KENNEDY SPACE CENTER PRESS SITE
(SWMU 074)

INTERIM MEASURE REPORT

KENNEDY SPACE CENTER, FLORIDA

Prepared for:

National Aeronautics and Space Administration
Kennedy Space Center, Florida

June 2015
Revision 0

Prepared by:
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INTERIM MEASURE REPORT
(REVISION 0)

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Prepared for:
Environmental Assurance Branch
National Aeronautics and Space Administration
John F. Kennedy Space Center
Kennedy Space Center, Florida 32899

Prepared by:
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June 2015

I hereby certify that this RCRA Facility Interim Measure Report for the KSC Press Site, located at the John F. Kennedy Space Center, Florida, was prepared using appropriate geologic, hydrogeologic, and engineering standards of practice.

_____
Joseph L. Applegate, P.G.
Florida P.G. License No. 1067

Date:_____

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ABBREVIATIONS AND ACRONYMS

ARCADIS	ARCADIS U.S., Inc.
bls	below land surface
CFES	Central Florida Environmental Services, Inc.
CFR	Code of Federal Regulations
COC	constituent of concern
cy	cubic yard
EDE	Electronic Data Exchange
FDEP	Florida Department of Environmental Protection
ft^2	square feet
HASP	Health and Safety Plan
IDW	investigation-derived waste
IM	Interim Measure
IMWP	Interim Measure Work Plan
KEDD	KSC Electronic Data Deliverable
KSC	Kennedy Space Center
KSCRT	KSC Remediation Team
LUC	Land Use Control
LUCIP	Land Use Control Implementation Plan
mg/kg	milligram per kilogram
NASA	National Aeronautics and Space Administration
NFA	No Further Action
PCB	polychlorinated biphenyl
Press Site	KSC Press Site
R-	residential direct exposure
RCRA	Resource Conservation and Recovery Act
RIS	KSC Remediation Information System
SB	Statement of Basis
SCTL	Soil Cleanup Target Level
TSCA	Toxic Substance Control Act
USEPA	U.S. Environmental Protection Agency
VAB	Vehicle Assembly Building

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EXECUTIVE SUMMARY

This report summarizes the Interim Measure (IM) activities conducted at the Kennedy Space Center (KSC) Press Site ("the Press Site"). This facility has been designated as Solid Waste Management Unit 074 under KSC's Resource Conservation and Recovery Act Corrective Action program. The activities were completed as part of the Vehicle Assembly Building (VAB) Area Land Use Controls Implementation Plan (LUCIP) Elimination Project. The purpose of the VAB Area LUCIP Elimination Project was to delineate and remove soil affected with constituents of concern (COCs) that historically resulted in Land Use Controls (LUCs). The goal of the project was to eliminate the LUCs on soil. LUCs for groundwater were not addressed as part of the project and are not discussed in this report.

This report is intended to meet the Florida Department of Environmental Protection (FDEP) Corrective Action Management Plan requirement as part of the KSC Hazardous and Solid Waste Amendments permit and the U.S. Environmental Protection Agency's (USEPA's) Toxic Substance Control Act (TSCA) self-implementing polychlorinated biphenyl (PCB) cleanup requirements of 40 Code of Federal Regulations (CFR) 761.61(a).

Background

The historical Statement of Basis and LUCIP approved in 2006 did not indicate the presence of soils affected with PCBs at concentrations exceeding the FDEP residential direct-exposure (R-) Soil Cleanup Target Levels (SCTL). ARCADIS U.S., Inc. (ARCADIS) implemented the Delineation Sampling Work Plan (ARCADIS 2012) to confirm and delineate the single soil COC (arsenic) identified in the SB. The confirmation and delineation-sampling results and an IM Work Plan (IMWP) were presented to the KSC Remediation Team (KSCRT) in December 2012, and concurrence on adequate delineation and implementation of the IM was obtained. The arsenic IMWP was subsequently implemented in July and August 2013 and approved by FDEP on December 13, 2013 (FDEP 2013).

Following the arsenic IM, and in conjunction with preparation of a Site Rehabilitation Completion Order Request, a historical file review indicated the presence of PCB-affected soil remaining adjacent to the Transformer Building (K7-1205C) at concentrations exceeding the R-SCTL of 0.5 milligram per kilogram (mg/kg). The file review indicated that PCBs were historically delineated and remediated to the industrial direct-exposure SCTL of 2.1 mg/kg.

PCBs Interim Measure

Between January and September 2014, PCB-affected soil was delineated to the R-SCTL on the exterior of the Transformer Building. In addition, concrete-core and wipe samples were collected inside the Transformer Building to assess the slab. Soil

samples beneath the concrete slab could not be safely obtained due to high uncertainty in locating and marking-out subsurface utilities beneath the building with active transformers.

Based on the PCB-delineation data obtained in 2014, an IMWP was prepared and presented at the January 2015 KSCRT meeting, and concurrence was obtained on delineation of PCB-affected media and implementation of the IMWP. Minutes for the January 2015 meeting are included in Appendix A. FDEP approval of the IMWP was obtained on February 26, 2015. Also, as PCBs were detected in concrete exceeding the TSCA 50-mg/kg threshold concentration, the IMWP was submitted to the USEPA in accordance with the KSC Decision Process Document (NASA 2011a). Following discussions with USEPA in March 2015, NASA obtained USEPA concurrence for implementation of the IMWP.

The IM was initiated with utility location and mark-out on March 18, 2015. Construction activities commenced on March 30, 2015, to remove PCB-affected soil with concentrations exceeding the R-SCTL and to clean with an organic solvent and encapsulate a portion of the concrete slab inside the Transformer Building. Encapsulation of the concrete slab was chosen over removal given the presence of active transformers inside the building. The IM activities were performed in accordance with the FDEP- and USEPA-approved IMWP (ARCADIS 2015).

During the IM activities, approximately 10 cubic yards (cy) of soil affected with non-TSCA PCB concentrations exceeding the R-SCTL was excavated from the exterior of the Transformer Building by vacuum truck due to the presence of subsurface utilities. The excavation areas extended horizontally and vertically to sample locations with PCB concentrations below the screening criterion, as depicted in the approved IMWP. The boundaries of the excavation were established prior to IM activities using known measurements to existing structures and existing staked sample locations.

Site-specific information on the approximate area and depth of each excavation area, and approximate volume of affected media excavated from each area are summarized below:

Area	COC	Depth Interval (feet bls)	Area (ft^2)	Volume (cy)
Area A	PCBs	0-0.5	42	0.78
Area B	PCBs	0-0.5	105	1.95
Area C	PCBs	0-3.0	101	7.48

Notes:
bls = below land surface
cy = cubic yards
ft^2 = square feet

According to the weigh tickets, approximately 26.45 tons of soil and concrete debris was transported to the Omni Waste Landfill in St. Cloud, Florida, for disposal. The proposed IM areas around the Transformer Building were completed and the excavation areas were backfilled, graded, and compacted to original grade as specified in the IMWP. A modification was made in the field to the proposed excavation Area A based on site conditions. A concrete slab located within proposed excavation Area A was found to be approximately 7 inches thick, which was greater than the proposed excavation depth of 6 inches. The slab also appeared to have been continuously poured following the PCB excavation previously conducted by others that abutted Area A. Therefore, the slab was left in place, as no soil removal was required beneath it given its depth.

In addition to soil-excavation activities, the concrete slab affected with PCB concentrations exceeding the TSCA threshold concentration of 50 mg/kg inside the Transformer Building was double-washed/rinsed with an organic solvent and encapsulated in accordance with 40 CFR 761.30(p). The encapsulation entailed applying a base coat of red-colored, specialized epoxy paint to seal the surface. A second top coat of contrasting gray-colored, specialized epoxy paint was applied for surface wear indication and to improve the integrity of the encapsulation. In accordance with 40 CFR 761, caution signs that included a PCB warning and telephone contact information were applied to the surface. Additional barriers, such as chains, were not installed as access to the slab is limited to infrequent occupancy by approved personnel, as the facility doors are locked restricting access.

Based on the completion of the soil excavation, slab cleaning using an organic solvent, and encapsulation, No Further Action is recommended for soil at the Press Site and the soil LUC should be removed. The encapsulated slab will be managed by the KSC Permitting and Compliance Branch in conjunction with ongoing operations of the Transformer Building. The IM was presented to the KSCRT in April 2015, and concurrence was reached on the recommendations. A copy of the KSCRT meeting minutes is included as Appendix A.

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1.0 INTRODUCTION

1.1 Overview

This report summarizes the Interim Measure (IM) activities conducted at the Kennedy Space Center (KSC) Press Site ("the Press Site"), which is designated as Solid Waste Management Unit 074 under KSC's Resource Conservation and Recovery Act (RCRA) Corrective Action Program. The IM activities were conducted by ARCADIS U.S., Inc. (ARCADIS) on behalf of the National Aeronautics and Space Administration (NASA) under Basic Ordering Agreement NNK09CA03B to mitigate potential exposure to polychlorinated biphenyl (PCB)-affected media.

The activities were completed as part of the Vehicle Assembly Building (VAB) Area Land Use Controls Implementation Plan (LUCIP) Elimination Project. The purpose of the VAB Area LUCIP Elimination Project was to delineate and remove soil affected with constituents of concern (COCs) that historically resulted in Land Use Controls (LUCs). The goal of the project was to eliminate the LUCs on soil. LUCs for groundwater were not addressed as part of the project and are not discussed in this document.

The IM activities were conducted March 30 through April 2, 2015, to remediate PCBs at concentrations exceeding the Florida Department of Environmental Protection (FDEP) residential direct-exposure (R-) Soil Cleanup Target Level (SCTL) of 0.5 milligram per kilogram (mg/kg) established by Chapter 62-777, Florida Administrative Code. Furthermore, PCB-affected concrete delineated above the Toxic Substance Control Act (TSCA) screening criteria of 50 mg/kg was cleaned and encapsulated. The IM was performed in accordance with the IM Work Plan (IMWP) approved by the KSC Remediation Team (KSCRT), FDEP, and U.S. Environmental Protection Agency (USEPA). The minutes from the January 2015 team meeting when the IMWP was presented are provided in Appendix A.

1.2 Facility Usage

KSC is located on the northern portion of Merritt Island, between the Indian and Banana Rivers, in Brevard County, Florida (Figure 1-1). The Press Site is located in the VAB Area, south of Saturn Parkway, north of a wooded area, east of the Operations Support Building II, and west of the Turning Basin.

The Press Site was conceived to allow for centralized press operations at KSC, and was constructed from 1967 to 1968. It has undergone subsequent construction since that time, currently consisting of several buildings, including media buildings and news service trailers. The PCB-affected soil identified for the IM is in the vicinity of Transformer Building (K7-1205C). A Site Plan depicting the areas associated with IM activities is included as Figure 1-2.

1.3 Summary of Delineation Sampling Results

The historical Statement of Basis (SB) and LUCIP approved in 2006 did not indicate the presence of soils affected with PCBs at concentrations exceeding the FDEP R-SCTL. ARCADIS previously implemented the Delineation Sampling Work Plan (ARCADIS 2012) for the Press Site to confirm and delineate the single soil COC (arsenic) identified in the SB. The confirmation and delineation-sampling results and IMWP for arsenic were presented to the KSCRT in December 2012, and concurrence on adequate delineation and IM implementation was obtained. The arsenic IMWP was implemented in July and August 2013 and approved by FDEP on December 13, 2013 (FDEP 2013).

Following the arsenic IM, and in conjunction with preparation of a Site Rehabilitation Completion Order Request, a historical file review indicated the presence of PCB-affected soil remaining adjacent to the Transformer Building (K7-1205C) at concentrations exceeding the R-SCTL of 0.5 mg/kg. The file review indicated that PCBs were historically delineated and remediated to the industrial direct-exposure SCTL of 2.1 mg/kg as shown on Figure 1-3.

Between January and September 2014, PCB-affected soil was delineated around the Transformer Building to the R-SCTL. Delineation-sampling activities were conducted in accordance with the Site-Specific Health and Safety Plan, the FDEP's Standard Operating Procedures for Field Activities (FDEP 2008), Appendix E of NASA's Decision Process Document (NASA 2011a), the Sampling and Analysis Plan for the RCRA Corrective Action Program (NASA 2011b), and the KSC Investigation-Derived Waste Management Plan (NASA 2006). Collected samples were placed on ice and transported to ALS Environmental in Jacksonville, Florida—a USEPA National Environmental Laboratory Accreditation Program laboratory—under standard chain-of-custody protocol.

As presented on Figure 1-3, three areas around the outside of the Transformer Building totaling approximately 248 square feet were delineated with PCB-affected soil concentrations exceeding the R-SCTL, with a maximum concentration of 2.55 mg/kg at SB0003-000.5.

In addition, concrete-core and wipe samples were collected inside the Transformer Building to characterize the slab as shown on Figure 1-4. The concrete-core samples indicated a total PCB concentration of 120.5 mg/kg in CO0001. Total PCB results in surrounding concrete-core samples inside the building were less than the R-SCTL and wipe samples were less than laboratory method detection limits. Soil samples beneath the concrete slab could not be safely obtained to vertically delineate the extent of affected media at CO0001 due to high uncertainty in locating and marking subsurface utilities beneath the active building.

Summaries of the soil and concrete PCB analytical results are shown in Table 1-1 and Table 1-2, respectively. The laboratory analytical reports are included as Appendix B.

Based on KSC guidance for sites with liquid PCB releases, a soil sample also was collected at the location (SB0003 [2.55 mg/kg]) with the highest detected PCB concentration to assess the potential presence of dioxin and furans. A soil sample was collected on September 22, 2014, adjacent to SB0003 at 0.5 foot bls, and the laboratory results indicated that the total concentrations of dioxins (2.3×10^{-6} mg/kg) and furans (0.9×10^{-6} mg/kg) as Toxicity Equivalences of 2,3,7,8-tetrachlorodibenzodioxin were less than the FDEP R-SCTL of 7×10^{-6} mg/kg. Sampling results are summarized in Table 1-3. A copy of the laboratory report is included in Appendix B.

1.4 Interim Measure Objectives

The objectives of the IM were to mitigate human-health risks associated with PCBs in soil above the R-SCTL (0.5 mg/kg), allow the LUCIP for the soil to be removed, qualify soil at the Site for No Further Action (NFA), and encapsulate the PCB-affected concrete slab inside the active Transformer Building to facilitate operational management by the KSC Permitting and Compliance Branch.

Site-specific information about the COC (PCBs), approximate square footage, depth of each soil excavation area, and approximate volume of affected media in each area are summarized in the table below:

Area	COC	Depth Interval (feet bls)	Area (ft^2)	Volume (cy)
Area A	PCBs	0-0.5	42	0.78
Area B	PCBs	0-0.5	105	1.95
Area C	PCBs	0-3.0	101	7.48

Notes:

bls = below land surface
cy = cubic yards
ft^2 = square feet

The delineated soil areas extend horizontally and vertically to samples with PCB concentrations below screening criteria, as depicted in the approved IMWP and as shown on Figure 1-3. A summary of the soil boring locations used to define excavation boundaries and/or removed during the excavation are included as Table 1-4 and Table 1-5, respectively. The boundary coordinates for the excavation areas are shown

In addition, approximately 77 square feet (ft^2) of PCB-affected concrete above the TSCA threshold concentration of 50 mg/kg was delineated inside the Transformer Building as shown on Figure 1-4 to below the R-SCTL. A summary of the concrete-coring locations

used to define the encapsulation boundary are included as Table 1-5. The boundary coordinates for the encapsulation area is depicted on Figure 1-6.

The delineation of the soil and concrete affected with PCBs and the IMWP were presented to the KSCRT in January 2015 and team concurrence was obtained on adequate delineation and implementation of the IMWP. The minutes from the KSCRT meeting are provided in Appendix A.

1.5 Interim Measure Team

The IM was implemented by ARCADIS with support from the following subcontractors:

- ALS Environmental – analytical services for investigation-derived waste (IDW)
- Central Florida Environmental Services, Inc. (CFES) – excavation of affected media, backfill, chromated copper arsenate encapsulation, and site restoration
- Omni Waste of Osceola County – disposal of non-TSCA affected media
- Orange Industrial Services, Inc. – soil vacuum excavation
- Star Trucking & Construction Services, Inc. – transportation of excavated material to disposal sites

Table 1-1
Summary of Soil Analytical Results
KSC Press Site Transformer Building (K7-1205C)
Kennedy Space Center, FL

	Screening Criteria				Sample Location:	PRES-SO0001-001.0-20020509		PRES-SO0001A-001.0-20020509	PRES-SO0001B-001.0-20030512	PRES-SO0001B-001.0-20020509	PRES-SO0001B-002.0-20030527	PRES-SO0001B-003.0-20030604	PRES-SO0001B-A-001.0-20030512	PRES-SO0001B-B-001.0-20030512
					Sample Depth (ft bls):	0 - 1	3 - 4	0 - 1	0 - 1	0 - 1	1 - 2	2 - 3	0 - 1	0 - 1
	R-SCTL	I-SCTL	L-SCTL											
AROCLOR-1254	0.5	2.1	17			0.362	0.042 U	0.045 U	**11.8 Ri**	**15.7 Ri**	**8.57 Ri**	0.213	**2.29 Ri**	**2.47 Ri**
AROCLOR-1260	0.5	2.1	17			0.16	0.042 U	0.045 U	1.8 U	6.9 U	1.8 U	0.019 U	0.37 U	0.36 U
Total PCBs	0.5	2.1	17			0.522	< 0.042	< 0.045	**11.8 Ri**	**15.7 Ri**	**8.57 Ri**	0.213	**2.29 Ri**	**2.47 Ri**

	Screening Criteria				Sample Location:	PRES-SO0001B-C-001.0-20030512	PRES-SO0001B-D-001.0-20030512	PRES-SO0001B-E-001.0-20030512	PRES-SO0001B-F-001.0-20030512	PRES-SO0001C-001.0-20020509	PRES-SB0001-000.5-20140110	PRES-SB0001-0.002.0-20140110	PRES-SB0002-000.5-20140204	PRES-SB0003-000.5-20140204
					Sample Depth (ft bls):	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 0.5	0.5 - 2	0 - 0.5	0 - 0.5
	R-SCTL	I-SCTL	L-SCTL											
AROCLOR-1254	0.5	2.1	17			0.446	0.373	0.0089 J	0.018 U	0.038 U	**0.798 R**	0.176	0.40	**2.55 Ri**
AROCLOR-1260	0.5	2.1	17			0.072	0.09 U	0.017 U	0.018 U	0.038 U	0.218	0.045 I	0.0608 U	0.0112 U
Total PCBs	0.5	2.1	17			0.518	0.373	0.0089	< 0.018	< 0.038	**1.016 R**	0.221	0.40	**2.55 Ri**

	Screening Criteria				Sample Location:	PRES-SB0003-002.0-20140227	PRES-SB0003-003.0-20140922	PRES-SB0004-000.5-20140204	PRES-SB0005-000.5-20140204	PRES-SB0006-000.5-20140204	PRES-SB0006-002.0-20140227	PRES-SB0007-000.5-20140204	PRES-SB0008-000.5-20140204	PRES-SB0009-000.5-20140204
					Sample Depth (ft bls):	0.5 - 2.0	2.0 - 3.0	0 - 0.5	0 - 0.5	0 - 0.5	0.5 - 2.0	0 - 0.5	0 - 0.5	0 - 0.5
	R-SCTL	I-SCTL	L-SCTL											
AROCLOR-1248	0.5	2.1	17			0.0161 U	0.0168 U	0.0212 U	0.0212 U	**0.870 R**	0.1950	0.0196 U	0.0182 U	0.0189 U
AROCLOR-1254	0.5	2.1	17			0.508	0.013 U	0.0223 I	0.0161 U	0.412	0.0806	0.3020	0.1330	0.0143 U
AROCLOR-1260	0.5	2.1	17			0.327	0.00971 U	0.0123 U	0.0123 U	0.194	0.0558	0.0114 U	0.0444	0.011 U
Total PCBs	0.5	2.1	17			**0.835 R**	< 0.168	0.0223	< 0.0123	**1.476 R**	0.3314	0.3020	0.1774	< 0.011

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Table 1-1
Summary of Soil Analytical Results
KSC Press Site Transformer Building (K7-1205C)
Kennedy Space Center, FL

	Screening Criteria				Sample Location:	PRES-SB0010-000.5-20140204	PRES-SB0011-000.5-20140204	PRES-SB0012-000.5-20140227	PRES-SB0012-002.0-20140227	PRES-SB0013-000.5-20140227	PRES-SB0013-002.0-20140227	PRES-SB0014-000.5-20140227	PRES-SB0014-002.0-20140227
					Sample Depth (ft bls):	0 - 0.5	0 - 0.5	0 - 0.5	0.5 - 2.0	0 - 0.5	0.5 - 2.0	0 - 0.5	0.5 - 2.0
	R-SCTL	I-SCTL	L-SCTL										
AROCLOR-1248	0.5	2.1	17			0.0175 U	0.0228 U	0.0176 U	0.0161 U	0.0177 U	0.0167 U	0.0182 U	0.0168 U
AROCLOR-1254	0.5	2.1	17			0.0133 U	0.0676	0.0646	0.0122 U	0.0166 I	0.0127 U	0.2560	0.0127 U
AROCLOR-1260	0.5	2.1	17			0.0102 U	0.0132 U	0.0545	0.0093 U	0.0102 U	0.00966 U	0.154	0.00974 I
Total PCBs	0.5	2.1	17			< 0.0102	0.0676	0.1191	< 0.0093	0.0166	< 0.00966	0.4100	0.0097

	Screening Criteria				Sample Location:	PRES-SB0015-000.5-20140227	PRES-SB0015-002.0-20140227	PRES-SB0016-000.5-20140227	PRES-SB0016-002.0-20140227	PRES-SB0017-000.5-20140227	PRES-SB0017-002.0-20140227	PRES-SB0018-000.5-20140227
					Sample Depth (ft bls):	0 - 0.5	0.5 - 2.0	0 - 0.5	0.5 - 2.0	0 - 0.5	0.5 - 2.0	0 - 0.5
	R-SCTL	I-SCTL	L-SCTL									
AROCLOR-1248	0.5	2.1	17			0.0182 U	0.0162 U	0.0176 U	0.0161 U	0.0163 U	0.0180 U	0.0168 U
AROCLOR-1254	0.5	2.1	17			0.2590	0.0123 U	0.1550	0.0122 U	0.0183 I	0.0136 U	0.0269 I
AROCLOR-1260	0.5	2.1	17			0.177	0.00934 U	0.119	0.0131 I	0.022 I	0.0163 I	0.028 I
Total PCBs	0.5	2.1	17			0.4360	< 0.00934	0.2740	0.0131	0.0403	0.0163	0.0549

Notes:

Concentrations are in milligrams per kilogram (mg/kg)

Depths are in feet below land surface (ft bls).

Included in historical excavation

< - below MDL, shown

I-SCTL - Industrial SCTL

I - detected below MDL, estimated

J - detected between MDL and PQL, estimated

L-SCTL - Leachability to groundwater SCTL

MDL - method detection limit

PCBs - polychlorinated biphenyls

PQL - practical quantitation limit

R-SCTL - residential SCTL

R - exceeds R-SCTL

SCTL - Soil Cleanup Target Level

U - Below MDL, shown

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Table 1-2
Summary of Concrete and Wipe Analytical Results
KSC Press Site Transformer Building (K7-1205C)
Kennedy Space Center, FL

	Screening Criteria			Sample Location:	PRES-WIPE0001-000.0-20140721	PRES-CO0001-000.1-20140721	PRES-WIPE0002-000.0-20140922	PRES-CT0002 000.1-20140922	PRES-WIPE0003-000.0-20140922	PRES-CT0003 000.1-20140922	PRES-WIPE0004-000.0-20140922	PRES-CT0004 000.1-20140922	PRES-WIPE0005-000.0-20140922	PRES-CT0005 000.1-20140922	PRES-WIPE0006-000.0-20140922	PRES-CT0006 000.1-20140922
				Sample Depth (ft bls):	0-0	0-0.1	0-0	0-0.1	0-0	0-0.1	0-0	0-0.1	0-0	0-0.1	0-0	0-0.1
Analyte	**R-SCTL**	**I-SCTL**	**L-SCTL**	**TSCA**												
AROCLOR-1242	0.5	2.1	17	50	0.0005 U	0.524 U	0.0005 U	0.00996 U	0.0005 U	0.0139 U	0.0005 U	0.01 U	0.0005 U	0.0148 U	0.0005 U	0.056 I
AROCLOR-1248	0.5	2.1	17	50	0.0198	**108 RiLT**	0.0005 U	0.132	0.0005 U	0.315	0.0005 U	0.0182 U	0.0005 U	0.0267 U	0.0005 U	0.128
AROCLOR-1254	0.5	2.1	17	50	0.0005 U	0.716 U	0.0005 U	0.0137 U	0.0005 U	0.019 U	0.0005 U	0.0138 U	0.0005 U	0.0202 U	0.0005 U	0.0224 U
AROCLOR-1260	0.5	2.1	17	50	0.00518	**12.5 Ri**	0.0005 U	0.0486	0.0005 U	0.0653	0.0005 U	0.0234 I	0.0005 U	0.0155 I	0.0005 U	0.087 I
Total PCBs	0.5	2.1	17	50	0.02498	**120.5 RiLT**	ND	0.1806	ND	0.3803	ND	0.0234	ND	0.0155	ND	0.271

Notes:
Concentrations are in milligrams per centimeter (mg/cm^2)
Depths are in feet below land surface (ft bls)
I-SCTL - Industrial SCTL
i - exceeds Industrial SCTL
I - detected below MDL, estimated
J - detected between MDL and PQL, estimated
L - exceeds L-SCTL
L-SCTL - Leachability to groundwater SCTL
MDL - method detection limit
PCBs - polychlorinated biphenyls
PQL - practical quantitation limit
R-SCTL - residential SCTL
R - exceeds R-SCTL
SCTL - Soil Cleanup Target Level
T - exceeds TSCA
TSCA - Toxic Substances Control Act
U - Below MDL, shown

Table 1-3
Summary of Dioxins and Furans Analytical Results
KSC Press Site Transformer Building (K7-1205C)
Kennedy Space Center, FL

Dioxin/Furan Conversion Table

For Direct Exposure Soil Cleanup Target Levels

Site Name:	PRESS SIte
Location:	Kennedy Space Center, FL
Facility ID No.:	K7-1205C
Soil Sample No.	SB0003
Sample Date	9/22/2014
Location:	PRESS Site
Depth (ft):	0.5 ft bls

Instructions: Calculate 2,3,7,8-TCDD Equivalents only if at least one of the dioxin congeners is detected in the sample at a concentration equal to or higher than the Method Detection Limit (MDL), whether quantified with certainty (the concentration reported has no qualifier) or estimated (the concentration reported has a "J", "T" or "I" qualifier). Enter each congener concentration (in mg/kg) in the yellow boxes using the following criteria:

1. If quantified with certainty or estimated and has the "J" qualifier enter the reported value;
2. If not detected at the MDL (the concentration reported is the MDL followed by the "U" qualifier) enter 1/2 of the reported value;
3. If detected at a concentration lower than the MDL and the concentration is estimated (has the "T" qualifier) enter the estimated value;
4. If detected at a concentration equal to or higher than the MDL but lower than the Practical Quantitation Limit (PQL) and the concentration is estimated (has the "I" qualifier) enter the estimated value;
5. If detected at a concentration equal to or higher than the MDL but lower than the PQL and it is not estimated (the concentration reported is the PQL followed by the "M" qualifier) enter 1/2 of the reported value;
6. If estimated and reported with an "EMPC" (Estimated Maximum Possible Concentration) qualifier enter the estimated value;
7. If reported with an "EDL" (Estimated Detection Limit) qualifier enter 1/2 of the reported value (data is treated the same as "U" qualified data).
8. If the report only includes total concentrations for dioxin or furan congeners with the same degree of chlorination. These data cannot be used to estimate a 2,3,7,8-TCDD equivalent concentration. Please contact the Bureau of Waste C

Note: If dioxins are detected but no furans, then the furans TEQs can be assumed to be zero. Similarly, if furans are detected but no dioxins, then dioxin TEQs can be assumed to be zero.

For more information: see Section V.C.7 (p. 59) "Development of SCTLs for Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs)" in "Technical Report: Development of Cleanup Target Levels (CTLs) for Chapter 62-777", Final dated February 2005

Summary Criteria for Table Entries			
Detection	**Concentration Reported**	**Data Qualifier**	**Enter**
Quantified with certainty		None	reported value
Estimated		J	reported (estimated) value
ND at MDL	MDL	U	1/2 reported value
≤ MDL	Estimated	T	reported (estimated) value
≥ MDL but < PQL	Estimated	I	reported (estimated) value
≥ MDL but < PQL	Not estimated	M	1/2 reported value
Estimated	Estimated	EMPC	reported (estimated) value
Reported	EDL	EDL	1/2 reported value

Calculate TEQs using: ○ WHO 1998 TEFs ○ WHO 2005 TEFs (TEF = Toxic Equivalency Factor)

Table 1-3
Summary of Dioxins and Furans Analytical Results
KSC Press Site Transformer Building (K7-1205C)
Kennedy Space Center, FL

Polychlorinated dibenzodioxins			
Congener	Concentration (**mg/kg**)	WHO 2005 TEFs	2,3,7,8-TCDD Equivalents
2,3,7,8-TCDD	0.0000003	1	0.0000003
1,2,3,7,8-PeCDD	0.0000016	1	0.0000016
1,2,3,4,7,8-HxCDD	0.0000016	0.1	0.0000002
1,2,3,6,7,8-HxCDD	0.0000016	0.1	0.0000002
1,2,3,7,8,9-HxCDD	0.0000003	0.1	0.0000000
1,2,3,4,6,7,8-HpCDD	0.0000009	0.01	0.0000000
OCDD	0.0000068	0.0003	0.0000000
		Total Dioxin Equivalents=	**0.0000023**

Polychlorinated dibenzofurans			
Congener	Concentration (**mg/kg**)	WHO 2005 TEFs	2,3,7,8-TCDD Equivalents
2,3,7,8-TCDF	0.0000023300	0.1	0.0000002
1,2,3,7,8-PeCDF	0.0000008940	0.03	0.0000000
2,3,4,7,8-PeCDF	0.0000011900	0.3	0.0000004
1,2,3,4,7,8-HxCDF	0.0000011700	0.1	0.0000001
1,2,3,6,7,8-HxCDF	0.0000005860	0.1	0.0000001
1,2,3,7,8,9-HxCDF	0.0000004240	0.1	0.0000000
2,3,4,6,7,8-HxCDF	0.0000004310	0.1	0.0000000
1,2,3,4,6,7,8-HpCDF	0.0000007030	0.01	0.0000000
1,2,3,4,7,8,9-HpCDF	0.0000007560	0.01	0.0000000
OCDF	0.0000010	0.0003	0.0000000
DE Residential = 7.0e-06 mg/kg; DE Industrial = 3.0e-05 mg/kg		**Total Furan Equivalents =**	**0.0000009**

Total TEQs; Dioxins + Furans=	**0.0000032**

The concentration shown does not exceed the Residential Direct Exposure SCTL of 7.0e-06 mg/kg.

The concentration shown does not exceed the Industrial Direct Exposure SCTL of 3.0e-05 mg/kg.

