26	
1,3-Dichlorobenzene	19		2.5	ug/L	20.0	0.77 U	96	66-129	0.8	23	
1,4-Dichlorobenzene	19		2.5	ug/L	20.0	0.76 U	96	65-133	3	23	
2-Butanone	140		12	ug/L	100	4.5 U	140	10-180	1	29	
2-Hexanone	110		12	ug/L	100	2.5 U	106	12-180	3	28	
4-Methyl-2-pentanone	100		12	ug/L	100	2.5 U	101	19-180	0.3	24	
Acetone	100		25	ug/L	100	10 U	103	10-180	2	19	
Benzene	23		2.5	ug/L	20.0	0.71 U	113	56-136	2	14	
Bromodichloromethane	21		2.5	ug/L	20.0	0.52 U	107	58-135	1	19	
Bromoform	20		2.5	ug/L	20.0	0.75 U	102	46-148	2	18	
Bromomethane	16		2.5	ug/L	20.0	0.95 U	78	10-173	8	29	
Carbon disulfide	36		12	ug/L	20.0	2.5 U	180	43-153	5	26	QM-19
Carbon Tetrachloride	23		2.5	ug/L	20.0	0.94 U	117	54-156	3	27	
Chlorobenzene	20		2.5	ug/L	20.0	0.72 U	100	51-139	4	13	
Chloroethane	23		2.5	ug/L	20.0	0.98 U	114	27-180	4	22	
Chloroform	22		2.5	ug/L	20.0	0.80 U	111	58-139	1	17	
Chloromethane	14		2.5	ug/L	20.0	0.82 U	71	33-154	4	31	
cis-1,2-Dichloroethene	24		2.5	ug/L	20.0	2.1	108	56-128	2	17	
cis-1,3-Dichloropropene	20		2.5	ug/L	20.0	0.59 U	98	64-128	1	20	
Cyclohexane	22		2.5	ug/L	20.0	0.93 U	112	70-130	4	20	
Dibromochloromethane	17		2.5	ug/L	20.0	0.50 U	87	50-140	0.4	18	
Dichlorodifluoromethane	10		2.5	ug/L	20.0	0.74 U	51	10-180	10	26	
Ethylbenzene	20		2.5	ug/L	20.0	0.69 U	98	63-133	3	18	
Freon 113	23		2.5	ug/L	20.0	0.73 U	117	47-173	2	30	
Isopropylbenzene	20		2.5	ug/L	20.0	0.67 U	101	60-132	3	23	
m,p-Xylenes	40		5.0	ug/L	40.0	1.3 U	99	64-133	3	18	
Methyl acetate	20		2.5	ug/L	20.0	0.95 U	102	70-130	1	20	
Methylene Chloride	22		12	ug/L	20.0	2.5 U	108	43-142	1	23	
Methyl-tert-Butyl Ether	20		2.5	ug/L	20.0	0.60 U	101	51-145	0.9	22	
o-Xylene	19		2.5	ug/L	20.0	0.53 U	96	61-129	3	16	
Styrene	20		2.5	ug/L	20.0	0.61 U	101	59-136	2	32	
Tetrachloroethene	20		2.5	ug/L	20.0	0.76 U	98	60-147	4	21	
Toluene	20		2.5	ug/L	20.0	0.72 U	99	64-131	2	16	
trans-1,2-Dichloroethene	22		2.5	ug/L	20.0	0.73 U	108	54-134	4	20	
trans-1,3-Dichloropropene	18		2.5	ug/L	20.0	0.73 U	90	65-149	2	17	
Trichloroethene	23		2.5	ug/L	20.0	0.89 U	114	62-135	0.5	20	
Trichlorofluoromethane	23		2.5	ug/L	20.0	0.94 U	113	56-155	0.6	22	
Vinyl chloride	17		2.5	ug/L	20.0	0.71 U	86	20-167	5	24	
4-Bromofluorobenzene	*46*	*I*		*ug/L*	*50.0*		*91*	*41-142*			
Dibromofluoromethane	*48*	*I*		*ug/L*	*50.0*		*97*	*53-146*			
Toluene-d8	*49*	*I*		*ug/L*	*50.0*		*98*	*41-146*			

FLAGS/NOTES AND DEFINITIONS

PQL	PQL: Practical Quantitation Limit. The PQL presented is the laboratory MRL.
B	Results are based upon membrane filter colony counts that are outside the method indicated ideal range.
I	The reported value is between the laboratory method detection limit (MDL) and the practical quantitation limit (PQL).
J	Estimated value.
K	Off-scale low; Actual value is known to be less than the value given.
L	Off-scale high; Actual value is known to be greater than value given.
M	Presence of analyte is verified but not quantified; the actual value is less than the MRL but greater than the MDL.
N	Presumptive evidence of presence of material.
O	Sampled, but analysis lost or not performed.
Q	Sample exceeded the accepted holding time.
T	Value reported is less than the laboratory method detection limit. The value is reported for informational purposes only and shall not be used in statistical analysis.
U	Indicates that the compound was analyzed for but not detected.
V	Indicates that the analyte was detected in both the sample and the associated method blank.
Y	The laboratory analysis was from an improperly preserved sample. The data may not be accurate.
Z	Too many colonies were present (TNTC); the numeric value represents the filtration volume.
?	Data are rejected and should not be used. Some or all of the quality control data for the analyte were outside criteria, and the presence or absence of the analyte cannot be determined from the data.
*	Not reported due to interference.
[CALC]	Calculated analyte - MDL/MRL reported to the highest reporting limit of the component analyses.
QL-02	The associated laboratory control sample exhibited high bias; since the result is ND, there is no impact.
QM-11	Precision between duplicate matrix spikes of the same sample was outside acceptance limits.
QM-19	The spike recovery was outside acceptance limits for the MS and/or MSD.
QS-03	Surrogate recovery outside acceptance limits
QV-01	The associated continuing calibration verification standard exhibited high bias; since the result is ND, there is no impact.

Tetra Tech, Inc.

CHAIN OF CUSTODY | NUMBER AE08058 No. 3250 | PAGE 1 OF 2

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G08985	KSC-LC34	Mark Joyner	(412) 921-8622	ENCO – Kaitlin Dilnicki
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER	PHONE NUMBER	ADDRESS
Chuck Sorden		Chuck Sorden	(321) 591-7580	10775 Central Port Dr.
		CARRIER/WAYBILL NUMBER		CITY, STATE
				Orlando, FL

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR 2021	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	CONTAINER TYPE PLASTIC (P) or GLASS (G): G; PRESERVATIVE USED: HCl	TYPE OF ANALYSIS: 8260D TCL SOM Cl	COMMENTS
10/05	1600	LC34-IW0125-018.0-2021	1005	13	23	GW	G	3	X		
1	1630	LC34-IW0131-018.0-2021	1005	13	23						
10/05	1725 1200	LC34-IW0108-024.0-2021	1005	20	28						
10/06	1205	LC34-IW0124-018.0-20211	006	13	23						
	1410	LC34-IW0128-018.0-2021	1006	13	23						
	1500	LC34-IW0127-024.0-2021	1006	20	28						
	1530	LC34-IW0057S-008.1-2021	1006	5.9	11						
	1600	LC34-IW0057I-025.5-202	11006	23	28						
10/06	1705	LC34-IW0141-024.0-2021	1006	20	28						
10/07	1015	LC34-IW0142-024.0-20211	007	20	28						
	1050	LC34-IW0144-024.0-2021	1007	20	28						
	1120	LC34-IW0145-081.5-2021	1007	29	34						
10/07	1150	LC34-IW0123-024.9-2021	1007	20	28	GW	G	3	X		

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	10/07/21	1515	1. RECEIVED BY	10/7/21	1515
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS: CG-566 3.7°C

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

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FORM NO. TtNUS-001

AE08058

Tetra Tech, Inc. | **CHAIN OF CUSTODY** | **NUMBER** No. 2351 | **PAGE** 2 OF 2

PROJECT NO: 112G08985	FACILITY: KSC-LC34	PROJECT MANAGER Mark Sonnet	PHONE NUMBER (412) 921-8622	LABORATORY NAME AND CONTACT: ENCO — Kaitlin Dylnicki
SAMPLERS (SIGNATURE) Chuck Sorden		FIELD OPERATIONS LEADER Chuck Sorden	PHONE NUMBER (321) 591-7580	ADDRESS 10775 Central Park Dr.
		CARRIER/WAYBILL NUMBER		CITY, STATE Orlando, FL

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR 2021	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	CONTAINER TYPE PLASTIC (P) or GLASS (G)	PRESERVATIVE USED	TYPE OF ANALYSIS 8260DTCL SOMe1								COMMENTS
									G	HCl									
10/07	1250	LC34-IW0147-024.0-20211007		20	28	GW	G	3			X								
1	1410	LC34-IW0145-018.0-20211007		13	23	1	1	1			1								
10/07	1450	LC34-IW0143-024.0-20211007		20	28	GW	G	3			X								

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	10/07/21	1515	1. RECEIVED BY	10/7/21	1515
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS LC-566 3.7°C

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

ENCO Laboratories

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10775 Central Port Drive
Orlando FL, 32824
Phone: 407.826.5314 FAX: 407.850.6945

Friday, October 15, 2021
Tetra Tech NUS, Inc. (TE015)
Attn: Mark Jonnet
Foster Plaza 7, 661 Anderson Drive
Pittsburgh, PA 15220

RE: Laboratory Results for
Project Number: 112G08985, Project Name/Desc: NASA KSC LC34
ENCO Workorder(s): AE08103

Dear Mark Jonnet,

Enclosed is a copy of your laboratory report for test samples received by our laboratory on Friday, October 8, 2021.

Unless otherwise noted in an attached project narrative, all samples were received in acceptable condition and processed in accordance with the referenced methods/procedures. Results for these procedures apply only to the samples as submitted.

The analytical results contained in this report are in compliance with NELAC standards, except as noted in the project narrative if applicable. This report shall not be reproduced except in full, without the written approval of the Laboratory.

This report contains only those analyses performed by Environmental Conservation Laboratories. Unless otherwise noted, all analyses were performed at ENCO Orlando. Data from outside organizations will be reported under separate cover.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

Kaitlin Dylnicki

Project Manager

Enclosure(s)

SAMPLE SUMMARY/LABORATORY CHRONICLE

Client ID: LC34-IW0137-024.0-20211007 **Lab ID: AE08103-01** **Sampled: 10/07/21 16:20** **Received: 10/08/21 15:00**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	10/21/21	10/13/21 00:00	10/13/21 11:14

Client ID: LC34-IW0138-031.5-20211007 **Lab ID: AE08103-02** **Sampled: 10/07/21 17:10** **Received: 10/08/21 15:00**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	10/21/21	10/13/21 00:00	10/13/21 15:33

Client ID: LC34-IW0135-024.0-20211007 **Lab ID: AE08103-03** **Sampled: 10/07/21 17:40** **Received: 10/08/21 15:00**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	10/21/21	10/13/21 00:00	10/13/21 16:01

Client ID: LC34-IW0135-024.0-20211007 **Lab ID: AE08103-03RE1** **Sampled: 10/07/21 17:40** **Received: 10/08/21 15:00**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	10/21/21	10/14/21 00:00	10/14/21 12:58

Client ID: LC34-IW0139-018.0-20211008 **Lab ID: AE08103-04** **Sampled: 10/08/21 09:25** **Received: 10/08/21 15:00**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	10/22/21	10/13/21 00:00	10/13/21 16:30

Client ID: LC34-IW0140-024.0-20211008 **Lab ID: AE08103-05** **Sampled: 10/08/21 10:35** **Received: 10/08/21 15:00**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	10/22/21	10/13/21 00:00	10/13/21 16:59

Client ID: LC34-IW0136-024.0-20211008 **Lab ID: AE08103-06** **Sampled: 10/08/21 10:35** **Received: 10/08/21 15:00**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	10/22/21	10/14/21 00:00	10/14/21 13:27

Client ID: LC34-IW0126-024.0-20211008 **Lab ID: AE08103-07** **Sampled: 10/08/21 11:05** **Received: 10/08/21 15:00**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	10/22/21	10/14/21 00:00	10/14/21 13:56

Client ID: LC34-IW0134-024.0-20211008 **Lab ID: AE08103-08** **Sampled: 10/08/21 11:30** **Received: 10/08/21 15:00**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	10/22/21	10/14/21 00:00	10/14/21 14:24

Client ID: LC34-SW1004-000.5-20211008 **Lab ID: AE08103-09** **Sampled: 10/08/21 11:55** **Received: 10/08/21 15:00**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	10/22/21	10/14/21 00:00	10/14/21 14:53

Client ID: LC34-SW1001-000.5-20211008 **Lab ID: AE08103-10** **Sampled: 10/08/21 12:20** **Received: 10/08/21 15:00**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	10/22/21	10/14/21 00:00	10/14/21 15:22

Client ID: LC34-SW1002-000.5-20211008 **Lab ID: AE08103-11** **Sampled: 10/08/21 12:45** **Received: 10/08/21 15:00**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	10/22/21	10/14/21 00:00	10/14/21 12:30

SAMPLE DETECTION SUMMARY

Client ID: LC34-IW0137-024.0-20211007 **Lab ID:** AE08103-01

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	5.0		0.53	2.5	ug/L	EPA 8260D	

Client ID: LC34-IW0138-031.5-20211007 **Lab ID:** AE08103-02

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	1.7	I	0.53	2.5	ug/L	EPA 8260D	

Client ID: LC34-IW0135-024.0-20211007 **Lab ID:** AE08103-03

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
trans-1,2-Dichloroethene	150		15	50	ug/L	EPA 8260D	
Vinyl chloride	190		14	50	ug/L	EPA 8260D	

Client ID: LC34-IW0135-024.0-20211007 **Lab ID:** AE08103-03RE1

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	2700		53	250	ug/L	EPA 8260D	

Client ID: LC34-IW0126-024.0-20211008 **Lab ID:** AE08103-07

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	0.64	I	0.53	2.5	ug/L	EPA 8260D	

Client ID: LC34-IW0134-024.0-20211008 **Lab ID:** AE08103-08

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	9700		53	250	ug/L	EPA 8260D	
trans-1,2-Dichloroethene	77	I	73	250	ug/L	EPA 8260D	
Vinyl chloride	1000		71	250	ug/L	EPA 8260D	

Client ID: LC34-SW1002-000.5-20211008 **Lab ID:** AE08103-11

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	2.1	I	0.53	2.5	ug/L	EPA 8260D	

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ANALYTICAL RESULTS

Description: LC34-IW0137-024.0-20211007 **Lab Sample ID:** AE08103-01 **Received:** 10/08/21 15:00

Matrix: Ground Water **Sampled:** 10/07/21 16:20 **Work Order:** AE08103

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden/Kyle Kercher

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	1J13009	EPA 8260D	10/13/21 11:14	kkw	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	1J13009	EPA 8260D	10/13/21 11:14	kkw	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	1J13009	EPA 8260D	10/13/21 11:14	kkw	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	1J13009	EPA 8260D	10/13/21 11:14	kkw	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	1J13009	EPA 8260D	10/13/21 11:14	kkw	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	1J13009	EPA 8260D	10/13/21 11:14	kkw	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	1J13009	EPA 8260D	10/13/21 11:14	kkw	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	1J13009	EPA 8260D	10/13/21 11:14	kkw	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	1J13009	EPA 8260D	10/13/21 11:14	kkw	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	1J13009	EPA 8260D	10/13/21 11:14	kkw	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	1J13009	EPA 8260D	10/13/21 11:14	kkw	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	1J13009	EPA 8260D	10/13/21 11:14	kkw	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	1J13009	EPA 8260D	10/13/21 11:14	kkw	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	1J13009	EPA 8260D	10/13/21 11:14	kkw	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	1J13009	EPA 8260D	10/13/21 11:14	kkw	QM-11
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	1J13009	EPA 8260D	10/13/21 11:14	kkw	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	1J13009	EPA 8260D	10/13/21 11:14	kkw	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	1J13009	EPA 8260D	10/13/21 11:14	kkw	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	1J13009	EPA 8260D	10/13/21 11:14	kkw	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	1J13009	EPA 8260D	10/13/21 11:14	kkw	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	1J13009	EPA 8260D	10/13/21 11:14	kkw	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	1J13009	EPA 8260D	10/13/21 11:14	kkw	QL-02, QM-19, QV-01
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	1J13009	EPA 8260D	10/13/21 11:14	kkw	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	1J13009	EPA 8260D	10/13/21 11:14	kkw	QM-11
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	1J13009	EPA 8260D	10/13/21 11:14	kkw	QV-01
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	1J13009	EPA 8260D	10/13/21 11:14	kkw	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	1J13009	EPA 8260D	10/13/21 11:14	kkw	
cis-1,2-Dichloroethene [156-59-2]^	**5.0**		ug/L	1	0.53	2.5	1J13009	EPA 8260D	10/13/21 11:14	kkw	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	1J13009	EPA 8260D	10/13/21 11:14	kkw	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	1J13009	EPA 8260D	10/13/21 11:14	kkw	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	1J13009	EPA 8260D	10/13/21 11:14	kkw	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	1J13009	EPA 8260D	10/13/21 11:14	kkw	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	1J13009	EPA 8260D	10/13/21 11:14	kkw	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	1J13009	EPA 8260D	10/13/21 11:14	kkw	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	1J13009	EPA 8260D	10/13/21 11:14	kkw	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	1J13009	EPA 8260D	10/13/21 11:14	kkw	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	1J13009	EPA 8260D	10/13/21 11:14	kkw	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	1J13009	EPA 8260D	10/13/21 11:14	kkw	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	1J13009	EPA 8260D	10/13/21 11:14	kkw	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	1J13009	EPA 8260D	10/13/21 11:14	kkw	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	1J13009	EPA 8260D	10/13/21 11:14	kkw	
trans-1,2-Dichloroethene [156-60-5]^	0.73	U	ug/L	1	0.73	2.5	1J13009	EPA 8260D	10/13/21 11:14	kkw	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	1J13009	EPA 8260D	10/13/21 11:14	kkw	
Trichloroethene [79-01-6]^	0.89	U	ug/L	1	0.89	2.5	1J13009	EPA 8260D	10/13/21 11:14	kkw	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	1J13009	EPA 8260D	10/13/21 11:14	kkw	

ANALYTICAL RESULTS

Description: LC34-IW0137-024.0-20211007 **Lab Sample ID:** AE08103-01 **Received:** 10/08/21 15:00

Matrix: Ground Water **Sampled:** 10/07/21 16:20 **Work Order:** AE08103

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden/Kyle Kercher

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Vinyl chloride [75-01-4]^	0.71	U	ug/L	1	0.71	2.5	1J13009	EPA 8260D	10/13/21 11:14	kkw	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*43*	*1*	*50.0*	*87 %*	*41-142*	*1J13009*	*EPA 8260D*	*10/13/21 11:14*	*kkw*	
Dibromofluoromethane	*49*	*1*	*50.0*	*98 %*	*53-146*	*1J13009*	*EPA 8260D*	*10/13/21 11:14*	*kkw*	
Toluene-d8	*46*	*1*	*50.0*	*92 %*	*41-146*	*1J13009*	*EPA 8260D*	*10/13/21 11:14*	*kkw*	

ANALYTICAL RESULTS

Description: LC34-IW0138-031.5-20211007 **Lab Sample ID:** AE08103-02 **Received:** 10/08/21 15:00

Matrix: Ground Water **Sampled:** 10/07/21 17:10 **Work Order:** AE08103

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden/Kyle Kercher

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	1J13009	EPA 8260D	10/13/21 15:33	kkw	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	1J13009	EPA 8260D	10/13/21 15:33	kkw	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	1J13009	EPA 8260D	10/13/21 15:33	kkw	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	1J13009	EPA 8260D	10/13/21 15:33	kkw	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	1J13009	EPA 8260D	10/13/21 15:33	kkw	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	1J13009	EPA 8260D	10/13/21 15:33	kkw	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	1J13009	EPA 8260D	10/13/21 15:33	kkw	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	1J13009	EPA 8260D	10/13/21 15:33	kkw	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	1J13009	EPA 8260D	10/13/21 15:33	kkw	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	1J13009	EPA 8260D	10/13/21 15:33	kkw	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	1J13009	EPA 8260D	10/13/21 15:33	kkw	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	1J13009	EPA 8260D	10/13/21 15:33	kkw	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	1J13009	EPA 8260D	10/13/21 15:33	kkw	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	1J13009	EPA 8260D	10/13/21 15:33	kkw	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	1J13009	EPA 8260D	10/13/21 15:33	kkw	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	1J13009	EPA 8260D	10/13/21 15:33	kkw	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	1J13009	EPA 8260D	10/13/21 15:33	kkw	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	1J13009	EPA 8260D	10/13/21 15:33	kkw	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	1J13009	EPA 8260D	10/13/21 15:33	kkw	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	1J13009	EPA 8260D	10/13/21 15:33	kkw	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	1J13009	EPA 8260D	10/13/21 15:33	kkw	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	1J13009	EPA 8260D	10/13/21 15:33	kkw	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	1J13009	EPA 8260D	10/13/21 15:33	kkw	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	1J13009	EPA 8260D	10/13/21 15:33	kkw	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	1J13009	EPA 8260D	10/13/21 15:33	kkw	QV-01
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	1J13009	EPA 8260D	10/13/21 15:33	kkw	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	1J13009	EPA 8260D	10/13/21 15:33	kkw	
cis-1,2-Dichloroethene [156-59-2]^	**1.7**	I	ug/L	1	0.53	2.5	1J13009	EPA 8260D	10/13/21 15:33	kkw	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	1J13009	EPA 8260D	10/13/21 15:33	kkw	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	1J13009	EPA 8260D	10/13/21 15:33	kkw	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	1J13009	EPA 8260D	10/13/21 15:33	kkw	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	1J13009	EPA 8260D	10/13/21 15:33	kkw	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	1J13009	EPA 8260D	10/13/21 15:33	kkw	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	1J13009	EPA 8260D	10/13/21 15:33	kkw	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	1J13009	EPA 8260D	10/13/21 15:33	kkw	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	1J13009	EPA 8260D	10/13/21 15:33	kkw	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	1J13009	EPA 8260D	10/13/21 15:33	kkw	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	1J13009	EPA 8260D	10/13/21 15:33	kkw	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	1J13009	EPA 8260D	10/13/21 15:33	kkw	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	1J13009	EPA 8260D	10/13/21 15:33	kkw	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	1J13009	EPA 8260D	10/13/21 15:33	kkw	
trans-1,2-Dichloroethene [156-60-5]^	0.73	U	ug/L	1	0.73	2.5	1J13009	EPA 8260D	10/13/21 15:33	kkw	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	1J13009	EPA 8260D	10/13/21 15:33	kkw	
Trichloroethene [79-01-6]^	0.89	U	ug/L	1	0.89	2.5	1J13009	EPA 8260D	10/13/21 15:33	kkw	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	1J13009	EPA 8260D	10/13/21 15:33	kkw	
Vinyl chloride [75-01-4]^	0.71	U	ug/L	1	0.71	2.5	1J13009	EPA 8260D	10/13/21 15:33	kkw	

ANALYTICAL RESULTS

Description: LC34-IW0138-031.5-20211007 **Lab Sample ID:** AE08103-02 **Received:** 10/08/21 15:00

Matrix: Ground Water **Sampled:** 10/07/21 17:10 **Work Order:** AE08103

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden/Kyle Kercher

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*45*	*1*	*50.0*	*89 %*	*41-142*	*1J13009*	*EPA 8260D*	*10/13/21 15:33*	*kkw*	
Dibromofluoromethane	*49*	*1*	*50.0*	*97 %*	*53-146*	*1J13009*	*EPA 8260D*	*10/13/21 15:33*	*kkw*	
Toluene-d8	*48*	*1*	*50.0*	*97 %*	*41-146*	*1J13009*	*EPA 8260D*	*10/13/21 15:33*	*kkw*	

ANALYTICAL RESULTS

Description: LC34-IW0135-024.0-20211007 **Lab Sample ID:** AE08103-03 **Received:** 10/08/21 15:00

Matrix: Ground Water **Sampled:** 10/07/21 17:40 **Work Order:** AE08103

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden/Kyle Kercher

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	16	U	ug/L	20	16	50	1J13009	EPA 8260D	10/13/21 16:01	kkw	
1,1,2,2-Tetrachloroethane [79-34-5]^	11	U	ug/L	20	11	50	1J13009	EPA 8260D	10/13/21 16:01	kkw	
1,1,2-Trichloroethane [79-00-5]^	15	U	ug/L	20	15	50	1J13009	EPA 8260D	10/13/21 16:01	kkw	
1,1-Dichloroethane [75-34-3]^	12	U	ug/L	20	12	50	1J13009	EPA 8260D	10/13/21 16:01	kkw	
1,1-Dichloroethene [75-35-4]^	19	U	ug/L	20	19	50	1J13009	EPA 8260D	10/13/21 16:01	kkw	
1,2,4-Trichlorobenzene [120-82-1]^	14	U	ug/L	20	14	50	1J13009	EPA 8260D	10/13/21 16:01	kkw	
1,2-Dibromo-3-chloropropane [96-12-8]^	19	U	ug/L	20	19	50	1J13009	EPA 8260D	10/13/21 16:01	kkw	
1,2-Dibromoethane [106-93-4]^	16	U	ug/L	20	16	50	1J13009	EPA 8260D	10/13/21 16:01	kkw	
1,2-Dichlorobenzene [95-50-1]^	15	U	ug/L	20	15	50	1J13009	EPA 8260D	10/13/21 16:01	kkw	
1,2-Dichloroethane [107-06-2]^	13	U	ug/L	20	13	50	1J13009	EPA 8260D	10/13/21 16:01	kkw	
1,2-Dichloropropane [78-87-5]^	16	U	ug/L	20	16	50	1J13009	EPA 8260D	10/13/21 16:01	kkw	
1,3-Dichlorobenzene [541-73-1]^	15	U	ug/L	20	15	50	1J13009	EPA 8260D	10/13/21 16:01	kkw	
1,4-Dichlorobenzene [106-46-7]^	15	U	ug/L	20	15	50	1J13009	EPA 8260D	10/13/21 16:01	kkw	
2-Butanone [78-93-3]^	90	U	ug/L	20	90	250	1J13009	EPA 8260D	10/13/21 16:01	kkw	
2-Hexanone [591-78-6]^	50	U	ug/L	20	50	250	1J13009	EPA 8260D	10/13/21 16:01	kkw	
4-Methyl-2-pentanone [108-10-1]^	50	U	ug/L	20	50	250	1J13009	EPA 8260D	10/13/21 16:01	kkw	
Acetone [67-64-1]^	200	U	ug/L	20	200	500	1J13009	EPA 8260D	10/13/21 16:01	kkw	
Benzene [71-43-2]^	14	U	ug/L	20	14	50	1J13009	EPA 8260D	10/13/21 16:01	kkw	
Bromodichloromethane [75-27-4]^	10	U	ug/L	20	10	50	1J13009	EPA 8260D	10/13/21 16:01	kkw	
Bromoform [75-25-2]^	15	U	ug/L	20	15	50	1J13009	EPA 8260D	10/13/21 16:01	kkw	
Bromomethane [74-83-9]^	19	U	ug/L	20	19	50	1J13009	EPA 8260D	10/13/21 16:01	kkw	QV-01
Carbon disulfide [75-15-0]^	50	U	ug/L	20	50	250	1J13009	EPA 8260D	10/13/21 16:01	kkw	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	19	U	ug/L	20	19	50	1J13009	EPA 8260D	10/13/21 16:01	kkw	
Chlorobenzene [108-90-7]^	14	U	ug/L	20	14	50	1J13009	EPA 8260D	10/13/21 16:01	kkw	
Chloroethane [75-00-3]^	20	U	ug/L	20	20	50	1J13009	EPA 8260D	10/13/21 16:01	kkw	QV-01
Chloroform [67-66-3]^	16	U	ug/L	20	16	50	1J13009	EPA 8260D	10/13/21 16:01	kkw	
Chloromethane [74-87-3]^	16	U	ug/L	20	16	50	1J13009	EPA 8260D	10/13/21 16:01	kkw	
cis-1,2-Dichloroethene [156-59-2]^	**2700**		ug/L	100	53	250	1J14017	EPA 8260D	10/14/21 12:58	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	12	U	ug/L	20	12	50	1J13009	EPA 8260D	10/13/21 16:01	kkw	
Cyclohexane [110-82-7]^	19	U	ug/L	20	19	50	1J13009	EPA 8260D	10/13/21 16:01	kkw	
Dibromochloromethane [124-48-1]^	10	U	ug/L	20	10	50	1J13009	EPA 8260D	10/13/21 16:01	kkw	
Dichlorodifluoromethane [75-71-8]^	15	U	ug/L	20	15	50	1J13009	EPA 8260D	10/13/21 16:01	kkw	
Ethylbenzene [100-41-4]^	14	U	ug/L	20	14	50	1J13009	EPA 8260D	10/13/21 16:01	kkw	
Freon 113 [76-13-1]^	15	U	ug/L	20	15	50	1J13009	EPA 8260D	10/13/21 16:01	kkw	
Isopropylbenzene [98-82-8]^	13	U	ug/L	20	13	50	1J13009	EPA 8260D	10/13/21 16:01	kkw	
Methyl acetate [79-20-9]^	19	U	ug/L	20	19	50	1J13009	EPA 8260D	10/13/21 16:01	kkw	
Methylene Chloride [75-09-2]^	50	U	ug/L	20	50	250	1J13009	EPA 8260D	10/13/21 16:01	kkw	
Methyl-tert-Butyl Ether [1634-04-4]^	12	U	ug/L	20	12	50	1J13009	EPA 8260D	10/13/21 16:01	kkw	
Styrene [100-42-5]^	12	U	ug/L	20	12	50	1J13009	EPA 8260D	10/13/21 16:01	kkw	
Tetrachloroethene [127-18-4]^	15	U	ug/L	20	15	50	1J13009	EPA 8260D	10/13/21 16:01	kkw	
Toluene [108-88-3]^	14	U	ug/L	20	14	50	1J13009	EPA 8260D	10/13/21 16:01	kkw	
trans-1,2-Dichloroethene [156-60-5]^	**150**		ug/L	20	15	50	1J13009	EPA 8260D	10/13/21 16:01	kkw	
trans-1,3-Dichloropropene [10061-02-6]^	15	U	ug/L	20	15	50	1J13009	EPA 8260D	10/13/21 16:01	kkw	
Trichloroethene [79-01-6]^	18	U	ug/L	20	18	50	1J13009	EPA 8260D	10/13/21 16:01	kkw	
Trichlorofluoromethane [75-69-4]^	19	U	ug/L	20	19	50	1J13009	EPA 8260D	10/13/21 16:01	kkw	
Vinyl chloride [75-01-4]^	**190**		ug/L	20	14	50	1J13009	EPA 8260D	10/13/21 16:01	kkw	

ANALYTICAL RESULTS

Description: LC34-IW0135-024.0-20211007 **Lab Sample ID:** AE08103-03 **Received:** 10/08/21 15:00

Matrix: Ground Water **Sampled:** 10/07/21 17:40 **Work Order:** AE08103

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden/Kyle Kercher

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*45*	*1*	*50.0*	*90 %*	*41-142*	*1J13009*	*EPA 8260D*	*10/13/21 16:01*	*kkw*	
4-Bromofluorobenzene	*46*	*1*	*50.0*	*92 %*	*41-142*	*1J14017*	*EPA 8260D*	*10/14/21 12:58*	*nmc*	
Dibromofluoromethane	*49*	*1*	*50.0*	*98 %*	*53-146*	*1J13009*	*EPA 8260D*	*10/13/21 16:01*	*kkw*	
Dibromofluoromethane	*55*	*1*	*50.0*	*110 %*	*53-146*	*1J14017*	*EPA 8260D*	*10/14/21 12:58*	*nmc*	
Toluene-d8	*48*	*1*	*50.0*	*97 %*	*41-146*	*1J13009*	*EPA 8260D*	*10/13/21 16:01*	*kkw*	
Toluene-d8	*49*	*1*	*50.0*	*98 %*	*41-146*	*1J14017*	*EPA 8260D*	*10/14/21 12:58*	*nmc*	

ANALYTICAL RESULTS

Description: LC34-IW0139-018.0-20211008 **Lab Sample ID:** AE08103-04 **Received:** 10/08/21 15:00

Matrix: Ground Water **Sampled:** 10/08/21 09:25 **Work Order:** AE08103

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden/Kyle Kercher

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	1J13009	EPA 8260D	10/13/21 16:30	kkw	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	1J13009	EPA 8260D	10/13/21 16:30	kkw	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	1J13009	EPA 8260D	10/13/21 16:30	kkw	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	1J13009	EPA 8260D	10/13/21 16:30	kkw	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	1J13009	EPA 8260D	10/13/21 16:30	kkw	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	1J13009	EPA 8260D	10/13/21 16:30	kkw	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	1J13009	EPA 8260D	10/13/21 16:30	kkw	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	1J13009	EPA 8260D	10/13/21 16:30	kkw	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	1J13009	EPA 8260D	10/13/21 16:30	kkw	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	1J13009	EPA 8260D	10/13/21 16:30	kkw	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	1J13009	EPA 8260D	10/13/21 16:30	kkw	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	1J13009	EPA 8260D	10/13/21 16:30	kkw	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	1J13009	EPA 8260D	10/13/21 16:30	kkw	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	1J13009	EPA 8260D	10/13/21 16:30	kkw	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	1J13009	EPA 8260D	10/13/21 16:30	kkw	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	1J13009	EPA 8260D	10/13/21 16:30	kkw	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	1J13009	EPA 8260D	10/13/21 16:30	kkw	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	1J13009	EPA 8260D	10/13/21 16:30	kkw	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	1J13009	EPA 8260D	10/13/21 16:30	kkw	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	1J13009	EPA 8260D	10/13/21 16:30	kkw	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	1J13009	EPA 8260D	10/13/21 16:30	kkw	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	1J13009	EPA 8260D	10/13/21 16:30	kkw	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	1J13009	EPA 8260D	10/13/21 16:30	kkw	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	1J13009	EPA 8260D	10/13/21 16:30	kkw	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	1J13009	EPA 8260D	10/13/21 16:30	kkw	QV-01
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	1J13009	EPA 8260D	10/13/21 16:30	kkw	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	1J13009	EPA 8260D	10/13/21 16:30	kkw	
cis-1,2-Dichloroethene [156-59-2]^	0.53	U	ug/L	1	0.53	2.5	1J13009	EPA 8260D	10/13/21 16:30	kkw	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	1J13009	EPA 8260D	10/13/21 16:30	kkw	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	1J13009	EPA 8260D	10/13/21 16:30	kkw	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	1J13009	EPA 8260D	10/13/21 16:30	kkw	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	1J13009	EPA 8260D	10/13/21 16:30	kkw	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	1J13009	EPA 8260D	10/13/21 16:30	kkw	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	1J13009	EPA 8260D	10/13/21 16:30	kkw	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	1J13009	EPA 8260D	10/13/21 16:30	kkw	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	1J13009	EPA 8260D	10/13/21 16:30	kkw	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	1J13009	EPA 8260D	10/13/21 16:30	kkw	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	1J13009	EPA 8260D	10/13/21 16:30	kkw	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	1J13009	EPA 8260D	10/13/21 16:30	kkw	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	1J13009	EPA 8260D	10/13/21 16:30	kkw	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	1J13009	EPA 8260D	10/13/21 16:30	kkw	
trans-1,2-Dichloroethene [156-60-5]^	0.73	U	ug/L	1	0.73	2.5	1J13009	EPA 8260D	10/13/21 16:30	kkw	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	1J13009	EPA 8260D	10/13/21 16:30	kkw	
Trichloroethene [79-01-6]^	0.89	U	ug/L	1	0.89	2.5	1J13009	EPA 8260D	10/13/21 16:30	kkw	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	1J13009	EPA 8260D	10/13/21 16:30	kkw	
Vinyl chloride [75-01-4]^	0.71	U	ug/L	1	0.71	2.5	1J13009	EPA 8260D	10/13/21 16:30	kkw	

ANALYTICAL RESULTS

Description: LC34-IW0139-018.0-20211008 **Lab Sample ID:** AE08103-04 **Received:** 10/08/21 15:00

Matrix: Ground Water **Sampled:** 10/08/21 09:25 **Work Order:** AE08103

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden/Kyle Kercher

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*46*	*1*	*50.0*	*92 %*	*41-142*	*1J13009*	*EPA 8260D*	*10/13/21 16:30*	*kkw*	
Dibromofluoromethane	*50*	*1*	*50.0*	*100 %*	*53-146*	*1J13009*	*EPA 8260D*	*10/13/21 16:30*	*kkw*	
Toluene-d8	*50*	*1*	*50.0*	*100 %*	*41-146*	*1J13009*	*EPA 8260D*	*10/13/21 16:30*	*kkw*	

ANALYTICAL RESULTS

Description: LC34-IW0140-024.0-20211008 **Lab Sample ID:** AE08103-05 **Received:** 10/08/21 15:00

Matrix: Ground Water **Sampled:** 10/08/21 10:35 **Work Order:** AE08103

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden/Kyle Kercher

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	1J13009	EPA 8260D	10/13/21 16:59	kkw	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	1J13009	EPA 8260D	10/13/21 16:59	kkw	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	1J13009	EPA 8260D	10/13/21 16:59	kkw	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	1J13009	EPA 8260D	10/13/21 16:59	kkw	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	1J13009	EPA 8260D	10/13/21 16:59	kkw	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	1J13009	EPA 8260D	10/13/21 16:59	kkw	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	1J13009	EPA 8260D	10/13/21 16:59	kkw	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	1J13009	EPA 8260D	10/13/21 16:59	kkw	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	1J13009	EPA 8260D	10/13/21 16:59	kkw	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	1J13009	EPA 8260D	10/13/21 16:59	kkw	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	1J13009	EPA 8260D	10/13/21 16:59	kkw	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	1J13009	EPA 8260D	10/13/21 16:59	kkw	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	1J13009	EPA 8260D	10/13/21 16:59	kkw	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	1J13009	EPA 8260D	10/13/21 16:59	kkw	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	1J13009	EPA 8260D	10/13/21 16:59	kkw	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	1J13009	EPA 8260D	10/13/21 16:59	kkw	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	1J13009	EPA 8260D	10/13/21 16:59	kkw	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	1J13009	EPA 8260D	10/13/21 16:59	kkw	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	1J13009	EPA 8260D	10/13/21 16:59	kkw	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	1J13009	EPA 8260D	10/13/21 16:59	kkw	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	1J13009	EPA 8260D	10/13/21 16:59	kkw	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	1J13009	EPA 8260D	10/13/21 16:59	kkw	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	1J13009	EPA 8260D	10/13/21 16:59	kkw	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	1J13009	EPA 8260D	10/13/21 16:59	kkw	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	1J13009	EPA 8260D	10/13/21 16:59	kkw	QV-01
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	1J13009	EPA 8260D	10/13/21 16:59	kkw	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	1J13009	EPA 8260D	10/13/21 16:59	kkw	
cis-1,2-Dichloroethene [156-59-2]^	0.53	U	ug/L	1	0.53	2.5	1J13009	EPA 8260D	10/13/21 16:59	kkw	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	1J13009	EPA 8260D	10/13/21 16:59	kkw	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	1J13009	EPA 8260D	10/13/21 16:59	kkw	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	1J13009	EPA 8260D	10/13/21 16:59	kkw	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	1J13009	EPA 8260D	10/13/21 16:59	kkw	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	1J13009	EPA 8260D	10/13/21 16:59	kkw	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	1J13009	EPA 8260D	10/13/21 16:59	kkw	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	1J13009	EPA 8260D	10/13/21 16:59	kkw	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	1J13009	EPA 8260D	10/13/21 16:59	kkw	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	1J13009	EPA 8260D	10/13/21 16:59	kkw	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	1J13009	EPA 8260D	10/13/21 16:59	kkw	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	1J13009	EPA 8260D	10/13/21 16:59	kkw	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	1J13009	EPA 8260D	10/13/21 16:59	kkw	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	1J13009	EPA 8260D	10/13/21 16:59	kkw	
trans-1,2-Dichloroethene [156-60-5]^	0.73	U	ug/L	1	0.73	2.5	1J13009	EPA 8260D	10/13/21 16:59	kkw	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	1J13009	EPA 8260D	10/13/21 16:59	kkw	
Trichloroethene [79-01-6]^	0.89	U	ug/L	1	0.89	2.5	1J13009	EPA 8260D	10/13/21 16:59	kkw	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	1J13009	EPA 8260D	10/13/21 16:59	kkw	
Vinyl chloride [75-01-4]^	0.71	U	ug/L	1	0.71	2.5	1J13009	EPA 8260D	10/13/21 16:59	kkw	

ANALYTICAL RESULTS

Description: LC34-IW0140-024.0-20211008 **Lab Sample ID:** AE08103-05 **Received:** 10/08/21 15:00

Matrix: Ground Water **Sampled:** 10/08/21 10:35 **Work Order:** AE08103

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden/Kyle Kercher

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*44*	*1*	*50.0*	*88 %*	*41-142*	*1J13009*	*EPA 8260D*	*10/13/21 16:59*	*kkw*	
Dibromofluoromethane	*49*	*1*	*50.0*	*98 %*	*53-146*	*1J13009*	*EPA 8260D*	*10/13/21 16:59*	*kkw*	
Toluene-d8	*48*	*1*	*50.0*	*95 %*	*41-146*	*1J13009*	*EPA 8260D*	*10/13/21 16:59*	*kkw*	

ANALYTICAL RESULTS

Description: LC34-IW0136-024.0-20211008 **Lab Sample ID:** AE08103-06 **Received:** 10/08/21 15:00

Matrix: Ground Water **Sampled:** 10/08/21 10:35 **Work Order:** AE08103

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden/Kyle Kercher

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	1J14017	EPA 8260D	10/14/21 13:27	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	1J14017	EPA 8260D	10/14/21 13:27	nmc	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	1J14017	EPA 8260D	10/14/21 13:27	nmc	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	1J14017	EPA 8260D	10/14/21 13:27	nmc	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	1J14017	EPA 8260D	10/14/21 13:27	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	1J14017	EPA 8260D	10/14/21 13:27	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	1J14017	EPA 8260D	10/14/21 13:27	nmc	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	1J14017	EPA 8260D	10/14/21 13:27	nmc	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	1J14017	EPA 8260D	10/14/21 13:27	nmc	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	1J14017	EPA 8260D	10/14/21 13:27	nmc	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	1J14017	EPA 8260D	10/14/21 13:27	nmc	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	1J14017	EPA 8260D	10/14/21 13:27	nmc	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	1J14017	EPA 8260D	10/14/21 13:27	nmc	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	1J14017	EPA 8260D	10/14/21 13:27	nmc	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	1J14017	EPA 8260D	10/14/21 13:27	nmc	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	1J14017	EPA 8260D	10/14/21 13:27	nmc	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	1J14017	EPA 8260D	10/14/21 13:27	nmc	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	1J14017	EPA 8260D	10/14/21 13:27	nmc	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	1J14017	EPA 8260D	10/14/21 13:27	nmc	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	1J14017	EPA 8260D	10/14/21 13:27	nmc	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	1J14017	EPA 8260D	10/14/21 13:27	nmc	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	1J14017	EPA 8260D	10/14/21 13:27	nmc	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	1J14017	EPA 8260D	10/14/21 13:27	nmc	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	1J14017	EPA 8260D	10/14/21 13:27	nmc	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	1J14017	EPA 8260D	10/14/21 13:27	nmc	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	1J14017	EPA 8260D	10/14/21 13:27	nmc	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	1J14017	EPA 8260D	10/14/21 13:27	nmc	
cis-1,2-Dichloroethene [156-59-2]^	0.53	U	ug/L	1	0.53	2.5	1J14017	EPA 8260D	10/14/21 13:27	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	1J14017	EPA 8260D	10/14/21 13:27	nmc	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	1J14017	EPA 8260D	10/14/21 13:27	nmc	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	1J14017	EPA 8260D	10/14/21 13:27	nmc	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	1J14017	EPA 8260D	10/14/21 13:27	nmc	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	1J14017	EPA 8260D	10/14/21 13:27	nmc	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	1J14017	EPA 8260D	10/14/21 13:27	nmc	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	1J14017	EPA 8260D	10/14/21 13:27	nmc	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	1J14017	EPA 8260D	10/14/21 13:27	nmc	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	1J14017	EPA 8260D	10/14/21 13:27	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	1J14017	EPA 8260D	10/14/21 13:27	nmc	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	1J14017	EPA 8260D	10/14/21 13:27	nmc	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	1J14017	EPA 8260D	10/14/21 13:27	nmc	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	1J14017	EPA 8260D	10/14/21 13:27	nmc	
trans-1,2-Dichloroethene [156-60-5]^	0.73	U	ug/L	1	0.73	2.5	1J14017	EPA 8260D	10/14/21 13:27	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	1J14017	EPA 8260D	10/14/21 13:27	nmc	
Trichloroethene [79-01-6]^	0.89	U	ug/L	1	0.89	2.5	1J14017	EPA 8260D	10/14/21 13:27	nmc	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	1J14017	EPA 8260D	10/14/21 13:27	nmc	
Vinyl chloride [75-01-4]^	0.71	U	ug/L	1	0.71	2.5	1J14017	EPA 8260D	10/14/21 13:27	nmc	

ANALYTICAL RESULTS

Description: LC34-IW0136-024.0-20211008 **Lab Sample ID:** AE08103-06 **Received:** 10/08/21 15:00

Matrix: Ground Water **Sampled:** 10/08/21 10:35 **Work Order:** AE08103

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden/Kyle Kercher

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*44*	*1*	*50.0*	*89 %*	*41-142*	*1J14017*	*EPA 8260D*	*10/14/21 13:27*	*nmc*	
Dibromofluoromethane	*48*	*1*	*50.0*	*97 %*	*53-146*	*1J14017*	*EPA 8260D*	*10/14/21 13:27*	*nmc*	
Toluene-d8	*48*	*1*	*50.0*	*96 %*	*41-146*	*1J14017*	*EPA 8260D*	*10/14/21 13:27*	*nmc*	

ANALYTICAL RESULTS

Description: LC34-IW0126-024.0-20211008 **Lab Sample ID:** AE08103-07 **Received:** 10/08/21 15:00

Matrix: Ground Water **Sampled:** 10/08/21 11:05 **Work Order:** AE08103

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden/Kyle Kercher

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	1J14017	EPA 8260D	10/14/21 13:56	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	1J14017	EPA 8260D	10/14/21 13:56	nmc	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	1J14017	EPA 8260D	10/14/21 13:56	nmc	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	1J14017	EPA 8260D	10/14/21 13:56	nmc	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	1J14017	EPA 8260D	10/14/21 13:56	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	1J14017	EPA 8260D	10/14/21 13:56	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	1J14017	EPA 8260D	10/14/21 13:56	nmc	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	1J14017	EPA 8260D	10/14/21 13:56	nmc	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	1J14017	EPA 8260D	10/14/21 13:56	nmc	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	1J14017	EPA 8260D	10/14/21 13:56	nmc	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	1J14017	EPA 8260D	10/14/21 13:56	nmc	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	1J14017	EPA 8260D	10/14/21 13:56	nmc	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	1J14017	EPA 8260D	10/14/21 13:56	nmc	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	1J14017	EPA 8260D	10/14/21 13:56	nmc	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	1J14017	EPA 8260D	10/14/21 13:56	nmc	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	1J14017	EPA 8260D	10/14/21 13:56	nmc	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	1J14017	EPA 8260D	10/14/21 13:56	nmc	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	1J14017	EPA 8260D	10/14/21 13:56	nmc	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	1J14017	EPA 8260D	10/14/21 13:56	nmc	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	1J14017	EPA 8260D	10/14/21 13:56	nmc	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	1J14017	EPA 8260D	10/14/21 13:56	nmc	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	1J14017	EPA 8260D	10/14/21 13:56	nmc	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	1J14017	EPA 8260D	10/14/21 13:56	nmc	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	1J14017	EPA 8260D	10/14/21 13:56	nmc	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	1J14017	EPA 8260D	10/14/21 13:56	nmc	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	1J14017	EPA 8260D	10/14/21 13:56	nmc	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	1J14017	EPA 8260D	10/14/21 13:56	nmc	
cis-1,2-Dichloroethene [156-59-2]^	**0.64**	I	ug/L	1	0.53	2.5	1J14017	EPA 8260D	10/14/21 13:56	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	1J14017	EPA 8260D	10/14/21 13:56	nmc	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	1J14017	EPA 8260D	10/14/21 13:56	nmc	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	1J14017	EPA 8260D	10/14/21 13:56	nmc	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	1J14017	EPA 8260D	10/14/21 13:56	nmc	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	1J14017	EPA 8260D	10/14/21 13:56	nmc	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	1J14017	EPA 8260D	10/14/21 13:56	nmc	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	1J14017	EPA 8260D	10/14/21 13:56	nmc	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	1J14017	EPA 8260D	10/14/21 13:56	nmc	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	1J14017	EPA 8260D	10/14/21 13:56	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	1J14017	EPA 8260D	10/14/21 13:56	nmc	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	1J14017	EPA 8260D	10/14/21 13:56	nmc	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	1J14017	EPA 8260D	10/14/21 13:56	nmc	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	1J14017	EPA 8260D	10/14/21 13:56	nmc	
trans-1,2-Dichloroethene [156-60-5]^	0.73	U	ug/L	1	0.73	2.5	1J14017	EPA 8260D	10/14/21 13:56	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	1J14017	EPA 8260D	10/14/21 13:56	nmc	
Trichloroethene [79-01-6]^	0.89	U	ug/L	1	0.89	2.5	1J14017	EPA 8260D	10/14/21 13:56	nmc	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	1J14017	EPA 8260D	10/14/21 13:56	nmc	
Vinyl chloride [75-01-4]^	0.71	U	ug/L	1	0.71	2.5	1J14017	EPA 8260D	10/14/21 13:56	nmc	

ANALYTICAL RESULTS

Description: LC34-IW0126-024.0-20211008 **Lab Sample ID:** AE08103-07 **Received:** 10/08/21 15:00

Matrix: Ground Water **Sampled:** 10/08/21 11:05 **Work Order:** AE08103

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden/Kyle Kercher

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*45*	*1*	*50.0*	*91 %*	*41-142*	*1J14017*	*EPA 8260D*	*10/14/21 13:56*	*nmc*	
Dibromofluoromethane	*50*	*1*	*50.0*	*99 %*	*53-146*	*1J14017*	*EPA 8260D*	*10/14/21 13:56*	*nmc*	
Toluene-d8	*49*	*1*	*50.0*	*99 %*	*41-146*	*1J14017*	*EPA 8260D*	*10/14/21 13:56*	*nmc*	

ANALYTICAL RESULTS

Description: LC34-IW0134-024.0-20211008 **Lab Sample ID:** AE08103-08 **Received:** 10/08/21 15:00

Matrix: Ground Water **Sampled:** 10/08/21 11:30 **Work Order:** AE08103

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden/Kyle Kercher

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	80	U	ug/L	100	80	250	1J14017	EPA 8260D	10/14/21 14:24	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	54	U	ug/L	100	54	250	1J14017	EPA 8260D	10/14/21 14:24	nmc	
1,1,2-Trichloroethane [79-00-5]^	76	U	ug/L	100	76	250	1J14017	EPA 8260D	10/14/21 14:24	nmc	
1,1-Dichloroethane [75-34-3]^	62	U	ug/L	100	62	250	1J14017	EPA 8260D	10/14/21 14:24	nmc	
1,1-Dichloroethene [75-35-4]^	94	U	ug/L	100	94	250	1J14017	EPA 8260D	10/14/21 14:24	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	70	U	ug/L	100	70	250	1J14017	EPA 8260D	10/14/21 14:24	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	96	U	ug/L	100	96	250	1J14017	EPA 8260D	10/14/21 14:24	nmc	
1,2-Dibromoethane [106-93-4]^	78	U	ug/L	100	78	250	1J14017	EPA 8260D	10/14/21 14:24	nmc	
1,2-Dichlorobenzene [95-50-1]^	73	U	ug/L	100	73	250	1J14017	EPA 8260D	10/14/21 14:24	nmc	
1,2-Dichloroethane [107-06-2]^	63	U	ug/L	100	63	250	1J14017	EPA 8260D	10/14/21 14:24	nmc	
1,2-Dichloropropane [78-87-5]^	80	U	ug/L	100	80	250	1J14017	EPA 8260D	10/14/21 14:24	nmc	
1,3-Dichlorobenzene [541-73-1]^	77	U	ug/L	100	77	250	1J14017	EPA 8260D	10/14/21 14:24	nmc	
1,4-Dichlorobenzene [106-46-7]^	76	U	ug/L	100	76	250	1J14017	EPA 8260D	10/14/21 14:24	nmc	
2-Butanone [78-93-3]^	450	U	ug/L	100	450	1200	1J14017	EPA 8260D	10/14/21 14:24	nmc	
2-Hexanone [591-78-6]^	250	U	ug/L	100	250	1200	1J14017	EPA 8260D	10/14/21 14:24	nmc	
4-Methyl-2-pentanone [108-10-1]^	250	U	ug/L	100	250	1200	1J14017	EPA 8260D	10/14/21 14:24	nmc	
Acetone [67-64-1]^	1000	U	ug/L	100	1000	2500	1J14017	EPA 8260D	10/14/21 14:24	nmc	
Benzene [71-43-2]^	71	U	ug/L	100	71	250	1J14017	EPA 8260D	10/14/21 14:24	nmc	
Bromodichloromethane [75-27-4]^	52	U	ug/L	100	52	250	1J14017	EPA 8260D	10/14/21 14:24	nmc	
Bromoform [75-25-2]^	75	U	ug/L	100	75	250	1J14017	EPA 8260D	10/14/21 14:24	nmc	
Bromomethane [74-83-9]^	95	U	ug/L	100	95	250	1J14017	EPA 8260D	10/14/21 14:24	nmc	QV-01
Carbon disulfide [75-15-0]^	250	U	ug/L	100	250	1200	1J14017	EPA 8260D	10/14/21 14:24	nmc	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	94	U	ug/L	100	94	250	1J14017	EPA 8260D	10/14/21 14:24	nmc	
Chlorobenzene [108-90-7]^	72	U	ug/L	100	72	250	1J14017	EPA 8260D	10/14/21 14:24	nmc	
Chloroethane [75-00-3]^	98	U	ug/L	100	98	250	1J14017	EPA 8260D	10/14/21 14:24	nmc	
Chloroform [67-66-3]^	80	U	ug/L	100	80	250	1J14017	EPA 8260D	10/14/21 14:24	nmc	
Chloromethane [74-87-3]^	82	U	ug/L	100	82	250	1J14017	EPA 8260D	10/14/21 14:24	nmc	
cis-1,2-Dichloroethene [156-59-2]^	**9700**		ug/L	100	53	250	1J14017	EPA 8260D	10/14/21 14:24	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	59	U	ug/L	100	59	250	1J14017	EPA 8260D	10/14/21 14:24	nmc	
Cyclohexane [110-82-7]^	93	U	ug/L	100	93	250	1J14017	EPA 8260D	10/14/21 14:24	nmc	
Dibromochloromethane [124-48-1]^	50	U	ug/L	100	50	250	1J14017	EPA 8260D	10/14/21 14:24	nmc	
Dichlorodifluoromethane [75-71-8]^	74	U	ug/L	100	74	250	1J14017	EPA 8260D	10/14/21 14:24	nmc	
Ethylbenzene [100-41-4]^	69	U	ug/L	100	69	250	1J14017	EPA 8260D	10/14/21 14:24	nmc	
Freon 113 [76-13-1]^	73	U	ug/L	100	73	250	1J14017	EPA 8260D	10/14/21 14:24	nmc	
Isopropylbenzene [98-82-8]^	67	U	ug/L	100	67	250	1J14017	EPA 8260D	10/14/21 14:24	nmc	
Methyl acetate [79-20-9]^	95	U	ug/L	100	95	250	1J14017	EPA 8260D	10/14/21 14:24	nmc	
Methylene Chloride [75-09-2]^	250	U	ug/L	100	250	1200	1J14017	EPA 8260D	10/14/21 14:24	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	60	U	ug/L	100	60	250	1J14017	EPA 8260D	10/14/21 14:24	nmc	
Styrene [100-42-5]^	61	U	ug/L	100	61	250	1J14017	EPA 8260D	10/14/21 14:24	nmc	
Tetrachloroethene [127-18-4]^	76	U	ug/L	100	76	250	1J14017	EPA 8260D	10/14/21 14:24	nmc	
Toluene [108-88-3]^	72	U	ug/L	100	72	250	1J14017	EPA 8260D	10/14/21 14:24	nmc	
trans-1,2-Dichloroethene [156-60-5]^	**77**	I	ug/L	100	73	250	1J14017	EPA 8260D	10/14/21 14:24	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	73	U	ug/L	100	73	250	1J14017	EPA 8260D	10/14/21 14:24	nmc	
Trichloroethene [79-01-6]^	89	U	ug/L	100	89	250	1J14017	EPA 8260D	10/14/21 14:24	nmc	
Trichlorofluoromethane [75-69-4]^	94	U	ug/L	100	94	250	1J14017	EPA 8260D	10/14/21 14:24	nmc	
Vinyl chloride [75-01-4]^	**1000**		ug/L	100	71	250	1J14017	EPA 8260D	10/14/21 14:24	nmc	

ANALYTICAL RESULTS

Description: LC34-IW0134-024.0-20211008 **Lab Sample ID:** AE08103-08 **Received:** 10/08/21 15:00

Matrix: Ground Water **Sampled:** 10/08/21 11:30 **Work Order:** AE08103

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden/Kyle Kercher

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*45*	*1*	*50.0*	*90 %*	*41-142*	*1J14017*	*EPA 8260D*	*10/14/21 14:24*	*nmc*	
Dibromofluoromethane	*50*	*1*	*50.0*	*99 %*	*53-146*	*1J14017*	*EPA 8260D*	*10/14/21 14:24*	*nmc*	
Toluene-d8	*48*	*1*	*50.0*	*96 %*	*41-146*	*1J14017*	*EPA 8260D*	*10/14/21 14:24*	*nmc*	

ANALYTICAL RESULTS

Description: LC34-SW1004-000.5-20211008 **Lab Sample ID:** AE08103-09 **Received:** 10/08/21 15:00