Table 1-4
Summary of Excavation and Encapsulation Boundary Coordinates
KSC Press Site Transformer Building (K7-1205C)
Kennedy Space Center, FL

Sample Location	Area of Concern, Excavation Area (if applicable)	Easting	Northing
PRES-S0001A	Area A	234529.1009	470693.4095
PRES-SB0013	Area A	234528.8264	470691.0854
PRES-SB0014	Area A	234530.6436	470691.9497
PRES-S0001B-A	Area B	234536.8791	470698.1088
PRES-SB0001	Area B	234537.1773	470698.2380
PRES-SB0002	Area B	234540.4001	470699.2920
PRES-SB0011	Area B	234536.7180	470700.8401
PRES-SB0016	Area B	234540.6348	470696.4908
PRES-S0001B-A	Area C	234536.8791	470698.1088
PRES-S0001C	Area C	234538.4995	470692.4372
PRES-SB0001	Area C	234537.1773	470698.2380
PRES-SB0003	Area C	234538.0414	470695.8990
PRES-SB0015	Area C	234539.7983	470694.6643
PRES-SB0016	Area C	234540.6348	470696.4908
CO0002	Area D	234532.8949	470692.5670
CO0003	Area D	234536.7946	470693.2839
Point 1	Area D	234532.7459	470693.1436
Point 2	Area D	234533.1643	470691.4979
Point 3	Area D	234537.0694	470692.3905
Point 4	Area D	234536.5673	470694.0920

Notes:
Eastings and Northings are in Florida State Plane East, meters.
IMWP = Interim Measure Work Plan
KSC = Kennedy Space Center
LOC = location of concern
SB = soil boring

Table 1-5
Coordinates of Sample Locations in Excavation and Encapsulation Areas
KSC Press Site Transformer Building K7-1205C
Kennedy Space Center, FL

Sample Location	Area of Concern, Excavation Area (if applicable)	Easting	Northing	Inside, Outside, or on Boundary
Soil Excavation Areas				
PRES-S0001A	Area A	234529.101	470693.410	Boundary
PRES-SB0006	Area A	234529.327	470692.623	Inside
PRES-SB0013	Area A	234528.826	470691.085	Boundary
PRES-SB0014	Area A	234530.644	470691.950	Boundary
PRES-S0001B-A	Area B	234536.879	470698.109	Boundary
PRES-SB0001	Area B	234537.177	470698.238	Boundary
PRES-SB0002	Area B	234540.400	470699.292	Boundary
PRES-SB0011	Area B	234536.718	470700.840	Boundary
PRES-SB0016	Area B	234540.635	470696.491	Boundary
PRES-S0001B-A	Area C	234536.879	470698.109	Boundary
PRES-S0001C	Area C	234538.500	470692.437	Boundary
PRES-SB0001	Area C	234537.177	470698.238	Boundary
PRES-SB0003	Area C	234538.041	470695.899	Boundary
PRES-SB0015	Area C	234539.798	470694.664	Boundary
PRES-SB0016	Area C	234540.635	470696.491	Boundary
PRES-S0001		234534.367	470690.979	Outside
PRES-S0001B		234533.800	470696.974	Outside
PRES-S0001B-B		234530.883	470696.731	Outside
PRES-S0001B-D		234528.858	470699.567	Outside
PRES-S0001B-E		234527.805	470705.077	Outside
PRES-S0001B-F		234535.097	470706.697	Outside
PRES-SB0004		234537.848	470691.844	Outside
PRES-SB0005		234534.208	470690.296	Outside
PRES-SB0007		234528.810	470695.442	Outside
PRES-SB0008		234529.061	470698.957	Outside
PRES-SB0009		234527.471	470704.983	Outside
PRES-SB0010		234534.835	470707.117	Outside
PRES-SB0012		234527.920	470693.626	Outside
PRES-SB0017		234543.824	470696.837	Outside
PRES-SB0018		234544.006	470694.033	Outside

Table 1-5
Coordinates of Sample Locations in Excavation and Encapsulation Areas
KSC Press Site Transformer Building K7-1205C
Kennedy Space Center, FL

Sample Location	Area of Concern, Excavation Area (if applicable)	Easting	Northing	Inside, Outside, or on Boundary
Concrete Encapsulation Area				
CO0001		234534.946	470692.479	Inside
CO0002		234532.895	470692.567	Boundary
CO0003		234536.795	470693.284	Boundary
CO0004		234532.211	470694.771	Outside
CO0005		234534.153	470695.328	Outside
CO0006		234535.936	470695.615	Outside

Notes:
Eastings and Northings are in Florida State Plane East, meters.
IMWP = Interim Measure Work Plan
KSC = Kennedy Space Center
LOC = location of concern
SB = soil boring

Legend

- Structure
- KSC Press Site

Notes:
IMR - Interim Measure Report
KSC - Kennedy Space Center
NASA - National Aeronautics and Space Administration
PRES - KSC Press Site
VAB - Vehicle Assembly Building

N

Site Location Map
Interim Measure Report

KSC Press Site
NASA Kennedy Space Center, Florida

Project Number: TL014021.0001

Figure 1-1

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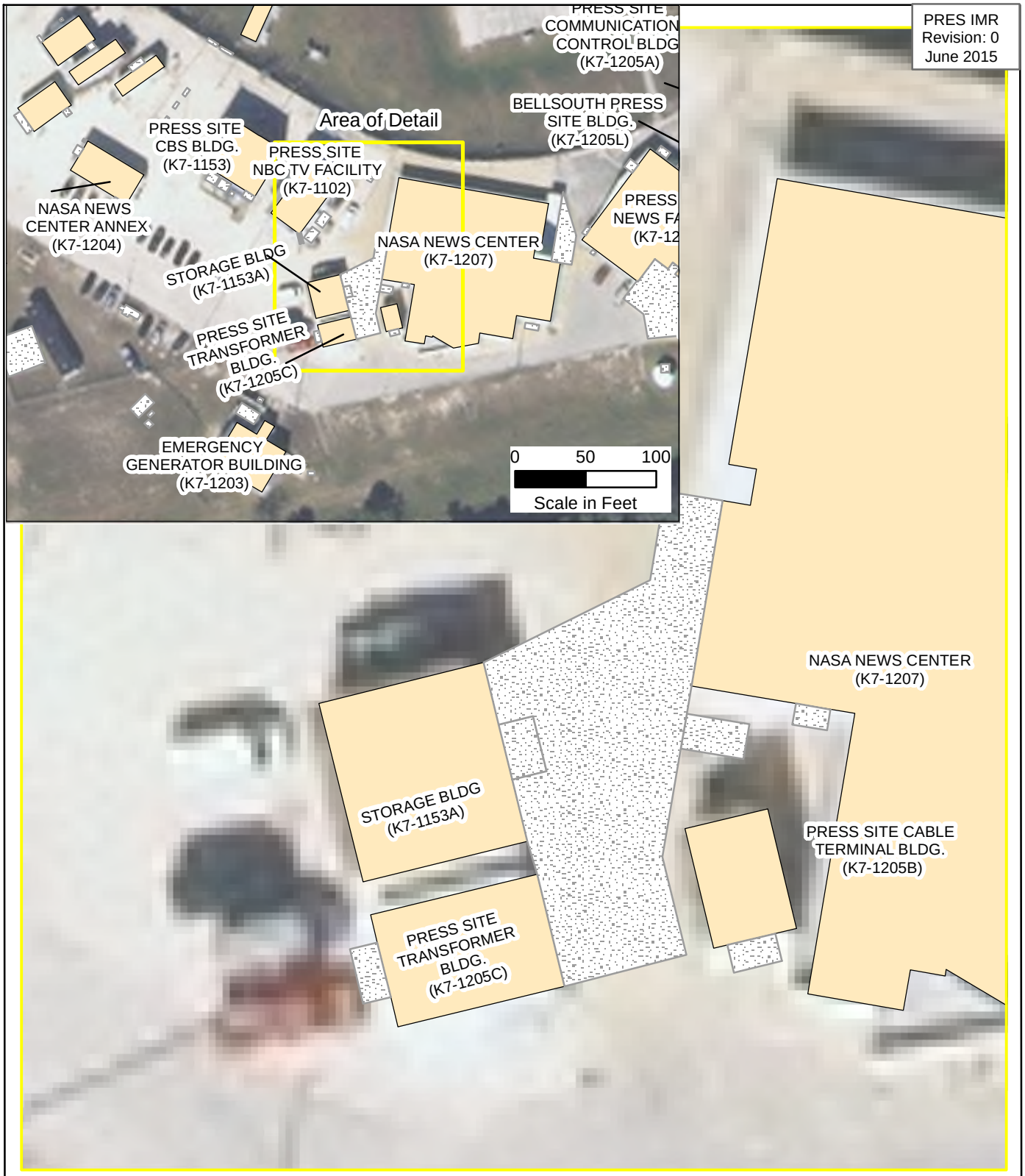

Legend

- Concrete
- Structure

0 10 20
Scale in Feet

N

Notes:
IMR- Interim Measure Report
KSC - Kennedy Space Center
NASA - National Aeronautics and Space Administration
PRES - KSC Press Site

Site Plan
Interim Measure Report

KSC Press Site
NASA Kennedy Space Center, Florida

Project Number: TL014021.0001

Figure 1-2

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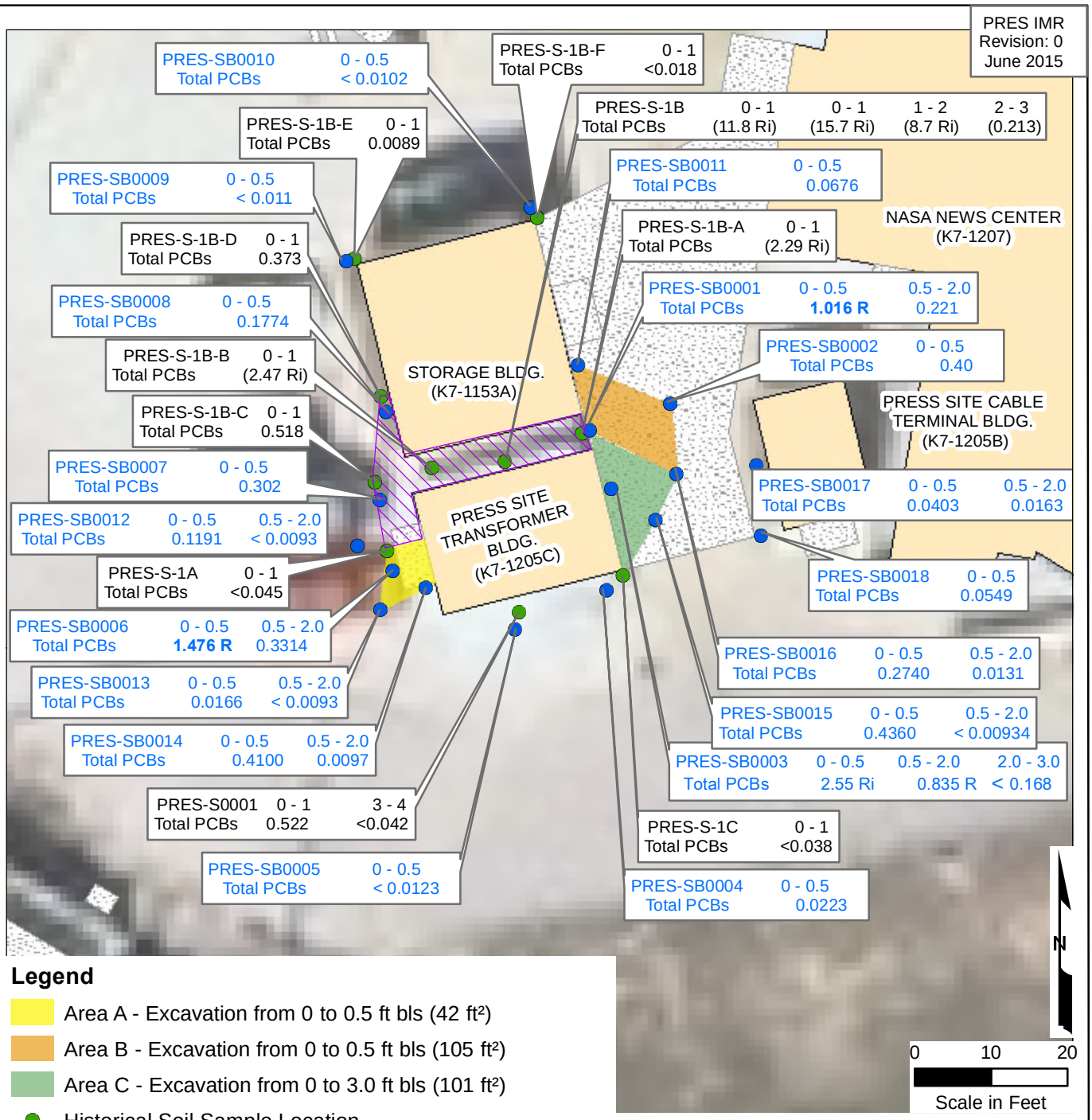

Legend

- Area A - Excavation from 0 to 0.5 ft bls (42 ft²)
- Area B - Excavation from 0 to 0.5 ft bls (105 ft²)
- Area C - Excavation from 0 to 3.0 ft bls (101 ft²)
- Historical Soil Sample Location
- 2014 Sample Location
- Concrete
- Structure
- Historical Excavation Area (177 ft² to 2 ft bls)

Concentrations in parenthesis were excavated in 2004.
Locations in blue were collected in 2014.

Notes:
Concentration in milligrams per kilogram (mg/kg)
Depths in feet below land surface (ft bls)
< - below MDL, shown
IMR - Interim Measure Report
KSC - Kennedy Space Center
NASA - National Aeronautics and Space Administration
PCBs - polychlorinated biphenyls
PRES - KSC Press Site
R - exceeds Residential SCTL
i - exceeds Industrial SCTL
SCTL - Soil Cleanup Target Level

PCB Concentrations in Soil
Interim Measure Report

KSC Press Site
NASA Kennedy Space Center, Florida

Project Number: TL014021.0001

Figure 1-3

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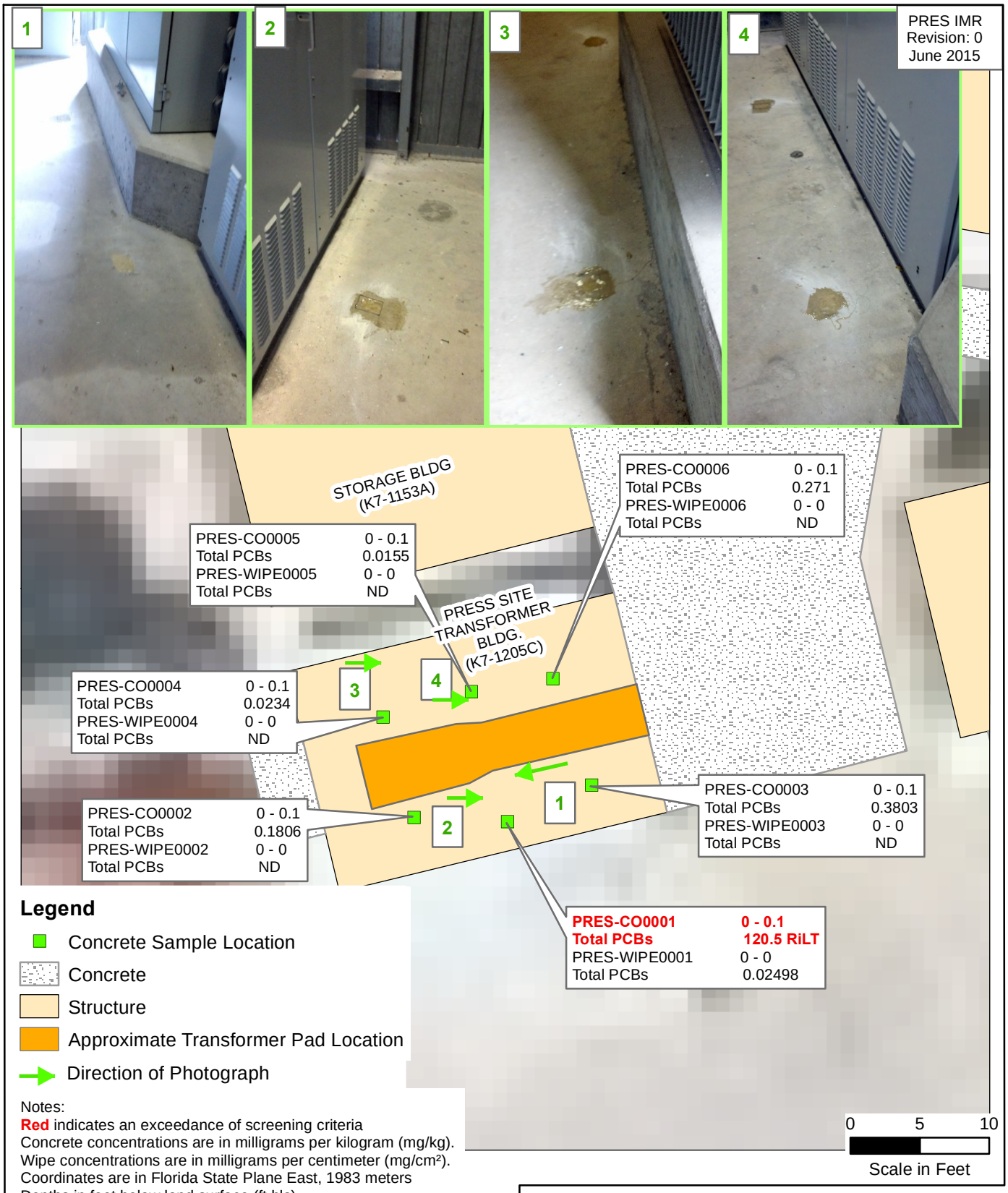

Notes:
Red indicates an exceedance of screening criteria
Concrete concentrations are in milligrams per kilogram (mg/kg).
Wipe concentrations are in milligrams per centimeter (mg/cm²).
Coordinates are in Florida State Plane East, 1983 meters
Depths in feet below land surface (ft bls)
ft² - square feet
IMR - Interim Measure Report
KSC - Kennedy Space Center
NASA - National Aeronautics and Space Administration
PCBs - polychlorinated biphenyls
PRES - KSC Press Site
R - exceeds Residential SCTL
i - exceeds Industrial SCTL
SCTL - Soil Cleanup Target Level
TSCA - Toxic Substances Control Act

N

PCB Concentrations in Concrete
Interim Measure Report

KSC Press Site
NASA Kennedy Space Center, Florida

Project Number: TL014021.0001

Figure 1-4

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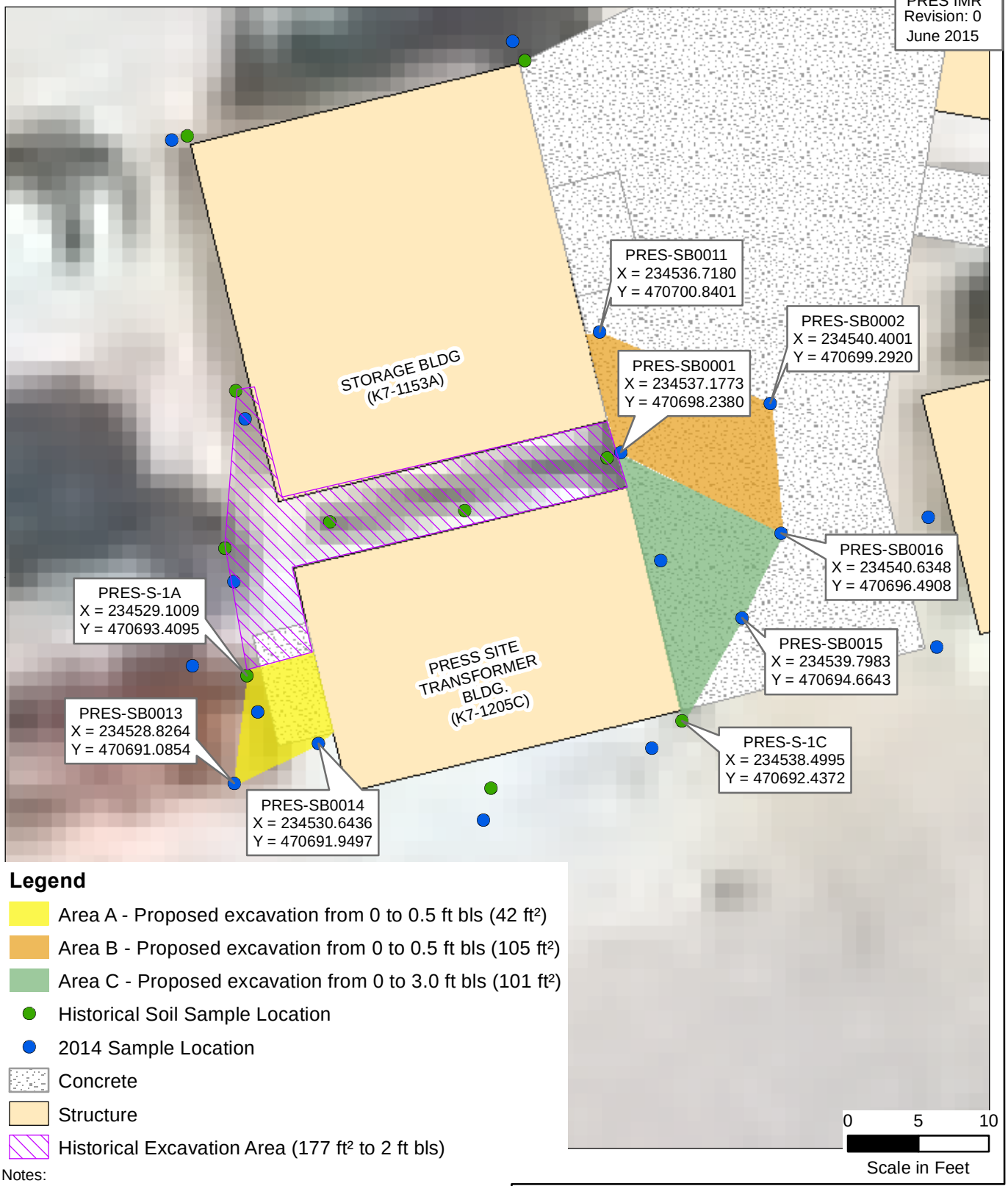

Legend

- Area A - Proposed excavation from 0 to 0.5 ft bls (42 ft²)
- Area B - Proposed excavation from 0 to 0.5 ft bls (105 ft²)
- Area C - Proposed excavation from 0 to 3.0 ft bls (101 ft²)
- Historical Soil Sample Location
- 2014 Sample Location
- Concrete
- Structure
- Historical Excavation Area (177 ft² to 2 ft bls)

Notes:
Coordinates are in Florida State Plane East, 1983 meters
Depths in feet below land surface (ft bls)
ft² - square feet
IMR - Interim Measure Report
KSC - Kennedy Space Center
NASA - National Aeronautics and Space Administration
PCBs - polychlorinated biphenyls
PRES - KSC Press Site
R - exceeds Residential SCTL
i - exceeds Industrial SCTL
SCTL - Soil Cleanup Target Level

N

Coordinates for PCB Soil Excavation Interim Measure Report

KSC Press Site
NASA Kennedy Space Center, Florida

Project Number: TL014021.0001

Figure 1-5

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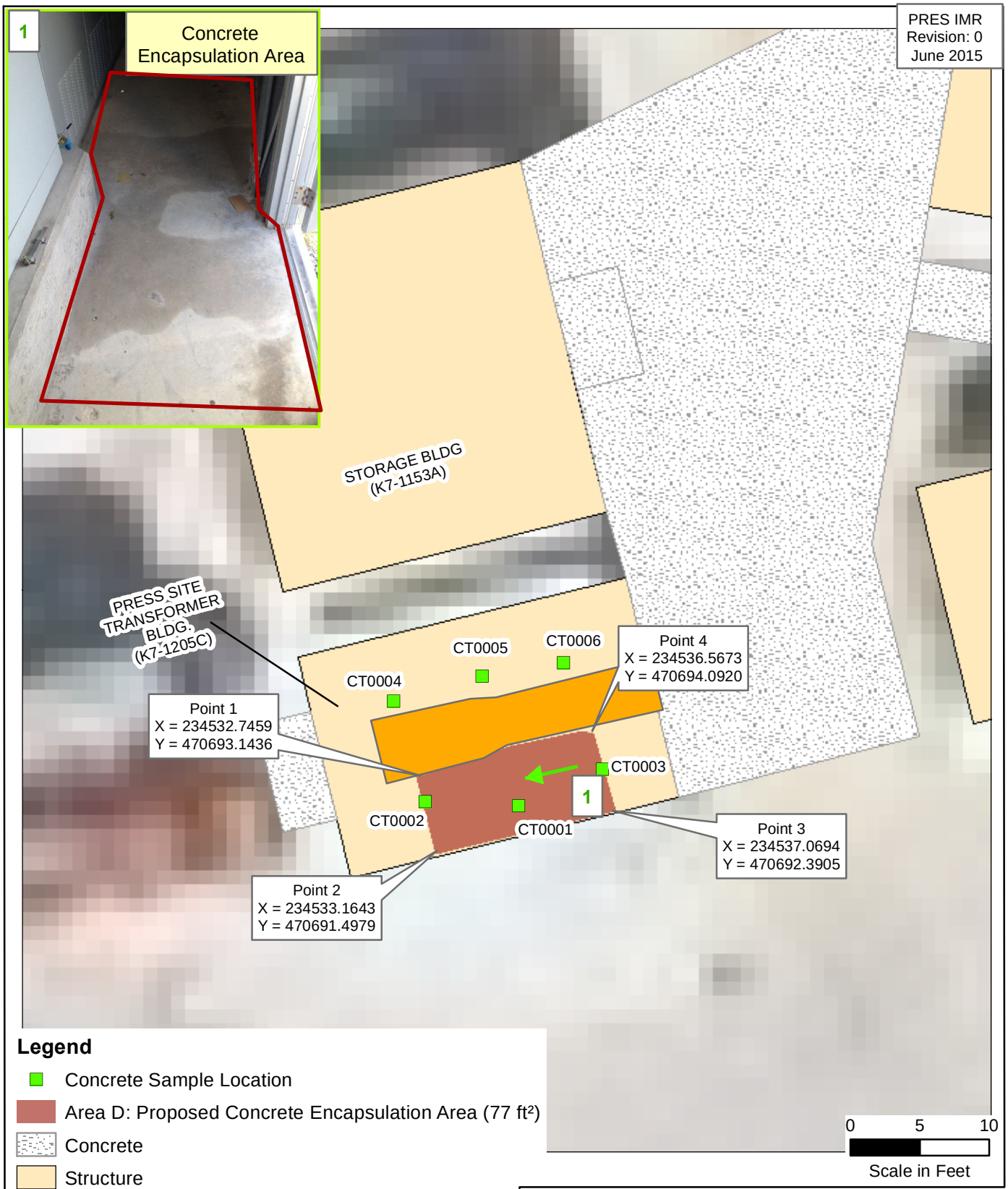

Legend

- Concrete Sample Location
- Area D: Proposed Concrete Encapsulation Area (77 ft²)
- Concrete
- Structure
- Direction of Photograph

Notes:
Coordinates are in Florida State Plane East, 1983 meters
ft² - square feet
IMR - Interim Measure Work Report
KSC - Kennedy Space Center
NASA - National Aeronautics and Space Administration
PCBs - polychlorinated biphenyls
PRES - KSC Press Site

N

Coordinates for Concrete Encapsulation Area
Interim Measure Report

KSC Press Site
NASA Kennedy Space Center, Florida

Project Number: TL014021.0001

Figure 1-6

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2.0 IM IMPLEMENTATION

The IM activities were implemented from March 30 through April 2, 2015, in accordance with the FDEP- and USEPA-approved IMWP (ARCADIS 2015).

2.1 Health and Safety Plan

ARCADIS prepared a Health and Safety Plan (HASP) for use during excavation activities to remove media affected with COCs under the VAB LUCIP Elimination Project. The HASP addressed the potential hazards associated with planned field activities at the Press Site and presented the minimum health and safety requirements for establishing and maintaining a safe working environment during the course of work. The provisions of ARCADIS' General Health and Safety Plan prepared for Basic Ordering Agreement NNK09CA03B were also incorporated into the HASP. Additionally, a HASP Addendum was prepared and submitted in March 2015 detailing the site control methods, work zones, and methods for maintenance of traffic in this area during excavation activities.

Activities conducted under ARCADIS' direction at the Press Site were in compliance with applicable Occupational Safety and Health Administration regulations, particularly those in 29 Code of Federal Regulations (CFR) 1910.120 "Hazardous Waste Operations and Emergency Response"; 29 CFR 1926 "Construction Health and Safety"; and other applicable federal, state, and local laws, regulations, and statutes. Copies of the HASP, HASP Addendum, and the General HASP were kept on Site during field activities.

2.2 Pre-Construction Meeting and Project Coordination

On March 30, 2015, ARCADIS conducted a pre-construction meeting to coordinate project activities. During the pre-construction meeting, ARCADIS discussed the construction activities and logistics, schedule of activities, utility clearance, work area exclusion zones, site restoration, and health and safety monitoring of construction workers and facility employees. The pre-construction meeting was attended by ARCADIS, CFES, and NASA personnel.

2.3 Site Preparation

On March 30, 2015, ARCADIS and CFES mobilized to the Press Site to perform IM activities. The boundaries of the excavation areas, as shown on Figure 1-5, were established using a global positioning system and measuring from Press Site features (e.g., buildings) and existing sample locations. The boundaries were marked with colored spray paint and survey flags to distinguish the excavation area and depths. An excavation permit was obtained, and a copy of the KSC dig permit is included with the field notes in Appendix C. The locations of underground utilities within and adjacent to the excavation areas were marked by KSC utility locators. Barricades and/or temporary fencing were

placed around work zones to limit entry into the excavation areas for site safety and security purposes. Construction and work safety signs with contact information were posted at work zone entrances.

2.4 Slab Encapsulation Activities

From March 31 to April 2, 2015, the PCB-affected concrete slab inside the Transformer Building was cleaned and encapsulated in accordance with the 40 CFR 761. Upon cleaning of the PCB-affected concrete surface with an organic solvent using the double-wash/rinse method, a base coat of red-colored, specialized epoxy paint was applied to seal the surface. A second top coat of contrasting gray-colored, specialized epoxy paint was applied for surface wear indication and to improve the integrity of the encapsulation. In accordance with 40 CFR 761, caution signs that included a PCB warning and telephone contact information were posted in the area. Additional barriers, such as chains, were not installed as access to the slab is limited to infrequent occupancy by approved personnel and the facility doors are locked, preventing access. The encapsulated slab with PCB concentrations above the TSCA criterion will be managed by the KSC Permitting and Compliance Branch as part of facility operations in accordance with the correspondence included as Appendix D.

The encapsulated area and boundary coordinates are shown on Figure 1-6. A summary of the concrete coring locations used to define the encapsulation boundaries are included as Table 1-4. Photographs of the IM activities are provided in Appendix E.

2.5 Soil Excavation

On March 30 through April 1, 2015, soil with PCB concentrations greater than the FDEP R-SCTL was excavated around the Transformer Building. Based on the areas and depths of the excavations, a total of approximately 10 cubic yards (cy) of affected soil was excavated from the Press Site. A vacuum truck and hand digging were used to excavate material due to subsurface utilities.

Three excavation areas surrounding the Transformer Building were identified in the IMWP (ARCADIS 2015) as follows:

- Area A: approximately 42 ft² from 0 to 0.5 foot bls (0.78 cy)
- Area B: approximately 105 ft² from 0 to 0.5 foot bls (1.95 cy)
- Area C: approximately 101 ft² from 0 to 3.0 feet bls (7.48 cy)

The excavations extended horizontally and vertically to samples with COC concentrations below screening criteria as shown on Figure 1-3.

The proposed IM areas around the Transformer Building were completed, and the excavation areas were backfilled, graded, and compacted to original grade as specified in

the IMWP. A modification was made in the field to the proposed excavation Area A based on Site conditions; a concrete slab located within the proposed Area A excavation was found to be approximately 7 inches thick, which was greater than the proposed excavation depth of 6 inches. The slab also appeared to have been continuously poured following the PCB excavation previously conducted by others that abutted Area A. Therefore, the slab was left in place, as no soil removal was required beneath it given its depth.

The excavation area and boundary coordinates are presented in Table 1-4 and on Figure 1-5. A summary of the soil boring locations removed during the excavation are on Table 1-5. Field notes from the IM are provided in Appendix C. Photographs of the IM activities are provided in Appendix E.

2.6 Soil Disposal

The soil and construction debris were loaded onto two trucks for transport under non-hazardous waste manifests to the Omni Waste Landfill in St. Cloud, Florida, for disposal. According to the weigh tickets, a total of 26.45 tons of soil and construction debris were excavated and properly disposed. Historical sample results were used for waste characterization to reduce analytical costs. The weigh tickets and disposal manifests for the trucks are provided in Appendix F.

2.7 Backfilling and Restoration

The excavation areas were backfilled with the clean fill, graded, compacted to original grade, and re-surfaced to match existing conditions. Photographs of the backfilling/restoration activities and the restored areas are provided in Appendix E.

2.8 Decontamination

A decontamination area was constructed to clean equipment used during IM activities. Equipment used to excavate soil was decontaminated with brushes/brooms and water and placed in drum number 196993. Equipment and miscellaneous materials used to clean and encapsulate the slab were placed in drum number 198395. The liquid captured from the slab cleaning was placed in drum number 198394. Liquid and solid IDW generated during the decontamination of equipment and concrete slab were placed in KSC-approved, 55-gallon capacity, Department of Transportation-approved drums. Two samples of the liquid waste were collected and analyzed for PCBs. The laboratory results were summarized on the drum inventory log provided to the KSC Project Manager and included in Appendix G. The laboratory analytical report for the liquid IDW is also included in Appendix B.

2.9 KEDDS

The KSCRT has implemented a KSC Remediation Information System (RIS). Part of the RIS includes an Electronic Data Exchange (EDE) that is designed to assist contractors tasked with the submittal of environmental data electronically. The EDE module contains seven KSC Electronic Data Deliverables (KEDDs), and location and sample identification nomenclature has been established for the KEDDs. All samples collected and discussed in this report use the nomenclature consistent with the KEDDs. The files were submitted to NASA for the RIS, and the submission tickets are included in Appendix H.

3.0 SUMMARY AND RECOMMENDATIONS

The IM fieldwork was conducted in accordance with the IMWP (ARCADIS 2015) approved by the FDEP and USEPA. During the IM, three areas containing soil with PCB concentrations greater than the FDEP R-SCTLs were excavated. The excavation areas extended horizontally and vertically to samples exhibiting PCB concentrations below screening criteria. Approximately 26.45 tons of non-TSCA PCB-affected media were transported off site for proper disposal. In addition, approximately 77 square feet of PCB-affected concrete pad was encapsulated following implementation of the double-wash/rinse method using an organic solvent in accordance with 40 CFR 761.

Based on the completion of the soil excavation, and slab cleaning and encapsulation, NFA is recommended for soil at the Press Site and the soil LUC should be removed. The operation and maintenance of the encapsulated slab will be managed by the KSC Permitting and Compliance Branch in conjunction with management of ongoing operations of the Transformer Building in accordance with the correspondence included as Appendix D. The IM was presented to the KSCRT in April 2015, and concurrence was reached on the recommendations. A copy of the KSCRT meeting minutes is included as Appendix A.

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4.0 REFERENCES

29 Code of Federal Regulations. 1910.210 and 1926.

40 Code of Federal Regulations. 761.61.

ARCADIS. 2011. Interim Measures at Various Sites, Health and Safety Plan, Kennedy Space Center, Florida. August. (includes addendum submitted in July 2013)

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ARCADIS. 2015. KSC Press Site, Interim Measure Work Plan, Kennedy Space Center, Florida. January.

FDEP. 2005. Florida Administrative Code. Chapter 62-777. April 17.

FDEP. 2008. Standard Operating Procedures for Field Activities (DEP-001/01). Revised March 31 (Effective December 3).

FDEP. 2013. general correspondence. December 13.

NASA. 2006. KSC-TA-6813. Investigative Derived Waste Management Plan, Environmental Program Office, Kennedy Space Center, Florida. February.

NASA. 2011a. KSC-TA-6168. Screening Process and Screening Tables, Appendix E, Decision Process Document, John F. Kennedy Space Center, Florida. May.

NASA. 2011b. KSC-TA-6169. Sampling and Analysis Plan for the RCRA Corrective Action Program at the Kennedy Space Center, Florida. June.

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Appendix A

KSCRT Meeting Minutes

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1501-M17 Susan Sitkoff/ ARCADIS

KSC Press Site Transformer Building (SWMU 074)

Goal: Present IM WP and obtain team consensus on path forward

Discussion: Due to PCB detections of 50 mg/kg or higher within the Press Site Transformer Building (K7-1205C), this workplan will submitted to EPA for comment. Based on the current agreement between EPA and NASA, EPA has 30 days to comment on the workplan. Ensure that there is information in the workplan to specify that this is a secured facility [restricted access (i.e. locked door, etc.)]. NASA will request that the KSC Compliance group accept responsibility to maintain the encapsulation of the area as specified in the IM workplan, therefore no LUCIP would be needed. Revise Figure 4 notes to include units for PCB results. A placard (PCB mark) will be placed next to the encapsulation area to indicate that PCBs are present in the building.

Team consensus reached on delineation as presented in the IM workplan at the January 2015 remediation team meeting.

Team consensus reached that the encapsulation area will be maintained by the KSC Compliance division; therefore, no LUCIP will be required.

Team consensus reached that PCB mark stickers will be placed near the encapsulation area.

Results: Decision items 1501-D84 to D8

1504-M15 Scott Starr/ ARCADIS

Press Site (074)

Goal: Obtain team consensus on IM implementation and removal of land use controls for soil at press site.

Discussion: Reviewed historical Press Site statement of basis (SB) and land use control implementation plan (LUCIP) for COC data. PCBs were not identified as soil COC in SB/LUCIP and were not initially considered for re-evaluation. During the development of the SRCO documentation, PCBs exceeding R-SCTLs were identified in soil adjacent to

transformer building K7-1205C. Historical IM in the area only removed PCB-affected soil to I-SCTL. Additional PCB delineation sampling conducted. Delineated areas of PCB-affected soil adjacent to building K7-1205C to R-SCTL (detections were all less than I-SCTL). During additional delineation efforts, PCB-affected stained concrete inside the building was identified greater than 50 ppm. Unable to sample beneath the building slab due to safety concerns. Total soil/concrete excavated and disposed of at the Omni Landfill was 26.45 tons.

Team consensus reached for NFA at soil at Press Site (074).

Team consensus reached for removal of soil LUCIP at Press Site (074).

Team consensus reached on management and maintenance of encapsulated slab by KSC Permitting and Compliance Branch.

Appendix B

Laboratory Analytical Reports

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January 17, 2014 Service Request No:J1400210

Mr. Scott Starr
Levine Fricke
14025 Riveredge Drive
Suite 600
Tampa, FL 33637

Laboratory Results for: Press Site

Dear Mr.Starr,

Enclosed are the results of the sample(s) submitted to our laboratory January 13, 2014
For your reference, these analyses have been assigned our service request number **J1400210.**

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. In accordance to the NELAC 2003 Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Please contact me if you have any questions. My extension is 4409. You may also contact me via email at Craig.Myers@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Craig Myers
Project Manager

ADDRESS 9143 Philips Highway, Suite 200, Jacksonville, FL 32256
PHONE +1 904 739 2277 | FAX +1 904 739 2011
ALS Group USA, Corp.
dba ALS Environmental

SAMPLE DETECTION SUMMARY

CLIENT ID: Pres-SB0001-000.5-20140110	Lab ID: J1400210-001					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Solids, Total	79		0.10	0.10	Percent	160.3
Aroclor 1254	798		40.6	110	ug/Kg	8082
Aroclor 1260	218		15.5	55.0	ug/Kg	8082

CLIENT ID: Pres-SB0001-002.0-20140110	Lab ID: J1400210-002					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Solids, Total	78		0.10	0.10	Percent	160.3
Aroclor 1254	176		21.5	58.2	ug/Kg	8082
Aroclor 1260	45.0	I	16.5	58.2	ug/Kg	8082

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
Florida Department of Health	E82502	6/30/2014
North Carolina Department of Environment and Natural Resources	527	12/31/2014
Virginia Environmental Accreditation Program	460191	12/14/2014
Louisiana Department of Environmental Quality	02086	6/30/2014
Georgia Department of Natural Resources	958	6/30/2014
Kentucky Division of Waste Management	63	6/30/2014
South Carolina Department of Health and Environmental Control	96021001	6/30/2014
Texas Commision on Environmental Quality	T104704197-13-5	5/31/2014
Maine Department of Health and Human Services	2011006	2/3/2015
Department of Defense	66206	5/31/2014
Pennsylvania Department of Environmental Protection	68-04835	8/31/2014

Data Qualifiers

Florida-DEP

!	Data deviates from historically established concentration ranges
*	Not reported due to interference
?	Data is rejected and should not be used
A	Value reported is the arithmetic mean of two or more determininations
B	Results based upon colony counts outside the acceptable range.
D	Measurement was made in the field.
E	Extra samples were taken at composite stations
H	Value based on field kit determination; results may not be accurate.
I	The reported value is between the laboratory method detection limit and the laboratory PQL.
J	Estimated value.
K	Off scale low. The value is less than the lowest calibration standard.
L	Off scale high. The analyte is above the acceptable level of quantitation.
M	The MDL/MRL has been elevated because the analyte could not be accurately quantified.
N	Presumptive evidence of presence of material.
O	Sampled, but analysis lost or not performed
Q	Sample held beyond the acceptable holding time.
R	Significant rain in the past 48 hours (typically in excess of 0.5 inches)
T	Estimated value, less than the MDL
U	Indicates that the compound was analyzed for but not detected.
V	Indicates that the analyte was detected in both the sample and the associated method blank.
X	Insufficient individuals were present in the sample to achieve a minimum of 280 organisms for identification (Stream Condition Index Analysis only)
Y	The laboratory analysis was from an unpreserved or improperly preserved sample.
Z	Too many colonies were present, the numeric value represents the filtration volume

ALS Laboratory Group

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Client: Levine Fricke **Service Request:**J1400210
Project: Press Site/TL014

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
J1400210-001	Pres-SB0001-000.5-20140110	1/10/2014	1120
J1400210-002	Pres-SB0001-002.0-20140110	1/10/2014	1130

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1400210
Project:	Press Site/TL014	**Date Collected:**	01/10/14 11:20
Sample Matrix:	Soil	**Date Received:**	01/13/14 09:50
Sample Name:	Pres-SB0001-000.5-20140110	**Units:**	ug/Kg
Lab Code:	J1400210-001	**Basis:**	Dry

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082
Prep Method: EPA 3550B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	15.1 U	55.0	15.1	1	01/15/14 15:43	1/15/14	
Aroclor 1221	11.2 U	55.0	11.2	1	01/15/14 15:43	1/15/14	
Aroclor 1232	36.0 U	55.0	36.0	1	01/15/14 15:43	1/15/14	
Aroclor 1242	14.9 U	55.0	14.9	1	01/15/14 15:43	1/15/14	
Aroclor 1248	26.8 U	55.0	26.8	1	01/15/14 15:43	1/15/14	
Aroclor 1254	**798**	110	40.6	2	01/15/14 17:45	1/15/14	
Aroclor 1260	**218**	55.0	15.5	1	01/15/14 15:43	1/15/14	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	110	10 - 258	01/15/14 15:43	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1400210
Project:	Press Site/TL014	**Date Collected:**	01/10/14 11:30
Sample Matrix:	Soil	**Date Received:**	01/13/14 09:50
Sample Name:	Pres-SB0001-002.0-20140110	**Units:**	ug/Kg
Lab Code:	J1400210-002	**Basis:**	Dry

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082
Prep Method: EPA 3550B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	16.0 U	58.2	16.0	1	01/15/14 16:08	1/15/14	
Aroclor 1221	11.8 U	58.2	11.8	1	01/15/14 16:08	1/15/14	
Aroclor 1232	38.1 U	58.2	38.1	1	01/15/14 16:08	1/15/14	
Aroclor 1242	15.7 U	58.2	15.7	1	01/15/14 16:08	1/15/14	
Aroclor 1248	28.4 U	58.2	28.4	1	01/15/14 16:08	1/15/14	
Aroclor 1254	**176**	58.2	21.5	1	01/15/14 16:08	1/15/14	
Aroclor 1260	**45.0 I**	58.2	16.5	1	01/15/14 16:08	1/15/14	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	124	10 - 258	01/15/14 16:08	

Client:	Levine Fricke	**Service Request:**	J1400210
Project:	Press Site/TL014	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/Kg
Lab Code:	JQ1400297-01	**Basis:**	Dry

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082
Prep Method: EPA 3550B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	9.06 U	33.0	9.06	1	01/15/14 14:30	1/15/14	
Aroclor 1221	6.68 U	33.0	6.68	1	01/15/14 14:30	1/15/14	
Aroclor 1232	21.6 U	33.0	21.6	1	01/15/14 14:30	1/15/14	
Aroclor 1242	8.89 U	33.0	8.89	1	01/15/14 14:30	1/15/14	
Aroclor 1248	16.1 U	33.0	16.1	1	01/15/14 14:30	1/15/14	
Aroclor 1254	12.2 U	33.0	12.2	1	01/15/14 14:30	1/15/14	
Aroclor 1260	9.30 U	33.0	9.30	1	01/15/14 14:30	1/15/14	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	104	10 - 258	01/15/14 14:30	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1400210
Project:	Press Site/TL014	**Date Collected:**	01/10/14
Sample Matrix:	Soil	**Date Received:**	01/13/14
Analysis Method:	160.3 Modified	**Units:**	Percent
		Basis:	As Received

Solids, Total

Sample Name	Lab Code	Result	MRL	MDL	Dil.	Date Analyzed	Q
Pres-SB0001-000.5-20140110	J1400210-001	**79**	0.10	0.10	1	01/13/14 13:02	
Pres-SB0001-002.0-20140110	J1400210-002	**78**	0.10	0.10	1	01/13/14 13:02	

Client: Levine Fricke **Service Request:** J1400210
Project: Press Site/TL014
Sample Matrix: Soil

SURROGATE RECOVERY SUMMARY
Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082
Extraction Method: EPA 3550B

Sample Name	Lab Code	Decachlorobiphenyl 10 - 258
Pres-SB0001-000.5-20140110	J1400210-001	110
Pres-SB0001-002.0-20140110	J1400210-002	124
Method Blank	JQ1400297-01	104
Lab Control Sample	JQ1400297-02	116
Duplicate Lab Control Sample	JQ1400297-03	122

Client:	Levine Fricke	**Service Request:**	J1400210
Project:	Press Site/TL014	**Date Analyzed:**	01/15/14
Sample Matrix:	Soil	**Date Extracted:**	01/15/14

Duplicate Lab Control Sample Summary
Polychlorinated Biphenyls (PCBs) by GC

Analysis Method:	8082	**Units:**	ug/Kg
Prep Method:	EPA 3550B	**Basis:**	Dry
		Analysis Lot:	376667

	Lab Control Sample JQ1400297-02			Duplicate Lab Control Sample JQ1400297-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Aroclor 1016	245	267	92	249	267	93	28-149	2	30
Aroclor 1260	272	267	102	293	267	110	10-176	7	30

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client:	Levine Fricke	**Service Request:**	J1400210
Project	Press Site/TL014	**Date Collected:**	01/10/14
Sample Matrix:	Soil	**Date Received:**	01/13/14
		Date Analyzed:	01/13/14

Replicate Sample Summary
General Chemistry Parameters

Sample Name:	Pres-SB0001-000.5-20140110	**Units:**	Percent
Lab Code:	J1400210-001	**Basis:**	As Received

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample J1400210-001DUP Result	Average	RPD	RPD Limit
Solids, Total	160.3 Modified	0.10	0.10	79	79	78.6	<1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Environmental

Cooler Receipt Form

Client: Arcadis Service Request #: J1400240

Project: Press Site

Cooler received on 1/13/14 and opened on 1/13/14 by SL

COURIER: ALS (UPS) FEDEX Client Other ______ Airbill # J4524054329

1	Were custody seals on outside of cooler?	Yes (No)
	If yes, how many and where?	#:___ on lid other
2	Were seals intact and signature and date correct?	Yes No (N/A)
3	Were custody papers properly filled out?	(Yes) No N/A
4	Temperature of cooler(s) upon receipt (Should be > 0°C and < 6°C)	0.9°C
5	Thermometer ID	T81
6	Temperature Blank Present?	(Yes) No
7	Were Ice or Ice Packs present	(Ice) Ice Packs No
8	Did all bottles arrive in good condition (unbroken, etc....)?	(Yes) No N/A
9	Type of packing material present	(Netting) Vial Holder (Bubble Wrap) Paper Styrofoam Other N/A
10	Were all bottle labels complete (sample ID, preservation, etc....)?	(Yes) No N/A
11	Did all bottle labels and tags agree with custody papers?	(Yes) No N/A
12	Were the correct bottles used for the tests indicated?	(Yes) No N/A
13	Were all of the preserved bottles received with the appropriate preservative? HNO3 pH<2 H2SO4 pH<2 ZnAc2/NaOH pH>9 NaOH pH>12 HCl pH<2 Preservative additions noted below	Yes No (N/A)
14	Were all samples received within analysis holding times?	(Yes) No N/A
15	Were all VOA vials free of air bubbles? If present, note below	Yes No (N/A)
16	Where did the bottles originate?	(ALS) Client

Sample ID	Reagent	Lot #	ml added	Initials Date/Time

Additional comments and/or explanation of all discrepancies noted above:

Client approval to run samples if discrepancies noted: Date:

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

ALS Environmental

9143 Phillips Highway, Ste 200 • Jacksonville, FL 32256 (904) 739-2277 • 800-695-7222 x06 • FAX (904) 739-2011

PAGE 1 OF 1

SR# J1400210 CAS Contract

Project Name: Press Site	Project Number: TL014
Project Manager: Scott Starr	Email Address: Scott.Starr@arcadis-us.com
Company/Address: 14225 Ridgedale Dr Suite 500, Tampa, FL 33637	
Phone #: 813-344-4760	FAX #
Sampler's Signature	Sampler's Printed Name: Nick Fletcher

ANALYSIS REQUESTED (Include Method Number and Preservative)

PRESERVATIVE: B

J1400210 5

Levine Fricke Press Site

NUMBER OF CONTAINERS: 8082 PCB

1. HCl
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other ice

CLIENT SAMPLE ID	LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	8082 PCB	REMARKS/ ALTERNATE DESCRIPTION
Press-SB2001-0002.0-20140110		1/10/14	1120	soil	2	2	
Press-SB2001-0002.0-20140110		1/10/14	1130	soil	2	2	

SPECIAL INSTRUCTIONS/COMMENTS

See QAPP ☐

TURNAROUND REQUIREMENTS
_____ RUSH (SURCHARGES APPLY)
_____ STANDARD
REQUESTED FAX DATE
REQUESTED REPORT DATE

REPORT REQUIREMENTS
_____ I. Results Only
_____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
_____ III. Results + QC and Calibration Summaries
_____ IV. Data Validation Report with Raw Data
_____ V. Specialized Forms / Custom Report
Edata _____Yes _____No

INVOICE INFORMATION
PO #
BILL TO:

SAMPLE RECEIPT: CONDITION/COOLER TEMP: CUSTODY SEALS: Y N

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: Nick Fletcher	Signature: Shawn Lightsey	Signature	Signature	Signature	Signature
Printed Name: Arcadis	Printed Name: ALS	Printed Name	Printed Name	Printed Name	Printed Name
Firm: 1/10/14	Firm: 1/13/14 0950	Firm	Firm	Firm	Firm
Date/Time	Date/Time	Date/Time	Date/Time	Date/Time	Date/Time

Distribution: White - Return to Originator; Yellow - Retained by Client

February 17, 2014 Service Request No:J1400851

Mr. Scott Starr
Levine Fricke
14025 Riveredge Drive
Suite 600
Tampa, FL 33637

Laboratory Results for: Press Site

Dear Mr.Starr,

Enclosed are the results of the sample(s) submitted to our laboratory February 05, 2014
For your reference, these analyses have been assigned our service request number **J1400851.**

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. In accordance to the NELAC 2003 Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Please contact me if you have any questions. My extension is 4409. You may also contact me via email at Craig.Myers@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Craig Myers
Project Manager

ADDRESS 9143 Philips Highway, Suite 200, Jacksonville, FL 32256
PHONE +1 904 739 2277 | FAX +1 904 739 2011
ALS Group USA, Corp.
dba ALS Environmental

SAMPLE DETECTION SUMMARY

CLIENT ID: PRES-SB0002-000.5-20140204	Lab ID: J1400851-001					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Solids, Total	76		0.10	0.10	Percent	160.3
Aroclor 1254	400		79.5	216	ug/Kg	8082

CLIENT ID: PRES-SB0003-000.5-20140204	Lab ID: J1400851-002					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Solids, Total	79		0.10	0.10	Percent	160.3
Aroclor 1254	2550		291	788	ug/Kg	8082

CLIENT ID: PRES-SB0004-000.5-20140204	Lab ID: J1400851-003					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Solids, Total	79		0.10	0.10	Percent	160.3
Aroclor 1254	22.3	I	16.1	43.5	ug/Kg	8082

CLIENT ID: PRES-SB0005-000.5-20140204	Lab ID: J1400851-004					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Solids, Total	77		0.10	0.10	Percent	160.3

CLIENT ID: PRES-SB0006-000.5-20140204	Lab ID: J1400851-005					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Solids, Total	85		0.10	0.10	Percent	160.3
Aroclor 1248	870		91.5	188	ug/Kg	8082
Aroclor 1254	412		69.3	188	ug/Kg	8082
Aroclor 1260	194		10.6	37.6	ug/Kg	8082

CLIENT ID: PRES-SB0007-000.5-20140204	Lab ID: J1400851-006					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Solids, Total	82		0.10	0.10	Percent	160.3
Aroclor 1254	302		14.9	40.2	ug/Kg	8082

CLIENT ID: PRES-SB0008-000.5-20140204	Lab ID: J1400851-007					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Solids, Total	88		0.10	0.10	Percent	160.3
Aroclor 1254	133		13.8	37.3	ug/Kg	8082
Aroclor 1260	44.4		10.5	37.3	ug/Kg	8082

CLIENT ID: PRES-SB0009-000.5-20140204	Lab ID: J1400851-008					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Solids, Total	87		0.10	0.10	Percent	160.3

CLIENT ID: PRES-SB0010-000.5-20140204	Lab ID: J1400851-009					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Solids, Total	89		0.10	0.10	Percent	160.3

CLIENT ID: PRES-SB0011-000.5-20140204	Lab ID: J1400851-010					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Solids, Total	75		0.10	0.10	Percent	160.3

SAMPLE DETECTION SUMMARY

CLIENT ID: PRES-SB0011-000.5-20140204	Lab ID: J1400851-010					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Aroclor 1254	67.6		17.3	46.8	ug/Kg	8082

9143 Philips Highway, Suite 200, Jacksonville, FL 32256 | 904-739-2277 | www.caslab.com

Client: Levine Fricke
Project: Press Site/TL014021.0000
Sample Matrix: Soil

Service Request: J1400851
Date Received: 2/5/14

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II data deliverables, including results of QC samples analyzed from this delivery group. When appropriate to the procedure, method blank results have been reported with each analytical test. Analytical procedures performed by the lab are validated in accordance with NELAC standards. Parameters that are included in the NELAC Fields of Testing but are not included in the lab's NELAC accreditation are identified in the discussion of each analytical procedure.

Sample Receipt

Ten soil samples were received for analysis at ALS Environmental on 02/05/2014. The samples were received in good condition and consistent with the accompanying chain of custody form. Samples are refrigerated at ≤6°C upon receipt at the lab except for aqueous samples designated for metals analyses, which are stored at room temperature.

Semi-Volatile Organic Analyses:

Method 8082: The control criterion for matrix spike recoveries of Aroclor-1016 and Aroclor-1260 and the RPD values between Matrix Spike JQ1400935-04 (MS) and Matrix Spike Duplicate JQ1400935-05 (MSD) for sample J1400851-005 is not applicable. The Aroclor concentrations in the associated parent sample were significantly higher than the added spike concentration, preventing accurate evaluation of the spike recoveries.

Method 8082: The confirmation comparison criterion of 40% difference for analyte Aroclor-1260 was exceeded in Matrix Spike JQ1400935-04 (MS) and Matrix Spike Duplicate JQ1400935-05 (MSD) for sample J1400851-005. The lower of the two values were reported because of an apparent interference on the alternate column that produced the higher value.

Method 8082: Sample J1400851-001 required dilution due to the presence of elevated levels of target and non-target analytes. The reporting limits are adjusted to reflect the dilution.

Method 8082: Three Aroclors were identified in sample J1400851-005: Aroclor-1248, Aroclor-1254 and Aroclor- 1260. When mixtures of PCB Aroclors are present in a sample, correct identification and quantitative analysis of the individual Aroclors can be subjective and care is taken to minimize the possibility of double-counting PCBs. Analytical peaks are selected based on the best resolution possible for that particular sample. However, when a mixture of Aroclors are present in a sample, the potential exists for a high bias from contribution of one Aroclor to another due to common peaks or peaks that cannot be completely resolved. Aroclor -1254 was quantified based on three peaks, instead of the usual four peaks, in sample J1400851-005 in order to remove a potential high bias caused by sample matrix. Aroclor-1254 was quantified based on three peaks, instead of the usual four, peaks in sample J1400851-006 in order to remove a potential high bias caused by sample matrix. Aroclor-1260 was quantified based on three peaks, instead of the usual four peaks, in sample J1400851-007 in order to remove a potential high bias caused by sample matrix.

General Chemistry Analyses:

No significant data anomalies were noted with this analysis.

Approved by _____ Date 2/17/2014

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
Florida Department of Health	E82502	6/30/2014
North Carolina Department of Environment and Natural Resources	527	12/31/2014
Virginia Environmental Accreditation Program	460191	12/14/2014
Louisiana Department of Environmental Quality	02086	6/30/2014
Georgia Department of Natural Resources	958	6/30/2014
Kentucky Division of Waste Management	63	6/30/2014
South Carolina Department of Health and Environmental Control	96021001	6/30/2014
Texas Commision on Environmental Quality	T104704197-13-5	5/31/2014
Maine Department of Health and Human Services	2011006	2/3/2015
Department of Defense	66206	5/31/2014
Pennsylvania Department of Environmental Protection	68-04835	8/31/2014

Data Qualifiers

Florida-DEP

!	Data deviates from historically established concentration ranges
*	Not reported due to interference
?	Data is rejected and should not be used
A	Value reported is the arithmetic mean of two or more determininations
B	Results based upon colony counts outside the acceptable range.
D	Measurement was made in the field.
E	Extra samples were taken at composite stations
H	Value based on field kit determination; results may not be accurate.
I	The reported value is between the laboratory method detection limit and the laboratory PQL.
J	Estimated value.
K	Off scale low. The value is less than the lowest calibration standard.
L	Off scale high. The analyte is above the acceptable level of quantitation.
M	The MDL/MRL has been elevated because the analyte could not be accurately quantified.
N	Presumptive evidence of presence of material.
O	Sampled, but analysis lost or not performed
Q	Sample held beyond the acceptable holding time.
R	Significant rain in the past 48 hours (typically in excess of 0.5 inches)
T	Estimated value, less than the MDL
U	Indicates that the compound was analyzed for but not detected.
V	Indicates that the analyte was detected in both the sample and the associated method blank.
X	Insufficient individuals were present in the sample to achieve a minimum of 280 organisms for identification (Stream Condition Index Analysis only)
Y	The laboratory analysis was from an unpreserved or improperly preserved sample.
Z	Too many colonies were present, the numeric value represents the filtration volume

ALS Laboratory Group

Acronyms

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DOH	Department of Health
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GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
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M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
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MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
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NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Client: Levine Fricke **Service Request:**J1400851

Project: Press Site/TL014021.0000

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
J1400851-001	PRES-SB0002-000.5-20140204	2/4/2014	1212
J1400851-002	PRES-SB0003-000.5-20140204	2/4/2014	1218
J1400851-003	PRES-SB0004-000.5-20140204	2/4/2014	1224
J1400851-004	PRES-SB0005-000.5-20140204	2/4/2014	1233
J1400851-005	PRES-SB0006-000.5-20140204	2/4/2014	1240
J1400851-006	PRES-SB0007-000.5-20140204	2/4/2014	1247
J1400851-007	PRES-SB0008-000.5-20140204	2/4/2014	1254
J1400851-008	PRES-SB0009-000.5-20140204	2/4/2014	1302
J1400851-009	PRES-SB0010-000.5-20140204	2/4/2014	1200
J1400851-010	PRES-SB0011-000.5-20140204	2/4/2014	1206

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1400851
Project:	Press Site/TL014021.0000	**Date Collected:**	02/04/14 12:12
Sample Matrix:	Soil	**Date Received:**	02/05/14 09:25
Sample Name:	PRES-SB0002-000.5-20140204	**Units:**	ug/Kg
Lab Code:	J1400851-001	**Basis:**	Dry

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082
Prep Method: EPA 3550B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	59.3 U	216	59.3	5	02/12/14 08:43	2/7/14	
Aroclor 1221	43.7 U	216	43.7	5	02/12/14 08:43	2/7/14	
Aroclor 1232	142 U	216	142	5	02/12/14 08:43	2/7/14	
Aroclor 1242	58.1 U	216	58.1	5	02/12/14 08:43	2/7/14	
Aroclor 1248	106 U	216	106	5	02/12/14 08:43	2/7/14	
Aroclor 1254	**400**	216	79.5	5	02/12/14 08:43	2/7/14	
Aroclor 1260	60.8 U	216	60.8	5	02/12/14 08:43	2/7/14	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	82	10 - 258	02/12/14 08:43	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1400851
Project:	Press Site/TL014021.0000	**Date Collected:**	02/04/14 12:18
Sample Matrix:	Soil	**Date Received:**	02/05/14 09:25
Sample Name:	PRES-SB0003-000.5-20140204	**Units:**	ug/Kg
Lab Code:	J1400851-002	**Basis:**	Dry

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082
Prep Method: EPA 3550B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	10.9 U	39.4	10.9	1	02/12/14 09:08	2/7/14	
Aroclor 1221	7.98 U	39.4	7.98	1	02/12/14 09:08	2/7/14	
Aroclor 1232	25.8 U	39.4	25.8	1	02/12/14 09:08	2/7/14	
Aroclor 1242	10.7 U	39.4	10.7	1	02/12/14 09:08	2/7/14	
Aroclor 1248	19.2 U	39.4	19.2	1	02/12/14 09:08	2/7/14	
Aroclor 1254	**2550**	788	291	20	02/13/14 21:36	2/7/14	
Aroclor 1260	11.2 U	39.4	11.2	1	02/12/14 09:08	2/7/14	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	85	10 - 258	02/12/14 09:08	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1400851
Project:	Press Site/TL014021.0000	**Date Collected:**	02/04/14 12:24
Sample Matrix:	Soil	**Date Received:**	02/05/14 09:25
Sample Name:	PRES-SB0004-000.5-20140204	**Units:**	ug/Kg
Lab Code:	J1400851-003	**Basis:**	Dry

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082
Prep Method: EPA 3550B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	12.0 U	43.5	12.0	1	02/12/14 09:32	2/7/14	
Aroclor 1221	8.81 U	43.5	8.81	1	02/12/14 09:32	2/7/14	
Aroclor 1232	28.5 U	43.5	28.5	1	02/12/14 09:32	2/7/14	
Aroclor 1242	11.8 U	43.5	11.8	1	02/12/14 09:32	2/7/14	
Aroclor 1248	21.2 U	43.5	21.2	1	02/12/14 09:32	2/7/14	
Aroclor 1254	**22.3 I**	43.5	16.1	1	02/12/14 09:32	2/7/14	
Aroclor 1260	12.3 U	43.5	12.3	1	02/12/14 09:32	2/7/14	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	90	10 - 258	02/12/14 09:32	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1400851
Project:	Press Site/TL014021.0000	**Date Collected:**	02/04/14 12:33
Sample Matrix:	Soil	**Date Received:**	02/05/14 09:25
Sample Name:	PRES-SB0005-000.5-20140204	**Units:**	ug/Kg
Lab Code:	J1400851-004	**Basis:**	Dry