Matrix: Ground Water **Sampled:** 10/08/21 11:55 **Work Order:** AE08103

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden/Kyle Kercher

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	1J14017	EPA 8260D	10/14/21 14:53	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	1J14017	EPA 8260D	10/14/21 14:53	nmc	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	1J14017	EPA 8260D	10/14/21 14:53	nmc	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	1J14017	EPA 8260D	10/14/21 14:53	nmc	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	1J14017	EPA 8260D	10/14/21 14:53	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	1J14017	EPA 8260D	10/14/21 14:53	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	1J14017	EPA 8260D	10/14/21 14:53	nmc	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	1J14017	EPA 8260D	10/14/21 14:53	nmc	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	1J14017	EPA 8260D	10/14/21 14:53	nmc	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	1J14017	EPA 8260D	10/14/21 14:53	nmc	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	1J14017	EPA 8260D	10/14/21 14:53	nmc	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	1J14017	EPA 8260D	10/14/21 14:53	nmc	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	1J14017	EPA 8260D	10/14/21 14:53	nmc	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	1J14017	EPA 8260D	10/14/21 14:53	nmc	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	1J14017	EPA 8260D	10/14/21 14:53	nmc	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	1J14017	EPA 8260D	10/14/21 14:53	nmc	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	1J14017	EPA 8260D	10/14/21 14:53	nmc	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	1J14017	EPA 8260D	10/14/21 14:53	nmc	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	1J14017	EPA 8260D	10/14/21 14:53	nmc	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	1J14017	EPA 8260D	10/14/21 14:53	nmc	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	1J14017	EPA 8260D	10/14/21 14:53	nmc	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	1J14017	EPA 8260D	10/14/21 14:53	nmc	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	1J14017	EPA 8260D	10/14/21 14:53	nmc	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	1J14017	EPA 8260D	10/14/21 14:53	nmc	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	1J14017	EPA 8260D	10/14/21 14:53	nmc	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	1J14017	EPA 8260D	10/14/21 14:53	nmc	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	1J14017	EPA 8260D	10/14/21 14:53	nmc	
cis-1,2-Dichloroethene [156-59-2]^	0.53	U	ug/L	1	0.53	2.5	1J14017	EPA 8260D	10/14/21 14:53	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	1J14017	EPA 8260D	10/14/21 14:53	nmc	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	1J14017	EPA 8260D	10/14/21 14:53	nmc	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	1J14017	EPA 8260D	10/14/21 14:53	nmc	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	1J14017	EPA 8260D	10/14/21 14:53	nmc	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	1J14017	EPA 8260D	10/14/21 14:53	nmc	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	1J14017	EPA 8260D	10/14/21 14:53	nmc	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	1J14017	EPA 8260D	10/14/21 14:53	nmc	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	1J14017	EPA 8260D	10/14/21 14:53	nmc	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	1J14017	EPA 8260D	10/14/21 14:53	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	1J14017	EPA 8260D	10/14/21 14:53	nmc	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	1J14017	EPA 8260D	10/14/21 14:53	nmc	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	1J14017	EPA 8260D	10/14/21 14:53	nmc	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	1J14017	EPA 8260D	10/14/21 14:53	nmc	
trans-1,2-Dichloroethene [156-60-5]^	0.73	U	ug/L	1	0.73	2.5	1J14017	EPA 8260D	10/14/21 14:53	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	1J14017	EPA 8260D	10/14/21 14:53	nmc	
Trichloroethene [79-01-6]^	0.89	U	ug/L	1	0.89	2.5	1J14017	EPA 8260D	10/14/21 14:53	nmc	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	1J14017	EPA 8260D	10/14/21 14:53	nmc	
Vinyl chloride [75-01-4]^	0.71	U	ug/L	1	0.71	2.5	1J14017	EPA 8260D	10/14/21 14:53	nmc	

ANALYTICAL RESULTS

Description: LC34-SW1004-000.5-20211008 **Lab Sample ID:** AE08103-09 **Received:** 10/08/21 15:00

Matrix: Ground Water **Sampled:** 10/08/21 11:55 **Work Order:** AE08103

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden/Kyle Kercher

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*41*	*1*	*50.0*	*82 %*	*41-142*	*1J14017*	*EPA 8260D*	*10/14/21 14:53*	*nmc*	
Dibromofluoromethane	*49*	*1*	*50.0*	*98 %*	*53-146*	*1J14017*	*EPA 8260D*	*10/14/21 14:53*	*nmc*	
Toluene-d8	*47*	*1*	*50.0*	*93 %*	*41-146*	*1J14017*	*EPA 8260D*	*10/14/21 14:53*	*nmc*	

ANALYTICAL RESULTS

Description: LC34-SW1001-000.5-20211008 **Lab Sample ID:** AE08103-10 **Received:** 10/08/21 15:00

Matrix: Ground Water **Sampled:** 10/08/21 12:20 **Work Order:** AE08103

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden/Kyle Kercher

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	1J14017	EPA 8260D	10/14/21 15:22	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	1J14017	EPA 8260D	10/14/21 15:22	nmc	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	1J14017	EPA 8260D	10/14/21 15:22	nmc	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	1J14017	EPA 8260D	10/14/21 15:22	nmc	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	1J14017	EPA 8260D	10/14/21 15:22	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	1J14017	EPA 8260D	10/14/21 15:22	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	1J14017	EPA 8260D	10/14/21 15:22	nmc	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	1J14017	EPA 8260D	10/14/21 15:22	nmc	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	1J14017	EPA 8260D	10/14/21 15:22	nmc	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	1J14017	EPA 8260D	10/14/21 15:22	nmc	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	1J14017	EPA 8260D	10/14/21 15:22	nmc	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	1J14017	EPA 8260D	10/14/21 15:22	nmc	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	1J14017	EPA 8260D	10/14/21 15:22	nmc	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	1J14017	EPA 8260D	10/14/21 15:22	nmc	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	1J14017	EPA 8260D	10/14/21 15:22	nmc	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	1J14017	EPA 8260D	10/14/21 15:22	nmc	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	1J14017	EPA 8260D	10/14/21 15:22	nmc	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	1J14017	EPA 8260D	10/14/21 15:22	nmc	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	1J14017	EPA 8260D	10/14/21 15:22	nmc	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	1J14017	EPA 8260D	10/14/21 15:22	nmc	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	1J14017	EPA 8260D	10/14/21 15:22	nmc	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	1J14017	EPA 8260D	10/14/21 15:22	nmc	QL-02, QV-01
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	1J14017	EPA 8260D	10/14/21 15:22	nmc	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	1J14017	EPA 8260D	10/14/21 15:22	nmc	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	1J14017	EPA 8260D	10/14/21 15:22	nmc	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	1J14017	EPA 8260D	10/14/21 15:22	nmc	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	1J14017	EPA 8260D	10/14/21 15:22	nmc	
cis-1,2-Dichloroethene [156-59-2]^	0.53	U	ug/L	1	0.53	2.5	1J14017	EPA 8260D	10/14/21 15:22	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	1J14017	EPA 8260D	10/14/21 15:22	nmc	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	1J14017	EPA 8260D	10/14/21 15:22	nmc	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	1J14017	EPA 8260D	10/14/21 15:22	nmc	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	1J14017	EPA 8260D	10/14/21 15:22	nmc	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	1J14017	EPA 8260D	10/14/21 15:22	nmc	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	1J14017	EPA 8260D	10/14/21 15:22	nmc	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	1J14017	EPA 8260D	10/14/21 15:22	nmc	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	1J14017	EPA 8260D	10/14/21 15:22	nmc	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	1J14017	EPA 8260D	10/14/21 15:22	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	1J14017	EPA 8260D	10/14/21 15:22	nmc	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	1J14017	EPA 8260D	10/14/21 15:22	nmc	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	1J14017	EPA 8260D	10/14/21 15:22	nmc	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	1J14017	EPA 8260D	10/14/21 15:22	nmc	
trans-1,2-Dichloroethene [156-60-5]^	0.73	U	ug/L	1	0.73	2.5	1J14017	EPA 8260D	10/14/21 15:22	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	1J14017	EPA 8260D	10/14/21 15:22	nmc	
Trichloroethene [79-01-6]^	0.89	U	ug/L	1	0.89	2.5	1J14017	EPA 8260D	10/14/21 15:22	nmc	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	1J14017	EPA 8260D	10/14/21 15:22	nmc	
Vinyl chloride [75-01-4]^	0.71	U	ug/L	1	0.71	2.5	1J14017	EPA 8260D	10/14/21 15:22	nmc	

ANALYTICAL RESULTS

Description: LC34-SW1001-000.5-20211008 **Lab Sample ID:** AE08103-10 **Received:** 10/08/21 15:00

Matrix: Ground Water **Sampled:** 10/08/21 12:20 **Work Order:** AE08103

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden/Kyle Kercher

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*46*	*1*	*50.0*	*91 %*	*41-142*	*1J14017*	*EPA 8260D*	*10/14/21 15:22*	*nmc*	
Dibromofluoromethane	*50*	*1*	*50.0*	*100 %*	*53-146*	*1J14017*	*EPA 8260D*	*10/14/21 15:22*	*nmc*	
Toluene-d8	*49*	*1*	*50.0*	*98 %*	*41-146*	*1J14017*	*EPA 8260D*	*10/14/21 15:22*	*nmc*	

ANALYTICAL RESULTS

Description: LC34-SW1002-000.5-20211008 **Lab Sample ID:** AE08103-11 **Received:** 10/08/21 15:00

Matrix: Ground Water **Sampled:** 10/08/21 12:45 **Work Order:** AE08103

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden/Kyle Kercher

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	1J14017	EPA 8260D	10/14/21 12:30	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	1J14017	EPA 8260D	10/14/21 12:30	nmc	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	1J14017	EPA 8260D	10/14/21 12:30	nmc	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	1J14017	EPA 8260D	10/14/21 12:30	nmc	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	1J14017	EPA 8260D	10/14/21 12:30	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	1J14017	EPA 8260D	10/14/21 12:30	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	1J14017	EPA 8260D	10/14/21 12:30	nmc	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	1J14017	EPA 8260D	10/14/21 12:30	nmc	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	1J14017	EPA 8260D	10/14/21 12:30	nmc	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	1J14017	EPA 8260D	10/14/21 12:30	nmc	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	1J14017	EPA 8260D	10/14/21 12:30	nmc	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	1J14017	EPA 8260D	10/14/21 12:30	nmc	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	1J14017	EPA 8260D	10/14/21 12:30	nmc	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	1J14017	EPA 8260D	10/14/21 12:30	nmc	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	1J14017	EPA 8260D	10/14/21 12:30	nmc	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	1J14017	EPA 8260D	10/14/21 12:30	nmc	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	1J14017	EPA 8260D	10/14/21 12:30	nmc	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	1J14017	EPA 8260D	10/14/21 12:30	nmc	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	1J14017	EPA 8260D	10/14/21 12:30	nmc	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	1J14017	EPA 8260D	10/14/21 12:30	nmc	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	1J14017	EPA 8260D	10/14/21 12:30	nmc	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	1J14017	EPA 8260D	10/14/21 12:30	nmc	QL-02, QM-19, QV-01
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	1J14017	EPA 8260D	10/14/21 12:30	nmc	
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	1J14017	EPA 8260D	10/14/21 12:30	nmc	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	1J14017	EPA 8260D	10/14/21 12:30	nmc	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	1J14017	EPA 8260D	10/14/21 12:30	nmc	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	1J14017	EPA 8260D	10/14/21 12:30	nmc	
cis-1,2-Dichloroethene [156-59-2]^	**2.1**	I	ug/L	1	0.53	2.5	1J14017	EPA 8260D	10/14/21 12:30	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	1J14017	EPA 8260D	10/14/21 12:30	nmc	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	1J14017	EPA 8260D	10/14/21 12:30	nmc	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	1J14017	EPA 8260D	10/14/21 12:30	nmc	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	1J14017	EPA 8260D	10/14/21 12:30	nmc	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	1J14017	EPA 8260D	10/14/21 12:30	nmc	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	1J14017	EPA 8260D	10/14/21 12:30	nmc	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	1J14017	EPA 8260D	10/14/21 12:30	nmc	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	1J14017	EPA 8260D	10/14/21 12:30	nmc	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	1J14017	EPA 8260D	10/14/21 12:30	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	1J14017	EPA 8260D	10/14/21 12:30	nmc	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	1J14017	EPA 8260D	10/14/21 12:30	nmc	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	1J14017	EPA 8260D	10/14/21 12:30	nmc	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	1J14017	EPA 8260D	10/14/21 12:30	nmc	
trans-1,2-Dichloroethene [156-60-5]^	0.73	U	ug/L	1	0.73	2.5	1J14017	EPA 8260D	10/14/21 12:30	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	1J14017	EPA 8260D	10/14/21 12:30	nmc	
Trichloroethene [79-01-6]^	0.89	U	ug/L	1	0.89	2.5	1J14017	EPA 8260D	10/14/21 12:30	nmc	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	1J14017	EPA 8260D	10/14/21 12:30	nmc	

ANALYTICAL RESULTS

Description: LC34-SW1002-000.5-20211008 **Lab Sample ID:** AE08103-11 **Received:** 10/08/21 15:00

Matrix: Ground Water **Sampled:** 10/08/21 12:45 **Work Order:** AE08103

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden/Kyle Kercher

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Vinyl chloride [75-01-4]^	0.71	U	ug/L	1	0.71	2.5	1J14017	EPA 8260D	10/14/21 12:30	nmc	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*45*	*1*	*50.0*	*90 %*	*41-142*	*1J14017*	*EPA 8260D*	*10/14/21 12:30*	*nmc*	
Dibromofluoromethane	*49*	*1*	*50.0*	*98 %*	*53-146*	*1J14017*	*EPA 8260D*	*10/14/21 12:30*	*nmc*	
Toluene-d8	*48*	*1*	*50.0*	*96 %*	*41-146*	*1J14017*	*EPA 8260D*	*10/14/21 12:30*	*nmc*	

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1J13009 - EPA 5030B_MS

Blank (1J13009-BLK1) Prepared: 10/13/2021 00:00 Analyzed: 10/13/2021 10:46

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	0.80	U	2.5	ug/L							
1,1,2,2-Tetrachloroethane	0.54	U	2.5	ug/L							
1,1,2-Trichloroethane	0.76	U	2.5	ug/L							
1,1-Dichloroethane	0.62	U	2.5	ug/L							
1,1-Dichloroethene	0.94	U	2.5	ug/L							
1,2,4-Trichlorobenzene	0.70	U	2.5	ug/L							
1,2-Dibromo-3-chloropropane	0.96	U	2.5	ug/L							
1,2-Dibromoethane	0.78	U	2.5	ug/L							
1,2-Dichlorobenzene	0.73	U	2.5	ug/L							
1,2-Dichloroethane	0.63	U	2.5	ug/L							
1,2-Dichloropropane	0.80	U	2.5	ug/L							
1,3-Dichlorobenzene	0.77	U	2.5	ug/L							
1,4-Dichlorobenzene	0.76	U	2.5	ug/L							
2-Butanone	4.5	U	12	ug/L							
2-Hexanone	2.5	U	12	ug/L							
4-Methyl-2-pentanone	2.5	U	12	ug/L							
Acetone	10	U	25	ug/L							
Benzene	0.71	U	2.5	ug/L							
Bromodichloromethane	0.52	U	2.5	ug/L							
Bromoform	0.75	U	2.5	ug/L							
Bromomethane	0.95	U	2.5	ug/L							
Carbon disulfide	2.5	U	12	ug/L							
Carbon Tetrachloride	0.94	U	2.5	ug/L							
Chlorobenzene	0.72	U	2.5	ug/L							
Chloroethane	0.98	U	2.5	ug/L							
Chloroform	0.80	U	2.5	ug/L							
Chloromethane	0.82	U	2.5	ug/L							
cis-1,2-Dichloroethene	0.53	U	2.5	ug/L							
cis-1,3-Dichloropropene	0.59	U	2.5	ug/L							
Cyclohexane	0.93	U	2.5	ug/L							
Dibromochloromethane	0.50	U	2.5	ug/L							
Dichlorodifluoromethane	0.74	U	2.5	ug/L							
Ethylbenzene	0.69	U	2.5	ug/L							
Freon 113	0.73	U	2.5	ug/L							
Isopropylbenzene	0.67	U	2.5	ug/L							
Methyl acetate	0.95	U	2.5	ug/L							
Methylene Chloride	2.5	U	12	ug/L							
Methyl-tert-Butyl Ether	0.60	U	2.5	ug/L							
Styrene	0.61	U	2.5	ug/L							
Tetrachloroethene	0.76	U	2.5	ug/L							
Toluene	0.72	U	2.5	ug/L							
trans-1,2-Dichloroethene	0.73	U	2.5	ug/L							
trans-1,3-Dichloropropene	0.73	U	2.5	ug/L							
Trichloroethene	0.89	U	2.5	ug/L							
Trichlorofluoromethane	0.94	U	2.5	ug/L							
Vinyl chloride	0.71	U	2.5	ug/L							
4-Bromofluorobenzene	*49*	*I*		*ug/L*	*50.0*		*98*	*41-142*			
Dibromofluoromethane	*47*	*I*		*ug/L*	*50.0*		*94*	*53-146*			
Toluene-d8	*44*	*I*		*ug/L*	*50.0*		*88*	*41-146*			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1J13009 - EPA 5030B_MS - Continued

LCS (1J13009-BS1) Prepared: 10/13/2021 00:00 Analyzed: 10/13/2021 08:22

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	25		2.5	ug/L	20.0		123	57-148			
1,1,2,2-Tetrachloroethane	18		2.5	ug/L	20.0		92	60-139			
1,1,2-Trichloroethane	20		2.5	ug/L	20.0		101	57-141			
1,1-Dichloroethane	23		2.5	ug/L	20.0		113	57-142			
1,1-Dichloroethene	24		2.5	ug/L	20.0		121	47-139			
1,2,4-Trichlorobenzene	23		2.5	ug/L	20.0		114	52-159			
1,2-Dibromo-3-chloropropane	15		2.5	ug/L	20.0		74	48-150			
1,2-Dibromoethane	20		2.5	ug/L	20.0		102	57-140			
1,2-Dichlorobenzene	20		2.5	ug/L	20.0		102	63-131			
1,2-Dichloroethane	23		2.5	ug/L	20.0		116	50-156			
1,2-Dichloropropane	20		2.5	ug/L	20.0		100	61-133			
1,3-Dichlorobenzene	22		2.5	ug/L	20.0		112	66-129			
1,4-Dichlorobenzene	21		2.5	ug/L	20.0		106	65-133			
2-Butanone	130		12	ug/L	100		134	10-180			
2-Hexanone	100		12	ug/L	100		103	12-180			
4-Methyl-2-pentanone	98		12	ug/L	100		98	19-180			
Acetone	110		25	ug/L	100		110	10-180			
Benzene	22		2.5	ug/L	20.0		109	56-136			
Bromodichloromethane	23		2.5	ug/L	20.0		114	58-135			
Bromoform	22		2.5	ug/L	20.0		108	46-148			
Bromomethane	12		2.5	ug/L	20.0		62	10-173			
Carbon disulfide	42		12	ug/L	20.0		209	43-153			QL-02
Carbon Tetrachloride	24		2.5	ug/L	20.0		121	54-156			
Chlorobenzene	22		2.5	ug/L	20.0		108	51-139			
Chloroethane	26		2.5	ug/L	20.0		129	27-180			
Chloroform	23		2.5	ug/L	20.0		116	58-139			
Chloromethane	20		2.5	ug/L	20.0		101	33-154			
cis-1,2-Dichloroethene	23		2.5	ug/L	20.0		114	56-128			
cis-1,3-Dichloropropene	20		2.5	ug/L	20.0		101	64-128			
Cyclohexane	23		2.5	ug/L	20.0		113	70-130			
Dibromochloromethane	20		2.5	ug/L	20.0		100	50-140			
Dichlorodifluoromethane	24		2.5	ug/L	20.0		119	10-180			
Ethylbenzene	21		2.5	ug/L	20.0		106	63-133			
Freon 113	25		2.5	ug/L	20.0		124	47-173			
Isopropylbenzene	21		2.5	ug/L	20.0		107	60-132			
m,p-Xylenes	42		5.0	ug/L	40.0		105	64-133			
Methyl acetate	21		2.5	ug/L	20.0		105	70-130			
Methylene Chloride	22		12	ug/L	20.0		112	43-142			
Methyl-tert-Butyl Ether	22		2.5	ug/L	20.0		108	51-145			
o-Xylene	21		2.5	ug/L	20.0		103	61-129			
Styrene	22		2.5	ug/L	20.0		109	59-136			
Tetrachloroethene	22		2.5	ug/L	20.0		112	60-147			
Toluene	21		2.5	ug/L	20.0		104	64-131			
trans-1,2-Dichloroethene	23		2.5	ug/L	20.0		114	54-134			
trans-1,3-Dichloropropene	20		2.5	ug/L	20.0		99	65-149			
Trichloroethene	24		2.5	ug/L	20.0		118	62-135			
Trichlorofluoromethane	25		2.5	ug/L	20.0		124	56-155			
Vinyl chloride	22		2.5	ug/L	20.0		110	20-167			
4-Bromofluorobenzene	*48*	*I*		*ug/L*	*50.0*		*96*	*41-142*			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1J13009 - EPA 5030B_MS - Continued

LCS (1J13009-BS1) Continued Prepared: 10/13/2021 00:00 Analyzed: 10/13/2021 08:22

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Dibromofluoromethane	*50*			*ug/L*	*50.0*		*100*	*53-146*			
Toluene-d8	*49*	*I*		*ug/L*	*50.0*		*99*	*41-146*			

Matrix Spike (1J13009-MS1) Prepared: 10/13/2021 00:00 Analyzed: 10/13/2021 08:51

Source: AE08103-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	20		2.5	ug/L	20.0	0.80 U	100	57-148			
1,1,2,2-Tetrachloroethane	17		2.5	ug/L	20.0	0.54 U	86	60-139			
1,1,2-Trichloroethane	20		2.5	ug/L	20.0	0.76 U	102	57-141			
1,1-Dichloroethane	18		2.5	ug/L	20.0	0.62 U	91	57-142			
1,1-Dichloroethene	28		2.5	ug/L	20.0	0.94 U	139	47-139			
1,2,4-Trichlorobenzene	21		2.5	ug/L	20.0	0.70 U	107	52-159			
1,2-Dibromo-3-chloropropane	14		2.5	ug/L	20.0	0.96 U	69	48-150			
1,2-Dibromoethane	21		2.5	ug/L	20.0	0.78 U	105	57-140			
1,2-Dichlorobenzene	20		2.5	ug/L	20.0	0.73 U	101	63-131			
1,2-Dichloroethane	17		2.5	ug/L	20.0	0.63 U	85	50-156			
1,2-Dichloropropane	16		2.5	ug/L	20.0	0.80 U	81	61-133			
1,3-Dichlorobenzene	20		2.5	ug/L	20.0	0.77 U	101	66-129			
1,4-Dichlorobenzene	20		2.5	ug/L	20.0	0.76 U	98	65-133			
2-Butanone	100		12	ug/L	100	4.5 U	103	10-180			
2-Hexanone	71		12	ug/L	100	2.5 U	71	12-180			QM-11
4-Methyl-2-pentanone	90		12	ug/L	100	2.5 U	90	19-180			
Acetone	110		25	ug/L	100	10 U	107	10-180			
Benzene	19		2.5	ug/L	20.0	0.71 U	93	56-136			
Bromodichloromethane	18		2.5	ug/L	20.0	0.52 U	88	58-135			
Bromoform	23		2.5	ug/L	20.0	0.75 U	113	46-148			
Bromomethane	19		2.5	ug/L	20.0	0.95 U	94	10-173			
Carbon disulfide	42		12	ug/L	20.0	2.5 U	209	43-153			QM-19
Carbon Tetrachloride	22		2.5	ug/L	20.0	0.94 U	108	54-156			
Chlorobenzene	24		2.5	ug/L	20.0	0.72 U	121	51-139			QM-11
Chloroethane	29		2.5	ug/L	20.0	0.98 U	145	27-180			
Chloroform	19		2.5	ug/L	20.0	0.80 U	94	58-139			
Chloromethane	24		2.5	ug/L	20.0	0.82 U	119	33-154			
cis-1,2-Dichloroethene	24		2.5	ug/L	20.0	5.0	97	56-128			
cis-1,3-Dichloropropene	16		2.5	ug/L	20.0	0.59 U	81	64-128			
Cyclohexane	19		2.5	ug/L	20.0	0.93 U	96	70-130			
Dibromochloromethane	22		2.5	ug/L	20.0	0.50 U	108	50-140			
Dichlorodifluoromethane	26		2.5	ug/L	20.0	0.74 U	132	10-180			
Ethylbenzene	23		2.5	ug/L	20.0	0.69 U	117	63-133			
Freon 113	29		2.5	ug/L	20.0	0.73 U	145	47-173			
Isopropylbenzene	23		2.5	ug/L	20.0	0.67 U	116	60-132			
m,p-Xylenes	46		5.0	ug/L	40.0	1.3 U	116	64-133			
Methyl acetate	21		2.5	ug/L	20.0	0.95 U	107	70-130			
Methylene Chloride	24		12	ug/L	20.0	2.5 U	119	43-142			
Methyl-tert-Butyl Ether	22		2.5	ug/L	20.0	0.60 U	111	51-145			
o-Xylene	23		2.5	ug/L	20.0	0.53 U	113	61-129			
Styrene	23		2.5	ug/L	20.0	0.61 U	116	59-136			
Tetrachloroethene	25		2.5	ug/L	20.0	0.76 U	123	60-147			
Toluene	22		2.5	ug/L	20.0	0.72 U	108	64-131			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1J13009 - EPA 5030B_MS - Continued

Matrix Spike (1J13009-MS1) Continued Prepared: 10/13/2021 00:00 Analyzed: 10/13/2021 08:51

Source: AE08103-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
trans-1,2-Dichloroethene	26		2.5	ug/L	20.0	0.73 U	128	54-134			
trans-1,3-Dichloropropene	18		2.5	ug/L	20.0	0.73 U	91	65-149			
Trichloroethene	25		2.5	ug/L	20.0	0.89 U	123	62-135			
Trichlorofluoromethane	29		2.5	ug/L	20.0	0.94 U	144	56-155			
Vinyl chloride	26		2.5	ug/L	20.0	0.71 U	130	20-167			
4-Bromofluorobenzene	*49*	*I*		*ug/L*	*50.0*		*98*	*41-142*			
Dibromofluoromethane	*45*	*I*		*ug/L*	*50.0*		*90*	*53-146*			
Toluene-d8	*44*	*I*		*ug/L*	*50.0*		*88*	*41-146*			

Matrix Spike Dup (1J13009-MSD1) Prepared: 10/13/2021 00:00 Analyzed: 10/13/2021 09:20

Source: AE08103-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	23		2.5	ug/L	20.0	0.80 U	114	57-148	14	25	
1,1,2,2-Tetrachloroethane	17		2.5	ug/L	20.0	0.54 U	84	60-139	3	17	
1,1,2-Trichloroethane	19		2.5	ug/L	20.0	0.76 U	95	57-141	7	16	
1,1-Dichloroethane	21		2.5	ug/L	20.0	0.62 U	104	57-142	13	24	
1,1-Dichloroethene	24		2.5	ug/L	20.0	0.94 U	118	47-139	16	16	
1,2,4-Trichlorobenzene	21		2.5	ug/L	20.0	0.70 U	106	52-159	1	24	
1,2-Dibromo-3-chloropropane	14		2.5	ug/L	20.0	0.96 U	71	48-150	2	21	
1,2-Dibromoethane	19		2.5	ug/L	20.0	0.78 U	93	57-140	12	16	
1,2-Dichlorobenzene	19		2.5	ug/L	20.0	0.73 U	96	63-131	5	25	
1,2-Dichloroethane	20		2.5	ug/L	20.0	0.63 U	102	50-156	18	18	
1,2-Dichloropropane	18		2.5	ug/L	20.0	0.80 U	91	61-133	11	26	
1,3-Dichlorobenzene	19		2.5	ug/L	20.0	0.77 U	97	66-129	4	23	
1,4-Dichlorobenzene	20		2.5	ug/L	20.0	0.76 U	98	65-133	0.2	23	
2-Butanone	120		12	ug/L	100	4.5 U	125	10-180	19	29	
2-Hexanone	97		12	ug/L	100	2.5 U	97	12-180	31	28	QM-11
4-Methyl-2-pentanone	93		12	ug/L	100	2.5 U	93	19-180	3	24	
Acetone	97		25	ug/L	100	10 U	97	10-180	10	19	
Benzene	21		2.5	ug/L	20.0	0.71 U	105	56-136	12	14	
Bromodichloromethane	21		2.5	ug/L	20.0	0.52 U	104	58-135	16	19	
Bromoform	20		2.5	ug/L	20.0	0.75 U	101	46-148	11	18	
Bromomethane	18		2.5	ug/L	20.0	0.95 U	92	10-173	1	29	
Carbon disulfide	34		12	ug/L	20.0	2.5 U	172	43-153	20	26	QM-19
Carbon Tetrachloride	23		2.5	ug/L	20.0	0.94 U	116	54-156	6	27	
Chlorobenzene	20		2.5	ug/L	20.0	0.72 U	100	51-139	19	13	QM-11
Chloroethane	25		2.5	ug/L	20.0	0.98 U	127	27-180	14	22	
Chloroform	21		2.5	ug/L	20.0	0.80 U	106	58-139	12	17	
Chloromethane	20		2.5	ug/L	20.0	0.82 U	101	33-154	16	31	
cis-1,2-Dichloroethene	25		2.5	ug/L	20.0	5.0	102	56-128	3	17	
cis-1,3-Dichloropropene	18		2.5	ug/L	20.0	0.59 U	92	64-128	12	20	
Cyclohexane	22		2.5	ug/L	20.0	0.93 U	110	70-130	13	20	
Dibromochloromethane	18		2.5	ug/L	20.0	0.50 U	90	50-140	18	18	
Dichlorodifluoromethane	22		2.5	ug/L	20.0	0.74 U	109	10-180	19	26	
Ethylbenzene	20		2.5	ug/L	20.0	0.69 U	98	63-133	18	18	
Freon 113	24		2.5	ug/L	20.0	0.73 U	120	47-173	19	30	
Isopropylbenzene	20		2.5	ug/L	20.0	0.67 U	102	60-132	12	23	
m,p-Xylenes	39		5.0	ug/L	40.0	1.3 U	98	64-133	16	18	

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1J13009 - EPA 5030B_MS - Continued

Matrix Spike Dup (1J13009-MSD1) Continued Prepared: 10/13/2021 00:00 Analyzed: 10/13/2021 09:20

Source: AE08103-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Methyl acetate	18		2.5	ug/L	20.0	0.95 U	91	70-130	16	20	
Methylene Chloride	20		12	ug/L	20.0	2.5 U	102	43-142	15	23	
Methyl-tert-Butyl Ether	19		2.5	ug/L	20.0	0.60 U	96	51-145	14	22	
o-Xylene	19		2.5	ug/L	20.0	0.53 U	97	61-129	15	16	
Styrene	20		2.5	ug/L	20.0	0.61 U	101	59-136	14	32	
Tetrachloroethene	20		2.5	ug/L	20.0	0.76 U	101	60-147	20	21	
Toluene	19		2.5	ug/L	20.0	0.72 U	96	64-131	11	16	
trans-1,2-Dichloroethene	22		2.5	ug/L	20.0	0.73 U	108	54-134	17	20	
trans-1,3-Dichloropropene	18		2.5	ug/L	20.0	0.73 U	90	65-149	1	17	
Trichloroethene	22		2.5	ug/L	20.0	0.89 U	111	62-135	10	20	
Trichlorofluoromethane	24		2.5	ug/L	20.0	0.94 U	121	56-155	18	22	
Vinyl chloride	22		2.5	ug/L	20.0	0.71 U	110	20-167	17	24	
4-Bromofluorobenzene	*47*	*I*		*ug/L*	*50.0*		*95*	*41-142*			
Dibromofluoromethane	*47*	*I*		*ug/L*	*50.0*		*94*	*53-146*			
Toluene-d8	*47*	*I*		*ug/L*	*50.0*		*95*	*41-146*			

Batch 1J14017 - EPA 5030B_MS

Blank (1J14017-BLK1) Prepared: 10/14/2021 00:00 Analyzed: 10/14/2021 11:32

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	0.80	U	2.5	ug/L							
1,1,2,2-Tetrachloroethane	0.54	U	2.5	ug/L							
1,1,2-Trichloroethane	0.76	U	2.5	ug/L							
1,1-Dichloroethane	0.62	U	2.5	ug/L							
1,1-Dichloroethene	0.94	U	2.5	ug/L							
1,2,4-Trichlorobenzene	0.70	U	2.5	ug/L							
1,2-Dibromo-3-chloropropane	0.96	U	2.5	ug/L							
1,2-Dibromoethane	0.78	U	2.5	ug/L							
1,2-Dichlorobenzene	0.73	U	2.5	ug/L							
1,2-Dichloroethane	0.63	U	2.5	ug/L							
1,2-Dichloropropane	0.80	U	2.5	ug/L							
1,3-Dichlorobenzene	0.77	U	2.5	ug/L							
1,4-Dichlorobenzene	0.76	U	2.5	ug/L							
2-Butanone	4.5	U	12	ug/L							
2-Hexanone	2.5	U	12	ug/L							
4-Methyl-2-pentanone	2.5	U	12	ug/L							
Acetone	10	U	25	ug/L							
Benzene	0.71	U	2.5	ug/L							
Bromodichloromethane	0.52	U	2.5	ug/L							
Bromoform	0.75	U	2.5	ug/L							
Bromomethane	0.95	U	2.5	ug/L							
Carbon disulfide	2.5	U	12	ug/L							
Carbon Tetrachloride	0.94	U	2.5	ug/L							
Chlorobenzene	0.72	U	2.5	ug/L							
Chloroethane	0.98	U	2.5	ug/L							
Chloroform	0.80	U	2.5	ug/L							
Chloromethane	0.82	U	2.5	ug/L							
cis-1,2-Dichloroethene	0.53	U	2.5	ug/L							

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1J14017 - EPA 5030B_MS - Continued

Blank (1J14017-BLK1) Continued Prepared: 10/14/2021 00:00 Analyzed: 10/14/2021 11:32

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
cis-1,3-Dichloropropene	0.59	U	2.5	ug/L							
Cyclohexane	0.93	U	2.5	ug/L							
Dibromochloromethane	0.50	U	2.5	ug/L							
Dichlorodifluoromethane	0.74	U	2.5	ug/L							
Ethylbenzene	0.69	U	2.5	ug/L							
Freon 113	0.73	U	2.5	ug/L							
Isopropylbenzene	0.67	U	2.5	ug/L							
Methyl acetate	0.95	U	2.5	ug/L							
Methylene Chloride	2.5	U	12	ug/L							
Methyl-tert-Butyl Ether	0.60	U	2.5	ug/L							
Styrene	0.61	U	2.5	ug/L							
Tetrachloroethene	0.76	U	2.5	ug/L							
Toluene	0.72	U	2.5	ug/L							
trans-1,2-Dichloroethene	0.73	U	2.5	ug/L							
trans-1,3-Dichloropropene	0.73	U	2.5	ug/L							
Trichloroethene	0.89	U	2.5	ug/L							
Trichlorofluoromethane	0.94	U	2.5	ug/L							
Vinyl chloride	0.71	U	2.5	ug/L							
4-Bromofluorobenzene	*45*	*I*		*ug/L*	*50.0*		*89*	*41-142*			
Dibromofluoromethane	*48*	*I*		*ug/L*	*50.0*		*97*	*53-146*			
Toluene-d8	*49*	*I*		*ug/L*	*50.0*		*97*	*41-146*			

LCS (1J14017-BS1) Prepared: 10/14/2021 00:00 Analyzed: 10/14/2021 09:07

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	22		2.5	ug/L	20.0		109	57-148			
1,1,2,2-Tetrachloroethane	17		2.5	ug/L	20.0		86	60-139			
1,1,2-Trichloroethane	17		2.5	ug/L	20.0		86	57-141			
1,1-Dichloroethane	21		2.5	ug/L	20.0		104	57-142			
1,1-Dichloroethene	24		2.5	ug/L	20.0		120	47-139			
1,2,4-Trichlorobenzene	20		2.5	ug/L	20.0		102	52-159			
1,2-Dibromo-3-chloropropane	16		2.5	ug/L	20.0		82	48-150			
1,2-Dibromoethane	17		2.5	ug/L	20.0		87	57-140			
1,2-Dichlorobenzene	18		2.5	ug/L	20.0		90	63-131			
1,2-Dichloroethane	19		2.5	ug/L	20.0		97	50-156			
1,2-Dichloropropane	18		2.5	ug/L	20.0		90	61-133			
1,3-Dichlorobenzene	18		2.5	ug/L	20.0		91	66-129			
1,4-Dichlorobenzene	19		2.5	ug/L	20.0		94	65-133			
2-Butanone	130		12	ug/L	100		130	10-180			
2-Hexanone	96		12	ug/L	100		96	12-180			
4-Methyl-2-pentanone	92		12	ug/L	100		92	19-180			
Acetone	100		25	ug/L	100		105	10-180			
Benzene	21		2.5	ug/L	20.0		105	56-136			
Bromodichloromethane	20		2.5	ug/L	20.0		100	58-135			
Bromoform	19		2.5	ug/L	20.0		96	46-148			
Bromomethane	13		2.5	ug/L	20.0		67	10-173			
Carbon disulfide	40		12	ug/L	20.0		200	43-153			QL-02
Carbon Tetrachloride	21		2.5	ug/L	20.0		107	54-156			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1J14017 - EPA 5030B_MS - Continued

LCS (1J14017-BS1) Continued Prepared: 10/14/2021 00:00 Analyzed: 10/14/2021 09:07

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Chlorobenzene	19		2.5	ug/L	20.0		95	51-139			
Chloroethane	26		2.5	ug/L	20.0		129	27-180			
Chloroform	21		2.5	ug/L	20.0		104	58-139			
Chloromethane	19		2.5	ug/L	20.0		97	33-154			
cis-1,2-Dichloroethene	20		2.5	ug/L	20.0		101	56-128			
cis-1,3-Dichloropropene	19		2.5	ug/L	20.0		93	64-128			
Cyclohexane	22		2.5	ug/L	20.0		108	70-130			
Dibromochloromethane	16		2.5	ug/L	20.0		80	50-140			
Dichlorodifluoromethane	22		2.5	ug/L	20.0		109	10-180			
Ethylbenzene	19		2.5	ug/L	20.0		93	63-133			
Freon 113	25		2.5	ug/L	20.0		125	47-173			
Isopropylbenzene	19		2.5	ug/L	20.0		94	60-132			
m,p-Xylenes	37		5.0	ug/L	40.0		93	64-133			
Methyl acetate	21		2.5	ug/L	20.0		103	70-130			
Methylene Chloride	22		12	ug/L	20.0		108	43-142			
Methyl-tert-Butyl Ether	20		2.5	ug/L	20.0		98	51-145			
o-Xylene	18		2.5	ug/L	20.0		90	61-129			
Styrene	19		2.5	ug/L	20.0		95	59-136			
Tetrachloroethene	18		2.5	ug/L	20.0		89	60-147			
Toluene	18		2.5	ug/L	20.0		92	64-131			
trans-1,2-Dichloroethene	22		2.5	ug/L	20.0		110	54-134			
trans-1,3-Dichloropropene	17		2.5	ug/L	20.0		85	65-149			
Trichloroethene	21		2.5	ug/L	20.0		106	62-135			
Trichlorofluoromethane	24		2.5	ug/L	20.0		121	56-155			
Vinyl chloride	21		2.5	ug/L	20.0		104	20-167			
4-Bromofluorobenzene	*45*	*I*		*ug/L*	*50.0*		*91*	*41-142*			
Dibromofluoromethane	*47*	*I*		*ug/L*	*50.0*		*95*	*53-146*			
Toluene-d8	*49*	*I*		*ug/L*	*50.0*		*97*	*41-146*			

Matrix Spike (1J14017-MS1) Prepared: 10/14/2021 00:00 Analyzed: 10/14/2021 09:38

Source: AE08103-11

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	24		2.5	ug/L	20.0	0.80 U	120	57-148			
1,1,2,2-Tetrachloroethane	18		2.5	ug/L	20.0	0.54 U	92	60-139			
1,1,2-Trichloroethane	19		2.5	ug/L	20.0	0.76 U	96	57-141			
1,1-Dichloroethane	23		2.5	ug/L	20.0	0.62 U	113	57-142			
1,1-Dichloroethene	25		2.5	ug/L	20.0	0.94 U	123	47-139			
1,2,4-Trichlorobenzene	21		2.5	ug/L	20.0	0.70 U	105	52-159			
1,2-Dibromo-3-chloropropane	17		2.5	ug/L	20.0	0.96 U	85	48-150			
1,2-Dibromoethane	19		2.5	ug/L	20.0	0.78 U	93	57-140			
1,2-Dichlorobenzene	19		2.5	ug/L	20.0	0.73 U	97	63-131			
1,2-Dichloroethane	20		2.5	ug/L	20.0	0.63 U	102	50-156			
1,2-Dichloropropane	20		2.5	ug/L	20.0	0.80 U	100	61-133			
1,3-Dichlorobenzene	19		2.5	ug/L	20.0	0.77 U	97	66-129			
1,4-Dichlorobenzene	20		2.5	ug/L	20.0	0.76 U	99	65-133			
2-Butanone	140		12	ug/L	100	4.5 U	138	10-180			
2-Hexanone	100		12	ug/L	100	2.5 U	103	12-180			
4-Methyl-2-pentanone	100		12	ug/L	100	2.5 U	101	19-180			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1J14017 - EPA 5030B_MS - Continued

Matrix Spike (1J14017-MS1) Continued Prepared: 10/14/2021 00:00 Analyzed: 10/14/2021 09:38

Source: AE08103-11

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Acetone	100		25	ug/L	100	10 U	102	10-180			
Benzene	23		2.5	ug/L	20.0	0.71 U	115	56-136			
Bromodichloromethane	22		2.5	ug/L	20.0	0.52 U	109	58-135			
Bromoform	21		2.5	ug/L	20.0	0.75 U	104	46-148			
Bromomethane	14		2.5	ug/L	20.0	0.95 U	72	10-173			
Carbon disulfide	38		12	ug/L	20.0	2.5 U	189	43-153			QM-19
Carbon Tetrachloride	24		2.5	ug/L	20.0	0.94 U	121	54-156			
Chlorobenzene	21		2.5	ug/L	20.0	0.72 U	104	51-139			
Chloroethane	24		2.5	ug/L	20.0	0.98 U	119	27-180			
Chloroform	22		2.5	ug/L	20.0	0.80 U	112	58-139			
Chloromethane	15		2.5	ug/L	20.0	0.82 U	74	33-154			
cis-1,2-Dichloroethene	24		2.5	ug/L	20.0	2.1	110	56-128			
cis-1,3-Dichloropropene	20		2.5	ug/L	20.0	0.59 U	99	64-128			
Cyclohexane	23		2.5	ug/L	20.0	0.93 U	116	70-130			
Dibromochloromethane	18		2.5	ug/L	20.0	0.50 U	88	50-140			
Dichlorodifluoromethane	11		2.5	ug/L	20.0	0.74 U	56	10-180			
Ethylbenzene	20		2.5	ug/L	20.0	0.69 U	101	63-133			
Freon 113	24		2.5	ug/L	20.0	0.73 U	118	47-173			
Isopropylbenzene	21		2.5	ug/L	20.0	0.67 U	104	60-132			
m,p-Xylenes	41		5.0	ug/L	40.0	1.3 U	103	64-133			
Methyl acetate	20		2.5	ug/L	20.0	0.95 U	101	70-130			
Methylene Chloride	22		12	ug/L	20.0	2.5 U	109	43-142			
Methyl-tert-Butyl Ether	20		2.5	ug/L	20.0	0.60 U	100	51-145			
o-Xylene	20		2.5	ug/L	20.0	0.53 U	100	61-129			
Styrene	21		2.5	ug/L	20.0	0.61 U	104	59-136			
Tetrachloroethene	20		2.5	ug/L	20.0	0.76 U	102	60-147			
Toluene	20		2.5	ug/L	20.0	0.72 U	101	64-131			
trans-1,2-Dichloroethene	22		2.5	ug/L	20.0	0.73 U	112	54-134			
trans-1,3-Dichloropropene	18		2.5	ug/L	20.0	0.73 U	92	65-149			
Trichloroethene	23		2.5	ug/L	20.0	0.89 U	114	62-135			
Trichlorofluoromethane	23		2.5	ug/L	20.0	0.94 U	114	56-155			
Vinyl chloride	18		2.5	ug/L	20.0	0.71 U	91	20-167			
4-Bromofluorobenzene	*46*	*I*		*ug/L*	*50.0*		*92*	*41-142*			
Dibromofluoromethane	*48*	*I*		*ug/L*	*50.0*		*97*	*53-146*			
Toluene-d8	*50*			*ug/L*	*50.0*		*100*	*41-146*			

Matrix Spike Dup (1J14017-MSD1) Prepared: 10/14/2021 00:00 Analyzed: 10/14/2021 10:06

Source: AE08103-11

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	23		2.5	ug/L	20.0	0.80 U	117	57-148	3	25	
1,1,2,2-Tetrachloroethane	18		2.5	ug/L	20.0	0.54 U	91	60-139	1	17	
1,1,2-Trichloroethane	19		2.5	ug/L	20.0	0.76 U	95	57-141	0.6	16	
1,1-Dichloroethane	22		2.5	ug/L	20.0	0.62 U	110	57-142	3	24	
1,1-Dichloroethene	24		2.5	ug/L	20.0	0.94 U	121	47-139	2	16	
1,2,4-Trichlorobenzene	21		2.5	ug/L	20.0	0.70 U	106	52-159	1	24	
1,2-Dibromo-3-chloropropane	18		2.5	ug/L	20.0	0.96 U	88	48-150	3	21	
1,2-Dibromoethane	18		2.5	ug/L	20.0	0.78 U	92	57-140	1	16	
1,2-Dichlorobenzene	19		2.5	ug/L	20.0	0.73 U	94	63-131	2	25	

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1J14017 - EPA 5030B_MS - Continued

Matrix Spike Dup (1J14017-MSD1) Continued Prepared: 10/14/2021 00:00 Analyzed: 10/14/2021 10:06

Source: AE08103-11

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,2-Dichloroethane	21		2.5	ug/L	20.0	0.63 U	104	50-156	2	18	
1,2-Dichloropropane	19		2.5	ug/L	20.0	0.80 U	97	61-133	4	26	
1,3-Dichlorobenzene	19		2.5	ug/L	20.0	0.77 U	96	66-129	0.8	23	
1,4-Dichlorobenzene	19		2.5	ug/L	20.0	0.76 U	96	65-133	3	23	
2-Butanone	140		12	ug/L	100	4.5 U	140	10-180	1	29	
2-Hexanone	110		12	ug/L	100	2.5 U	106	12-180	3	28	
4-Methyl-2-pentanone	100		12	ug/L	100	2.5 U	101	19-180	0.3	24	
Acetone	100		25	ug/L	100	10 U	103	10-180	2	19	
Benzene	23		2.5	ug/L	20.0	0.71 U	113	56-136	2	14	
Bromodichloromethane	21		2.5	ug/L	20.0	0.52 U	107	58-135	1	19	
Bromoform	20		2.5	ug/L	20.0	0.75 U	102	46-148	2	18	
Bromomethane	16		2.5	ug/L	20.0	0.95 U	78	10-173	8	29	
Carbon disulfide	36		12	ug/L	20.0	2.5 U	180	43-153	5	26	QM-19
Carbon Tetrachloride	23		2.5	ug/L	20.0	0.94 U	117	54-156	3	27	
Chlorobenzene	20		2.5	ug/L	20.0	0.72 U	100	51-139	4	13	
Chloroethane	23		2.5	ug/L	20.0	0.98 U	114	27-180	4	22	
Chloroform	22		2.5	ug/L	20.0	0.80 U	111	58-139	1	17	
Chloromethane	14		2.5	ug/L	20.0	0.82 U	71	33-154	4	31	
cis-1,2-Dichloroethene	24		2.5	ug/L	20.0	2.1	108	56-128	2	17	
cis-1,3-Dichloropropene	20		2.5	ug/L	20.0	0.59 U	98	64-128	1	20	
Cyclohexane	22		2.5	ug/L	20.0	0.93 U	112	70-130	4	20	
Dibromochloromethane	17		2.5	ug/L	20.0	0.50 U	87	50-140	0.4	18	
Dichlorodifluoromethane	10		2.5	ug/L	20.0	0.74 U	51	10-180	10	26	
Ethylbenzene	20		2.5	ug/L	20.0	0.69 U	98	63-133	3	18	
Freon 113	23		2.5	ug/L	20.0	0.73 U	117	47-173	2	30	
Isopropylbenzene	20		2.5	ug/L	20.0	0.67 U	101	60-132	3	23	
m,p-Xylenes	40		5.0	ug/L	40.0	1.3 U	99	64-133	3	18	
Methyl acetate	20		2.5	ug/L	20.0	0.95 U	102	70-130	1	20	
Methylene Chloride	22		12	ug/L	20.0	2.5 U	108	43-142	1	23	
Methyl-tert-Butyl Ether	20		2.5	ug/L	20.0	0.60 U	101	51-145	0.9	22	
o-Xylene	19		2.5	ug/L	20.0	0.53 U	96	61-129	3	16	
Styrene	20		2.5	ug/L	20.0	0.61 U	101	59-136	2	32	
Tetrachloroethene	20		2.5	ug/L	20.0	0.76 U	98	60-147	4	21	
Toluene	20		2.5	ug/L	20.0	0.72 U	99	64-131	2	16	
trans-1,2-Dichloroethene	22		2.5	ug/L	20.0	0.73 U	108	54-134	4	20	
trans-1,3-Dichloropropene	18		2.5	ug/L	20.0	0.73 U	90	65-149	2	17	
Trichloroethene	23		2.5	ug/L	20.0	0.89 U	114	62-135	0.5	20	
Trichlorofluoromethane	23		2.5	ug/L	20.0	0.94 U	113	56-155	0.6	22	
Vinyl chloride	17		2.5	ug/L	20.0	0.71 U	86	20-167	5	24	
4-Bromofluorobenzene	*46*	*I*		*ug/L*	*50.0*		*91*	*41-142*			
Dibromofluoromethane	*48*	*I*		*ug/L*	*50.0*		*97*	*53-146*			
Toluene-d8	*49*	*I*		*ug/L*	*50.0*		*98*	*41-146*			

FLAGS/NOTES AND DEFINITIONS

PQL	PQL: Practical Quantitation Limit. The PQL presented is the laboratory MRL.
B	Results are based upon membrane filter colony counts that are outside the method indicated ideal range.
I	The reported value is between the laboratory method detection limit (MDL) and the practical quantitation limit (PQL).
J	Estimated value.
K	Off-scale low; Actual value is known to be less than the value given.
L	Off-scale high; Actual value is known to be greater than value given.
M	Presence of analyte is verified but not quantified; the actual value is less than the MRL but greater than the MDL.
N	Presumptive evidence of presence of material.
O	Sampled, but analysis lost or not performed.
Q	Sample exceeded the accepted holding time.
T	Value reported is less than the laboratory method detection limit. The value is reported for informational purposes only and shall not be used in statistical analysis.
U	Indicates that the compound was analyzed for but not detected.
V	Indicates that the analyte was detected in both the sample and the associated method blank.
Y	The laboratory analysis was from an improperly preserved sample. The data may not be accurate.
Z	Too many colonies were present (TNTC); the numeric value represents the filtration volume.
?	Data are rejected and should not be used. Some or all of the quality control data for the analyte were outside criteria, and the presence or absence of the analyte cannot be determined from the data.
*	Not reported due to interference.
[CALC]	Calculated analyte - MDL/MRL reported to the highest reporting limit of the component analyses.
QL-02	The associated laboratory control sample exhibited high bias; since the result is ND, there is no impact.
QM-11	Precision between duplicate matrix spikes of the same sample was outside acceptance limits.
QM-19	The spike recovery was outside acceptance limits for the MS and/or MSD.
QV-01	The associated continuing calibration verification standard exhibited high bias; since the result is ND, there is no impact.

Tetra Tech, Inc. CHAIN OF CUSTODY NUMBER No. 2352 AE08103 PAGE 1 OF 1

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G08985	KSC-LC34	Mark Jonnet	(412) 921-8622	ENCO — Kaitlin Dylnicki
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER	PHONE NUMBER	ADDRESS
Chuck Sorden		Chuck Sorden	(321) 591-7580	10775 Central Park Dr.
Kyle Kercher		CARRIER/WAYBILL NUMBER		CITY, STATE
				Orlando, FL

STANDARD TAT ☒ RUSH TAT ☐ ☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR 2021	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	CONTAINER TYPE PLASTIC (P) or GLASS (G): G	PRESERVATIVE USED: HCl/4°C	TYPE OF ANALYSIS: 8260D TCL SO MCL	COMMENTS
10/07	1620	LC34-IW0137-024.0-20211007		20	28	GW	G	3	X			
1	1710	LC34-IW0138-031.5-20211007		29	34							
10/07	1740	LC34-IW0135-024.0-20211007		20	28							
10/08	0925	LC34-IW0139-018.0-20211008		13	23							
	1035	LC34-IW0140-024.0-20211008		20	28							
	1035	LC34-IW0136-024.0-20211008		20	28							
	1105	LC34-IW0126-024.0-20211008		20	28							
	1130	LC34-IW0134-024.0-20211008		20	28	GW						
	1155	LC34-SW1004-000.5-20211008		0.0	0.5	SW						
	1220	LC34-SW1001-000.5-20211008		0.0	0.5							
10/08	1245	LC34-SW1002-000.5-20211008		0.0	0.5	SW	G	3	X			

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	10/08/21	1500	1. RECEIVED BY	10/8/21	1500
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS: Lg Blvl 0.0°C Morgas 1.1°C

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

ENCO Laboratories

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10775 Central Port Drive
Orlando FL, 32824
Phone: 407.826.5314 FAX: 407.850.6945

Tuesday, January 4, 2022
Tetra Tech NUS, Inc. (TE015)
Attn: Mark Jonnet
Foster Plaza 7, 661 Anderson Drive
Pittsburgh, PA 15220

RE: Laboratory Results for
Project Number: 112G08985, Project Name/Desc: NASA KSC LC34
ENCO Workorder(s): AE10179

Dear Mark Jonnet,

Enclosed is a copy of your laboratory report for test samples received by our laboratory on Thursday, December 23, 2021.

Unless otherwise noted in an attached project narrative, all samples were received in acceptable condition and processed in accordance with the referenced methods/procedures. Results for these procedures apply only to the samples as submitted.

The analytical results contained in this report are in compliance with NELAC standards, except as noted in the project narrative if applicable. This report shall not be reproduced except in full, without the written approval of the Laboratory.

This report contains only those analyses performed by Environmental Conservation Laboratories. Unless otherwise noted, all analyses were performed at ENCO Orlando. Data from outside organizations will be reported under separate cover.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

Kaitlin Dylnicki

Project Manager

Enclosure(s)

SAMPLE SUMMARY/LABORATORY CHRONICLE

Client ID: LC34-IW004202-089.5-20211223 **Lab ID: AE10179-01** **Sampled: 12/23/21 09:25** **Received: 12/23/21 13:20**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	01/06/22	12/28/21 08:03	12/28/21 13:29

Client ID: LC34-IW004302-110.0-20211223 **Lab ID: AE10179-02** **Sampled: 12/23/21 09:30** **Received: 12/23/21 13:20**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	01/06/22	12/28/21 08:03	12/28/21 13:57

Client ID: LC34-IW000102-110.0-20211223 **Lab ID: AE10179-03** **Sampled: 12/23/21 10:00** **Received: 12/23/21 13:20**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	01/06/22	12/28/21 08:03	12/28/21 14:24

Client ID: LC34-IW00160-110.0-20211223 **Lab ID: AE10179-04** **Sampled: 12/23/21 10:10** **Received: 12/23/21 13:20**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	01/06/22	12/28/21 08:03	12/28/21 14:52

Client ID: LC34-IW004502-110.0-20211223 **Lab ID: AE10179-05** **Sampled: 12/23/21 10:15** **Received: 12/23/21 13:20**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	01/06/22	12/28/21 08:03	12/28/21 15:20

Client ID: LC34-IW0165-110.0-20211223 **Lab ID: AE10179-06** **Sampled: 12/23/21 10:55** **Received: 12/23/21 13:20**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	01/06/22	12/28/21 08:03	12/28/21 15:48

Client ID: LC34-IW004402-110.0-20211223 **Lab ID: AE10179-07** **Sampled: 12/23/21 11:15** **Received: 12/23/21 13:20**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	01/06/22	12/28/21 08:03	12/28/21 16:16

Client ID: LC34-IW0163-110.0-20211223 **Lab ID: AE10179-08** **Sampled: 12/23/21 11:50** **Received: 12/23/21 13:20**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	01/06/22	12/28/21 08:03	12/28/21 16:43

Client ID: LC34-IW0164-110.0-20211223 **Lab ID: AE10179-09** **Sampled: 12/23/21 11:50** **Received: 12/23/21 13:20**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	01/06/22	12/29/21 07:09	12/29/21 08:49

Client ID: LC34-IW0162-110.0-20211223 **Lab ID: AE10179-10** **Sampled: 12/23/21 11:55** **Received: 12/23/21 13:20**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	01/06/22	12/29/21 07:09	12/29/21 09:17

Client ID: LC34-IW0161-110.0-20211223 **Lab ID: AE10179-11** **Sampled: 12/23/21 12:30** **Received: 12/23/21 13:20**

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	01/06/22	12/29/21 07:09	12/29/21 09:45

SAMPLE DETECTION SUMMARY

Client ID: LC34-IW004302-110.0-20211223 **Lab ID:** AE10179-02

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
cis-1,2-Dichloroethene	0.74	I	0.53	2.5	ug/L	EPA 8260D	

Client ID: LC34-IW0162-110.0-20211223 **Lab ID:** AE10179-10

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Trichloroethene	2.4	I	0.89	2.5	ug/L	EPA 8260D	

ANALYTICAL RESULTS

Description: LC34-IW004202-089.5-20211223 **Lab Sample ID:** AE10179-01 **Received:** 12/23/21 13:20

Matrix: Ground Water **Sampled:** 12/23/21 09:25 **Work Order:** AE10179

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden/James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	1L28001	EPA 8260D	12/28/21 13:29	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	1L28001	EPA 8260D	12/28/21 13:29	nmc	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	1L28001	EPA 8260D	12/28/21 13:29	nmc	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	1L28001	EPA 8260D	12/28/21 13:29	nmc	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	1L28001	EPA 8260D	12/28/21 13:29	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	1L28001	EPA 8260D	12/28/21 13:29	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	1L28001	EPA 8260D	12/28/21 13:29	nmc	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	1L28001	EPA 8260D	12/28/21 13:29	nmc	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	1L28001	EPA 8260D	12/28/21 13:29	nmc	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	1L28001	EPA 8260D	12/28/21 13:29	nmc	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	1L28001	EPA 8260D	12/28/21 13:29	nmc	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	1L28001	EPA 8260D	12/28/21 13:29	nmc	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	1L28001	EPA 8260D	12/28/21 13:29	nmc	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	1L28001	EPA 8260D	12/28/21 13:29	nmc	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	1L28001	EPA 8260D	12/28/21 13:29	nmc	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	1L28001	EPA 8260D	12/28/21 13:29	nmc	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	1L28001	EPA 8260D	12/28/21 13:29	nmc	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	1L28001	EPA 8260D	12/28/21 13:29	nmc	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	1L28001	EPA 8260D	12/28/21 13:29	nmc	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	1L28001	EPA 8260D	12/28/21 13:29	nmc	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	1L28001	EPA 8260D	12/28/21 13:29	nmc	
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	1L28001	EPA 8260D	12/28/21 13:29	nmc	
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	1L28001	EPA 8260D	12/28/21 13:29	nmc	QV-01
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	1L28001	EPA 8260D	12/28/21 13:29	nmc	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	1L28001	EPA 8260D	12/28/21 13:29	nmc	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	1L28001	EPA 8260D	12/28/21 13:29	nmc	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	1L28001	EPA 8260D	12/28/21 13:29	nmc	
cis-1,2-Dichloroethene [156-59-2]^	0.53	U	ug/L	1	0.53	2.5	1L28001	EPA 8260D	12/28/21 13:29	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	1L28001	EPA 8260D	12/28/21 13:29	nmc	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	1L28001	EPA 8260D	12/28/21 13:29	nmc	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	1L28001	EPA 8260D	12/28/21 13:29	nmc	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	1L28001	EPA 8260D	12/28/21 13:29	nmc	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	1L28001	EPA 8260D	12/28/21 13:29	nmc	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	1L28001	EPA 8260D	12/28/21 13:29	nmc	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	1L28001	EPA 8260D	12/28/21 13:29	nmc	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	1L28001	EPA 8260D	12/28/21 13:29	nmc	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	1L28001	EPA 8260D	12/28/21 13:29	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	1L28001	EPA 8260D	12/28/21 13:29	nmc	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	1L28001	EPA 8260D	12/28/21 13:29	nmc	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	1L28001	EPA 8260D	12/28/21 13:29	nmc	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	1L28001	EPA 8260D	12/28/21 13:29	nmc	
trans-1,2-Dichloroethene [156-60-5]^	0.73	U	ug/L	1	0.73	2.5	1L28001	EPA 8260D	12/28/21 13:29	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	1L28001	EPA 8260D	12/28/21 13:29	nmc	
Trichloroethene [79-01-6]^	0.89	U	ug/L	1	0.89	2.5	1L28001	EPA 8260D	12/28/21 13:29	nmc	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	1L28001	EPA 8260D	12/28/21 13:29	nmc	
Vinyl chloride [75-01-4]^	0.71	U	ug/L	1	0.71	2.5	1L28001	EPA 8260D	12/28/21 13:29	nmc	

ANALYTICAL RESULTS

Description: LC34-IW004202-089.5-20211223 **Lab Sample ID:** AE10179-01 **Received:** 12/23/21 13:20

Matrix: Ground Water **Sampled:** 12/23/21 09:25 **Work Order:** AE10179

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden/James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*53*	*1*	*50.0*	*106 %*	*41-142*	*1L28001*	*EPA 8260D*	*12/28/21 13:29*	*nmc*	
Dibromofluoromethane	*53*	*1*	*50.0*	*107 %*	*53-146*	*1L28001*	*EPA 8260D*	*12/28/21 13:29*	*nmc*	
Toluene-d8	*52*	*1*	*50.0*	*104 %*	*41-146*	*1L28001*	*EPA 8260D*	*12/28/21 13:29*	*nmc*	

ANALYTICAL RESULTS

Description: LC34-IW004302-110.0-20211223 **Lab Sample ID:** AE10179-02 **Received:** 12/23/21 13:20

Matrix: Ground Water **Sampled:** 12/23/21 09:30 **Work Order:** AE10179

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden/James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	1L28001	EPA 8260D	12/28/21 13:57	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	1L28001	EPA 8260D	12/28/21 13:57	nmc	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	1L28001	EPA 8260D	12/28/21 13:57	nmc	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	1L28001	EPA 8260D	12/28/21 13:57	nmc	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	1L28001	EPA 8260D	12/28/21 13:57	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	1L28001	EPA 8260D	12/28/21 13:57	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	1L28001	EPA 8260D	12/28/21 13:57	nmc	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	1L28001	EPA 8260D	12/28/21 13:57	nmc	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	1L28001	EPA 8260D	12/28/21 13:57	nmc	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	1L28001	EPA 8260D	12/28/21 13:57	nmc	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	1L28001	EPA 8260D	12/28/21 13:57	nmc	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	1L28001	EPA 8260D	12/28/21 13:57	nmc	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	1L28001	EPA 8260D	12/28/21 13:57	nmc	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	1L28001	EPA 8260D	12/28/21 13:57	nmc	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	1L28001	EPA 8260D	12/28/21 13:57	nmc	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	1L28001	EPA 8260D	12/28/21 13:57	nmc	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	1L28001	EPA 8260D	12/28/21 13:57	nmc	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	1L28001	EPA 8260D	12/28/21 13:57	nmc	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	1L28001	EPA 8260D	12/28/21 13:57	nmc	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	1L28001	EPA 8260D	12/28/21 13:57	nmc	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	1L28001	EPA 8260D	12/28/21 13:57	nmc	
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	1L28001	EPA 8260D	12/28/21 13:57	nmc	
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	1L28001	EPA 8260D	12/28/21 13:57	nmc	QV-01
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	1L28001	EPA 8260D	12/28/21 13:57	nmc	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	1L28001	EPA 8260D	12/28/21 13:57	nmc	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	1L28001	EPA 8260D	12/28/21 13:57	nmc	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	1L28001	EPA 8260D	12/28/21 13:57	nmc	
cis-1,2-Dichloroethene [156-59-2]^	**0.74**	I	ug/L	1	0.53	2.5	1L28001	EPA 8260D	12/28/21 13:57	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	1L28001	EPA 8260D	12/28/21 13:57	nmc	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	1L28001	EPA 8260D	12/28/21 13:57	nmc	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	1L28001	EPA 8260D	12/28/21 13:57	nmc	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	1L28001	EPA 8260D	12/28/21 13:57	nmc	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	1L28001	EPA 8260D	12/28/21 13:57	nmc	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	1L28001	EPA 8260D	12/28/21 13:57	nmc	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	1L28001	EPA 8260D	12/28/21 13:57	nmc	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	1L28001	EPA 8260D	12/28/21 13:57	nmc	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	1L28001	EPA 8260D	12/28/21 13:57	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	1L28001	EPA 8260D	12/28/21 13:57	nmc	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	1L28001	EPA 8260D	12/28/21 13:57	nmc	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	1L28001	EPA 8260D	12/28/21 13:57	nmc	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	1L28001	EPA 8260D	12/28/21 13:57	nmc	
trans-1,2-Dichloroethene [156-60-5]^	0.73	U	ug/L	1	0.73	2.5	1L28001	EPA 8260D	12/28/21 13:57	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	1L28001	EPA 8260D	12/28/21 13:57	nmc	
Trichloroethene [79-01-6]^	0.89	U	ug/L	1	0.89	2.5	1L28001	EPA 8260D	12/28/21 13:57	nmc	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	1L28001	EPA 8260D	12/28/21 13:57	nmc	
Vinyl chloride [75-01-4]^	0.71	U	ug/L	1	0.71	2.5	1L28001	EPA 8260D	12/28/21 13:57	nmc	

ANALYTICAL RESULTS

Description: LC34-IW004302-110.0-20211223 **Lab Sample ID:** AE10179-02 **Received:** 12/23/21 13:20

Matrix: Ground Water **Sampled:** 12/23/21 09:30 **Work Order:** AE10179

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden/James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*51*	*1*	*50.0*	*103 %*	*41-142*	*1L28001*	*EPA 8260D*	*12/28/21 13:57*	*nmc*	
Dibromofluoromethane	*52*	*1*	*50.0*	*103 %*	*53-146*	*1L28001*	*EPA 8260D*	*12/28/21 13:57*	*nmc*	
Toluene-d8	*52*	*1*	*50.0*	*104 %*	*41-146*	*1L28001*	*EPA 8260D*	*12/28/21 13:57*	*nmc*	

ANALYTICAL RESULTS

Description: LC34-IW000102-110.0-20211223 **Lab Sample ID:** AE10179-03 **Received:** 12/23/21 13:20

Matrix: Ground Water **Sampled:** 12/23/21 10:00 **Work Order:** AE10179

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden/James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	1L28001	EPA 8260D	12/28/21 14:24	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	1L28001	EPA 8260D	12/28/21 14:24	nmc	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	1L28001	EPA 8260D	12/28/21 14:24	nmc	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	1L28001	EPA 8260D	12/28/21 14:24	nmc	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	1L28001	EPA 8260D	12/28/21 14:24	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	1L28001	EPA 8260D	12/28/21 14:24	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	1L28001	EPA 8260D	12/28/21 14:24	nmc	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	1L28001	EPA 8260D	12/28/21 14:24	nmc	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	1L28001	EPA 8260D	12/28/21 14:24	nmc	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	1L28001	EPA 8260D	12/28/21 14:24	nmc	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	1L28001	EPA 8260D	12/28/21 14:24	nmc	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	1L28001	EPA 8260D	12/28/21 14:24	nmc	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	1L28001	EPA 8260D	12/28/21 14:24	nmc	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	1L28001	EPA 8260D	12/28/21 14:24	nmc	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	1L28001	EPA 8260D	12/28/21 14:24	nmc	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	1L28001	EPA 8260D	12/28/21 14:24	nmc	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	1L28001	EPA 8260D	12/28/21 14:24	nmc	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	1L28001	EPA 8260D	12/28/21 14:24	nmc	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	1L28001	EPA 8260D	12/28/21 14:24	nmc	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	1L28001	EPA 8260D	12/28/21 14:24	nmc	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	1L28001	EPA 8260D	12/28/21 14:24	nmc	
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	1L28001	EPA 8260D	12/28/21 14:24	nmc	
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	1L28001	EPA 8260D	12/28/21 14:24	nmc	QV-01
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	1L28001	EPA 8260D	12/28/21 14:24	nmc	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	1L28001	EPA 8260D	12/28/21 14:24	nmc	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	1L28001	EPA 8260D	12/28/21 14:24	nmc	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	1L28001	EPA 8260D	12/28/21 14:24	nmc	
cis-1,2-Dichloroethene [156-59-2]^	0.53	U	ug/L	1	0.53	2.5	1L28001	EPA 8260D	12/28/21 14:24	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	1L28001	EPA 8260D	12/28/21 14:24	nmc	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	1L28001	EPA 8260D	12/28/21 14:24	nmc	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	1L28001	EPA 8260D	12/28/21 14:24	nmc	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	1L28001	EPA 8260D	12/28/21 14:24	nmc	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	1L28001	EPA 8260D	12/28/21 14:24	nmc	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	1L28001	EPA 8260D	12/28/21 14:24	nmc	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	1L28001	EPA 8260D	12/28/21 14:24	nmc	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	1L28001	EPA 8260D	12/28/21 14:24	nmc	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	1L28001	EPA 8260D	12/28/21 14:24	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	1L28001	EPA 8260D	12/28/21 14:24	nmc	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	1L28001	EPA 8260D	12/28/21 14:24	nmc	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	1L28001	EPA 8260D	12/28/21 14:24	nmc	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	1L28001	EPA 8260D	12/28/21 14:24	nmc	
trans-1,2-Dichloroethene [156-60-5]^	0.73	U	ug/L	1	0.73	2.5	1L28001	EPA 8260D	12/28/21 14:24	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	1L28001	EPA 8260D	12/28/21 14:24	nmc	
Trichloroethene [79-01-6]^	0.89	U	ug/L	1	0.89	2.5	1L28001	EPA 8260D	12/28/21 14:24	nmc	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	1L28001	EPA 8260D	12/28/21 14:24	nmc	
Vinyl chloride [75-01-4]^	0.71	U	ug/L	1	0.71	2.5	1L28001	EPA 8260D	12/28/21 14:24	nmc	

ANALYTICAL RESULTS

Description: LC34-IW000102-110.0-20211223 **Lab Sample ID:** AE10179-03 **Received:** 12/23/21 13:20

Matrix: Ground Water **Sampled:** 12/23/21 10:00 **Work Order:** AE10179

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden/James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*54*	*1*	*50.0*	*107 %*	*41-142*	*1L28001*	*EPA 8260D*	*12/28/21 14:24*	*nmc*	
Dibromofluoromethane	*54*	*1*	*50.0*	*107 %*	*53-146*	*1L28001*	*EPA 8260D*	*12/28/21 14:24*	*nmc*	
Toluene-d8	*52*	*1*	*50.0*	*104 %*	*41-146*	*1L28001*	*EPA 8260D*	*12/28/21 14:24*	*nmc*	

ANALYTICAL RESULTS

Description: LC34-IW00160-110.0-20211223 **Lab Sample ID:** AE10179-04 **Received:** 12/23/21 13:20

Matrix: Ground Water **Sampled:** 12/23/21 10:10 **Work Order:** AE10179

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden/James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	1L28001	EPA 8260D	12/28/21 14:52	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	1L28001	EPA 8260D	12/28/21 14:52	nmc	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	1L28001	EPA 8260D	12/28/21 14:52	nmc	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	1L28001	EPA 8260D	12/28/21 14:52	nmc	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	1L28001	EPA 8260D	12/28/21 14:52	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	1L28001	EPA 8260D	12/28/21 14:52	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	1L28001	EPA 8260D	12/28/21 14:52	nmc	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	1L28001	EPA 8260D	12/28/21 14:52	nmc	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	1L28001	EPA 8260D	12/28/21 14:52	nmc	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	1L28001	EPA 8260D	12/28/21 14:52	nmc	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	1L28001	EPA 8260D	12/28/21 14:52	nmc	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	1L28001	EPA 8260D	12/28/21 14:52	nmc	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	1L28001	EPA 8260D	12/28/21 14:52	nmc	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	1L28001	EPA 8260D	12/28/21 14:52	nmc	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	1L28001	EPA 8260D	12/28/21 14:52	nmc	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	1L28001	EPA 8260D	12/28/21 14:52	nmc	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	1L28001	EPA 8260D	12/28/21 14:52	nmc	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	1L28001	EPA 8260D	12/28/21 14:52	nmc	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	1L28001	EPA 8260D	12/28/21 14:52	nmc	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	1L28001	EPA 8260D	12/28/21 14:52	nmc	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	1L28001	EPA 8260D	12/28/21 14:52	nmc	
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	1L28001	EPA 8260D	12/28/21 14:52	nmc	
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	1L28001	EPA 8260D	12/28/21 14:52	nmc	QV-01
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	1L28001	EPA 8260D	12/28/21 14:52	nmc	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	1L28001	EPA 8260D	12/28/21 14:52	nmc	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	1L28001	EPA 8260D	12/28/21 14:52	nmc	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	1L28001	EPA 8260D	12/28/21 14:52	nmc	
cis-1,2-Dichloroethene [156-59-2]^	0.53	U	ug/L	1	0.53	2.5	1L28001	EPA 8260D	12/28/21 14:52	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	1L28001	EPA 8260D	12/28/21 14:52	nmc	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	1L28001	EPA 8260D	12/28/21 14:52	nmc	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	1L28001	EPA 8260D	12/28/21 14:52	nmc	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	1L28001	EPA 8260D	12/28/21 14:52	nmc	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	1L28001	EPA 8260D	12/28/21 14:52	nmc	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	1L28001	EPA 8260D	12/28/21 14:52	nmc	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	1L28001	EPA 8260D	12/28/21 14:52	nmc	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	1L28001	EPA 8260D	12/28/21 14:52	nmc	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	1L28001	EPA 8260D	12/28/21 14:52	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	1L28001	EPA 8260D	12/28/21 14:52	nmc	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	1L28001	EPA 8260D	12/28/21 14:52	nmc	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	1L28001	EPA 8260D	12/28/21 14:52	nmc	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	1L28001	EPA 8260D	12/28/21 14:52	nmc	
trans-1,2-Dichloroethene [156-60-5]^	0.73	U	ug/L	1	0.73	2.5	1L28001	EPA 8260D	12/28/21 14:52	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	1L28001	EPA 8260D	12/28/21 14:52	nmc	
Trichloroethene [79-01-6]^	0.89	U	ug/L	1	0.89	2.5	1L28001	EPA 8260D	12/28/21 14:52	nmc	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	1L28001	EPA 8260D	12/28/21 14:52	nmc	
Vinyl chloride [75-01-4]^	0.71	U	ug/L	1	0.71	2.5	1L28001	EPA 8260D	12/28/21 14:52	nmc	

ANALYTICAL RESULTS

Description: LC34-IW00160-110.0-20211223 **Lab Sample ID:** AE10179-04 **Received:** 12/23/21 13:20

Matrix: Ground Water **Sampled:** 12/23/21 10:10 **Work Order:** AE10179

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden/James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*53*	*1*	*50.0*	*107 %*	*41-142*	*1L28001*	*EPA 8260D*	*12/28/21 14:52*	*nmc*	
Dibromofluoromethane	*54*	*1*	*50.0*	*107 %*	*53-146*	*1L28001*	*EPA 8260D*	*12/28/21 14:52*	*nmc*	
Toluene-d8	*53*	*1*	*50.0*	*105 %*	*41-146*	*1L28001*	*EPA 8260D*	*12/28/21 14:52*	*nmc*	

ANALYTICAL RESULTS

Description: LC34-IW004502-110.0-20211223 **Lab Sample ID:** AE10179-05 **Received:** 12/23/21 13:20

Matrix: Ground Water **Sampled:** 12/23/21 10:15 **Work Order:** AE10179

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden/James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	1L28001	EPA 8260D	12/28/21 15:20	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	1L28001	EPA 8260D	12/28/21 15:20	nmc	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	1L28001	EPA 8260D	12/28/21 15:20	nmc	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	1L28001	EPA 8260D	12/28/21 15:20	nmc	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	1L28001	EPA 8260D	12/28/21 15:20	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	1L28001	EPA 8260D	12/28/21 15:20	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	1L28001	EPA 8260D	12/28/21 15:20	nmc	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	1L28001	EPA 8260D	12/28/21 15:20	nmc	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	1L28001	EPA 8260D	12/28/21 15:20	nmc	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	1L28001	EPA 8260D	12/28/21 15:20	nmc	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	1L28001	EPA 8260D	12/28/21 15:20	nmc	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	1L28001	EPA 8260D	12/28/21 15:20	nmc	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	1L28001	EPA 8260D	12/28/21 15:20	nmc	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	1L28001	EPA 8260D	12/28/21 15:20	nmc	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	1L28001	EPA 8260D	12/28/21 15:20	nmc	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	1L28001	EPA 8260D	12/28/21 15:20	nmc	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	1L28001	EPA 8260D	12/28/21 15:20	nmc	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	1L28001	EPA 8260D	12/28/21 15:20	nmc	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	1L28001	EPA 8260D	12/28/21 15:20	nmc	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	1L28001	EPA 8260D	12/28/21 15:20	nmc	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	1L28001	EPA 8260D	12/28/21 15:20	nmc	
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	1L28001	EPA 8260D	12/28/21 15:20	nmc	
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	1L28001	EPA 8260D	12/28/21 15:20	nmc	QV-01
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	1L28001	EPA 8260D	12/28/21 15:20	nmc	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	1L28001	EPA 8260D	12/28/21 15:20	nmc	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	1L28001	EPA 8260D	12/28/21 15:20	nmc	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	1L28001	EPA 8260D	12/28/21 15:20	nmc	
cis-1,2-Dichloroethene [156-59-2]^	0.53	U	ug/L	1	0.53	2.5	1L28001	EPA 8260D	12/28/21 15:20	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	1L28001	EPA 8260D	12/28/21 15:20	nmc	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	1L28001	EPA 8260D	12/28/21 15:20	nmc	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	1L28001	EPA 8260D	12/28/21 15:20	nmc	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	1L28001	EPA 8260D	12/28/21 15:20	nmc	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	1L28001	EPA 8260D	12/28/21 15:20	nmc	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	1L28001	EPA 8260D	12/28/21 15:20	nmc	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	1L28001	EPA 8260D	12/28/21 15:20	nmc	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	1L28001	EPA 8260D	12/28/21 15:20	nmc	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	1L28001	EPA 8260D	12/28/21 15:20	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	1L28001	EPA 8260D	12/28/21 15:20	nmc	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	1L28001	EPA 8260D	12/28/21 15:20	nmc	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	1L28001	EPA 8260D	12/28/21 15:20	nmc	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	1L28001	EPA 8260D	12/28/21 15:20	nmc	
trans-1,2-Dichloroethene [156-60-5]^	0.73	U	ug/L	1	0.73	2.5	1L28001	EPA 8260D	12/28/21 15:20	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	1L28001	EPA 8260D	12/28/21 15:20	nmc	
Trichloroethene [79-01-6]^	0.89	U	ug/L	1	0.89	2.5	1L28001	EPA 8260D	12/28/21 15:20	nmc	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	1L28001	EPA 8260D	12/28/21 15:20	nmc	
Vinyl chloride [75-01-4]^	0.71	U	ug/L	1	0.71	2.5	1L28001	EPA 8260D	12/28/21 15:20	nmc	

ANALYTICAL RESULTS

Description: LC34-IW004502-110.0-20211223 **Lab Sample ID:** AE10179-05 **Received:** 12/23/21 13:20

Matrix: Ground Water **Sampled:** 12/23/21 10:15 **Work Order:** AE10179

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden/James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*53*	*1*	*50.0*	*107 %*	*41-142*	*1L28001*	*EPA 8260D*	*12/28/21 15:20*	*nmc*	
Dibromofluoromethane	*53*	*1*	*50.0*	*106 %*	*53-146*	*1L28001*	*EPA 8260D*	*12/28/21 15:20*	*nmc*	
Toluene-d8	*53*	*1*	*50.0*	*106 %*	*41-146*	*1L28001*	*EPA 8260D*	*12/28/21 15:20*	*nmc*	

ANALYTICAL RESULTS

Description: LC34-IW0165-110.0-20211223 **Lab Sample ID:** AE10179-06 **Received:** 12/23/21 13:20

Matrix: Ground Water **Sampled:** 12/23/21 10:55 **Work Order:** AE10179

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden/James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	1L28001	EPA 8260D	12/28/21 15:48	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	1L28001	EPA 8260D	12/28/21 15:48	nmc	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	1L28001	EPA 8260D	12/28/21 15:48	nmc	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	1L28001	EPA 8260D	12/28/21 15:48	nmc	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	1L28001	EPA 8260D	12/28/21 15:48	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	1L28001	EPA 8260D	12/28/21 15:48	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	1L28001	EPA 8260D	12/28/21 15:48	nmc	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	1L28001	EPA 8260D	12/28/21 15:48	nmc	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	1L28001	EPA 8260D	12/28/21 15:48	nmc	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	1L28001	EPA 8260D	12/28/21 15:48	nmc	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	1L28001	EPA 8260D	12/28/21 15:48	nmc	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	1L28001	EPA 8260D	12/28/21 15:48	nmc	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	1L28001	EPA 8260D	12/28/21 15:48	nmc	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	1L28001	EPA 8260D	12/28/21 15:48	nmc	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	1L28001	EPA 8260D	12/28/21 15:48	nmc	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	1L28001	EPA 8260D	12/28/21 15:48	nmc	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	1L28001	EPA 8260D	12/28/21 15:48	nmc	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	1L28001	EPA 8260D	12/28/21 15:48	nmc	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	1L28001	EPA 8260D	12/28/21 15:48	nmc	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	1L28001	EPA 8260D	12/28/21 15:48	nmc	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	1L28001	EPA 8260D	12/28/21 15:48	nmc	
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	1L28001	EPA 8260D	12/28/21 15:48	nmc	
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	1L28001	EPA 8260D	12/28/21 15:48	nmc	QV-01
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	1L28001	EPA 8260D	12/28/21 15:48	nmc	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	1L28001	EPA 8260D	12/28/21 15:48	nmc	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	1L28001	EPA 8260D	12/28/21 15:48	nmc	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	1L28001	EPA 8260D	12/28/21 15:48	nmc	
cis-1,2-Dichloroethene [156-59-2]^	0.53	U	ug/L	1	0.53	2.5	1L28001	EPA 8260D	12/28/21 15:48	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	1L28001	EPA 8260D	12/28/21 15:48	nmc	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	1L28001	EPA 8260D	12/28/21 15:48	nmc	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	1L28001	EPA 8260D	12/28/21 15:48	nmc	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	1L28001	EPA 8260D	12/28/21 15:48	nmc	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	1L28001	EPA 8260D	12/28/21 15:48	nmc	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	1L28001	EPA 8260D	12/28/21 15:48	nmc	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	1L28001	EPA 8260D	12/28/21 15:48	nmc	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	1L28001	EPA 8260D	12/28/21 15:48	nmc	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	1L28001	EPA 8260D	12/28/21 15:48	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	1L28001	EPA 8260D	12/28/21 15:48	nmc	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	1L28001	EPA 8260D	12/28/21 15:48	nmc	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	1L28001	EPA 8260D	12/28/21 15:48	nmc	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	1L28001	EPA 8260D	12/28/21 15:48	nmc	
trans-1,2-Dichloroethene [156-60-5]^	0.73	U	ug/L	1	0.73	2.5	1L28001	EPA 8260D	12/28/21 15:48	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	1L28001	EPA 8260D	12/28/21 15:48	nmc	
Trichloroethene [79-01-6]^	0.89	U	ug/L	1	0.89	2.5	1L28001	EPA 8260D	12/28/21 15:48	nmc	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	1L28001	EPA 8260D	12/28/21 15:48	nmc	
Vinyl chloride [75-01-4]^	0.71	U	ug/L	1	0.71	2.5	1L28001	EPA 8260D	12/28/21 15:48	nmc	

ANALYTICAL RESULTS

Description: LC34-IW0165-110.0-20211223 **Lab Sample ID:** AE10179-06 **Received:** 12/23/21 13:20

Matrix: Ground Water **Sampled:** 12/23/21 10:55 **Work Order:** AE10179

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden/James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*53*	*1*	*50.0*	*105 %*	*41-142*	*1L28001*	*EPA 8260D*	*12/28/21 15:48*	*nmc*	
Dibromofluoromethane	*55*	*1*	*50.0*	*109 %*	*53-146*	*1L28001*	*EPA 8260D*	*12/28/21 15:48*	*nmc*	
Toluene-d8	*53*	*1*	*50.0*	*106 %*	*41-146*	*1L28001*	*EPA 8260D*	*12/28/21 15:48*	*nmc*	

ANALYTICAL RESULTS

Description: LC34-IW004402-110.0-20211223 **Lab Sample ID:** AE10179-07 **Received:** 12/23/21 13:20

Matrix: Ground Water **Sampled:** 12/23/21 11:15 **Work Order:** AE10179

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden/James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	1L28001	EPA 8260D	12/28/21 16:16	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	1L28001	EPA 8260D	12/28/21 16:16	nmc	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	1L28001	EPA 8260D	12/28/21 16:16	nmc	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	1L28001	EPA 8260D	12/28/21 16:16	nmc	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	1L28001	EPA 8260D	12/28/21 16:16	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	1L28001	EPA 8260D	12/28/21 16:16	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	1L28001	EPA 8260D	12/28/21 16:16	nmc	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	1L28001	EPA 8260D	12/28/21 16:16	nmc	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	1L28001	EPA 8260D	12/28/21 16:16	nmc	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	1L28001	EPA 8260D	12/28/21 16:16	nmc	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	1L28001	EPA 8260D	12/28/21 16:16	nmc	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	1L28001	EPA 8260D	12/28/21 16:16	nmc	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	1L28001	EPA 8260D	12/28/21 16:16	nmc	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	1L28001	EPA 8260D	12/28/21 16:16	nmc	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	1L28001	EPA 8260D	12/28/21 16:16	nmc	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	1L28001	EPA 8260D	12/28/21 16:16	nmc	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	1L28001	EPA 8260D	12/28/21 16:16	nmc	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	1L28001	EPA 8260D	12/28/21 16:16	nmc	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	1L28001	EPA 8260D	12/28/21 16:16	nmc	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	1L28001	EPA 8260D	12/28/21 16:16	nmc	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	1L28001	EPA 8260D	12/28/21 16:16	nmc	
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	1L28001	EPA 8260D	12/28/21 16:16	nmc	
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	1L28001	EPA 8260D	12/28/21 16:16	nmc	QV-01
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	1L28001	EPA 8260D	12/28/21 16:16	nmc	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	1L28001	EPA 8260D	12/28/21 16:16	nmc	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	1L28001	EPA 8260D	12/28/21 16:16	nmc	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	1L28001	EPA 8260D	12/28/21 16:16	nmc	
cis-1,2-Dichloroethene [156-59-2]^	0.53	U	ug/L	1	0.53	2.5	1L28001	EPA 8260D	12/28/21 16:16	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	1L28001	EPA 8260D	12/28/21 16:16	nmc	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	1L28001	EPA 8260D	12/28/21 16:16	nmc	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	1L28001	EPA 8260D	12/28/21 16:16	nmc	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	1L28001	EPA 8260D	12/28/21 16:16	nmc	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	1L28001	EPA 8260D	12/28/21 16:16	nmc	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	1L28001	EPA 8260D	12/28/21 16:16	nmc	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	1L28001	EPA 8260D	12/28/21 16:16	nmc	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	1L28001	EPA 8260D	12/28/21 16:16	nmc	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	1L28001	EPA 8260D	12/28/21 16:16	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	1L28001	EPA 8260D	12/28/21 16:16	nmc	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	1L28001	EPA 8260D	12/28/21 16:16	nmc	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	1L28001	EPA 8260D	12/28/21 16:16	nmc	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	1L28001	EPA 8260D	12/28/21 16:16	nmc	
trans-1,2-Dichloroethene [156-60-5]^	0.73	U	ug/L	1	0.73	2.5	1L28001	EPA 8260D	12/28/21 16:16	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	1L28001	EPA 8260D	12/28/21 16:16	nmc	
Trichloroethene [79-01-6]^	0.89	U	ug/L	1	0.89	2.5	1L28001	EPA 8260D	12/28/21 16:16	nmc	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	1L28001	EPA 8260D	12/28/21 16:16	nmc	
Vinyl chloride [75-01-4]^	0.71	U	ug/L	1	0.71	2.5	1L28001	EPA 8260D	12/28/21 16:16	nmc	

ANALYTICAL RESULTS

Description: LC34-IW004402-110.0-20211223 **Lab Sample ID:** AE10179-07 **Received:** 12/23/21 13:20

Matrix: Ground Water **Sampled:** 12/23/21 11:15 **Work Order:** AE10179

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden/James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*52*	*1*	*50.0*	*104 %*	*41-142*	*1L28001*	*EPA 8260D*	*12/28/21 16:16*	*nmc*	
Dibromofluoromethane	*53*	*1*	*50.0*	*107 %*	*53-146*	*1L28001*	*EPA 8260D*	*12/28/21 16:16*	*nmc*	
Toluene-d8	*52*	*1*	*50.0*	*105 %*	*41-146*	*1L28001*	*EPA 8260D*	*12/28/21 16:16*	*nmc*	

ANALYTICAL RESULTS

Description: LC34-IW0163-110.0-20211223 **Lab Sample ID:** AE10179-08 **Received:** 12/23/21 13:20

Matrix: Ground Water **Sampled:** 12/23/21 11:50 **Work Order:** AE10179

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden/James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	1L28001	EPA 8260D	12/28/21 16:43	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	1L28001	EPA 8260D	12/28/21 16:43	nmc	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	1L28001	EPA 8260D	12/28/21 16:43	nmc	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	1L28001	EPA 8260D	12/28/21 16:43	nmc	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	1L28001	EPA 8260D	12/28/21 16:43	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	1L28001	EPA 8260D	12/28/21 16:43	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	1L28001	EPA 8260D	12/28/21 16:43	nmc	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	1L28001	EPA 8260D	12/28/21 16:43	nmc	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	1L28001	EPA 8260D	12/28/21 16:43	nmc	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	1L28001	EPA 8260D	12/28/21 16:43	nmc	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	1L28001	EPA 8260D	12/28/21 16:43	nmc	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	1L28001	EPA 8260D	12/28/21 16:43	nmc	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	1L28001	EPA 8260D	12/28/21 16:43	nmc	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	1L28001	EPA 8260D	12/28/21 16:43	nmc	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	1L28001	EPA 8260D	12/28/21 16:43	nmc	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	1L28001	EPA 8260D	12/28/21 16:43	nmc	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	1L28001	EPA 8260D	12/28/21 16:43	nmc	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	1L28001	EPA 8260D	12/28/21 16:43	nmc	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	1L28001	EPA 8260D	12/28/21 16:43	nmc	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	1L28001	EPA 8260D	12/28/21 16:43	nmc	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	1L28001	EPA 8260D	12/28/21 16:43	nmc	
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	1L28001	EPA 8260D	12/28/21 16:43	nmc	
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	1L28001	EPA 8260D	12/28/21 16:43	nmc	QV-01
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	1L28001	EPA 8260D	12/28/21 16:43	nmc	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	1L28001	EPA 8260D	12/28/21 16:43	nmc	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	1L28001	EPA 8260D	12/28/21 16:43	nmc	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	1L28001	EPA 8260D	12/28/21 16:43	nmc	
cis-1,2-Dichloroethene [156-59-2]^	0.53	U	ug/L	1	0.53	2.5	1L28001	EPA 8260D	12/28/21 16:43	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	1L28001	EPA 8260D	12/28/21 16:43	nmc	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	1L28001	EPA 8260D	12/28/21 16:43	nmc	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	1L28001	EPA 8260D	12/28/21 16:43	nmc	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	1L28001	EPA 8260D	12/28/21 16:43	nmc	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	1L28001	EPA 8260D	12/28/21 16:43	nmc	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	1L28001	EPA 8260D	12/28/21 16:43	nmc	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	1L28001	EPA 8260D	12/28/21 16:43	nmc	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	1L28001	EPA 8260D	12/28/21 16:43	nmc	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	1L28001	EPA 8260D	12/28/21 16:43	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	1L28001	EPA 8260D	12/28/21 16:43	nmc	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	1L28001	EPA 8260D	12/28/21 16:43	nmc	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	1L28001	EPA 8260D	12/28/21 16:43	nmc	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	1L28001	EPA 8260D	12/28/21 16:43	nmc	
trans-1,2-Dichloroethene [156-60-5]^	0.73	U	ug/L	1	0.73	2.5	1L28001	EPA 8260D	12/28/21 16:43	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	1L28001	EPA 8260D	12/28/21 16:43	nmc	
Trichloroethene [79-01-6]^	0.89	U	ug/L	1	0.89	2.5	1L28001	EPA 8260D	12/28/21 16:43	nmc	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	1L28001	EPA 8260D	12/28/21 16:43	nmc	
Vinyl chloride [75-01-4]^	0.71	U	ug/L	1	0.71	2.5	1L28001	EPA 8260D	12/28/21 16:43	nmc	

ANALYTICAL RESULTS

Description: LC34-IW0163-110.0-20211223 **Lab Sample ID:** AE10179-08 **Received:** 12/23/21 13:20

Matrix: Ground Water **Sampled:** 12/23/21 11:50 **Work Order:** AE10179

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden/James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*53*	*1*	*50.0*	*106 %*	*41-142*	*1L28001*	*EPA 8260D*	*12/28/21 16:43*	*nmc*	
Dibromofluoromethane	*54*	*1*	*50.0*	*107 %*	*53-146*	*1L28001*	*EPA 8260D*	*12/28/21 16:43*	*nmc*	
Toluene-d8	*53*	*1*	*50.0*	*106 %*	*41-146*	*1L28001*	*EPA 8260D*	*12/28/21 16:43*	*nmc*	

ANALYTICAL RESULTS

Description: LC34-IW0164-110.0-20211223 **Lab Sample ID:** AE10179-09 **Received:** 12/23/21 13:20

Matrix: Ground Water **Sampled:** 12/23/21 11:50 **Work Order:** AE10179

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden/James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	1L29002	EPA 8260D	12/29/21 08:49	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	1L29002	EPA 8260D	12/29/21 08:49	nmc	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	1L29002	EPA 8260D	12/29/21 08:49	nmc	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	1L29002	EPA 8260D	12/29/21 08:49	nmc	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	1L29002	EPA 8260D	12/29/21 08:49	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	1L29002	EPA 8260D	12/29/21 08:49	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	1L29002	EPA 8260D	12/29/21 08:49	nmc	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	1L29002	EPA 8260D	12/29/21 08:49	nmc	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	1L29002	EPA 8260D	12/29/21 08:49	nmc	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	1L29002	EPA 8260D	12/29/21 08:49	nmc	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	1L29002	EPA 8260D	12/29/21 08:49	nmc	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	1L29002	EPA 8260D	12/29/21 08:49	nmc	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	1L29002	EPA 8260D	12/29/21 08:49	nmc	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	1L29002	EPA 8260D	12/29/21 08:49	nmc	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	1L29002	EPA 8260D	12/29/21 08:49	nmc	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	1L29002	EPA 8260D	12/29/21 08:49	nmc	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	1L29002	EPA 8260D	12/29/21 08:49	nmc	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	1L29002	EPA 8260D	12/29/21 08:49	nmc	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	1L29002	EPA 8260D	12/29/21 08:49	nmc	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	1L29002	EPA 8260D	12/29/21 08:49	nmc	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	1L29002	EPA 8260D	12/29/21 08:49	nmc	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	1L29002	EPA 8260D	12/29/21 08:49	nmc	
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	1L29002	EPA 8260D	12/29/21 08:49	nmc	QV-01
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	1L29002	EPA 8260D	12/29/21 08:49	nmc	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	1L29002	EPA 8260D	12/29/21 08:49	nmc	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	1L29002	EPA 8260D	12/29/21 08:49	nmc	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	1L29002	EPA 8260D	12/29/21 08:49	nmc	
cis-1,2-Dichloroethene [156-59-2]^	0.53	U	ug/L	1	0.53	2.5	1L29002	EPA 8260D	12/29/21 08:49	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	1L29002	EPA 8260D	12/29/21 08:49	nmc	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	1L29002	EPA 8260D	12/29/21 08:49	nmc	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	1L29002	EPA 8260D	12/29/21 08:49	nmc	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	1L29002	EPA 8260D	12/29/21 08:49	nmc	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	1L29002	EPA 8260D	12/29/21 08:49	nmc	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	1L29002	EPA 8260D	12/29/21 08:49	nmc	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	1L29002	EPA 8260D	12/29/21 08:49	nmc	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	1L29002	EPA 8260D	12/29/21 08:49	nmc	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	1L29002	EPA 8260D	12/29/21 08:49	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	1L29002	EPA 8260D	12/29/21 08:49	nmc	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	1L29002	EPA 8260D	12/29/21 08:49	nmc	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	1L29002	EPA 8260D	12/29/21 08:49	nmc	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	1L29002	EPA 8260D	12/29/21 08:49	nmc	
trans-1,2-Dichloroethene [156-60-5]^	0.73	U	ug/L	1	0.73	2.5	1L29002	EPA 8260D	12/29/21 08:49	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	1L29002	EPA 8260D	12/29/21 08:49	nmc	
Trichloroethene [79-01-6]^	0.89	U	ug/L	1	0.89	2.5	1L29002	EPA 8260D	12/29/21 08:49	nmc	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	1L29002	EPA 8260D	12/29/21 08:49	nmc	
Vinyl chloride [75-01-4]^	0.71	U	ug/L	1	0.71	2.5	1L29002	EPA 8260D	12/29/21 08:49	nmc	

ANALYTICAL RESULTS

Description: LC34-IW0164-110.0-20211223 **Lab Sample ID:** AE10179-09 **Received:** 12/23/21 13:20

Matrix: Ground Water **Sampled:** 12/23/21 11:50 **Work Order:** AE10179

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden/James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*53*	*1*	*50.0*	*106 %*	*41-142*	*1L29002*	*EPA 8260D*	*12/29/21 08:49*	*nmc*	
Dibromofluoromethane	*53*	*1*	*50.0*	*106 %*	*53-146*	*1L29002*	*EPA 8260D*	*12/29/21 08:49*	*nmc*	
Toluene-d8	*53*	*1*	*50.0*	*106 %*	*41-146*	*1L29002*	*EPA 8260D*	*12/29/21 08:49*	*nmc*	

ANALYTICAL RESULTS

Description: LC34-IW0162-110.0-20211223 **Lab Sample ID:** AE10179-10 **Received:** 12/23/21 13:20

Matrix: Ground Water **Sampled:** 12/23/21 11:55 **Work Order:** AE10179

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden/James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	1L29002	EPA 8260D	12/29/21 09:17	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	1L29002	EPA 8260D	12/29/21 09:17	nmc	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	1L29002	EPA 8260D	12/29/21 09:17	nmc	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	1L29002	EPA 8260D	12/29/21 09:17	nmc	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	1L29002	EPA 8260D	12/29/21 09:17	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	1L29002	EPA 8260D	12/29/21 09:17	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	1L29002	EPA 8260D	12/29/21 09:17	nmc	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	1L29002	EPA 8260D	12/29/21 09:17	nmc	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	1L29002	EPA 8260D	12/29/21 09:17	nmc	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	1L29002	EPA 8260D	12/29/21 09:17	nmc	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	1L29002	EPA 8260D	12/29/21 09:17	nmc	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	1L29002	EPA 8260D	12/29/21 09:17	nmc	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	1L29002	EPA 8260D	12/29/21 09:17	nmc	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	1L29002	EPA 8260D	12/29/21 09:17	nmc	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	1L29002	EPA 8260D	12/29/21 09:17	nmc	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	1L29002	EPA 8260D	12/29/21 09:17	nmc	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	1L29002	EPA 8260D	12/29/21 09:17	nmc	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	1L29002	EPA 8260D	12/29/21 09:17	nmc	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	1L29002	EPA 8260D	12/29/21 09:17	nmc	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	1L29002	EPA 8260D	12/29/21 09:17	nmc	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	1L29002	EPA 8260D	12/29/21 09:17	nmc	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	1L29002	EPA 8260D	12/29/21 09:17	nmc	
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	1L29002	EPA 8260D	12/29/21 09:17	nmc	QV-01
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	1L29002	EPA 8260D	12/29/21 09:17	nmc	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	1L29002	EPA 8260D	12/29/21 09:17	nmc	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	1L29002	EPA 8260D	12/29/21 09:17	nmc	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	1L29002	EPA 8260D	12/29/21 09:17	nmc	
cis-1,2-Dichloroethene [156-59-2]^	0.53	U	ug/L	1	0.53	2.5	1L29002	EPA 8260D	12/29/21 09:17	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	1L29002	EPA 8260D	12/29/21 09:17	nmc	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	1L29002	EPA 8260D	12/29/21 09:17	nmc	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	1L29002	EPA 8260D	12/29/21 09:17	nmc	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	1L29002	EPA 8260D	12/29/21 09:17	nmc	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	1L29002	EPA 8260D	12/29/21 09:17	nmc	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	1L29002	EPA 8260D	12/29/21 09:17	nmc	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	1L29002	EPA 8260D	12/29/21 09:17	nmc	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	1L29002	EPA 8260D	12/29/21 09:17	nmc	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	1L29002	EPA 8260D	12/29/21 09:17	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	1L29002	EPA 8260D	12/29/21 09:17	nmc	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	1L29002	EPA 8260D	12/29/21 09:17	nmc	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	1L29002	EPA 8260D	12/29/21 09:17	nmc	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	1L29002	EPA 8260D	12/29/21 09:17	nmc	
trans-1,2-Dichloroethene [156-60-5]^	0.73	U	ug/L	1	0.73	2.5	1L29002	EPA 8260D	12/29/21 09:17	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	1L29002	EPA 8260D	12/29/21 09:17	nmc	
Trichloroethene [79-01-6]^	**2.4**	I	ug/L	1	0.89	2.5	1L29002	EPA 8260D	12/29/21 09:17	nmc	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	1L29002	EPA 8260D	12/29/21 09:17	nmc	
Vinyl chloride [75-01-4]^	0.71	U	ug/L	1	0.71	2.5	1L29002	EPA 8260D	12/29/21 09:17	nmc	

ANALYTICAL RESULTS

Description: LC34-IW0162-110.0-20211223 **Lab Sample ID:** AE10179-10 **Received:** 12/23/21 13:20

Matrix: Ground Water **Sampled:** 12/23/21 11:55 **Work Order:** AE10179

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden/James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*53*	*1*	*50.0*	*107 %*	*41-142*	*1L29002*	*EPA 8260D*	*12/29/21 09:17*	*nmc*	
Dibromofluoromethane	*53*	*1*	*50.0*	*107 %*	*53-146*	*1L29002*	*EPA 8260D*	*12/29/21 09:17*	*nmc*	
Toluene-d8	*53*	*1*	*50.0*	*105 %*	*41-146*	*1L29002*	*EPA 8260D*	*12/29/21 09:17*	*nmc*	

ANALYTICAL RESULTS

Description: LC34-IW0161-110.0-20211223 **Lab Sample ID:** AE10179-11 **Received:** 12/23/21 13:20

Matrix: Ground Water **Sampled:** 12/23/21 12:30 **Work Order:** AE10179

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden/James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	1L29002	EPA 8260D	12/29/21 09:45	nmc	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	1L29002	EPA 8260D	12/29/21 09:45	nmc	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	1L29002	EPA 8260D	12/29/21 09:45	nmc	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	1L29002	EPA 8260D	12/29/21 09:45	nmc	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	1L29002	EPA 8260D	12/29/21 09:45	nmc	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	1L29002	EPA 8260D	12/29/21 09:45	nmc	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	1L29002	EPA 8260D	12/29/21 09:45	nmc	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	1L29002	EPA 8260D	12/29/21 09:45	nmc	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	1L29002	EPA 8260D	12/29/21 09:45	nmc	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	1L29002	EPA 8260D	12/29/21 09:45	nmc	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	1L29002	EPA 8260D	12/29/21 09:45	nmc	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	1L29002	EPA 8260D	12/29/21 09:45	nmc	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	1L29002	EPA 8260D	12/29/21 09:45	nmc	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	1L29002	EPA 8260D	12/29/21 09:45	nmc	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	1L29002	EPA 8260D	12/29/21 09:45	nmc	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	1L29002	EPA 8260D	12/29/21 09:45	nmc	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	1L29002	EPA 8260D	12/29/21 09:45	nmc	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	1L29002	EPA 8260D	12/29/21 09:45	nmc	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	1L29002	EPA 8260D	12/29/21 09:45	nmc	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	1L29002	EPA 8260D	12/29/21 09:45	nmc	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	1L29002	EPA 8260D	12/29/21 09:45	nmc	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	1L29002	EPA 8260D	12/29/21 09:45	nmc	
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	1L29002	EPA 8260D	12/29/21 09:45	nmc	QV-01
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	1L29002	EPA 8260D	12/29/21 09:45	nmc	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	1L29002	EPA 8260D	12/29/21 09:45	nmc	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	1L29002	EPA 8260D	12/29/21 09:45	nmc	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	1L29002	EPA 8260D	12/29/21 09:45	nmc	
cis-1,2-Dichloroethene [156-59-2]^	0.53	U	ug/L	1	0.53	2.5	1L29002	EPA 8260D	12/29/21 09:45	nmc	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	1L29002	EPA 8260D	12/29/21 09:45	nmc	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	1L29002	EPA 8260D	12/29/21 09:45	nmc	
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	1L29002	EPA 8260D	12/29/21 09:45	nmc	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	1L29002	EPA 8260D	12/29/21 09:45	nmc	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	1L29002	EPA 8260D	12/29/21 09:45	nmc	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	1L29002	EPA 8260D	12/29/21 09:45	nmc	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	1L29002	EPA 8260D	12/29/21 09:45	nmc	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	1L29002	EPA 8260D	12/29/21 09:45	nmc	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	1L29002	EPA 8260D	12/29/21 09:45	nmc	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	1L29002	EPA 8260D	12/29/21 09:45	nmc	
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	1L29002	EPA 8260D	12/29/21 09:45	nmc	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	1L29002	EPA 8260D	12/29/21 09:45	nmc	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	1L29002	EPA 8260D	12/29/21 09:45	nmc	
trans-1,2-Dichloroethene [156-60-5]^	0.73	U	ug/L	1	0.73	2.5	1L29002	EPA 8260D	12/29/21 09:45	nmc	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	1L29002	EPA 8260D	12/29/21 09:45	nmc	
Trichloroethene [79-01-6]^	0.89	U	ug/L	1	0.89	2.5	1L29002	EPA 8260D	12/29/21 09:45	nmc	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	1L29002	EPA 8260D	12/29/21 09:45	nmc	
Vinyl chloride [75-01-4]^	0.71	U	ug/L	1	0.71	2.5	1L29002	EPA 8260D	12/29/21 09:45	nmc	

ANALYTICAL RESULTS

Description: LC34-IW0161-110.0-20211223 **Lab Sample ID:** AE10179-11 **Received:** 12/23/21 13:20

Matrix: Ground Water **Sampled:** 12/23/21 12:30 **Work Order:** AE10179

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden/James Lloyd

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	*53*	*1*	*50.0*	*106 %*	*41-142*	*1L29002*	*EPA 8260D*	*12/29/21 09:45*	*nmc*	
Dibromofluoromethane	*52*	*1*	*50.0*	*103 %*	*53-146*	*1L29002*	*EPA 8260D*	*12/29/21 09:45*	*nmc*	
Toluene-d8	*52*	*1*	*50.0*	*105 %*	*41-146*	*1L29002*	*EPA 8260D*	*12/29/21 09:45*	*nmc*	

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1L28001 - EPA 5030B_MS

Blank (1L28001-BLK1) Prepared: 12/28/2021 00:00 Analyzed: 12/28/2021 08:51

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	0.80	U	2.5	ug/L							
1,1,2,2-Tetrachloroethane	0.54	U	2.5	ug/L							
1,1,2-Trichloroethane	0.76	U	2.5	ug/L							
1,1-Dichloroethane	0.62	U	2.5	ug/L							
1,1-Dichloroethene	0.94	U	2.5	ug/L							
1,2,4-Trichlorobenzene	0.70	U	2.5	ug/L							
1,2-Dibromo-3-chloropropane	0.96	U	2.5	ug/L							
1,2-Dibromoethane	0.78	U	2.5	ug/L							
1,2-Dichlorobenzene	0.73	U	2.5	ug/L							
1,2-Dichloroethane	0.63	U	2.5	ug/L							
1,2-Dichloropropane	0.80	U	2.5	ug/L							
1,3-Dichlorobenzene	0.77	U	2.5	ug/L							
1,4-Dichlorobenzene	0.76	U	2.5	ug/L							
2-Butanone	4.5	U	12	ug/L							
2-Hexanone	2.5	U	12	ug/L							
4-Methyl-2-pentanone	2.5	U	12	ug/L							
Acetone	10	U	25	ug/L							
Benzene	0.71	U	2.5	ug/L							
Bromodichloromethane	0.52	U	2.5	ug/L							
Bromoform	0.75	U	2.5	ug/L							
Bromomethane	0.95	U	2.5	ug/L							
Carbon disulfide	2.5	U	12	ug/L							
Carbon Tetrachloride	0.94	U	2.5	ug/L							
Chlorobenzene	0.72	U	2.5	ug/L							
Chloroethane	0.98	U	2.5	ug/L							
Chloroform	0.80	U	2.5	ug/L							
Chloromethane	0.82	U	2.5	ug/L							
cis-1,2-Dichloroethene	0.53	U	2.5	ug/L							
cis-1,3-Dichloropropene	0.59	U	2.5	ug/L							
Cyclohexane	0.93	U	2.5	ug/L							
Dibromochloromethane	0.50	U	2.5	ug/L							
Dichlorodifluoromethane	0.74	U	2.5	ug/L							
Ethylbenzene	0.69	U	2.5	ug/L							
Freon 113	0.73	U	2.5	ug/L							
Isopropylbenzene	0.67	U	2.5	ug/L							
Methyl acetate	0.95	U	2.5	ug/L							
Methylene Chloride	2.5	U	12	ug/L							
Methyl-tert-Butyl Ether	0.60	U	2.5	ug/L							
Styrene	0.61	U	2.5	ug/L							
Tetrachloroethene	0.76	U	2.5	ug/L							
Toluene	0.72	U	2.5	ug/L							
trans-1,2-Dichloroethene	0.73	U	2.5	ug/L							
trans-1,3-Dichloropropene	0.73	U	2.5	ug/L							
Trichloroethene	0.89	U	2.5	ug/L							
Trichlorofluoromethane	0.94	U	2.5	ug/L							
Vinyl chloride	0.71	U	2.5	ug/L							
4-Bromofluorobenzene	*52*			*ug/L*	*50.0*		*104*	*41-142*			
Dibromofluoromethane	*53*			*ug/L*	*50.0*		*107*	*53-146*			
Toluene-d8	*51*			*ug/L*	*50.0*		*103*	*41-146*			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1L28001 - EPA 5030B_MS - Continued

LCS (1L28001-BS1) Prepared: 12/28/2021 00:00 Analyzed: 12/28/2021 07:54

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	22		2.5	ug/L	20.0		112	57-148			
1,1,2,2-Tetrachloroethane	22		2.5	ug/L	20.0		112	60-139			
1,1,2-Trichloroethane	23		2.5	ug/L	20.0		117	57-141			
1,1-Dichloroethane	22		2.5	ug/L	20.0		109	57-142			
1,1-Dichloroethene	22		2.5	ug/L	20.0		109	47-139			
1,2,4-Trichlorobenzene	22		2.5	ug/L	20.0		112	52-159			
1,2-Dibromo-3-chloropropane	22		2.5	ug/L	20.0		110	48-150			
1,2-Dibromoethane	21		2.5	ug/L	20.0		107	57-140			
1,2-Dichlorobenzene	22		2.5	ug/L	20.0		108	63-131			
1,2-Dichloroethane	18		2.5	ug/L	20.0		92	50-156			
1,2-Dichloropropane	21		2.5	ug/L	20.0		105	61-133			
1,3-Dichlorobenzene	22		2.5	ug/L	20.0		112	66-129			
1,4-Dichlorobenzene	20		2.5	ug/L	20.0		102	65-133			
2-Butanone	110		12	ug/L	100		111	10-180			
2-Hexanone	93		12	ug/L	100		93	12-180			
4-Methyl-2-pentanone	100		12	ug/L	100		103	19-180			
Acetone	92		25	ug/L	100		92	10-180			
Benzene	22		2.5	ug/L	20.0		110	56-136			
Bromodichloromethane	19		2.5	ug/L	20.0		94	58-135			
Bromoform	28		2.5	ug/L	20.0		138	46-148			
Bromomethane	18		2.5	ug/L	20.0		92	10-173			
Carbon disulfide	23		12	ug/L	20.0		115	43-153			
Carbon Tetrachloride	24		2.5	ug/L	20.0		119	54-156			
Chlorobenzene	23		2.5	ug/L	20.0		115	51-139			
Chloroethane	24		2.5	ug/L	20.0		118	27-180			
Chloroform	21		2.5	ug/L	20.0		107	58-139			
Chloromethane	19		2.5	ug/L	20.0		96	33-154			
cis-1,2-Dichloroethene	22		2.5	ug/L	20.0		109	56-128			
cis-1,3-Dichloropropene	18		2.5	ug/L	20.0		89	64-128			
Cyclohexane	23		2.5	ug/L	20.0		117	70-130			
Dibromochloromethane	20		2.5	ug/L	20.0		101	50-140			
Dichlorodifluoromethane	18		2.5	ug/L	20.0		90	10-180			
Ethylbenzene	22		2.5	ug/L	20.0		111	63-133			
Freon 113	22		2.5	ug/L	20.0		110	47-173			
Isopropylbenzene	23		2.5	ug/L	20.0		114	60-132			
m,p-Xylenes	45		5.0	ug/L	40.0		113	64-133			
Methyl acetate	22		2.5	ug/L	20.0		110	70-130			
Methylene Chloride	22		12	ug/L	20.0		111	43-142			
Methyl-tert-Butyl Ether	22		2.5	ug/L	20.0		110	51-145			
o-Xylene	23		2.5	ug/L	20.0		116	61-129			
Styrene	21		2.5	ug/L	20.0		106	59-136			
Tetrachloroethene	22		2.5	ug/L	20.0		108	60-147			
Toluene	22		2.5	ug/L	20.0		108	64-131			
trans-1,2-Dichloroethene	23		2.5	ug/L	20.0		113	54-134			
trans-1,3-Dichloropropene	21		2.5	ug/L	20.0		103	65-149			
Trichloroethene	20		2.5	ug/L	20.0		99	62-135			
Trichlorofluoromethane	21		2.5	ug/L	20.0		103	56-155			
Vinyl chloride	20		2.5	ug/L	20.0		101	20-167			
4-Bromofluorobenzene	*53*			*ug/L*	*50.0*		*106*	*41-142*			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1L28001 - EPA 5030B_MS - Continued

LCS (1L28001-BS1) Continued Prepared: 12/28/2021 00:00 Analyzed: 12/28/2021 07:54

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Dibromofluoromethane	*54*			*ug/L*	*50.0*		*109*	*53-146*			
Toluene-d8	*53*			*ug/L*	*50.0*		*106*	*41-146*			

Batch 1L29002 - EPA 5030B_MS

Blank (1L29002-BLK1) Prepared: 12/29/2021 06:42 Analyzed: 12/29/2021 07:54

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	0.80	U	2.5	ug/L							
1,1,2,2-Tetrachloroethane	0.54	U	2.5	ug/L							
1,1,2-Trichloroethane	0.76	U	2.5	ug/L							
1,1-Dichloroethane	0.62	U	2.5	ug/L							
1,1-Dichloroethene	0.94	U	2.5	ug/L							
1,2,4-Trichlorobenzene	0.70	U	2.5	ug/L							
1,2-Dibromo-3-chloropropane	0.96	U	2.5	ug/L							
1,2-Dibromoethane	0.78	U	2.5	ug/L							
1,2-Dichlorobenzene	0.73	U	2.5	ug/L							
1,2-Dichloroethane	0.63	U	2.5	ug/L							
1,2-Dichloropropane	0.80	U	2.5	ug/L							
1,3-Dichlorobenzene	0.77	U	2.5	ug/L							
1,4-Dichlorobenzene	0.76	U	2.5	ug/L							
2-Butanone	4.5	U	12	ug/L							
2-Hexanone	2.5	U	12	ug/L							
4-Methyl-2-pentanone	2.5	U	12	ug/L							
Acetone	10	U	25	ug/L							
Benzene	0.71	U	2.5	ug/L							
Bromodichloromethane	0.52	U	2.5	ug/L							
Bromoform	0.75	U	2.5	ug/L							
Bromomethane	0.95	U	2.5	ug/L							
Carbon disulfide	2.5	U	12	ug/L							
Carbon Tetrachloride	0.94	U	2.5	ug/L							
Chlorobenzene	0.72	U	2.5	ug/L							
Chloroethane	0.98	U	2.5	ug/L							
Chloroform	0.80	U	2.5	ug/L							
Chloromethane	0.82	U	2.5	ug/L							
cis-1,2-Dichloroethene	0.53	U	2.5	ug/L							
cis-1,3-Dichloropropene	0.59	U	2.5	ug/L							
Cyclohexane	0.93	U	2.5	ug/L							
Dibromochloromethane	0.50	U	2.5	ug/L							
Dichlorodifluoromethane	0.74	U	2.5	ug/L							
Ethylbenzene	0.69	U	2.5	ug/L							
Freon 113	0.73	U	2.5	ug/L							
Isopropylbenzene	0.67	U	2.5	ug/L							
Methyl acetate	0.95	U	2.5	ug/L							
Methylene Chloride	2.5	U	12	ug/L							
Methyl-tert-Butyl Ether	0.60	U	2.5	ug/L							
Styrene	0.61	U	2.5	ug/L							
Tetrachloroethene	0.76	U	2.5	ug/L							
Toluene	0.72	U	2.5	ug/L							