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082
Prep Method: EPA 3550B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	12.0 U	43.4	12.0	1	02/12/14 09:56	2/7/14	
Aroclor 1221	8.80 U	43.4	8.80	1	02/12/14 09:56	2/7/14	
Aroclor 1232	28.5 U	43.4	28.5	1	02/12/14 09:56	2/7/14	
Aroclor 1242	11.8 U	43.4	11.8	1	02/12/14 09:56	2/7/14	
Aroclor 1248	21.2 U	43.4	21.2	1	02/12/14 09:56	2/7/14	
Aroclor 1254	16.1 U	43.4	16.1	1	02/12/14 09:56	2/7/14	
Aroclor 1260	12.3 U	43.4	12.3	1	02/12/14 09:56	2/7/14	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	79	10 - 258	02/12/14 09:56	

Client:	Levine Fricke	**Service Request:**	J1400851
Project:	Press Site/TL014021.0000	**Date Collected:**	02/04/14 12:40
Sample Matrix:	Soil	**Date Received:**	02/05/14 09:25
Sample Name:	PRES-SB0006-000.5-20140204	**Units:**	ug/Kg
Lab Code:	J1400851-005	**Basis:**	Dry

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082
Prep Method: EPA 3550B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	10.4 U	37.6	10.4	1	02/12/14 10:21	2/7/14	
Aroclor 1221	7.61 U	37.6	7.61	1	02/12/14 10:21	2/7/14	
Aroclor 1232	24.6 U	37.6	24.6	1	02/12/14 10:21	2/7/14	
Aroclor 1242	10.2 U	37.6	10.2	1	02/12/14 10:21	2/7/14	
Aroclor 1248	**870**	188	91.5	5	02/13/14 22:00	2/7/14	
Aroclor 1254	**412**	188	69.3	5	02/13/14 22:00	2/7/14	
Aroclor 1260	**194**	37.6	10.6	1	02/12/14 10:21	2/7/14	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	41	10 - 258	02/12/14 10:21	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1400851
Project:	Press Site/TL014021.0000	**Date Collected:**	02/04/14 12:47
Sample Matrix:	Soil	**Date Received:**	02/05/14 09:25
Sample Name:	PRES-SB0007-000.5-20140204	**Units:**	ug/Kg
Lab Code:	J1400851-006	**Basis:**	Dry

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082
Prep Method: EPA 3550B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	11.1 U	40.2	11.1	1	02/12/14 11:34	2/7/14	
Aroclor 1221	8.15 U	40.2	8.15	1	02/12/14 11:34	2/7/14	
Aroclor 1232	26.4 U	40.2	26.4	1	02/12/14 11:34	2/7/14	
Aroclor 1242	10.9 U	40.2	10.9	1	02/12/14 11:34	2/7/14	
Aroclor 1248	19.6 U	40.2	19.6	1	02/12/14 11:34	2/7/14	
Aroclor 1254	**302**	40.2	14.9	1	02/12/14 11:34	2/7/14	
Aroclor 1260	11.4 U	40.2	11.4	1	02/12/14 11:34	2/7/14	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	66	10 - 258	02/12/14 11:34	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1400851
Project:	Press Site/TL014021.0000	**Date Collected:**	02/04/14 12:54
Sample Matrix:	Soil	**Date Received:**	02/05/14 09:25
Sample Name:	PRES-SB0008-000.5-20140204	**Units:**	ug/Kg
Lab Code:	J1400851-007	**Basis:**	Dry

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082
Prep Method: EPA 3550B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	10.3 U	37.3	10.3	1	02/12/14 11:58	2/7/14	
Aroclor 1221	7.55 U	37.3	7.55	1	02/12/14 11:58	2/7/14	
Aroclor 1232	24.4 U	37.3	24.4	1	02/12/14 11:58	2/7/14	
Aroclor 1242	10.1 U	37.3	10.1	1	02/12/14 11:58	2/7/14	
Aroclor 1248	18.2 U	37.3	18.2	1	02/12/14 11:58	2/7/14	
Aroclor 1254	**133**	37.3	13.8	1	02/12/14 11:58	2/7/14	
Aroclor 1260	**44.4**	37.3	10.5	1	02/12/14 11:58	2/7/14	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	82	10 - 258	02/12/14 11:58	

Client:	Levine Fricke	**Service Request:**	J1400851
Project:	Press Site/TL014021.0000	**Date Collected:**	02/04/14 13:02
Sample Matrix:	Soil	**Date Received:**	02/05/14 09:25
Sample Name:	PRES-SB0009-000.5-20140204	**Units:**	ug/Kg
Lab Code:	J1400851-008	**Basis:**	Dry

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082
Prep Method: EPA 3550B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	10.7 U	38.7	10.7	1	02/12/14 12:22	2/7/14	
Aroclor 1221	7.84 U	38.7	7.84	1	02/12/14 12:22	2/7/14	
Aroclor 1232	25.4 U	38.7	25.4	1	02/12/14 12:22	2/7/14	
Aroclor 1242	10.5 U	38.7	10.5	1	02/12/14 12:22	2/7/14	
Aroclor 1248	18.9 U	38.7	18.9	1	02/12/14 12:22	2/7/14	
Aroclor 1254	14.3 U	38.7	14.3	1	02/12/14 12:22	2/7/14	
Aroclor 1260	11.0 U	38.7	11.0	1	02/12/14 12:22	2/7/14	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	82	10 - 258	02/12/14 12:22	

Client:	Levine Fricke	**Service Request:**	J1400851
Project:	Press Site/TL014021.0000	**Date Collected:**	02/04/14 12:00
Sample Matrix:	Soil	**Date Received:**	02/05/14 09:25
Sample Name:	PRES-SB0010-000.5-20140204	**Units:**	ug/Kg
Lab Code:	J1400851-009	**Basis:**	Dry

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082
Prep Method: EPA 3550B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	9.86 U	35.9	9.86	1	02/12/14 12:47	2/7/14	
Aroclor 1221	7.27 U	35.9	7.27	1	02/12/14 12:47	2/7/14	
Aroclor 1232	23.5 U	35.9	23.5	1	02/12/14 12:47	2/7/14	
Aroclor 1242	9.67 U	35.9	9.67	1	02/12/14 12:47	2/7/14	
Aroclor 1248	17.5 U	35.9	17.5	1	02/12/14 12:47	2/7/14	
Aroclor 1254	13.3 U	35.9	13.3	1	02/12/14 12:47	2/7/14	
Aroclor 1260	10.2 U	35.9	10.2	1	02/12/14 12:47	2/7/14	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	75	10 - 258	02/12/14 12:47	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1400851
Project:	Press Site/TL014021.0000	**Date Collected:**	02/04/14 12:06
Sample Matrix:	Soil	**Date Received:**	02/05/14 09:25
Sample Name:	PRES-SB0011-000.5-20140204	**Units:**	ug/Kg
Lab Code:	J1400851-010	**Basis:**	Dry

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082
Prep Method: EPA 3550B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	12.9 U	46.8	12.9	1	02/12/14 13:11	2/7/14	
Aroclor 1221	9.48 U	46.8	9.48	1	02/12/14 13:11	2/7/14	
Aroclor 1232	30.7 U	46.8	30.7	1	02/12/14 13:11	2/7/14	
Aroclor 1242	12.7 U	46.8	12.7	1	02/12/14 13:11	2/7/14	
Aroclor 1248	22.8 U	46.8	22.8	1	02/12/14 13:11	2/7/14	
Aroclor 1254	**67.6**	46.8	17.3	1	02/12/14 13:11	2/7/14	
Aroclor 1260	13.2 U	46.8	13.2	1	02/12/14 13:11	2/7/14	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	75	10 - 258	02/12/14 13:11	

Client:	Levine Fricke	**Service Request:**	J1400851
Project:	Press Site/TL014021.0000	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/Kg
Lab Code:	JQ1400935-01	**Basis:**	Dry

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082
Prep Method: EPA 3550B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	9.06 U	33.0	9.06	1	02/12/14 07:06	2/7/14	
Aroclor 1221	6.68 U	33.0	6.68	1	02/12/14 07:06	2/7/14	
Aroclor 1232	21.6 U	33.0	21.6	1	02/12/14 07:06	2/7/14	
Aroclor 1242	8.89 U	33.0	8.89	1	02/12/14 07:06	2/7/14	
Aroclor 1248	16.1 U	33.0	16.1	1	02/12/14 07:06	2/7/14	
Aroclor 1254	12.2 U	33.0	12.2	1	02/12/14 07:06	2/7/14	
Aroclor 1260	9.30 U	33.0	9.30	1	02/12/14 07:06	2/7/14	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	171	10 - 258	02/12/14 07:06	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1400851
Project:	Press Site/TL014021.0000	**Date Collected:**	02/4/14
Sample Matrix:	Soil	**Date Received:**	02/5/14
Analysis Method:	160.3 Modified	**Units:**	Percent
		Basis:	NA

Solids, Total

Sample Name	Lab Code	Result	MRL	MDL	Dil.	Date Analyzed	Q
PRES-SB0002-000.5-20140204	J1400851-001	**76**	0.10	0.10	1	02/12/14 17:23	
PRES-SB0003-000.5-20140204	J1400851-002	**79**	0.10	0.10	1	02/12/14 17:23	
PRES-SB0004-000.5-20140204	J1400851-003	**79**	0.10	0.10	1	02/12/14 17:23	
PRES-SB0005-000.5-20140204	J1400851-004	**77**	0.10	0.10	1	02/12/14 17:23	
PRES-SB0006-000.5-20140204	J1400851-005	**85**	0.10	0.10	1	02/12/14 17:23	
PRES-SB0007-000.5-20140204	J1400851-006	**82**	0.10	0.10	1	02/12/14 17:23	
PRES-SB0008-000.5-20140204	J1400851-007	**88**	0.10	0.10	1	02/12/14 17:23	
PRES-SB0009-000.5-20140204	J1400851-008	**87**	0.10	0.10	1	02/12/14 17:23	
PRES-SB0010-000.5-20140204	J1400851-009	**89**	0.10	0.10	1	02/12/14 17:23	
PRES-SB0011-000.5-20140204	J1400851-010	**75**	0.10	0.10	1	02/12/14 17:23	

Client: Levine Fricke **Service Request:** J1400851
Project: Press Site/TL014021.0000
Sample Matrix: Soil

SURROGATE RECOVERY SUMMARY
Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082
Extraction Method: EPA 3550B

Sample Name	Lab Code	Decachlorobiphenyl 10 - 258
PRES-SB0002-000.5-20140204	J1400851-001	82
PRES-SB0003-000.5-20140204	J1400851-002	85
PRES-SB0004-000.5-20140204	J1400851-003	90
PRES-SB0005-000.5-20140204	J1400851-004	79
PRES-SB0006-000.5-20140204	J1400851-005	41
PRES-SB0007-000.5-20140204	J1400851-006	66
PRES-SB0008-000.5-20140204	J1400851-007	82
PRES-SB0009-000.5-20140204	J1400851-008	82
PRES-SB0010-000.5-20140204	J1400851-009	75
PRES-SB0011-000.5-20140204	J1400851-010	75
Method Blank	JQ1400935-01	171
Lab Control Sample	JQ1400935-03	115
PRES-SB0006-000.5-20140204	JQ1400935-04	58
PRES-SB0006-000.5-20140204	JQ1400935-05	64

Client:	Levine Fricke	**Service Request:**	J1400851
Project:	Press Site/TL014021.0000	**Date Collected:**	02/04/14
Sample Matrix:	Soil	**Date Received:**	02/05/14
		Date Analyzed:	02/12/14
		Date Extracted:	02/7/14

Duplicate Matrix Spike Summary
Polychlorinated Biphenyls (PCBs) by GC

Sample Name:	PRES-SB0006-000.5-20140204	**Units:**	ug/Kg
Lab Code:	J1400851-005	**Basis:**	Dry
Analysis Method:	8082		
Prep Method:	EPA 3550B		

		Matrix Spike JQ1400935-04			**Duplicate Matrix Spike** JQ1400935-05					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Aroclor 1016	10.2 U	421	300	140	333	312	107	28-149	23	30
Aroclor 1260	194	124	300	-23 *	447	312	81	10-176	113*	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client:	Levine Fricke	**Service Request:**	J1400851
Project:	Press Site/TL014021.0000	**Date Analyzed:**	02/12/14
Sample Matrix:	Soil	**Date Extracted:**	02/07/14

Lab Control Sample Summary
Polychlorinated Biphenyls (PCBs) by GC

Analysis Method:	8082	**Units:**	ug/Kg
Prep Method:	EPA 3550B	**Basis:**	Dry
		Analysis Lot:	379837

Lab Control Sample
JQ1400935-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Aroclor 1016	257	267	96	28-149
Aroclor 1260	277	267	104	10-176

Client:	Levine Fricke	**Service Request:**	J1400851
Project	Press Site/TL014021.0000	**Date Collected:**	02/04/14
Sample Matrix:	Soil	**Date Received:**	02/05/14
		Date Analyzed:	02/12/14

Replicate Sample Summary
General Chemistry Parameters

Sample Name:	PRES-SB0002-000.5-20140204	**Units:**	Percent
Lab Code:	J1400851-001	**Basis:**	NA

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample J1400851-001DUP Result	Average	RPD	RPD Limit
Solids, Total	160.3 Modified	0.10	0.10	76	76	76.2	<1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Environmental

Cooler Receipt Form

Client: Arcadis Service Request #: J1400851

Project: Press Site

Cooler received on 2/5/14 and opened on 2/5/14 by SC

COURIER: ALS (UPS) FEDEX Client Other ______ Airbill # J452 405 4351

1	Were custody seals on outside of cooler?	Yes (No)
	If yes, how many and where?	#:__ on lid other
2	Were seals intact and signature and date correct?	Yes No (N/A)
3	Were custody papers properly filled out?	(Yes) No N/A
4	Temperature of cooler(s) upon receipt (Should be > 0°C and < 6°C)	1.9°C
5	Thermometer ID	T81
6	Temperature Blank Present?	(Yes) No
7	Were Ice or Ice Packs present	(Ice) Ice Packs No
8	Did all bottles arrive in good condition (unbroken, etc....)?	(Yes) No N/A
9	Type of packing material present	Netting Vial Holder (Bubble Wrap) Paper Styrofoam Other N/A
10	Were all bottle labels complete (sample ID, preservation, etc....)?	(Yes) No N/A
11	Did all bottle labels and tags agree with custody papers?	(Yes) No N/A
12	Were the correct bottles used for the tests indicated?	(Yes) No N/A
13	Were all of the preserved bottles received with the appropriate preservative? HNO3 pH<2 H2SO4 pH<2 ZnAc2/NaOH pH>9 NaOH pH>12 HCl pH<2 Preservative additions noted below	Yes No (N/A)
14	Were all samples received within analysis holding times?	(Yes) No N/A
15	Were all VOA vials free of air bubbles? If present, note below	Yes No (N/A)
16	Where did the bottles originate?	(ALS) Client

Sample ID	Reagent	Lot #	ml added	Initials Date/Time

Additional comments and/or explanation of all discrepancies noted above:

Client approval to run samples if discrepancies noted: Date:

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

ALS Environmental

9143 Philips Highway, Ste 200 • Jacksonville, FL 32256 (904) 739-2277 • 800-695-7222 x06 • FAX (904) 739-2011

PAGE 1 OF 1

SR# J1400851 CAS Contract

Project Name: PRESS Site	Project Number:
Project Manager: Scott Starr	Email Address: Scott.Starr@Arcadis-us.com
Company/Address: Arcadis	
10025 Riveredge Pr Suite 600	
Tampa FL 33637	
Phone #: 813 394 9360	FAX #:
Sampler's Signature: Erik Dankerl	Sampler's Printed Name: Erik Dankerl

ANALYSIS REQUESTED (Include Method Number) J1400851 5

Levine Fricke Press Site

PRESERVATIVE: 8

NUMBER OF CONTAINERS: 1

6082 PCBs

Preservative Key: 0. NONE; 1. HCL; 2. HNO_3; 3. H_2SO_4; 4. NaOH; 5. Zn. Acetate; 6. MeOH; 7. $NaHSO_4$; 8. Other Ice

CLIENT SAMPLE ID	LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	REMARKS/ ALTERNATE DESCRIPTION
PRES-SB0002-000.5-20140204		2/4/14	12:12	S	
PRES-SB0003-000.5-20140204			12:18		
PRES-SB0004-000.5-20140204			12:24		
PRES-SB0005-000.5-20140204			12:33		
PRES-SB0006-000.5-20140204			12:40		
PRES-SB0007-000.5-20140204		2/4/14	12:47	S	
PRES-SB0008-000.5-20140204			12:54		
PRES-SB0009-000.5-20140204			13:02		
PRES-SB0010-000.5-20140204			12:00		
PRES-SB0011-000.5-20140204		2/4/14	12:06	S	

SPECIAL INSTRUCTIONS/COMMENTS

See QAPP ☐

TURNAROUND REQUIREMENTS
_____ RUSH (SURCHARGES APPLY)
_____ STANDARD
REQUESTED FAX DATE
_____
REQUESTED REPORT DATE
_____

REPORT REQUIREMENTS
____ I. Results Only
____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data
____ V. Specialized Forms / Custom Report
Edata ____Yes ____No

INVOICE INFORMATION
PO #
BILL TO:

SAMPLE RECEIPT: CONDITION/COOLER TEMP: 1.2°C CUSTODY SEALS: Y N

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: Erik Dankerl	Signature: Shawn Lightsey	Signature	Signature	Signature	Signature
Printed Name: ARCADIS	Printed Name: ARCADIS	Printed Name	Printed Name	Printed Name	Printed Name
Firm: 2/4/14 1330	Firm: 2/5/14 0925	Firm	Firm	Firm	Firm
Date/Time: UPS	Date/Time	Date/Time	Date/Time	Date/Time	Date/Time

Distribution: White - Return to Originator; Yellow - Retained by Client

March 17, 2014 Service Request No:J1401475

Mr. Scott Starr
Levine Fricke
14025 Riveredge Drive
Suite 600
Tampa, FL 33637

Laboratory Results for: NASA Press Site

Dear Mr.Starr,

Enclosed are the results of the sample(s) submitted to our laboratory February 28, 2014
For your reference, these analyses have been assigned our service request number **J1401475.**

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. In accordance to the NELAC 2003 Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Please contact me if you have any questions. My extension is 4409. You may also contact me via email at Craig.Myers@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Craig Myers
Project Manager

ADDRESS 9143 Philips Highway, Suite 200, Jacksonville, FL 32256
PHONE +1 904 739 2277 | FAX +1 904 739 2011
ALS Group USA, Corp.
dba ALS Environmental

SAMPLE DETECTION SUMMARY

CLIENT ID: PRES-SB0003-002.0-20140227	Lab ID: J1401475-001					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Solids, Total	96		0.10	0.10	Percent	160.3
Aroclor 1254	508		60.8	160	ug/Kg	8082
Aroclor 1260	327		46.5	160	ug/Kg	8082

CLIENT ID: PRES-SB0006-002.0-20140227	Lab ID: J1401475-002					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Solids, Total	92		0.10	0.10	Percent	160.3
Aroclor 1248	195		16.3	33.4	ug/Kg	8082
Aroclor 1254	80.6		12.4	33.4	ug/Kg	8082
Aroclor 1260	55.8		9.42	33.4	ug/Kg	8082

CLIENT ID: PRES-SB0012-000.5-20140227	Lab ID: J1401475-003					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Solids, Total	90		0.10	0.10	Percent	160.3
Aroclor 1254	64.4		13.3	35.9	ug/Kg	8082
Aroclor 1260	54.5		10.2	35.9	ug/Kg	8082

CLIENT ID: PRES-SB0012-002.0-20140227	Lab ID: J1401475-004					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Solids, Total	94		0.10	0.10	Percent	160.3

CLIENT ID: PRES-SB0013-000.5-20140227	Lab ID: J1401475-005					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Solids, Total	90		0.10	0.10	Percent	160.3
Aroclor 1254	16.6	I	13.4	36.2	ug/Kg	8082

CLIENT ID: PRES-SB0013-002.0-20140227	Lab ID: J1401475-006					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Solids, Total	97		0.10	0.10	Percent	160.3

CLIENT ID: PRES-SB0014-000.5-20140227	Lab ID: J1401475-007					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Solids, Total	89		0.10	0.10	Percent	160.3
Aroclor 1254	256		13.8	37.3	ug/Kg	8082
Aroclor 1260	154		10.6	37.3	ug/Kg	8082

CLIENT ID: PRES-SB0014-002.0-20140227	Lab ID: J1401475-008					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Solids, Total	93		0.10	0.10	Percent	160.3
Aroclor 1260	9.74	I	9.68	34.3	ug/Kg	8082

CLIENT ID: PRES-SB0015-000.5-20140227	Lab ID: J1401475-009					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Solids, Total	88		0.10	0.10	Percent	160.3
Aroclor 1254	259		13.8	37.3	ug/Kg	8082

SAMPLE DETECTION SUMMARY

CLIENT ID: PRES-SB0015-000.5-20140227	Lab ID: J1401475-009					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Aroclor 1260	177		10.5	37.3	ug/Kg	8082

CLIENT ID: PRES-SB0015-002.0-20140227	Lab ID: J1401475-010					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Solids, Total	97		0.10	0.10	Percent	160.3

CLIENT ID: PRES-SB0016-000.5-20140227	Lab ID: J1401475-011					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Solids, Total	91		0.10	0.10	Percent	160.3
Aroclor 1254	155		13.3	36.0	ug/Kg	8082
Aroclor 1260	119		10.2	36.0	ug/Kg	8082

CLIENT ID: PRES-SB0016-002.0-20140227	Lab ID: J1401475-012					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Solids, Total	96		0.10	0.10	Percent	160.3
Aroclor 1260	13.1	I	9.30	31.4	ug/Kg	8082

CLIENT ID: PRES-SB0017-000.5-20140227	Lab ID: J1401475-013					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Solids, Total	90		0.10	0.10	Percent	160.3
Aroclor 1254	18.3	I	12.3	33.3	ug/Kg	8082
Aroclor 1260	22.0	I	9.40	33.3	ug/Kg	8082

CLIENT ID: PRES-SB0017-002.0-20140277	Lab ID: J1401475-014					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Solids, Total	89		0.10	0.10	Percent	160.3
Aroclor 1260	16.3	I	10.4	36.8	ug/Kg	8082

CLIENT ID: PRES-SB0018-000.5-20140227	Lab ID: J1401475-015					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Solids, Total	92		0.10	0.10	Percent	160.3
Aroclor 1254	26.9	I	12.8	34.5	ug/Kg	8082
Aroclor 1260	28.0	I	9.72	34.5	ug/Kg	8082

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
Florida Department of Health	E82502	6/30/2014
North Carolina Department of Environment and Natural Resources	527	12/31/2014
Virginia Environmental Accreditation Program	460191	12/14/2014
Louisiana Department of Environmental Quality	02086	6/30/2014
Georgia Department of Natural Resources	958	6/30/2014
Kentucky Division of Waste Management	63	6/30/2014
South Carolina Department of Health and Environmental Control	96021001	6/30/2014
Texas Commision on Environmental Quality	T104704197-13-5	5/31/2014
Maine Department of Health and Human Services	2011006	2/3/2015
Department of Defense	66206	5/31/2014
Pennsylvania Department of Environmental Protection	68-04835	8/31/2014

Data Qualifiers

Florida-DEP

!	Data deviates from historically established concentration ranges
*	Not reported due to interference
?	Data is rejected and should not be used
A	Value reported is the arithmetic mean of two or more determininations
B	Results based upon colony counts outside the acceptable range.
D	Measurement was made in the field.
E	Extra samples were taken at composite stations
H	Value based on field kit determination; results may not be accurate.
I	The reported value is between the laboratory method detection limit and the laboratory PQL.
J	Estimated value.
K	Off scale low. The value is less than the lowest calibration standard.
L	Off scale high. The analyte is above the acceptable level of quantitation.
M	The MDL/MRL has been elevated because the analyte could not be accurately quantified.
N	Presumptive evidence of presence of material.
O	Sampled, but analysis lost or not performed
Q	Sample held beyond the acceptable holding time.
R	Significant rain in the past 48 hours (typically in excess of 0.5 inches)
T	Estimated value, less than the MDL
U	Indicates that the compound was analyzed for but not detected.
V	Indicates that the analyte was detected in both the sample and the associated method blank.
X	Insufficient individuals were present in the sample to achieve a minimum of 280 organisms for identification (Stream Condition Index Analysis only)
Y	The laboratory analysis was from an unpreserved or improperly preserved sample.
Z	Too many colonies were present, the numeric value represents the filtration volume

ALS Laboratory Group

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Client: Levine Fricke **Service Request:**J1401475

Project: NASA Press Site/TL014021.0000

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
J1401475-001	PRES-SB0003-002.0-20140227	2/27/2014	1051
J1401475-002	PRES-SB0006-002.0-20140227	2/27/2014	1158
J1401475-003	PRES-SB0012-000.5-20140227	2/27/2014	1207
J1401475-004	PRES-SB0012-002.0-20140227	2/27/2014	1211
J1401475-005	PRES-SB0013-000.5-20140227	2/27/2014	1217
J1401475-006	PRES-SB0013-002.0-20140227	2/27/2014	1221
J1401475-007	PRES-SB0014-000.5-20140227	2/27/2014	1230
J1401475-008	PRES-SB0014-002.0-20140227	2/27/2014	1235
J1401475-009	PRES-SB0015-000.5-20140227	2/27/2014	1118
J1401475-010	PRES-SB0015-002.0-20140227	2/27/2014	1121
J1401475-011	PRES-SB0016-000.5-20140227	2/27/2014	1107
J1401475-012	PRES-SB0016-002.0-20140227	2/27/2014	1110
J1401475-013	PRES-SB0017-000.5-20140227	2/27/2014	1130
J1401475-014	PRES-SB0017-002.0-20140277	2/27/2014	1134
J1401475-015	PRES-SB0018-000.5-20140227	2/27/2014	1149

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1401475
Project:	NASA Press Site/TL014021.0000	**Date Collected:**	02/27/14 10:51
Sample Matrix:	Soil	**Date Received:**	02/28/14 09:00
Sample Name:	PRES-SB0003-002.0-20140227	**Units:**	ug/Kg
Lab Code:	J1401475-001	**Basis:**	Dry

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082
Prep Method: EPA 3550B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	9.06 U	32.0	9.06	1	03/11/14 15:35	3/11/14	
Aroclor 1221	6.68 U	32.0	6.68	1	03/11/14 15:35	3/11/14	
Aroclor 1232	21.6 U	32.0	21.6	1	03/11/14 15:35	3/11/14	
Aroclor 1242	8.89 U	32.0	8.89	1	03/11/14 15:35	3/11/14	
Aroclor 1248	16.1 U	32.0	16.1	1	03/11/14 15:35	3/11/14	
Aroclor 1254	**508**	160	60.8	5	03/11/14 23:18	3/11/14	
Aroclor 1260	**327**	160	46.5	5	03/11/14 23:18	3/11/14	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	60	10 - 258	03/11/14 15:35	

Client:	Levine Fricke	**Service Request:**	J1401475
Project:	NASA Press Site/TL014021.0000	**Date Collected:**	02/27/14 11:58
Sample Matrix:	Soil	**Date Received:**	02/28/14 09:00
Sample Name:	PRES-SB0006-002.0-20140227	**Units:**	ug/Kg
Lab Code:	J1401475-002	**Basis:**	Dry

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082
Prep Method: EPA 3550B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	9.18 U	33.4	9.18	1	03/11/14 16:48	3/11/14	
Aroclor 1221	6.77 U	33.4	6.77	1	03/11/14 16:48	3/11/14	
Aroclor 1232	21.9 U	33.4	21.9	1	03/11/14 16:48	3/11/14	
Aroclor 1242	9.01 U	33.4	9.01	1	03/11/14 16:48	3/11/14	
Aroclor 1248	**195**	33.4	16.3	1	03/13/14 09:23	3/11/14	
Aroclor 1254	**80.6**	33.4	12.4	1	03/11/14 16:48	3/11/14	
Aroclor 1260	**55.8**	33.4	9.42	1	03/11/14 16:48	3/11/14	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	48	10 - 258	03/11/14 16:48	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1401475
Project:	NASA Press Site/TL014021.0000	**Date Collected:**	02/27/14 12:07
Sample Matrix:	Soil	**Date Received:**	02/28/14 09:00
Sample Name:	PRES-SB0012-000.5-20140227	**Units:**	ug/Kg
Lab Code:	J1401475-003	**Basis:**	Dry

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082
Prep Method: EPA 3550B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	9.87 U	35.9	9.87	1	03/12/14 14:52	3/12/14	
Aroclor 1221	7.28 U	35.9	7.28	1	03/12/14 14:52	3/12/14	
Aroclor 1232	23.6 U	35.9	23.6	1	03/12/14 14:52	3/12/14	
Aroclor 1242	9.69 U	35.9	9.69	1	03/12/14 14:52	3/12/14	
Aroclor 1248	17.6 U	35.9	17.6	1	03/12/14 14:52	3/12/14	
Aroclor 1254	**64.4**	35.9	13.3	1	03/12/14 14:52	3/12/14	
Aroclor 1260	**54.5**	35.9	10.2	1	03/12/14 14:52	3/12/14	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	53	10 - 258	03/12/14 14:52	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1401475
Project:	NASA Press Site/TL014021.0000	**Date Collected:**	02/27/14 12:11
Sample Matrix:	Soil	**Date Received:**	02/28/14 09:00
Sample Name:	PRES-SB0012-002.0-20140227	**Units:**	ug/Kg
Lab Code:	J1401475-004	**Basis:**	Dry

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082
Prep Method: EPA 3550B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	9.06 U	32.9	9.06	1	03/11/14 17:13	3/11/14	
Aroclor 1221	6.68 U	32.9	6.68	1	03/11/14 17:13	3/11/14	
Aroclor 1232	21.6 U	32.9	21.6	1	03/11/14 17:13	3/11/14	
Aroclor 1242	8.89 U	32.9	8.89	1	03/11/14 17:13	3/11/14	
Aroclor 1248	16.1 U	32.9	16.1	1	03/11/14 17:13	3/11/14	
Aroclor 1254	12.2 U	32.9	12.2	1	03/11/14 17:13	3/11/14	
Aroclor 1260	9.30 U	32.9	9.30	1	03/11/14 17:13	3/11/14	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	63	10 - 258	03/11/14 17:13	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1401475
Project:	NASA Press Site/TL014021.0000	**Date Collected:**	02/27/14 12:17
Sample Matrix:	Soil	**Date Received:**	02/28/14 09:00
Sample Name:	PRES-SB0013-000.5-20140227	**Units:**	ug/Kg
Lab Code:	J1401475-005	**Basis:**	Dry

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082
Prep Method: EPA 3550B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	9.94 U	36.2	9.94	1	03/12/14 15:17	3/12/14	
Aroclor 1221	7.33 U	36.2	7.33	1	03/12/14 15:17	3/12/14	
Aroclor 1232	23.7 U	36.2	23.7	1	03/12/14 15:17	3/12/14	
Aroclor 1242	9.75 U	36.2	9.75	1	03/12/14 15:17	3/12/14	
Aroclor 1248	17.7 U	36.2	17.7	1	03/12/14 15:17	3/12/14	
Aroclor 1254	**16.6 I**	36.2	13.4	1	03/12/14 15:17	3/12/14	
Aroclor 1260	10.2 U	36.2	10.2	1	03/12/14 15:17	3/12/14	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	52	10 - 258	03/12/14 15:17	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1401475
Project:	NASA Press Site/TL014021.0000	**Date Collected:**	02/27/14 12:21
Sample Matrix:	Soil	**Date Received:**	02/28/14 09:00
Sample Name:	PRES-SB0013-002.0-20140227	**Units:**	ug/Kg
Lab Code:	J1401475-006	**Basis:**	Dry

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082
Prep Method: EPA 3550B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	9.41 U	34.2	9.41	1	03/11/14 17:37	3/11/14	
Aroclor 1221	6.94 U	34.2	6.94	1	03/11/14 17:37	3/11/14	
Aroclor 1232	22.4 U	34.2	22.4	1	03/11/14 17:37	3/11/14	
Aroclor 1242	9.23 U	34.2	9.23	1	03/11/14 17:37	3/11/14	
Aroclor 1248	16.7 U	34.2	16.7	1	03/11/14 17:37	3/11/14	
Aroclor 1254	12.7 U	34.2	12.7	1	03/11/14 17:37	3/11/14	
Aroclor 1260	9.66 U	34.2	9.66	1	03/11/14 17:37	3/11/14	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	64	10 - 258	03/11/14 17:37	

Client:	Levine Fricke	**Service Request:**	J1401475
Project:	NASA Press Site/TL014021.0000	**Date Collected:**	02/27/14 12:30
Sample Matrix:	Soil	**Date Received:**	02/28/14 09:00
Sample Name:	PRES-SB0014-000.5-20140227	**Units:**	ug/Kg
Lab Code:	J1401475-007	**Basis:**	Dry

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082
Prep Method: EPA 3550B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	10.3 U	37.3	10.3	1	03/11/14 18:01	3/11/14	
Aroclor 1221	7.56 U	37.3	7.56	1	03/11/14 18:01	3/11/14	
Aroclor 1232	24.5 U	37.3	24.5	1	03/11/14 18:01	3/11/14	
Aroclor 1242	10.1 U	37.3	10.1	1	03/11/14 18:01	3/11/14	
Aroclor 1248	18.2 U	37.3	18.2	1	03/11/14 18:01	3/11/14	
Aroclor 1254	**256**	37.3	13.8	1	03/11/14 18:01	3/11/14	
Aroclor 1260	**154**	37.3	10.6	1	03/11/14 18:01	3/11/14	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	25	10 - 258	03/11/14 18:01	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1401475
Project:	NASA Press Site/TL014021.0000	**Date Collected:**	02/27/14 12:35
Sample Matrix:	Soil	**Date Received:**	02/28/14 09:00
Sample Name:	PRES-SB0014-002.0-20140227	**Units:**	ug/Kg
Lab Code:	J1401475-008	**Basis:**	Dry

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082
Prep Method: EPA 3550B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	9.43 U	34.3	9.43	1	03/11/14 18:26	3/11/14	
Aroclor 1221	6.96 U	34.3	6.96	1	03/11/14 18:26	3/11/14	
Aroclor 1232	22.5 U	34.3	22.5	1	03/11/14 18:26	3/11/14	
Aroclor 1242	9.26 U	34.3	9.26	1	03/11/14 18:26	3/11/14	
Aroclor 1248	16.8 U	34.3	16.8	1	03/11/14 18:26	3/11/14	
Aroclor 1254	12.7 U	34.3	12.7	1	03/11/14 18:26	3/11/14	
Aroclor 1260	**9.74 I**	34.3	9.68	1	03/11/14 18:26	3/11/14	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	80	10 - 258	03/11/14 18:26	

Client:	Levine Fricke	**Service Request:**	J1401475
Project:	NASA Press Site/TL014021.0000	**Date Collected:**	02/27/14 11:18
Sample Matrix:	Soil	**Date Received:**	02/28/14 09:00
Sample Name:	PRES-SB0015-000.5-20140227	**Units:**	ug/Kg
Lab Code:	J1401475-009	**Basis:**	Dry

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082
Prep Method: EPA 3550B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	10.3 U	37.3	10.3	1	03/11/14 18:50	3/11/14	
Aroclor 1221	7.55 U	37.3	7.55	1	03/11/14 18:50	3/11/14	
Aroclor 1232	24.4 U	37.3	24.4	1	03/11/14 18:50	3/11/14	
Aroclor 1242	10.1 U	37.3	10.1	1	03/11/14 18:50	3/11/14	
Aroclor 1248	18.2 U	37.3	18.2	1	03/11/14 18:50	3/11/14	
Aroclor 1254	**259**	37.3	13.8	1	03/11/14 18:50	3/11/14	
Aroclor 1260	**177**	37.3	10.5	1	03/11/14 18:50	3/11/14	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	61	10 - 258	03/11/14 18:50	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1401475
Project:	NASA Press Site/TL014021.0000	**Date Collected:**	02/27/14 11:21
Sample Matrix:	Soil	**Date Received:**	02/28/14 09:00
Sample Name:	PRES-SB0015-002.0-20140227	**Units:**	ug/Kg
Lab Code:	J1401475-010	**Basis:**	Dry

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082
Prep Method: EPA 3550B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	9.10 U	33.1	9.10	1	03/11/14 19:14	3/11/14	
Aroclor 1221	6.71 U	33.1	6.71	1	03/11/14 19:14	3/11/14	
Aroclor 1232	21.7 U	33.1	21.7	1	03/11/14 19:14	3/11/14	
Aroclor 1242	8.93 U	33.1	8.93	1	03/11/14 19:14	3/11/14	
Aroclor 1248	16.2 U	33.1	16.2	1	03/11/14 19:14	3/11/14	
Aroclor 1254	12.3 U	33.1	12.3	1	03/11/14 19:14	3/11/14	
Aroclor 1260	9.34 U	33.1	9.34	1	03/11/14 19:14	3/11/14	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	74	10 - 258	03/11/14 19:14	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1401475
Project:	NASA Press Site/TL014021.0000	**Date Collected:**	02/27/14 11:07
Sample Matrix:	Soil	**Date Received:**	02/28/14 09:00
Sample Name:	PRES-SB0016-000.5-20140227	**Units:**	ug/Kg
Lab Code:	J1401475-011	**Basis:**	Dry

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082
Prep Method: EPA 3550B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	9.90 U	36.0	9.90	1	03/11/14 19:39	3/11/14	
Aroclor 1221	7.30 U	36.0	7.30	1	03/11/14 19:39	3/11/14	
Aroclor 1232	23.6 U	36.0	23.6	1	03/11/14 19:39	3/11/14	
Aroclor 1242	9.71 U	36.0	9.71	1	03/11/14 19:39	3/11/14	
Aroclor 1248	17.6 U	36.0	17.6	1	03/11/14 19:39	3/11/14	
Aroclor 1254	**155**	36.0	13.3	1	03/11/14 19:39	3/11/14	
Aroclor 1260	**119**	36.0	10.2	1	03/11/14 19:39	3/11/14	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	59	10 - 258	03/11/14 19:39	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1401475
Project:	NASA Press Site/TL014021.0000	**Date Collected:**	02/27/14 11:10
Sample Matrix:	Soil	**Date Received:**	02/28/14 09:00
Sample Name:	PRES-SB0016-002.0-20140227	**Units:**	ug/Kg
Lab Code:	J1401475-012	**Basis:**	Dry

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082
Prep Method: EPA 3550B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	9.06 U	31.4	9.06	1	03/11/14 20:03	3/11/14	
Aroclor 1221	6.68 U	31.4	6.68	1	03/11/14 20:03	3/11/14	
Aroclor 1232	21.6 U	31.4	21.6	1	03/11/14 20:03	3/11/14	
Aroclor 1242	8.89 U	31.4	8.89	1	03/11/14 20:03	3/11/14	
Aroclor 1248	16.1 U	31.4	16.1	1	03/11/14 20:03	3/11/14	
Aroclor 1254	12.2 U	31.4	12.2	1	03/11/14 20:03	3/11/14	
Aroclor 1260	**13.1 I**	31.4	9.30	1	03/11/14 20:03	3/11/14	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	68	10 - 258	03/11/14 20:03	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1401475
Project:	NASA Press Site/TL014021.0000	**Date Collected:**	02/27/14 11:30
Sample Matrix:	Soil	**Date Received:**	02/28/14 09:00
Sample Name:	PRES-SB0017-000.5-20140227	**Units:**	ug/Kg
Lab Code:	J1401475-013	**Basis:**	Dry

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082
Prep Method: EPA 3550B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	9.16 U	33.3	9.16	1	03/11/14 20:27	3/11/14	
Aroclor 1221	6.75 U	33.3	6.75	1	03/11/14 20:27	3/11/14	
Aroclor 1232	21.8 U	33.3	21.8	1	03/11/14 20:27	3/11/14	
Aroclor 1242	8.98 U	33.3	8.98	1	03/11/14 20:27	3/11/14	
Aroclor 1248	16.3 U	33.3	16.3	1	03/11/14 20:27	3/11/14	
Aroclor 1254	**18.3 I**	33.3	12.3	1	03/11/14 20:27	3/11/14	
Aroclor 1260	**22.0 I**	33.3	9.40	1	03/11/14 20:27	3/11/14	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	47	10 - 258	03/11/14 20:27	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1401475
Project:	NASA Press Site/TL014021.0000	**Date Collected:**	02/27/14 11:34
Sample Matrix:	Soil	**Date Received:**	02/28/14 09:00
Sample Name:	PRES-SB0017-002.0-20140277	**Units:**	ug/Kg
Lab Code:	J1401475-014	**Basis:**	Dry

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082
Prep Method: EPA 3550B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	10.2 U	36.8	10.2	1	03/11/14 20:52	3/11/14	
Aroclor 1221	7.46 U	36.8	7.46	1	03/11/14 20:52	3/11/14	
Aroclor 1232	24.1 U	36.8	24.1	1	03/11/14 20:52	3/11/14	
Aroclor 1242	9.93 U	36.8	9.93	1	03/11/14 20:52	3/11/14	
Aroclor 1248	18.0 U	36.8	18.0	1	03/11/14 20:52	3/11/14	
Aroclor 1254	13.6 U	36.8	13.6	1	03/11/14 20:52	3/11/14	
Aroclor 1260	**16.3 I**	36.8	10.4	1	03/11/14 20:52	3/11/14	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	38	10 - 258	03/11/14 20:52	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1401475
Project:	NASA Press Site/TL014021.0000	**Date Collected:**	02/27/14 11:49
Sample Matrix:	Soil	**Date Received:**	02/28/14 09:00
Sample Name:	PRES-SB0018-000.5-20140227	**Units:**	ug/Kg
Lab Code:	J1401475-015	**Basis:**	Dry

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082
Prep Method: EPA 3550B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	9.47 U	34.5	9.47	1	03/11/14 21:16	3/11/14	
Aroclor 1221	6.99 U	34.5	6.99	1	03/11/14 21:16	3/11/14	
Aroclor 1232	22.6 U	34.5	22.6	1	03/11/14 21:16	3/11/14	
Aroclor 1242	9.30 U	34.5	9.30	1	03/11/14 21:16	3/11/14	
Aroclor 1248	16.8 U	34.5	16.8	1	03/11/14 21:16	3/11/14	
Aroclor 1254	**26.9 I**	34.5	12.8	1	03/11/14 21:16	3/11/14	
Aroclor 1260	**28.0 I**	34.5	9.72	1	03/11/14 21:16	3/11/14	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	55	10 - 258	03/11/14 21:16	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1401475
Project:	NASA Press Site/TL014021.0000	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/Kg
Lab Code:	JQ1401814-01	**Basis:**	Dry

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082
Prep Method: EPA 3550B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	9.06 U	33.0	9.06	1	03/11/14 14:47	3/11/14	
Aroclor 1221	6.68 U	33.0	6.68	1	03/11/14 14:47	3/11/14	
Aroclor 1232	21.6 U	33.0	21.6	1	03/11/14 14:47	3/11/14	
Aroclor 1242	8.89 U	33.0	8.89	1	03/11/14 14:47	3/11/14	
Aroclor 1248	16.1 U	33.0	16.1	1	03/11/14 14:47	3/11/14	
Aroclor 1254	12.2 U	33.0	12.2	1	03/11/14 14:47	3/11/14	
Aroclor 1260	9.30 U	33.0	9.30	1	03/11/14 14:47	3/11/14	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	56	10 - 258	03/11/14 14:47	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1401475
Project:	NASA Press Site/TL014021.0000	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/Kg
Lab Code:	JQ1401855-01	**Basis:**	Dry

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082
Prep Method: EPA 3550B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	9.06 U	33.0	9.06	1	03/12/14 14:04	3/12/14	
Aroclor 1221	6.68 U	33.0	6.68	1	03/12/14 14:04	3/12/14	
Aroclor 1232	21.6 U	33.0	21.6	1	03/12/14 14:04	3/12/14	
Aroclor 1242	8.89 U	33.0	8.89	1	03/12/14 14:04	3/12/14	
Aroclor 1248	16.1 U	33.0	16.1	1	03/12/14 14:04	3/12/14	
Aroclor 1254	12.2 U	33.0	12.2	1	03/12/14 14:04	3/12/14	
Aroclor 1260	9.30 U	33.0	9.30	1	03/12/14 14:04	3/12/14	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	70	10 - 258	03/12/14 14:04	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1401475
Project:	NASA Press Site/TL014021.0000	**Date Collected:**	02/27/14
Sample Matrix:	Soil	**Date Received:**	02/28/14
Analysis Method:	160.3 Modified	**Units:**	Percent
		Basis:	NA

Solids, Total

Sample Name	Lab Code	Result	MRL	MDL	Dil.	Date Analyzed	Q
PRES-SB0003-002.0-20140227	J1401475-001	**96**	0.10	0.10	1	03/14/14 09:30	
PRES-SB0006-002.0-20140227	J1401475-002	**92**	0.10	0.10	1	03/14/14 09:30	
PRES-SB0012-000.5-20140227	J1401475-003	**90**	0.10	0.10	1	03/14/14 09:30	
PRES-SB0012-002.0-20140227	J1401475-004	**94**	0.10	0.10	1	03/14/14 09:30	
PRES-SB0013-000.5-20140227	J1401475-005	**90**	0.10	0.10	1	03/14/14 09:30	
PRES-SB0013-002.0-20140227	J1401475-006	**97**	0.10	0.10	1	03/14/14 09:30	
PRES-SB0014-000.5-20140227	J1401475-007	**89**	0.10	0.10	1	03/14/14 09:30	
PRES-SB0014-002.0-20140227	J1401475-008	**93**	0.10	0.10	1	03/14/14 09:30	
PRES-SB0015-000.5-20140227	J1401475-009	**88**	0.10	0.10	1	03/14/14 09:30	
PRES-SB0015-002.0-20140227	J1401475-010	**97**	0.10	0.10	1	03/14/14 09:30	
PRES-SB0016-000.5-20140227	J1401475-011	**91**	0.10	0.10	1	03/14/14 09:30	
PRES-SB0016-002.0-20140227	J1401475-012	**96**	0.10	0.10	1	03/14/14 09:30	
PRES-SB0017-000.5-20140227	J1401475-013	**90**	0.10	0.10	1	03/14/14 09:30	
PRES-SB0017-002.0-20140277	J1401475-014	**89**	0.10	0.10	1	03/14/14 09:30	
PRES-SB0018-000.5-20140227	J1401475-015	**92**	0.10	0.10	1	03/14/14 09:30	

Client: Levine Fricke **Service Request:** J1401475
Project: NASA Press Site/TL014021.0000
Sample Matrix: Soil

SURROGATE RECOVERY SUMMARY
Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082
Extraction Method: EPA 3550B

Sample Name	Lab Code	Decachlorobiphenyl 10 - 258
PRES-SB0003-002.0-20140227	J1401475-001	60
PRES-SB0006-002.0-20140227	J1401475-002	48
PRES-SB0012-000.5-20140227	J1401475-003	53
PRES-SB0012-002.0-20140227	J1401475-004	63
PRES-SB0013-000.5-20140227	J1401475-005	52
PRES-SB0013-002.0-20140227	J1401475-006	64
PRES-SB0014-000.5-20140227	J1401475-007	25
PRES-SB0014-002.0-20140227	J1401475-008	80
PRES-SB0015-000.5-20140227	J1401475-009	61
PRES-SB0015-002.0-20140227	J1401475-010	74
PRES-SB0016-000.5-20140227	J1401475-011	59
PRES-SB0016-002.0-20140227	J1401475-012	68
PRES-SB0017-000.5-20140227	J1401475-013	47
PRES-SB0017-002.0-20140277	J1401475-014	38
PRES-SB0018-000.5-20140227	J1401475-015	55
Method Blank	JQ1401814-01	56
Lab Control Sample	JQ1401814-02	58
PRES-SB0003-002.0-20140227	JQ1401814-03	73
PRES-SB0003-002.0-20140227	JQ1401814-04	75
Method Blank	JQ1401855-01	70
Lab Control Sample	JQ1401855-02	70

Client:	Levine Fricke	**Service Request:**	J1401475
Project:	NASA Press Site/TL014021.0000	**Date Collected:**	02/27/14
Sample Matrix:	Soil	**Date Received:**	02/28/14
		Date Analyzed:	03/11/14
		Date Extracted:	03/11/14

Duplicate Matrix Spike Summary
Polychlorinated Biphenyls (PCBs) by GC

Sample Name:	PRES-SB0003-002.0-20140227	**Units:**	ug/Kg
Lab Code:	J1401475-001	**Basis:**	Dry
Analysis Method:	8082		
Prep Method:	EPA 3550B		

		Matrix Spike			**Duplicate Matrix Spike**					
		JQ1401814-03			JQ1401814-04					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Aroclor 1016	9.20 U	304	271	112	289	269	108	28-149	5	30
Aroclor 1260	327	383	271	21	411	269	31	10-176	7	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client:	Levine Fricke	**Service Request:**	J1401475
Project:	NASA Press Site/TL014021.0000	**Date Analyzed:**	03/11/14
Sample Matrix:	Soil	**Date Extracted:**	03/11/14

Lab Control Sample Summary
Polychlorinated Biphenyls (PCBs) by GC

Analysis Method:	8082	**Units:**	ug/Kg
Prep Method:	EPA 3550B	**Basis:**	Dry
		Analysis Lot:	383300

Lab Control Sample
JQ1401814-02

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Aroclor 1016	241	267	90	28-149
Aroclor 1260	204	267	77	10-176

Client:	Levine Fricke	**Service Request:**	J1401475
Project:	NASA Press Site/TL014021.0000	**Date Analyzed:**	03/12/14
Sample Matrix:	Soil	**Date Extracted:**	03/12/14

Lab Control Sample Summary
Polychlorinated Biphenyls (PCBs) by GC

Analysis Method:	8082	**Units:**	ug/Kg
Prep Method:	EPA 3550B	**Basis:**	Dry
		Analysis Lot:	383502

Lab Control Sample
JQ1401855-02

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Aroclor 1016	194	267	73	28-149
Aroclor 1260	213	267	80	10-176

Client:	Levine Fricke	**Service Request:**	J1401475
Project	NASA Press Site/TL014021.0000	**Date Collected:**	02/27/14
Sample Matrix:	Soil	**Date Received:**	02/28/14
		Date Analyzed:	03/14/14

Replicate Sample Summary
General Chemistry Parameters

Sample Name:	PRES-SB0003-002.0-20140227	**Units:**	Percent
Lab Code:	J1401475-001	**Basis:**	NA

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample J1401475-001DUP Result	Average	RPD	RPD Limit
Solids, Total	160.3 Modified	0.10	0.10	96	95	95.5	<1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Environmental

Cooler Receipt Form

Client: Arcadis Service Request #: 1401475

Project: NASA PRESS SITE

Cooler received on 2/27/14 and opened on _____ by _____

COURIER: ALS (UPS) FEDEX Client Other _____ Airbill #_____

1	Were custody seals on outside of cooler?	Yes	(No)					
	If yes, how many and where?	#:___ on lid		other				
2	Were seals intact and signature and date correct?	Yes	No	(N/A)				
3	Were custody papers properly filled out?	(Yes)	No	N/A				
4	Temperature of cooler(s) upon receipt (Should be > 0°C and < 6°C)	4.5						
5	Thermometer ID	T81						
6	Temperature Blank Present?	Yes	(No)					
7	Were Ice or Ice Packs present	(Ice)	Ice Packs	No				
8	Did all bottles arrive in good condition (unbroken, etc....)?	(Yes)	No	N/A				
9	Type of packing material present	Netting	Vial Holder	(Bubble Wrap)				
		Paper	Styrofoam	Other	N/A			
10	Were all bottle labels complete (sample ID, preservation, etc....)?	(Yes)	No	N/A				
11	Did all bottle labels and tags agree with custody papers?	(Yes)	No	N/A				
12	Were the correct bottles used for the tests indicated?	(Yes)	No	N/A				
13	Were all of the preserved bottles received with the appropriate preservative?	Yes	No	(N/A)				
	HNO3 pH<2 H2SO4 pH<2 ZnAc2/NaOH pH>9 NaOH pH>12 HCl pH<2							
	Preservative additions noted below							
14	Were all samples received within analysis holding times?	(Yes)	No	N/A				
15	Were all VOA vials free of air bubbles? If present, note below	Yes	No	(N/A)				
16	Where did the bottles originate?	(ALS)	Client					

Sample ID	Reagent	Lot #	ml added	Initials Date/Time

Additional comments and/or explanation of all discrepancies noted above:

Client approval to run samples if discrepancies noted: Date:

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

ALS Environmental

9143 Philips Highway, Ste 200 • Jacksonville, FL 32256 (904) 739-2277 • 800-695-7222 x06 • FAX (904) 739-2011

PAGE 1 OF 2

SR# J1401475 CAS Contract

J1401475 5

Levine Fricke
NASA Press Site

Project Name	NASA PRESS Site
Project Number	TL014021.0000
Project Manager	Scott Starr
Email Address	Scott.Starr@Arcadis-us.com
Company/Address	Arcadis 14025 Riveredge Dr #600 Tampa FL 33637
Phone #	813 394-9360
FAX #	
Sampler's Signature	
Sampler's Printed Name	Erik Dankel

ANALYSIS REQUESTED (Include Method Number and PRESERVATIVE)

NUMBER OF CONTAINERS: 1

PCBs 8082

0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other TCE

REMARKS/ ALTERNATE DESCRIPTION

CLIENT SAMPLE ID	LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX
PRES-SB0003-002.0	-20140227	2/27/13	10:59	S
PRESSB0006-002.0	-20140227	2/27/13	11:58	S
PRES-SB0012-000.5	-20140227		12:07	
PRES-SB0012-002.0	-20140227		12:11	
PRES-SB0013-000.5	-20140227		12:17	
PRES-SB0013-002.0	-20140227		12:21	
PRES-SB00M-000.5	-20140227		12:30	
PRES-SB00M-002.0	-20140227		12:35	
PRES-SB0015-000.5	-20140227		11:18	
PRES-SB0015-002.0	-20140227	2/27/13	11:21	S

SPECIAL INSTRUCTIONS/COMMENTS

See QAPP ☐

TURNAROUND REQUIREMENTS
____ RUSH (SURCHARGES APPLY)
✓ STANDARD
REQUESTED FAX DATE
REQUESTED REPORT DATE

REPORT REQUIREMENTS
____ I. Results Only
____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data
____ V. Specialized Forms / Custom Report
Edata ____ Yes ____ No

INVOICE INFORMATION
PO #
BILL TO:

SAMPLE RECEIPT: CONDITION/COOLER TEMP: CUSTODY SEALS: Y N

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature	Signature	Signature	Signature	Signature	Signature
Printed Name Erik Dankel	Printed Name	Printed Name	Printed Name	Printed Name	Printed Name
Firm Arcadis	Firm	Firm	Firm ALS	Firm	Firm
Date/Time 2/27/14 1330	Date/Time	Date/Time	Date/Time 2/28/14 1330	Date/Time	Date/Time

1330 JA 2/28/14

White - Return to Originator; Yellow - Retained by Client

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

ALS Environmental

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PAGE 2 OF 2

SR# 01401475 CAS Contract

J1401475 5

Levine Fricke
NASA Press Site

Project Name: NASA Press Site	Project Number: TL014021.0000
Project Manager: Scott Starr	Email Address: Scott.Starr@Arcadis-US.com
Company/Address: ARCADIS 14025 River edge Dr #600 Tampa FL	
Phone #: 813 394 9360	FAX #
Sampler's Signature: Erik Dankel	Sampler's Printed Name: Erik Dankel

ANALYSIS REQUESTED (Include Method Number an

PRESERVATIVE: 8

NUMBER OF CONTAINERS: 1

PCBs 8082

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other TCE

CLIENT SAMPLE ID	LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	PCBs 8082	REMARKS/ ALTERNATE DESCRIPTION
PRES-SB0016-000.5-20140227		2/27/14	11:07	S	1	✓	
PRES-SB0016-002.0-20140227			11:10		1	✓	
PRES-SB0017-000.5-20140227			11:30		1	✓	
PRES-SB0017-002.0-20140227			11:34		1	✓	
PRES-SB0018-000.5-20140227		↓	11:49	↓	1	✓	
~~PRES-SB0018-002.0-20140227~~		~~2/27/14~~		~~S~~	1	✓	EWO 3/17/14

SPECIAL INSTRUCTIONS/COMMENTS

See QAPP ☐

TURNAROUND REQUIREMENTS
___ RUSH (SURCHARGES APPLY)
✓ STANDARD
REQUESTED FAX DATE
REQUESTED REPORT DATE

REPORT REQUIREMENTS
___ I. Results Only
___ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
___ III. Results + QC and Calibration Summaries
___ IV. Data Validation Report with Raw Data
___ V. Specialized Forms / Custom Report
Edata ___ Yes ___ No

INVOICE INFORMATION
PO #
BILL TO:

SAMPLE RECEIPT: CONDITION/COOLER TEMP:

CUSTODY SEALS: Y N

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: Erik Dankel	Signature	Signature	Signature	Signature	Signature
Printed Name: Erik Dankel	Printed Name	Printed Name	Printed Name: Lindsay Hilbert	Printed Name	Printed Name
Firm: ARCADIS	Firm	Firm	Firm: ALS	Firm	Firm
Date/Time: 2/27/14 1330	Date/Time	Date/Time	Date/Time: 2/28/14 1550	Date/Time	Date/Time

Distribution: White - Return to Originator; Yellow - Retained by Client

JA 2/28/14

August 04, 2014 Service Request No:J1405406

Mr. Scott Starr
Levine Fricke
14025 Riveredge Drive
Suite 600
Tampa, FL 33637

Laboratory Results for: NASA - VAB LUCIP

Dear Mr.Starr,

Enclosed are the results of the sample(s) submitted to our laboratory July 22, 2014
For your reference, these analyses have been assigned our service request number **J1405406.**

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. In accordance to the NELAC 2003 Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Please contact me if you have any questions. My extension is 4409. You may also contact me via email at Craig.Myers@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Craig Myers
Project Manager

ADDRESS 9143 Philips Highway, Suite 200, Jacksonville, FL 32256
PHONE +1 904 739 2277 | FAX +1 904 739 2011
ALS Group USA, Corp.
dba ALS Environmental

9143 Philips Highway, Suite 200, Jacksonville, FL 32256 | 904-739-2277 | www.alsglobal.com

Client: Levine Fricke
Project: NASA - VAB LUCIP/TL014021.0000.00005
Sample Matrix: Soil

Service Request:J1405406
Date Received:7/22/14

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II data deliverables, including results of QC samples analyzed from this delivery group. When appropriate to the procedure, method blank results have been reported with each analytical test. Analytical procedures performed by the lab are validated in accordance with NELAC standards. Parameters that are included in the NELAC Fields of Testing but are not included in the lab's NELAC accreditation are identified in the discussion of each analytical procedure.

Sample Receipt

One solid and one soil sample was received for analysis at ALS Environmental on 07/22/2014. The samples were received in good condition and consistent with the accompanying chain of custody form. Samples are refrigerated at ≤6°C upon receipt at the lab except for aqueous samples designated for metals analyses, which are stored at room temperature.

Semi-Volatile Organic Analyses:

Method 8082: Two Aroclors were identified in samples J1405406-001 and J1405406-002: Aroclor 1248 and Aroclor 1260. When mixtures of PCB Aroclors are present in a sample, correct identification and quantitative analysis of the individual Aroclors can be subjective and care is taken to minimize the possibility of double-counting PCBs. Analytical peaks are selected based on the best resolution possible for that particular sample. However, when a mixture of Aroclors are present in a sample, the potential exists for a high bias from contribution of one Aroclor to another due to common peaks or peaks that cannot be completely resolved. Aroclor 1260 was quantified based on three peaks, instead of the usual four peaks, in samples J1405406-001 and J1405406-002 in order to remove a potential high bias caused by Aroclor 1248. Aroclor 1248 was quantified based on three peaks, instead of the usual four peaks, in samples J1405406-001 and J1405406-002 in order to remove a potential high bias caused by sample matrix interferences.

Method 8082: The Method Reporting Limit (MRL) is elevated for all target analytes in sample J1405406-001. The sample was extracted using approximately 4.5g of sample, instead of the usual 15.0g, due to problems created by the sample matrix during extraction, filtration, and concentration. The Method Reporting Limit (MRL) is elevated for all target analytes in sample J1405406-002. The sample was extracted using approximately 10.3g of sample, instead of the usual 15.0g, due to problems created by the sample matrix during extraction, filtration, and concentration.

Method 8082: Samples J1405406-001 and -002 required dilution due to the presence of elevated levels of one or more of the following target analytes: Aroclor 1248, Aroclor 1254, and/or Aroclor 1260. The reporting limits are adjusted to reflect the dilution.

General Chemistry Analyses:

No significant data anomalies were noted with this analysis.