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1L29002 - EPA 5030B_MS - Continued

Blank (1L29002-BLK1) Continued Prepared: 12/29/2021 06:42 Analyzed: 12/29/2021 07:54

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
trans-1,2-Dichloroethene	0.73	U	2.5	ug/L							
trans-1,3-Dichloropropene	0.73	U	2.5	ug/L							
Trichloroethene	0.89	U	2.5	ug/L							
Trichlorofluoromethane	0.94	U	2.5	ug/L							
Vinyl chloride	0.71	U	2.5	ug/L							
4-Bromofluorobenzene	*53*			*ug/L*	*50.0*		*106*	*41-142*			
Dibromofluoromethane	*52*			*ug/L*	*50.0*		*103*	*53-146*			
Toluene-d8	*52*			*ug/L*	*50.0*		*104*	*41-146*			

LCS (1L29002-BS1) Prepared: 12/29/2021 06:42 Analyzed: 12/29/2021 06:58

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	23		2.5	ug/L	20.0		117	57-148			
1,1,2,2-Tetrachloroethane	23		2.5	ug/L	20.0		115	60-139			
1,1,2-Trichloroethane	24		2.5	ug/L	20.0		119	57-141			
1,1-Dichloroethane	22		2.5	ug/L	20.0		112	57-142			
1,1-Dichloroethene	22		2.5	ug/L	20.0		112	47-139			
1,2,4-Trichlorobenzene	24		2.5	ug/L	20.0		122	52-159			
1,2-Dibromo-3-chloropropane	23		2.5	ug/L	20.0		114	48-150			
1,2-Dibromoethane	23		2.5	ug/L	20.0		117	57-140			
1,2-Dichlorobenzene	23		2.5	ug/L	20.0		114	63-131			
1,2-Dichloroethane	19		2.5	ug/L	20.0		96	50-156			
1,2-Dichloropropane	22		2.5	ug/L	20.0		112	61-133			
1,3-Dichlorobenzene	23		2.5	ug/L	20.0		116	66-129			
1,4-Dichlorobenzene	21		2.5	ug/L	20.0		104	65-133			
2-Butanone	110		12	ug/L	100		110	10-180			
2-Hexanone	97		12	ug/L	100		97	12-180			
4-Methyl-2-pentanone	110		12	ug/L	100		109	19-180			
Acetone	100		25	ug/L	100		101	10-180			
Benzene	23		2.5	ug/L	20.0		114	56-136			
Bromodichloromethane	20		2.5	ug/L	20.0		100	58-135			
Bromoform	27		2.5	ug/L	20.0		136	46-148			
Bromomethane	12		2.5	ug/L	20.0		58	10-173			
Carbon disulfide	25		12	ug/L	20.0		123	43-153			
Carbon Tetrachloride	25		2.5	ug/L	20.0		124	54-156			
Chlorobenzene	24		2.5	ug/L	20.0		118	51-139			
Chloroethane	22		2.5	ug/L	20.0		111	27-180			
Chloroform	22		2.5	ug/L	20.0		108	58-139			
Chloromethane	19		2.5	ug/L	20.0		95	33-154			
cis-1,2-Dichloroethene	23		2.5	ug/L	20.0		115	56-128			
cis-1,3-Dichloropropene	19		2.5	ug/L	20.0		95	64-128			
Cyclohexane	23		2.5	ug/L	20.0		116	70-130			
Dibromochloromethane	21		2.5	ug/L	20.0		106	50-140			
Dichlorodifluoromethane	18		2.5	ug/L	20.0		92	10-180			
Ethylbenzene	23		2.5	ug/L	20.0		116	63-133			
Freon 113	22		2.5	ug/L	20.0		109	47-173			
Isopropylbenzene	24		2.5	ug/L	20.0		121	60-132			
m,p-Xylenes	48		5.0	ug/L	40.0		120	64-133			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1L29002 - EPA 5030B_MS - Continued

LCS (1L29002-BS1) Continued Prepared: 12/29/2021 06:42 Analyzed: 12/29/2021 06:58

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Methyl acetate	25		2.5	ug/L	20.0		124	70-130			
Methylene Chloride	23		12	ug/L	20.0		113	43-142			
Methyl-tert-Butyl Ether	23		2.5	ug/L	20.0		114	51-145			
o-Xylene	25		2.5	ug/L	20.0		124	61-129			
Styrene	21		2.5	ug/L	20.0		107	59-136			
Tetrachloroethene	22		2.5	ug/L	20.0		108	60-147			
Toluene	23		2.5	ug/L	20.0		113	64-131			
trans-1,2-Dichloroethene	23		2.5	ug/L	20.0		117	54-134			
trans-1,3-Dichloropropene	21		2.5	ug/L	20.0		105	65-149			
Trichloroethene	21		2.5	ug/L	20.0		105	62-135			
Trichlorofluoromethane	20		2.5	ug/L	20.0		102	56-155			
Vinyl chloride	21		2.5	ug/L	20.0		103	20-167			
4-Bromofluorobenzene	*54*			*ug/L*	*50.0*		*109*	*41-142*			
Dibromofluoromethane	*52*			*ug/L*	*50.0*		*104*	*53-146*			
Toluene-d8	*53*			*ug/L*	*50.0*		*106*	*41-146*			

Matrix Spike (1L29002-MS1) Prepared: 12/29/2021 06:42 Analyzed: 12/29/2021 10:12

Source: AE10179-09

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	25		2.5	ug/L	20.0	0.80 U	123	57-148			
1,1,2,2-Tetrachloroethane	22		2.5	ug/L	20.0	0.54 U	110	60-139			
1,1,2-Trichloroethane	22		2.5	ug/L	20.0	0.76 U	112	57-141			
1,1-Dichloroethane	23		2.5	ug/L	20.0	0.62 U	115	57-142			
1,1-Dichloroethene	22		2.5	ug/L	20.0	0.94 U	111	47-139			
1,2,4-Trichlorobenzene	23		2.5	ug/L	20.0	0.70 U	115	52-159			
1,2-Dibromo-3-chloropropane	22		2.5	ug/L	20.0	0.96 U	111	48-150			
1,2-Dibromoethane	21		2.5	ug/L	20.0	0.78 U	103	57-140			
1,2-Dichlorobenzene	23		2.5	ug/L	20.0	0.73 U	114	63-131			
1,2-Dichloroethane	19		2.5	ug/L	20.0	0.63 U	95	50-156			
1,2-Dichloropropane	21		2.5	ug/L	20.0	0.80 U	106	61-133			
1,3-Dichlorobenzene	23		2.5	ug/L	20.0	0.77 U	117	66-129			
1,4-Dichlorobenzene	21		2.5	ug/L	20.0	0.76 U	104	65-133			
2-Butanone	110		12	ug/L	100	4.5 U	105	10-180			
2-Hexanone	85		12	ug/L	100	2.5 U	85	12-180			
4-Methyl-2-pentanone	100		12	ug/L	100	2.5 U	104	19-180			
Acetone	86		25	ug/L	100	10 U	86	10-180			
Benzene	22		2.5	ug/L	20.0	0.71 U	112	56-136			
Bromodichloromethane	19		2.5	ug/L	20.0	0.52 U	95	58-135			
Bromoform	25		2.5	ug/L	20.0	0.75 U	125	46-148			
Bromomethane	11		2.5	ug/L	20.0	0.95 U	53	10-173			
Carbon disulfide	26		12	ug/L	20.0	2.5 U	129	43-153			
Carbon Tetrachloride	29		2.5	ug/L	20.0	0.94 U	145	54-156			
Chlorobenzene	22		2.5	ug/L	20.0	0.72 U	111	51-139			
Chloroethane	25		2.5	ug/L	20.0	0.98 U	124	27-180			
Chloroform	22		2.5	ug/L	20.0	0.80 U	110	58-139			
Chloromethane	19		2.5	ug/L	20.0	0.82 U	97	33-154			
cis-1,2-Dichloroethene	22		2.5	ug/L	20.0	0.53 U	112	56-128			
cis-1,3-Dichloropropene	18		2.5	ug/L	20.0	0.59 U	89	64-128			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1L29002 - EPA 5030B_MS - Continued

Matrix Spike (1L29002-MS1) Continued Prepared: 12/29/2021 06:42 Analyzed: 12/29/2021 10:12

Source: AE10179-09

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Cyclohexane	23		2.5	ug/L	20.0	0.93 U	115	70-130			
Dibromochloromethane	20		2.5	ug/L	20.0	0.50 U	99	50-140			
Dichlorodifluoromethane	17		2.5	ug/L	20.0	0.74 U	86	10-180			
Ethylbenzene	23		2.5	ug/L	20.0	0.69 U	114	63-133			
Freon 113	21		2.5	ug/L	20.0	0.73 U	103	47-173			
Isopropylbenzene	23		2.5	ug/L	20.0	0.67 U	115	60-132			
m,p-Xylenes	45		5.0	ug/L	40.0	1.3 U	113	64-133			
Methyl acetate	20		2.5	ug/L	20.0	0.95 U	102	70-130			
Methylene Chloride	23		12	ug/L	20.0	2.5 U	117	43-142			
Methyl-tert-Butyl Ether	22		2.5	ug/L	20.0	0.60 U	112	51-145			
o-Xylene	23		2.5	ug/L	20.0	0.53 U	114	61-129			
Styrene	20		2.5	ug/L	20.0	0.61 U	102	59-136			
Tetrachloroethene	21		2.5	ug/L	20.0	0.76 U	106	60-147			
Toluene	21		2.5	ug/L	20.0	0.72 U	106	64-131			
trans-1,2-Dichloroethene	24		2.5	ug/L	20.0	0.73 U	121	54-134			
trans-1,3-Dichloropropene	20		2.5	ug/L	20.0	0.73 U	98	65-149			
Trichloroethene	22		2.5	ug/L	20.0	0.89 U	108	62-135			
Trichlorofluoromethane	20		2.5	ug/L	20.0	0.94 U	101	56-155			
Vinyl chloride	21		2.5	ug/L	20.0	0.71 U	103	20-167			
4-Bromofluorobenzene	*52*			*ug/L*	*50.0*		*104*	*41-142*			
Dibromofluoromethane	*54*			*ug/L*	*50.0*		*108*	*53-146*			
Toluene-d8	*53*			*ug/L*	*50.0*		*105*	*41-146*			

Matrix Spike Dup (1L29002-MSD1) Prepared: 12/29/2021 06:42 Analyzed: 12/29/2021 10:40

Source: AE10179-09

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	24		2.5	ug/L	20.0	0.80 U	121	57-148	2	25	
1,1,2,2-Tetrachloroethane	21		2.5	ug/L	20.0	0.54 U	105	60-139	4	17	
1,1,2-Trichloroethane	22		2.5	ug/L	20.0	0.76 U	109	57-141	2	16	
1,1-Dichloroethane	23		2.5	ug/L	20.0	0.62 U	114	57-142	0.8	24	
1,1-Dichloroethene	23		2.5	ug/L	20.0	0.94 U	115	47-139	4	16	
1,2,4-Trichlorobenzene	22		2.5	ug/L	20.0	0.70 U	108	52-159	6	24	
1,2-Dibromo-3-chloropropane	19		2.5	ug/L	20.0	0.96 U	96	48-150	14	21	
1,2-Dibromoethane	21		2.5	ug/L	20.0	0.78 U	105	57-140	1	16	
1,2-Dichlorobenzene	22		2.5	ug/L	20.0	0.73 U	111	63-131	3	25	
1,2-Dichloroethane	19		2.5	ug/L	20.0	0.63 U	94	50-156	1	18	
1,2-Dichloropropane	21		2.5	ug/L	20.0	0.80 U	105	61-133	0.8	26	
1,3-Dichlorobenzene	22		2.5	ug/L	20.0	0.77 U	109	66-129	7	23	
1,4-Dichlorobenzene	21		2.5	ug/L	20.0	0.76 U	104	65-133	0.1	23	
2-Butanone	110		12	ug/L	100	4.5 U	106	10-180	0.9	29	
2-Hexanone	83		12	ug/L	100	2.5 U	83	12-180	2	28	
4-Methyl-2-pentanone	98		12	ug/L	100	2.5 U	98	19-180	6	24	
Acetone	84		25	ug/L	100	10 U	84	10-180	2	19	
Benzene	22		2.5	ug/L	20.0	0.71 U	109	56-136	3	14	
Bromodichloromethane	19		2.5	ug/L	20.0	0.52 U	97	58-135	2	19	
Bromoform	25		2.5	ug/L	20.0	0.75 U	123	46-148	1	18	
Bromomethane	11		2.5	ug/L	20.0	0.95 U	57	10-173	7	29	
Carbon disulfide	24		12	ug/L	20.0	2.5 U	119	43-153	8	26	

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 1L29002 - EPA 5030B_MS - Continued

Matrix Spike Dup (1L29002-MSD1) Continued Prepared: 12/29/2021 06:42 Analyzed: 12/29/2021 10:40

Source: AE10179-09

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Carbon Tetrachloride	29		2.5	ug/L	20.0	0.94 U	144	54-156	0.6	27	
Chlorobenzene	23		2.5	ug/L	20.0	0.72 U	114	51-139	2	13	
Chloroethane	24		2.5	ug/L	20.0	0.98 U	120	27-180	3	22	
Chloroform	22		2.5	ug/L	20.0	0.80 U	109	58-139	0.8	17	
Chloromethane	19		2.5	ug/L	20.0	0.82 U	94	33-154	2	31	
cis-1,2-Dichloroethene	23		2.5	ug/L	20.0	0.53 U	115	56-128	3	17	
cis-1,3-Dichloropropene	17		2.5	ug/L	20.0	0.59 U	86	64-128	3	20	
Cyclohexane	23		2.5	ug/L	20.0	0.93 U	116	70-130	2	20	
Dibromochloromethane	20		2.5	ug/L	20.0	0.50 U	100	50-140	2	18	
Dichlorodifluoromethane	16		2.5	ug/L	20.0	0.74 U	80	10-180	7	26	
Ethylbenzene	22		2.5	ug/L	20.0	0.69 U	112	63-133	2	18	
Freon 113	20		2.5	ug/L	20.0	0.73 U	102	47-173	1	30	
Isopropylbenzene	23		2.5	ug/L	20.0	0.67 U	116	60-132	0.2	23	
m,p-Xylenes	45		5.0	ug/L	40.0	1.3 U	112	64-133	0.7	18	
Methyl acetate	20		2.5	ug/L	20.0	0.95 U	101	70-130	1	20	
Methylene Chloride	23		12	ug/L	20.0	2.5 U	116	43-142	0.7	23	
Methyl-tert-Butyl Ether	22		2.5	ug/L	20.0	0.60 U	109	51-145	3	22	
o-Xylene	23		2.5	ug/L	20.0	0.53 U	117	61-129	3	16	
Styrene	20		2.5	ug/L	20.0	0.61 U	101	59-136	0.8	32	
Tetrachloroethene	21		2.5	ug/L	20.0	0.76 U	104	60-147	2	21	
Toluene	21		2.5	ug/L	20.0	0.72 U	105	64-131	1	16	
trans-1,2-Dichloroethene	24		2.5	ug/L	20.0	0.73 U	118	54-134	2	20	
trans-1,3-Dichloropropene	20		2.5	ug/L	20.0	0.73 U	101	65-149	3	17	
Trichloroethene	21		2.5	ug/L	20.0	0.89 U	105	62-135	2	20	
Trichlorofluoromethane	20		2.5	ug/L	20.0	0.94 U	99	56-155	2	22	
Vinyl chloride	20		2.5	ug/L	20.0	0.71 U	102	20-167	0.4	24	
4-Bromofluorobenzene	*54*			*ug/L*	*50.0*		*108*	*41-142*			
Dibromofluoromethane	*54*			*ug/L*	*50.0*		*109*	*53-146*			
Toluene-d8	*54*			*ug/L*	*50.0*		*108*	*41-146*			

FLAGS/NOTES AND DEFINITIONS

PQL	PQL: Practical Quantitation Limit. The PQL presented is the laboratory MRL.
B	Results are based upon membrane filter colony counts that are outside the method indicated ideal range.
I	The reported value is between the laboratory method detection limit (MDL) and the practical quantitation limit (PQL).
J	Estimated value.
K	Off-scale low; Actual value is known to be less than the value given.
L	Off-scale high; Actual value is known to be greater than value given.
M	Presence of analyte is verified but not quantified; the actual value is less than the MRL but greater than the MDL.
N	Presumptive evidence of presence of material.
O	Sampled, but analysis lost or not performed.
Q	Sample exceeded the accepted holding time.
T	Value reported is less than the laboratory method detection limit. The value is reported for informational purposes only and shall not be used in statistical analysis.
U	Indicates that the compound was analyzed for but not detected.
V	Indicates that the analyte was detected in both the sample and the associated method blank.
Y	The laboratory analysis was from an improperly preserved sample. The data may not be accurate.
Z	Too many colonies were present (TNTC); the numeric value represents the filtration volume.
?	Data are rejected and should not be used. Some or all of the quality control data for the analyte were outside criteria, and the presence or absence of the analyte cannot be determined from the data.
*	Not reported due to interference.
[CALC]	Calculated analyte - MDL/MRL reported to the highest reporting limit of the component analyses.
QV-01	The associated continuing calibration verification standard exhibited high bias; since the result is ND, there is no impact.

AE10179

Tetra Tech, Inc. CHAIN OF CUSTODY | NUMBER No. 2555 | PAGE 1 OF 1

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G08985	KSC-LC34	Mark Sonnet	(412) 921-8622	ENCO — Kristin Rylnicki
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER	PHONE NUMBER	ADDRESS
Chuck Sorden, James Lloyd, Robert Siegel		Chuck Sorden	(321) 591-7580	10775 Central Port Dr.
		CARRIER/WAYBILL NUMBER		CITY, STATE
				Orlando, FL

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G
PRESERVATIVE USED: HCl/4°C

DATE YEAR 2021	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS: 8260D TCL SOM02	COMMENTS
12/23	0925	LC34-IW0042D2-0895-2021	1223	87	92	GW	G	3	X	
	0930	LC34-IW0043D2-110.0-2021	1223	105	115					
	1000	LC34-IW0010D2-110.0-2021	1223							
	1010	LC34-IW0160-110.0-2021	1223							
	1015	LC34-IW0045D2-110.0-2021	1223							
	1055	LC34-IW0165-110.0-2021	1223							
	1115	LC34-IW0044D2-110.0-2021	1223							
	1150	LC34-IW0163-110.0-2021	1223							
	1150	LC34-IW0164-110.0-2021	1223							
	1155	LC34-IW0162-110.0-2021	1223							
12/23	1230	LC34-IW0161-110.0-2021	1223	105	115	GW	G	3	X	

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	12/23/21	1320	1. RECEIVED BY	12/23/21	1320
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS: C - 2242 3.0°C

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Tuesday, February 15, 2022
Tetra Tech NUS, Inc. (TE015)
Attn: Mark Jonnet
Foster Plaza 7, 661 Anderson Drive
Pittsburgh, PA 15220

RE: Laboratory Results for
Project Number: 112G08985, Project Name/Desc: NASA KSC LC34
ENCO Workorder(s): AF00910

Dear Mark Jonnet,

Enclosed is a copy of your laboratory report for test samples received by our laboratory on Friday, February 4, 2022.

Unless otherwise noted in an attached project narrative, all samples were received in acceptable condition and processed in accordance with the referenced methods/procedures. Results for these procedures apply only to the samples as submitted.

The analytical results contained in this report are in compliance with NELAC standards, except as noted in the project narrative if applicable. This report shall not be reproduced except in full, without the written approval of the Laboratory.

This report contains only those analyses performed by Environmental Conservation Laboratories. Unless otherwise noted, all analyses were performed at ENCO Orlando. Data from outside organizations will be reported under separate cover.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

Kaitlin Dylnicki

Project Manager

Enclosure(s)

SAMPLE SUMMARY/LABORATORY CHRONICLE

Client ID: LC34-IW0162-110.0-20220204 **Lab ID:** AF00910-01 **Sampled:** 02/04/22 15:00 **Received:** 02/04/22 15:50

Parameter	Preparation	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260D	EPA 5030B_MS	02/18/22	02/09/22 09:53	02/09/22 10:34

SAMPLE DETECTION SUMMARY

Client ID: LC34-IW0162-110.0-20220204 **Lab ID:** AF00910-01

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Trichloroethene	7.4		0.89	2.5	ug/L	EPA 8260D	

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ANALYTICAL RESULTS

Description: LC34-IW0162-110.0-20220204 | **Lab Sample ID:** AF00910-01 | **Received:** 02/04/22 15:50

Matrix: Ground Water | **Sampled:** 02/04/22 15:00 | **Work Order:** AF00910

Project: NASA KSC LC34 | **Sampled By:** Chuck Sorden

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	2.5	2B09014	EPA 8260D	02/09/22 10:34	KKW	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	2.5	2B09014	EPA 8260D	02/09/22 10:34	KKW	
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	2.5	2B09014	EPA 8260D	02/09/22 10:34	KKW	
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	2.5	2B09014	EPA 8260D	02/09/22 10:34	KKW	
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	2.5	2B09014	EPA 8260D	02/09/22 10:34	KKW	
1,2,4-Trichlorobenzene [120-82-1]^	0.70	U	ug/L	1	0.70	2.5	2B09014	EPA 8260D	02/09/22 10:34	KKW	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.96	U	ug/L	1	0.96	2.5	2B09014	EPA 8260D	02/09/22 10:34	KKW	
1,2-Dibromoethane [106-93-4]^	0.78	U	ug/L	1	0.78	2.5	2B09014	EPA 8260D	02/09/22 10:34	KKW	
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	2.5	2B09014	EPA 8260D	02/09/22 10:34	KKW	
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	2.5	2B09014	EPA 8260D	02/09/22 10:34	KKW	
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	2.5	2B09014	EPA 8260D	02/09/22 10:34	KKW	
1,3-Dichlorobenzene [541-73-1]^	0.77	U	ug/L	1	0.77	2.5	2B09014	EPA 8260D	02/09/22 10:34	KKW	
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	2.5	2B09014	EPA 8260D	02/09/22 10:34	KKW	
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	12	2B09014	EPA 8260D	02/09/22 10:34	KKW	
2-Hexanone [591-78-6]^	2.5	U	ug/L	1	2.5	12	2B09014	EPA 8260D	02/09/22 10:34	KKW	
4-Methyl-2-pentanone [108-10-1]^	2.5	U	ug/L	1	2.5	12	2B09014	EPA 8260D	02/09/22 10:34	KKW	
Acetone [67-64-1]^	10	U	ug/L	1	10	25	2B09014	EPA 8260D	02/09/22 10:34	KKW	
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	2.5	2B09014	EPA 8260D	02/09/22 10:34	KKW	
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	2.5	2B09014	EPA 8260D	02/09/22 10:34	KKW	
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	2.5	2B09014	EPA 8260D	02/09/22 10:34	KKW	
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	2.5	2B09014	EPA 8260D	02/09/22 10:34	KKW	QV-01
Carbon disulfide [75-15-0]^	2.5	U	ug/L	1	2.5	12	2B09014	EPA 8260D	02/09/22 10:34	KKW	QV-01
Carbon Tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	2.5	2B09014	EPA 8260D	02/09/22 10:34	KKW	QM-07, QV-01
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	2.5	2B09014	EPA 8260D	02/09/22 10:34	KKW	
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	2.5	2B09014	EPA 8260D	02/09/22 10:34	KKW	
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	2.5	2B09014	EPA 8260D	02/09/22 10:34	KKW	
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	2.5	2B09014	EPA 8260D	02/09/22 10:34	KKW	
cis-1,2-Dichloroethene [156-59-2]^	0.53	U	ug/L	1	0.53	2.5	2B09014	EPA 8260D	02/09/22 10:34	KKW	
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	2.5	2B09014	EPA 8260D	02/09/22 10:34	KKW	
Cyclohexane [110-82-7]^	0.93	U	ug/L	1	0.93	2.5	2B09014	EPA 8260D	02/09/22 10:34	KKW	QV-01
Dibromochloromethane [124-48-1]^	0.50	U	ug/L	1	0.50	2.5	2B09014	EPA 8260D	02/09/22 10:34	KKW	
Dichlorodifluoromethane [75-71-8]^	0.74	U	ug/L	1	0.74	2.5	2B09014	EPA 8260D	02/09/22 10:34	KKW	
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	2.5	2B09014	EPA 8260D	02/09/22 10:34	KKW	
Freon 113 [76-13-1]^	0.73	U	ug/L	1	0.73	2.5	2B09014	EPA 8260D	02/09/22 10:34	KKW	
Isopropylbenzene [98-82-8]^	0.67	U	ug/L	1	0.67	2.5	2B09014	EPA 8260D	02/09/22 10:34	KKW	
Methyl acetate [79-20-9]^	0.95	U	ug/L	1	0.95	2.5	2B09014	EPA 8260D	02/09/22 10:34	KKW	
Methylene Chloride [75-09-2]^	2.5	U	ug/L	1	2.5	12	2B09014	EPA 8260D	02/09/22 10:34	KKW	
Methyl-tert-Butyl Ether [1634-04-4]^	0.60	U	ug/L	1	0.60	2.5	2B09014	EPA 8260D	02/09/22 10:34	KKW	QV-01
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	2.5	2B09014	EPA 8260D	02/09/22 10:34	KKW	
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	2.5	2B09014	EPA 8260D	02/09/22 10:34	KKW	
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	2.5	2B09014	EPA 8260D	02/09/22 10:34	KKW	
trans-1,2-Dichloroethene [156-60-5]^	0.73	U	ug/L	1	0.73	2.5	2B09014	EPA 8260D	02/09/22 10:34	KKW	
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	2.5	2B09014	EPA 8260D	02/09/22 10:34	KKW	
Trichloroethene [79-01-6]^	**7.4**		ug/L	1	0.89	2.5	2B09014	EPA 8260D	02/09/22 10:34	KKW	
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	2.5	2B09014	EPA 8260D	02/09/22 10:34	KKW	
Vinyl chloride [75-01-4]^	0.71	U	ug/L	1	0.71	2.5	2B09014	EPA 8260D	02/09/22 10:34	KKW	

ANALYTICAL RESULTS

Description: LC34-IW0162-110.0-20220204 **Lab Sample ID:** AF00910-01 **Received:** 02/04/22 15:50

Matrix: Ground Water **Sampled:** 02/04/22 15:00 **Work Order:** AF00910

Project: NASA KSC LC34 **Sampled By:** Chuck Sorden

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Xylenes (Total) [1330-20-7]	1.3	U	ug/L	1	1.3	5.0	2B09014	EPA 8260D	02/09/22 10:34	KKW	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*53*	*1*	*50.0*	*107 %*	*41-142*	*2B09014*	*EPA 8260D*	*02/09/22 10:34*	*KKW*	
Dibromofluoromethane	*54*	*1*	*50.0*	*108 %*	*53-146*	*2B09014*	*EPA 8260D*	*02/09/22 10:34*	*KKW*	
Toluene-d8	*53*	*1*	*50.0*	*105 %*	*41-146*	*2B09014*	*EPA 8260D*	*02/09/22 10:34*	*KKW*	

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2B09014 - EPA 5030B_MS

Blank (2B09014-BLK1) Prepared: 02/09/2022 00:00 Analyzed: 02/09/2022 09:39

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	0.80	U	2.5	ug/L							
1,1,2,2-Tetrachloroethane	0.54	U	2.5	ug/L							
1,1,2-Trichloroethane	0.76	U	2.5	ug/L							
1,1-Dichloroethane	0.62	U	2.5	ug/L							
1,1-Dichloroethene	0.94	U	2.5	ug/L							
1,2,4-Trichlorobenzene	0.70	U	2.5	ug/L							
1,2-Dibromo-3-chloropropane	0.96	U	2.5	ug/L							
1,2-Dibromoethane	0.78	U	2.5	ug/L							
1,2-Dichlorobenzene	0.73	U	2.5	ug/L							
1,2-Dichloroethane	0.63	U	2.5	ug/L							
1,2-Dichloropropane	0.80	U	2.5	ug/L							
1,3-Dichlorobenzene	0.77	U	2.5	ug/L							
1,4-Dichlorobenzene	0.76	U	2.5	ug/L							
2-Butanone	4.5	U	12	ug/L							
2-Hexanone	2.5	U	12	ug/L							
4-Methyl-2-pentanone	2.5	U	12	ug/L							
Acetone	10	U	25	ug/L							
Benzene	0.71	U	2.5	ug/L							
Bromodichloromethane	0.52	U	2.5	ug/L							
Bromoform	0.75	U	2.5	ug/L							
Bromomethane	0.95	U	2.5	ug/L							
Carbon disulfide	2.5	U	12	ug/L							
Carbon Tetrachloride	0.94	U	2.5	ug/L							
Chlorobenzene	0.72	U	2.5	ug/L							
Chloroethane	0.98	U	2.5	ug/L							
Chloroform	0.80	U	2.5	ug/L							
Chloromethane	0.82	U	2.5	ug/L							
cis-1,2-Dichloroethene	0.53	U	2.5	ug/L							
cis-1,3-Dichloropropene	0.59	U	2.5	ug/L							
Cyclohexane	0.93	U	2.5	ug/L							
Dibromochloromethane	0.50	U	2.5	ug/L							
Dichlorodifluoromethane	0.74	U	2.5	ug/L							
Ethylbenzene	0.69	U	2.5	ug/L							
Freon 113	0.73	U	2.5	ug/L							
Isopropylbenzene	0.67	U	2.5	ug/L							
Methyl acetate	0.95	U	2.5	ug/L							
Methylene Chloride	2.5	U	12	ug/L							
Methyl-tert-Butyl Ether	0.60	U	2.5	ug/L							
Styrene	0.61	U	2.5	ug/L							
Tetrachloroethene	0.76	U	2.5	ug/L							
Toluene	0.72	U	2.5	ug/L							
trans-1,2-Dichloroethene	0.73	U	2.5	ug/L							
trans-1,3-Dichloropropene	0.73	U	2.5	ug/L							
Trichloroethene	0.89	U	2.5	ug/L							
Trichlorofluoromethane	0.94	U	2.5	ug/L							
Vinyl chloride	0.71	U	2.5	ug/L							
Xylenes (Total)	1.3	U	5.0	ug/L							
4-Bromofluorobenzene	*55*			*ug/L*	*50.0*		*110*	*41-142*			
Dibromofluoromethane	*55*			*ug/L*	*50.0*		*111*	*53-146*			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2B09014 - EPA 5030B_MS - Continued

Blank (2B09014-BLK1) Continued Prepared: 02/09/2022 00:00 Analyzed: 02/09/2022 09:39

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Toluene-d8	*54*			*ug/L*	*50.0*		*108*	*41-146*			

LCS (2B09014-BS1) Prepared: 02/09/2022 00:00 Analyzed: 02/09/2022 08:43

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	23		2.5	ug/L	20.0		114	57-148			
1,1,2,2-Tetrachloroethane	20		2.5	ug/L	20.0		100	60-139			
1,1,2-Trichloroethane	20		2.5	ug/L	20.0		100	57-141			
1,1-Dichloroethane	24		2.5	ug/L	20.0		120	57-142			
1,1-Dichloroethene	20		2.5	ug/L	20.0		101	47-139			
1,2,4-Trichlorobenzene	19		2.5	ug/L	20.0		95	52-159			
1,2-Dibromo-3-chloropropane	20		2.5	ug/L	20.0		99	48-150			
1,2-Dibromoethane	19		2.5	ug/L	20.0		93	57-140			
1,2-Dichlorobenzene	20		2.5	ug/L	20.0		102	63-131			
1,2-Dichloroethane	20		2.5	ug/L	20.0		99	50-156			
1,2-Dichloropropane	20		2.5	ug/L	20.0		99	61-133			
1,3-Dichlorobenzene	20		2.5	ug/L	20.0		102	66-129			
1,4-Dichlorobenzene	19		2.5	ug/L	20.0		94	65-133			
2-Butanone	120		12	ug/L	100		115	10-180			
2-Hexanone	94		12	ug/L	100		94	12-180			
4-Methyl-2-pentanone	96		12	ug/L	100		96	19-180			
Acetone	100		25	ug/L	100		103	10-180			
Benzene	22		2.5	ug/L	20.0		109	56-136			
Bromodichloromethane	19		2.5	ug/L	20.0		94	58-135			
Bromoform	25		2.5	ug/L	20.0		123	46-148			
Bromomethane	18		2.5	ug/L	20.0		89	10-173			
Carbon disulfide	25		12	ug/L	20.0		124	43-153			
Carbon Tetrachloride	24		2.5	ug/L	20.0		121	54-156			
Chlorobenzene	20		2.5	ug/L	20.0		98	51-139			
Chloroethane	23		2.5	ug/L	20.0		114	27-180			
Chloroform	22		2.5	ug/L	20.0		110	58-139			
Chloromethane	16		2.5	ug/L	20.0		80	33-154			
cis-1,2-Dichloroethene	21		2.5	ug/L	20.0		107	56-128			
cis-1,3-Dichloropropene	19		2.5	ug/L	20.0		94	64-128			
Cyclohexane	24		2.5	ug/L	20.0		118	70-130			
Dibromochloromethane	18		2.5	ug/L	20.0		89	50-140			
Dichlorodifluoromethane	11		2.5	ug/L	20.0		54	10-180			
Ethylbenzene	20		2.5	ug/L	20.0		98	63-133			
Freon 113	22		2.5	ug/L	20.0		108	47-173			
Isopropylbenzene	21		2.5	ug/L	20.0		104	60-132			
m,p-Xylenes	40		5.0	ug/L	40.0		99	64-133			
Methyl acetate	24		2.5	ug/L	20.0		121	70-130			
Methylene Chloride	22		12	ug/L	20.0		112	43-142			
Methyl-tert-Butyl Ether	24		2.5	ug/L	20.0		122	51-145			
o-Xylene	20		2.5	ug/L	20.0		101	61-129			
Styrene	18		2.5	ug/L	20.0		91	59-136			
Tetrachloroethene	18		2.5	ug/L	20.0		89	60-147			
Toluene	19		2.5	ug/L	20.0		96	64-131			
trans-1,2-Dichloroethene	22		2.5	ug/L	20.0		111	54-134			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2B09014 - EPA 5030B_MS - Continued

LCS (2B09014-BS1) Continued Prepared: 02/09/2022 00:00 Analyzed: 02/09/2022 08:43

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
trans-1,3-Dichloropropene	19		2.5	ug/L	20.0		97	65-149			
Trichloroethene	19		2.5	ug/L	20.0		93	62-135			
Trichlorofluoromethane	19		2.5	ug/L	20.0		97	56-155			
Vinyl chloride	18		2.5	ug/L	20.0		88	20-167			
4-Bromofluorobenzene	*55*			*ug/L*	*50.0*		*110*	*41-142*			
Dibromofluoromethane	*55*			*ug/L*	*50.0*		*110*	*53-146*			
Toluene-d8	*54*			*ug/L*	*50.0*		*108*	*41-146*			

Matrix Spike (2B09014-MS1) Prepared: 02/09/2022 00:00 Analyzed: 02/09/2022 12:25

Source: AF00910-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	27		2.5	ug/L	20.0	0.80 U	134	57-148			
1,1,2,2-Tetrachloroethane	20		2.5	ug/L	20.0	0.54 U	100	60-139			
1,1,2-Trichloroethane	20		2.5	ug/L	20.0	0.76 U	100	57-141			
1,1-Dichloroethane	25		2.5	ug/L	20.0	0.62 U	125	57-142			
1,1-Dichloroethene	25		2.5	ug/L	20.0	0.94 U	123	47-139			
1,2,4-Trichlorobenzene	19		2.5	ug/L	20.0	0.70 U	93	52-159			
1,2-Dibromo-3-chloropropane	18		2.5	ug/L	20.0	0.96 U	91	48-150			
1,2-Dibromoethane	18		2.5	ug/L	20.0	0.78 U	89	57-140			
1,2-Dichlorobenzene	22		2.5	ug/L	20.0	0.73 U	109	63-131			
1,2-Dichloroethane	20		2.5	ug/L	20.0	0.63 U	102	50-156			
1,2-Dichloropropane	23		2.5	ug/L	20.0	0.80 U	113	61-133			
1,3-Dichlorobenzene	22		2.5	ug/L	20.0	0.77 U	112	66-129			
1,4-Dichlorobenzene	21		2.5	ug/L	20.0	0.76 U	103	65-133			
2-Butanone	120		12	ug/L	100	4.5 U	119	10-180			
2-Hexanone	88		12	ug/L	100	2.5 U	88	12-180			
4-Methyl-2-pentanone	90		12	ug/L	100	2.5 U	90	19-180			
Acetone	96		25	ug/L	100	10 U	96	10-180			
Benzene	23		2.5	ug/L	20.0	0.71 U	114	56-136			
Bromodichloromethane	20		2.5	ug/L	20.0	0.52 U	98	58-135			
Bromoform	24		2.5	ug/L	20.0	0.75 U	119	46-148			
Bromomethane	15		2.5	ug/L	20.0	0.95 U	73	10-173			
Carbon disulfide	29		12	ug/L	20.0	2.5 U	145	43-153			
Carbon Tetrachloride	28		2.5	ug/L	20.0	0.94 U	138	54-156			
Chlorobenzene	21		2.5	ug/L	20.0	0.72 U	106	51-139			
Chloroethane	26		2.5	ug/L	20.0	0.98 U	128	27-180			
Chloroform	24		2.5	ug/L	20.0	0.80 U	118	58-139			
Chloromethane	18		2.5	ug/L	20.0	0.82 U	90	33-154			
cis-1,2-Dichloroethene	25		2.5	ug/L	20.0	0.53 U	124	56-128			
cis-1,3-Dichloropropene	18		2.5	ug/L	20.0	0.59 U	92	64-128			
Cyclohexane	27		2.5	ug/L	20.0	0.93 U	135	70-130			QM-07
Dibromochloromethane	19		2.5	ug/L	20.0	0.50 U	93	50-140			
Dichlorodifluoromethane	13		2.5	ug/L	20.0	0.74 U	64	10-180			
Ethylbenzene	21		2.5	ug/L	20.0	0.69 U	105	63-133			
Freon 113	26		2.5	ug/L	20.0	0.73 U	130	47-173			
Isopropylbenzene	23		2.5	ug/L	20.0	0.67 U	116	60-132			
m,p-Xylenes	44		5.0	ug/L	40.0	1.3 U	111	64-133			
Methyl acetate	24		2.5	ug/L	20.0	0.95 U	119	70-130			

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2B09014 - EPA 5030B_MS - Continued

Matrix Spike (2B09014-MS1) Continued Prepared: 02/09/2022 00:00 Analyzed: 02/09/2022 12:25

Source: AF00910-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Methylene Chloride	24		12	ug/L	20.0	2.5 U	122	43-142			
Methyl-tert-Butyl Ether	25		2.5	ug/L	20.0	0.60 U	125	51-145			
o-Xylene	23		2.5	ug/L	20.0	0.53 U	116	61-129			
Styrene	19		2.5	ug/L	20.0	0.61 U	97	59-136			
Tetrachloroethene	19		2.5	ug/L	20.0	0.76 U	93	60-147			
Toluene	21		2.5	ug/L	20.0	0.72 U	104	64-131			
trans-1,2-Dichloroethene	25		2.5	ug/L	20.0	0.73 U	127	54-134			
trans-1,3-Dichloropropene	20		2.5	ug/L	20.0	0.73 U	98	65-149			
Trichloroethene	28		2.5	ug/L	20.0	7.4	103	62-135			
Trichlorofluoromethane	22		2.5	ug/L	20.0	0.94 U	108	56-155			
Vinyl chloride	20		2.5	ug/L	20.0	0.71 U	100	20-167			
4-Bromofluorobenzene	*55*			*ug/L*	*50.0*		*111*	*41-142*			
Dibromofluoromethane	*58*			*ug/L*	*50.0*		*115*	*53-146*			
Toluene-d8	*54*			*ug/L*	*50.0*		*107*	*41-146*			

Matrix Spike Dup (2B09014-MSD1) Prepared: 02/09/2022 00:00 Analyzed: 02/09/2022 12:53

Source: AF00910-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	25		2.5	ug/L	20.0	0.80 U	126	57-148	6	25	
1,1,2,2-Tetrachloroethane	20		2.5	ug/L	20.0	0.54 U	101	60-139	1	17	
1,1,2-Trichloroethane	21		2.5	ug/L	20.0	0.76 U	103	57-141	4	16	
1,1-Dichloroethane	23		2.5	ug/L	20.0	0.62 U	114	57-142	9	24	
1,1-Dichloroethene	23		2.5	ug/L	20.0	0.94 U	116	47-139	5	16	
1,2,4-Trichlorobenzene	19		2.5	ug/L	20.0	0.70 U	93	52-159	0.4	24	
1,2-Dibromo-3-chloropropane	19		2.5	ug/L	20.0	0.96 U	93	48-150	1	21	
1,2-Dibromoethane	18		2.5	ug/L	20.0	0.78 U	92	57-140	3	16	
1,2-Dichlorobenzene	22		2.5	ug/L	20.0	0.73 U	110	63-131	0.3	25	
1,2-Dichloroethane	20		2.5	ug/L	20.0	0.63 U	102	50-156	0.05	18	
1,2-Dichloropropane	22		2.5	ug/L	20.0	0.80 U	110	61-133	3	26	
1,3-Dichlorobenzene	22		2.5	ug/L	20.0	0.77 U	111	66-129	0.9	23	
1,4-Dichlorobenzene	20		2.5	ug/L	20.0	0.76 U	101	65-133	2	23	
2-Butanone	110		12	ug/L	100	4.5 U	109	10-180	9	29	
2-Hexanone	88		12	ug/L	100	2.5 U	88	12-180	0.4	28	
4-Methyl-2-pentanone	100		12	ug/L	100	2.5 U	100	19-180	10	24	
Acetone	91		25	ug/L	100	10 U	91	10-180	6	19	
Benzene	22		2.5	ug/L	20.0	0.71 U	112	56-136	2	14	
Bromodichloromethane	21		2.5	ug/L	20.0	0.52 U	104	58-135	6	19	
Bromoform	25		2.5	ug/L	20.0	0.75 U	125	46-148	5	18	
Bromomethane	14		2.5	ug/L	20.0	0.95 U	68	10-173	7	29	
Carbon disulfide	26		12	ug/L	20.0	2.5 U	129	43-153	11	26	
Carbon Tetrachloride	31		2.5	ug/L	20.0	0.94 U	157	54-156	12	27	QM-07
Chlorobenzene	21		2.5	ug/L	20.0	0.72 U	106	51-139	0.7	13	
Chloroethane	26		2.5	ug/L	20.0	0.98 U	132	27-180	3	22	
Chloroform	23		2.5	ug/L	20.0	0.80 U	115	58-139	3	17	
Chloromethane	17		2.5	ug/L	20.0	0.82 U	86	33-154	5	31	
cis-1,2-Dichloroethene	23		2.5	ug/L	20.0	0.53 U	113	56-128	9	17	
cis-1,3-Dichloropropene	19		2.5	ug/L	20.0	0.59 U	97	64-128	6	20	
Cyclohexane	26		2.5	ug/L	20.0	0.93 U	129	70-130	4	20	

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 2B09014 - EPA 5030B_MS - Continued

Matrix Spike Dup (2B09014-MSD1) Continued Prepared: 02/09/2022 00:00 Analyzed: 02/09/2022 12:53

Source: AF00910-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Dibromochloromethane	19		2.5	ug/L	20.0	0.50 U	93	50-140	0.3	18	
Dichlorodifluoromethane	12		2.5	ug/L	20.0	0.74 U	60	10-180	5	26	
Ethylbenzene	21		2.5	ug/L	20.0	0.69 U	107	63-133	2	18	
Freon 113	23		2.5	ug/L	20.0	0.73 U	113	47-173	14	30	
Isopropylbenzene	23		2.5	ug/L	20.0	0.67 U	116	60-132	0.7	23	
m,p-Xylenes	44		5.0	ug/L	40.0	1.3 U	110	64-133	1	18	
Methyl acetate	24		2.5	ug/L	20.0	0.95 U	119	70-130	0.5	20	
Methylene Chloride	24		12	ug/L	20.0	2.5 U	121	43-142	0.2	23	
Methyl-tert-Butyl Ether	25		2.5	ug/L	20.0	0.60 U	125	51-145	0.3	22	
o-Xylene	22		2.5	ug/L	20.0	0.53 U	112	61-129	4	16	
Styrene	19		2.5	ug/L	20.0	0.61 U	97	59-136	0.1	32	
Tetrachloroethene	19		2.5	ug/L	20.0	0.76 U	97	60-147	5	21	
Toluene	21		2.5	ug/L	20.0	0.72 U	104	64-131	0.9	16	
trans-1,2-Dichloroethene	24		2.5	ug/L	20.0	0.73 U	120	54-134	6	20	
trans-1,3-Dichloropropene	20		2.5	ug/L	20.0	0.73 U	102	65-149	4	17	
Trichloroethene	28		2.5	ug/L	20.0	7.4	103	62-135	0.4	20	
Trichlorofluoromethane	21		2.5	ug/L	20.0	0.94 U	106	56-155	2	22	
Vinyl chloride	18		2.5	ug/L	20.0	0.71 U	91	20-167	10	24	
4-Bromofluorobenzene	*55*			*ug/L*	*50.0*		*110*	*41-142*			
Dibromofluoromethane	*55*			*ug/L*	*50.0*		*110*	*53-146*			
Toluene-d8	*54*			*ug/L*	*50.0*		*108*	*41-146*			

FLAGS/NOTES AND DEFINITIONS

PQL	PQL: Practical Quantitation Limit. The PQL presented is the laboratory MRL.
B	Results are based upon membrane filter colony counts that are outside the method indicated ideal range.
I	The reported value is between the laboratory method detection limit (MDL) and the practical quantitation limit (PQL).
J	Estimated value.
K	Off-scale low; Actual value is known to be less than the value given.
L	Off-scale high; Actual value is known to be greater than value given.
M	Presence of analyte is verified but not quantified; the actual value is less than the MRL but greater than the MDL.
N	Presumptive evidence of presence of material.
O	Sampled, but analysis lost or not performed.
Q	Sample exceeded the accepted holding time.
T	Value reported is less than the laboratory method detection limit. The value is reported for informational purposes only and shall not be used in statistical analysis.
U	Indicates that the compound was analyzed for but not detected.
V	Indicates that the analyte was detected in both the sample and the associated method blank.
Y	The laboratory analysis was from an improperly preserved sample. The data may not be accurate.
Z	Too many colonies were present (TNTC); the numeric value represents the filtration volume.
?	Data are rejected and should not be used. Some or all of the quality control data for the analyte were outside criteria, and the presence or absence of the analyte cannot be determined from the data.
*	Not reported due to interference.
[CALC]	Calculated analyte - MDL/MRL reported to the highest reporting limit of the component analyses.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
QV-01	The associated continuing calibration verification standard exhibited high bias; since the result is ND, there is no impact.

Tetra Tech, Inc.

CHAIN OF CUSTODY | NUMBER No. 2569 AF000910 PAGE 1 OF 1

PROJECT NO: 112G08985	FACILITY: KSC-LC34	PROJECT MANAGER Mark Jonner	PHONE NUMBER (412) 921-8622	LABORATORY NAME AND CONTACT: ENCO — Kaitlyn Olnicki
SAMPLERS (SIGNATURE) Chuck Scarden		FIELD OPERATIONS LEADER Chuck Scarden	PHONE NUMBER (321) 591-7580	ADDRESS 10775 Central Port Dr.
		CARRIER/WAYBILL NUMBER		CITY, STATE Orlando, FL

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR 2022	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	CONTAINER TYPE PLASTIC (P) or GLASS (G)										COMMENTS
									G	G									
									PRESERVATIVE USED		HCl/4°C	4°C							
									TYPE OF ANALYSIS		8260D TCL SOM01	8260D TCL SOM01							
CR/02	1500	LC34-IW062-110.0-20220204		105	115	GW	G	4	X	X									

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	02/04/22	1550	1. RECEIVED BY Jennifer Gregory	2/4/22	1650
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS LQ MD 4.1°C

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

APPENDIX C

HCS VOLUME AND MASS RECOVERY

(PROVIDED IN ELECTRONIC VERSION ONLY)

Appendix C - Volume and Mass Recovery Summary

Date	TCE (µg/L)	cDCE (µg/L)	tDCE (µg/L)	VC (µg/L)	Total VOCs (µg/L)	Total Volume Recovered (gal)	VOC Mass Recovered (lb)	Total VOC Mass Recovered (lb)
12/21/09	NA	NA	NA	NA	317,020	217,856	576	576
1/18/10	180,000	40,000	10,000	10,000	240,000	241,552	5	580
1/19/10	280,000	37,000	10,000	10,000	337,000	243,932	88	668
1/20/10	300,000	41,000	10,000	10,000	361,000	279,080	150	818
1/21/10	250,000	32,000	10,000	10,000	302,000	329,062	117	935
1/22/10	270,000	34,000	10,000	10,000	324,000	379,482	99	1,033
1/23/10	280,000	40,000	10,000	10,000	340,000	420,631	100	1,133
1/24/10	30,000	40,000	10,000	10,000	90,000	463,282	23	1,156
1/25/10	191,000	41,100	340	6,530	238,970	496,921	67	1,223
1/26/10	186,000	41,600	680	6,250	234,530	533,056	71	1,294
1/27/10	193,000	44,000	376	5,880	243,256	572,313	80	1,373
2/5/10	195,000	37,400	290	5,330	238,020	618,289	93	1,466
2/6/10	200,000	36,900	284	5,300	242,484	651,054	5	1,472
2/7/10	194,000	38,000	850	6,550	239,400	691,788	60	1,532
2/8/10	192,000	40,800	340	6,290	239,430	727,821	81	1,613
2/11/10	188,000	34,100	1,700	5,630	229,430	766,742	76	1,689
2/17/10	185,000	33,400	850	5,350	224,600	832,715	158	1,847
2/18/10	191,000	34,600	850	5,650	232,100	876,533	83	1,931
2/19/10	178,000	32,300	1,700	5,770	217,770	909,310	61	1,992
2/20/10	176,000	32,000	1,700	5,820	215,520	948,062	70	2,062
2/21/10	169,000	28,400	1,700	5,540	204,640	983,917	63	2,125
2/25/10	160,000	34,500	680	6,260	201,440	1,026,259	72	2,197
2/26/10	159,000	39,300	680	5,090	204,070	1,064,269	64	2,261
2/27/10	159,000	37,100	680	6,090	202,870	1,093,415	49	2,310
2/28/10	154,000	36,200	680	6,510	197,390	1,133,604	67	2,378
3/1/10	156,000	38,100	680	6,250	201,030	1,155,545	36	2,414
3/10/10	164,000	40,100	340	6,460	210,900	1,221,872	114	2,528
3/11/10	166,000	36,500	232	5,190	207,922	1,243,642	38	2,566
3/12/10	160,000	39,200	340	6,470	206,010	1,290,222	80	2,646
3/13/10	83,700	19,300	340	3,300	106,640	1,309,805	26	2,672
3/14/10	79,400	19,200	340	3,050	101,990	1,354,210	39	2,710
3/18/10	151,000	35,800	850	6,270	193,920	1,372,005	22	2,732
3/19/10	148,000	37,300	850	5,890	192,040	1,408,903	59	2,792
3/20/10	153,000	41,500	850	5,980	201,330	1,465,194	92	2,884
3/21/10	157,000	44,700	850	7,630	210,180	1,484,341	33	2,917
3/22/10	144,000	41,100	850	6,010	191,960	1,526,613	71	2,988
3/23/10	129,000	40,200	850	5,340	175,390	1,544,296	27	3,015
3/24/10	137,000	40,900	340	5,320	183,560	1,593,934	74	3,089
3/25/10	123,000	38,200	340	5,100	166,640	1,643,244	72	3,161
3/31/10	124,000	37,000	680	4,780	166,460	1,904,722	363	3,524
4/7/10	132,000	34,400	340	5,090	171,830	2,210,866	432	3,956
4/14/10	119,000	31,000	680	4,190	154,870	2,490,998	381	4,337
5/5/10	128,000	34,200	3,400	4,060	169,660	2,701,027	284	4,621
5/13/10	124,000	34,000	680	3,670	162,350	3,063,129	501	5,123
5/19/10	113,000	33,700	200	3,540	150,440	3,353,491	379	5,501
5/26/10	116,000	26,900	680	3,370	146,950	3,669,054	391	5,892
6/2/10	105,000	26,400	680	3,480	135,560	4,035,865	432	6,324
6/16/10	94,500	21,000	680	2,750	118,930	4,229,775	206	6,530
6/23/10	96,900	23,200	340	4,660	125,100	4,305,389	77	6,607
7/1/10	103,000	26,300	680	2,600	132,580	4,494,327	203	6,810

Appendix C - Volume and Mass Recovery Summary

Date	TCE	cDCE	tDCE	VC	Total VOCs	Total Volume Recovered	VOC Mass Recovered	Total VOC Mass Recovered
7/7/10	107,000	27,600	680	3,040	138,320	4,805,920	352	7,162
8/11/10	130,000	12,600	850	1,080	144,530	5,025,055	258	7,420
8/18/10	115,000	13,500	680	560	129,740	5,262,660	272	7,692
8/25/10	156,000	14,000	850	1,680	172,530	5,493,826	291	7,983
9/1/10	127,000	15,800	440	911	144,151	5,716,649	294	8,277
9/8/10	96,700	12,900	340	765	110,705	5,943,878	241	8,519
9/15/10	98,400	21,000	170	2,800	122,370	6,099,598	151	8,670
9/22/10	92,500	23,300	340	2,260	118,400	6,423,806	325	8,995
10/27/10	87,400	17,900	700	2,810	108,810	7,156,312	694	9,689
11/22/10	83,900	24,300	350	1,830	110,380	8,358,987	1,099	10,788
12/29/10	69,800	16,700	350	2,290	89,140	9,263,486	752	11,540
1/26/11	68,700	14,200	350	1,910	85,160	10,476,772	882	12,422
2/21/11	69,900	18,400	180	981	89,461	11,540,001	774	13,196
3/10/11	67,100	16,800	700	1,600	86,200	12,249,769	520	13,715
4/14/11	71,600	18,600	180	1,490	91,870	13,689,983	1,069	14,784
5/18/11	65,000	14,600	350	1,500	81,450	15,255,460	1,131	15,916
6/8/11	63,800	15,500	350	1,430	81,080	16,231,905	662	16,577
7/15/11	57,900	14,400	700	1,460	74,460	17,847,362	1,047	17,624
8/10/11	59,500	15,300	180	1,360	76,340	18,530,288	429	18,054
9/14/11	59,000	12,800	350	1,330	73,480	19,966,621	897	18,951
10/10/11	54,400	12,300	350	1,180	68,230	21,227,891	745	19,696
11/10/11	51,200	10,800	700	863	63,563	22,564,484	734	20,430
12/15/11	65,000	8,030	350	220	73,600	24,130,105	895	21,325
1/20/12	63,000	11,000	350	1,340	75,690	25,503,046	854	22,180
2/2/12	61,000	9,740	101	964	71,805	26,136,005	389	22,569
3/1/12	59,800	9,670	87	1,100	70,657	27,308,762	696	23,265
4/4/12	65,100	9,080	350	1,180	75,710	28,981,254	1,020	24,286
5/17/12	60,000	9,240	108	1,080	70,428	31,129,989	1,309	25,595
6/14/12	54,000	8,140	180	727	63,047	32,534,469	781	26,376
7/26/12	50,800	6,980	180	763	58,723	34,531,500	1,014	27,390
9/14/12	53,500	8,150	350	563	62,563	36,131,052	809	28,199
10/5/12	54,200	7,620	46	856	62,722	37,166,262	541	28,739
11/26/12	44,200	6,020	86	611	50,917	39,616,362	1,161	29,900
1/29/13	45,600	7,820	116	939	54,475	42,608,831	1,315	31,214
3/11/13	39,500	6,900	100	880	47,380	44,625,535	856	32,071
5/8/13	38,300	7,310	102	577	46,289	47,534,164	1,136	33,206
5/30/13	39,100	6,260	73	602	46,035	48,647,590	429	33,635
6/26/13	35,100	5,620	67	695	41,482	49,747,278	401	34,036
9/27/13	41,600	6,200	46	718	48,564	53,554,155	1,429	35,465
12/31/13	26,700	5,050	92	579	32,421	57,713,664	1,404	36,869
4/3/14	45,000	6,570	170	5,510	57,250	61,633,676	1,465	38,335
6/26/14	29,500	6,350	115	913	36,878	65,168,232	1,387	39,721
9/30/14	31,600	4,350	170	365	36,485	69,313,690	1,268	40,989
12/30/14	31,800	4,370	170	339	36,679	73,266,210	1,205	42,195
2/10/15	31,800	4,370	170	339	36,679	74,779,415	463	42,657
5/27/15	11,300	420	3,800	19,200	34,720	74,779,415	0	42,657
6/3/15	20,700	400	2,100	47,700	70,900	74,785,458	3	42,660
6/4/15	26,000	570	2,300	50,200	79,070	74,798,570	8	42,668
6/5/15	28,800	680	2,400	59,700	91,580	74,837,496	28	42,696
6/6/15	28,600	620	2,200	53,400	84,820	74,903,992	49	42,745
6/7/15	16,000	434	1,930	34,364	52,728	75,011,941	62	42,807

Appendix C - Volume and Mass Recovery Summary

Date	TCE	cDCE	tDCE	VC	Total VOCs	Total Volume Recovered	VOC Mass Recovered	Total VOC Mass Recovered
6/8/15	14,300	337	1,470	39,007	55,114	75,071,559	27	42,833
6/9/15	57	2	6	159	223	75,123,105	12	42,845
6/10/15	14,100	52	1,400	38,752	54,304	75,211,628	20	42,865
6/11/15	14,900	325	1,850	40,275	57,350	75,286,100	35	42,900
6/14/15	15,300	325	2,110	39,035	56,770	75,467,415	86	42,986
6/18/15	12,900	331	1,580	35,811	50,622	75,795,443	147	43,133
6/25/15	12,300	293	1,520	29,013	43,126	76,371,248	225	43,358
7/13/15	8,880	223	925	28,928	38,956	76,961,970	202	43,560
8/13/15	10,500	236	1,030	29,666	41,432	79,323,000	791	44,352
9/10/15	10,100	234	1,040	32,174	43,548	81,345,000	716	45,068
9/30/15	8,280	154	808	29,542	38,784	82,808,000	502	45,570
12/14/15	10,100	182	1,210	32,592	44,084	88,401,111	1,932	47,502
3/4/16	9,040	148	1,110	28,698	38,996	93,000,225	1,593	49,095
6/22/16	16,200	6,740	118	904	23,962	99,737,909	1,768	50,863
9/22/16	16,300	7,120	119	814	24,353	107,355,607	1,534	52,397
12/16/16	17,700	6,170	98	706	24,674	114,664,390	1,494	53,891
3/15/17	17,000	6,510	122	833	24,465	122,003,577	1,503	55,394
5/4/17	7,660	8,010	143	1,050	16,863	125,872,275	666	56,061
9/20/17	16,700	4,340	66	720	21,826	132,775,303	1,113	57,174
12/13/17	15,900	4,250	75	504	20,729	140,128,487	1,304	58,478
3/19/18	16,100	3,730	77	551	20,458	150,036,067	1,701	60,179
6/28/18	13,500	3,350	65	499	17,414	160,481,465	1,649	61,828
9/20/18	15,300	3,930	44	536	19,810	169,178,387	1,349	63,178
1/18/19	13,300	3,500	72	470	17,342	182,303,518	2,033	65,211
3/1/19	15,600	3,990	74	684	20,348	187,169,485	765	65,975
3/29/19	15,600	3,990	74	684	20,348	190,050,139	489	66,464
6/12/19	10,300	2,940	44	476	13,760	196,805,791	1,147	67,611
9/30/19	31,400	4,230	44	446	36,120	207,056,535	1,280	68,891
12/17/19	20,100	3,010	55	463	23,628	213,936,309	1,780	70,671
3/12/20	13,300	2,160	44	236	15,740	222,643,055	1,775	72,446
6/26/20	10,700	2,380	44	236	13,360	231,332,404	1,122	73,568
9/25/20	16,200	2,360	47	241	18,848	238,855,049	985	74,553
12/4/20	45,000	3,650	55	477	49,182	245,328,188	1,031	75,585
3/31/21	12,100	2,450	67	476	15,093	253,001,137	3,154	78,738
6/28/21	22,500	2,830	55	462	25,847	260,891,390	1,427	80,165
10/4/21	17,000	3,000	180	430	20,610	268,991,399	1,724	81,890
1/10/22	19,000	3,400	180	630	23,210	277,999,241	1,549	83,439
3/31/22	12,000	3,900	73	360	16,333	285,712,801	1,494	84,933