Approved by _____ Date 8/4/2014

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
Florida Department of Health	E82502	6/30/2015
North Carolina Department of Environment and Natural Resources	527	12/31/2014
Virginia Environmental Accreditation Program	460191	12/14/2014
Louisiana Department of Environmental Quality	02086	6/30/2015
Georgia Department of Natural Resources	958	6/30/2015
Kentucky Division of Waste Management	63	6/30/2015
South Carolina Department of Health and Environmental Control	96021001	6/30/2015
Texas Commision on Environmental Quality	T104704197-13-5	5/31/2015
Maine Department of Health and Human Services	2011006	2/3/2015
Department of Defense	66206	11/1/2014
Pennsylvania Department of Environmental Protection	68-04835	8/31/2014

Data Qualifiers

Florida-DEP

!	Data deviates from historically established concentration ranges
*	Not reported due to interference
?	Data is rejected and should not be used
A	Value reported is the arithmetic mean of two or more determininations
B	Results based upon colony counts outside the acceptable range.
D	Measurement was made in the field.
E	Extra samples were taken at composite stations
H	Value based on field kit determination; results may not be accurate.
I	The reported value is between the laboratory method detection limit and the laboratory PQL.
J	Estimated value.
K	Off scale low. The value is less than the lowest calibration standard.
L	Off scale high. The analyte is above the acceptable level of quantitation.
M	The MDL/MRL has been elevated because the analyte could not be accurately quantified.
N	Presumptive evidence of presence of material.
O	Sampled, but analysis lost or not performed
Q	Sample held beyond the acceptable holding time.
R	Significant rain in the past 48 hours (typically in excess of 0.5 inches)
T	Estimated value, less than the MDL
U	Indicates that the compound was analyzed for but not detected.
V	Indicates that the analyte was detected in both the sample and the associated method blank.
X	Insufficient individuals were present in the sample to achieve a minimum of 280 organisms for identification (Stream Condition Index Analysis only)
Y	The laboratory analysis was from an unpreserved or improperly preserved sample.
Z	Too many colonies were present, the numeric value represents the filtration volume

ALS Laboratory Group

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1405406
Project:	NASA - VAB LUCIP/TL014021.0000.00005	**Date Collected:**	07/21/14 09:30
Sample Matrix:	Solid	**Date Received:**	07/22/14 09:30
Sample Name:	PRES-WIPE0001-0.000-20140721	**Units:**	ug/Wipe
Lab Code:	J1405406-001	**Basis:**	As Received

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082
Prep Method: EPA 3550B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	0.5 U	0.5	0.5	1	07/26/14 00:47	7/24/14	
Aroclor 1221	0.5 U	0.5	0.5	1	07/26/14 00:47	7/24/14	
Aroclor 1232	0.5 U	0.5	0.5	1	07/26/14 00:47	7/24/14	
Aroclor 1242	0.5 U	0.5	0.5	1	07/26/14 00:47	7/24/14	
Aroclor 1248	**19.8**	10	10	20	07/28/14 13:45	7/24/14	
Aroclor 1254	0.5 U	0.5	0.5	1	07/26/14 00:47	7/24/14	
Aroclor 1260	**5.18**	0.5	0.5	1	07/26/14 00:47	7/24/14	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	77	10 - 258	07/26/14 01:11	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1405406
Project:	NASA - VAB LUCIP/TL014021.0000.00005	**Date Collected:**	07/21/14 09:40
Sample Matrix:	Soil	**Date Received:**	07/22/14 09:30
Sample Name:	PRES-CO0001-000.1-20140721	**Units:**	ug/Kg
Lab Code:	J1405406-002	**Basis:**	Dry

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082
Prep Method: EPA 3550B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	534 U	1940	534	40	07/26/14 01:36	7/24/14	
Aroclor 1221	394 U	1940	394	40	07/26/14 01:36	7/24/14	
Aroclor 1232	1270 U	1940	1270	40	07/26/14 01:36	7/24/14	
Aroclor 1242	524 U	1940	524	40	07/26/14 01:36	7/24/14	
Aroclor 1248	**108000**	19400	9460	400	07/28/14 14:09	7/24/14	
Aroclor 1254	716 U	1940	716	40	07/26/14 01:36	7/24/14	
Aroclor 1260	**12500**	1940	548	40	07/26/14 01:36	7/24/14	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	180	10 - 258	07/26/14 01:36	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1405406
Project:	NASA - VAB LUCIP/TL014021.0000.00005	**Date Collected:**	NA
Sample Matrix:	Solid	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/Kg
Lab Code:	JQ1405535-01	**Basis:**	As Received

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082
Prep Method: EPA 3550B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	9.06 U	16.5	9.06	1	07/24/14 17:32	7/24/14	
Aroclor 1221	6.68 U	16.5	6.68	1	07/24/14 17:32	7/24/14	
Aroclor 1232	21.6 U	21.6	21.6	1	07/24/14 17:32	7/24/14	
Aroclor 1242	8.89 U	16.5	8.89	1	07/24/14 17:32	7/24/14	
Aroclor 1248	16.1 U	16.5	16.1	1	07/24/14 17:32	7/24/14	
Aroclor 1254	12.2 U	16.5	12.2	1	07/24/14 17:32	7/24/14	
Aroclor 1260	9.30 U	16.5	9.30	1	07/24/14 17:32	7/24/14	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	116	10 - 258	07/24/14 17:32	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1405406
Project:	NASA - VAB LUCIP/TL014021.0000.00005	**Date Collected:**	07/21/14
Sample Matrix:	Soil	**Date Received:**	07/22/14
Analysis Method:	160.3 Modified	**Units:**	Percent
		Basis:	NA

Solids, Total

Sample Name	Lab Code	Result	PQL	MDL	Dil.	Date Analyzed	Q
PRES-CO0001-000.1-20140721	J1405406-002	**99**	0.10	0.10	1	07/23/14 10:21	

Client: Levine Fricke **Service Request:** J1405406

Project: NASA - VAB LUCIP/TL014021.0000.00005

Sample Matrix: Solid

SURROGATE RECOVERY SUMMARY
Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082

Extraction Method: EPA 3550B

Sample Name	Lab Code	Decachlorobiphenyl 10 - 258
PRES-WIPE0001-0.000-20140721	J1405406-001	77
Method Blank	JQ1405535-01	116
Lab Control Sample	JQ1405535-06	102

Client: Levine Fricke **Service Request:** J1405406
Project: NASA - VAB LUCIP/TL014021.0000.00005
Sample Matrix: Soil

SURROGATE RECOVERY SUMMARY
Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082
Extraction Method: EPA 3550B

Sample Name	Lab Code	Decachlorobiphenyl 10 - 258
PRES-CO0001-000.1-20140721	J1405406-002	180

Client:	Levine Fricke	**Service Request:**	J1405406
Project:	NASA - VAB LUCIP/TL014021.0000.00005	**Date Analyzed:**	07/24/14
Sample Matrix:	Solid	**Date Extracted:**	07/24/14

Lab Control Sample Summary
Polychlorinated Biphenyls (PCBs) by GC

Analysis Method:	8082	**Units:**	ug/Kg
Prep Method:	EPA 3550B	**Basis:**	As Received
		Analysis Lot:	403575

Lab Control Sample
JQ1405535-06

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Aroclor 1016	164	133	123	28-149
Aroclor 1260	152	133	114	10-176

Client:	Levine Fricke	**Service Request:**	J1405406
Project	NASA - VAB LUCIP/TL014021.0000.00005	**Date Collected:**	07/21/14
Sample Matrix:	Soil	**Date Received:**	07/22/14
		Date Analyzed:	07/23/14

Replicate Sample Summary
General Chemistry Parameters

Sample Name:	ECPS-SB1077-002.0-20140721	**Units:**	Percent
Lab Code:	J1405406-004	**Basis:**	NA

Analyte Name	Analysis Method	PQL	MDL	Sample Result	Duplicate Sample J1405406-004DUP Result	Average	RPD	RPD Limit
Solids, Total	160.3 Modified	0.10	0.10	89	89	89.2	<1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Environmental

Cooler Receipt Form

Client: Arcadis Service Request #: J1403408

Project: NASA - VAB LDCIP

Cooler received on 7/22/14 and opened on 7/22/14 by EH

COURIER: ALS (UPS) FEDEX Client Other _____ Airbill # 5452 5831830

1	Were custody seals on outside of cooler?	Yes	(No)		
	If yes, how many and where?	#:___ on lid		other	
2	Were seals intact and signature and date correct?	Yes	No	(N/A)	
3	Were custody papers properly filled out?	Yes	No	N/A	
4	Temperature of cooler(s) upon receipt (Should be > 0°C and < 6°C)	4.1°C			
5	Thermometer ID	T81			
6	Temperature Blank Present?	(Yes)	No		
7	Were Ice or Ice Packs present	(Ice)	Ice Packs	No	
8	Did all bottles arrive in good condition (unbroken, etc....)?	(Yes)	No	N/A	
9	Type of packing material present	Netting	Vial Holder	(Bubble Wrap)	
		Paper	Styrofoam	Other	N/A
10	Were all bottle labels complete (sample ID, preservation, etc....)?	(Yes)	No	N/A	
11	Did all bottle labels and tags agree with custody papers?	(Yes)	No	N/A	
12	Were the correct bottles used for the tests indicated?	(Yes)	No	N/A	
13	Were all of the preserved bottles received with the appropriate preservative?	Yes	No	(N/A)	
	HNO3 pH<2 H2SO4 pH<2 ZnAc2/NaOH pH>9 NaOH pH>12 HCl pH<2				
	Preservative additions noted below				
14	Were all samples received within analysis holding times?	(Yes)	No	N/A	
15	Were all VOA vials free of air bubbles? If present, note below	Yes	No	(N/A)	
16	Where did the bottles originate?	(ALS)	Client		

Sample ID	Reagent	Lot #	ml added	Initials Date/Time

Additional comments and/or explanation of all discrepancies noted above:

Client approval to run samples if discrepancies noted: Date:

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

ALS Environmental

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PAGE 1 OF 1

SR# J1405406
CAS Contract

Project Name: NASA - VAB LOOP	Project Number: TLCM028.0000.00005
Project Manager: SCOTT STARR	Email Address: SCOTT.STARR@ARCADIS-US.COM
Company/Address: ARCADIS 14025 RIVEREDGE DR #600 TAMPA FL 33637	
Phone #: 813-394-9378	FAX #
Sampler's Signature	Sampler's Printed Name: DAVID DANKERT

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

PRESERVATIVE: HCl

J1405406 5
Levine Fricke
NASA - VAB

1. HCl
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

CLIENT SAMPLE ID	LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	PCBs + 8082	REMARKS/ ALTERNATE DESCRIPTION
PRES-WIPE001-C-000-20140721	140721	7/21/14	0930	wipe	1	X	
PRES-CO 0001-000.1-20140721			0940	Soil	1	X	
ECPS-SB1077-000.5-20140721			1015	soil	1	X	
ECPS-SB1077-002.0-20140721			1020		1	X	
ECPS-SB1012-000.5-20140721			1030		1	X	
ECPS-SB1078-000.5-20140721			1040		1	X	
ECPS-SB1078-002.0-20140721			1045		1	X	

SPECIAL INSTRUCTIONS/COMMENTS

See QAPP ☐

TURNAROUND REQUIREMENTS
_____ RUSH (SURCHARGES APPLY)
_____ STANDARD
REQUESTED FAX DATE
_____
REQUESTED REPORT DATE
_____

REPORT REQUIREMENTS
_____ I. Results Only
_____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
_____ III. Results + QC and Calibration Summaries
_____ IV. Data Validation Report with Raw Data
_____ V. Specialized Forms / Custom Report
Edata _____ Yes _____ No

INVOICE INFORMATION
PO #
BILL TO:

SAMPLE RECEIPT: CONDITION/COOLER TEMP: 4.1°C CUSTODY SEALS: Y N

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature	Signature	Signature	Signature	Signature	Signature
Printed Name: DAVID DANKERT	Printed Name: Chris Howard	Printed Name	Printed Name	Printed Name	Printed Name
Firm: ARCADIS	Firm: ALS	Firm	Firm	Firm	Firm
Date/Time: 7/21/14 1715	Date/Time: 7/22/14 0930	Date/Time	Date/Time	Date/Time	Date/Time

Distribution: White - Return to Originator; Yellow - Retained by Client

October 21, 2014 Service Request No:J1407382

Mr. Scott Starr
Levine Fricke
14025 Riveredge Drive
Suite 600
Tampa, FL 33637

Laboratory Results for: VAB LUCIP Press

Dear Mr.Starr,

Enclosed are the results of the sample(s) submitted to our laboratory September 23, 2014
For your reference, these analyses have been assigned our service request number **J1407382.**

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. In accordance to the NELAC 2003 Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Please contact me if you have any questions. My extension is 4409. You may also contact me via email at Craig.Myers@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Craig Myers
Project Manager

ADDRESS 9143 Philips Highway, Suite 200, Jacksonville, FL 32256
PHONE +1 904 739 2277 | FAX +1 904 739 2011
ALS Group USA, Corp.
dba ALS Environmental

ALS Environmental

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
Department of Defense	66206	11/1/2014
Florida Department of Health	E82502	6/30/2015
Georgia Department of Natural Resources	958	6/30/2015
Kentucky Division of Waste Management	63	6/30/2015
Louisiana Department of Environmental Quality	02086	6/30/2015
Maine Department of Health and Human Services	2011006	2/3/2015
North Carolina Department of Environment and Natural Resources	527	12/31/2014
Pennsylvania Department of Environmental Protection	68-04835	8/31/2015
South Carolina Department of Health and Environmental Control	96021001	6/30/2015
Texas Commision on Environmental Quality	T104704197-13-5	5/31/2015
Virginia Environmental Accreditation Program	460191	12/14/2014

Data Qualifiers

Florida-DEP

!	Data deviates from historically established concentration ranges
*	Not reported due to interference
?	Data is rejected and should not be used
A	Value reported is the arithmetic mean of two or more determininations
B	Results based upon colony counts outside the acceptable range.
D	Measurement was made in the field.
E	Extra samples were taken at composite stations
H	Value based on field kit determination; results may not be accurate.
I	The reported value is between the laboratory method detection limit and the laboratory PQL.
J	Estimated value.
K	Off scale low. The value is less than the lowest calibration standard.
L	Off scale high. The analyte is above the acceptable level of quantitation.
M	The MDL/MRL has been elevated because the analyte could not be accurately quantified.
N	Presumptive evidence of presence of material.
O	Sampled, but analysis lost or not performed
Q	Sample held beyond the acceptable holding time.
R	Significant rain in the past 48 hours (typically in excess of 0.5 inches)
T	Estimated value, less than the MDL
U	Indicates that the compound was analyzed for but not detected.
V	Indicates that the analyte was detected in both the sample and the associated method blank.
X	Insufficient individuals were present in the sample to achieve a minimum of 280 organisms for identification (Stream Condition Index Analysis only)
Y	The laboratory analysis was from an unpreserved or improperly preserved sample.
Z	Too many colonies were present, the numeric value represents the filtration volume

ALS Laboratory Group

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1407382
Project:	VAB LUCIP Press/TL014021.0000	**Date Collected:**	09/22/14 09:45
Sample Matrix:	Wipe	**Date Received:**	09/23/14 09:10
Sample Name:	Pres-Wipe0002-000.0-20140922	**Units:**	ug/Wipe
Lab Code:	J1407382-001	**Basis:**	As Received

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082
Prep Method: EPA 3550B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	0.5 U	0.5	0.5	1	10/02/14 14:33	10/2/14	
Aroclor 1221	0.5 U	0.5	0.5	1	10/02/14 14:33	10/2/14	
Aroclor 1232	0.5 U	0.5	0.5	1	10/02/14 14:33	10/2/14	
Aroclor 1242	0.5 U	0.5	0.5	1	10/02/14 14:33	10/2/14	
Aroclor 1248	0.5 U	0.5	0.5	1	10/03/14 16:01	10/2/14	
Aroclor 1254	0.5 U	0.5	0.5	1	10/02/14 14:33	10/2/14	
Aroclor 1260	0.5 U	0.5	0.5	1	10/02/14 14:33	10/2/14	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	88	10 - 258	10/02/14 14:33	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1407382
Project:	VAB LUCIP Press/TL014021.0000	**Date Collected:**	09/22/14 09:55
Sample Matrix:	Wipe	**Date Received:**	09/23/14 09:10
Sample Name:	Pres-Wipe0003-000.0-20140922	**Units:**	ug/Wipe
Lab Code:	J1407382-002	**Basis:**	As Received

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082
Prep Method: EPA 3550B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	0.5 U	0.5	0.5	1	10/02/14 14:58	10/2/14	
Aroclor 1221	0.5 U	0.5	0.5	1	10/02/14 14:58	10/2/14	
Aroclor 1232	0.5 U	0.5	0.5	1	10/02/14 14:58	10/2/14	
Aroclor 1242	0.5 U	0.5	0.5	1	10/02/14 14:58	10/2/14	
Aroclor 1248	0.5 U	0.5	0.5	1	10/03/14 16:26	10/2/14	
Aroclor 1254	0.5 U	0.5	0.5	1	10/02/14 14:58	10/2/14	
Aroclor 1260	0.5 U	0.5	0.5	1	10/02/14 14:58	10/2/14	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	70	10 - 258	10/02/14 14:58	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1407382
Project:	VAB LUCIP Press/TL014021.0000	**Date Collected:**	09/22/14 10:00
Sample Matrix:	Wipe	**Date Received:**	09/23/14 09:10
Sample Name:	Pres-Wipe0004-000.0-20140922	**Units:**	ug/Wipe
Lab Code:	J1407382-003	**Basis:**	As Received

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082
Prep Method: EPA 3550B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	0.5 U	0.5	0.5	1	10/02/14 15:22	10/2/14	
Aroclor 1221	0.5 U	0.5	0.5	1	10/02/14 15:22	10/2/14	
Aroclor 1232	0.5 U	0.5	0.5	1	10/02/14 15:22	10/2/14	
Aroclor 1242	0.5 U	0.5	0.5	1	10/02/14 15:22	10/2/14	
Aroclor 1248	0.5 U	0.5	0.5	1	10/02/14 15:22	10/2/14	
Aroclor 1254	0.5 U	0.5	0.5	1	10/02/14 15:22	10/2/14	
Aroclor 1260	0.5 U	0.5	0.5	1	10/02/14 15:22	10/2/14	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	87	10 - 258	10/02/14 15:22	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1407382
Project:	VAB LUCIP Press/TL014021.0000	**Date Collected:**	09/22/14 10:07
Sample Matrix:	Wipe	**Date Received:**	09/23/14 09:10
Sample Name:	Pres-Wipe0005-000.0-20140922	**Units:**	ug/Wipe
Lab Code:	J1407382-004	**Basis:**	As Received

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082
Prep Method: EPA 3550B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	0.5 U	0.5	0.5	1	10/02/14 15:47	10/2/14	
Aroclor 1221	0.5 U	0.5	0.5	1	10/02/14 15:47	10/2/14	
Aroclor 1232	0.5 U	0.5	0.5	1	10/02/14 15:47	10/2/14	
Aroclor 1242	0.5 U	0.5	0.5	1	10/02/14 15:47	10/2/14	
Aroclor 1248	0.5 U	0.5	0.5	1	10/03/14 16:50	10/2/14	
Aroclor 1254	0.5 U	0.5	0.5	1	10/02/14 15:47	10/2/14	
Aroclor 1260	0.5 U	0.5	0.5	1	10/02/14 15:47	10/2/14	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	96	10 - 258	10/02/14 15:47	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1407382
Project:	VAB LUCIP Press/TL014021.0000	**Date Collected:**	09/22/14 10:15
Sample Matrix:	Wipe	**Date Received:**	09/23/14 09:10
Sample Name:	Pres-Wipe0006-000.0-20140922	**Units:**	ug/Wipe
Lab Code:	J1407382-005	**Basis:**	As Received

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082
Prep Method: EPA 3550B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	0.5 U	0.5	0.5	1	10/02/14 16:11	10/2/14	
Aroclor 1221	0.5 U	0.5	0.5	1	10/02/14 16:11	10/2/14	
Aroclor 1232	0.5 U	0.5	0.5	1	10/02/14 16:11	10/2/14	
Aroclor 1242	0.5 U	0.5	0.5	1	10/02/14 16:11	10/2/14	
Aroclor 1248	0.5 U	0.5	0.5	1	10/02/14 16:11	10/2/14	
Aroclor 1254	0.5 U	0.5	0.5	1	10/02/14 16:11	10/2/14	
Aroclor 1260	0.5 U	0.5	0.5	1	10/02/14 16:11	10/2/14	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	54	10 - 258	10/02/14 16:11	

Client:	Levine Fricke	**Service Request:**	J1407382
Project:	VAB LUCIP Press/TL014021.0000	**Date Collected:**	NA
Sample Matrix:	Wipe	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/Wipe
Lab Code:	JQ1407734-01	**Basis:**	As Received

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082
Prep Method: EPA 3550B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	0.5 U	0.5	0.5	1	10/02/14 13:45	10/2/14	
Aroclor 1221	0.5 U	0.5	0.5	1	10/02/14 13:45	10/2/14	
Aroclor 1232	0.5 U	0.5	0.5	1	10/02/14 13:45	10/2/14	
Aroclor 1242	0.5 U	0.5	0.5	1	10/02/14 13:45	10/2/14	
Aroclor 1248	0.5 U	0.5	0.5	1	10/02/14 13:45	10/2/14	
Aroclor 1254	0.5 U	0.5	0.5	1	10/02/14 13:45	10/2/14	
Aroclor 1260	0.5 U	0.5	0.5	1	10/02/14 13:45	10/2/14	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	116	10 - 258	10/02/14 13:45	

Client: Levine Fricke **Service Request:** J1407382
Project: VAB LUCIP Press/TL014021.0000
Sample Matrix: Wipe

SURROGATE RECOVERY SUMMARY
Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082
Extraction Method: EPA 3550B

Sample Name	Lab Code	Decachlorobiphenyl 10 - 258
Pres-Wipe0002-000.0-20140922	J1407382-001	88
Pres-Wipe0003-000.0-20140922	J1407382-002	70
Pres-Wipe0004-000.0-20140922	J1407382-003	87
Pres-Wipe0005-000.0-20140922	J1407382-004	96
Pres-Wipe0006-000.0-20140922	J1407382-005	54
Method Blank	JQ1407734-01	116
Lab Control Sample	JQ1407734-02	86

Client:	Levine Fricke	**Service Request:**	J1407382
Project:	VAB LUCIP Press/TL014021.0000	**Date Analyzed:**	10/02/14
Sample Matrix:	Wipe	**Date Extracted:**	10/02/14

Lab Control Sample Summary
Polychlorinated Biphenyls (PCBs) by GC

Analysis Method:	8082	**Units:**	ug/Kg
Prep Method:	EPA 3550B	**Basis:**	As Received
		Analysis Lot:	414468

Lab Control Sample
JQ1407734-02

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Aroclor 1016	1140	1330	86	28-149
Aroclor 1260	1040	1330	78	10-176

ALS Environmental

Cooler Receipt Form

Client: Arcadia Service Request #: J1407382

Project: VAB LUCIP Press

Cooler received on 9.23.14 and opened on 9.23.14 GB

COURIER: ALS UPS FEDEX Client Other _____ Airbill # 805549689948

1	Were custody seals on outside of cooler?	Yes	No
	If yes, how many and where?	#: 1 on lid	other
2	Were seals intact and signature and date correct?	Yes	No N/A
3	Were custody papers properly filled out?	Yes	No N/A
4	Temperature of cooler(s) upon receipt (Should be > 0°C and < 6°C)	0.3	
5	Thermometer ID	TM1	
6	Temperature Blank Present?	Yes	No
7	Were Ice or Ice Packs present	Ice	Ice Packs No
8	Did all bottles arrive in good condition (unbroken, etc....)?	Yes	No N/A
9	Type of packing material present	Netting Vial Holder	Bubble Wrap
		Paper Styrofoam	Other N/A
10	Were all bottle labels complete (sample ID, preservation, etc....)?	Yes	No N/A
11	Did all bottle labels and tags agree with custody papers?	Yes	No N/A
12	Were the correct bottles used for the tests indicated?	Yes	No N/A
13	Were all of the preserved bottles received with the appropriate preservative?	Yes	No N/A
	HNO3 pH<2 H2SO4 pH<2 ZnAc2/NaOH pH>9 NaOH pH>12 HCl pH<2		
	Preservative additions noted below		
14	Were all samples received within analysis holding times?	Yes	No N/A
15	Were all VOA vials free of air bubbles? If present, note below	Yes	No N/A
16	Where did the bottles originate?	ALS	Client

Sample ID	Reagent	Lot #	ml added	Initials Date/Time

Additional comments and/or explanation of all discrepancies noted above: Pres-CT0006-000.1 Sample ID on the label is Pres-CT0005-000. No sample time on COC or label

Client approval to run samples if discrepancies noted: Date:

ALS Environmental

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

9143 Philips Highway, Ste 200 • Jacksonville, FL 32256 (904) 739-2277 • 800-695-7222 x06 • FAX (904) 739-2011

PAGE 1 OF 1

SR# J1407382
CAS Contract

J1407382
Levine Fricke
VAB Lucip Press

5

Project Name: VAB Lucip Press
Project Number: TL014021.0000
Project Manager: Scott Stear
Email Address: susan.sitthoff@arcadis-us.com
Company/Address: Arcadis, 14025 Riveredge Dr Ste 600, Tampa, FL 33637
Phone #: 813 353 5797
FAX #:
Sampler's Signature: [signature]
Sampler's Printed Name: Susan Sitthoff

ANALYSIS REQUESTED (Include Method Number and Container Pr...)

PRESERVATIVE: 0

Preservatives: 1. HCL 2. HNO_3 3. H_2SO_4 4. NaOH 5. Zn. Acetate 6. MeOH 7. $NaHSO_4$ 8. Other ____

CLIENT SAMPLE ID	LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	PCBs 8082	REMARKS/ ALTERNATE DESCRIPTION
Pres-wipe0002-000.0-20140922		9/22/14	0945	wipe	1	X	
Pres-wipe0003-000.0-20140922		↓	0955	↓	1	X	
Pres-wipe0004-000.0-20140922		↓	1000	↓	1	X	
Pres-wipe0005-000.0-20140922		↓	1007	↓	1	X	
Pres-wipe0006-000.0-20140922		↓	1015	↓	1	X	
Pres-CT0002-000.1-20140922		9/2014	1025	CT	1	X	
Pres-CT0003-000.1-20140922		↓	1037	↓	1	X	
Pres-CT0004-000.1-20140922		↓	1045	↓	1	X	
Pres-CT0005-000.1-20140922		↓	1053	↓	1	X	
Pres-CT0006-000.1-20140922		↓		↓	1	X	
Pres-SD0003-000.0-20140922		↓	1450	↓	1	X	

SPECIAL INSTRUCTIONS/COMMENTS

See QAPP ☐

TURNAROUND REQUIREMENTS
____ RUSH (SURCHARGES APPLY)
____ STANDARD
REQUESTED FAX DATE ________
REQUESTED REPORT DATE ________

REPORT REQUIREMENTS
____ I. Results Only
____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data
____ V. Specialized Forms / Custom Report
Edata ____Yes ____No

INVOICE INFORMATION
PO #
BILL TO:

SAMPLE RECEIPT: CONDITION/COOLER TEMP: 0.3 °C CUSTODY SEALS: (Y) N

	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature	[signature]	[signature]				
Printed Name	Susan S. Hoff	S Bauer				
Firm	Arcadis	ALS				
Date/Time	9/22/14	9.23.14 0910				

Distribution: White - Return to Originator; Yellow - Retained by Client

Copyright 2012 by ALS Grou...

October 21, 2014 Service Request No:J1407382

Mr. Scott Starr
Levine Fricke
14025 Riveredge Drive
Suite 600
Tampa, FL 33637

Laboratory Results for: VAB LUCIP Press

Dear Mr.Starr,

Enclosed are the results of the sample(s) submitted to our laboratory September 23, 2014
For your reference, these analyses have been assigned our service request number **J1407382.**

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. In accordance to the NELAC 2003 Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Please contact me if you have any questions. My extension is 4409. You may also contact me via email at Craig.Myers@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Craig Myers
Project Manager

ADDRESS 9143 Philips Highway, Suite 200, Jacksonville, FL 32256
PHONE +1 904 739 2277 | FAX +1 904 739 2011
ALS Group USA, Corp.
dba ALS Environmental

Client: Levine Fricke
Project: VAB LUCIP Press/TL014021.0000
Sample Matrix: Soil

Service Request:J1407382
Date Received:9/23/14

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II data deliverables, including results of QC samples analyzed from this delivery group. When appropriate to the procedure, method blank results have been reported with each analytical test. Analytical procedures performed by the lab are validated in accordance with NELAC standards. Parameters that are included in the NELAC Fields of Testing but are not included in the lab's NELAC accreditation are identified in the discussion of each analytical procedure.

Sample Receipt

Six soil samples were received for analysis at ALS Environmental on 09/23/2014. The samples were received in good condition and consistent with the accompanying chain of custody form. Samples are refrigerated at ≤6°C upon receipt at the lab except for aqueous samples designated for metals analyses, which are stored at room temperature.

Semi-Volatile Organic Analyses:

Method 8082: The confirmation comparison criteria of 40% difference for Aroclor 1248 was exceeded in sample J1407382-006. The lower of the two values was reported because of an apparent interference on the alternate column that produced the higher value. The confirmation comparison criteria of 40% difference for analyte Aroclor 1260 was exceeded in sample J1407382-007. The result from the back analytical column was reported because of an apparent interference on the alternate column. The confirmation comparison criteria of 40% difference for analyte Aroclor 1242 was exceeded in sample J1407382-010. The lower of the two values was reported because of an apparent interference on the alternate column that produced the higher value.

Method 8082: Two or more Aroclor patterns were identified in several of the field samples associated with this SDG. When mixtures of PCB Aroclors are present in a sample, correct identification and quantitative analysis of the individual Aroclors can be subjective and care is taken to minimize the possibility of double-counting PCBs. Analytical peaks are selected based on the best resolution possible for that particular sample. However, when a mixture of Aroclors are present in a sample, the potential exists for a high bias from contribution of one Aroclor to another due to common peaks or peaks that cannot be completely resolved. Aroclor 1260 was quantified based on three peaks, instead of the usual four peaks, in sample J1407382-009 due to sample matrix interferences. Aroclor 1242 was quantified based on three peaks, instead of the usual four peaks, in sample J1407382-010 due to sample matrix interferences. Aroclor 1248 was quantified based on three peaks, instead of the usual four peaks, in sample J1407382-010 due to sample matrix interferences.

General Chemistry Analyses:

No significant data anomalies were noted with this analysis.