Laboratory data qualifers not shown

TCE = trichloroethene
cDCE = cis-1,2-dichloroethene
tDCE = trans-1,2-dichloroethene
VC = vinyl chloride
VOCs = volatile organic compounds
µg/L = micrograms per liter

APPENDIX D

HOT SPOT 6 DATA LOG SHEETS

(PROVIDED IN ELECTRONIC VERSION ONLY)

Hot Spot 6 System Data Log

Date	Time	System		Flow (SCFM)								Pressure (psig)							
		Flow (SCFM)	Pressure (psig)	M01	M02	M03	M04	M05	M06	M07	M08	M01	M02	M03	M04	M05	M06	M07	M08
04/01/21	12:34:07	245.3	44.1	-0.2	0.2	-0.2	86.4	0.2	0.4	0.4	166.0	0.0	10.0	1.9	46.0	1.5	0.1	9.7	30.8
04/01/21	23:34:07	259.8	43.8	-0.2	-0.2	-0.2	85.9	0.2	183.2	0.3	0.1	0.1	0.1	2.5	45.9	0.3	31.3	0.2	0.2
04/02/21	12:34:07	242.3	44.1	-0.2	-0.1	-0.2	87.4	0.2	-0.1	0.1	168.3	0.1	10.0	2.5	46.0	1.7	0.2	8.4	31.0
04/02/21	23:34:07	262.1	43.9	0.1	0.0	-0.2	86.2	0.2	183.8	0.3	1.0	0.1	0.2	2.8	46.0	0.3	31.4	0.2	0.3
04/03/21	12:34:07	243.1	44.2	-0.2	-0.3	-0.2	88.4	0.0	0.2	0.1	167.8	0.1	10.0	2.5	46.1	1.6	0.2	7.9	31.0
04/03/21	23:34:07	255.6	43.8	-0.2	-0.2	-0.2	85.8	0.0	183.2	0.3	0.1	0.1	0.2	2.7	46.0	0.3	31.3	0.2	0.2
04/04/21	12:34:07	245.0	44.2	-0.2	0.0	-0.2	86.1	0.2	0.1	0.2	167.4	0.1	10.1	2.4	46.1	1.6	0.3	6.2	31.0
04/04/21	23:34:07	266.0	44.0	-0.2	0.0	0.1	85.3	0.0	183.7	0.3	0.1	0.1	0.2	2.6	46.1	0.3	31.4	0.2	0.2
04/05/21	12:34:07	242.7	44.2	-0.2	0.1	-0.2	86.0	0.3	0.3	0.2	168.0	0.1	10.1	2.2	46.1	1.8	0.2	7.2	31.0
04/05/21	23:34:07	259.3	44.0	-0.2	0.1	-0.2	88.2	0.2	183.8	0.2	0.0	0.1	0.2	2.5	46.0	0.3	31.4	0.2	0.2
04/06/21	12:34:07	243.6	44.3	-0.2	0.1	-0.2	85.7	-0.1	0.2	0.1	168.4	0.1	10.1	2.0	46.2	2.2	0.2	9.9	31.0
04/06/21	23:34:07	265.9	44.0	-0.2	-0.1	-0.2	86.6	-0.2	184.7	0.1	0.2	0.1	0.2	2.5	46.0	0.3	31.5	0.2	0.2
04/07/21	12:34:07	246.6	44.2	-0.2	-0.2	-0.2	85.5	0.2	0.1	0.3	167.3	0.1	10.1	2.1	46.1	3.2	0.2	9.4	30.9
04/07/21	23:34:07	263.1	43.9	-0.2	-0.3	-0.2	86.3	-0.2	181.4	0.1	0.2	0.1	0.2	2.3	46.0	0.3	31.4	0.2	0.2
04/08/21	12:34:07	243.2	44.2	-0.2	-0.2	-0.2	85.4	0.1	0.2	0.2	165.2	0.1	10.2	1.9	46.0	2.1	0.2	9.7	31.0
04/08/21	23:34:07	264.8	44.0	-0.2	0.0	-0.2	86.6	0.1	182.5	0.1	0.2	0.1	0.2	2.1	46.0	0.3	31.3	0.2	0.2
04/09/21	12:34:07	242.4	44.2	-0.2	-0.3	-0.2	85.4	-0.1	0.2	0.0	167.2	0.1	10.0	1.8	46.0	2.3	0.2	9.7	30.9
04/09/21	23:34:07	263.9	44.0	-0.2	-0.3	-0.2	84.4	0.1	180.1	0.1	0.2	0.1	0.1	2.1	45.9	0.3	31.3	0.2	0.2
04/10/21	12:34:07	236.4	44.2	-0.2	-0.2	-0.2	85.4	0.2	0.1	0.0	165.1	0.0	10.1	1.6	46.0	2.4	0.1	9.7	30.8
04/10/21	23:34:07	262.9	44.1	-0.2	0.0	-0.2	84.3	-0.2	180.7	0.3	0.2	0.1	0.2	2.2	46.0	0.3	31.2	0.2	0.1
04/11/21	12:34:07	244.4	44.0	-0.2	0.0	-0.2	84.2	0.1	0.0	0.3	168.3	0.1	9.7	2.1	46.1	1.7	0.1	8.6	30.9
04/11/21	23:34:07	266.5	44.0	-0.2	-0.2	-0.2	86.1	0.1	184.2	0.2	0.3	0.1	0.1	2.3	45.9	0.2	31.4	0.1	0.1
04/12/21	12:34:07	239.2	44.0	-0.2	-0.1	-0.2	83.9	0.0	0.7	0.2	166.2	0.1	9.9	1.9	46.0	2.0	0.2	8.1	30.9
04/12/21	23:34:07	260.2	43.9	-0.2	0.0	-0.2	87.8	-0.2	182.4	0.3	0.1	0.1	0.1	2.5	45.9	0.3	31.4	0.2	0.2
04/13/21	12:34:07	239.7	44.1	-0.2	0.1	-0.2	84.6	-0.1	0.0	0.2	167.6	0.0	9.9	1.7	46.0	2.4	0.1	7.3	30.9
04/13/21	23:34:07	262.0	43.9	-0.2	-0.1	-0.2	87.2	-0.3	179.7	0.3	0.1	0.0	0.1	2.1	45.8	0.3	31.2	0.1	0.1
04/14/21	12:34:07	245.5	44.2	-0.2	-0.2	-0.2	85.3	0.2	-0.1	0.3	166.3	0.1	10.0	1.7	45.9	1.9	0.1	8.4	30.8
04/14/21	23:34:07	261.6	43.9	-0.2	0.3	-0.2	85.8	0.1	179.0	0.2	0.1	0.1	0.1	2.1	45.9	0.3	31.3	0.2	0.2
04/15/21	12:34:07	239.2	44.1	-0.2	0.0	-0.2	83.5	0.0	-0.1	0.2	164.5	0.0	10.2	1.6	46.0	4.5	0.1	7.1	30.8
04/15/21	23:34:07	0.1	4.2	-0.2	-0.1	-0.2	0.1	-0.2	0.2	0.3	0.0	0.1	0.1	2.4	8.4	0.2	0.1	0.1	0.2
04/16/21	12:34:07	-0.2	0.0	-0.2	0.0	-0.2	-0.2	0.1	0.2	0.1	0.1	0.0	0.1	2.3	0.0	0.1	0.0	0.0	0.1
04/16/21	23:34:08	0.0	-0.1	-0.2	0.0	-0.2	0.1	0.0	0.1	0.2	0.1	0.0	0.1	2.2	0.0	0.0	0.0	0.0	0.1
04/17/21	12:34:08	-0.5	-0.1	-0.2	0.1	-0.2	0.5	0.0	0.3	0.2	0.1	0.0	0.1	2.2	0.0	0.0	0.1	-0.1	0.1
04/17/21	23:34:08	-0.4	-0.1	-0.2	0.1	-0.2	0.3	0.0	0.7	0.3	0.2	-0.1	0.1	2.2	-0.1	0.0	0.0	-0.1	0.0
04/18/21	12:34:08	-0.3	-0.1	-0.2	0.1	-0.1	0.3	0.4	-0.1	0.3	0.0	-0.1	0.1	2.1	0.0	0.0	0.0	-0.1	0.1
04/18/21	23:34:08	-0.1	-0.1	-0.2	0.2	-0.2	-0.2	0.5	0.0	0.3	0.1	-0.1	0.1	2.2	-0.1	0.0	0.0	-0.1	0.1
04/19/21	12:34:08	0.3	-0.1	-0.2	0.1	-0.2	-0.1	0.0	0.0	0.3	-0.1	-0.1	0.0	2.1	-0.1	0.0	0.0	-0.1	0.1
04/19/21	23:34:08	0.3	-0.2	-0.2	0.0	-0.2	0.2	0.2	-0.1	0.0	0.1	-0.1	0.1	2.2	-0.1	0.0	0.0	-0.1	0.0
04/20/21	12:34:08	-0.4	-0.3	-0.2	0.9	-0.2	0.2	0.0	-0.2	0.6	0.1	-0.1	0.1	2.2	-0.1	0.0	0.0	-0.1	0.1
04/20/21	23:34:08	-0.3	-0.2	-0.2	0.6	-0.2	0.3	0.1	0.1	0.3	0.3	-0.1	0.0	2.5	-0.1	0.0	-0.1	-0.1	0.0
04/21/21	12:34:08	1.4	-0.2	-0.2	-0.2	-0.2	0.2	-0.1	0.1	0.2	0.0	-0.1	0.1	2.1	-0.1	0.0	0.0	-0.1	0.1
04/21/21	23:34:08	1.0	-0.2	-0.2	-0.2	-0.2	0.2	-0.1	0.0	0.3	0.3	-0.1	0.0	2.4	-0.1	0.0	-0.1	-0.1	0.0
04/22/21	12:34:08	0.3	-0.2	-0.2	0.0	-0.2	-0.1	-0.2	0.0	0.6	0.1	-0.1	0.1	2.4	-0.1	0.0	0.0	-0.1	0.1
04/22/21	23:34:08	-0.7	-0.1	-0.2	-0.2	-0.2	0.4	0.1	0.3	0.6	0.2	-0.1	0.0	3.1	-0.1	0.0	0.0	-0.1	0.1
04/23/21	12:34:08	0.1	-0.1	-0.2	0.1	-0.2	0.2	0.1	0.3	0.2	0.1	-0.1	0.1	2.5	-0.1	0.0	0.0	-0.1	0.1
04/23/21	23:34:08	-0.7	-0.2	-0.2	0.0	-0.2	0.0	-0.2	-0.2	0.3	0.2	-0.1	0.1	2.6	-0.1	0.0	0.0	-0.1	0.0
04/24/21	12:34:08	-0.7	-0.1	-0.2	0.0	-0.2	0.0	-0.1	0.7	0.2	1.1	-0.1	0.1	2.4	0.0	0.0	0.0	-0.1	0.1
04/24/21	23:34:08	0.5	-0.1	-0.2	0.0	-0.2	-0.2	-0.1	0.1	0.2	0.4	-0.1	0.1	2.5	-0.1	0.0	0.0	-0.1	0.1
04/25/21	12:34:08	-0.5	-0.2	-0.2	-0.1	-0.2	0.2	0.1	0.1	0.2	0.3	-0.1	0.1	2.4	-0.1	0.0	0.0	-0.1	0.1
04/25/21	23:34:08	-0.1	-0.2	-0.2	-0.2	-0.2	0.1	0.1	0.2	0.3	0.0	-0.1	0.1	2.5	-0.2	0.0	-0.1	-0.1	0.0
04/26/21	12:34:08	0.2	-0.2	-0.2	0.0	-0.2	0.1	0.0	0.1	0.3	0.2	-0.1	0.1	2.5	-0.1	0.1	0.0	-0.1	0.1
04/26/21	23:34:08	-0.1	-0.2	-0.2	0.1	-0.2	-0.1	0.0	0.2	0.2	0.1	-0.1	0.1	2.6	-0.1	0.0	-0.1	-0.1	0.0
04/27/21	12:34:08	-0.4	-0.2	-0.2	-0.1	-0.2	0.2	0.8	0.2	0.4	0.1	-0.1	0.1	2.8	0.0	0.0	0.0	-0.1	0.1
04/27/21	23:34:08	0.2	-0.2	-0.2	0.0	-0.2	0.1	-0.1	0.2	0.1	0.3	-0.1	0.1	2.9	-0.1	0.0	-0.1	-0.1	0.1
04/28/21	12:34:08	3.0	-0.1	-0.2	-0.1	-0.2	0.2	0.0	0.1	0.2	0.0	-0.1	0.1	2.8	0.0	0.0	0.0	-0.1	0.1
04/28/21	23:34:08	0.0	-0.2	-0.2	-0.1	-0.2	-0.1	-0.2	-0.1	0.2	0.3	-0.1	0.1	2.9	-0.1	0.0	0.0	-0.1	0.1
04/29/21	12:34:08	-0.4	-0.2	-0.2	0.2	-0.2	0.4	-0.1	0.5	0.3	-0.1	-0.1	0.1	2.7	-0.1	0.1	0.0	-0.1	0.1
04/29/21	23:34:08	0.0	-0.2	-0.2	0.1	-0.2	0.1	-0.1	0.1	0.2	0.0	-0.1	0.1	2.8	-0.1	0.0	-0.1	-0.1	0.0
04/30/21	12:34:08	0.4	-0.2	-0.2	-0.1	-0.2	0.2	0.1	0.2	0.1	0.3	-0.1	0.0	2.6	-0.1	0.0	0.0	-0.1	0.1
04/30/21	23:34:08	258.6	43.8	-0.2	-0.1	-0.2	83.8	0.0	178.1	0.2	0.3	-0.1	0.1	2.4	45.5	0.0	31.1	-0.1	0.1
05/01/21	12:34:08	241.2	44.2	-0.1	-0.1	-0.2	83.6	-0.2	0.2	0.1	164.7	-0.1	10.5	1.7	45.8	1.3	0.1	8.6	30.7
05/01/21	23:34:08	252.5	43.8	-0.2	0.0	-0.2	84.3	-0.2	174.9	0.3	0.1	-0.1	0.1	2.0	45.6	0.2	31.1	0.2	0.1
05/02/21	12:34:08	241.4	44.2	-0.2	-0.1	-0.1	82.4	-0.1	0.1	0.2	161.7	-0.1	10.4	1.1	45.9	1.7	0.1	7.9	30.5
05/02/21	23:34:08	257.3	44.0	0.1	0.5	-0.2	83.1	-0.3	176.2	0.2	0.0	-0.1	0.1	1.7	45.7	0.2	31.1	0.2	0.1
05/03/21	12:34:08	237.8	44.2	-0.2	-0.1	-0.2	84.3	-0.2	0.1	0.2	162.2	0.0	10.3	0.9	45.9	3.1	0.1	7.5	30.6
05/03/21	23:34:08	256.9	44.0	-0.2	-0.1	-0.2	83.6	0.0	177.9	0.8	0.1	0.0	0.1	1.9	45.9	0.2	31.2	0.1	0.1
05/04/21	12:34:08	243.4	44.2	-0.2	-0.2	-0.1	82.3	0.1	-0.1	0.2	165.8	0.0	10.3	1.0	45.9	7.3	0.1	7.3	30.7
05/04/21	23:34:08	253.2	44.0	-0.1	-0.3	-0.2	83.4	-0.1	178.3	0.3	0.1	0.0	0.1	1.4	45.8	0.1	31.1	0.1	0.1
05/05/21	12:34:08	240.4	44.3	-0.2	-0.1	-0.2	82.2	-0.1	0.2	0.0	161.0	0.0	10.2	1.1	45.9	2.5	0.1	7.9	30.5
05/05/21	23:34:08	254.3	44.0	-0.2	0.1	-0.2	84.5	0.1	176.2	0.3	0.7	0.1	0.2	2.0	45.9	0.3	31.2	0.2	0.1
05/06/21	12:34:08	240.1	44.1	-0.1	0.1	-0.2	82.7	-0.2	-0.1	0.1	161.9	0.0	9.9	0.9	45.8	2.0	-0.1	6.5	30.6
05/06/21	23:34:08	264.3	43.9	-0.2	0.2	-0.2	84.0	-0.2	180.5	0.2	0.2	0.1	0.1	2.0	45.8	0.3	31.3	0.2	0.2
05/07/21	12:34:08	238.2	44.2	-0.2	-0.2	-0.2	84.2	0.0	-0.1	0.7	165.4	0.1	10.3	1.8	46.1	2.0	0.2	7.1	30.8

Hot Spot 6 System Data Log

Date	Time	System		Flow (SCFM)								Pressure (psig)							
		Flow (SCFM)	Pressure (psig)	M01	M02	M03	M04	M05	M06	M07	M08	M01	M02	M03	M04	M05	M06	M07	M08
05/07/21	23:34:08	255.6	44.0	-0.2	-0.1	-0.2	85.3	0.1	179.0	0.5	0.1	0.0	0.1	2.2	46.0	0.2	31.4	0.1	0.1
05/08/21	12:34:08	242.0	44.2	-0.2	-0.1	-0.2	84.7	-0.2	-0.1	0.1	164.8	0.1	10.4	2.0	46.1	2.2	0.2	5.7	30.9
05/08/21	23:34:08	256.3	43.9	-0.1	-0.1	-0.2	83.9	0.0	179.7	0.3	0.0	0.1	0.1	2.1	45.9	0.2	31.3	0.2	0.1
05/09/21	12:34:08	241.3	44.1	-0.2	0.1	-0.2	84.1	0.2	0.1	0.1	164.5	0.0	10.5	1.4	46.1	2.0	0.1	6.9	30.9
05/09/21	23:34:08	256.3	43.9	-0.2	-0.4	-0.2	84.2	0.0	176.5	0.2	0.9	0.0	0.2	1.8	45.9	0.3	31.3	0.2	0.1
05/10/21	12:34:08	240.2	44.3	-0.1	-0.1	-0.1	82.9	0.1	0.1	0.3	165.4	0.0	10.4	1.0	46.0	2.0	0.1	9.2	30.7
05/10/21	23:34:08	252.8	43.9	-0.2	-0.1	-0.2	83.5	0.2	179.1	0.2	0.1	0.0	0.2	1.6	45.9	0.2	31.2	0.2	0.1
05/11/21	12:34:08	238.2	44.1	-0.2	0.0	-0.2	83.8	-0.3	0.0	0.2	161.6	0.0	10.5	1.4	46.0	2.0	0.1	6.0	30.7
05/11/21	23:34:08	257.6	43.9	-0.2	-0.3	-0.2	84.1	0.1	178.9	0.2	0.2	0.0	0.1	1.8	45.9	0.2	31.2	0.2	0.1
05/12/21	12:34:08	242.0	44.2	-0.2	-0.1	-0.2	82.1	-0.1	0.0	0.3	161.4	0.0	10.3	2.0	45.9	1.9	0.1	7.6	30.5
05/12/21	23:34:08	257.8	44.0	-0.2	-0.4	-0.2	84.5	0.1	177.9	0.3	0.1	0.0	0.1	2.3	45.9	0.2	31.2	0.2	0.1
05/13/21	12:34:08	244.6	44.2	-0.2	-0.2	-0.2	84.3	0.1	0.1	0.1	165.2	0.1	10.2	2.6	46.1	2.0	0.1	4.4	30.9
05/13/21	23:34:08	264.5	43.9	-0.2	-0.2	-0.2	84.0	-0.2	179.5	0.2	0.9	0.1	0.2	2.6	45.9	0.2	31.3	0.1	0.2
05/14/21	12:34:08	239.5	44.2	-0.1	0.1	-0.2	83.2	0.0	0.2	0.2	162.9	0.0	10.2	2.2	46.0	1.9	0.1	6.8	30.8
05/14/21	23:34:08	258.8	43.9	-0.2	0.2	-0.2	83.3	0.0	179.7	0.3	0.2	0.1	0.1	2.4	45.9	0.2	31.3	0.1	0.2
05/15/21	12:34:08	237.8	44.2	-0.2	0.1	-0.2	82.9	-0.1	0.3	0.2	163.8	0.1	10.2	2.5	46.1	1.7	0.1	6.1	30.9
05/15/21	23:34:08	264.6	44.0	-0.2	0.0	-0.2	82.7	0.0	180.7	0.2	0.1	0.1	0.1	2.5	46.1	0.2	31.4	0.1	0.2
05/16/21	12:34:08	242.4	44.2	0.1	-0.1	-0.2	82.5	0.1	0.3	0.9	166.1	0.1	10.2	3.2	46.1	1.8	0.2	5.4	30.9
05/16/21	23:34:08	259.3	43.9	-0.2	0.0	-0.2	83.8	-0.1	179.3	0.3	0.3	0.1	0.2	2.9	46.0	0.3	31.4	0.2	0.2
05/17/21	12:34:08	242.6	44.2	-0.2	0.1	-0.2	81.9	0.6	0.0	0.2	164.6	0.1	10.3	3.2	46.2	2.5	0.2	4.6	30.9
05/17/21	23:34:08	257.3	44.0	-0.2	0.0	-0.2	84.2	0.0	179.6	0.0	0.2	0.1	0.1	2.9	46.0	0.3	31.4	0.2	0.2
05/18/21	12:34:08	238.5	44.2	-0.2	-0.2	-0.2	83.0	0.1	0.0	0.0	166.9	0.1	10.2	3.0	46.1	2.4	0.1	4.4	30.8
05/18/21	23:34:08	254.4	43.9	-0.2	-0.1	-0.2	83.7	0.0	180.7	0.2	0.1	0.1	0.2	2.8	46.0	0.3	31.4	0.2	0.1
05/19/21	12:34:08	240.5	44.2	-0.2	0.2	-0.2	82.2	0.1	-0.1	0.1	163.6	0.1	10.2	3.2	46.2	1.9	0.2	5.4	30.9
05/19/21	23:34:08	256.0	44.0	-0.2	0.0	-0.2	82.2	0.1	179.0	0.2	0.2	0.1	0.1	2.9	46.1	0.2	31.3	0.2	0.2
05/20/21	12:34:09	242.3	44.1	-0.2	0.0	-0.2	81.5	0.0	0.1	0.1	165.1	0.1	10.1	2.8	46.2	2.0	0.1	5.2	30.8
05/20/21	23:34:09	255.7	44.0	-0.2	-0.2	-0.2	82.5	0.2	181.0	0.3	0.4	0.1	0.2	2.7	46.1	0.2	31.4	0.1	0.2
05/21/21	12:34:09	242.5	44.2	-0.2	-0.3	-0.2	82.2	0.8	0.2	0.2	166.6	0.1	10.2	3.2	46.2	1.8	0.2	5.0	30.8
05/21/21	23:34:09	262.4	44.0	-0.2	-0.1	-0.2	82.6	0.9	179.8	0.3	0.4	0.1	0.1	3.0	46.1	0.2	31.3	0.1	0.2
05/22/21	12:34:09	241.4	44.1	0.1	-0.1	-0.2	81.1	-0.1	0.2	0.2	166.7	0.1	10.2	3.2	46.2	2.0	0.2	4.6	30.9
05/22/21	23:34:09	261.4	44.0	-0.2	-0.1	-0.2	82.2	0.1	179.6	0.2	0.0	0.1	0.2	2.9	46.0	0.2	31.3	0.2	0.2
05/23/21	12:34:09	240.0	44.1	-0.2	0.1	-0.2	82.8	0.1	0.0	0.3	165.4	0.0	10.2	2.4	46.2	1.8	0.2	4.8	30.9
05/23/21	23:34:09	256.9	44.1	-0.2	-0.3	-0.2	83.4	0.1	179.0	0.1	0.0	0.1	0.2	2.4	46.1	0.2	31.4	0.1	0.2
05/24/21	12:34:09	244.6	44.2	-0.2	-0.1	-0.2	81.9	0.0	0.3	0.2	167.0	0.1	10.2	3.1	46.2	1.8	0.2	4.7	30.8
05/24/21	23:34:09	252.9	44.0	-0.2	-0.2	-0.2	82.7	-0.2	180.1	0.1	0.2	0.1	0.2	2.7	46.0	0.2	31.4	0.2	0.2
05/25/21	12:34:09	243.8	44.2	-0.2	0.0	-0.2	82.5	0.1	0.2	1.0	167.2	0.0	10.1	1.9	46.1	1.5	0.1	6.2	30.9
05/25/21	23:34:09	254.0	44.1	-0.2	0.1	-0.2	83.5	0.2	180.7	0.4	0.4	0.1	0.2	1.9	46.0	0.2	31.3	0.2	0.2
05/26/21	12:34:09	236.9	44.2	-0.2	0.0	-0.2	83.1	-0.1	0.0	0.2	164.1	0.0	10.2	2.2	46.1	1.5	0.1	5.7	30.8
05/26/21	23:34:09	257.6	44.0	-0.2	-0.1	-0.2	82.5	0.1	178.9	0.3	-0.2	0.1	0.2	2.2	46.0	0.2	31.3	0.2	0.2
05/27/21	12:34:09	238.6	44.2	-0.2	-0.2	-0.2	81.5	0.1	0.8	0.2	167.7	0.0	10.1	1.8	46.2	1.6	0.2	6.3	30.8
05/27/21	23:34:09	263.0	44.0	-0.2	0.0	-0.2	81.2	0.0	180.6	0.3	0.1	0.1	0.2	2.0	46.0	0.2	31.3	0.2	0.1
05/28/21	12:34:09	239.5	44.3	-0.2	0.0	-0.2	82.1	0.0	-0.1	0.1	165.9	0.0	10.0	1.7	46.1	1.5	0.1	7.0	30.7
05/28/21	23:34:09	259.9	44.0	-0.2	-0.2	-0.2	82.4	-0.2	179.5	0.4	0.1	0.1	0.1	1.9	46.0	0.3	31.2	0.2	0.1
05/29/21	12:34:09	241.0	44.3	-0.1	-0.2	-0.1	81.7	0.1	0.1	0.1	167.1	0.0	10.1	1.9	46.1	1.5	0.1	5.8	30.7
05/29/21	23:34:09	253.2	44.1	-0.2	-0.1	-0.2	81.8	-0.2	178.2	0.8	0.1	0.0	0.2	1.9	46.0	0.2	31.3	0.1	0.1
05/30/21	12:34:09	236.7	44.3	-0.2	0.0	-0.2	81.4	0.1	0.1	0.1	167.4	0.0	10.0	2.2	46.1	1.5	0.1	5.5	30.8
05/30/21	23:34:09	251.7	43.9	-0.2	-0.3	-0.2	82.3	-0.2	176.8	0.3	0.0	0.0	0.2	1.9	46.0	0.3	31.1	0.2	0.1
05/31/21	12:34:09	238.2	44.2	-0.2	-0.2	-0.2	82.6	0.0	0.1	0.2	168.5	0.1	10.2	1.8	46.3	1.3	0.2	5.3	30.9
05/31/21	23:34:09	260.6	44.0	-0.2	-0.2	-0.2	83.1	0.2	178.2	0.2	0.0	0.1	0.2	1.9	46.0	0.3	31.2	0.2	0.1
06/01/21	12:34:09	236.1	44.1	-0.2	-0.1	-0.2	80.5	0.0	0.0	0.1	164.5	0.0	10.0	1.4	46.2	1.3	0.1	9.4	30.8
06/01/21	23:34:09	259.5	43.9	-0.2	0.8	-0.2	82.5	-0.2	178.8	0.3	0.0	0.0	0.2	1.7	46.0	0.2	31.3	0.1	0.1
06/02/21	12:34:09	242.6	44.3	-0.2	-0.4	-0.2	79.6	0.8	0.1	0.3	164.6	0.0	10.0	1.3	46.2	1.7	0.1	5.8	30.8
06/02/21	23:34:09	257.1	44.0	-0.2	-0.1	-0.2	81.6	0.1	178.5	0.0	0.1	0.0	0.1	1.7	46.0	0.2	31.3	0.2	0.1
06/03/21	12:34:09	237.1	44.2	-0.1	-0.1	0.1	81.2	0.0	0.0	0.1	163.8	0.0	10.0	1.7	46.1	1.9	0.1	5.5	30.7
06/03/21	23:34:09	261.1	43.9	-0.2	-0.2	-0.2	81.6	-0.1	177.9	0.1	0.5	0.0	0.2	1.8	46.0	0.2	31.2	0.2	0.1
06/04/21	12:34:09	237.3	44.2	-0.2	-0.3	-0.2	81.1	0.1	0.2	0.1	165.1	0.0	10.0	2.2	46.1	1.4	0.1	5.4	30.6
06/04/21	23:34:09	258.3	44.0	-0.2	-0.1	-0.2	81.0	-0.1	178.0	0.2	0.0	0.0	0.1	2.1	46.0	0.2	31.2	0.2	0.1
06/05/21	12:34:09	240.3	44.2	-0.2	-0.4	-0.1	80.5	0.0	-0.1	0.2	164.3	0.0	10.0	1.4	46.1	1.2	0.1	5.8	30.6
06/05/21	23:34:09	256.2	43.9	-0.2	0.3	-0.2	80.9	0.2	175.9	0.1	0.2	0.0	0.1	1.6	46.0	0.2	31.1	0.2	0.1
06/06/21	12:34:09	241.8	44.3	-0.2	-0.1	-0.2	81.1	0.3	-0.3	0.1	162.1	0.0	10.0	1.0	46.1	1.6	0.0	7.6	30.5
06/06/21	23:34:09	253.2	44.0	-0.2	-0.1	-0.2	80.6	0.1	177.9	0.2	0.0	0.0	0.1	1.3	46.0	0.2	31.2	0.2	0.1
06/07/21	12:34:09	238.6	44.3	-0.2	-0.2	-0.2	81.5	0.0	0.3	0.3	164.0	0.0	10.0	1.4	46.1	1.0	0.1	9.1	30.7
06/07/21	23:34:09	257.1	43.9	-0.2	-0.1	-0.2	80.0	-0.1	177.5	0.7	0.3	0.0	0.2	1.8	46.1	0.2	31.2	0.2	0.2
06/08/21	12:34:09	241.1	44.3	-0.2	0.1	-0.1	80.5	0.1	-0.1	0.0	164.6	0.0	10.0	2.1	46.1	1.4	0.1	7.5	30.6
06/08/21	23:34:09	252.7	44.1	-0.2	-0.1	-0.2	81.1	0.3	178.1	0.3	0.3	0.0	0.2	2.2	46.1	0.2	31.1	0.2	0.1
06/09/21	12:34:09	238.0	44.2	-0.2	0.1	-0.2	82.0	-0.2	-0.2	0.1	163.3	0.0	10.1	1.5	46.2	1.4	0.1	6.1	30.8
06/09/21	23:34:09	250.0	44.1	-0.2	-0.2	-0.2	80.2	0.0	177.8	0.3	-0.1	0.1	0.2	1.8	46.1	0.2	31.2	0.2	0.1
06/10/21	12:34:09	237.5	44.3	-0.1	-0.2	-0.1	80.3	0.8	0.1	0.3	163.9	0.0	10.0	2.0	46.2	1.3	0.0	4.8	30.7
06/10/21	23:34:09	257.5	44.1	-0.2	-0.4	-0.2	80.6	0.3	176.4	0.2	0.1	0.1	0.2	2.1	46.0	0.2	31.2	0.2	0.1
06/11/21	12:34:09	233.2	44.2	-0.2	-0.3	-0.2	79.0	0.0	0.1	1.0	166.4	0.0	10.2	1.5	46.2	1.3	0.1	6.7	30.6
06/11/21	23:34:09	251.9	44.0	-0.2	0.0	-0.2	80.5	0.0	178.8	0.6	0.1	0.1	0.2	1.9	46.1	0.3	31.3	0.2	0.1
06/12/21	12:34:09	234.2	44.3	-0.1	0.0	-0.1	78.5	0.0	-0.1	0.1	163.1	0.0	10.1	1.9	46.2	1.3	0.1	7.2	30.6
06/12/21	23:34:09	254.8	44.0	-0.2	-0.2	-0.2	81.4	0.2	178.6	0.4	0.2	0.0	0.2	2.2	46.2	0.3	31.3	0.2	0.2

Hot Spot 6 System Data Log

Date	Time	System		Flow (SCFM)								Pressure (psig)							
		Flow (SCFM)	Pressure (psig)	M01	M02	M03	M04	M05	M06	M07	M08	M01	M02	M03	M04	M05	M06	M07	M08
06/13/21	12:34:09	235.7	44.2	-0.1	0.8	-0.1	79.6	0.0	-0.1	0.1	164.8	-0.1	9.9	1.2	46.2	0.9	-0.1	9.5	30.5
06/13/21	23:34:09	256.9	44.0	-0.2	-0.1	-0.2	82.3	0.1	181.4	0.2	0.2	0.0	0.2	2.1	46.2	0.2	31.2	0.2	0.1
06/14/21	12:34:09	234.7	44.2	-0.2	-0.3	-0.2	79.1	0.2	-0.1	0.3	166.0	0.1	10.1	1.4	46.1	1.2	0.1	7.5	30.6
06/14/21	23:34:09	257.1	44.0	-0.2	-0.2	-0.2	81.6	0.1	180.6	0.3	0.0	0.1	0.2	2.1	46.1	0.2	31.4	0.2	0.1
06/15/21	12:34:09	234.6	44.2	-0.1	-0.1	-0.1	79.4	0.0	0.3	0.2	163.3	0.1	10.6	1.4	46.2	1.3	0.1	9.9	30.7
06/15/21	23:34:09	254.2	44.0	-0.2	-0.1	-0.2	80.1	0.1	176.5	0.3	-0.1	0.0	0.1	2.1	46.2	0.2	31.4	0.2	0.1
06/16/21	12:34:09	235.5	44.3	-0.1	-0.2	-0.2	78.6	0.1	-0.1	0.1	164.0	0.0	10.5	1.3	46.1	1.4	0.1	7.9	30.5
06/16/21	23:34:09	258.5	44.0	-0.2	0.0	-0.2	80.6	0.2	179.1	0.1	0.8	0.0	0.2	2.1	46.1	0.2	31.3	0.1	0.1
06/17/21	12:34:09	237.4	44.1	-0.1	-0.3	-0.2	79.1	0.1	0.0	0.1	165.0	0.1	10.6	1.7	46.2	1.5	0.1	7.8	30.7
06/17/21	23:34:09	257.7	44.0	-0.2	0.0	-0.2	79.5	-0.1	179.9	0.2	-0.2	0.0	0.1	1.8	46.1	0.2	31.3	0.1	0.1
06/18/21	12:34:09	239.7	44.2	-0.1	-0.2	-0.1	79.0	0.1	0.9	0.1	166.8	0.0	10.6	1.7	46.2	1.6	0.1	4.9	30.6
06/18/21	23:34:09	256.3	44.0	-0.2	-0.1	-0.1	78.7	0.0	175.9	0.3	0.0	0.0	0.1	1.7	46.0	0.2	31.2	0.2	0.1
06/19/21	12:34:09	234.8	44.3	-0.2	-0.1	-0.1	78.7	-0.2	0.1	0.2	164.9	0.0	10.5	1.6	46.3	1.4	0.1	7.5	30.6
06/19/21	23:34:09	253.6	44.0	-0.2	-0.2	-0.2	78.4	0.0	178.3	0.0	0.0	0.0	0.1	1.7	46.1	0.2	31.2	0.2	0.1
06/20/21	12:34:09	236.4	44.3	-0.2	-0.2	-0.2	78.2	-0.1	0.2	0.3	163.9	0.0	10.4	2.1	46.2	1.4	0.1	9.6	30.6
06/20/21	23:34:09	253.4	44.1	-0.2	-0.2	-0.2	79.5	-0.2	178.7	0.4	0.1	0.0	0.2	2.2	46.1	0.2	31.2	0.2	0.1
06/21/21	12:34:09	234.9	44.2	-0.1	-0.1	-0.2	77.8	-0.3	0.0	0.1	164.0	0.0	10.5	2.2	46.2	1.5	0.1	6.0	30.6
06/21/21	23:34:09	252.2	44.0	-0.2	0.2	-0.2	79.9	-0.1	179.0	0.3	0.1	0.0	0.2	2.6	46.2	0.2	31.3	0.2	0.1
06/22/21	12:34:09	233.8	44.2	-0.1	-0.1	-0.2	79.9	0.0	0.3	0.3	166.5	0.0	10.4	1.5	46.2	1.2	0.1	6.5	30.6
06/22/21	23:34:09	256.3	44.1	-0.2	0.1	-0.2	79.2	-0.1	180.5	0.2	0.0	0.0	0.2	2.2	46.2	0.3	31.3	0.2	0.1
06/23/21	12:34:10	240.2	44.2	-0.2	0.1	-0.2	79.1	0.2	-0.1	0.3	167.4	0.0	10.5	2.3	46.2	1.9	0.1	5.0	30.7
06/23/21	23:34:10	258.0	44.1	-0.2	-0.1	-0.2	80.2	0.0	180.7	0.1	-0.1	0.0	0.2	2.4	46.0	0.2	31.2	0.2	0.1
06/24/21	12:34:10	240.1	44.2	-0.2	0.1	-0.2	79.2	0.0	0.1	0.3	163.0	0.0	10.5	2.0	46.2	2.1	0.1	4.1	30.7
06/24/21	23:34:10	255.1	43.9	-0.2	-0.4	-0.2	79.5	0.0	179.6	0.6	0.2	0.0	0.1	1.9	46.0	0.2	31.1	0.2	0.1
06/25/21	12:34:10	237.1	44.3	-0.2	-0.2	0.1	79.8	0.2	0.0	0.1	164.6	0.0	10.4	2.4	46.3	2.8	0.1	2.8	30.8
06/25/21	23:34:10	258.7	43.9	-0.2	0.0	-0.2	79.3	-0.3	177.7	0.2	0.0	0.0	0.1	2.0	46.1	0.2	31.1	0.2	0.1
06/26/21	12:34:10	238.1	44.2	-0.2	0.7	-0.2	80.7	-0.1	-0.1	0.1	164.3	0.0	10.4	2.0	46.2	3.4	0.0	3.4	30.5
06/26/21	23:34:10	255.4	43.9	-0.2	0.4	-0.2	79.5	0.2	178.5	0.3	-0.2	0.0	0.1	1.9	46.0	0.2	31.2	0.2	0.1
06/27/21	12:34:10	238.4	44.2	-0.2	-0.2	-0.1	79.1	-0.2	0.0	0.2	162.1	0.0	10.4	1.6	46.3	2.4	0.1	6.6	30.7
06/27/21	23:34:10	258.9	44.0	-0.2	-0.1	-0.1	79.0	0.1	181.7	0.3	0.2	0.0	0.2	1.7	46.1	0.2	31.1	0.2	0.1
06/28/21	12:34:10	239.4	44.3	-0.2	0.0	-0.2	78.3	-0.2	-0.2	0.3	163.9	0.0	10.3	1.8	46.3	4.9	0.1	4.9	30.8
06/28/21	23:34:10	255.4	44.0	-0.2	-0.2	-0.2	79.3	0.1	179.6	0.2	0.1	0.0	0.2	1.7	46.1	0.2	31.2	0.2	0.1
06/29/21	12:34:10	242.1	44.2	-0.1	-0.2	-0.2	78.7	0.0	0.2	0.3	166.4	0.0	10.3	1.8	46.3	2.1	0.1	4.4	30.7
06/29/21	23:34:10	255.9	44.1	-0.2	-0.1	-0.2	80.0	0.2	180.8	0.2	0.6	0.0	0.2	1.8	46.2	0.2	31.2	0.2	0.1
06/30/21	12:34:10	240.6	44.3	-0.1	0.1	-0.2	79.7	-0.1	-0.1	0.1	168.1	0.0	10.2	1.6	46.4	2.3	0.0	2.4	30.7
06/30/21	23:34:10	257.1	43.9	-0.2	-0.1	-0.2	80.6	0.0	177.4	0.2	0.0	0.0	0.1	1.7	46.3	0.2	31.2	0.2	0.1
07/01/21	12:34:10	235.7	44.3	-0.2	-0.1	-0.2	79.1	-0.1	0.0	0.2	161.9	0.0	10.2	1.5	46.3	1.5	0.1	3.9	30.7
07/01/21	23:34:10	254.9	44.0	-0.2	-0.1	-0.2	81.0	-0.1	177.8	0.0	-0.1	0.0	0.1	1.8	46.3	0.2	31.2	0.2	0.1
07/02/21	12:34:10	236.9	44.3	-0.2	-0.3	-0.2	77.3	0.1	-0.2	0.3	164.7	0.0	10.2	1.5	46.2	2.2	0.1	4.8	30.6
07/02/21	23:34:10	258.0	44.0	-0.1	0.0	-0.1	80.4	0.1	177.4	0.2	0.1	0.0	0.2	1.6	46.2	0.3	31.2	0.2	0.1
07/03/21	12:34:10	237.4	44.2	-0.2	-0.2	-0.2	77.7	0.0	0.1	0.9	164.4	0.0	10.0	2.0	46.4	3.1	0.1	4.4	30.7
07/03/21	23:34:10	252.8	44.0	-0.2	-0.2	-0.2	78.3	0.2	180.0	0.5	0.1	0.0	0.2	2.1	46.3	0.2	31.2	0.2	0.1
07/04/21	12:34:10	235.0	44.2	-0.1	-0.1	-0.2	77.1	0.1	0.1	0.1	163.8	0.0	10.2	1.0	46.2	2.0	0.1	7.3	30.6
07/04/21	23:34:10	257.7	44.0	-0.2	-0.2	-0.2	78.9	-0.3	179.2	0.2	0.2	0.0	0.1	1.6	46.2	0.3	31.2	0.2	0.1
07/05/21	12:34:10	236.3	44.2	-0.2	-0.2	-0.2	79.5	0.0	0.0	0.2	167.4	0.0	10.1	1.3	46.3	1.9	0.0	4.8	30.8
07/05/21	23:34:10	257.6	44.0	-0.2	0.0	-0.2	81.0	0.1	178.1	0.3	0.1	0.0	0.1	1.8	46.1	0.3	31.2	0.2	0.1
07/06/21	12:34:10	240.3	44.3	-0.1	-0.3	-0.2	77.5	0.0	0.2	0.2	164.1	0.0	10.0	1.5	46.2	1.7	0.0	9.5	30.6
07/06/21	23:34:10	252.2	44.0	-0.2	-0.1	-0.2	79.6	0.1	176.4	0.1	0.0	0.0	0.1	1.5	46.1	0.2	31.1	0.2	0.0
07/07/21	12:34:10	240.0	44.2	-0.2	-0.1	-0.2	78.9	-0.1	0.2	0.9	164.6	0.0	10.0	1.5	46.4	2.0	0.1	6.2	30.6
07/07/21	23:34:10	250.4	44.0	-0.2	-0.1	-0.2	77.3	0.0	179.6	0.6	0.5	0.0	0.1	1.6	46.2	0.2	31.1	0.2	0.1
07/08/21	12:34:10	233.9	44.3	-0.2	0.0	-0.2	76.1	-0.1	-0.1	0.2	164.4	0.0	10.1	1.5	46.4	1.9	0.1	5.1	30.6
07/08/21	23:34:10	261.0	44.0	-0.2	-0.1	-0.2	77.9	0.0	181.1	0.2	0.2	0.0	0.1	1.9	46.5	0.2	31.2	0.2	0.1
07/09/21	12:34:10	236.0	44.2	-0.1	-0.1	-0.2	76.1	0.1	0.2	0.1	165.8	0.0	10.5	1.5	46.3	1.7	0.1	8.6	30.5
07/09/21	23:34:10	255.8	43.9	-0.2	0.2	0.1	78.0	0.1	178.0	0.2	0.4	0.0	0.2	1.8	46.3	0.3	31.3	0.2	0.1
07/10/21	12:34:10	236.4	44.3	-0.2	-0.1	-0.2	76.1	-0.1	0.3	0.2	163.8	0.1	10.5	2.1	46.4	2.0	0.1	6.9	30.7
07/10/21	23:34:10	254.3	44.0	-0.2	0.1	-0.2	78.3	0.0	179.0	0.2	-0.1	0.0	0.2	1.9	46.2	0.2	31.2	0.2	0.1
07/11/21	12:34:10	229.3	44.3	-0.2	-0.2	-0.2	76.3	-0.2	-0.1	0.1	158.2	0.0	10.4	2.0	46.4	2.2	0.1	4.8	30.7
07/11/21	23:34:10	258.1	44.0	-0.2	0.0	-0.2	77.0	-0.1	178.1	0.2	0.1	0.0	0.2	1.9	46.3	0.2	31.1	0.2	0.1
07/12/21	12:34:10	238.4	44.3	-0.1	-0.1	-0.2	77.1	0.1	-0.1	0.0	160.7	0.0	10.4	1.9	46.3	1.9	0.1	6.3	30.7
07/12/21	23:34:10	255.9	44.0	0.2	-0.2	0.0	77.3	-0.3	181.5	0.2	0.3	0.0	0.2	2.1	46.3	0.2	31.2	0.1	0.1
07/13/21	12:34:10	246.3	44.2	-0.2	0.0	-0.2	75.7	0.1	0.2	0.2	162.3	0.0	10.5	2.1	46.4	2.2	0.1	7.9	30.8
07/13/21	23:34:10	254.1	43.9	-0.1	0.6	-0.2	78.1	0.0	176.3	0.1	0.1	0.0	0.1	1.8	46.2	0.2	31.2	0.2	0.0
07/14/21	12:34:10	242.6	44.3	-0.1	-0.1	-0.2	77.2	-0.1	0.2	0.3	163.8	0.0	10.2	1.6	46.4	1.8	0.1	6.1	30.7
07/14/21	23:34:10	255.8	44.0	-0.2	-0.3	-0.2	76.8	-0.2	179.2	0.4	0.3	0.0	0.2	1.5	46.3	0.2	31.2	0.2	0.1
07/15/21	12:34:10	245.0	44.3	-0.2	-0.3	-0.2	77.4	0.1	0.2	0.1	162.3	0.0	10.3	2.0	46.4	2.0	0.1	10.3	30.7
07/15/21	23:34:10	256.2	44.0	-0.2	-0.3	-0.2	76.8	0.0	177.4	0.0	0.1	0.0	0.1	1.9	46.3	0.2	31.2	0.2	0.1
07/16/21	12:34:10	241.5	44.2	-0.2	-0.2	-0.2	76.9	-0.1	0.3	0.9	159.4	0.0	10.4	1.6	46.4	1.5	0.1	6.1	30.8
07/16/21	23:34:10	256.5	44.0	-0.2	0.1	-0.2	78.0	-0.1	178.8	0.5	0.2	0.0	0.2	1.6	46.3	0.2	31.2	0.1	0.0
07/17/21	12:34:10	238.2	44.4	0.1	0.1	-0.2	76.3	0.0	0.2	0.2	162.1	0.0	10.3	1.7	46.5	1.6	0.1	6.5	30.8
07/17/21	23:34:10	260.6	44.0	-0.2	0.1	-0.2	77.8	-0.1	179.5	0.2	-0.2	0.0	0.2	1.6	46.4	0.2	31.2	0.2	0.1
07/18/21	12:34:10	241.9	44.4	-0.2	-0.2	-0.2	76.6	0.1	0.2	0.3	160.9	0.0	10.3	1.8	46.5	1.2	0.1	9.9	30.8
07/18/21	23:34:10	259.6	43.9	-0.2	0.0	-0.2	74.8	-0.1	179.5	0.3	-0.1	0.0	0.2	1.7	46.3	0.2	31.2	0.2	0.1
07/19/21	12:34:10	243.1	44.2	-0.2	-0.1	-0.2	76.7	0.2	0.2	0.1	160.6	0.0	10.3	1.0	46.4	1.6	0.1	4.3	30.7

Hot Spot 6 System Data Log

Date	Time	System		Flow (SCFM)								Pressure (psig)							
		Flow (SCFM)	Pressure (psig)	M01	M02	M03	M04	M05	M06	M07	M08	M01	M02	M03	M04	M05	M06	M07	M08
07/19/21	23:34:10	263.3	44.0	-0.2	0.0	-0.2	76.3	-0.2	179.8	0.2	0.0	0.1	0.2	1.5	46.4	0.2	31.3	0.1	0.1
07/20/21	12:34:10	237.6	44.2	-0.2	-0.3	-0.2	76.6	-0.1	-0.1	0.9	160.9	0.0	10.3	1.3	46.5	1.5	0.1	4.3	30.8
07/20/21	23:34:10	263.1	44.0	-0.1	0.0	-0.2	77.7	0.9	179.7	0.3	0.0	0.0	0.2	1.6	46.5	0.2	31.2	0.1	0.1
07/21/21	12:34:10	240.7	44.3	-0.1	-0.3	-0.2	75.0	0.1	-0.1	0.3	160.1	0.0	10.2	1.3	46.4	1.4	0.1	6.0	30.7
07/21/21	23:34:10	259.8	44.0	-0.2	0.0	-0.2	76.9	0.0	177.3	0.2	0.7	0.0	0.1	1.4	46.4	0.2	31.2	0.2	0.0
07/22/21	12:34:10	238.7	44.2	-0.1	-0.3	-0.1	77.4	-0.3	0.1	0.1	159.9	0.0	10.2	1.0	46.5	1.4	0.1	5.4	30.7
07/22/21	23:34:10	261.2	43.9	-0.2	0.1	-0.2	75.3	-0.2	179.7	0.2	0.2	0.1	0.2	1.3	46.4	0.2	31.2	0.2	0.1
07/23/21	12:34:10	245.2	44.1	-0.1	-0.3	-0.1	76.9	0.1	0.1	0.1	161.8	0.0	10.1	1.5	46.4	1.3	0.0	5.5	30.6
07/23/21	23:34:10	261.1	43.9	-0.2	0.0	-0.2	79.0	0.1	178.1	0.2	0.1	0.0	0.1	1.9	46.4	0.2	31.2	0.2	0.1
07/24/21	12:34:10	246.4	44.2	-0.2	0.1	-0.2	77.2	0.1	-0.1	0.1	162.9	0.0	10.2	1.4	46.4	1.4	0.1	4.5	30.7
07/24/21	23:34:10	263.7	44.0	-0.2	-0.2	-0.2	76.3	0.6	178.3	0.3	0.0	0.0	0.1	1.3	46.3	0.2	31.1	0.2	0.0
07/25/21	12:34:10	240.4	44.2	-0.2	0.1	-0.2	76.1	0.2	0.0	0.2	161.9	0.0	10.1	1.5	46.4	1.4	0.1	3.8	30.8
07/25/21	23:34:10	262.7	43.9	-0.2	-0.3	-0.2	77.0	-0.1	177.1	0.1	-0.1	0.0	0.2	1.6	46.3	0.2	31.2	0.2	0.1
07/26/21	12:34:10	242.8	44.3	-0.2	0.0	-0.2	77.3	0.0	0.1	0.1	160.2	0.0	10.2	1.4	46.4	1.5	0.1	3.7	30.7
07/26/21	23:34:10	259.7	44.0	-0.1	0.5	-0.2	77.5	0.0	176.5	0.1	0.1	0.0	0.2	1.5	46.3	0.2	31.1	0.2	0.1
07/27/21	12:34:11	242.2	44.2	-0.1	-0.3	-0.1	76.0	-0.3	0.1	0.1	157.5	0.0	10.2	1.4	46.4	1.3	0.0	4.6	30.7
07/27/21	23:34:11	258.5	44.0	-0.2	0.0	-0.2	75.4	-0.1	178.6	0.2	0.3	0.0	0.2	1.6	46.3	0.2	31.2	0.2	0.1
07/28/21	12:34:11	238.5	44.2	-0.1	-0.1	-0.1	76.6	0.8	0.0	0.2	161.8	0.0	10.2	1.3	46.5	1.2	0.1	3.9	30.6
07/28/21	23:34:11	263.6	43.9	-0.2	0.0	-0.2	75.7	0.4	177.5	0.2	0.1	0.0	0.2	1.7	46.4	0.2	31.2	0.1	0.1
07/29/21	12:34:11	241.2	44.3	-0.1	-0.1	-0.1	76.1	-0.2	0.8	0.3	163.3	0.0	10.1	1.4	46.4	1.4	0.1	3.9	30.7
07/29/21	23:34:11	263.1	43.9	-0.2	0.1	-0.2	76.6	0.1	179.5	0.3	0.0	0.1	0.2	1.7	46.4	0.2	31.2	0.2	0.1
07/30/21	12:34:11	245.3	44.3	-0.2	-0.1	-0.2	76.4	-0.1	0.2	0.3	160.7	0.0	10.2	1.4	46.4	1.4	0.1	4.9	30.7
07/30/21	23:34:11	260.1	43.9	-0.2	0.0	-0.2	76.2	0.0	176.6	0.0	0.4	0.0	0.2	1.4	46.3	0.2	31.1	0.2	0.0
07/31/21	12:34:11	245.2	44.1	-0.1	-0.3	-0.1	75.1	0.1	0.1	0.0	160.7	0.0	10.1	1.4	46.4	1.3	0.1	4.7	30.7
07/31/21	23:34:11	259.6	44.0	-0.1	0.0	-0.1	76.0	0.0	177.1	0.2	0.2	0.0	0.2	1.3	46.3	0.2	31.1	0.2	0.1
08/01/21	12:34:11	240.1	44.3	-0.1	-0.2	-0.2	74.1	0.7	0.0	0.2	160.5	0.0	10.1	1.3	46.4	1.4	0.1	5.7	30.7
08/01/21	23:34:11	256.7	43.9	-0.2	0.1	-0.2	77.5	0.0	177.3	0.3	0.2	0.1	0.2	1.8	46.4	0.3	31.2	0.2	0.1
08/02/21	12:34:11	234.8	44.2	-0.1	-0.3	-0.2	74.9	-0.2	0.0	0.2	162.6	0.0	10.3	1.3	46.5	1.6	0.1	3.0	30.8
08/02/21	23:34:11	261.5	44.1	-0.2	0.1	-0.2	77.3	0.0	177.4	0.0	0.2	0.1	0.2	1.8	46.5	0.2	31.1	0.1	0.1
08/03/21	12:34:11	238.5	44.3	-0.2	0.1	-0.1	74.3	0.1	0.2	0.0	160.3	0.0	10.2	1.8	46.4	1.5	0.1	3.4	30.7
08/03/21	23:34:11	260.5	44.1	-0.1	0.0	-0.2	76.7	0.2	176.8	0.1	-0.2	0.0	0.2	2.0	46.4	0.2	31.2	0.1	0.1
08/04/21	12:34:11	238.7	44.2	-0.2	0.0	-0.2	74.2	0.0	0.1	0.0	162.3	0.1	10.5	1.8	46.5	1.7	0.1	5.6	30.8
08/04/21	23:34:11	252.0	43.9	-0.2	-0.3	-0.2	74.8	0.1	178.0	0.2	0.1	0.0	0.2	1.9	46.4	0.2	31.2	0.1	0.1
08/05/21	12:34:11	237.8	44.3	-0.1	-0.1	-0.2	74.9	0.4	0.0	0.1	159.9	0.0	10.4	1.3	46.4	1.8	0.1	3.3	30.8
08/05/21	23:34:11	261.1	44.1	-0.2	-0.2	-0.2	74.8	-0.1	178.2	0.2	0.1	0.0	0.2	1.6	46.4	0.2	31.3	0.2	0.1
08/06/21	12:34:11	236.9	44.4	-0.1	-0.1	-0.2	75.7	0.0	-0.2	0.1	159.8	0.0	10.4	1.3	46.4	1.7	0.1	4.2	30.7
08/06/21	23:34:11	253.8	44.0	-0.2	-0.3	-0.2	76.7	0.0	174.8	0.2	0.2	0.0	0.1	1.4	46.3	0.2	31.1	0.2	0.0
08/07/21	12:34:11	226.0	44.4	-0.2	-0.2	-0.2	74.7	0.0	-0.1	0.3	161.2	0.0	10.3	1.3	46.4	1.5	0.1	4.7	30.8
08/07/21	23:34:11	258.0	44.0	-0.2	0.1	-0.2	75.8	-0.1	176.4	0.8	0.2	0.1	0.2	1.7	46.4	0.2	31.1	0.2	0.1
08/08/21	12:34:11	238.3	44.3	-0.2	-0.2	-0.2	74.9	-0.2	0.0	0.2	162.0	0.0	10.3	1.5	46.5	1.8	0.1	3.1	30.7
08/08/21	23:34:11	256.3	44.1	-0.2	0.8	-0.2	76.5	0.1	177.4	0.1	0.7	0.0	0.2	1.5	46.4	0.2	31.1	0.1	0.1
08/09/21	12:34:11	238.0	44.3	-0.1	-0.2	-0.1	76.3	0.1	-0.1	0.3	163.0	0.0	10.2	1.7	46.5	1.6	0.1	5.9	30.7
08/09/21	23:34:11	257.1	44.0	-0.1	-0.1	-0.2	76.8	-0.2	177.1	0.3	0.1	0.0	0.1	1.6	46.3	0.2	31.1	0.2	0.0
08/10/21	12:34:11	241.7	44.3	0.1	-0.3	-0.1	77.6	0.0	-0.1	0.1	161.7	0.0	10.2	1.2	46.4	1.3	0.0	3.9	30.8
08/10/21	23:34:11	254.9	44.0	-0.2	-0.1	-0.2	75.7	0.0	178.1	0.3	0.0	0.0	0.1	1.3	46.3	0.2	31.0	0.2	0.0
08/11/21	12:34:11	-0.1	0.0	-0.2	-0.1	-0.2	0.2	0.1	0.1	0.2	-0.1	0.0	0.1	0.9	0.1	0.1	0.1	0.1	0.1
08/11/21	23:34:11	254.7	44.0	-0.2	0.0	-0.2	77.3	0.0	178.3	1.1	-0.1	0.0	0.1	0.8	46.1	0.2	31.0	0.2	0.0
08/12/21	12:34:11	238.5	44.0	-0.2	-0.2	-0.2	74.8	0.1	0.1	0.2	160.1	0.0	10.2	1.6	46.4	1.0	0.1	6.0	30.7
08/12/21	23:34:11	257.6	44.1	-0.2	0.7	-0.2	76.4	0.0	174.2	0.1	0.0	0.0	0.1	1.6	46.3	0.2	31.1	0.2	0.0
08/13/21	12:34:11	244.1	44.2	-0.1	-0.2	-0.2	73.9	0.0	0.5	0.3	162.7	0.0	10.2	1.4	46.4	1.0	0.1	5.7	30.7
08/13/21	23:34:11	258.9	44.0	-0.2	-0.1	-0.2	76.3	0.1	178.0	0.3	0.1	0.0	0.2	1.5	46.3	0.2	31.1	0.2	0.1
08/14/21	12:34:11	235.9	44.2	-0.1	-0.2	-0.2	74.5	-0.2	-0.2	0.2	161.5	0.1	10.2	1.5	46.4	1.0	0.1	5.0	30.7
08/14/21	23:34:11	254.9	44.0	-0.2	-0.1	-0.2	76.7	0.1	178.0	0.1	0.2	0.0	0.2	1.5	46.3	0.2	31.1	0.1	0.1
08/15/21	12:34:11	240.1	44.3	-0.2	-0.2	-0.1	75.7	0.0	0.2	0.8	158.1	0.0	10.3	1.0	46.3	1.0	0.1	3.4	30.6
08/15/21	23:34:11	255.0	43.9	-0.2	-0.1	-0.2	74.4	0.0	176.3	0.2	0.0	0.0	0.2	1.1	46.3	0.2	31.1	0.2	0.0
08/16/21	12:34:11	240.3	44.3	-0.1	0.4	-0.2	73.4	0.1	0.1	0.2	158.6	0.0	10.2	1.3	46.4	1.1	0.1	5.0	30.6
08/16/21	23:34:11	255.0	44.0	-0.2	-0.2	-0.2	74.6	-0.1	173.8	0.0	-0.1	0.0	0.2	1.5	46.3	0.1	31.0	0.2	0.0
08/17/21	12:34:11	243.3	44.2	-0.2	0.0	-0.2	73.9	0.1	0.8	0.3	160.5	0.0	10.3	1.8	46.4	1.1	0.1	3.6	30.7
08/17/21	23:34:11	257.7	44.1	-0.2	-0.2	-0.2	75.4	0.0	177.2	0.4	0.0	0.1	0.2	1.7	46.4	0.2	31.1	0.2	0.1
08/18/21	12:34:11	242.5	44.4	-0.1	0.1	-0.2	75.2	0.3	-0.1	0.1	161.5	0.0	10.2	1.9	46.5	1.0	0.1	4.9	30.8
08/18/21	23:34:11	270.5	44.0	-0.2	0.0	-0.2	75.2	0.8	178.1	0.2	0.1	0.0	0.2	1.9	46.4	0.2	31.1	0.2	0.1
08/19/21	12:34:11	240.3	44.2	-0.2	-0.3	-0.2	76.4	0.0	0.1	0.1	161.7	0.0	10.2	1.7	46.5	1.0	0.2	4.6	30.8
08/19/21	23:34:11	264.7	43.9	-0.2	-0.1	-0.2	76.1	-0.2	177.4	0.2	0.2	0.1	0.2	2.0	46.5	0.2	31.2	0.2	0.1
08/20/21	12:34:11	245.7	44.2	-0.2	0.5	-0.2	74.9	-0.2	0.1	0.3	159.4	0.0	10.2	1.5	46.5	1.0	0.1	4.9	30.8
08/20/21	23:34:11	255.4	44.0	-0.1	0.1	-0.2	75.5	-0.1	176.7	1.1	0.2	0.0	0.2	1.6	46.4	0.2	31.2	0.1	0.1
08/21/21	12:34:11	237.2	44.3	-0.2	-0.2	-0.2	75.4	0.2	0.1	0.3	161.7	0.0	10.2	1.4	46.5	1.0	0.1	4.2	30.7
08/21/21	23:34:11	259.7	44.1	-0.2	0.0	-0.2	74.5	0.1	179.7	0.3	-0.1	0.0	0.2	1.5	46.4	0.2	31.1	0.2	0.1
08/22/21	12:34:11	234.4	44.3	-0.1	-0.2	-0.2	74.2	0.3	-0.1	0.1	161.2	0.0	10.1	1.8	46.5	1.0	0.1	3.6	30.8
08/22/21	23:34:11	254.5	44.1	-0.1	-0.3	-0.2	75.9	0.4	176.0	0.3	0.0	0.0	0.2	1.6	46.4	0.2	31.1	0.1	0.1
08/23/21	12:34:11	236.5	44.3	-0.2	-0.1	-0.2	75.3	0.0	0.2	0.2	162.5	0.0	10.1	1.5	46.5	1.2	0.1	4.7	30.9
08/23/21	23:34:11	256.2	44.0	-0.2	0.0	-0.2	77.7	-0.1	180.1	0.3	0.5	0.1	0.2	1.9	46.4	0.2	31.2	0.1	0.1
08/24/21	12:34:11	236.0	44.2	-0.2	-0.1	-0.2	77.0	-0.2	0.1	0.1	163.0	0.0	10.0	1.6	46.5	1.0	0.1	2.6	30.9
08/24/21	23:34:11	259.9	44.1	-0.1	-0.1	-0.2	76.1	-0.1	176.9	0.3	-0.1	0.1	0.2	1.8	46.4	0.2	31.2	0.1	0.1