Approved by _____ Date 10/21/2014

ALS Environmental

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
Department of Defense	66206	11/1/2014
Florida Department of Health	E82502	6/30/2015
Georgia Department of Natural Resources	958	6/30/2015
Kentucky Division of Waste Management	63	6/30/2015
Louisiana Department of Environmental Quality	02086	6/30/2015
Maine Department of Health and Human Services	2011006	2/3/2015
North Carolina Department of Environment and Natural Resources	527	12/31/2014
Pennsylvania Department of Environmental Protection	68-04835	8/31/2015
South Carolina Department of Health and Environmental Control	96021001	6/30/2015
Texas Commision on Environmental Quality	T104704197-13-5	5/31/2015
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Data Qualifiers

Florida-DEP

!	Data deviates from historically established concentration ranges
*	Not reported due to interference
?	Data is rejected and should not be used
A	Value reported is the arithmetic mean of two or more determininations
B	Results based upon colony counts outside the acceptable range.
D	Measurement was made in the field.
E	Extra samples were taken at composite stations
H	Value based on field kit determination; results may not be accurate.
I	The reported value is between the laboratory method detection limit and the laboratory PQL.
J	Estimated value.
K	Off scale low. The value is less than the lowest calibration standard.
L	Off scale high. The analyte is above the acceptable level of quantitation.
M	The MDL/MRL has been elevated because the analyte could not be accurately quantified.
N	Presumptive evidence of presence of material.
O	Sampled, but analysis lost or not performed
Q	Sample held beyond the acceptable holding time.
R	Significant rain in the past 48 hours (typically in excess of 0.5 inches)
T	Estimated value, less than the MDL
U	Indicates that the compound was analyzed for but not detected.
V	Indicates that the analyte was detected in both the sample and the associated method blank.
X	Insufficient individuals were present in the sample to achieve a minimum of 280 organisms for identification (Stream Condition Index Analysis only)
Y	The laboratory analysis was from an unpreserved or improperly preserved sample.
Z	Too many colonies were present, the numeric value represents the filtration volume

ALS Laboratory Group

Acronyms

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CFC	Chlorofluorocarbon
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DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1407382
Project:	VAB LUCIP Press/TL014021.0000	**Date Collected:**	09/22/14 10:25
Sample Matrix:	Soil	**Date Received:**	09/23/14 09:10
Sample Name:	Pres-CT0002-000.1-20140922	**Units:**	ug/Kg
Lab Code:	J1407382-006	**Basis:**	As Received

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082
Prep Method: EPA 3550B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	10.2 U	36.9	10.2	1	10/02/14 17:24	10/2/14	
Aroclor 1221	7.48 U	36.9	7.48	1	10/02/14 17:24	10/2/14	
Aroclor 1232	24.2 U	36.9	24.2	1	10/02/14 17:24	10/2/14	
Aroclor 1242	9.96 U	36.9	9.96	1	10/02/14 17:24	10/2/14	
Aroclor 1248	**132**	36.9	18.0	1	10/03/14 17:14	10/2/14	
Aroclor 1254	13.7 U	36.9	13.7	1	10/02/14 17:24	10/2/14	
Aroclor 1260	**48.6**	36.9	10.5	1	10/02/14 17:24	10/2/14	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	77	10 - 258	10/02/14 17:24	

Client:	Levine Fricke	**Service Request:**	J1407382
Project:	VAB LUCIP Press/TL014021.0000	**Date Collected:**	09/22/14 10:37
Sample Matrix:	Soil	**Date Received:**	09/23/14 09:10
Sample Name:	Pres-CT0003-000.1-20140922	**Units:**	ug/Kg
Lab Code:	J1407382-007	**Basis:**	As Received

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082
Prep Method: EPA 3550B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	14.2 U	51.4	14.2	1	10/02/14 17:49	10/2/14	
Aroclor 1221	10.5 U	51.4	10.5	1	10/02/14 17:49	10/2/14	
Aroclor 1232	33.7 U	51.4	33.7	1	10/02/14 17:49	10/2/14	
Aroclor 1242	13.9 U	51.4	13.9	1	10/02/14 17:49	10/2/14	
Aroclor 1248	**315**	51.4	25.1	1	10/03/14 17:39	10/2/14	
Aroclor 1254	19.0 U	51.4	19.0	1	10/02/14 17:49	10/2/14	
Aroclor 1260	**65.3**	51.4	14.5	1	10/02/14 17:49	10/2/14	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	92	10 - 258	10/02/14 17:49	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1407382
Project:	VAB LUCIP Press/TL014021.0000	**Date Collected:**	09/22/14 10:45
Sample Matrix:	Soil	**Date Received:**	09/23/14 09:10
Sample Name:	Pres-CT0004-000.1-20140922	**Units:**	ug/Kg
Lab Code:	J1407382-008	**Basis:**	As Received

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082
Prep Method: EPA 3550B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	10.3 U	37.4	10.3	1	10/02/14 18:13	10/2/14	
Aroclor 1221	7.57 U	37.4	7.57	1	10/02/14 18:13	10/2/14	
Aroclor 1232	24.5 U	37.4	24.5	1	10/02/14 18:13	10/2/14	
Aroclor 1242	10.1 U	37.4	10.1	1	10/02/14 18:13	10/2/14	
Aroclor 1248	18.2 U	37.4	18.2	1	10/03/14 18:03	10/2/14	
Aroclor 1254	13.8 U	37.4	13.8	1	10/02/14 18:13	10/2/14	
Aroclor 1260	**23.4 I**	37.4	10.6	1	10/02/14 18:13	10/2/14	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	116	10 - 258	10/02/14 18:13	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1407382
Project:	VAB LUCIP Press/TL014021.0000	**Date Collected:**	09/22/14 10:53
Sample Matrix:	Soil	**Date Received:**	09/23/14 09:10
Sample Name:	Pres-CT0005-000.1-20140922	**Units:**	ug/Kg
Lab Code:	J1407382-009	**Basis:**	As Received

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082
Prep Method: EPA 3550B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	15.0 U	54.6	15.0	1	10/02/14 18:37	10/2/14	
Aroclor 1221	11.1 U	54.6	11.1	1	10/02/14 18:37	10/2/14	
Aroclor 1232	35.8 U	54.6	35.8	1	10/02/14 18:37	10/2/14	
Aroclor 1242	14.8 U	54.6	14.8	1	10/02/14 18:37	10/2/14	
Aroclor 1248	26.7 U	54.6	26.7	1	10/03/14 18:27	10/2/14	
Aroclor 1254	20.2 U	54.6	20.2	1	10/02/14 18:37	10/2/14	
Aroclor 1260	**15.5 I**	54.6	15.4	1	10/02/14 18:37	10/2/14	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	100	10 - 258	10/02/14 18:37	

Client:	Levine Fricke	**Service Request:**	J1407382
Project:	VAB LUCIP Press/TL014021.0000	**Date Collected:**	09/22/14 00:00
Sample Matrix:	Soil	**Date Received:**	09/23/14 09:10
Sample Name:	Pres-CT0006-000.1-20140922	**Units:**	ug/Kg
Lab Code:	J1407382-010	**Basis:**	As Received

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082
Prep Method: EPA 3550B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	16.7 U	60.7	16.7	1	10/02/14 19:02	10/2/14	
Aroclor 1221	12.3 U	60.7	12.3	1	10/02/14 19:02	10/2/14	
Aroclor 1232	39.8 U	60.7	39.8	1	10/02/14 19:02	10/2/14	
Aroclor 1242	**56.0 I**	60.7	16.4	1	10/02/14 19:02	10/2/14	
Aroclor 1248	**128**	60.7	29.6	1	10/03/14 18:52	10/2/14	
Aroclor 1254	22.4 U	60.7	22.4	1	10/02/14 19:02	10/2/14	
Aroclor 1260	**87.0**	60.7	17.2	1	10/02/14 19:02	10/2/14	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	86	10 - 258	10/02/14 19:02	

Client:	Levine Fricke	**Service Request:**	J1407382
Project:	VAB LUCIP Press/TL014021.0000	**Date Collected:**	09/22/14 14:50
Sample Matrix:	Soil	**Date Received:**	09/23/14 09:10
Sample Name:	Pres-SB0003-003.0-20140922	**Units:**	ug/Kg
Lab Code:	J1407382-011	**Basis:**	Dry

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082
Prep Method: EPA 3550B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	9.46 U	34.4	9.46	1	10/02/14 19:26	10/2/14	
Aroclor 1221	6.98 U	34.4	6.98	1	10/02/14 19:26	10/2/14	
Aroclor 1232	22.6 U	34.4	22.6	1	10/02/14 19:26	10/2/14	
Aroclor 1242	9.28 U	34.4	9.28	1	10/02/14 19:26	10/2/14	
Aroclor 1248	16.8 U	34.4	16.8	1	10/02/14 19:26	10/2/14	
Aroclor 1254	12.7 U	34.4	12.7	1	10/02/14 19:26	10/2/14	
Aroclor 1260	9.71 U	34.4	9.71	1	10/02/14 19:26	10/2/14	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	100	10 - 258	10/02/14 19:26	

Client:	Levine Fricke	**Service Request:**	J1407382
Project:	VAB LUCIP Press/TL014021.0000	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/Kg
Lab Code:	JQ1407734-01	**Basis:**	As Received

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082
Prep Method: EPA 3550B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	9.06 U	33.0	9.06	1	10/02/14 13:45	10/2/14	
Aroclor 1221	6.68 U	33.0	6.68	1	10/02/14 13:45	10/2/14	
Aroclor 1232	21.6 U	33.0	21.6	1	10/02/14 13:45	10/2/14	
Aroclor 1242	8.89 U	33.0	8.89	1	10/02/14 13:45	10/2/14	
Aroclor 1248	16.1 U	33.0	16.1	1	10/02/14 13:45	10/2/14	
Aroclor 1254	12.2 U	33.0	12.2	1	10/02/14 13:45	10/2/14	
Aroclor 1260	9.30 U	33.0	9.30	1	10/02/14 13:45	10/2/14	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	116	10 - 258	10/02/14 13:45	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1407382
Project:	VAB LUCIP Press/TL014021.0000	**Date Collected:**	09/22/14
Sample Matrix:	Soil	**Date Received:**	09/23/14
Analysis Method:	160.3 Modified	**Units:**	Percent
		Basis:	NA

Solids, Total

Sample Name	Lab Code	Result	PQL	MDL	Dil.	Date Analyzed	Q
Pres-SB0003-003.0-20140922	J1407382-011	**94**	0.10	0.10	1	09/29/14 16:29	

Client: Levine Fricke **Service Request:** J1407382
Project: VAB LUCIP Press/TL014021.0000
Sample Matrix: Soil

SURROGATE RECOVERY SUMMARY
Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082
Extraction Method: EPA 3550B

Sample Name	Lab Code	Decachlorobiphenyl 10 - 258
Pres-CT0002-000.1-20140922	J1407382-006	77
Pres-CT0003-000.1-20140922	J1407382-007	92
Pres-CT0004-000.1-20140922	J1407382-008	116
Pres-CT0005-000.1-20140922	J1407382-009	100
Pres-CT0006-000.1-20140922	J1407382-010	86
Pres-SB0003-003.0-20140922	J1407382-011	100
Pres-SB0003-003.0-20140922	JQ1407734-03	95
Pres-SB0003-003.0-20140922	JQ1407734-04	122

Client: Levine Fricke **Service Request:** J1407382
Project: VAB LUCIP Press/TL014021.0000
Sample Matrix: Soil

SURROGATE RECOVERY SUMMARY
Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082
Extraction Method: EPA 3550B

Sample Name	Lab Code	Decachlorobiphenyl 10 - 258
Method Blank	JQ1407734-01	116
Lab Control Sample	JQ1407734-02	86

Client:	Levine Fricke	**Service Request:**	J1407382
Project:	VAB LUCIP Press/TL014021.0000	**Date Collected:**	09/22/14
Sample Matrix:	Soil	**Date Received:**	09/23/14
		Date Analyzed:	10/2/14
		Date Extracted:	10/2/14

Duplicate Matrix Spike Summary
Polychlorinated Biphenyls (PCBs) by GC

Sample Name:	Pres-SB0003-003.0-20140922	**Units:**	ug/Kg
Lab Code:	J1407382-011	**Basis:**	Dry
Analysis Method:	8082		
Prep Method:	EPA 3550B		

		Matrix Spike			Duplicate Matrix Spike					
		JQ1407734-03			JQ1407734-04					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Aroclor 1016	11.0 U	1500	1610	94	1430	1420	101	28-149	5	30
Aroclor 1260	11.3 U	1420	1610	88	1760	1420	124	10-176	22	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client:	Levine Fricke	**Service Request:**	J1407382
Project:	VAB LUCIP Press/TL014021.0000	**Date Analyzed:**	10/02/14
Sample Matrix:	Soil	**Date Extracted:**	10/02/14

Lab Control Sample Summary
Polychlorinated Biphenyls (PCBs) by GC

Analysis Method:	8082	**Units:**	ug/Kg
Prep Method:	EPA 3550B	**Basis:**	As Received
		Analysis Lot:	414468

Lab Control Sample
JQ1407734-02

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Aroclor 1016	1140	1330	86	28-149
Aroclor 1260	1040	1330	78	10-176

ALS Environmental

Cooler Receipt Form

Client: Arcadia Service Request #: J1407382

Project: VAB LUCIP Press

Cooler received on 9.23.14 and opened on 9.23.14 GB

COURIER: ALS UPS FEDEX Client Other _____ Airbill # 805549689948

1	Were custody seals on outside of cooler?	Yes	No
	If yes, how many and where?	#: 1 on lid	other
2	Were seals intact and signature and date correct?	Yes	No N/A
3	Were custody papers properly filled out?	Yes	No N/A
4	Temperature of cooler(s) upon receipt (Should be > 0°C and < 6°C)	0.3	
5	Thermometer ID	TM1	
6	Temperature Blank Present?	Yes	No
7	Were Ice or Ice Packs present	Ice	Ice Packs No
8	Did all bottles arrive in good condition (unbroken, etc....)?	Yes	No N/A
9	Type of packing material present	Netting Vial Holder Bubble Wrap	
		Paper Styrofoam Other N/A	
10	Were all bottle labels complete (sample ID, preservation, etc....)?	Yes	No N/A
11	Did all bottle labels and tags agree with custody papers?	Yes	No N/A
12	Were the correct bottles used for the tests indicated?	Yes	No N/A
13	Were all of the preserved bottles received with the appropriate preservative?	Yes	No N/A
	HNO3 pH<2 H2SO4 pH<2 ZnAc2/NaOH pH>9 NaOH pH>12 HCl pH<2		
	Preservative additions noted below		
14	Were all samples received within analysis holding times?	Yes	No N/A
15	Were all VOA vials free of air bubbles? If present, note below	Yes	No N/A
16	Where did the bottles originate?	ALS	Client

Sample ID	Reagent	Lot #	ml added	Initials Date/Time

Additional comments and/or explanation of all discrepancies noted above: Pres-CT0006-000.1 Sample ID on the label is Pres-CT0005-000. No sample time on COC or label

Client approval to run samples if discrepancies noted: Date:

ALS Environmental

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

9143 Philips Highway, Ste 200 • Jacksonville, FL 32256 (904) 739-2277 • 800-695-7222 x06 • FAX (904) 739-2011

PAGE 1 OF 1

SR# J1407382
CAS Contract

J1407382 5
Levine Fricke
VAB Lucip Press

Project Name: VAB Lucip Press	Project Number: TL014021.0000
Project Manager: Scott Star	Email Address: susan.sittelhoff@arcadis-us.com
Company/Address: Arcadis, 14025 Riveredge Dr Ste 600, Tampa, FL 33637	
Phone #: 813 353 5797	FAX #:
Sampler's Signature: [signature]	Sampler's Printed Name: Susan Sittelhoff

ANALYSIS REQUESTED (Include Method Number and Container Pr...)

PRESERVATIVE: 0

Analysis: PCBs 8082

Preservative key: 1. HCL 2. HNO_3 3. H_2SO_4 4. NaOH 5. Zn. Acetate 6. MeOH 7. $NaHSO_4$ 8. Other ____

CLIENT SAMPLE ID	LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	PCBs 8082	REMARKS/ ALTERNATE DESCRIPTION
Pres-wipe0002-000.0-20140922		9/22/14	0945	wipe	1	X	
Pres-wipe0003-000.0-20140922		↓	0955	↓	1	X	
Pres-wipe0004-000.0-20140922		↓	1000	↓	1	X	
Pres-wipe0005-000.0-20140922		↓	1007	↓	1	X	
Pres-wipe0006-000.0-20140922		↓	1015	↓	1	X	
Pres-CT0002-000.1-20140922		9/22/14	1025	CT	1	X	
Pres-CT0003-000.1-20140922		↓	1037	↓	1	X	
Pres-CT0004-000.1-20140922		↓	1045	↓	1	X	
Pres-CT0005-000.1-20140922		↓	1053	↓	1	X	
Pres-CT0006-000.1-20140922		↓		↓	1	X	
Pres-SR0003-000.0-20140922		↓	1450		1	X	

SPECIAL INSTRUCTIONS/COMMENTS

See QAPP ☐

SAMPLE RECEIPT: CONDITION/COOLER TEMP: 0.3 °C CUSTODY SEALS: (Y) N

TURNAROUND REQUIREMENTS
____ RUSH (SURCHARGES APPLY)
____ STANDARD
REQUESTED FAX DATE ________
REQUESTED REPORT DATE ________

REPORT REQUIREMENTS
____ I. Results Only
____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data
____ V. Specialized Forms / Custom Report
Edata ____ Yes ____ No

INVOICE INFORMATION
PO #
BILL TO:

	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature	[signature]	[signature]				
Printed Name	Susan S. Hoff	S. Bauer				
Firm	Arcadis	ALS				
Date/Time	9/22/14	9.23.14 0940				

Distribution: White - Return to Originator; Yellow - Retained by Client

October 31, 2014 Service Request No:J1407415

Mr. Scott Starr
Levine Fricke
14025 Riveredge Drive
Suite 600
Tampa, FL 33637

Laboratory Results for: VAB 390G

Dear Mr.Starr,

Enclosed are the results of the sample(s) submitted to our laboratory September 23, 2014
For your reference, these analyses have been assigned our service request number **J1407415.**

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. In accordance to the NELAC 2003 Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Please contact me if you have any questions. My extension is 4409. You may also contact me via email at Craig.Myers@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Craig Myers
Project Manager

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PHONE +1 904 739 2277 | FAX +1 904 739 2011
ALS Group USA, Corp.
dba ALS Environmental

SAMPLE DETECTION SUMMARY

CLIENT ID: 390G-SB0040-000.5-20140922	Lab ID: J1407415-001					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
1,2,3,4,6,7,8-HpCDD	10.9		0.238	3.36	ng/Kg	8290
OCDD	73.8		0.177	6.72	ng/Kg	8290
2,3,7,8-TCDF	2.72		0.209	0.672	ng/Kg	8290
1,2,3,7,8-PeCDF	0.526	I	0.152	3.36	ng/Kg	8290
2,3,4,7,8-PeCDF	2.31	I	0.161	3.36	ng/Kg	8290
1,2,3,4,7,8-HxCDF	1.29	IJ	0.150	3.36	ng/Kg	8290
1,2,3,6,7,8-HxCDF	0.834	I	0.155	3.36	ng/Kg	8290
1,2,3,7,8,9-HxCDF	0.217	I	0.184	3.36	ng/Kg	8290
2,3,4,6,7,8-HxCDF	1.17	I	0.165	3.36	ng/Kg	8290
1,2,3,4,6,7,8-HpCDF	6.56		0.148	3.36	ng/Kg	8290
1,2,3,4,7,8,9-HpCDF	0.633	IJ	0.134	3.36	ng/Kg	8290
OCDF	7.54		0.343	6.72	ng/Kg	8290
Total Hexa-Dioxins	4.77		0.388	3.36	ng/Kg	8290
Total Hepta-Dioxins	43.6		0.238	3.36	ng/Kg	8290
Total Tetra-Furans	2.72		0.209	0.672	ng/Kg	8290
Total Penta-Furans	6.11		0.122	3.36	ng/Kg	8290
Total Hexa-Furans	9.12		0.163	3.36	ng/Kg	8290
Total Hepta-Furans	11.7		0.140	3.36	ng/Kg	8290
Total TEQ	4.52				ng/Kg	8290
Total Solids	72.7				Percent	CAS SOP

CLIENT ID: Pres-SB0003-000.5-20140922	Lab ID: J1407415-002					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
1,2,3,7,8,9-HxCDD	0.285	IJ	0.0365	3.20	ng/Kg	8290
1,2,3,4,6,7,8-HpCDD	0.856	IJ	0.0641	3.20	ng/Kg	8290
OCDD	6.78		0.166	6.40	ng/Kg	8290
2,3,7,8-TCDF	2.33		0.171	0.640	ng/Kg	8290
1,2,3,7,8-PeCDF	0.894	I	0.138	3.20	ng/Kg	8290
2,3,4,7,8-PeCDF	1.19	IJ	0.144	3.20	ng/Kg	8290
1,2,3,4,7,8-HxCDF	1.17	IJ	0.123	3.20	ng/Kg	8290
1,2,3,6,7,8-HxCDF	0.586	I	0.129	3.20	ng/Kg	8290
1,2,3,7,8,9-HxCDF	0.424	I	0.158	3.20	ng/Kg	8290
2,3,4,6,7,8-HxCDF	0.431	IJ	0.133	3.20	ng/Kg	8290
1,2,3,4,6,7,8-HpCDF	0.703	IJ	0.0766	3.20	ng/Kg	8290
1,2,3,4,7,8,9-HpCDF	0.756	IJ	0.0779	3.20	ng/Kg	8290
OCDF	0.981	IJ	0.332	6.40	ng/Kg	8290
Total Tetra-Furans	2.33		0.171	0.640	ng/Kg	8290
Total Penta-Furans	4.46		0.108	3.20	ng/Kg	8290
Total Hexa-Furans	1.77	I	0.135	3.20	ng/Kg	8290
Total TEQ	3.43				ng/Kg	8290
Total Solids	75.7				Percent	CAS SOP

Data Qualifiers

Florida-DEP

!	Data deviates from historically established concentration ranges
*	Not reported due to interference
?	Data is rejected and should not be used
A	Value reported is the arithmetic mean of two or more determininations
B	Results based upon colony counts outside the acceptable range.
D	Measurement was made in the field.
E	Extra samples were taken at composite stations
H	Value based on field kit determination; results may not be accurate.
I	The reported value is between the laboratory method detection limit and the laboratory PQL.
J	Estimated value.
K	Off scale low. The value is less than the lowest calibration standard.
L	Off scale high. The analyte is above the acceptable level of quantitation.
M	The MDL/MRL has been elevated because the analyte could not be accurately quantified.
N	Presumptive evidence of presence of material.
O	Sampled, but analysis lost or not performed
Q	Sample held beyond the acceptable holding time.
R	Significant rain in the past 48 hours (typically in excess of 0.5 inches)
T	Estimated value, less than the MDL
U	Indicates that the compound was analyzed for but not detected.
V	Indicates that the analyte was detected in both the sample and the associated method blank.
X	Insufficient individuals were present in the sample to achieve a minimum of 280 organisms for identification (Stream Condition Index Analysis only)
Y	The laboratory analysis was from an unpreserved or improperly preserved sample.
Z	Too many colonies were present, the numeric value represents the filtration volume

ALS Laboratory Group

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Client: Levine Fricke **Service Request:**J1407415

Project: VAB 390G/TL014021.0000

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
J1407415-001	390G-SB0040-000.5-20140922	9/22/2014	1144
J1407415-002	Pres-SB0003-000.5-20140922	9/22/2014	1440

ALS Environmental

Cooler Receipt Form

Client: Arcadis Service Request #: J1407415

Project: VAB Lucie 3903

Cooler received on 9.23.14 and opened on 9.23.14 by GB

COURIER: ALS UPS (FEDEX) Client Other _____ Airbill # 805549689948

1	Were custody seals on outside of cooler?	(Yes)	No			
	If yes, how many and where?	#: 1	(on lid)	other		
2	Were seals intact and signature and date correct?	(Yes)	No	N/A		
3	Were custody papers properly filled out?	(Yes)	No	N/A		
4	Temperature of cooler(s) upon receipt (Should be > 0°C and < 6°C)	0.3				
5	Thermometer ID	T71				
6	Temperature Blank Present?	(Yes)	No			
7	Were Ice or Ice Packs present	(Ice)	Ice Packs	No		
8	Did all bottles arrive in good condition (unbroken, etc....)?	(Yes)	No	N/A		
9	Type of packing material present	Netting	Vial Holder	(Bubble Wrap)		
		Paper	Styrofoam	Other	N/A	
10	Were all bottle labels complete (sample ID, preservation, etc....)?	(Yes)	No	N/A		
11	Did all bottle labels and tags agree with custody papers?	(Yes)	No	N/A		
12	Were the correct bottles used for the tests indicated?	(Yes)	No	N/A		
13	Were all of the preserved bottles received with the appropriate preservative?	Yes	No	(N/A)		
	HNO3 pH<2 H2SO4 pH<2 ZnAc2/NaOH pH>9 NaOH pH>12 HCl pH<2					
	Preservative additions noted below					
14	Were all samples received within analysis holding times?	(Yes)	No	N/A		
15	Were all VOA vials free of air bubbles? If present, note below	Yes	No	(N/A)		
16	Where did the bottles originate?	(ALS)	Client			

Sample ID	Reagent	Lot #	ml added	Initials Date/Time

Additional comments and/or explanation of all discrepancies noted above:

Client approval to run samples if discrepancies noted: Date:

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

ALS Environmental

9143 Philips Highway, Ste 200 • Jacksonville, FL 32256 (904) 739-2277 • 800-695-7222 x06 • FAX (904) 739-2011

PAGE 1 OF 1

SR# 51407415
CAS Contract

J1407415 5

Levine Fricke
VAB 3903

Project Name	VABLevin 3903
Project Number	TL014021 10000
Project Manager	Scott Gall
Email Address	Susan.S.Hartfield@arcadis-us.com
Company/Address	Arcadis 1425 Riverside Dr. Ste 600 Tampa FL 33637
Phone #	813 353 5797
FAX #	
Sampler's Signature	
Sampler's Printed Name	Susan S. Hartfield

ANALYSIS REQUESTED (Include Method Number a

PRESERVATIVE: 0

NUMBER OF CONTAINERS: 8290 Dioxins

1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

CLIENT SAMPLE ID	LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	8290 Dioxins	REMARKS/ ALTERNATE DESCRIPTION
3903-SB040-000.5-	20140922	9/22/14	1147	Soil	1	X	
DUP-SB0003-0005-	20140922	9/22/14	1440	Soil	1	X	

SPECIAL INSTRUCTIONS/COMMENTS

See QAPP ☐

TURNAROUND REQUIREMENTS
___ RUSH (SURCHARGES APPLY)
X STANDARD
REQUESTED FAX DATE
REQUESTED REPORT DATE

REPORT REQUIREMENTS
___ I. Results Only
___ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
___ III. Results + QC and Calibration Summaries
___ IV. Data Validation Report with Raw Data
___ V. Specialized Forms / Custom Report
Edata ___ Yes ___ No

INVOICE INFORMATION
PO #
BILL TO:

SAMPLE RECEIPT: CONDITION/COOLER TEMP: 0.3 °C CUSTODY SEALS: (Y) N

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: Susan S. Hartfield	Signature	Signature	Signature	Signature	Signature
Printed Name: Arcadis	Printed Name: G Bauer	Printed Name	Printed Name	Printed Name	Printed Name
Firm: 9/22/14	Firm: ALS	Firm	Firm	Firm	Firm
Date/Time	Date/Time: 9.23.14 0910	Date/Time	Date/Time	Date/Time	Date/Time

Distribution: White - Return to Originator; Yellow - Retained by Client

ALS Environmental Services
9143 Philips Highway, Suite 200
Jacksonville, FL 32256
Tel 904-739-2277
Fax 904-739-2011

Appendix A

Subcontracted Analytical Results

10450 Stancliff Rd., Suite 210
Houston, TX 77099
T: +1 713 266 1599
F: +1 713 266 1599
www.alsglobal.com

October 14, 2014 Service Request No: J1407415

Craig Myers
ALS Group USA Corp.
9143 Philips Hwy, Suite 200
Jacksonville, FL 32256

Laboratory Results for: Levine Fricke.

Dear Myers:

Enclosed are the results of the sample(s) submitted to our laboratory on October 01, 2014. For your reference, these analyses have been assigned our service request number **J1407415**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current TNI standards, where applicable, and considered in their entirety, and ALS Environmental is not responsible for use of less than the final complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. In accordance to the TNI 2009 Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Please contact me if you have any questions. My direct number is 281-575-2284. You may also contact me via email at Nicole.brown@alsglobal.com.

Respectfully submitted,

ALS Group USA Corp, dba ALS Environmental

Nicole Brown
Project Manager

For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com.

Certificate of Analysis

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Environmental

Client:	Levine Fricke	**Service Request No.:**	J1407415
Project:	VAB 3903 / TL014021.0000	**Date Received:**	10/01/14
Sample Matrix:	Soil		

CASE NARRATIVE

All analyses were performed in adherence to the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Two soil samples were received for analysis at ALS Environmental on 10/01/14.

The samples were received at 12 °C and are consistent with the accompanying chain of custody form. Dioxins Furans compounds are stable at room temperature. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

The samples had water inside the jars upon receipt. It is possible the water was a result of seepage from melting ice in the cooler.

Data Validation Notes and Discussion

MS/MSD

EQ1400634: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in lieu of an MS/MSD for this extraction batch. The batch quality control criteria were met.

2378-TCDF

Samples analyzed on the DB-5MSUI column were analyzed under conditions where sufficient separation between 2,3,7,8-TCDF and its closest eluter was achieved. Confirmation of this result was not required.

Labeled Standards

Quantification of the native 2,3,7,8-substituted congeners is based on isotopic dilution, which automatically corrects for variation in extraction efficiency and provides accurate values even with poor recovery. For samples that had recoveries of labeled standards outside the acceptance limits, the signal-to-noise ratios are greater than 10:1 and detection limits were below the Method Reporting Limits.

J flags

EMPC - When the ion abundance ratios associated with a particular compound are outside the QC limits, samples are flagged with a 'J' flag. A 'J' flag indicates an estimated maximum possible concentration for the associated compound.

Detection Limits

Detection limits are calculated for each analyte in each sample by measuring the height of the noise level for each quantitation ion for the associated labeled standard. The concentration equivalent to 2.5 times the height of the noise is then calculated using the appropriate response factor and the weight of the sample. The calculated concentration equals the detection limit.

The TEQ Summary results for each sample have been calculated by ALS/Houston to include:

- WHO-1998 TEFs, for PCBs, PCDDs, 21 PCDFs for humans and wildlife. (M. Van den Berg, et al., Environ Health Perspect 106: 775-792, 1998)
- Non-detected compounds reported as ND = ½ * Detection Limit

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS group USA Corp dba ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

Client: Levine Fricke **Service Request:**J1407415

Project: VAB 390G/TL014021.0000

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
J1407415-001	390G-SB0040-000.5-20140922	9/22/2014	1144
J1407415-002	Pres-SB0003-000.5-20140922	9/22/2014	1440

Service Request Summary

Folder #: **J1407415**
Client Name: Levine Fricke
Project Name: VAB 390G
Project Number: TL014021.0000

Report To: Scott Starr
Levine Fricke
14025 Riveredge Drive
Tampa, FL 33637
USA
Phone Number: 813-661-1810
Cell Number: 813-205-5932
Fax Number: 813-661-6043
E-mail: a.starr@arcadis-us.com

Project Chemist: Craig Myers
Originating Lab: JAX
Logged By: SLIGHTSEY
Date Received: 09/23/14
Internal Due Date: 10/16/2014
QAP: LAB QAP
Qualifier Set: Florida-DEP
Formset: Lab Standard
Merged?: N
Report to MDL?: Y
P.O. Number:
EDD: LFR RIS

2 4 oz-Glass Jar WM CLEAR Teflon Liner Unpreserved
Location: SampleCustodian
Pressure Gas:

				HOUSTON	
				PCDD PCDF/8290	Total Solids/ALS SOP
Lab Samp No.	**Client Samp No**	**Matrix**	**Collected**		
J1407415-001	390G-SB0040-000.5-20140922	Soil	09/22/14 1144	II	II
J1407415-002	Pres-SB0003-000.5-20140922	Soil	09/22/14 1440	II	II

Service Request Summary

Folder #: **J1407415**
Client Name: Levine Fricke
Project Name: VAB 390G
Project Number: TL014021.0000

Report To: Scott Starr
Levine Fricke
14025 Riveredge Drive
Tampa, FL 33637
USA
Phone Number: 813-661-1810
Cell Number: 813-205-5932
Fax Number: 813-661-6043
E-mail: a.starr@arcadis-us.com

Project Chemist: Craig Myers
Originating Lab: JAX
Logged By: SLIGHTSEY
Date Received: 09/23/14
Internal Due Date: 10/16/2014
QAP: LAB QAP
Qualifier Set: Florida-DEP
Formset: Lab Standard
Merged?: N
Report to MDL?: Y
P.O. Number:
EDD: LFR RIS

2 4 oz-Glass Jar WM CLEAR Teflon Liner Unpreserved
Location: SampleCustodian
Pressure Gas:

Test Comments:

Group	Test/Method	Samples	Comments
Semivoa GCMS	PCDD PCDF/8290	2	Report Florida Qualifers and TEQs

Data Qualifier Flags – Florida DEP

- **V** Indicates the associated analyte is found in the method blank as well as in the sample

- **U** Indicates the compound was analyzed and not detected

- **N** Indicates 2378-TCDF was confirmed on a DB-225 column. Everytime 2378-TCDF is detected on the DB-5 column, confirmation analyses are performed on a second column (DB-225). The results from both the DB-5 column and the DB-225 column are included in this data package. The results from the DB-225 analyses should be used to evaluate the concentration of 2378-TCDF in the samples. The confirmed result should be used in determining the TEQ value for TCDF.

- **L** Indicates an estimated value and is used when the analyte concentration exceeds the upper end of the linear calibration range. The actual value is known to be greater than the reported value.

- **I** Indicates an estimated value and is used when the reported value is between the estimated detection limit (EDL) and the method reporting limit (MRL)

- **J** Indicates an estimated concentration and is used when the ion abundance ratios associated with a particular compound are outside their acceptance criteria. A 'J' flag indicates an estimated maximum possible concentration (EMPC) for the associated compound.