Hot Spot 6 System Data Log

Date	Time	System		Flow (SCFM)								Pressure (psig)							
		Flow (SCFM)	Pressure (psig)	M01	M02	M03	M04	M05	M06	M07	M08	M01	M02	M03	M04	M05	M06	M07	M08
08/25/21	12:34:11	237.5	44.3	-0.2	0.0	-0.2	74.9	-0.1	0.3	0.3	161.2	0.0	10.1	1.4	46.5	1.1	0.1	4.2	30.8
08/25/21	23:34:11	260.7	43.9	-0.2	0.0	-0.2	75.0	-0.2	175.4	0.1	0.1	0.0	0.1	1.4	46.2	0.2	31.1	0.1	0.0
08/26/21	12:34:11	241.5	44.2	-0.1	0.1	-0.2	75.1	0.8	0.3	1.1	161.2	0.1	10.3	1.6	46.5	1.1	0.1	5.6	30.9
08/26/21	23:34:11	256.9	44.0	-0.2	-0.1	-0.2	74.7	0.4	175.5	0.6	0.1	0.0	0.2	1.4	46.3	0.2	31.1	0.1	0.1
08/27/21	12:34:11	240.4	44.3	-0.2	0.0	-0.2	74.8	0.1	-0.1	0.3	160.0	0.0	10.1	1.6	46.5	1.1	0.1	4.3	31.0
08/27/21	23:34:11	249.7	44.1	-0.2	-0.4	-0.2	74.9	-0.1	177.3	0.1	-0.1	0.0	0.2	1.5	46.3	0.1	31.1	0.1	0.1
08/28/21	12:34:11	238.4	44.3	-0.1	-0.2	-0.2	75.9	-0.1	-0.1	0.1	164.1	-0.1	10.2	1.2	46.4	1.1	0.0	4.8	30.8
08/28/21	23:34:11	256.3	44.1	-0.2	-0.1	-0.2	76.9	0.0	176.1	0.2	0.2	0.0	0.2	1.4	46.3	0.2	31.0	0.1	0.1
08/29/21	12:34:11	238.4	44.3	-0.2	0.0	-0.2	76.5	-0.1	-0.1	0.3	160.4	0.0	10.4	1.5	46.4	1.1	0.1	5.0	30.8
08/29/21	23:34:12	251.4	44.1	-0.2	0.1	-0.2	76.8	0.0	177.3	0.3	0.1	0.0	0.2	1.6	46.3	0.2	31.1	0.2	0.1
08/30/21	12:34:12	243.0	44.3	-0.1	-0.2	-0.2	76.1	0.6	0.3	0.5	161.1	0.0	10.3	1.4	46.5	1.1	0.1	3.8	30.9
08/30/21	23:34:12	263.1	44.0	-0.2	-0.1	-0.2	75.6	0.2	178.4	0.4	0.0	0.0	0.2	1.5	46.3	0.2	31.2	0.1	0.1
08/31/21	12:34:12	241.1	44.2	-0.1	-0.1	-0.2	75.2	-0.1	0.1	0.3	160.5	0.0	10.2	1.5	46.4	1.1	0.1	3.7	30.9
08/31/21	23:34:12	260.9	44.0	-0.2	-0.2	-0.2	75.1	0.0	177.8	0.2	-0.1	0.0	0.2	1.6	46.3	0.2	31.1	0.1	0.1
09/01/21	12:34:12	245.5	44.3	-0.2	-0.2	-0.2	75.9	-0.1	0.1	0.0	158.0	0.0	10.2	1.2	46.4	1.1	0.1	3.7	30.8
09/01/21	23:34:12	265.9	44.0	-0.2	-0.3	-0.2	76.7	-0.1	177.9	0.2	-0.1	0.0	0.2	1.7	46.4	0.2	31.2	0.1	0.1
09/02/21	12:34:12	241.4	44.2	-0.2	0.2	-0.2	75.0	0.2	0.3	0.2	158.5	0.0	10.2	1.2	46.3	1.1	0.1	4.7	30.8
09/02/21	23:34:12	264.2	44.0	-0.2	0.0	-0.2	75.0	0.0	178.3	0.2	0.1	0.1	0.2	1.9	46.4	0.2	31.2	0.2	0.1
09/03/21	12:34:12	237.2	44.2	-0.2	-0.1	-0.2	75.4	0.0	0.1	0.1	158.4	0.0	10.2	1.5	46.5	1.2	0.1	4.9	30.9
09/03/21	23:34:12	261.3	44.0	-0.2	-0.2	-0.2	77.3	-0.1	176.2	0.0	0.1	0.0	0.2	1.7	46.3	0.2	31.1	0.2	0.1
09/04/21	12:34:12	245.6	44.3	-0.1	-0.1	-0.2	76.7	0.1	0.1	0.4	159.6	0.0	10.3	1.3	46.4	1.2	0.1	3.5	30.9
09/04/21	23:34:12	260.5	43.9	-0.1	-0.3	-0.2	77.5	0.1	178.1	0.2	-0.1	0.0	0.2	1.6	46.3	0.2	31.1	0.1	0.1
09/05/21	12:34:12	238.6	44.2	-0.2	0.0	-0.2	74.6	0.0	0.3	0.0	160.7	0.0	10.3	1.2	46.4	1.1	0.1	3.1	30.8
09/05/21	23:34:12	261.4	43.9	-0.2	0.0	-0.2	74.4	0.0	176.8	0.3	0.1	0.0	0.2	1.6	46.3	0.2	31.0	0.2	0.1
09/06/21	12:34:12	241.1	44.3	-0.1	-0.4	-0.2	75.6	0.1	-0.1	0.0	162.1	0.0	10.2	1.3	46.5	1.0	0.1	3.2	30.9
09/06/21	23:34:12	258.8	44.0	-0.2	0.1	-0.2	75.1	0.1	177.2	0.3	0.1	0.0	0.2	1.5	46.3	0.2	31.0	0.1	0.1
09/07/21	12:34:12	241.0	44.3	-0.1	-0.2	-0.2	74.9	-0.1	-0.2	0.3	160.2	0.0	10.4	1.4	46.4	1.1	0.1	3.7	30.9
09/07/21	23:34:12	264.6	43.9	-0.2	0.3	-0.2	74.8	0.1	176.4	0.3	0.1	0.0	0.2	1.5	46.2	0.1	31.1	0.1	0.1
09/08/21	12:34:12	241.4	44.2	-0.2	-0.2	-0.2	75.4	-0.2	0.2	0.2	161.5	0.0	10.4	1.3	46.4	1.0	0.1	3.9	30.9
09/08/21	23:34:12	257.6	43.9	-0.2	0.0	-0.2	76.7	0.0	177.9	0.6	0.1	0.0	0.1	1.5	46.3	0.2	31.2	0.2	0.1
09/09/21	12:34:12	242.5	44.2	-0.2	0.0	-0.2	75.5	0.0	0.0	0.2	161.9	0.0	10.2	1.2	46.4	1.1	0.0	1.6	30.9
09/09/21	23:34:12	264.6	43.9	-0.2	-0.1	-0.2	74.9	-0.3	177.3	0.3	0.0	0.1	0.2	1.6	46.3	0.2	31.1	0.1	0.1
09/10/21	12:34:12	240.5	44.3	-0.2	-0.1	-0.2	-43.5	0.0	-0.1	0.3	160.3	0.0	10.4	1.3	46.5	1.2	0.1	2.3	30.9
09/10/21	23:34:12	260.8	43.9	-0.2	-0.2	-0.2	-43.5	-0.2	177.2	0.2	0.2	0.0	0.2	1.8	46.3	0.2	31.3	0.1	0.1
09/11/21	12:34:12	237.6	44.2	-0.2	-0.1	-0.2	-43.5	0.0	0.2	0.1	160.1	0.0	10.5	1.4	46.4	1.2	0.1	2.4	30.8
09/11/21	23:34:12	253.6	44.1	-0.2	0.7	-0.2	-43.5	0.0	177.4	0.0	0.1	0.0	0.2	1.4	46.2	0.1	31.2	0.1	0.2
09/12/21	12:34:12	237.3	44.3	-0.2	-0.4	-0.2	-43.5	0.1	0.2	0.2	157.7	0.0	10.5	1.3	46.4	1.3	0.1	1.6	30.8
09/12/21	23:34:12	259.7	44.0	-0.2	0.0	-0.2	-43.5	-0.2	177.0	0.2	0.1	0.0	0.2	1.6	46.3	0.2	31.1	0.1	0.1
09/13/21	12:34:12	239.8	44.3	-0.2	-0.2	-0.2	-43.5	0.0	0.0	0.2	161.0	0.0	10.4	1.5	46.4	1.3	0.1	3.7	30.9
09/13/21	23:34:12	267.5	43.9	-0.2	0.1	-0.2	-43.5	-0.3	178.7	0.3	0.1	0.0	0.2	1.7	46.2	0.2	31.2	0.2	0.1
09/14/21	12:34:12	235.9	44.2	-0.2	-0.3	-0.2	-43.5	-0.2	0.1	0.2	160.8	0.0	10.4	1.3	46.3	1.2	0.1	3.7	30.8
09/14/21	23:34:12	260.6	44.0	-0.2	0.1	-0.1	-43.5	0.2	176.2	0.2	0.0	0.0	0.2	1.7	46.2	0.2	31.2	0.1	0.1
09/15/21	12:34:12	237.0	44.3	-0.2	-0.1	-0.2	-43.5	0.1	0.2	0.2	161.4	0.0	10.5	1.3	46.4	1.1	0.1	3.1	30.9
09/15/21	23:34:12	260.4	44.1	-0.2	0.1	-0.2	-43.5	0.0	177.4	0.1	0.6	0.0	0.2	1.6	46.3	0.2	31.3	0.2	0.1
09/16/21	12:34:12	242.0	44.3	-0.2	-0.2	-0.1	-43.5	0.1	0.6	0.0	159.3	0.0	10.4	1.3	46.3	1.2	0.1	4.0	31.0
09/16/21	23:34:12	260.2	44.1	-0.2	0.0	-0.2	-43.5	-0.1	179.1	0.2	0.1	0.0	0.2	1.5	46.3	0.2	31.2	0.2	0.1
09/17/21	12:34:12	238.8	44.3	-0.2	-0.3	-0.2	-43.5	-0.1	0.1	0.3	159.4	0.0	10.4	1.3	46.3	1.3	0.1	3.8	30.9
09/17/21	23:34:12	259.1	44.0	-0.2	0.7	-0.2	-43.5	0.0	178.9	0.2	0.1	0.0	0.2	1.6	46.2	0.2	31.3	0.1	0.2
09/18/21	12:34:12	239.0	44.3	-0.2	0.0	-0.2	-43.5	-0.1	0.1	0.1	161.7	0.0	10.4	1.4	46.4	1.3	0.1	2.6	30.9
09/18/21	23:34:12	260.7	44.0	-0.2	-0.1	-0.2	-43.5	-0.3	179.0	0.2	0.1	0.0	0.2	1.3	46.1	0.2	31.2	0.1	0.1
09/19/21	12:34:12	235.1	44.3	-0.2	0.0	-0.1	-43.5	0.0	0.2	0.3	160.8	-0.1	10.4	1.3	46.3	1.5	0.1	2.4	30.8
09/19/21	23:34:12	259.8	44.0	-0.2	-0.1	-0.2	-43.5	0.0	178.7	0.0	-0.1	0.0	0.2	1.3	46.1	0.1	31.2	0.1	0.1
09/20/21	12:34:12	242.7	44.3	-0.1	0.1	-0.2	-43.5	0.1	0.6	0.0	159.0	0.0	10.4	1.2	46.2	1.3	0.1	3.9	30.9
09/20/21	23:34:12	258.3	44.0	0.1	0.0	-0.1	-43.5	0.0	177.7	0.3	-0.1	0.0	0.2	1.6	46.2	0.2	31.2	0.1	0.1
09/21/21	12:34:12	237.4	44.2	-0.2	0.0	-0.2	-43.5	-0.1	0.3	0.4	160.1	0.0	10.4	1.5	46.4	1.2	0.1	2.3	30.9
09/21/21	23:34:12	259.9	44.0	-0.2	-0.2	-0.2	-43.5	0.2	177.4	0.3	0.0	0.0	0.2	1.6	46.2	0.2	31.2	0.1	0.1
09/22/21	12:34:12	230.2	44.3	-0.2	0.0	-0.2	-43.5	-0.1	-0.1	0.2	159.9	-0.1	10.2	1.0	46.2	0.4	0.0	0.4	30.9
09/22/21	23:34:12	252.1	44.0	-0.2	0.0	-0.2	-43.5	-0.1	178.3	0.2	0.2	0.0	0.2	1.4	46.0	0.2	31.2	0.2	0.1
09/23/21	12:34:12	235.3	44.2	-0.2	0.0	-0.2	-43.5	0.1	0.1	1.1	161.4	-0.1	12.2	1.1	46.2	0.2	0.1	0.2	31.0
09/23/21	23:34:12	254.7	44.0	-0.2	-0.2	-0.2	-43.5	0.1	177.2	0.4	0.0	0.0	1.6	1.4	46.1	0.1	31.1	0.1	0.1
09/24/21	12:34:12	244.3	44.2	-0.2	0.5	-0.2	-43.5	-0.1	0.2	0.3	161.0	0.0	10.4	1.3	46.3	1.8	0.1	4.7	30.9
09/24/21	23:34:12	259.5	44.0	-0.2	-0.1	-0.2	-43.5	-0.1	177.4	0.3	0.0	0.0	0.1	1.3	46.2	0.2	31.2	0.1	0.1
09/25/21	12:34:12	240.7	44.3	-0.2	0.0	-0.2	-43.5	-0.1	0.2	0.1	160.9	0.0	10.5	1.3	46.3	1.2	0.1	2.8	31.0
09/25/21	23:34:12	255.2	44.0	-0.2	-0.2	-0.2	-43.5	0.0	178.1	0.2	0.1	0.0	0.2	1.3	46.2	0.2	31.2	0.2	0.1
09/26/21	12:34:12	239.7	44.2	-0.2	-0.1	-0.2	-43.5	0.0	0.3	0.2	160.4	0.0	10.3	1.4	46.4	1.3	0.1	2.8	31.0
09/26/21	23:34:12	256.8	44.0	-0.2	-0.3	-0.2	-43.5	0.0	178.6	0.2	0.1	0.1	0.2	1.6	46.2	0.2	31.3	0.1	0.1
09/27/21	12:34:12	238.3	44.3	-0.2	-0.2	-0.2	-43.5	0.1	0.2	0.1	161.8	0.1	10.4	1.4	46.4	1.3	0.1	2.7	31.1
09/27/21	23:34:12	6.6	48.4	-0.2	-0.1	-0.2	-43.5	0.1	0.1	0.2	0.1	0.1	0.2	1.4	2.9	0.2	0.1	0.1	0.2
09/28/21	12:34:12	7.5	49.4	-0.2	0.2	-0.2	-43.5	0.0	-0.1	0.2	0.4	0.1	0.2	1.7	0.2	0.2	0.2	0.1	0.2
09/28/21	23:34:12	8.6	46.8	-0.2	0.2	-0.2	-43.5	0.0	0.1	0.0	-0.2	0.1	0.2	1.5	0.1	0.1	0.1	0.1	0.2
09/29/21	12:34:12	9.0	49.2	-0.2	-0.2	-0.2	-43.5	0.1	0.0	0.4	0.0	0.1	0.1	1.6	0.1	0.2	0.1	0.1	0.1
09/29/21	23:34:12	9.5	49.6	-0.2	0.0	-0.2	-43.5	0.4	0.7	0.2	0.3	0.1	0.2	1.6	0.1	0.1	0.1	0.0	0.2
09/30/21	12:34:12	7.5	48.7	-0.2	0.1	-0.2	-43.5	0.2	-0.1	0.1	0.2	0.1	0.1	1.7	0.1	0.1	0.1	0.1	0.1

Hot Spot 6 System Data Log

Date	Time	System		Flow (SCFM)								Pressure (psig)							
		Flow (SCFM)	Pressure (psig)	M01	M02	M03	M04	M05	M06	M07	M08	M01	M02	M03	M04	M05	M06	M07	M08
09/30/21	23:34:12	6.4	47.7	-0.2	-0.1	-0.2	-43.6	0.2	-0.1	0.3	0.1	0.1	0.1	1.7	0.0	0.1	0.1	0.0	0.1
10/01/21	12:34:12	7.0	49.3	-0.2	-0.1	-0.2	-43.5	0.4	0.2	0.3	0.1	0.1	0.1	1.9	0.1	0.2	0.1	0.0	0.2
10/01/21	23:34:12	6.1	48.0	-0.2	0.0	-0.2	-43.5	0.6	0.1	1.0	0.2	0.1	0.1	1.7	0.0	0.1	0.1	0.0	0.1
10/02/21	12:34:12	6.1	46.8	-0.2	0.1	-0.2	-43.5	0.0	0.1	0.4	0.0	0.1	0.2	2.0	0.1	0.1	0.1	0.0	0.2
10/02/21	23:34:13	0.1	0.0	-0.2	-0.1	-0.2	-43.5	-0.2	-0.1	0.3	0.0	0.1	0.1	1.8	0.0	0.1	0.1	0.0	0.1
10/03/21	12:34:13	0.7	0.0	-0.2	0.0	-0.2	-43.6	0.3	-0.1	0.2	0.3	0.1	0.1	1.9	0.0	0.1	0.1	0.0	0.1
10/03/21	23:34:13	-0.2	0.0	-0.2	-0.1	-0.2	-43.5	0.3	-0.2	0.3	0.0	0.0	0.1	1.8	0.0	0.1	0.0	0.0	0.1
10/04/21	12:34:13	-0.3	-0.1	-0.2	0.0	-0.2	-43.5	-0.1	0.3	0.2	0.2	0.0	0.1	1.8	0.0	0.1	0.1	0.0	0.1
10/04/21	23:34:13	0.2	-0.1	-0.2	0.1	-0.2	-43.5	0.1	0.4	0.2	0.4	0.0	0.1	1.8	0.0	0.0	0.0	-0.1	0.1
10/05/21	12:34:13	-0.2	-0.1	-0.2	0.1	-0.2	-43.5	0.0	0.2	0.2	0.0	0.0	0.1	1.8	0.0	0.1	0.0	-0.1	0.1
10/05/21	23:34:13	-0.3	-0.1	-0.2	0.1	-0.2	-43.5	0.0	0.0	0.4	0.2	0.0	0.1	1.8	-0.1	0.0	0.0	-0.1	0.1
10/06/21	12:34:13	-0.1	-0.1	-0.2	0.2	-0.2	-43.5	-0.2	0.4	0.1	0.6	0.0	0.1	1.9	0.0	0.1	0.0	-0.1	0.1
10/06/21	23:34:13	0.0	-0.1	-0.2	0.2	-0.2	-43.5	-0.2	0.3	0.2	0.4	0.0	0.1	1.8	-0.1	0.0	0.0	-0.1	0.1
10/07/21	12:34:13	0.3	-0.1	-0.2	0.3	-0.2	-43.5	0.0	0.2	0.4	0.2	-0.1	0.0	1.8	-0.1	0.0	-0.1	-0.1	0.0
10/07/21	23:34:13	0.4	-0.1	-0.2	0.4	-0.2	-43.6	0.0	0.2	0.3	0.1	-0.1	0.1	1.8	-0.1	0.0	0.0	-0.1	0.1
10/08/21	12:34:13	5.1	48.0	-0.2	-0.1	-0.2	-43.5	0.0	0.0	0.2	0.1	0.0	0.1	1.7	0.0	0.0	0.0	0.0	0.1
10/08/21	23:34:13	5.5	46.9	-0.2	-0.1	-0.2	-43.6	0.0	-0.1	0.3	0.5	-0.1	0.1	1.9	-0.1	0.0	0.0	-0.1	0.1
10/09/21	12:34:13	5.1	49.5	-0.2	-0.2	-0.2	-43.5	0.0	0.1	0.1	0.3	0.0	0.1	2.0	-0.1	0.0	0.0	-0.1	0.1
10/09/21	23:34:13	3.0	47.6	-0.2	-0.1	-0.2	-43.5	0.1	-0.1	0.1	0.2	0.0	0.1	2.0	-0.1	0.0	0.0	-0.1	0.1
10/10/21	12:34:13	2.3	47.6	-0.2	0.0	-0.2	-43.5	0.5	0.3	0.2	0.2	0.0	0.1	2.0	0.0	0.1	0.1	0.0	0.1
10/10/21	23:34:13	3.5	46.9	0.1	0.2	-0.2	-43.5	0.8	0.2	0.2	0.3	0.0	0.1	2.0	-0.1	0.0	0.0	-0.1	0.1
10/11/21	12:34:13	235.0	44.3	-0.2	-0.1	-0.2	-43.5	0.0	0.1	0.2	158.5	0.0	11.1	1.8	46.2	0.6	0.0	7.4	30.9
10/11/21	23:34:13	259.6	43.8	-0.2	0.0	-0.2	-43.5	0.0	177.5	0.1	0.2	0.0	0.6	1.6	46.0	0.1	31.1	0.1	0.1
10/12/21	12:34:13	235.0	44.1	-0.1	-0.2	-0.2	-43.5	-0.1	0.1	0.2	160.1	0.0	10.6	1.4	46.2	1.8	0.1	6.2	30.8
10/12/21	23:34:13	253.0	43.9	-0.2	0.0	-0.2	-43.5	-0.1	179.5	0.2	0.2	0.0	0.1	1.6	46.0	0.1	31.2	0.1	0.1
10/13/21	12:34:13	241.7	44.3	-0.2	-0.2	0.1	-43.5	0.1	-0.2	0.1	160.6	0.0	10.6	1.4	46.3	1.3	0.1	3.9	30.9
10/13/21	23:34:13	255.4	44.0	-0.2	0.1	-0.2	-43.5	0.8	178.3	0.2	-0.2	0.0	0.1	1.4	46.1	0.1	31.2	0.1	0.1
10/14/21	12:34:13	239.3	44.2	-0.2	-0.1	-0.2	-43.5	-0.1	0.0	0.1	161.0	0.0	10.5	1.4	46.3	1.5	0.1	2.9	30.9
10/14/21	23:34:13	252.0	44.0	-0.1	0.0	-0.2	-43.5	-0.1	177.9	0.1	0.6	0.0	0.2	1.5	46.2	0.1	31.2	0.1	0.1
10/15/21	12:34:13	230.4	44.1	-0.1	-0.3	-0.2	-43.5	-0.1	0.0	0.2	160.3	0.0	10.4	1.4	46.3	1.6	0.1	2.0	31.0
10/15/21	23:34:13	255.0	44.1	-0.2	-0.2	-0.2	-43.5	0.1	175.4	0.1	0.2	0.0	0.2	1.4	46.1	0.1	31.3	0.1	0.2
10/16/21	12:34:13	235.4	44.3	-0.2	-0.1	-0.2	-43.5	0.2	0.0	0.1	161.0	0.0	10.3	1.4	46.4	1.7	0.1	1.8	31.0
10/16/21	23:34:13	257.4	44.0	-0.2	-0.2	-0.2	-43.5	-0.1	181.6	0.2	0.1	0.1	0.2	1.7	46.2	0.2	31.3	0.1	0.2
10/17/21	12:34:13	237.0	44.3	-0.2	-0.2	-0.2	-43.5	0.3	0.2	0.1	162.6	0.1	10.3	1.6	46.4	1.6	0.2	1.9	31.1
10/17/21	23:34:13	257.1	44.0	-0.2	-0.1	-0.2	-43.5	0.3	180.1	0.2	0.1	0.1	0.2	1.6	46.2	0.2	31.3	0.1	0.2
10/18/21	12:34:13	233.0	44.2	-0.2	0.1	-0.2	-43.5	-0.2	0.3	0.2	163.2	0.1	10.4	1.7	46.4	1.6	0.2	1.6	31.1
10/18/21	23:34:13	261.5	44.0	-0.2	-0.1	-0.1	-43.6	0.0	181.4	0.4	0.3	0.1	0.2	1.6	46.1	0.2	31.3	0.1	0.3
10/19/21	12:34:13	233.3	44.3	-0.2	-0.1	-0.2	-43.5	-0.1	0.3	0.3	162.9	0.1	10.3	1.6	46.4	1.4	0.2	1.5	31.2
10/19/21	23:34:13	258.4	44.1	-0.2	0.0	-0.2	-43.5	-0.1	179.8	0.2	0.2	0.1	0.2	1.6	46.2	0.2	31.4	0.1	0.2
10/20/21	12:34:13	237.8	44.3	-0.2	0.0	-0.2	-43.5	0.0	0.0	0.4	162.0	0.1	10.3	1.5	46.4	1.4	0.2	1.6	31.1
10/20/21	23:34:13	253.4	44.0	-0.2	0.2	-0.2	-43.5	-0.1	179.7	0.2	0.0	0.1	0.2	1.5	46.2	0.2	31.3	0.2	0.2
10/21/21	12:34:13	239.6	44.2	-0.2	-0.2	-0.2	-43.5	0.3	-0.1	0.3	162.8	0.1	10.3	1.3	46.4	1.2	0.2	1.5	31.1
10/21/21	23:34:13	259.6	44.1	-0.2	-0.1	-0.2	-43.5	0.4	181.7	0.1	-0.1	0.1	0.2	1.4	46.2	0.2	31.3	0.1	0.2
10/22/21	12:34:13	237.3	44.2	-0.2	-0.1	-0.2	-43.5	-0.1	-0.1	0.4	159.9	0.1	10.2	1.3	46.3	1.3	0.2	1.8	31.1
10/22/21	23:34:13	264.6	43.9	-0.2	-0.3	-0.2	-43.5	-0.1	181.5	0.1	0.0	0.1	0.2	1.4	46.1	0.2	31.3	0.1	0.2
10/23/21	12:34:13	240.5	44.2	-0.2	-0.2	-0.2	-43.5	0.1	0.1	0.1	162.0	0.1	10.2	1.3	46.3	1.4	0.2	2.1	31.0
10/23/21	23:34:13	248.2	44.0	-0.2	-0.1	-0.2	-43.5	0.2	177.7	0.2	0.0	0.0	0.2	1.1	46.1	0.2	31.2	0.1	0.1
10/24/21	12:34:13	242.1	44.1	-0.2	-0.3	-0.2	-43.5	0.1	-0.1	0.1	160.1	-0.1	9.9	1.0	46.2	1.1	0.0	1.3	31.0
10/24/21	23:34:13	261.6	43.9	-0.2	-0.3	-0.2	-43.5	0.2	180.1	0.4	0.2	0.1	0.2	1.3	46.1	0.1	31.3	0.1	0.1
10/25/21	12:34:13	264.7	43.8	-0.2	-0.1	-0.2	-43.5	0.0	0.2	0.1	161.4	0.0	10.3	1.0	46.1	1.1	0.1	1.7	30.9
10/25/21	23:34:13	281.1	43.5	-0.2	-0.3	-0.2	-43.5	0.1	178.7	0.2	0.1	0.0	0.1	1.2	46.1	0.1	31.1	0.1	0.1
10/26/21	12:34:13	257.3	43.8	-0.2	-0.3	-0.2	-43.5	-0.1	0.0	0.3	160.9	0.0	10.3	1.1	46.2	1.1	0.1	2.2	30.9
10/26/21	23:34:13	279.4	43.6	-0.2	-0.2	-0.2	-43.5	0.0	181.4	0.0	0.3	0.1	0.2	1.5	46.2	0.1	31.3	0.1	0.2
10/27/21	12:34:13	264.1	43.8	-0.2	0.0	-0.2	-43.5	-0.2	-0.1	0.1	164.1	0.0	10.3	1.5	46.3	1.1	0.1	2.7	31.1
10/27/21	23:34:13	279.2	43.6	-0.2	0.3	-0.2	-43.6	0.0	179.6	0.2	0.1	0.1	0.2	1.3	46.2	0.1	31.3	0.1	0.2
10/28/21	12:34:13	255.9	43.9	-0.2	-0.3	-0.2	-43.5	-0.1	0.1	0.1	161.3	0.0	10.0	1.2	46.2	1.1	0.1	1.4	31.0
10/28/21	23:34:13	272.7	43.7	-0.2	0.0	-0.2	-43.5	0.1	179.3	0.2	0.2	0.0	0.2	1.4	46.0	0.1	31.2	0.1	0.1
10/29/21	12:34:13	254.5	44.0	-0.2	0.0	-0.2	-43.5	0.0	-0.1	0.1	160.7	0.0	10.3	1.5	46.3	1.2	0.1	1.6	31.1
10/29/21	23:34:13	269.9	43.8	-0.2	0.0	-0.2	-43.5	0.2	181.8	0.2	0.2	0.1	0.1	1.4	46.2	0.2	31.3	0.1	0.2
10/30/21	12:34:13	252.5	44.0	-0.2	0.0	-0.2	-43.5	-0.1	0.2	0.3	165.4	0.1	10.1	1.8	46.3	1.1	0.2	1.0	31.1
10/30/21	23:34:13	278.7	43.8	-0.2	0.0	-0.2	-43.6	0.0	181.5	0.3	0.1	0.1	0.2	1.5	46.1	0.1	31.3	0.1	0.2
10/31/21	12:34:13	286.3	43.4	-0.2	141.7	-0.2	-43.5	0.0	0.0	161.0	0.1	0.0	21.1	1.7	4.6	1.2	0.2	30.0	0.2
10/31/21	23:34:13	276.9	43.7	-0.2	0.3	-0.2	-43.5	-0.3	180.8	0.3	0.0	0.1	0.2	1.4	46.1	0.1	31.3	0.1	0.2
11/01/21	12:34:13	288.2	43.5	-0.2	144.4	-0.2	-43.6	0.0	0.0	160.0	0.2	0.0	21.1	1.7	5.0	1.3	0.2	30.1	0.2
11/01/21	23:34:13	277.6	43.6	-0.2	-0.2	-0.2	-43.5	0.0	180.0	0.4	0.2	0.1	0.2	1.4	46.0	0.1	31.2	0.1	0.2
11/02/21	12:34:13	290.4	43.4	-0.2	140.9	-0.2	-43.5	0.0	0.0	157.4	-0.1	0.0	21.0	1.3	5.6	1.0	0.1	30.0	0.1
11/02/21	23:34:13	275.8	43.6	-0.2	-0.3	-0.2	-43.5	0.2	182.3	0.1	0.3	0.1	0.2	1.4	46.0	0.2	31.2	0.1	0.2
11/03/21	12:34:13	284.0	43.4	-0.2	141.4	-0.2	-43.5	0.0	0.0	158.0	0.7	0.0	21.0	1.3	5.4	1.3	0.1	29.9	0.1
11/03/21	23:34:13	275.8	43.6	-0.2	-0.1	-0.2	-43.5	-0.2	181.3	0.3	0.2	0.1	0.1	1.3	46.0	0.2	31.3	0.1	0.1
11/04/21	12:34:13	285.1	43.3	-0.2	142.4	-0.2	-43.5	0.1	-0.1	158.3	0.2	0.0	21.0	1.3	5.4	1.1	0.1	30.0	0.1
11/04/21	23:34:13	275.2	43.6	-0.2	0.3	-0.2	-43.5	0.1	179.2	0.7	0.0	0.1	0.1	1.3	46.0	0.1	31.2	0.1	0.1
11/05/21	12:34:13	286.4	43.5	-0.2	142.3	-0.2	-43.5	0.2	0.0	161.2	0.1	0.0	21.0	1.5	5.6	1.1	0.1	30.0	0.1
11/05/21	23:34:14	273.3	43.6	-0.2	-0.3	-0.2	-43.5	0.1	180.5	0.2	0.5	0.0	0.1	1.6	46.0	0.1	31.3	0.0	0.1

Hot Spot 6 System Data Log

Date	Time	System		Flow (SCFM)								Pressure (psig)							
		Flow (SCFM)	Pressure (psig)	M01	M02	M03	M04	M05	M06	M07	M08	M01	M02	M03	M04	M05	M06	M07	M08
11/06/21	12:34:14	290.8	43.5	-0.2	144.5	-0.2	-43.6	0.1	0.4	158.9	0.1	0.0	21.1	1.6	5.0	1.2	0.2	30.1	0.2
11/06/21	23:34:14	279.7	43.8	-0.2	0.0	-0.2	-43.6	0.1	182.6	0.3	0.2	0.1	0.1	2.1	46.2	0.2	31.4	0.0	0.3
11/07/21	12:34:14	287.3	43.4	-0.2	141.6	-0.2	-43.6	0.0	0.3	160.8	0.0	0.0	21.2	1.8	3.7	1.0	0.2	30.1	0.2
11/07/21	23:34:14	271.4	43.6	-0.2	-0.1	-0.2	-43.5	0.1	181.9	0.2	0.2	0.0	0.1	1.4	46.1	0.1	31.3	0.1	0.2
11/08/21	12:34:14	287.0	43.5	-0.2	141.7	-0.2	-43.6	-0.2	0.0	158.5	0.2	0.0	21.2	1.6	4.4	1.1	0.2	30.1	0.2
11/08/21	23:34:14	281.9	43.8	-0.2	0.0	-0.2	-43.6	0.2	181.5	0.5	0.1	0.1	0.2	1.6	46.1	0.2	31.3	0.1	0.2
11/09/21	12:34:14	275.4	43.8	-0.2	143.1	-0.2	-43.5	0.0	0.3	160.2	0.2	0.0	21.1	1.7	5.5	2.9	0.2	30.1	0.2
11/09/21	23:34:14	260.9	44.0	-0.2	0.2	-0.2	-43.5	0.1	182.1	0.2	0.2	0.1	0.1	1.5	46.0	0.2	31.3	0.1	0.1
11/10/21	12:34:14	273.5	43.6	-0.2	141.6	-0.2	-43.5	0.2	-0.2	159.4	0.1	0.1	21.1	1.5	5.2	2.4	0.1	29.9	0.1
11/10/21	23:34:14	257.5	43.8	-0.2	-0.2	-0.2	-43.5	0.0	179.1	0.4	0.0	0.0	0.1	1.4	46.0	0.1	31.3	0.0	0.1
11/11/21	12:34:14	273.6	43.7	-0.2	139.2	-0.2	-43.5	0.1	0.1	158.8	0.1	0.0	21.0	1.4	5.4	2.5	0.1	30.0	0.1
11/11/21	23:34:14	259.5	43.9	-0.2	0.0	-0.2	-43.5	0.0	180.0	0.2	0.1	0.0	0.2	1.5	46.0	0.2	31.3	0.0	0.1
11/12/21	12:34:14	267.3	43.8	-0.2	138.7	-0.2	-43.5	0.1	0.1	158.5	0.2	0.0	21.2	1.5	5.6	1.7	0.1	29.9	0.2
11/12/21	23:34:14	257.8	43.9	-0.2	0.2	-0.2	-43.5	0.1	179.1	0.2	0.1	0.0	0.1	1.7	46.0	0.1	31.3	0.0	0.2
11/13/21	12:34:14	270.1	43.7	-0.2	136.4	-0.2	-43.5	0.3	0.4	155.7	0.2	0.0	21.2	1.5	5.2	1.5	0.1	29.9	0.1
11/13/21	23:34:14	257.1	43.8	-0.2	0.1	-0.2	-43.5	-0.2	179.9	0.4	0.5	0.0	0.1	1.6	46.0	0.1	31.3	0.0	0.1
11/14/21	12:34:14	266.1	43.6	-0.2	139.4	-0.2	-43.6	0.0	0.0	158.6	-0.1	0.0	21.2	1.8	4.3	1.5	0.2	30.0	0.2
11/14/21	23:34:14	266.5	43.9	-0.2	-0.2	-0.2	-43.6	0.1	183.3	0.0	0.3	0.0	0.1	1.9	46.0	0.1	31.4	0.0	0.2
11/15/21	12:34:14	272.0	43.8	-0.2	138.4	-0.2	-43.5	-0.1	0.0	158.4	0.2	0.1	21.2	1.7	3.0	1.5	0.2	30.1	0.2
11/15/21	23:34:14	265.6	44.0	-0.2	0.2	-0.2	-43.6	-0.1	183.1	0.0	0.1	0.1	0.1	2.1	46.0	0.2	31.4	0.0	0.3
11/16/21	12:34:14	264.5	43.8	-0.2	140.6	-0.2	-43.5	0.0	0.1	157.2	0.2	0.1	21.2	1.6	3.0	1.6	0.2	30.1	0.2
11/16/21	23:34:14	256.6	43.9	-0.2	0.0	-0.2	-43.5	0.1	178.5	0.1	0.0	0.1	0.1	1.4	45.9	0.1	31.3	0.1	0.1
11/17/21	12:34:14	266.9	43.8	-0.2	140.3	-0.2	-43.5	-0.2	0.0	157.2	0.0	0.1	21.2	1.6	4.0	1.5	0.1	30.1	0.2
11/17/21	23:34:14	263.7	43.9	0.1	0.1	-0.2	-43.5	0.0	178.9	0.3	0.1	0.1	0.2	1.6	46.0	0.1	31.3	0.0	0.1
11/18/21	12:34:14	271.8	43.7	-0.2	141.4	-0.2	-43.5	0.0	-0.1	158.9	0.0	0.1	21.1	1.4	3.3	1.8	0.1	30.0	0.1
11/18/21	23:34:14	258.7	44.0	-0.2	0.1	-0.2	-43.5	0.0	178.4	0.2	0.1	0.0	0.1	1.7	46.0	0.1	31.3	0.0	0.1
11/19/21	12:34:14	269.1	43.7	-0.2	139.3	-0.2	-43.5	0.0	-0.1	158.5	0.1	0.1	21.1	1.5	2.8	1.5	0.1	30.0	0.1
11/19/21	23:34:14	257.5	43.9	-0.2	-0.2	-0.2	-43.5	0.1	178.9	0.2	0.1	0.0	0.1	1.6	46.0	0.2	31.3	0.1	0.1
11/20/21	12:34:14	267.5	43.7	-0.2	137.0	-0.2	-43.5	0.4	0.0	158.1	0.3	0.0	21.2	1.6	1.6	1.2	0.1	30.0	0.1
11/20/21	23:34:14	260.2	43.8	-0.2	-0.3	-0.2	-43.5	0.4	180.1	0.0	0.1	0.0	0.1	1.6	46.0	0.1	31.3	0.0	0.1
11/21/21	12:34:14	265.7	43.8	0.1	139.1	-0.2	-43.5	-0.1	0.1	154.6	-0.1	0.0	21.2	1.5	1.0	1.5	0.1	30.0	0.1
11/21/21	23:34:14	254.0	43.9	-0.2	-0.1	-0.2	-43.5	-0.1	178.9	1.2	0.2	0.1	0.1	1.6	46.0	0.1	31.2	0.0	0.1
11/22/21	12:34:14	270.8	43.6	-0.2	135.6	-0.1	-43.5	0.2	0.0	158.4	0.1	0.0	21.2	1.6	0.7	1.3	0.0	30.0	0.0
11/22/21	23:34:14	255.2	43.8	-0.2	0.1	-0.2	-43.5	0.1	177.9	0.1	0.9	0.0	0.1	1.7	45.9	0.1	31.3	0.0	0.1
11/23/21	12:34:14	269.6	43.6	-0.2	136.2	-0.2	-43.6	-0.2	0.1	159.1	0.1	0.0	21.2	1.7	0.1	1.4	0.1	30.0	0.1
11/23/21	23:34:14	259.7	44.0	-0.2	0.0	-0.2	-43.6	-0.1	179.9	0.3	0.1	0.0	0.1	1.7	46.0	0.1	31.4	0.0	0.2
11/24/21	12:34:14	266.7	43.8	-0.2	139.2	-0.2	-43.6	0.1	0.5	160.5	-0.2	0.1	21.3	1.8	0.1	1.4	0.2	30.1	0.2
11/24/21	23:34:14	262.2	44.1	-0.2	-0.2	-0.2	-43.6	0.0	178.3	0.4	0.0	0.1	0.2	1.7	46.0	0.1	31.3	0.1	0.2
11/25/21	12:34:14	274.1	43.8	-0.2	136.3	-0.2	-43.5	-0.1	0.1	158.8	0.4	0.1	21.3	1.9	0.1	1.8	0.2	30.1	0.2
11/25/21	23:34:14	264.8	44.1	-0.2	0.0	-0.2	-43.6	-0.1	182.9	0.2	0.0	0.1	0.2	2.0	46.0	0.2	31.5	0.1	0.2
11/26/21	12:34:14	262.2	43.7	-0.2	139.7	-0.2	-43.6	-0.2	0.0	157.8	0.3	0.1	21.2	1.8	0.1	1.8	0.2	30.1	0.2
11/26/21	23:34:14	260.7	43.9	-0.2	-0.2	-0.2	-43.5	0.1	181.5	0.2	0.6	0.1	0.2	1.6	45.9	0.1	31.4	0.1	0.2
11/27/21	12:34:14	275.9	43.8	-0.2	138.6	-0.2	-43.6	0.2	0.0	160.4	0.3	0.1	21.2	1.8	0.1	1.6	0.2	30.1	0.2
11/27/21	23:34:14	264.1	43.8	-0.2	0.1	-0.2	-43.6	0.1	181.5	0.2	0.1	0.1	0.2	2.1	45.9	0.2	31.4	0.1	0.3
11/28/21	12:34:14	266.3	43.9	-0.2	141.2	-0.2	-43.5	0.4	-0.1	159.2	0.0	0.1	21.2	1.8	0.1	1.5	0.2	30.1	0.2
11/28/21	23:34:14	265.9	44.1	-0.2	-0.2	-0.2	-43.6	0.4	182.7	0.2	0.0	0.1	0.2	2.0	46.0	0.2	31.4	0.1	0.2
11/29/21	12:34:14	266.4	43.6	-0.2	140.3	-0.2	-43.6	0.2	-0.1	161.1	0.7	0.1	21.3	1.9	0.3	1.5	0.2	30.1	0.2
11/29/21	23:34:14	272.0	43.8	-0.2	0.1	-0.2	-43.6	-0.1	182.6	1.0	0.1	0.1	0.2	2.0	46.0	0.2	31.5	0.1	0.3
11/30/21	12:34:14	280.1	43.5	-0.2	140.1	-0.1	-43.5	0.1	-0.1	161.1	0.0	0.1	21.3	1.8	0.4	1.7	0.2	30.1	0.3
11/30/21	23:34:14	279.3	43.8	-0.2	-0.3	-0.2	-43.6	0.0	179.9	0.0	-0.3	0.1	0.2	1.7	45.9	0.2	31.3	0.1	0.2
12/01/21	12:34:14	281.3	43.5	-0.2	140.1	-0.2	-43.6	0.0	0.5	161.1	0.1	0.1	21.3	1.7	0.4	1.7	0.2	30.1	0.2
12/01/21	23:34:14	275.3	43.6	-0.2	0.0	-0.2	-43.6	0.1	182.7	0.2	-0.1	0.1	0.2	1.9	45.8	0.2	31.4	0.1	0.3
12/02/21	12:34:14	283.1	43.5	-0.2	138.9	-0.2	-43.6	0.5	-0.2	158.1	0.2	0.1	21.2	1.5	0.2	1.6	0.2	30.0	0.2
12/02/21	23:34:14	280.7	43.8	-0.2	0.2	-0.2	-43.6	0.4	184.4	0.1	-0.1	0.1	0.1	2.1	45.9	0.2	31.6	0.1	0.3
12/03/21	12:34:14	280.9	43.4	-0.2	141.4	-0.2	-43.5	0.0	-0.1	159.4	0.0	0.1	21.2	1.5	0.2	1.8	0.2	30.0	0.2
12/03/21	23:34:14	272.0	43.6	-0.2	0.1	-0.2	-43.6	-0.2	182.5	0.2	0.2	0.1	0.2	1.9	45.9	0.2	31.4	0.1	0.3
12/04/21	12:34:14	280.0	43.5	-0.2	138.6	-0.2	-43.5	0.2	-0.1	161.0	-0.1	0.1	21.1	1.5	0.1	1.3	0.2	30.0	0.2
12/04/21	23:34:14	273.5	43.7	-0.2	-0.1	-0.2	-43.6	0.0	182.8	0.0	0.0	0.1	0.2	1.6	45.8	0.1	31.3	0.0	0.2
12/05/21	12:34:14	285.1	43.5	-0.2	143.3	-0.2	-43.6	0.0	-0.2	160.6	-0.1	0.0	21.1	1.5	0.4	1.6	0.2	30.0	0.2
12/05/21	23:34:14	273.4	43.6	-0.2	0.1	-0.2	-43.6	0.2	179.3	0.1	0.3	0.0	0.1	1.4	45.8	0.1	31.2	0.0	0.1
12/06/21	12:34:14	286.3	43.4	-0.2	142.0	-0.2	-43.5	0.8	-0.2	159.5	0.3	0.1	21.1	1.4	0.4	1.6	0.1	29.9	0.1
12/06/21	23:34:14	280.3	43.6	-0.2	-0.1	-0.2	-43.5	0.6	180.4	0.2	0.2	0.1	0.1	1.4	45.8	0.1	31.3	0.0	0.1
12/07/21	12:34:14	287.9	43.4	-0.2	140.5	-0.2	-43.5	0.2	0.1	157.5	0.1	0.0	21.1	1.3	0.1	1.6	0.1	29.9	0.1
12/07/21	23:34:14	280.7	43.6	-0.2	0.3	-0.2	-43.6	0.1	181.7	0.1	0.2	0.0	0.1	1.4	45.8	0.1	31.3	0.0	0.1
12/08/21	12:34:14	286.7	43.3	-0.2	142.0	-0.2	-43.5	0.2	0.5	157.1	0.1	0.0	21.1	1.3	0.1	1.8	0.1	29.8	0.1
12/08/21	23:34:14	275.9	43.6	-0.2	-0.1	-0.2	-43.6	0.2	180.0	0.3	0.2	0.0	0.1	1.3	45.8	0.1	31.3	0.0	0.1
12/09/21	12:34:14	282.6	43.3	-0.2	141.5	-0.2	-43.5	-0.1	0.0	158.4	-0.1	0.1	21.1	1.4	0.2	1.6	0.1	29.9	0.1
12/09/21	23:34:15	271.8	43.5	-0.2	0.0	-0.2	-43.5	0.1	181.4	0.3	0.2	0.0	0.1	1.4	45.8	0.1	31.2	0.0	0.1
12/10/21	12:34:15	288.6	43.4	-0.2	139.8	-0.2	-43.5	0.0	0.2	158.4	0.3	0.0	21.1	1.3	0.0	1.8	0.1	29.9	0.1
12/10/21	23:34:15	281.9	43.5	-0.2	-0.1	-0.2	-43.6	0.2	179.4	0.3	0.1	0.0	0.1	1.6	45.7	0.1	31.3	0.0	0.1
12/11/21	12:34:15	282.2	43.5	-0.2	141.9	-0.2	-43.5	0.0	0.1	156.3	0.1	0.0	21.0	1.2	0.0	1.7	0.1	29.9	0.1
12/11/21	23:34:15	284.4	43.5	-0.2	-0.1	-0.2	-43.6	-0.1	181.0	0.4	0.0	0.0	0.1	1.5	45.8	0.1	31.2	0.0	0.1
12/12/21	12:34:15	293.7	43.4	-0.2	139.8	-0.1	-43.5	0.1	-0.1	158.5	1.0	0.0	21.1	1.2	0.2	1.9	0.1	29.9	0.1

Hot Spot 6 System Data Log

Date	Time	System		Flow (SCFM)								Pressure (psig)							
		Flow (SCFM)	Pressure (psig)	M01	M02	M03	M04	M05	M06	M07	M08	M01	M02	M03	M04	M05	M06	M07	M08
12/12/21	23:34:15	285.0	43.5	-0.2	0.0	-0.2	-43.5	-0.2	178.2	0.4	0.3	0.0	0.1	1.3	45.7	0.1	31.2	0.0	0.1
12/13/21	12:34:15	287.6	43.3	-0.2	139.9	-0.2	-43.5	-0.1	0.3	158.1	0.2	0.0	21.1	1.3	0.2	1.5	0.1	29.9	0.1
12/13/21	23:34:15	283.3	43.5	-0.2	0.0	-0.2	-43.5	0.0	182.0	0.3	0.2	0.0	0.1	1.4	45.7	0.1	31.2	0.0	0.1
12/14/21	12:34:15	287.7	43.3	-0.2	142.2	-0.2	-43.5	0.6	0.2	158.7	0.1	0.0	21.1	1.5	0.2	1.9	0.1	29.9	0.1
12/14/21	23:34:15	273.6	43.5	-0.2	-0.2	-0.2	-43.6	0.1	179.7	0.2	0.2	0.0	0.1	1.6	45.7	0.1	31.2	0.0	0.1
12/15/21	12:34:15	289.5	43.3	-0.2	139.0	-0.2	-43.5	0.2	0.2	160.8	0.4	0.0	21.1	1.4	0.1	1.9	0.0	29.9	0.1
12/15/21	23:34:15	280.8	43.5	-0.2	0.1	-0.2	-43.5	0.2	178.8	0.2	-0.1	0.0	0.1	1.4	45.8	0.1	31.2	0.0	0.1
12/16/21	12:34:15	286.1	43.4	-0.2	140.8	-0.2	-43.5	0.1	0.0	158.1	0.1	0.1	21.1	1.4	0.1	1.9	0.1	29.9	0.1
12/16/21	23:34:15	283.0	43.5	-0.2	0.0	-0.2	-43.5	0.2	179.5	1.0	0.1	0.0	0.1	1.5	45.7	0.1	31.2	0.0	0.1
12/17/21	12:34:15	286.0	43.4	-0.2	140.9	-0.1	-43.5	0.0	0.3	157.9	0.0	0.0	21.1	1.5	0.2	1.5	0.1	29.9	0.1
12/17/21	23:34:15	282.3	43.5	-0.2	0.0	-0.2	-43.5	0.0	181.4	0.3	0.1	0.0	0.1	1.7	45.8	0.1	31.2	0.0	0.1
12/18/21	12:34:15	282.7	43.4	-0.2	138.4	-0.2	-43.5	-0.2	0.0	158.4	0.1	0.0	21.0	1.3	0.2	1.5	0.1	29.9	0.1
12/18/21	23:34:15	280.0	43.5	-0.2	0.1	-0.2	-43.5	-0.1	177.7	0.3	0.1	0.0	0.1	1.4	45.7	0.1	31.2	0.1	0.1
12/19/21	12:34:15	286.5	43.5	-0.1	137.2	-0.1	-43.5	-0.3	0.2	156.6	0.3	0.0	21.1	1.3	0.3	1.4	0.1	29.9	0.1
12/19/21	23:34:15	273.0	43.6	-0.2	0.0	-0.2	-43.5	0.0	180.7	0.2	0.1	0.0	0.1	1.6	45.7	0.1	31.2	0.1	0.2
12/20/21	12:34:15	290.9	43.4	-0.2	142.5	-0.2	-43.5	0.0	0.1	157.5	0.2	0.1	21.1	1.6	0.2	1.6	0.1	30.0	0.1
12/20/21	23:34:15	273.9	43.6	-0.2	0.2	-0.2	-43.5	0.2	177.0	0.4	0.1	0.1	0.2	1.8	45.7	0.2	31.2	0.1	0.1
12/21/21	12:34:15	288.2	43.4	-0.2	135.8	-0.2	-43.5	-0.1	0.1	157.2	0.1	0.0	21.3	1.8	0.1	1.6	0.1	30.0	0.1
12/21/21	23:34:15	272.3	43.6	-0.2	0.0	-0.2	-43.6	-0.1	176.4	0.3	0.0	-0.1	0.1	1.8	46.1	0.1	31.3	0.0	0.2
12/22/21	12:34:15	288.5	43.4	-0.2	138.3	-0.2	-43.6	0.1	0.1	160.0	0.2	0.1	21.3	2.2	0.1	1.7	0.2	30.0	0.3
12/22/21	23:34:15	279.1	43.7	-0.2	-0.1	-0.2	-43.6	0.0	181.4	0.3	0.2	0.1	0.1	2.0	46.2	0.1	31.4	0.0	0.2
12/23/21	12:34:15	287.7	43.4	-0.2	138.1	-0.2	-43.6	-0.3	0.1	157.8	0.0	0.0	21.3	1.9	0.2	2.6	0.1	30.0	0.2
12/23/21	23:34:15	276.7	43.6	-0.2	0.1	-0.2	-43.6	0.0	180.0	0.2	0.0	0.1	0.2	1.8	46.0	0.1	31.4	0.0	0.2
12/24/21	12:34:15	290.9	43.4	-0.2	135.9	-0.1	-43.5	-0.1	0.0	156.6	0.4	0.1	21.2	1.7	0.2	1.7	0.2	30.0	0.2
12/24/21	23:34:15	283.1	43.7	-0.2	0.3	-0.2	-43.6	-0.2	179.7	0.1	0.2	0.1	0.2	1.8	46.0	0.1	31.3	0.1	0.2
12/25/21	12:34:15	282.1	43.5	-0.2	137.7	-0.2	-43.6	0.1	0.1	158.5	0.0	0.1	21.3	1.6	0.1	2.4	0.2	30.0	0.2
12/25/21	23:34:15	283.5	43.7	-0.2	-0.2	-0.2	-43.6	0.1	178.2	0.2	0.0	0.1	0.2	1.7	46.0	0.1	31.4	0.0	0.1
12/26/21	12:34:15	282.4	43.4	-0.2	138.8	-0.2	-43.5	-0.3	0.0	157.1	0.1	0.1	21.3	1.6	0.1	2.1	0.1	30.0	0.2
12/26/21	23:34:15	277.1	43.7	-0.2	-0.2	-0.2	-43.6	0.1	180.9	0.1	0.1	0.1	0.2	1.8	46.0	0.1	31.4	0.1	0.2
12/27/21	12:34:15	32.7	46.7	-0.2	-0.2	-0.2	-43.5	0.2	-0.1	0.1	0.2	0.9	11.4	1.7	0.1	4.3	0.8	11.5	0.7
12/27/21	23:34:15	34.6	48.0	-0.2	-0.2	-0.2	-43.6	0.2	0.3	0.0	-0.1	0.1	0.1	1.5	0.0	0.1	0.1	0.0	0.2
12/28/21	12:34:15	33.8	46.8	-0.2	0.1	-0.2	0.0	1.0	0.2	0.4	0.2	0.0	0.2	1.6	0.0	0.1	0.1	0.0	0.2
12/28/21	23:34:15	30.5	45.9	-0.2	-0.1	-0.2	0.1	0.9	-0.2	0.3	1.2	0.0	0.1	1.4	0.0	0.1	0.0	0.0	0.2
12/29/21	12:34:15	30.8	46.1	-0.2	-0.1	-0.2	0.1	0.2	-0.2	0.2	0.3	0.0	0.2	1.6	0.0	0.1	0.1	0.0	0.2
12/29/21	23:34:15	33.7	46.0	-0.2	-0.1	-0.2	0.1	0.0	-0.1	0.3	0.0	0.1	0.1	1.3	0.0	0.1	0.1	0.0	0.1
12/30/21	12:34:15	30.6	48.8	-0.2	-0.1	-0.2	0.1	0.1	0.3	0.1	0.3	0.0	0.1	1.5	0.0	0.1	0.1	0.0	0.1
12/30/21	23:34:15	30.1	45.9	-0.2	0.0	-0.2	0.1	0.0	0.1	0.2	0.1	0.0	0.1	1.4	0.0	0.1	0.0	0.0	0.1
12/31/21	12:34:15	29.7	48.2	-0.2	0.1	-0.2	0.3	-0.2	0.1	0.3	0.2	0.0	0.2	1.4	0.0	0.1	0.1	0.0	0.2
12/31/21	23:34:15	30.0	48.7	-0.2	0.0	-0.2	0.1	-0.2	-0.1	0.2	0.2	0.0	0.1	1.3	0.0	0.0	0.0	-0.1	0.1
01/01/22	12:34:15	28.8	45.9	-0.2	-0.2	-0.2	0.2	0.0	-0.1	0.0	0.0	0.0	0.1	1.5	0.0	0.1	0.1	0.0	0.1
01/01/22	23:34:15	30.0	48.4	-0.2	0.0	-0.2	0.4	0.0	-0.1	0.2	0.7	0.0	0.1	1.3	0.0	0.0	0.0	-0.1	0.1
01/02/22	12:34:15	32.0	48.0	-0.2	0.0	-0.2	0.2	0.1	0.1	0.1	0.2	0.0	0.1	1.5	0.0	0.1	0.1	0.0	0.1
01/02/22	23:34:15	32.3	47.1	-0.2	0.0	-0.2	0.1	0.2	0.1	0.4	-0.1	0.0	0.1	1.4	0.0	0.0	0.0	-0.1	0.1
01/03/22	12:34:15	30.9	46.9	-0.2	-0.3	-0.2	0.3	-0.2	0.0	0.1	0.2	0.0	0.1	1.6	0.0	0.1	0.1	0.0	0.1
01/03/22	23:34:15	38.4	48.1	-0.2	-0.3	-0.2	0.0	-0.1	-0.2	0.1	0.2	0.0	0.1	1.5	0.0	0.1	0.0	0.0	0.1
01/04/22	12:34:15	35.9	46.9	-0.2	0.2	-0.2	0.0	0.2	-0.1	0.1	0.2	0.1	0.2	1.7	0.0	0.1	0.1	0.0	0.1
01/04/22	23:34:15	35.9	48.0	-0.2	0.2	-0.2	0.2	-0.1	0.3	0.1	0.2	0.0	0.1	1.4	0.0	0.1	0.1	0.0	0.1
01/05/22	12:34:15	37.2	47.8	-0.2	-0.1	-0.2	0.1	-0.1	0.2	0.2	-0.1	0.0	0.1	1.6	0.0	0.1	0.1	0.0	0.2
01/05/22	23:34:15	35.4	46.7	-0.2	-0.1	0.1	0.1	-0.1	0.0	0.1	0.0	0.0	0.1	1.4	0.0	0.0	0.0	-0.1	0.1
01/06/22	12:34:15	34.8	47.5	-0.2	0.0	-0.2	1.1	0.1	0.2	0.1	0.0	0.1	0.1	1.6	0.0	0.1	0.1	0.0	0.1
01/06/22	23:34:15	37.4	48.5	-0.2	-0.1	-0.2	0.1	-0.1	0.6	0.2	0.1	0.0	0.1	1.6	0.0	0.1	0.0	0.0	0.1
01/07/22	12:34:15	37.2	47.5	-0.2	0.1	-0.2	0.2	0.1	0.2	0.1	0.2	0.0	0.1	1.5	0.0	0.1	0.1	0.0	0.1
01/07/22	23:34:15	37.3	46.1	-0.2	0.1	-0.2	0.0	0.0	-0.1	0.1	0.0	0.0	0.1	1.5	0.0	0.1	0.0	0.0	0.1
01/08/22	12:34:15	38.8	47.5	-0.2	-0.2	-0.2	-0.1	0.1	-0.1	0.0	0.1	0.0	0.1	1.6	0.0	0.1	0.1	0.0	0.2
01/08/22	23:34:15	36.8	46.9	-0.2	-0.3	-0.2	0.2	0.0	0.0	0.0	-0.1	0.0	0.1	1.3	0.0	0.0	0.1	0.0	0.1
01/09/22	12:34:15	37.4	48.9	-0.2	0.1	-0.2	0.2	0.0	0.3	0.1	0.2	0.1	0.2	1.7	0.0	0.1	0.1	0.0	0.2
01/09/22	23:34:15	35.5	46.6	-0.2	0.0	-0.2	-0.2	0.0	0.2	0.3	0.0	0.0	0.1	1.5	0.0	0.1	0.1	0.0	0.1
01/10/22	12:34:15	278.7	43.3	-0.2	135.4	-0.2	-0.2	0.2	0.0	153.3	0.2	0.0	21.3	1.3	0.0	0.9	0.1	30.0	0.1
01/10/22	23:34:15	282.8	43.6	-0.2	0.1	-0.2	81.0	0.1	178.2	0.3	0.0	0.0	0.1	1.4	46.1	0.1	31.3	0.0	0.1
01/11/22	12:34:15	287.2	43.3	-0.2	136.8	-0.2	0.2	0.1	0.1	157.5	0.2	0.0	21.2	1.6	0.1	1.7	0.2	30.0	0.2
01/11/22	23:34:15	280.7	43.6	-0.2	0.0	-0.2	80.6	-0.2	178.8	0.0	0.1	0.1	0.2	1.6	46.1	0.1	31.4	0.1	0.1
01/12/22	12:34:16	298.1	43.5	-0.2	142.5	-0.2	0.3	0.1	0.0	158.4	0.2	0.1	21.3	1.8	0.1	1.6	0.2	30.1	0.2
01/12/22	23:34:16	288.1	43.5	-0.2	0.2	-0.2	81.9	0.1	178.4	0.1	0.0	0.1	0.2	1.6	46.2	0.1	31.4	0.1	0.2
01/13/22	12:34:16	289.4	43.4	-0.2	142.2	-0.2	0.3	0.0	-0.1	157.2	0.1	0.1	21.2	1.7	0.0	1.5	0.2	30.1	0.2
01/13/22	23:34:16	288.7	43.6	-0.2	0.1	-0.2	81.3	-0.1	180.3	0.3	0.2	0.1	0.2	1.7	46.3	0.2	31.4	0.1	0.2
01/14/22	12:34:16	297.6	43.4	-0.2	143.6	-0.2	0.1	-0.3	-0.1	159.7	0.2	0.1	21.3	1.8	0.1	1.5	0.2	30.2	0.2
01/14/22	23:34:16	283.0	43.7	-0.2	0.2	-0.2	83.8	-0.2	187.4	0.4	0.2	0.2	0.2	2.3	46.4	0.2	31.6	0.1	0.4
01/15/22	12:34:16	292.8	43.5	-0.2	141.3	-0.2	0.2	0.0	0.0	160.7	0.1	0.1	21.3	1.7	0.1	1.7	0.2	30.1	0.3
01/15/22	23:34:16	280.8	43.7	-0.2	0.2	-0.2	81.3	0.1	181.5	0.1	-0.1	0.1	0.2	1.4	46.1	0.2	31.4	0.1	0.3
01/16/22	12:34:16	294.5	43.5	-0.2	141.9	-0.2	-0.2	-0.1	0.2	158.5	0.3	0.1	21.3	1.7	0.1	1.4	0.1	30.1	0.2
01/16/22	23:34:16	281.3	43.6	-0.2	0.0	-0.2	82.6	0.0	182.0	0.1	0.1	0.1	0.2	1.8	46.2	0.2	31.5	0.1	0.3
01/17/22	12:34:16	290.6	43.5	-0.2	140.7	-0.2	0.4	0.2	0.2	159.7	0.0	0.1	21.3	1.6	0.1	1.4	0.2	30.2	0.2
01/17/22	23:34:16	279.4	43.7	-0.2	0.2	-0.2	84.3	0.0	183.5	0.3	0.2	0.1	0.2	2.0	46.3	0.2	31.6	0.1	0.3

Hot Spot 6 System Data Log

Date	Time	System		Flow (SCFM)								Pressure (psig)							
		Flow (SCFM)	Pressure (psig)	M01	M02	M03	M04	M05	M06	M07	M08	M01	M02	M03	M04	M05	M06	M07	M08
01/18/22	12:34:16	298.6	43.5	-0.2	142.9	-0.2	0.3	-0.1	0.1	159.7	0.2	0.1	21.3	1.8	0.1	1.3	0.2	30.2	0.3
01/18/22	23:34:16	287.7	43.7	-0.2	0.0	-0.2	83.9	0.1	185.7	0.2	0.1	0.2	0.2	2.2	46.4	0.2	31.6	0.1	0.4
01/19/22	12:34:16	292.4	43.4	-0.2	140.9	0.1	0.4	0.2	-0.1	159.2	0.0	0.1	21.2	1.7	0.1	1.7	0.2	30.0	0.3
01/19/22	23:34:16	281.6	43.6	-0.2	0.0	-0.2	82.8	0.1	181.8	0.1	0.2	0.1	0.2	1.6	46.2	0.2	31.5	0.1	0.3
01/20/22	12:34:16	292.6	43.4	-0.2	142.6	-0.2	0.9	0.2	0.3	157.0	0.1	0.1	21.2	1.5	0.1	1.5	0.2	30.0	0.3
01/20/22	23:34:16	275.6	43.5	-0.2	0.0	-0.2	81.9	0.1	179.6	0.0	0.2	0.1	0.2	1.3	46.0	0.1	31.4	0.1	0.2
01/21/22	12:34:16	286.0	43.3	-0.2	143.4	-0.2	0.1	0.1	0.1	158.4	0.1	0.1	21.1	1.6	0.0	1.5	0.2	30.0	0.2
01/21/22	23:34:16	274.8	43.5	-0.2	-0.1	-0.2	83.0	-0.2	180.9	0.2	-0.1	0.1	0.2	1.5	46.1	0.1	31.3	0.1	0.2
01/22/22	12:34:16	292.5	43.3	-0.2	144.2	-0.2	0.2	0.2	0.3	160.3	0.1	0.1	21.2	1.7	0.0	1.3	0.1	30.0	0.1
01/22/22	23:34:16	284.4	43.6	-0.2	0.1	-0.2	83.5	0.1	183.7	0.1	0.2	0.1	0.2	1.9	46.1	0.1	31.6	0.0	0.3
01/23/22	12:34:16	290.3	43.3	-0.2	144.7	-0.2	0.0	-0.1	0.2	161.1	0.1	0.1	21.2	2.0	0.0	1.4	0.2	30.1	0.2
01/23/22	23:34:16	283.8	43.5	-0.2	0.6	-0.3	84.3	0.2	186.3	0.3	0.0	0.1	0.1	2.3	46.3	0.2	31.6	0.0	0.4
01/24/22	12:34:16	300.5	43.4	0.1	144.2	-0.2	0.0	-0.1	-0.1	161.7	0.1	0.1	21.2	2.0	0.0	1.3	0.2	30.1	0.3
01/24/22	23:34:16	283.4	43.6	-0.2	0.1	-0.2	84.2	0.0	189.0	0.3	0.1	0.1	0.2	2.2	46.3	0.2	31.6	0.1	0.4
01/25/22	12:34:16	291.7	43.3	-0.2	145.1	-0.2	-0.1	0.1	0.3	159.4	0.0	0.1	21.2	2.0	0.1	1.2	0.2	30.1	0.3
01/25/22	23:34:16	279.3	43.6	-0.2	0.0	-0.2	84.3	0.1	182.4	0.2	0.4	0.1	0.2	1.7	46.2	0.2	31.5	0.0	0.3
01/26/22	12:34:16	288.8	43.4	-0.2	143.6	-0.2	0.3	0.3	0.0	161.2	0.3	0.1	21.2	1.6	0.1	1.3	0.2	30.0	0.2
01/26/22	23:34:16	282.6	43.5	-0.2	0.2	-0.2	82.1	-0.2	181.5	0.2	-0.1	0.0	0.1	1.0	46.0	0.1	31.3	0.0	0.1
01/27/22	12:34:16	286.5	43.3	-0.2	142.5	-0.2	0.2	0.2	0.1	158.8	0.3	0.0	21.1	1.5	0.0	1.4	0.1	29.9	0.2
01/27/22	23:34:16	281.3	43.6	-0.2	0.1	-0.2	81.9	-0.1	182.1	0.4	0.1	0.0	0.1	1.2	46.0	0.1	31.3	0.0	0.1
01/28/22	12:34:16	291.2	43.3	-0.2	141.6	-0.2	0.0	0.1	0.0	158.9	0.7	0.0	21.1	1.6	0.0	1.3	0.1	29.9	0.2
01/28/22	23:34:16	282.6	43.4	-0.2	0.0	-0.2	80.9	0.1	181.9	0.1	0.0	0.0	0.1	1.7	46.1	0.1	31.4	0.0	0.2
01/29/22	12:34:16	300.1	43.3	-0.2	143.8	-0.2	0.1	0.2	-0.2	164.7	0.2	0.1	21.3	2.4	0.0	1.0	0.2	30.1	0.3
01/29/22	23:34:16	289.4	43.5	-0.2	-0.3	-0.2	83.0	0.2	187.7	0.3	0.4	0.2	0.2	2.6	46.4	0.3	31.7	0.0	0.4
01/30/22	12:34:16	301.8	43.4	-0.2	146.1	-0.2	0.3	0.2	0.6	162.4	0.3	0.2	21.3	2.3	0.1	1.1	0.2	30.2	0.3
01/30/22	23:34:16	288.8	43.6	-0.3	0.1	-0.2	84.3	-0.1	192.6	0.2	0.0	0.2	0.3	2.8	46.4	0.3	31.7	0.0	0.5
01/31/22	12:34:16	294.4	43.3	-0.2	144.1	-0.2	0.0	-0.1	0.2	159.4	0.1	0.1	21.3	2.0	0.1	1.3	0.2	30.0	0.3
01/31/22	23:34:16	306.7	43.1	-0.2	0.3	-0.2	83.8	0.2	187.5	0.2	0.1	0.2	0.2	1.9	46.2	0.2	31.5	0.1	0.3
02/01/22	12:34:16	313.7	42.9	-0.2	145.8	-0.2	0.1	0.1	0.0	160.0	0.6	0.1	21.2	1.4	0.1	1.4	0.2	30.0	0.2
02/01/22	23:34:16	308.5	43.2	-0.2	0.2	-0.2	82.0	-0.1	180.3	0.3	-0.1	0.1	0.2	1.1	46.1	0.1	31.4	0.1	0.2
02/02/22	12:34:16	316.1	43.0	-0.2	143.1	-0.2	0.0	0.1	0.2	158.5	0.2	0.1	21.2	1.5	0.1	1.4	0.2	30.0	0.2
02/02/22	23:34:16	306.4	43.2	-0.2	-0.1	-0.2	82.3	0.2	181.8	0.3	1.1	0.1	0.2	1.2	46.2	0.2	31.4	0.1	0.2
02/03/22	12:34:16	311.3	42.9	-0.2	142.1	-0.2	0.1	0.1	0.0	158.7	0.2	0.1	21.1	1.1	0.1	1.4	0.1	29.9	0.2
02/03/22	23:34:16	294.6	43.2	-0.2	0.2	-0.2	81.8	-0.1	182.6	0.4	0.4	0.1	0.2	1.1	46.1	0.2	31.3	0.1	0.2
02/04/22	12:34:16	309.8	42.8	-0.2	139.4	-0.2	0.3	-0.2	0.2	157.9	0.2	0.0	21.1	1.1	0.1	1.2	0.1	29.8	0.2
02/04/22	23:34:16	302.3	43.1	-0.2	0.1	-0.2	80.2	0.1	180.5	0.1	-0.1	0.1	0.2	1.1	46.1	0.1	31.4	0.1	0.2
02/05/22	12:34:16	315.1	42.9	-0.2	143.9	-0.2	0.2	0.3	0.1	159.3	0.2	0.1	21.2	1.4	0.1	1.2	0.1	30.0	0.2
02/05/22	23:34:16	304.5	43.2	-0.2	-0.2	-0.2	80.8	-0.2	181.4	0.3	0.0	0.1	0.2	1.1	46.1	0.1	31.4	0.0	0.1
02/06/22	12:34:16	311.6	42.9	-0.2	144.0	-0.2	-0.1	0.6	0.1	159.9	0.2	0.0	21.1	1.3	0.0	1.1	0.1	29.9	0.1
02/06/22	23:34:16	295.8	43.2	-0.2	0.2	-0.2	81.5	0.1	181.3	0.3	0.1	0.0	0.2	1.0	46.1	0.1	31.3	0.0	0.2
02/07/22	12:34:16	320.2	43.0	-0.2	141.8	-0.2	-0.1	0.0	-0.1	161.9	0.2	0.0	21.2	1.4	0.1	1.1	0.1	29.9	0.1
02/07/22	23:34:16	303.4	43.1	-0.2	-0.1	-0.2	81.7	-0.2	182.3	0.3	0.3	0.0	0.1	1.3	46.0	0.1	31.4	0.0	0.2
02/08/22	12:34:16	312.7	43.0	-0.2	145.1	-0.2	0.2	-0.1	0.1	159.5	0.2	0.1	21.2	1.3	0.1	1.1	0.1	29.9	0.2
02/08/22	23:34:16	308.4	43.2	-0.2	0.2	-0.2	81.6	0.1	183.4	0.3	0.1	0.1	0.1	1.3	46.0	0.1	31.4	0.0	0.2
02/09/22	12:34:16	311.9	42.9	-0.2	141.6	-0.1	0.0	-0.1	0.1	158.2	0.1	0.1	21.2	1.4	0.1	1.1	0.2	29.9	0.2
02/09/22	23:34:16	311.6	43.2	-0.2	-0.1	-0.2	82.1	0.0	185.9	0.2	0.1	0.1	0.1	1.5	46.2	0.1	31.4	0.0	0.2
02/10/22	12:34:16	308.5	42.9	-0.2	143.2	-0.1	0.2	0.4	0.1	157.7	0.0	0.1	21.2	1.3	0.1	1.3	0.1	30.0	0.2
02/10/22	23:34:16	298.8	43.2	-0.2	-0.2	-0.2	82.8	0.3	185.1	0.2	0.0	0.1	0.2	1.2	46.1	0.2	31.5	0.0	0.2
02/11/22	12:34:16	309.6	43.0	-0.2	144.3	-0.2	0.0	-0.2	0.2	158.6	0.2	0.1	21.2	1.3	0.1	1.3	0.2	30.0	0.2
02/11/22	23:34:16	259.3	43.8	-0.2	0.1	-0.2	82.3	0.0	180.3	0.2	0.2	0.1	0.2	1.0	46.1	0.1	31.3	0.1	0.2
02/12/22	12:34:16	269.1	43.7	-0.2	140.8	-0.2	0.0	-0.2	-0.1	155.4	0.2	0.1	21.1	1.2	0.1	1.2	0.2	29.9	0.1
02/12/22	23:34:16	256.0	43.9	-0.2	0.0	-0.2	81.1	0.1	180.7	0.3	0.1	0.1	0.1	1.0	46.1	0.1	31.3	0.0	0.1
02/13/22	12:34:16	267.0	43.7	-0.2	143.2	-0.2	0.3	0.0	0.2	159.2	0.0	0.0	21.1	1.2	0.0	1.2	0.1	30.0	0.2
02/13/22	23:34:16	260.6	43.8	-0.2	0.1	-0.2	81.6	0.2	183.5	0.0	0.0	0.1	0.1	1.2	46.1	0.1	31.2	0.0	0.2
02/14/22	12:34:16	275.6	43.6	-0.2	145.6	-0.2	0.3	0.5	0.0	160.2	0.3	0.1	21.2	1.5	0.0	1.3	0.2	30.0	0.3
02/14/22	23:34:16	261.6	43.9	-0.2	0.0	-0.2	82.2	0.4	183.9	0.1	0.3	0.1	0.2	1.6	46.1	0.2	31.4	0.1	0.3
02/15/22	12:34:17	270.4	45.1	-0.2	143.8	-0.2	0.1	0.1	-0.1	160.8	0.3	0.1	21.5	1.2	0.0	0.8	0.2	30.4	0.2
02/15/22	23:34:17	258.9	45.1	-0.2	-0.2	-0.2	81.6	0.1	182.3	0.3	0.3	0.1	0.2	1.0	46.1	0.1	31.4	0.1	0.2
02/16/22	12:34:17	277.2	44.8	-0.2	142.4	-0.2	0.1	0.0	-0.2	161.4	0.0	0.1	21.1	1.3	0.1	1.2	0.2	30.0	0.2
02/16/22	23:34:17	265.6	44.9	-0.2	0.0	-0.2	80.9	0.1	182.6	0.1	0.1	0.0	0.2	1.1	46.1	0.1	31.3	0.1	0.2
02/17/22	12:34:17	266.6	44.8	-0.2	141.4	-0.2	0.1	-0.1	0.5	156.7	0.0	0.1	21.1	1.0	0.0	1.3	0.1	29.9	0.1
02/17/22	23:34:17	262.1	44.9	-0.2	0.0	-0.2	80.6	0.0	179.9	0.1	0.2	0.0	0.1	1.0	46.1	0.1	31.3	0.0	0.1
02/18/22	12:34:17	260.7	44.7	-0.2	140.3	-0.2	0.1	0.0	0.0	158.1	0.3	0.0	21.1	1.0	0.0	1.2	0.1	29.9	0.1
02/18/22	23:34:17	256.8	44.9	-0.2	0.0	-0.2	79.8	0.3	181.0	0.1	0.0	0.0	0.1	1.1	46.1	0.1	31.2	0.0	0.2
02/19/22	12:34:17	280.5	44.7	-0.2	143.7	-0.2	0.2	0.1	-0.1	163.0	0.2	0.0	21.1	1.3	0.0	1.0	0.0	30.0	0.1
02/19/22	23:34:17	259.5	44.8	-0.2	0.0	-0.2	80.8	0.2	183.3	0.1	0.1	0.1	0.1	1.2	46.1	0.1	31.4	0.0	0.1
02/20/22	12:34:17	267.8	44.5	-0.2	141.8	-0.2	0.0	0.1	0.3	160.6	0.1	0.1	21.1	1.3	0.1	1.2	0.2	30.0	0.2
02/20/22	23:34:17	258.8	44.7	-0.2	0.0	-0.2	80.6	0.1	181.7	0.3	0.0	0.1	0.2	1.2	46.0	0.1	31.3	0.0	0.2
02/21/22	12:34:17	270.1	44.5	-0.2	144.5	-0.1	0.1	0.0	0.2	162.7	-0.2	0.1	21.1	1.3	0.1	1.4	0.2	30.0	0.2
02/21/22	23:34:17	259.2	44.6	-0.2	0.2	-0.2	79.6	-0.2	183.0	0.3	0.2	0.0	0.1	1.1	46.0	0.1	31.3	0.0	0.2
02/22/22	12:34:17	264.0	44.5	-0.2	142.5	-0.2	0.0	0.3	0.2	158.8	0.0	0.1	21.1	1.2	0.0	1.3	0.1	30.0	0.1
02/22/22	23:34:17	260.7	44.5	0.1	0.0	-0.2	80.5	0.4	182.6	0.1	0.0	0.0	0.1	1.1	46.1	0.1	31.3	0.0	0.1
02/23/22	12:34:17	269.0	44.3	-0.2	141.3	-0.2	0.3	0.2	0.0	157.7	0.0	0.0	21.0	1.0	0.0	1.3	0.1	29.9	0.1

Hot Spot 6 System Data Log

Date	Time	System		Flow (SCFM)								Pressure (psig)							
		Flow (SCFM)	Pressure (psig)	M01	M02	M03	M04	M05	M06	M07	M08	M01	M02	M03	M04	M05	M06	M07	M08
02/23/22	23:34:17	258.6	44.6	-0.2	0.1	-0.2	80.5	0.0	182.7	0.3	0.0	0.0	0.1	1.1	46.0	0.1	31.3	0.0	0.1
02/24/22	12:34:17	269.2	44.3	-0.2	140.1	-0.2	0.8	0.1	0.2	159.4	0.2	0.0	21.1	1.1	0.0	1.3	0.1	29.9	0.1
02/24/22	23:34:17	260.1	44.5	-0.2	-0.1	-0.2	79.9	0.0	179.7	0.1	0.7	0.0	0.1	1.0	46.0	0.1	31.2	0.0	0.1
02/25/22	12:34:17	268.1	44.4	-0.2	144.0	-0.2	0.7	0.1	0.3	158.6	0.0	0.0	21.0	1.1	0.0	1.3	0.0	29.9	0.1
02/25/22	23:34:17	263.9	44.6	-0.2	0.4	-0.2	80.5	0.2	181.6	0.2	-0.1	0.0	0.1	1.1	46.0	0.1	31.3	0.0	0.1
02/26/22	12:34:17	264.3	44.3	-0.2	141.7	-0.2	0.1	-0.2	0.3	158.8	0.0	0.0	21.1	1.1	0.1	1.4	0.1	29.9	0.1
02/26/22	23:34:17	260.7	44.5	-0.2	-0.3	-0.2	79.4	-0.3	180.8	0.2	0.1	0.0	0.1	1.0	46.0	0.1	31.2	0.0	0.1
02/27/22	12:34:17	271.1	44.3	-0.2	141.1	-0.1	0.3	-0.1	0.3	160.7	0.3	0.1	21.0	1.2	0.0	1.3	0.1	29.9	0.1
02/27/22	23:34:17	257.6	44.4	-0.2	-0.1	-0.2	79.0	-0.1	180.3	0.2	0.0	0.0	0.1	1.1	46.0	0.1	31.3	0.0	0.1
02/28/22	12:34:17	268.7	44.3	-0.2	142.1	-0.2	0.1	0.0	0.0	157.6	0.0	0.1	21.1	1.1	0.0	1.3	0.1	29.9	0.1
02/28/22	23:34:17	262.2	44.5	-0.2	-0.1	-0.2	82.0	0.0	182.5	1.0	0.2	0.0	0.1	1.1	46.0	0.1	31.3	0.0	0.1
03/01/22	12:34:17	274.1	44.3	-0.2	142.9	-0.2	0.1	0.0	0.1	158.7	0.0	0.0	21.0	1.2	0.0	1.2	0.1	29.9	0.2
03/01/22	23:34:17	259.5	44.5	-0.2	0.6	-0.2	81.3	0.1	183.3	0.2	0.2	0.0	0.1	1.3	46.0	0.1	31.3	0.0	0.1
03/02/22	12:34:17	275.6	44.3	-0.2	142.6	-0.2	-0.2	0.1	0.0	160.6	0.1	0.0	21.1	1.2	0.0	1.5	0.1	29.9	0.1
03/02/22	23:34:17	257.0	44.4	-0.2	-0.1	-0.2	81.7	0.0	183.9	0.1	0.1	0.0	0.1	1.1	46.0	0.1	31.3	0.0	0.1
03/03/22	12:34:17	272.0	44.4	-0.2	143.4	-0.2	0.2	0.1	-0.1	160.1	0.3	0.1	21.1	1.2	0.0	1.3	0.1	29.9	0.2
03/03/22	23:34:17	252.9	44.3	-0.2	-0.1	-0.2	80.0	0.1	182.4	0.3	0.1	0.0	0.1	1.1	46.0	0.1	31.3	0.0	0.1
03/04/22	12:34:17	267.4	44.3	-0.2	141.6	-0.2	0.2	0.1	0.3	160.3	0.0	0.0	21.1	1.1	0.0	1.2	0.1	29.9	0.2
03/04/22	23:34:17	254.5	44.6	-0.2	0.0	-0.2	80.6	0.0	182.4	0.7	0.1	0.0	0.2	1.0	46.0	0.1	31.2	0.0	0.1
03/05/22	12:34:17	271.6	44.3	-0.2	142.0	-0.2	0.0	0.0	0.3	159.2	0.4	0.1	21.0	1.2	0.1	1.4	0.1	29.9	0.1
03/05/22	23:34:17	257.5	44.5	-0.2	-0.1	-0.2	81.0	0.2	180.1	0.2	0.0	0.0	0.1	1.1	46.1	0.1	31.2	0.0	0.2
03/06/22	12:34:17	276.3	44.2	-0.2	143.5	-0.1	0.3	-0.2	0.2	161.3	0.0	0.1	21.0	1.2	0.1	1.3	0.0	29.9	0.1
03/06/22	23:34:17	259.7	44.5	-0.2	0.1	-0.2	81.4	-0.3	181.7	0.2	0.2	0.0	0.1	1.1	46.0	0.1	31.3	0.0	0.1
03/07/22	12:34:17	268.9	44.3	-0.2	141.5	-0.2	0.2	0.2	0.2	156.7	0.3	0.0	21.0	1.0	0.0	1.2	0.1	29.9	0.1
03/07/22	23:34:17	259.3	44.5	-0.2	-0.2	-0.2	80.4	0.0	181.1	0.2	0.2	0.1	0.2	1.1	46.1	0.1	31.2	0.0	0.1
03/08/22	12:34:17	266.6	44.3	-0.2	138.1	-0.2	0.0	-0.2	0.1	157.6	-0.1	0.1	21.1	1.2	0.1	1.5	0.1	29.9	0.1
03/08/22	23:34:17	257.1	44.5	-0.2	0.0	-0.2	80.2	-0.1	180.0	0.2	0.4	0.0	0.1	1.0	46.1	0.1	31.2	0.0	0.1
03/09/22	12:34:17	264.8	44.3	-0.2	142.1	-0.2	-0.1	0.0	0.1	157.1	0.2	0.0	21.1	1.0	0.1	1.2	0.0	29.8	0.1
03/09/22	23:34:17	256.7	44.4	-0.2	0.1	-0.2	79.8	0.1	180.5	0.3	1.1	0.0	0.1	1.1	46.1	0.1	31.3	0.0	0.1
03/10/22	12:34:17																		
03/10/22	23:34:17																		
03/11/22	12:34:17																		
03/11/22	23:34:17																		
03/12/22	12:34:17																		
03/12/22	23:34:17																		
03/13/22	12:34:17																		
03/13/22	23:34:17																		
03/14/22	12:34:17																		
03/14/22	23:59:38	312.0	11.1	-0.2	79.9	18.0	30.7	70.8	70.8	66.4	0.0	0.0	17.2	21.7	21.9	19.4	19.3	19.2	0.1
03/15/22	12:59:38	229.9	44.7	-0.2	-0.3	-0.2	79.9	0.0	0.0	0.2	153.3	0.0	11.0	1.3	46.5	1.3	0.0	10.2	31.2
03/15/22	23:59:39	256.4	44.3	-0.2	-0.2	-0.2	79.2	-0.1	181.6	0.4	0.3	0.0	0.3	1.1	46.1	0.1	31.3	0.0	0.1
03/16/22	12:59:39	228.0	44.7	-0.2	-0.2	-0.2	77.9	-0.2	0.2	0.9	151.2	-0.1	9.2	1.0	46.4	1.3	0.1	10.5	31.2
03/16/22	23:59:39	258.4	44.3	-0.2	-0.1	-0.2	79.9	0.0	179.8	0.3	0.2	0.0	0.1	1.1	46.1	0.1	31.3	0.0	0.1
03/17/22	12:59:39	228.4	44.6	-0.2	0.0	-0.2	77.2	0.0	0.1	0.1	153.4	0.0	5.4	1.3	46.4	1.2	0.1	10.8	31.3
03/17/22	23:59:39	253.5	44.3	-0.2	0.0	-0.2	80.5	-0.1	179.1	0.3	0.1	0.0	0.1	1.1	46.0	0.1	31.3	0.0	0.1
03/18/22	12:59:39	226.4	44.7	-0.2	-0.1	-0.2	78.3	-0.2	0.8	0.2	149.2	0.0	5.4	0.9	46.3	1.2	0.1	10.7	31.1
03/18/22	23:59:39	259.2	44.3	-0.2	0.1	-0.2	78.9	-0.1	178.4	0.1	0.3	-0.1	0.1	1.0	46.1	0.1	31.3	0.0	0.1
03/19/22	12:59:39	230.9	44.6	-0.2	0.0	-0.2	79.2	0.6	0.0	0.1	151.7	0.0	5.3	0.9	46.3	1.3	0.1	9.8	31.2
03/19/22	23:59:39	251.7	44.3	-0.2	0.1	-0.2	79.1	0.4	179.2	0.3	0.2	0.0	0.1	0.9	46.0	0.1	31.2	0.0	0.1
03/20/22	12:59:39	230.4	44.7	-0.2	0.1	-0.2	78.4	0.2	-0.1	0.8	151.1	0.0	5.1	1.4	46.4	1.2	0.1	10.7	31.4
03/20/22	23:59:39	258.5	44.4	-0.2	0.6	-0.2	81.3	0.1	182.6	0.2	0.2	0.0	0.1	1.3	46.0	0.1	31.3	0.0	0.2
03/21/22	12:59:39	232.8	44.8	-0.2	-0.2	-0.2	78.3	0.1	0.1	0.0	151.4	0.1	3.6	1.3	46.5	1.1	0.1	8.9	31.4
03/21/22	23:59:39	255.2	44.4	-0.2	0.2	-0.2	81.1	0.0	181.1	0.2	-0.1	0.1	0.2	1.2	46.1	0.1	31.4	0.1	0.2
03/22/22	12:59:39	230.7	44.8	-0.2	-0.2	-0.2	77.9	0.0	-0.1	0.4	150.9	0.1	3.3	1.2	46.5	1.3	0.1	9.6	31.4
03/22/22	23:59:39	254.7	44.5	-0.2	-0.1	-0.2	79.5	0.2	179.9	0.0	0.2	0.1	0.1	1.1	46.1	0.2	31.4	0.1	0.2
03/23/22	12:59:39	229.9	44.8	-0.2	-0.2	-0.2	78.6	0.1	0.0	0.3	152.9	0.0	4.8	1.0	46.4	1.3	0.1	9.9	31.3
03/23/22	23:59:39	252.0	44.5	-0.2	-0.2	-0.2	80.2	-0.1	178.2	0.4	0.0	0.1	0.1	1.0	46.1	0.1	31.3	0.1	0.1
03/24/22	12:59:39	227.2	44.8	-0.2	0.1	-0.2	78.6	-0.1	0.1	0.0	152.9	0.0	5.1	0.9	46.4	1.1	0.0	10.0	31.2
03/24/22	23:59:39	259.5	44.3	-0.2	0.1	-0.2	79.8	0.0	181.6	0.1	0.1	0.0	0.1	1.2	46.1	0.1	31.3	0.0	0.1
03/25/22	12:59:39	232.4	44.7	-0.2	0.0	-0.2	79.4	0.1	0.4	0.3	153.3	0.1	3.4	1.3	46.4	1.2	0.1	10.7	31.4
03/25/22	23:59:39	254.3	44.5	-0.2	0.1	-0.2	81.5	0.1	181.8	0.2	0.2	0.1	0.2	1.3	46.1	0.1	31.4	0.1	0.2
03/26/22	12:59:39	231.3	44.8	-0.2	0.0	-0.2	79.2	0.0	0.2	0.2	152.9	0.1	1.8	1.3	46.4	1.2	0.2	10.8	31.4
03/26/22	23:59:39	256.2	44.4	-0.2	0.0	-0.2	80.2	0.1	181.8	0.2	0.0	0.1	0.2	1.4	46.1	0.2	31.4	0.1	0.2
03/27/22	12:59:39	236.9	44.8	-0.2	0.1	0.1	79.9	-0.2	-0.2	0.3	159.2	0.1	0.2	1.5	46.3	1.0	0.2	0.9	31.2
03/27/22	23:59:39	203.0	45.0	-0.2	-0.2	24.2	0.0	165.3	-0.1	0.3	0.2	0.1	0.2	26.2	12.1	32.3	7.9	0.1	0.2
03/28/22	12:59:39	236.5	44.7	-0.2	-0.2	-0.2	80.1	0.0	-0.2	0.1	157.6	0.1	0.2	1.3	46.3	1.2	0.2	1.1	31.1
03/28/22	23:59:39	200.6	45.1	-0.2	-0.1	24.8	0.0	161.0	-0.2	0.3	0.1	0.1	0.2	26.1	12.0	32.2	8.0	0.1	0.2
03/29/22	12:59:39	237.7	44.8	-0.2	-0.2	-0.2	80.1	-0.3	-0.2	0.1	159.7	0.1	0.2	1.2	46.3	1.1	0.2	1.0	31.1
03/29/22	23:59:39	195.4	44.9	-0.2	-0.1	24.5	0.1	160.7	0.1	0.2	0.4	0.1	0.1	26.2	11.9	32.2	8.2	0.1	0.2
03/30/22	12:59:39	236.6	44.6	-0.2	-0.1	-0.2	78.8	0.0	0.1	0.3	157.4	0.1	0.1	1.0	46.2	1.0	0.1	0.9	31.0
03/30/22	23:59:39	202.6	44.9	-0.2	0.0	24.5	0.2	161.5	0.2	0.1	0.2	0.1	0.1	26.0	11.8	32.2	8.4	0.1	0.2
03/31/22	12:59:39	236.2	44.7	-0.2	-0.1	-0.2	80.3	0.0	0.1	0.3	157.2	0.0	0.1	1.0	46.2	0.9	0.1	0.8	31.0
03/31/22	23:59:39	202.4	44.8	0.0	0.0	25.1	-0.2	166.6	0.3	0.3	1.1	0.0	0.1	26.0	11.9	32.4	8.2	0.1	0.1

APPENDIX E

JUNE 2022 KSCRT MEETING MINUTES AND DECISIONS

(PROVIDED IN ELECTRONIC VERSION ONLY)

Revision 1 Meeting Minutes for June 28th, 2022

Attendees:

1. Bruce Moore/FDEP
2. Mike Deliz/NASA
3. Ryan O'Meara/NASA
4. Deda Johansen/NASA
5. Anne Chrest/NASA
6. Natasha Darre/NASA
7. Michelle Moore/NEMCON
8. Mark Jonnet/Tetra Tech
9. Chris Pike/Tetra Tech
10. James Lloyd/ Tetra Tech
11. Sarah Damphousse/Tetra Tech
12. Chris Neumann/Tetra Tech
13. Jennifer Joyal/AECOM
14. Richard Smith/HGL
15. Carol Cady/HGL
16. Robert Lynch/HGL
17. Tim Jellett/HGL
18. Jason Bublitz/HGL

2206-M01 Michelle Moore/NEMCON

Meeting Minutes and Miscellaneous Items

Team consensus was reached that Revision 1 of the meeting minutes and action/decision items for the May 2022 Team meeting will become final. Team members acknowledged and did not object to the fact that these meeting minutes may become public as part of a final report at a later date **(2206-D01).**

Open action items were reviewed and updated. The following action items were closed:

Center-Wide Per- and Polyfluoroalkyl Substances (PRL #237) Phase III Solid Waste Management Unit Site Assessment and Confirmatory Sampling Report Summary, January 2022: NASA owes FDEP an update on Q6 Radar Station (SWMU #112), so they will put together an ADP to review the RFI they completed.

The contract was modified and NASA will present results for this in a future presentation **(2201-A03).**

Wilson Corners (SWMU #001) 2021 Annual Long-Term Monitoring Update, May 2022: FDEP stated that VOC concentrations are increasing to the west but the natural attenuation default concentrations (NADC) footprint hasn't changed much. AECOM confirmed that was correct. Based predominantly on DPT data, the existing wells are appropriate for the extent of the low-concentration plume (LCP). The performance monitoring wells are

more on the interior of the plume and will give us a better idea of what is going on with the high concentration plume (HCP). FDEP inquired what the vertical head difference of the zones are that are being referred to. AECOM will look into this question and provide the information.

AECOM provided vertical head data for 2019, 2020 and 2021 to FDEP on May 5, 2022 **(2205-A02).**

Results: Decision Item 2206-D01

2206-M02 Bruce Moore /FDEP

FDEP Program Update, May 2022

Goal: The objective is to summarize any changes at the Florida Department of Environmental Protection (FDEP) and provide pertinent news since the last Kennedy Space Center (KSC) Remediation Team (KSCRT) meeting.

Discussion: Bruce Moore provided a quick update on the program.

Update provided regarding FDEP staff: The Federal Facilities Branch hired Billy Hessman internally and he will take over Homestead BRAC (Base Realignment and Closure) sites and the active Homestead Air Force Reserve Base from Bruce. The Department also hired a Remediation Project Manager (RPM) named Crystal Boutwell, and still needs to fill a professional engineer 3 vacancy. FDEP received approval by the governor to hire a Professional Geologist II and Environmental Consultant (senior positions). A contract employee, Annie Paladino, is updating and improving the Environmental Restoration Integrated Cleanup (ERIC) database.

FDEP continues to use Geosyntec, Arcadis, and CDM Smith to review documents. FDEP just received a sizeable amount of document to review. During the month of July there should be a lot of reviews completed.

The Florida governor signed a bill for titled "Cleanup of Perfluoroalkyl and Polyfluoroalkyl Substances" (PFAS). The bill states that if EPA has not finalized standards for PFAS by January 1, 2025, then FDEP must adopt statewide cleanup target levels (CTLs).

The new rules cannot take effect until ratified by legislature. Until they are ratified, FDEP cannot compel, impose penalties, etc., to public or private entities. FDEP will continue to work with the KSC Remediation Program to the best degree they can as CTLs are under development. KSC has been proactive in identification and sharing of information.

NASA inquired if FDEP would be revising their provisional values at this time based on the Environmental Protection Agency's (EPA) May 2022 Regional Screening Levels. Bruce could not say definitively, but there is no emphasis in changing them at this time. NASA will be watching for an update of the dynamic plan.

2206-M03 Anne Chrest / NASA

Update on NASA KSC Program

Hoping to backfill a position within the Remediation Program by September 2022.

Regarding per- and polyfluoroalkyl substances (PFAS), NASA management has advised the NASA KSC Remediation group to use the EPA regional screening levels at this time. In our Phase III SWMU Assessment, our transmittal letter will state which sites exceed the regional screening levels. NASA will address this in a cover letter and submit to FDEP in July 2022. This will need to be routed through legal and the review department.

NASA will need the Department of Health involvement with the off-site well surveys. NASA is not aware of any active consumptive use wells on center. KSC is updating the PFAS communications plan to address more of our workforce and outside parties.

FDEP noted they are addressing circumstance where a District may issue a permit for dewatering without having information about contamination that may be influenced. The Department is trying to get land use controls (LUCs) placed into their maps and have inquired with the Air Force and Navy to provide shape files of their LUC layers; responses to this request have varied. FDEP is unsure what Geographic Information System (GIS) information they have on hand from NASA.

NASA responded they can provide the LUC map. That information is available for KSC Master Planning and other KSC users to reference for projects taking place on KSC. For PFAS, NASA made a commitment to provide an update to this GIS layer semiannually. NASA will consider providing the GIS layer and will follow up with FDEP on this request **(2206-A01).**

Results: Action Item 2206-A01

2206-M04 Mark Jonnet / Tetra Tech

Annual Update on Launch Complex 34

Goal: The goal of this ADP is to summarize groundwater interim measures (IMs) and monitoring results for chlorinated volatile organic compounds (CVOCs) at Launch Complex 34 (LC34), Data from April 1, 2021, through March 31, 2022, will be documented in the 2021 Performance Monitoring Report.

Discussion:

LC34 is located on Cape Canaveral Space Force Station, a barrier island bounded by the Banana River and Atlantic Ocean. There is a 322-acre CVOC groundwater plume exceeding State of Florida Groundwater Cleanup Target Levels (GCTLs), referred to as a Low Concentration Plume (LCP). Within the LCP is an area of 163 acres that exceeds Florida Department of Environmental Protection (FDEP) Natural Attenuation Default Concentrations (NADCs); 53.6 acres that exceed 10-times NADCs. referred to as Hot Spots; 9.5 acres that exceed 100-times NADCs; and a two-acre trichloroethene (TCE) source zone referred to as the dense non-aqueous phase liquid (DNAPL) Source Zone (DSZ). The DSZ Hydraulic Containment System (HCS) and Hot Spot 6 (HS6) Air Sparging IM were operational during this reporting period.

A brief site history and background were provided on LC34. FDEP inquired if the part of the plume that is above GCTLs discharges to the Atlantic Ocean. Tetra Tech stated they had temporary wells along the ocean. They can go back and pull together the data if this would be helpful. FDEP agreed this would be helpful to understand the history of the site **(2206-A02).**

The geology at LC34 was shown with the recovery wells intervals. Generally speaking, Layers 1, 2, 3, 5, 6, and 8 are sandy, Layer 4 is clayey, Layer 7 is silty, and Layer 9 is the Hawthorn Group. Layers 4 and 7 have sorbed mass in addition to dissolved mass. Sitewide groundwater contours indicate mounding near the HCS compound in the shallow intervals (Layers 1, 2, 3), and flow generally to the southeast, southwest, and west in deeper intervals (Layers 6 and 8).

Hydraulic Containment System (HCS)

The IM objective for the HCS is to attain hydraulic control of the DSZ and TCE HCP within Hot Spots 2, 3, and 4 via hydraulic containment and ex-situ treatment. The HCS began full-scale operation in May 2010. The system was expanded in 2015, and in August 2019 a new recovery well was installed 80 to 95 feet below land surface (ft bls). Three additional recovery wells (80 to 95 ft bls) were installed in February 2021. The current HCS includes 10 shallow recovery wells (15 to 45 ft bls), 7 deep recovery wells (50 to 80 ft bls), 4 deeper recovery wells (80 to 95 ft bls), equalization tank and discharge pump, 2 air strippers, discharge pump, and liquid-phase granular activated carbon (LPGAC) treatment for polishing (if needed), catalytic oxidizer, quench tower, scrubbing unit, and 12 deep injection wells (50 to 80 ft bls) and an infiltration gallery for discharge of treated water.

The HCS hydraulically controls the DSZ by utilizing recovery wells to extract contaminated groundwater. The extracted groundwater flows into an equalization tank, which is then treated by two air strippers in series and subsequently pumped to injection wells and an infiltration gallery. The contaminants in the air stream from the air strippers are destroyed by a catalytic oxidizer. The catalytic oxidizer effluent is cooled in a quench tower and then neutralized by using acid in the gas scrubber prior to discharge to the atmosphere. During the Year 12 operational period (April 1, 2021, through March 31, 2022), system runtime was 94%. Over 32 million gallons of groundwater were treated during Year 12 with 6,195 pounds of CVOCs destroyed. Since HCS operation began, over 285 million gallons of groundwater have been treated with 84,933 pounds of CVOCs destroyed.

FDEP referenced Slide 15, which gives an overview of the HCS. Are there groundwater flow maps available that present the depth to groundwater and groundwater flow within the capture zone? NASA

requested this be captured as an action item to follow up on **(2206-A03).**

The configuration of the DSZ based on 2019 recharacterization was discussed. FDEP pointed out that the groundwater flow directions in the deeper zones were east, southeast, and west (Slide 12). The northeasterly lobe of the DSZ (Slide 17) is contradictory. Tetra Tech responded that there are direct push technology (DPT) groundwater results used for characterization of hot spots that did not indicate the DSZ extends to the other side of the blockhouse. This contradicts groundwater flow, but the transition might be downhill in this area. FDEP speculated that it is DNAPL migration versus groundwater migration, and Tetra Tech concurred; it seems like it is riding on top of layer 7.

FDEP inquired if it was possible the northeasterly DSZ finger had been present prior to the 2019 recharacterization, but had been missed by earlier DPT points? Tetra Tech stated that it is possible and they will take an action item to look at the 2019 recharacterization for DPT coverage in that area. Whether it was missed or moved, sampling indicates the plume has not come out from under the blockhouse **(2206-A04).**

FDEP stated that the TCE plume footprint is showing a good reduction. How much of TCE reduction is due to transition/breakdown into daughter products? Tetra Tech responded that they do not see a lot of degradation. The recovery well influent is primarily TCE and without a lot of dichloroethene (DCE) or vinyl chloride (VC). Looking at influent results (Slide 21), cis-1,2-DCE (cDCE) and VC results are fairly constant while TCE has been more variable. If degradation was occurring, we would have expected to see an increase in the amount of VC here.

FDEP noted the system is actually reducing concentrations due to the pump and treat. Tetra Tech confirmed the system has pulled out 85,000 lbs. of TCE. Based on the initial site characterization, the Corrective Measures Study mass calculation estimated 86,000 lbs. of TCE in the DSZ. What we can glean from this is that there is still a mass in the ground. It is very difficult to quantify DNAPL.

Performance sampling is conducted to evaluate the HCS operations. The air stripper's effluent and LPGAC (when online) are sampled monthly, individual recovery wells and combined influent are

sampled quarterly, and catalytic oxidation influent and effluent (vapor) are sampled annually. In addition, nine locations are sampled annually via direct-push technology (DPT) to evaluate aquifer conditions within the DSZ. At each location, samples were collected in five-foot intervals from 8 to 98 ft bls (83 to 98 ft bls interval added this year to monitor Layer 7/8).

Influent system concentrations showed a stable trend over the reporting period. Sample results, as shown on Slide 22, indicate that contaminants in groundwater were reduced to less than GCTLs in the effluent of the secondary air stripper during all sampling events in the reporting period with the exception of TCE exceeding GCTL during the September and November events. The effluent from the GAC was all less than GCTLs.

The catalytic oxidizer influent and effluent sample results were shown on Slide 23. The influent results translate to 17.2 lb/day for total VOCs and 12.4 lb/day for TCE, and the effluent results translate to 0.055 lb/day for Total VOCs and 0.051 lb/day for TCE. Based on the effluent results, the catalytic oxidizer continues to meet the permissible daily hazardous air pollutants (HAP) levels of 6.8 lb/day for Total VOCs and 2.7 lb/day for TCE.

Individual recovery wells results, flow rates, and mass recovery rates were summarized on Slide 25. The total recovery well flow rate was reduced from 86 gpm to 75 gpm during the Air Sparging Pilot Study then returned back to 86 gpm upon completion of the study. The highest TCE results were detected in RW02A (shallow capture zone), RW02B (deep capture zone), and RW19C (deeper zone), with the highest overall TCE result of 827,000 ug/L from RW19C during this reporting period during the June 2021 sampling event. The four recovery wells in the deeper zone (Layer 7; RWs 17C, 18C, 19C, 20C) are each operating at 1 gpm due to the silty lithology in this layer. As of March 2022, these four deeper zone wells have recovered 2,270,063 gallons of groundwater with 6,956 pounds of VOCs treated.

Annual DPT sampling was conducted in December 2021 to evaluate aquifer conditions within the DSZ. An evaluation of the results by extraction zone was summarized on Slide 28, with the highest TCE results of 1,900,000 ug/L (shallow capture zone), 2,030,000 ug/L (between shallow and deep capture zones), 15,400,000 ug/L (deep capture zone), and 472,000 ug/L (Layer 7 capture zone). Sampling

results were compared to previous sample events and tabulated to show TCE concentrations in percent composition over all sample intervals in relation to recovery well capture zone (Slides 29 to 31). Data shows that the majority of contamination is located at 48 ft bls (above/within Layer 4), 58 ft bls (Layer 5), and 83 ft bls (Layer 7).

Groundwater samples from Layer 7 and 8 monitoring wells were also collected in December 2021 to confirm vertical migration of contamination is not occurring. All wells sampled were below detection limits, except IW43D2 and IW162. IW43D2 had a cDCE detection of 0.74 ug/L and no other analytes were detected, which is consistent with prior results. IW162 had a cDCE detection of 0.74 I ug/L and a TCE detection of 2.4 I ug/L, respectively. The cDCE detection was less than the GCTL of 70 ug/L. The TCE detection was below the GCTL of 3 ug/L. IW162 was resampled in February 2022 to confirm the presence of TCE then redeveloped and sampled again in March 2022. The results from each resampling were 7.4 and 33 ug/L, respectively, both above the GCTL. Slides 33 and 34 present information from the 2019 Site Characterization to evaluate the presence of TCE in the vicinity of IW-162, with Layer 7 recovery wells were added to the cross-section. The 98 ft bls sample (deeper than RW20C) at DPT0645 had TCE at 521,000 µg/L. TCE appears to flow towards IW-162 from the high concentration plume around DPT0645. The increase between the February and March samples from IW-162 appear to have been enhanced by well redevelopment, possibly drawing TCE in the DPT0645 98 ft bls vicinity towards IW-162. A new recovery screened from 90 to 100 ft bls adjacent to RW20C is recommended to capture the TCE impacting IW-162.

The Team reached consensus to continue IM OM&M of the HCS for Year 13, the operational period of April 1, 2022, to March 31, 2023, consistent with the current approach that includes: monthly sampling of the air stripper's effluent (aqueous), quarterly sampling of the combined influent and individual RW influent (aqueous), and annual sampling of the influent and effluent of the CatOx (vapor), DPT (aqueous), and Layer 7/8 monitoring wells (aqueous) **(2206-D02).**

The Team reached consensus on the installation of a new recovery well screened 90 to 100 ft bls adjacent to recovery well RW20C **(2206-D03).**

NASA stated that this recovery well installation would be contracted this year.

Hot Spot 6 Air Sparging:

The IM objective for the HS6 Air Sparging IM is to remediate contaminated groundwater within the treatment zone to prevent impacts to the drainage ditch and support transition to monitored natural attenuation (MNA). The initial phase of the HS6 IM began full scale operations in July 2018, and was then expanded from 160 air sparging wells (ASWs) to 300 ASWs with full scale operations beginning in May 2019. The 300 ASWs were installed beneath the VOC contamination on the top of Layer 4 (approximately 40 feet bls). The design included an ASW flow rate of 5.0 CFM, and 25 ft radius of influence with ASWs spaced 25 feet apart with no overlap. The system operates in nine treatment zones with compressed air supplied from a 75-horsepower rotary screw compressor.

Slide 37 showed cycle times for the nine zones associated with the system. Zones 1 and 2 remained off during the operational period as cleanup objectives have been met in this area. System run time was 89% over the reporting period. The system is monitored remotely, and if any issues arise a technician is dispatched to troubleshoot and resume operations. Monthly site visits are conducted to ensure the system is operating properly and the system is balanced.

Semi-annual performance sampling was conducted at 28 monitoring wells and 3 surface water locations in the nearby canal/drainage ditch. Performance results were shown on Slides 41 and 42. From the October 2021 event, 21 wells are less than GCTLs and 7 wells exceed GCTLs, IW135 exceeded cDCE and VC NADCs, and IW134 exceeded 10-times cDCE and VC NADCs. IW135 and IW134 are located closest to the DSZ.

Slide 39 displayed the Hot Spot 6 plume configurations from June 2018 (prior to system startup) and present. As of October 2021, 13.8 acres of treatment area are less than GCTLs and 1.9 acres continue to exceed GCTLs. COC concentrations have been drastically reduced since system startup with maximum cDCE reducing from 53,800 ug/L (baseline) to 9,700 ug/L (Oct 2021) and maximum VC reducing from 13,600 (baseline) to 1,000 ug/L (Oct 2021). Surface water results were all non-detect during the 2021 semi-annual events, showing that impacts to the drainage ditch have been eliminated.

An expansion of the air sparge system is planned once a Biological Opinion is received from the US Fish and Wildlife Service.

The Team reached consensus to continue operation of the HS6 air sparging system of the active 199 air sparge wells for the operational period of April 1, 2022, to March 31, 2023 **(2206-D04).**

The Team reached consensus that HS6 performance monitoring semi-annual sampling will continue to be completed at the same 28 monitoring wells and 3 surface water locations for VOC analysis and field parameters. Tetra Tech stated the upcoming expansion will be sampled quarterly in accordance with its Work Plan once installed **(2206-D05).**

There was a question about whether the new expansion will be in hot spot 6. Based on previous designation, the expansion will be in hot spot 7, which more or less encircles the DSZ. However, it is an expansion of the Hot Spot 6 system. NASA is nibbling away at hot spot 7 and next year will contract further around, plus an area by the blockhouse.

Path Forward:
In summary, the path forward will include: (1) Monthly System Sampling will include HCS effluent samples collected from air strippers, and LPGAC when online; (2) Quarterly Sampling will include HCS total system influent, and HCS individual recovery wells (18 RWs); (3) Semi-annual Hot Spot 6 performance sampling (28 MWs and 3 SWs); (4) Annual Sampling (December 2022) will include HCS CatOx influent and effluent, HCS DPT samples from 9 locations (8 to 98 ft bls at each boring), and Layer 8 Performance MWs; (5) Biennial Site-Wide LTM Sampling (December 2022) will include sampling of 56 MWs for VOCs and one MW for PCBs; and, (6) Install and operate of a new recovery well screened 90 to 100 ft bls adjacent to RW20C.

Results: Decision Items 2206-D02 – D05
Action Item 2206-A02 – A04

2206-M05 Carol Cady/Jason Bublitz /HGL

Fluid Servicing Road Area Interim Groundwater Monitoring Summary, June 2022

Goal: The objective of the advance data presentation (ADP) is to summarize the site description and history, discuss sampling results, present recommendations, and obtain consensus for both the Propellants Support Building Area (PSBA) and the Former Drum Storage Area (FDSA).

Discussion:

IGWM at PSBA

The site-wide interim groundwater monitoring (IGWM) activities at PSBA were completed in November/December 2021 and results are presented along with a summary of the site assessment history and background. The sampling and analysis plan specified the sampling of 22 monitoring wells (8 annual wells and 14 biennial wells) for the contaminants of concern (COC) (trichloroethene [TCE], cis-1,2-dichloroethene [cDCE], trans-1,2-dichloroethene [tDCE], and vinyl chloride [VC]). Groundwater level measurements were collected from 37 wells. Direct-push technology (DPT) samples were also collected at 47 locations for the first phase of the 5-year plume assessment. Additionally, three groundwater samples were collected from monitoring wells and analyzed for per- and polyfluoroalkyl substances (PFAS) analysis.

NASA inquired when referencing that the 2012 groundwater model indicated that the plume would not migrate "north to the outstanding Florida waters (OFW)" (Slide 5), does that mean north of the former drum storage area? HGL confirmed that was correct.

The data evaluation indicates that concentrations of VC are stable or decreasing in the north and east/west plumes at all depth intervals sampled. The low concentration plume has migrated to the west/southwest and direct push technology (DPT) results have not completely delineated the western boundary. COC concentrations increased along the western edge of the east/west plume at the 40-50 feet (ft) depth interval in 2019 exceeding the Natural Attenuation Default Concentration (NADC) for VC. Following the 2019 event, concentrations have decreased below the NADC but exceed the groundwater cleanup target level (GCTL).

Three monitoring wells were sampled for PFAS. There were no detections above the State of Florida provisional GCTLs.

The following recommendations were made:

- Continue annual/biennial interim groundwater monitoring.
- Conduct 2nd phase of 5-year plume monitoring (DPT event) in fall of 2022.
- Based on DPT data, additional monitoring wells are likely to be recommended. Proposed locations will be brought back to the Team for consensus.
- Based upon NADC exceedances in the east-west plume, installation of an air sparge barrier on the west side of the east-west plume is recommended.

The Team reached consensus on the 2022-2023 Sampling Plan: 1) Annual sampling event (8 annual wells in December 2022 for TCE, cDCE, tDCE and VC); collect depth to water measurements from 37 site-wide monitoring wells **(2206-D06).**

The Team reached consensus on the Exit Strategy, which includes continuation of monitoring to evaluate natural attenuation and concentration trends, and evaluation of optimization of monitoring program on an annual basis **(2206-D07).**

The necessity of installing an air sparge system was discussed. The farther the plume travels west the more into the wetlands area it gets. The scrub jay habitat impacts our ability to clear. NASA figures they have the infrastructure nearby because of the inactive FDSA air sparge system and can tie into the old line and run a line over. The path forward is an additional DPT assessment evaluation, after which they will bring to the team for a recommendation before moving forward. NASA is contracting a design for next year or maybe 2024. The air sparge wells will be installed as far west as possible.

<u>IGWM at FDSA</u>

The site-wide IGWM activities at FDSA were completed from April 2021 through March 2022 and results are presented along with a summary of the site assessment history and background. The sampling and analysis plan specified quarterly sampling (4 monitoring wells in July 2022 and 1 well in other quarterly events), biennial sampling of 43 monitoring wells, and groundwater level measurements were collected from 72 wells.

Prior to the biennial sampling event, results have remained below the NADC since the air sparge system was shut down in 2016/2018.

COC concentrations are stable or decreasing in the 0-10 ft interval and 30-40 ft intervals. COC concentrations in the 20-30 ft depth interval have slightly increased since the annual 2021 sampling event. Cis-DCE concentrations have increased in the 40-50 ft depth interval while other site COCs have deceased. One sample (MW03S2) reported a TCE result (667 ug/L) exceeding the NADC in the 10-20 ft depth interval. This well is upgradient and outside the source area. The TCE result had a "J" data qualifier, signifying an estimated value. FDEP observed that this was the highest TCE result for the sampling event.

NASA pointed out there was an uptick in COC concentrations in 2019 and then a significant increase in 2021 for MW03S2, but the TCE result is an estimated value. To investigate the TCE detection at MW03S2, the monitoring well was resampled in June 2022, and results are pending. If the NADC exceedance is confirmed, DPT groundwater samples will be collected during Phase 2 of the PSBA DPT sampling (if time permits). If groundwater samples are not collected during the PSBA Phase 2 DPT sampling, samples will be collected at a later date. Samples will be collected from three borings at 10, 15, 20, 25, and 30 ft bgs. NASA inquired will HGL present results at the next meeting? HGL will provide the 2020 DPT results for this site to the Team at the next meeting **(2206-A05).**

FDEP referenced the well just north of the one being discussed (MW40); is that roughly screened the same? Tetra Tech responded that the southern well is at a lower elevation since the pavement steps down into a swale. While the screen intervals are the same relative to land surface, the part of the aquifer monitored is a little different.

MW03S2) is just on the western edge of the air sparge system radius of influence. Historically, we did not see TCE in this location. FDEP noted that just in looking at the data presented, it does not look like there is a bounding sample location to the west. HGL will present results from 2020 DPTs at the next meeting as part of their action item, which will show a location just west of MW03S2 that was a non-detect.

NASA summarized that the June MW03S2 re-sample data will be reviewed. If the TCE result is above NADC, then DPT sampling will be performed in the vicinity to develop more information. If the

NADC exceedance is not confirmed, no additional investigations will be performed.

Tetra Tech confirmed there is a Statement of Basis dated 2009 for this site. It needs to be revised to include more recent work.

Recommendations were made as follows 1) continue Annual/Biennial IGWM of TCE, cDCE, tDCE, and VC; and 2) recommend optimization of monitoring schedule of 1 monitoring well (MW0061) from quarterly to semi-annual based upon analytical results (stable COCs from last three quarterly events).

Regarding MW0061, FDEP inquired if there is data from below its screened interval? HGL replied that MW0061 was installed based on DPT results from 2020 (DPT0370). TCE was detected at 41 ug/L in the 3-7 ft. interval and about the same at the 13-17 ft. interval. That is why we put the well in that location. Adjacent MW0029 is a deeper well (10-20 ft. screen) and addresses the deeper TCE detection. The 2021 result was 8.9 ug/L. There was a co-located 2021 surface water sample.

Should FDSA be a long-term monitoring (LTM) site rather than an IGWM site? A Team member replied that this is not really as much an IGWM as it is a post-remediation monitoring status. NASA stated that there is no expectation of reactivating any part of the air sparge system at FDSA. Next year we can evaluate whether an LTM plan is appropriate for this site. FDEP concurred that remediation is progressing and it doesn't look like the site is ready for LTM just yet. Let's see how we do with the OFW wells and this single well above NADC.

The Team reached consensus to continue annual/biennial IGWM activities at FDSA with the following modifications: 1) Recommend optimization of monitoring schedule of 1 well (MW0061) from quarterly to semi-annual; 2) Semi-annual sampling of 1 well (MW0061) for TCE, cDCE, tDCE, and VC – July and December 2022; 3) Annual Event sampling of 27 wells for TCE, cDCE, tDCE, and VC in December 2022 (fiscal year 2023); 4) Annual water level data from 72 wells **(2206-D08).**

The Team reached consensus on Exit Strategy, which includes continuation of monitoring to evaluate natural attenuation and concentration trends, and evaluation and optimization of the monitoring program on annual basis **(2206-D09).**

Results: Decision Items 2206-D06 through D09
Action Item 2206-A05

2206-M06 Chris Neumann / Tetra Tech

KSC HQ Area Soil Interim Measure, June 2022

Goal: The purpose of the ADP is to present the results of the soil Interim Measure (IM) for polychlorinated biphenyl (PCB)-contaminated soil at Location of Concern (LOC) 2D and LOC 2E at the KSC Headquarters Building Area (KHQA). A RCRA Facility Investigation (RFI) was completed in 2009 and identified media contaminated with polychlorinated biphenyls (PCBs) above the State of Florida residential soil cleanup target levels (R-SCTLs) (0.5 mg/kg) at LOC 2D and LOC 2E.

Discussion: Accessible contaminated media at the former Headquarters Building was excavated during IMs in 2011 and 2015 and a LUCIP was in place for remaining contaminated media. An IMWP was prepared in 2016 for the removal of contaminated media in tandem with the demolition of the Headquarters Building. The IMWP for LOC 2D and LOC 2E was updated in 2018 to include additional contaminated areas. The IMWP was prepared in accordance with NASA's Generic Work Plan for the Investigation and Cleanup of PCB-Contaminated Sites Under Toxic Substances Control Act (TSCA) (NASA, 2007) and due to the presence of PCB concentrations greater than or equal to 50 mg/kg, coordination with and approval by the United States Environmental Protection Agency (EPA) was required. EPA provided an approval letter for the IMWP on August 3, 2018.

The IM objective was to excavate vadose-zone soil in LOC 2D and LOC 2E with PCB concentrations greater than the State of Florida RSCTL (0.5 mg/kg). The IM included 9 areas with depths ranging from 0.5 to 4.0 feet below land surface. The total area was approximately 5,186 square feet and the total volume of soil and concrete removed was 347 cubic yards. The IM was conducted from November 2021 to May 2022, with active excavation and transportation and disposal occurring from January to February

2022. A total of 13 truckloads, 343 tons of contaminated material was disposed at JED Landfill and a total of 6 truckloads, 135 tons of contaminated material was disposed at the Emelle, AL Landfill. An additional roll-off box (4.2 tons) was disposed at JED Landfill and an additional drum (300 pounds) was disposed at the Emelle, AL Landfill during the verification sampling effort. The excavation removed all material with PCBs exceeding 0.5 mg/kg.

FDEP inquired if the confirmatory sampling was conducted post removal of the exceedance or pre removal of the exceedance? Tetra Tech stated they sampled pre and post removal. They removed media to designated boundaries (green or red dots on the slides) and then collected samples. If the result was above 0.5 mg/kg PCBs, then additional material (concrete or soil) was removed and sampling was repeated. Referencing Slide 30 for example, the result for the "N" location (Sample CO0054) was above 0.5 mg/kg, so additional concrete was removed and "Q" (CO0057) was collected at the same horizontal location as "N" but at the new surface. The "Q" sample was below 0.5 mg/kg as were lateral samples, so no further removal was needed.

Three monitoring wells were installed following completion of the IM. The wells were installed at the locations of maximum PCB concentrations during previous Perimeter IM, and the LOC 2D, and LOC 2E IM. Groundwater samples were collected for analysis of PCBs and select VOCs, including tetrachloroethene (PCE), trichloroethene (TCE) and daughter products, benzene, and chlorobenzene compounds. All PCB and VOC results were non-detect.

Per- and polyfluorinated alkyl substances (PFAS) were also analyzed in the monitoring well samples to provide information regarding PFAS distribution in the KSC Industrial Area. PFAS had been detected in earlier KHQA investigation derived waste (IDW). NASA has not identified a source at or near the former Headquarters Building. NASA would like to close out SWMU #104 because we do not have a known source of PFAS. Further PFAS investigation will be performed under one of the known PFAS sites in the industrial area. NASA expects that there will be commingled PFAS plumes in the industrial area, particularly in light of the EPA Regional Screening Levels issued in May 2022. FDEP

recommended for NASA to discuss that the PFAS is not likely associated with the former Headquarters Building in the IM Report.

The path forward for this site is to prepare and submit the Interim Measure Report. NASA will submit separate Site Rehabilitation Completion Order request documentation for SWMU 104 to support an NFA without controls recommendation.

The Team reached consensus that remediation is complete for 9 excavation areas at LOC 2D and LOC 2E, delineated to residential SCTL (0.5 mg/kg) **(2206-D10).**

The Team reached consensus for No further action for soil and concrete at the KHQA (SWMU 104) **(2206-D11).**

The Team reached consensus for No further action for PCBs and VOCs in groundwater at the KHQA (SWMU 104) **(2206-D12).**

The Team reached consensus to continue investigation of PFAS in groundwater either through expansion of an existing site with ongoing PFAS investigation or by adding a new site for PFAS investigation in this area. Additional SWMU Assessment activities will be performed to investigate for a PFAS source in this area **(2206-D13).**

FDEP agrees with all the consensus statements pending review of the Interim Measure Report. Please convey as simply as possible where the contamination was, and why it is no longer a problem.

Results: Decision Items 2206-D10 through D13

2206-M07 Deda Johansen / NASA

SLERA Conclusions and Recommendations for the Un-numbered Operational Area (UNOA), PRL #229, June 2022

HGL completed the food web analysis as an addition to the screening level ecological risk analysis. It concluded that risk to birds from PAHs associated with the railroad tie disposal area pond is unlikely. No further study will be recommended at the UNOA pond. NASA understands that the ecology folks at FDEP will have to take a look at this.

FDEP stated that they will farm this out to University of Florida (UF) for review. NASA responded that this report is already drafted and will submit the report for review with the details **(2206-A06).**

Results: Action Item 2206-A06

2205-M08 Anne Chrest / NASA

CAMP Deliverables Look-Ahead and Document Requirements, June 2022

Goal: To provide an update on the CAMP submittal look-ahead.

Discussion: Anne presented the latest CAMP. An opportunity was provided during the meeting to follow up with any questions on what was provided. If any questions or concerns after the fact, please reach out.

For the former Headquarters Building, NASA may need to submit the Interim Measure (IM) Report and then put together a site closure report with all the remediation history. This is the fourth IM conducted at the site, and the current report does not cover the history of the other three IMs. NASA will submit a separate summary document for the formal closure of this site.

FDEP noted that the look-ahead is appreciated. It helps with planning contractor reviews.

2206-M09 Howard Fowler /HGL

Stand Alone Electrical Equipment Confirmation Sampling Report Addendum and Interim Measure Work Plan, June 2022.

Goal: The objective of the ADP is to summarize the site description and history, discuss sampling results, discuss the Interim Measure (IM) Work Plan, and obtain consensus for the Stand-Alone Electrical Equipment (SAEE) Potential Release Location (PRL) 227a path forward. SAEE PRL 227a was formerly known as PRL 227 Location of Concern (LOC) 3.

Discussion: Eighty-seven pieces of electrical equipment were evaluated in the September 2015 PRL 227 SWMU Assessment (SA) and 49 LOCs were identified. The August 2019 Confirmatory Sampling Report (CSR) recommended No Further Action (NFA) at 45 LOCs. NFA was not recommended at:

- PRL 227a (PRL 227, LOC 3) - Addressed by this CSR Addendum (CSRA)
- PRL 227b (PRL 227, LOC 16) - Addressed by Soil IM
- PRL 227c (PRL 227, LOC 29) - Addressed by Soil IM
- PRL 227d (PRL 227, LOC 30) - Addressed by separate CSRA and approved for No Further Action (NFA)

NASA clarified that the ground slopes to the west, which explains why we have further migration of the dielectric fluid that is the source of the PCBs to the west than the east.

PRL 227a is located to the southeast of the industrial area on the north side of 10th Street SE, west of the former Vertical Processing Facility. The site consists of the Load Break Switch (LBS) 35 and associated concrete pad which is surrounded by road rock and grass. A small building (Communications Terminal #11) is located to the north of the LBS 35 concrete pad and a driveway is located to the east.

The KSC Power Distribution System was established in the 1960s with the construction of the first facilities at KSC. The former LBS is suspected to have used oil that contained polychlorinated biphenyls (PCBs). LBS 35 was replaced in 1994 with a new LBS that does not use PCBs. The site is not considered ecological habitat. The area to the east of PRL 227a was formerly the Vertical Processing Facility (VPF) and the site has been extensively reworked since 2008. Three soil excavations were completed in the vicinity of PRL 227a in October 2009 as part of remedial measures associated with the VPF. Excavations were completed to a depth of 0.5 foot and were performed to mitigate risks associated with copper and chromium in soil.

<u>Confirmatory Sampling Overview</u>

Initial Confirmatory Sampling (CS) at PRL 227a was performed between August 2018 and April 2019 and was documented in the August 2019 CSR for PRL 227 (Tetra Tech, 2019). Seventy-five soil samples were collected from 44 locations. PCBs concentrations above the residential soil cleanup target level (SCTL) were detected

in multiple locations and the extent of PCBs impacts were not delineated after the initial CS activities. PCBs concentrations above 50 parts per million (ppm) were detected in 1 sample (SB0012 0.5'-2'). A re-sample of this location and interval yielded a result below 50 ppm. Five concrete samples were collected from 5 locations. The greatest PCBs concentration in concrete was 0.1 mg/kg. One asphalt sample was collected from 1 location. PCBs were not detected in the sample. One shallow monitoring well (MW0001, screened 5'-15') was installed and sampled in the area with the greatest PCBs concentration. PCBs were not detected in the sample.

CSRA Sample Collection Methodologies

Initial CS samples were analyzed using the USEPA approved Ultrasonic Extraction Method (3550C). Since PCB concentrations equal to or greater than 50 ppm were detected, and previous HGL discussions with EPA confirmed their preference for using the USEPA approved Soxhlet Extraction Method (3540C), HGL chose this method for additional analyses. The initial CS samples were used to guide sample location placement but not used to delineate PCBs impacts. In general, samples collected at depths of less than 5' were collected via hand auger and samples collected at depths of greater than 5' were collected with a direct push technology (DPT) rig.

Samples collected at depths greater than 5' down to 20' bls were collected to confirm that PCBs did not migrate to a less permeable zone. Delineation sample locations are spaced approximately 20 feet apart. After the first round of CSRA sampling (June 2020), the shallow depth intervals were changed from 0-0.5' and 0.5'-2' to 0-0.5', 0.5'-1' and 1'-2'. In March 2021, a PCB Notification Letter was sent to the Florida Department of Environmental Protection (FDEP) to initiate the PCB Coordinated Cleanup Process.

CSRA Soil Sampling

A total of 299 soil samples were collected between 2020 and 2022 from 82 locations at depths ranging from 0-0.5 to 19'-20' bls. One sample (SB0012-1'-2') exceeded 50 ppm which confirmed the earlier detection above 50 ppm at this location. Fifty-eight samples exceeded the residential SCTL of 0.5 mg/kg. Twenty-three samples exceeded the industrial SCTL of 2.6 mg/kg. Three samples exceeded the leachability SCTL of 17 mg/kg. PCBs were not detected in the sample collected beneath the LBS 35 concrete pad (0-

0.5' and 0.5'-2'). Due to restricted access, samples could not be collected beneath the Communications Terminal #11 building. PCBs were not detected in the samples collected beneath the driveway.

FDEP inquired if the depth to groundwater is mentioned? HGL responded that it was not. It is around 5ft if you are up by the driveway.

The deepest depth of PCB concentrations above the residential SCTL was detected at SB0356 (4'-5' and 5'-6'). PCB concentrations at SB0356 were below the rSCTL at 6'-7' and 7'-8'. Samples were collected at depths greater than 6' at six locations to confirm that PCBs did not migrate to a less permeable zone. All six soil PCB results were less than 0.5 mg/kg. Boring logs indicate a hardpan semi-peat layer at 10' bls. Samples collected below 10' confirm PCB contamination did not migrate vertically beneath this hardpan layer. Overall complete horizontal and vertical delineation was achieved.

IM Work Plan

An IM Work Plan for the excavation of PCBs-impacted soil is being submitted with the CSRA. Based on the CSRA sampling, the total volume of the excavation is approximately 739.7 cubic yards. Approximately 9.3 cubic yards of soils with PCBs greater than or equal to 50 ppm will be segregated and disposed of separately. The driveway will be used as the eastern boundary of the excavation. Soil will not be excavated beneath the LBS 35 concrete pad (results below the residential SCTL) or the Communications Terminal #11 building concrete pad (not sampled due to access constraints). Land Use Controls (LUCs) will be required for soils beneath the Communications Terminal #11 building. To confirm no LUCs are required beneath the LBS pad, wall samples will be collected from the edge of the excavation nearest SB12 and SB356 at depths below 2', since PCBs above the residential SCTL were found deeper than the prior under-slab samples. A post-IM groundwater sample will be collected from MW0001 (or its replacement) and analyzed for PCBs.

IM Work Plan Implementation Issues

Due to the presence of underground utilities, a ground penetrating radar survey is recommended to identify all underground utilities. The IM Contractor will need to work with KSC to de-energize electrical equipment prior to soil IM. MW0001 may have to be

abandoned in advance of soil IM activities. If that is the case, a replacement well will be installed.

NASA inquired if the well is located in the 6 ft excavation? It is not, it is in a 3' excavation. Since the well has been sampled already under worst case conditions, FDEP doesn't believe you need to sample again. NASA stated the previous sample was not tested for chlorinated benzenes so that needs to be done.

FDEP stated, assuming the IM is successful, the case might be made that there is nothing underneath the Communications Building. NASA observed that there are samples as close as possible to the building with results above the residential SCTL. Given the communications lines coming into the building, coring through the floor wasn't feasible. NASA has discussed the circumstances internally and is okay with placing a LUC Implementation Plan.

FDEP commented that digging around the building slab and then collecting sidewall samples may be adequate to avoid LUCs, assuming they are clean. NASA inquired if shoring would be utilized for the 6' excavation? Or will you excavate incrementally? The response was incremental excavation with flowable fill so as not to undermine the roadway. The driveway is only utilized by the communications folks and us. HGL stated it was not in good condition.

NASA stated they will be removing everything 0.5 mg/kg to the building, and inquired with FDEP how the PCB coordinated removal would work. FDEP has not participated in one of those yet, so this will be a mutual learning experience. NASA will forward the Notification Letter sent previously to Bruce (**2206-A07**).

The Team reached consensus that PCB-contaminated soil has been delineated. The Confirmation Sampling Report Addendum and Interim Measure Work Plan will be submitted to FDEP for PCB Coordinated Cleanup approval **(2206-D14).**

The Team reached consensus that side walls samples will be collected to determine if land use controls (LUCs) will be required for soils beneath the Communications Terminal #11 building **(2206-D15).**

Results: Decision Items 2206-D14-D15
Action Item 2206-A07

2206-M10 Robert Lynch/ HGL

Child Development Center Confirmation Sampling Update, June 2022

Goal: The goal is to present the results of the 2022 Confirmatory Sampling event at the KSC Child Development Center (KCDC).

Discussion:
In 2022, a project by NASA to replace certain playground equipment and the rubberized play surface is planned. A Land Use Control Implementation Plan (LUCIP) is in effect at KCDC due to arsenic above the residential soil cleanup target level (rSCTL) beneath the playground's artificial surface. Soil sampling was initiated to investigate whether other metals associated with treated wood (copper and chromium) were present at levels of potential concern; and investigate the remaining arsenic levels.

On March 19th, 2022, soil sampling was conducted at Location of Concern (LOC) 4 (Sealed Playground Area) and LOC 2 (Wooden Fence Area). At LOC 4, a core drill was utilized to drill through the impervious playground surface and underlying concrete pad at five locations. Soil samples were collected from directly beneath the concrete pad to 1 ft below ground surface (bgs) (0.5-1.0 ft. bgs), and every 1-ft. interval until the water table was encountered (approx. 3-4 ft bgs across the site). At LOC 2, two soil boring locations were advanced from ground surface using a hand auger. Soil samples were collected from ground surface to 0.5 ft. bgs, 0.5-1.0 ft. bgs, and every 1-ft. interval until the water table was encountered. All soil samples were analyzed for arsenic, total chromium, hexavalent chromium, and copper. Soil sample results for total chromium, hexavalent chromium, and copper were less than the residential and/or leachability SCTLs.

Detections of arsenic exceeding the rSCTL) of 2.1 mg/kg were observed at SB0045 (LOC 4) and SB0048 (LOC 2). Results are as follows: SB0045: 2.3 mg/kg at 1.0-2.0 ft bgs; SB0048: 10.2 mg/kg at 0-0.5 ft bgs. Both sample locations were delineated vertically to concentrations less than the rSCTL. All arsenic results from the other 5 boring locations were less than the rSCTL.

The two locations with results above the rSCTL are not accessible to playground users because of the play surface and concrete (SB0045) or because of location between two fences (SB0048). Thus, the LUCIP remains valid as a means of protection for human health. Therefore, Land Use Controls and quarterly inspections will continue and the Remediation Program will continue to have repairs made to the play surface as needed.

Further soil sampling and a possible removal action will be planned for the time when the KSC Child Development Center moves to a new location, which is anticipated to be within the next 10 years.

The NASA RPM told the Team that the Remediation Program hoped they could take advantage of the project replacement of the poured-in-place surface. However, the concrete that underlies the rubberized surface will remain in place and is not being removed to expose the contaminated soils. NASA will look at this again when the CDC moves and there is an opportunity to fully excavate.

At sample SB0048, FDEP noted that this is bare ground between two fences with arsenic almost at the industrial level and asked about a delineation. NASA does not believe this is fully delineated to the north. The KSC range of background was used at the time this was initially investigated. NASA has had further discussion with FDEP about regional levels not always being acceptable.

FDEP responded that site-specific values are encouraged as we moved forward here. A little more delineation is warranted in the northern area. What is the facility to the north? NASA replied it was a warehouse.

NASA showed the existing LUCIP boundary. NASA is on board with further delineation and extending the LUC boundary to match the new delineated area if necessary.

2201-M11 KSCRT

Miscellaneous Discussion

NASA provided an update with regards to the PFAS investigations. The Phase II and III Center-wide Report will be submitted to FDEP shortly. The report was substantially complete when the EPA issued new regional screening levels (RSLs) in May 2022. The

recommendations the report developed based on Florida's provisional cleanup target levels will not be changed, but the transmittal letter will include a summary of sites that may require additional evaluation based on the RSLs. Initial Site Assessment work at the selected individual sites has generated a lot of data. ,

There are groundwater samples near the KSC property line that may indicate potential off-site migration.

FDEP responded that it may serve you better to do something sooner than later when it comes to the location near the property boundary. NASA replied that further investigation is underway. FDEP plans on inviting the Program Administrator to at least phone in for the next PFAS presentation and see the PFAs sites. NASA is ahead of the Department of Defense and other government agencies in your investigation efforts.

NASA noted that the PFAS ADPs are being presented in the near future. To get away from very large reports they will try to present findings as they are developed.

FDEP responded that this sounds good for information purposes for them. They cannot make regulatory demands upon anyone at this time. NASA stated they want FDEP's input and would like to give FDEP the opportunity for this round of sites under investigation. We are pulling forward three new sites into the SWMU Assessment stage to include the South Repeater Building, the Sharkey Road area, and Contractor Support Building #7. NASA picked sites that would provide better understanding of groundwater and surface water regional impacts.

FDEP observed that originally NASA contracted to investigate sites that had results above the Florida provisional CTLs. What is the status now? NASA responded that the Site Assessments are being funded incrementally. Comparing to the provisional groundwater cleanup target levels, they had 40 sites with groundwater concerns and now the RSLs suggest 47 sites with potential groundwater concerns. There was one site with soil above the provisional soil cleanup target level, but there are 8 sites with potential soil concerns with the new RSLs.

For the contractors' information, NASA noted that NASA's internal review of documents for public release (STRIVES) is finding very small things. For example, in a legend, they found a copyright symbol, which requires a release for use. Some contractors have a standard email caveat about being read by someone who is not being the intended recipient. NASA asks that contractors please be aware of these export review issues.

2022 Meeting Dates
September 13 – virtual meeting for shortened agenda – pushing most to October 4th date.
October 5th & 6th (hybrid meeting)
November 30th-December 1st, 2022

Agenda Topics for September and October 2022 Meetings

AECOM

1. ORSY site wide PCB results and IMWP (45 min)
2. Updates on PFAS to include (Former Fire Station 2, SLF, South Repeater Building, VAB North) (90 minutes)
3. VAB LTM (LC39OGA DPT groundwater sampling and proposed groundwater monitoring well locations)

Tetra Tech

1. Fire Station 1, Fire Station 3, STP #1 (90 min)
2. CCB RAE (60 min)
3. LC 34 AS Pilot Study (90 min) Jonnet
4. POL Annual OM&M (60 min)
5. AOSB Year 1 OM&M (60 min)
6. CHP Year 1 PMR (60 min)

HGL

1. C5 Substation PARM (30 min)
2. PFAS Sharkey Rd

FDEP
15-20-minute FDEP update by Program Manager

Anne Chrest is the team leader next meeting so email topics to this individual after the meeting is over.

June 2022 Decision Items Rev 1		Decision
Decision No.	Minutes Reference	
2206-D01	2206-M01	**Meeting Minutes and Miscellaneous Items:** Team consensus was reached that Revision 1 of the meeting minutes and action/decision items for the May 2022 Team meeting will become final. Team members acknowledged and did not object to the fact that these meeting minutes may become public as part of a final report at a later date.
2206-D02	2206-M04	**Annual Update on Launch Complex 34 :** The Team reached consensus to continue IM OM&M of the HCS for Year 13, the operational period of April 1, 2022, to March 31, 2023, consistent with the current approach that includes: monthly sampling of the air stripper's effluent (aqueous), quarterly sampling of the combined influent and individual RW influent (aqueous), and annual sampling of the influent and effluent of the CatOx (vapor), DPT (aqueous), and Layer 7/8 monitoring wells (aqueous).
2206-D03	2206-M04	**Annual Update on Launch Complex 34 :** The Team reached consensus on the installation of a new recovery well screened 90 to 100 ft bls adjacent to recovery well RW20C.
2206-D04	2206-M04	**Annual Update on Launch Complex 34 :** The Team reached consensus to continue operation of the HS6 air sparging system of the active 199 air sparge wells for the operational period of April 1, 2022, to March 31, 2023.
2206-D05	2206-M04	**Annual Update on Launch Complex 34 :** The Team reached consensus that HS6 performance monitoring semi-annual sampling will continue to be completed at the same 28 monitoring wells and 3 surface water locations for VOC analysis and field parameters. Tetra Tech stated the upcoming expansion will be sampled quarterly in accordance with its Work Plan once installed.
2206-D06	2206-M05	**Fluid Servicing Road Area Interim Groundwater Monitoring Summary, June 2022:** The Team reached consensus on the 2022-2023 Sampling Plan: 1) Annual sampling event (8 annual wells in December 2022 for TCE, cDCE, tDCE and VC); collect depth to water measurements from 37 site-wide monitoring wells.
2206-D07	2206-M05	**Fluid Servicing Road Area Interim Groundwater Monitoring Summary, June 2022:** The Team reached consensus on the Exit Strategy, which includes continuation of monitoring to evaluate natural attenuation and concentration trends, and evaluation of optimization of monitoring program on an annual basis.
2206-D08	2206-M05	**Fluid Servicing Road Area Interim Groundwater Monitoring Summary, June 2022:** The Team reached consensus to continue annual/biennial IGWM activities at FDSA with the following modifications: 1) Recommend optimization of monitoring schedule of 1 well (MW0061) from quarterly to semi-annual; 2) Semi-annual sampling of 1 well (MW0061) for TCE, cDCE, tDCE, and VC – July and December 2022; 3) Annual Event sampling of 27 wells for TCE, cDCE, tDCE, and VC in December 2022 (fiscal year 2023); 4) Annual water level data from 72 wells.
2206-D09	2206-M05	**Fluid Servicing Road Area Interim Groundwater Monitoring Summary, June 2022:** The Team reached consensus on Exit Strategy, which includes continuation of monitoring to evaluate natural attenuation and concentration trends, and evaluation and optimization of the monitoring program on annual basis.
2206-D10	2206-M06	**KSC HQ Area Soil Interim Measure, June 2022:** The Team reached consensus that remediation is complete for 9 excavation areas at LOC 2D and LOC 2E, delineated to residential SCTL (0.5 mg/kg).
2206-D11	2206-M06	**KSC HQ Area Soil Interim Measure, June 2022:** The Team reached consensus for No further action for soil and concrete at the KHQA (SWMU 104).
2206-D12	2206-M06	**KSC HQ Area Soil Interim Measure, June 2022:** The Team reached consensus for No further action for PCBs and VOCs in groundwater at the KHQA (SWMU 104).
2206-D13	2206-M06	**KSC HQ Area Soil Interim Measure, June 2022:** The Team reached consensus to continue investigation of PFAS in groundwater either through expansion of an existing site with ongoing PFAS investigation or by adding a new site for PFAS investigation in this area. Additional SWMU Assessment activities will be performed to investigate for a PFAS source in this area.
2206-D14	2206-M09	**StandAlone Electrical Equipment Confirmation Sampling Report Addendum and Interim Measure Work Plan, June 2022:** The Team reached consensus that PCB-contaminated soil has been delineated. The Confirmation Sampling Report Addendum and Interim Measure Work Plan will be submitted to FDEP for PCB Coordinated Cleanup approval.

June 2022 Decision Items Rev 1		Decision
Decision No.	Minutes Reference	
2206-D15	2206-M09	**StandAlone Electrical Equipment Confirmation Sampling Report Addendum and Interim Measure Work Plan, June 2022:** The Team reached consensus that side walls samples will be collected to determine if land use controls (LUCs) will be required for soils beneath the Communications Terminal #11 building.

Action Item No.	Minutes Reference	Responsible Team Member	Action item	Status	Comments
1712-A01	1712-M07	Team	If a document contains materials controlled under EAR99 (as determined by Export Control), the following clause shall be included on the first page (Action item): "EAR99 – NO LICENSE REQUIRED This information or item is controlled under the Export Administration Regulations (EAR) as EAR99. It may be exported without a license, expect to embargoed/designated countries (General Provision Six) or entities of concern. The designation of EAR99 does not constitute public release. Per Lori Ray, Reference STI TN#### NASA KSC Export Control Office, 321-867-9209."	Open	Standing Open Item
1810-A01	1810-M01	Team	NASA legal is concerned about copyright infringement regarding the inclusion of lab reports in documents. Reach out to labs to get release statements from them for the lab reports.	Open	Standing Open Item
2002-A03	2002-M10	A&Es	NASA requests that all A&E firms please large file transfer the .pdf and PowerPoint versions of the ADPs being presented so they can be uploaded to the folder and utilized for the team meeting. Cover letters should summarize the goal of the ADPs and the consensus statements should be provided for the minutes.	Open	Standing Open Item
2102-A09	2102-M13	Team	General Comment: FDEP observed that, based on the current monitoring network and plume depiction, one could think the plume is not delineated. Trepidations exist about making decisions without understanding how MNA has progressed. For clarity moving forward, the NASA lead requested that future documents include the end point assessment map that shows that we have plume delineation at a site, as well as a cross-section reference (e.g., what was the last map that brought us to the point of LTM, and where are we now [all the circa data circa]).	Open	Standing Open Item
1810-A02	1810-M04	NASA (RPO)	Launch Complex 39B (LC39B) (SWMU 009) - revisit team consensus 1810-D13 on weir installation based on permits date expiration and Year 2 PM results. (Team consensus reached to suspend the weir installation since CVOC concentrations adjacent to the pond are below their respective GCTLs and to re-evaluate the need for the weir prior to the SJRWMD and USACE permit expiration (11 July 2023).	Open	The Team reached consensus to evaluate Action Item 1810-M04, 1810-A02 in 2022 to re-evaluate the need for a weir near OFW. This item will remain open pending that evaluation. Tetra Tech resampled for line of evidence - upon receiving results, will revisit this action item.
2102-A07	2102-M13	NASA (RPO)	Industrial Area LTM, February 2021 (ORSY Site): FDEP inquired about past results for monitoring well ORSY-DRM-MW0001I. NASA stated they will look into the historical sampling results and get back with the Team.	Open	Findings and recommendations were submitted to FDEP. NASA is implementing the recommendations and will be revisited at a later date.
2102-A08	2102-M13	NASA (RPO)	Industrial Area LTM, February 2021 (EHF Site): FDEP and NASA discussed the site. NASA stated that the MNA program is routinely optimized, but this site was never included in an engineering evaluation process. Mounding takes place at this location, and a building was removed in the past few years. NASA took an action item to review the sampling data in the RFI for this location.	Open	Findings and recommendations were submitted to FDEP. NASA is implementing the recommendations and will be revisited at a later date.
2102-A10	2102-M13	NASA (RPO)	Industrial Area LTM, February 2021 (M7-505 Site): NASA took an action item to investigate if there are deeper data points around the location of MW0033.	Open	Findings and recommendations were submitted to FDEP. NASA is implementing the recommendations and will be revisited at a later date.
2102-A11	2102-M13	NASA (RPO)	Industrial Area LTM, February 2021 (GSSP Site): FDEP inquired if this site was delineated to the northwest of the lake, and if we have vertical delineation at this location. NASA stated a site characterization was performed in 2012. In 2009, DPT55 was placed on the west side of the pond (west of MW0035) and DPT56 was located on the east side of the pond (20ft NW of the location of monitoring wells MW0033, MW0034, and MW0035). On the west side there were no detections, and on the east side there were low detections. Surface water was also sampled here. NASA took an action item to provide this data to FDEP for reference following the meeting.	Open	Findings and recommendations were submitted to FDEP. NASA is implementing the recommendations and will be revisited at a later date.
2102-A12	2102-M13	NASA (RPO)	Industrial Area LTM, February 2021 (KARS Park 1 Site): FDEP inquired if this was a skeet range previously? NASA stated there was a rifle/pistol range with a skeet range to the west (reference slide 154). FDEP inquired on the groundwater in the rifle/pistol range area? NASA stated that the groundwater was not monitored in that area. Tetra Tech pulled up the old wells in a previous presentation figure during the meeting. The only well shown in the area of discussion was in the lead shot area (KP1-MW0007). FDEP stated they would like to know what happened west of LOC 9 if NASA can provide that data. NASA took an action item to look into this.	Open	Findings and recommendations were submitted to FDEP. NASA is implementing the recommendations and will be revisited at a later date.
2106-A01	2106-M03	NASA/FDEP	NASA Remediation Program Updates, June 2021: FDEP stated that, regarding the existing Statement of Basis template being acceptable, it would be best for FDEP and NASA to have a follow up meeting to review the current template. FDEP and NASA can decide from there.	Open	

KSCRT Status of Open Action Items

Action Item No.	Minutes Reference	Responsible Team Member	Action item	Status	Comments
2106-A02	2106-M03	NASA/FDEP	NASA Remediation Program Updates, June 2021: Regarding updating the Statement of Basis (SB) for a site after an IM has taken place (post initial SB publication), FDEP agrees that this is an administrative item and it does have significance. For the Federal Facilities Branch, it may not be critical to see the change in SB post IM, but the RCRA Program may have a different perspective. We need an understanding of what are considered significant changes on the permit, what triggers public notification, etc. That is a conversation NASA and FDEP should have to provide firmer ground on what is required going forward.	Open	Most of this has been addressed in the current permit modification, but still need a follow up meeting with FDEP to close out.
2201-A01	2201-M04	NASA	Center-Wide Per- and Polyfluoroalkyl Substances (PRL #237) Phase III Solid Waste Management Unit Site Assessment and Confirmatory Sampling Report Summary, January 2022: NASA stated that the red boundary (PFAS LOC) in the figure on slide 90 is for the fire station, and not for Central Supply. NASA will gather together the figures they are investigating, and provide to FDEP.	Open	NASA met with Michelle to create figures. Revision to the maps are needed and once completed, NASA will provide the maps to FDEP.

Action Item No.	Minutes Reference	Responsible Team Member	Action item	Status	Date Closed	Closure Comments
1906-A01	1906-M01	NASA (Ryan O'Meara)	Per FDEP correspondence letter dated (March 22, 2019) RPM Ryan O'Meara will provide a site history of the Visitor Center Maintenance Area (SWMU 099) at a future team meeting.	Closed	10/2/2019	Discussion earlier this month with FDEP
1906-A02	1906-M11	FDEP	Discuss with FDEP Management to ensure Alternative Soil Cleanup Target Levels approved for use by Cape Canaveral Air Force Station for barium and copper may be applies to Kennedy Space Center sites.	Closed	8/8/2019	FDEP indicated that the ASCTLs that have been approved for use at CCAFS by the University of Florida can be referenced and applied to KSC sites. FDEP sent the Team an email on this subject on 6/27/19.
1908-A01	1908-M03	NASA Remediation Program wide	An action item was added for the NASA Remediation Program to begin adding a references section in all new and revised LUCIP documents moving forward.	Closed	2/6/2020	FDEP approved the use of a site-specific document reference within the NASA LUCIPs that states, "Site-specific documentation is available for review by contacting the Environmental Assurance Branch at telephone number (321)867-6971", moving forward.
1908-A02	1908-M04	FDEP	FDEP will check with their records department to add language that requires the preferred submission method of a report cover page with the CD only for report submittals moving forward.	Closed	10/23/2019	No FDEP mentioned record - this submittal method is acceptable.
1910-A01	1910-M02	NASA & TetraTech	Launch Complex (LC) 34 (SWMU CC054): DNAPL Source Zone Site Characterization Engineering Evaluation and Remedial Alternatives Evaluation (RAE) for the DSZ discussed the MWs in Layer 8 vertically delineating the TCE (four existing and four newly installed wells were sampled). The Team discussed the Layer 8 wells and recommended they be sampled as part of the next annual plume-wide sampling event scheduled in Dec 2020. An action item for NASA was added to work with Tetra Tech to make sure the deep wells get incorporated into the sampling program accordingly.	Closed	4/16/2020	These wells have been incorporated
2002-A01	2002-M07	A&Es	NASA requests that any updates to the PFAS six questionnaires be provided to Mark Speranza with Tetra Tech so he can utilize those same questions at other sites where Tetra Tech is investigating PFAS.	Closed	4/16/2020	No updates to questionnaires
2002-A02	2002-M07	FDEP	FDEP to look into the review and responses of the following document "White Paper: Development of Surface Water Criteria for PFOA and PFOS based on the protection of aquatic receptors" published by the Center for Environmental & Human Toxicology at the University of Florida , and provide input back to the Team.	Closed	6/18/2020	John Winters looked into and provided response on 05/22/2020 to the Team.
2008-A01	2008-M02	AECOM	Mobile Launch Platform Rehabilitation Sites/Vehicle Assembly Building Area (MLP/VAB), Solid Waste Management Unit (SWMU #056) Corrective Measures Implementation (CMI) and Interim Measures (IM) Update, August 2020: There seems to be a gap of treatment with regards to wells IS1, 1D and 6IR and if the HS2 area is turned off, is there a concern of contaminants slipping through? AECOM clarified that these sparge wells are spaced closely but not operating at the same time. The ROI distance and spacing in the expansion was based on what was learned from the original system design. Looking at DO and ORP, and performance monitoring, AECOM is not seeing data that this area is not being treated. NASA inquired if the wells 1S, 1D, and 6IR are being sampled? AECOM stated these are not being sampled, but they will take an action to research why and come back with an explanation to FDEP.	Closed	10/8/2020	Teams meeting with AECOM on 8/27/20 - The recently observed ROI of the BS system overlaps at the space between treatment barrier walls, therefore there is not gap in treatment. IW0006IR was not sampled because collective data from previous DPT investigations indicated VOCs > 100 ug/L was not present at the 6IR location and that the ROI of treatment wells was treating the targeted >100 VC plume as designed. IW0001S was not sampled because it is not within the treatment interval. Conclusion: IW0001D and IW0006IR will be included in the upcomming September 2020 sampling event. IW0006IR will continue to be monitored for VOC and dissolved oxygen (DO) during OM&M events.
2008-A03	2008-M02	AE Firms	Mobile Launch Platform Rehabilitation Sites/Vehicle Assembly Building Area (MLP/VAB), Solid Waste Management Unit (SWMU #056) Corrective Measures Implementation (CMI) and Interim Measures (IM) Update, August 2020: NASA asked the AE firms to query their teams to find out what sites are sampling using PDBs.	Closed	10/8/2020	HGL and Tetra Tech are not using PDBs at any of their sites. AECOM to look into the sites where this may be used and will report back to NASA. AECOM followed up with NASA that two sites were planned for use of PDBs to include Wilson Corners and the VAB LTM. Per NASA's request, PDBs will no longer be used in sampling moving forward, but the preferred "low-flow" sampling will be used from this point on.

Action Item No.	Minutes Reference	Responsible Team Member	Action item	Status	Date Closed	Closure Comments
2008-A04	2008-M03	AECOM	GSRY Reclamation Yard (SWMU #0010) - An April 2020 approval letter from FDEP regarding UIC at the site statied that since Provect-OX was applied to the saturated subsurface in multiple LDA/caisson excavation cells, monitoring for appropriate Underground Injection Control (UIC) parameters was recommended for a subset of wells, and should be analyzed for the iron, manganese, and sodium. After one year, sampling frequency and locations should be assessed. This means that the Team would need one additional sampling round to meet that year timeframe. AECOM will take an action to update the presentation prior to uploading to RIS for the records	Closed	10/8/2020	AECOM's Jennifer Joyal confirmed this presentation was updated prior to uploading to RIS.
2008-A05	2008-M07	FDEP	FDEP stated that the department has been doing a pilot project beginning with listing out dry cleaner and other cleanup sites. This PFAS tracking spreadsheet has minimal data and link to the reports associated with them, and the state is really trying to identify the max concentrations by media type. It is interesting to see what is coming up. AECOM inquired if the state has a list issued for the hazardous waste sites? AECOM did locate the dry-cleaning list. FDEP stated there are links in the spreadsheet to all different facilities to include landfills and electroplaters. There is an updated version of the tracking sheet, and FDEP will send out a copy to the Team.	Closed	10/8/2020	Laura Barrett (FDEP) provided the latest version of the tracking sheet to the Team.
1906-A03	1906-M09	NASA (Deda Johansen)	Component Refurbishment and Chemical Analysis (CRCA) facility (SWMU 041) Follow-up with NASA Compliance to determine if piping/sumps within the main CRCA building (K6-1696) and adjacent hazardous storage building are double-lined and compliant with Spill Prevention, Control, and Countermeasure (SPCC) requirements.	Closed	12/10/2020	NASA reached out to Jeff Bobersky (NASA Compliance SPCC) on this topic, and was referred to Albert Gibson (NASA Compliance Haz Materials/ Haz Waste) for answers. This piping is not subjec to SPCC double-lined requirements, and should be discussed from a hazardous materials/haz waste compliance standpoint. Project has been reassigned from Ryan O'Meara to Deda Johansen
2010-A01	2010-M02	NASA	Components Refurbishment and Chemical Analysis (CRCA) Solid Waste Management Unit (SWMU) #041, Year 1 Operations Maintenance and Monitoring: NASA took an action item to transition MW0032 to quarterly monitoring.	Closed	12/10/2020	MW0032 has been transitioned to quarterly monitoring
2010-A02	2010-M02	NASA (Deda Johansen)	Components Refurbishment and Chemical Analysis (CRCA) Solid Waste Management Unit (SWMU) #041, Year 1 Operations Maintenance and Monitoring: NASA took the action to present a basket item after the next two rounds of quarterly groundwater data, which will take place in October 2020 and January 2021	Closed	12/10/2020	Tetra Tech presented groundwater data in a basket item at the 12/10/2020 KSCRT meeting to update FDEP on the October sample results for monitoring well CRCA-MW0032, and propose installation of MW0033 to monitor the downgradient plume edge west of MW0032
2010-A03	2010-M3	NASA (Anne Chrest)	KSC Headquarters Building Area (KHQA) (SWMU #104) Perimeter Soil IM Completion: NASA will provide a copy of the Interim Measure Work Plan for LOC 2D and 2E to FDEP	Closed	12/10/2020	Anne provided after meeting - FYI only and previously submitted and approved by FDEP earlier regime.
2010-A04	2010-M04	Tetra Tech	LC34 DNAPL Source Zone Remediation Alternative Evaluation (RAE) Discussion and Proposed Pilot Study, October 2020: Aquifer testing was conducted in 2019 for Layer 7. During the test, an upward gradient was observed in well pairs screened in Layers 6 and 8, suggesting an upward gradient. FDEP inquired if the Team recalls how much of a gradient was observe? TetraTech will take an action to provide that information following the meeting to FDEP.	Closed	12/10/2020	Mark Jonnet (Tetra Tech) provided the requested information to Kirk Johnson (FDEP) by email on 10/9/2020. Water level elevations at the paired wells differed by 0.7 to 0.8 ft and the average vertical gradient was 0.02 ft/ft.
2008-A02	2008-M02	AECOM & NASA	Mobile Launch Platform Rehabilitation Sites/Vehicle Assembly Building Area (MLP/VAB), Solid Waste Management Unit (SWMU #056) Corrective Measures Implementation (CMI) and Interim Measures (IM) Update, August 2020: An action item was assigned to NASA and AECOM to convene and review past data and devise a plan to present to the state regarding the data gap in the northwest portion of the site, and the downgradient wells that serve as the points of compliance, where the vinyl chloride results have recently exceeded its groundwater cleanup target level (1 µg/L) and show signs of increasing.	Closed	2/17/2021	AECOM is under contract to conduct additional groundwater assessment and installation of wells to the east of the biosparge barrier and railroad tracks. Up to 10 monitoring wells will be installed based on the results of the groundwater assessment.

Action Item No.	Minutes Reference	Responsible Team Member	Action item	Status	Date Closed	Closure Comments
2012-A01	2012-M02	NASA (Deda Johansen)	Maintenance and Operations (M&O) Building (SWMU #014) Confirmation Sampling Work Plan for Soil Land Use Control Implementation Plan (LUCIP) Removal, December 2020: NASA (Deda Johansen) took an action item to look more into the site history for data from the prior investigation	Closed	2/17/2021	A bibliography with brief descriptions of document content was prepared. It will be included in HGL's upcoming Confirmatory Sampling Work Plan for Soil LUCIP Close-out
2012-A02	2012-M03	NASA (Mike Deliz)	Review of Site Status and Deliverables, December 2020: FDEP inquired if NASA will be going over the outstanding CAMP documents later on, or if a list could be provided. NASA (Mike Deliz) took an action item to consolidate and send the outstanding document summary to FDEP	Closed	2/17/2021	A consolidation of the outstanding CAMP documents was provided to FDEP following the meeting
2102-A01	2102-M05	NASA (DJ)	Contractors Road Heavy Equipment Area (SWMU #055) 2020 Annual Groundwater Monitoring, February 2021: FDEP asked about the TDS and sodium results in the bioremediation area that are above Class GII groundwater standards. NASA responded that the sodium and TDS are compared to the KSC background levels, and took an action to provide the approved plan and data to FDEP for future reference.	Closed	4/28/2021	Completed - NASA sent both the background study and the approval letter to FDEP on 2/19/2021. A follow-up meeting was held between NASA, FDEP and HGL on 3/1/2021. FDEP requested a copy of the Decision Process Document, and as a follow-on later requested a copy of the actual background study. On 4/18/2021, FDEP recommended that NASA identify a suite of wells at the site that can be used to generate site-specific background information. NASA will follow that recommendation.
2102-A02	2102-M05	NASA (DJ)	Contractors Road Heavy Equipment Area (SWMU #055) 2020 Annual Groundwater Monitoring, February 2021: FDEP inquired if NASA has an UIC approval order to identify what NASA is using? NASA stated UIC monitoring was approved as part of the IM work plans that will be provided to FDEP .	Closed	4/28/2021	NASA provided FDEP with the 2016 and 2018 Bioremediation Work Plans that included the UIC Notifications as an appendix in each.
2102-A03	2102-M05	NASA (DJ)	Contractors Road Heavy Equipment Area (SWMU #055) 2020 Annual Groundwater Monitoring, February 2021: FDEP inquired if the Team resampled for benzene and chloroform at the site, and found these not to be a risk? NASA performed a real-time investigation during the KSCRT meeting of past data and did not find resampling of benzene. Since no soil benzene source was identified in soil or groundwater, and the detections did not exceed the commercial level, NASA submitted these sampling results to the NASA Industrial Hygiene Office for review. FDEP would like to see the email to help understand the resampling and rationale of the dropping of these chemicals off the sampling list. NASA will provide this benzene data to FDEP and have a discussion to review the data and also the UIC information from May/June 2014.	Closed	4/28/2021	NASA sent the Vapor Intrusion Memorandum to FDEP on 2/19/2021. A follow-up meeting was held between NASA, FDEP and HGL on 3/1/2021. FDEP's primary concern was that the sub-slab vapor results would be acted on if needed. NASA explained that KSC's Industrial Hygienist was consulted about the findings which FDEP had concerns about and found no need for action, and that vapor sampling results will continue to be provided to KSC's Environmental and Occupational Health organization.
2102-A04	2102-M10	NASA (DJ)	GSA Reclamation Yard (SWMU#010), DPT Results, February 2021: FDEP pointed out that the iron in monitoring well MW0071 exceeded the secondary standard. What is the basis for not including monitoring well MW0071? NASA responded that the results for iron were within the range of background values for KSC, and will provide documentation. FDEP stated that site-specific background data may be needed at some point. NASA took an action item to look at the RFI for that data, and provide to FDEP.	Closed	4/28/2021	The RFI and CMS groundwater metals data for GSRY were reviewed. The majority of the data are from the upper horizon of the aquifer (30 ft. or shallower), while the zone treated with Provect-OX™ was 40-50 ft below ground surface. In the 2021 wet season groundwater sampling event, samples for iron will be collected from a site well outside the treated area.
2102-A05	2102-M13	NASA (RO)	needs to be a downgradient well establishing the extent of the plume at FSA1 (PRL #157). Do we have one? AECOM took an action item to look into that request	Closed	4/28/2021	NASA will be installing a downgradient well.
2102-A06	2102-M13	NASA (RO)	Industrial Area LTM, February 2021 (FSA1 Site): NASA stated they will take a look into the prior DPT data to see if we need to install that well and provide the Team with an update and make a recommendation	Closed	4/28/2021	NASA will be installing a downgradient well.
2104-A01	2104-M04	NASA (AMC)	Area South of K7-0516 and Eastern Component Cleaning Facility (SWMU #030) Interim Measure, Operation, Maintenance, & Monitoring, and Performance Monitoring and Interim Groundwater Monitoring, April 2021: An action item to incorporate surface water sampling into the CCF monitoring program was assigned to NASA and Tetra Tech	Closed	6/22/2021	This surface water sampling was incorporated in the barge canal sampling program moving forward.

Action Item No.	Minutes Reference	Responsible Team Member	Action item	Status	Date Closed	Closure Comments
2012-A03	2012-M03	NASA (MD)	Review of Site Status and Deliverables, December 2020: Mike will summarize the look ahead and send a detailed version to FDEP that will provide site histories, what NASA has completed, and where they are going (plume maps, the works). FDEP inquired if they could also obtain a copy of the slides being presented today. NASA confirmed they would provide the slides via large file transfer	Closed	9/15/2021	Look ahead and maps have been provided to FDEP by NASA
2104-A02	2104-M04	NASA (AMC)	Area South of K7-0516 and Eastern Component Cleaning Facility (SWMU #030) Interim Measure, Operation, Maintenance, & Monitoring, and Performance Monitoring and Interim Groundwater Monitoring, April 2021: FDEP requested that the sampling plans for 2021 be documented in a letter since there will not be a report submitted this year for this site. NASA stated they would put a memo together and provide the work plan for the next year of monitoring	Closed	9/15/2021	FDEP referenced the April 2021 advance data package (ADP) in their review letters dated May 11, 2021 (for CCF, SWMU #030) and May 12, 2021 (for 516S, SWMU #100). Both letters state additional groundwater assessment activities will be conducted in 2021. This work has been delayed and will now occur in early 2022. The proposed sampling plans were presented in the April 2021 ADP. Revisions to the CCF East sampling plan will be presented at the September Team meeting. This meets the intent of this action item.
2106-A03	2106-M03	NASA	NASA Remediation Program Updates, June 2021: FDEP received a request from Florida Today requesting documents associated with PFAS on KSC. NASA stated they will provide the Oculus document/report names to FDEP to assist with the inquiry.	Closed	9/15/2021	NASA assisted FDEP with this inquiry
2012-A04	2012-M04	NASA (MD)	Firex Water Tank (SWMU #069) Confirmation Sampling Work Plan for Soil LUCIP Removal, December 2020: NASA (Mike Deliz) took an action item to see what NASA can find out on these discharge reports	Closed	11/9/2021	Internal discharge records were located and saved to the NASA shared drive. No additional spill records have been located for the release(s). The site entered the RCRA process through a SWMU Assessment and was added to KSC's RCRA Permit Appendix A. A Discharge Report Form does not appear to have been filed.
2109-A02	2109-M09	NASA (MJD)	KSC Center-Wide Per- and Polyfluoroalkyl Substances (PRL 237) Locations of Concern, September 2021: NASA has conducted sampling in the Indian River for PFAS. NASA to provide FDEP with the surface water sample results from the Indian River	Closed	11/9/2021	Sample results provided to FDEP
2109-A01	2109-M09	NASA (AC)	Wilson Corners (SWMU 001) High Concentration Plume Site Characterization and Revised AS System Layout, September 2021: NASA will send historic groundwater sampling data to FDEP.	Closed	1/11/2022	This data was provided to FDEP on November 9, 2021, during the KSCRT meeting.
2109-A03	2109-M14	NASA (DJ)	General Services Administration Reclamation Yard (GSRY) SWMU 010, May/June Groundwater Monitoring Results September 2021: NASA asked that the pre-Interim Measure UIC sample results be added to the applicable figure and requested that AECOM update the table with pre-treatment results in the ADP and get that back to the Team for the records.	Closed	1/11/2022	The pre-Interim Measure UIC results were included in the UIC discussion in the annual groundwater monitoring report that was submitted in November 2021.
2201-A02	2201-M04	NASA	Center-Wide Per- and Polyfluoroalkyl Substances (PRL #237) Phase III Solid Waste Management Unit Site Assessment and Confirmatory Sampling Report Summary, January 2022: NASA will update the summary table for KARS Park I and email back out to the Team.	Closed	5/3/2022	addressed in the meeting minutes
2203-A01	2203-M03	NASA	Contractors Rd Heavy Equipment Area (SWMU 055) 2021 Annual Groundwater Monitoring Report Advanced Data Package, March 2022: FDEP requested that HGL provide information regarding the number of sample points necessary for Mann-Kendall statistical analysis	Closed	5/3/2022	HGL provided the requested information to FDEP in a follow up email on March 8, 2022 to FDEP.
2203-A04	2203-M06	NASA	GSA Reclamation Yard (SWMU 010) Groundwater Monitoring Update, March 2022: FDEP requested a synoptic figure of the last two clean sampling events of the two wells.	Closed	5/3/2022	AECOM provided figure to FDEP on March 9, 2022
2203-A06	2203-M09	NASA	CAMP Deliverables Look-Ahead and Document Requirements, March 2022: FDEP inquired if the CAMP document being presented is the document sent around March 1? NASA confirmed that it was, but that it was revised since then. For PRL 237, there were two errors on dates (inadvertently switched), but will send this after the meeting.	Closed	5/3/2022	NASA provided the updated CAMP to team members

Action Item No.	Minutes Reference	Responsible Team Member	Action item	Status	Date Closed	Closure Comments
2201-A03	2201-M04	NASA	Center-Wide Per- and Polyfluoroalkyl Substances (PRL #237) Phase III Solid Waste Management Unit Site Assessment and Confirmatory Sampling Report Summary, January 2022: NASA owes FDEP an update on Q6 Radar Station (SWMU #112), so they will put together an ADP to review the RFI they completed.	Closed	6/28/2022	contract was modified and NASA will present results for this in a future presentation
2205-A02	2205-M08	NASA	**Wilson Corners (SWMU #001) 2021 Annual Long-Term Monitoring Update, May 2022:** FDEP stated that VOC concentrations are increasing to the west but the natural attenuation default concentrations (NADC) footprint hasn't changed much. AECOM confirmed that was correct. Based predominantly on DPT data, the existing wells are appropriate for the extent of the low-concentration plume (LCP). The performance monitoring wells are more on the interior of the plume and will give us a better idea of what is going on with the high concentration plume (HCP). FDEP inquired what the vertical head difference of the zones are that are being referred to. AECOM will look into this question and provide the information.	Closed	6/28/2022	AECOM provided vertical head data for 2019, 2020 and 2021 to FDEP on May 5, 2022.