Acronyms

Cal	Calibration
Conc	CONCentration
Dioxin(s)	Polychlorinated dibenzo-p-dioxin(s)
EDL	Estimated Detection Limit
EMPC	Estimated Maximum Possible Concentration
Flags	Data qualifiers
Furan(s)	Polychlorinated dibenzofuran(s)
g	Grams
ICAL	Initial CALibration
ID	IDentifier
Ions	Masses monitored for the analyte during data acquisition
L	Liter (s)
LCS	Laboratory Control Sample
DLCS	Duplicate Laboratory Control Sample
MB	Method Blank
MCL	Method Calibration Limit
MDL	Method Detection Limit
mL	Milliliters
MS	Matrix Spiked sample
DMS	Duplicate Matrix Spiked sample
NO	Number of peaks meeting all identification criteria
PCDD(s)	Polychlorinated dibenzo-p-dioxin(s)
PCDF(s)	Polychlorinated dibenzofuran(s)
ppb	Parts per billion
ppm	Parts per million
ppq	Parts per quadrillion
ppt	Parts per trillion
QA	Quality Assurance
QC	Quality Control
Ratio	Ratio of areas from monitored ions for an analyte
% Rec.	Percent recovery
RPD	Relative Percent Difference
RRF	Relative Response Factor
RT	Retention Time
SDG	Sample Delivery Group
S/N	Signal-to-noise ratio
TEF	Toxicity Equivalence Factor
TEQ	Toxicity Equivalence Quotient

ALS Environmental

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
American Association for Laboratory Accreditation	2897.01	11/30/2014
Arizona Department of Health Services	AZ0793	5/27/2015
Arkansas Department of Environmental Quality	14-038-0	6/16/2015
California Department of Health Services	2452	2/28/2015
Florida Department of Health	E87611	6/30/2015
Hawaii Department of Health	TX02694	6/30/2015
Kansas Department of Health and Environment	E-10406	1/31/2015
Louisiana Department of Environmental Quality	03048	12/31/2014
Louisiana Department of Health and Hospitals	TX2694	6/30/2015
Maine Center for Disease Control and Prevention	2014019	12/31/2014
Maryland Department of the Environment	343	6/30/2015
Michigan Depratment of Environmental Quality	9971	6/30/2015
Minnesota Department of Health	TX02694	12/31/2014
Nebraska Department of Health and Human Services	NE-OS-25-13	6/30/2015
Nevada Department of Concervation and Natural Resources	TX014112013-2	7/31/2015
New Jersey Department of Environmental Protection	NLC140001	6/30/2015
New Mexico Environment Department	TX02694	6/30/2015
New York Department of Health	11707	4/1/2015
Oklahoma Department of Environmental Quality	2014-124	8/31/2015
Oregon Environmental Laboratory Accreditation Program	TX200002	3/24/2015
Pennsylvania Department of Environmental Protection	68-03441	6/30/2015
Tennessee Department of Environment and Concervation	04016	6/30/2015
Texas Commision on Environmental Quality	TX104704216-14-5	6/30/2015
United States Department of Agriculture	P330-14-00067	2/21/2017
Utah Department of Health Environmental Laboratory Certification	TX02694	7/31/2015
Washington Department of Health	c819	11/14/2014
West Virginia Department of Environmental Protection	347	6/30/2015

ALS ENVIRONMENTAL – Houston
Data Processing/Form Production and Peer Review Signatures

SR# Unique ID: J1407415 | DB-5 | DB-5MSUI | DB-225 | SPB-Octyl

First Level - Data Processing - to be filled by person generating the forms

Date:	Analyst:	Samples:
10/14/14		001, 002

Second Level - Data Review – to be filled by person doing peer review

Date:	Analyst:	Samples:
10/14/14		001, 002

Chain of Custody

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

Intra-Network Chain of Custody

9143 Philips Highway, Suite 200 • Jacksonville, FL 32256 • 904-739-2277 • FAX 904-739-2011

ALS Contact: Craig Myers

Project Name: VAB 3903
Project Number: TL014021.0000
Project Manager: Scott Starr
Company: Levine Fricke

Lab Code	Client Sample ID	# of Cont.	Matrix	Sample Date	Sample Time	Date Received	Send To	PCDD PCDF 8290	Total Solids CAS SOP
J1407415-001	3903-SB0040-000.5-20140922	1	Soil	9/22/14	1144	9/23/14	HOUSTON	II	II
J1407415-002	Pres-SB0003-000.5-20140922	1	Soil	9/22/14	1440	9/23/14	HOUSTON	II	II

Test Comments

PCDD PCDF - 8290 J1407415-001,2 Report Florida Qualifers and TEQs

J1407415 5
Levine Fricke
VAB 3903

Special Instructions/Comments

pH Checked _____

Turnaround Requirements

____ **RUSH** (Surcharges Apply)

PLEASE CIRCLE WORK DAYS

1 2 3 4 5

✓ **STANDARD**

Requested FAX Date: _____

Requested Report Date: ~~10/09/14~~ 10/16/14

Report Requirements

____ I. Results Only

✓ II. Results + QC Summaries

____ III. Results + QC and Calibration Summaries

____ IV. Data Validation Report with Raw Data

PQL/MDL/J Y

EDD Y

Invoice Information

PO# J1407415

Bill to

Relinquished By: J1407415

Received By: _____ 10/6/14

Airbill Number: _____

Cooler Receipt Form

ALS Environmental

Project Chemist NB

Client/Project Levine Fricke

Thermometer ID SM0

Date/Time Received: 10/01/14 920 Initials: AL

Date/Time Logged in: 10/01/14 Initials AL

1. Method of delivery: ○ US Mail ✓ Fed Ex ○ UPS ○ DHL ○ Courier ○ Client

2. Samples received in: ✓ Cooler ○ Box ○ Envelope ○ Other

3. Were custody seals on coolers? ○ Yes ✓ No
   Were they intact? ○ Yes ○ No ✓ N/A
   Were they signed and dated? ○ Yes ○ No ✓ N/A
   If yes, how many and where? No Seals

4. Packing Material: ○ Inserts ✓ Baggies ✓ Bubble Wrap ○ Gel Packs ✓ Wet Ice ○ Sleeves ○ Other

5. Foreign or Regulated Soil? ○ Yes ✓ No Location of Sampling:

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
5498 9748 9910		10/01/14	1053	AL	13/12	☐
						☐
						☐
						☐

6. Were custody papers properly filled out (ink, signed, dated, etc)? ✓ Yes ○ No
7. Did all bottles arrive in good condition (not broken, no signs of leakage)? ○ Yes ✓ No
8. Were all sample labels complete (i.e., sample ID, analysis, preservation, etc)? ✓ Yes ○ No
9. Were appropriate bottles/containers and volumes received for the requested tests? ✓ Yes ○ No
10. Did sample labels and tags agree with custody documents? ✓ Yes ○ No

Notes, Discrepancies, & Resolutions:

Sample arrived out of temp, samples also showed signs of leakage, sample contained water inside cotainer AL 10/01/14

Dioxins furans compounds are stable at room temperature. Samples had water inside the jars, possibly from seepage from melting ice in the cooler. NB

# of containers on COC: # of containers received:

Service request Label:

J1407415 5
Levine Fricke
VAB 3903

10450 Stancliff Rd., Suite 210
Houston, TX 77099
T: +1 713 266 1599
F: +1 713 266 1599
www.alsglobal.com

SAMPLE ACCEPTANCE POLICY

This policy outlines the criteria samples must meet to be accepted by ALS Environmental – Houston HRMS.

Cooler Custody Seals (desirable, mandatory if specified in SAP):

- ✓ Intact on outside of cooler, signed and dated

Chain-of-Custody (COC) documentation (mandatory):

The following is required on each COC:

- ✓ Sample ID, the location, date and time of collection, collector's name, preservation type, sample type, and any other special remarks concerning the sampleThe COC must be completed in ink.
- ✓ Signature and date of relinquishing party.

In the absence of a COC at sample receipt, the COC will be requested from the client.

Sample Integrity (mandatory):

Samples are inspected upon arrival to ensure that sample integrity was not compromised during transfer to the laboratory.

- ✓ Sample containers must arrive in good condition (not broken or leaking).
- ✓ Samples must be labeled appropriately, including Sample IDs, and requested test using durable labels and indelible ink.
- ✓ The correct type of sample bottle must be used for the method requested.
- ✓ An appropriate sample volume, or weight, must be received.
- ✓ Sample IDs and number of containers must reconcile with the COC.
- ✓ Samples must be received within the method defined holding time.

Temperature Requirement (varies by sample matrix):

- ✓ Aqueous and Non-aqueous samples must be shipped and stored cold, at 0 to 6ºC.
- ✓ Tissue samples must be shipped and stored frozen, at -20 to -10ºC.
- ✓ Air samples are shipped and stored cold, at 0 to 6ºC
- ✓ The sample temperature must be recorded on the COC

All cooler inspections are documented on the Cooler Receipt Form (CRF). A separate CRF is completed for each service request. Any samples not meeting the above criteria are noted on the CRF and the Project Manager notified. The Project Manager must resolve any sample integrity issues with the client prior to proceeding with the analysis. Such resolutions are documented in writing and filed with the project folder. Data associated with samples received outside of this acceptance policy will be qualified on the case narrative of the final report

Preparation Information Benchsheets

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

Preparation Information Benchsheet

Prep Run#: 219964 **Prep WorkFlow:** OrgExtDioxS(30) **Status:** Prepped
Team: Semivoa GCMS/WMCDONOUGH **Prep Method:** Method **Prep Date/Time:** 10/7/14 09:00 AM

#	Lab Code	Client ID	B#	Method /Test	pH	Matrix	Amt. Ext.	Sample Description
1	E1401124-004	North Wall B	.01	8290/PCDD PCDF		Soil	10.018g	Soft, Brown Dirt (w/ roots)
2	E1401182-001	KW533-01-SS01-C	.01	8290A/PCDD PCDF		Soil	10.385g	Tan Dirt (w/ rocks)
3	E1401182-002	KW533-01-SS02-C	.01	8290A/PCDD PCDF		Soil	10.069g	Tan Dirt (w/ rocks)
4	E1401182-003	KW533-01-SS03-C	.01	8290A/PCDD PCDF		Soil	10.155g	Tan Dirt (w/ rocks)
5	E1401182-004	KZ531-01-SS02-C	.01	8290A/PCDD PCDF		Soil	10.475g	Tan Dirt (w/ rocks)
6	E1401182-005	KZ531-01-SS03-C	.01	8290A/PCDD PCDF		Soil	10.142g	Tan Dirt (w/ rocks)
7	E1401182-006	LD529-01-SS06-C	.01	8290A/PCDD PCDF		Soil	10.090g	Tan Dirt (w/ rocks)
8	E1401182-007	LD529-01-SS07-C	.01	8290A/PCDD PCDF		Soil	10.217g	Tan Dirt (w/ rocks)
9	E1401222-001	2014090872-1	.01	8290/PCDD PCDF		Sediment	10.600g	Wet, Brown Mud (w/ roots)
10	E1401222-002	2014090872-2	.01	8290/PCDD PCDF		Sediment	10.267g	Wet, Brown Mud (w/ roots)
11	EQ1400634-01	MB		8290A/PCDD PCDF		Solid	10.200g	
12	EQ1400634-02	LCS		8290A/PCDD PCDF		Solid	10.044g	
13	EQ1400634-03	DLCS		8290A/PCDD PCDF		Solid	10.177g	
14	J1407415-001	390G-SB0040-000.5-20140922	.01	8290/PCDD PCDF		Soil	10.242g	Brown Mud (in water)
15	J1407415-002	Pres-SB0003-000.5-20140922	.01	8290/PCDD PCDF		Soil	10.319g	Brown Mud (in water)
16	J1407493-001	ECPS-SB1027-000.5-20140925	.01	8290/PCDD PCDF		Soil	10.532g	White Mud (in water)
17	K1408838-001RE	Grade 9750 Run# 40964	.03	8290/PCDD PCDF		Paperboard	3.077g	Brown, Shredded Paper
18	T1401380-001	DAD-BA-091114-004	.03	8290/PCDD PCDF		Ash	2.622g	Black Solid (on rocks)
19	T1401380-002	DAD-FA-091114-004	.03	8290/PCDD PCDF		Ash	2.552g	Fine, Grey Powder
20	T1401457-001	TUL-FA-91814-005	.03	8290/PCDD PCDF		Ash	2.752g	Fine, Grey Powder
21	T1401457-002	TUL--3/8-91814-005	.03	8290/PCDD PCDF		Ash	2.742g	Black Solid (on rocks)
22	T1401457-003	TUL-+3/8-91814-005	.03	8290/PCDD PCDF		Ash	2.731g	Black Solid (on rocks)

Preparation Information Benchsheet

Prep Run#: 219964 **Prep WorkFlow:** OrgExtDioxS(30) **Status:** Prepped
Team: Semivoa GCMS/WMCDONOUGH **Prep Method:** Method **Prep Date/Time:** 10/7/14 09:00 AM

Spiking Solutions

Name:	1613B Matrix Working Standard	Inventory ID	75110	Logbook Ref:	2-20 ng/ml 75110 TL 9/26/14	Expires On:	09/26/2015

EQ1400634-02	100.00µL	EQ1400634-02	100.00µL	EQ1400634-03	100.00µL	EQ1400634-03	100.00µL

Name:	1613B Labeled Working Standard	Inventory ID	75329	Logbook Ref:	2-4 ng/ml 75329 TL 10/2/14	Expires On:	10/02/2015

E1401124-004	1,000.00µL	E1401182-001	1,000.00µL	E1401182-002	1,000.00µL	E1401182-003	1,000.00µL	E1401182-004	1,000.00µL	E1401182-005	1,000.00µL
E1401182-006	1,000.00µL	E1401182-007	1,000.00µL	E1401222-001	1,000.00µL	E1401222-002	1,000.00µL	EQ1400634-01	1,000.00µL	EQ1400634-01	1,000.00µL
EQ1400634-02	1,000.00µL	EQ1400634-02	1,000.00µL	EQ1400634-03	1,000.00µL	EQ1400634-03	1,000.00µL	J1407415-001	1,000.00µL	J1407415-002	1,000.00µL
J1407493-001	1,000.00µL	K1408838-001	1,000.00µL	T1401380-001	1,000.00µL	T1401380-002	1,000.00µL	T1401457-001	1,000.00µL	T1401457-002	1,000.00µL
T1401457-003	1,000.00µL										

Name:	8290/1613B Cleanup Working Standard	Inventory ID	75408	Logbook Ref:	75408 LM 10/06/2014	Expires On:	10/06/2015

E1401124-004	100.00µL	E1401182-001	100.00µL	E1401182-002	100.00µL	E1401182-003	100.00µL	E1401182-004	100.00µL	E1401182-005	100.00µL
E1401182-006	100.00µL	E1401182-007	100.00µL	E1401222-001	100.00µL	E1401222-002	100.00µL	EQ1400634-01	100.00µL	EQ1400634-01	100.00µL
EQ1400634-02	100.00µL	EQ1400634-02	100.00µL	EQ1400634-03	100.00µL	EQ1400634-03	100.00µL	J1407415-001	100.00µL	J1407415-002	100.00µL
J1407493-001	100.00µL	K1408838-001	100.00µL	T1401380-001	100.00µL	T1401380-002	100.00µL	T1401457-001	100.00µL	T1401457-002	100.00µL
T1401457-003	100.00µL										

Preparation Materials

Carbon, High Purity	AL 09/24/14 (75056)	Ethyl Acetate 99.9% Minimum EtOAc	LM 09/23/14 (75019)	Glass Wool	AL 08/06/14 (73215)
Sulfuric Acid Reagent Grade H2SO4	LM 09/16/14 (74784)	Hexanes 95%	LM 09/26/14 (75115)	Sodium Sulfate Anhydrous Reagent Grade Na2SO4	LM 09/09/14 (74580)
Tridecane (n-Tridecane)	AL 08/19/14 (73695)	Silica Gel Reagent Grade	LM 09/18/14 (74887)	Toluene 99.9% Minimum	LM 09/30/14 (75177)
Sodium Chloride Reagent Grade NaCl	C2-65-5 (38670)	Dichloromethane (Methylene Chloride) 99.9% MeCl2	LM 09/02/14 (74231)	Sodium Hydroxide Reagent Grade NaOH	LM 09/02/14 (74232)

Preparation Steps

Step:	Extraction	Step:	Acid Clean	Step:	Silica Gel Clean	Step:	Final Volume
Started:	10/7/14 09:00	Started:	10/8/14 19:20	Started:	10/9/14 11:00	Started:	10/10/14 08:47
Finished:	10/7/14 12:30	Finished:	10/8/14 20:10	Finished:	10/9/14 13:00	Finished:	10/10/14 09:21
By:	DEDWARDS	By:	LMCCRINK	By:	CDIAZ	By:	DEDWARDS
Comments		Comments		Comments		Comments	

Comments:

Preparation Information Benchsheet

Prep Run#: 219964 **Prep WorkFlow:** OrgExtDioxS(30) **Status:** Prepped
Team: Semivoa GCMS/WMCDONOUGH **Prep Method:** Method **Prep Date/Time:** 10/7/14 09:00 AM

Reviewed By: JWP 101014 Date: _____ Spike Witness: LMCCRINK Date: _____

Chain of Custody

Relinquished By: _____ Date: _____

Received By: _____ Date: _____

Extracts Examined
Yes No

Analytical Results

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

Client:	Levine Fricke	**Service Request:**	J1407415
Project:	VAB 390G/TL014021.0000	**Date Collected:**	09/22/14 11:44
Sample Matrix:	Soil	**Date Received:**	09/23/14 09:10
Sample Name:	390G-SB0040-000.5-20140922	**Units:**	ng/Kg
Lab Code:	J1407415-001	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	8290	**Date Analyzed:**	10/11/14 18:56
Prep Method:	Method	**Date Extracted:**	10/7/14
Sample Amount:	10.242g	**Instrument Name:**	E-HRMS-03
		GC Column:	DB-5MSUI
Data File Name:	P174042	**Blank File Name:**	P231884
ICAL Date:	03/25/14	**Cal Ver. File Name:**	P174037

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.135	0.672			1
1,2,3,7,8-PeCDD	ND	U	0.118	3.36			1
1,2,3,4,7,8-HxCDD	ND	U	0.379	3.36			1
1,2,3,6,7,8-HxCDD	ND	U	0.416	3.36			1
1,2,3,7,8,9-HxCDD	ND	U	0.369	3.36			1
1,2,3,4,6,7,8-HpCDD	10.9		0.238	3.36	1.10	1.000	1
OCDD	73.8		0.177	6.72	0.88	1.000	1
2,3,7,8-TCDF	2.72		0.209	0.672	0.89	1.001	1
1,2,3,7,8-PeCDF	0.526**I**		0.152	3.36	1.38	1.001	1
2,3,4,7,8-PeCDF	2.31**I**		0.161	3.36	1.43	1.000	1
1,2,3,4,7,8-HxCDF	1.29**IJ**		0.150	3.36	1.99	1.000	1
1,2,3,6,7,8-HxCDF	0.834**I**		0.155	3.36	1.06	1.000	1
1,2,3,7,8,9-HxCDF	0.217**I**		0.184	3.36	1.12	1.000	1
2,3,4,6,7,8-HxCDF	1.17**I**		0.165	3.36	1.26	1.000	1
1,2,3,4,6,7,8-HpCDF	6.56		0.148	3.36	1.05	1.000	1
1,2,3,4,7,8,9-HpCDF	0.633**IJ**		0.134	3.36	1.36	1.000	1
OCDF	7.54		0.343	6.72	0.78	1.005	1
Total Tetra-Dioxins	ND	U	0.135	0.672			1
Total Penta-Dioxins	ND	U	0.118	3.36			1
Total Hexa-Dioxins	4.77		0.388	3.36	1.21		1
Total Hepta-Dioxins	43.6		0.238	3.36	0.98		1
Total Tetra-Furans	2.72		0.209	0.672	0.89		1
Total Penta-Furans	6.11		0.122	3.36	1.48		1
Total Hexa-Furans	9.12		0.163	3.36	1.36		1
Total Hepta-Furans	11.7		0.140	3.36	1.05		1

Client:	Levine Fricke	**Service Request:**	J1407415
Project:	VAB 390G/TL014021.0000	**Date Collected:**	09/22/14 11:44
Sample Matrix:	Soil	**Date Received:**	09/23/14 09:10
Sample Name:	390G-SB0040-000.5-20140922	**Units:**	Percent
Lab Code:	J1407415-001	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	8290	**Date Analyzed:**	10/11/14 18:56
Prep Method:	Method	**Date Extracted:**	10/7/14
Sample Amount:	10.242g	**Instrument Name:**	E-HRMS-03
		GC Column:	DB-5MSUI
Data File Name:	P174042	**Blank File Name:**	P231884
ICAL Date:	03/25/14	**Cal Ver. File Name:**	P174037

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
C13-2,3,7,8-TCDD	2000	938.871	47		40-135	0.79	1.020
C13-1,2,3,7,8-PeCDD	2000	806.527	40		40-135	1.57	1.176
C13-1,2,3,4,7,8-HxCDD	2000	1044.634	52		40-135	1.36	0.991
C13-1,2,3,6,7,8-HxCDD	2000	943.648	47		40-135	1.17	0.993
C13-1,2,3,4,6,7,8-HpCDD	2000	839.079	42		40-135	1.08	1.065
C13-OCDD	4000	1201.614	30		40-135	0.90	1.141
C13-2,3,7,8-TCDF	2000	903.361	45		40-135	0.77	0.993
C13-1,2,3,7,8-PeCDF	2000	783.481	39		40-135	1.59	1.136
C13-2,3,4,7,8-PeCDF	2000	783.890	39		40-135	1.60	1.167
C13-1,2,3,4,7,8-HxCDF	2000	1155.272	58		40-135	0.51	0.972
C13-1,2,3,6,7,8-HxCDF	2000	1046.076	52		40-135	0.53	0.975
C13-1,2,3,7,8,9-HxCDF	2000	1043.697	52		40-135	0.50	1.008
C13-2,3,4,6,7,8-HxCDF	2000	1051.660	53		40-135	0.51	0.988
C13-1,2,3,4,6,7,8-HpCDF	2000	669.627	33		40-135	0.44	1.041
C13-1,2,3,4,7,8,9-HpCDF	2000	903.601	45		40-135	0.46	1.079
CL37-2,3,7,8-TCDD	800	346.518	43		40-135	NA	1.020

Client:	Levine Fricke	**Service Request:**	J1407415
Project:	VAB 390G/TL014021.0000	**Date Collected:**	09/22/14 11:44
Sample Matrix:	Soil	**Date Received:**	09/23/14 09:10
Sample Name:	390G-SB0040-000.5-20140922	**Units:**	ng/Kg
Lab Code:	J1407415-001	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290
Prep Method: Method

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.135	0.672	1	1	0.336
1,2,3,7,8-PeCDD	ND	0.118	3.36	1	1	1.68
1,2,3,4,7,8-HxCDD	ND	0.379	3.36	1	0.1	0.168
1,2,3,6,7,8-HxCDD	ND	0.416	3.36	1	0.1	0.168
1,2,3,7,8,9-HxCDD	ND	0.369	3.36	1	0.1	0.168
1,2,3,4,6,7,8-HpCDD	**10.9**	0.238	3.36	1	0.01	0.109
OCDD	**73.8**	0.177	6.72	1	0.0001	0.00738
2,3,7,8-TCDF	**2.72**	0.209	0.672	1	0.1	0.272
1,2,3,7,8-PeCDF	**0.526**	0.152	3.36	1	0.05	0.0263
2,3,4,7,8-PeCDF	**2.31**	0.161	3.36	1	0.5	1.16
1,2,3,4,7,8-HxCDF	**1.29**	0.150	3.36	1	0.1	0.129
1,2,3,6,7,8-HxCDF	**0.834**	0.155	3.36	1	0.1	0.0834
1,2,3,7,8,9-HxCDF	**0.217**	0.184	3.36	1	0.1	0.0217
2,3,4,6,7,8-HxCDF	**1.17**	0.165	3.36	1	0.1	0.117
1,2,3,4,6,7,8-HpCDF	**6.56**	0.148	3.36	1	0.01	0.0656
1,2,3,4,7,8,9-HpCDF	**0.633**	0.134	3.36	1	0.01	0.00633
OCDF	**7.54**	0.343	6.72	1	0.0001	0.000754
		Total TEQ				4.52

1998 WHO TEFs, ND = 0.5

Client:	Levine Fricke	**Service Request:**	J1407415
Project:	VAB 3903/TL014021.0000	**Date Collected:**	09/22/14 11:44
Sample Matrix:	Soil	**Date Received:**	09/23/14 09:10
Sample Name:	3903-SB0040-000.5-20140922	**Units:**	Percent
Lab Code:	J1407415-001	**Basis:**	Dry

Total Solids Run Create

Analysis Method:	CAS SOP	**Date Analyzed:**	10/08/14 17:12
	9.934g		NA
			E-Balance-01

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Solids	72.7		-	-			1

Client:	Levine Fricke	**Service Request:**	J1407415
Project:	VAB 390G/TL014021.0000	**Date Collected:**	09/22/14 14:40
Sample Matrix:	Soil	**Date Received:**	09/23/14 09:10
Sample Name:	Pres-SB0003-000.5-20140922	**Units:**	ng/Kg
Lab Code:	J1407415-002	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	8290	**Date Analyzed:**	10/11/14 19:44
Prep Method:	Method	**Date Extracted:**	10/7/14
Sample Amount:	10.319g	**Instrument Name:**	E-HRMS-03
		GC Column:	DB-5MSUI
Data File Name:	P174043	**Blank File Name:**	P231884
ICAL Date:	03/25/14	**Cal Ver. File Name:**	P174037

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.137	0.640			1
1,2,3,7,8-PeCDD	ND	U	0.177	3.20			1
1,2,3,4,7,8-HxCDD	ND	U	0.0381	3.20			1
1,2,3,6,7,8-HxCDD	ND	U	0.0406	3.20			1
1,2,3,7,8,9-HxCDD	0.285**IJ**		0.0365	3.20	0.88	1.007	1
1,2,3,4,6,7,8-HpCDD	0.856**IJ**		0.0641	3.20	0.68	1.000	1
OCDD	6.78		0.166	6.40	0.78	1.000	1
2,3,7,8-TCDF	2.33		0.171	0.640	0.76	1.001	1
1,2,3,7,8-PeCDF	0.894**I**		0.138	3.20	1.69	1.001	1
2,3,4,7,8-PeCDF	1.19**IJ**		0.144	3.20	1.29	1.000	1
1,2,3,4,7,8-HxCDF	1.17**IJ**		0.123	3.20	0.95	1.000	1
1,2,3,6,7,8-HxCDF	0.586**I**		0.129	3.20	1.11	1.000	1
1,2,3,7,8,9-HxCDF	0.424**I**		0.158	3.20	1.25	1.001	1
2,3,4,6,7,8-HxCDF	0.431**IJ**		0.133	3.20	1.01	1.000	1
1,2,3,4,6,7,8-HpCDF	0.703**IJ**		0.0766	3.20	1.39	1.000	1
1,2,3,4,7,8,9-HpCDF	0.756**IJ**		0.0779	3.20	0.70	1.000	1
OCDF	0.981**IJ**		0.332	6.40	1.55	1.005	1
Total Tetra-Dioxins	ND	U	0.137	0.640			1
Total Penta-Dioxins	ND	U	0.177	3.20			1
Total Hexa-Dioxins	ND	U	0.0383	3.20			1
Total Hepta-Dioxins	ND	U	0.0641	3.20			1
Total Tetra-Furans	2.33		0.171	0.640	0.76		1
Total Penta-Furans	4.46		0.108	3.20			1
Total Hexa-Furans	1.77**I**		0.135	3.20	1.12		1
Total Hepta-Furans	ND	U	0.0771	3.20			1

Client:	Levine Fricke	**Service Request:**	J1407415
Project:	VAB 390G/TL014021.0000	**Date Collected:**	09/22/14 14:40
Sample Matrix:	Soil	**Date Received:**	09/23/14 09:10
Sample Name:	Pres-SB0003-000.5-20140922	**Units:**	Percent
Lab Code:	J1407415-002	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	8290	**Date Analyzed:**	10/11/14 19:44
Prep Method:	Method	**Date Extracted:**	10/7/14
Sample Amount:	10.319g	**Instrument Name:**	E-HRMS-03
		GC Column:	DB-5MSUI
Data File Name:	P174043	**Blank File Name:**	P231884
ICAL Date:	03/25/14	**Cal Ver. File Name:**	P174037

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
C13-2,3,7,8-TCDD	2000	877.222	44		40-135	0.79	1.020
C13-1,2,3,7,8-PeCDD	2000	721.842	36		40-135	1.54	1.176
C13-1,2,3,4,7,8-HxCDD	2000	985.641	49		40-135	1.27	0.991
C13-1,2,3,6,7,8-HxCDD	2000	922.561	46		40-135	1.29	0.993
C13-1,2,3,4,6,7,8-HpCDD	2000	821.832	41		40-135	1.03	1.065
C13-OCDD	4000	1157.530	29		40-135	0.92	1.140
C13-2,3,7,8-TCDF	2000	859.819	43		40-135	0.75	0.993
C13-1,2,3,7,8-PeCDF	2000	731.364	37		40-135	1.59	1.136
C13-2,3,4,7,8-PeCDF	2000	725.040	36		40-135	1.60	1.167
C13-1,2,3,4,7,8-HxCDF	2000	1100.531	55		40-135	0.52	0.972
C13-1,2,3,6,7,8-HxCDF	2000	997.571	50		40-135	0.51	0.975
C13-1,2,3,7,8,9-HxCDF	2000	948.282	47		40-135	0.51	1.008
C13-2,3,4,6,7,8-HxCDF	2000	1000.813	50		40-135	0.52	0.988
C13-1,2,3,4,6,7,8-HpCDF	2000	702.250	35		40-135	0.44	1.041
C13-1,2,3,4,7,8,9-HpCDF	2000	845.391	42		40-135	0.44	1.079
CL37-2,3,7,8-TCDD	800	319.156	40		40-135	NA	1.020

Client:	Levine Fricke	**Service Request:**	J1407415
Project:	VAB 390G/TL014021.0000	**Date Collected:**	09/22/14 14:40
Sample Matrix:	Soil	**Date Received:**	09/23/14 09:10
Sample Name:	Pres-SB0003-000.5-20140922	**Units:**	ng/Kg
Lab Code:	J1407415-002	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290
Prep Method: Method

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.137	0.640	1	1	0.320
1,2,3,7,8-PeCDD	ND	0.177	3.20	1	1	1.60
1,2,3,4,7,8-HxCDD	ND	0.0381	3.20	1	0.1	0.160
1,2,3,6,7,8-HxCDD	ND	0.0406	3.20	1	0.1	0.160
1,2,3,7,8,9-HxCDD	**0.285**	0.0365	3.20	1	0.1	0.0285
1,2,3,4,6,7,8-HpCDD	**0.856**	0.0641	3.20	1	0.01	0.00856
OCDD	**6.78**	0.166	6.40	1	0.0001	0.000678
2,3,7,8-TCDF	**2.33**	0.171	0.640	1	0.1	0.233
1,2,3,7,8-PeCDF	**0.894**	0.138	3.20	1	0.05	0.0447
2,3,4,7,8-PeCDF	**1.19**	0.144	3.20	1	0.5	0.595
1,2,3,4,7,8-HxCDF	**1.17**	0.123	3.20	1	0.1	0.117
1,2,3,6,7,8-HxCDF	**0.586**	0.129	3.20	1	0.1	0.0586
1,2,3,7,8,9-HxCDF	**0.424**	0.158	3.20	1	0.1	0.0424
2,3,4,6,7,8-HxCDF	**0.431**	0.133	3.20	1	0.1	0.0431
1,2,3,4,6,7,8-HpCDF	**0.703**	0.0766	3.20	1	0.01	0.00703
1,2,3,4,7,8,9-HpCDF	**0.756**	0.0779	3.20	1	0.01	0.00756
OCDF	**0.981**	0.332	6.40	1	0.0001	0.0000981
		Total TEQ				3.43

1998 WHO TEFs, ND = 0.5

Client:	Levine Fricke	**Service Request:**	J1407415
Project:	VAB 3903/TL014021.0000	**Date Collected:**	09/22/14 14:40
Sample Matrix:	Soil	**Date Received:**	09/23/14 09:10
Sample Name:	Pres-SB0003-000.5-20140922	**Units:**	Percent
Lab Code:	J1407415-002	**Basis:**	Dry

Total Solids Run Create

Analysis Method:	CAS SOP	**Date Analyzed:**	10/08/14 17:12
	9.242g		NA
			E-Balance-01

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Solids	75.7		-	-			1

Client:	Levine Fricke	**Service Request:**	J1407415
Project:	VAB 3903/TL014021.0000	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ng/Kg
Lab Code:	EQ1400634-01	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	8290	**Date Analyzed:**	10/12/14 00:33
Prep Method:	Method	**Date Extracted:**	10/7/14
Sample Amount:	10.200g	**Instrument Name:**	E-HRMS-04
		GC Column:	DB-5MSUI
Data File Name:	P231884	**Blank File Name:**	P231884
ICAL Date:	08/24/14	**Cal Ver. File Name:**	P231881

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.180	0.490			1
1,2,3,7,8-PeCDD	ND	U	0.183	2.45			1
1,2,3,4,7,8-HxCDD	ND	U	0.209	2.45			1
1,2,3,6,7,8-HxCDD	ND	U	0.204	2.45			1
1,2,3,7,8,9-HxCDD	ND	U	0.191	2.45			1
1,2,3,4,6,7,8-HpCDD	ND	U	0.113	2.45			1
OCDD	ND	U	0.174	4.90			1
2,3,7,8-TCDF	ND	U	0.149	0.490			1
1,2,3,7,8-PeCDF	ND	U	0.104	2.45			1
2,3,4,7,8-PeCDF	ND	U	0.108	2.45			1
1,2,3,4,7,8-HxCDF	ND	U	0.0838	2.45			1
1,2,3,6,7,8-HxCDF	ND	U	0.0834	2.45			1
1,2,3,7,8,9-HxCDF	ND	U	0.0894	2.45			1
2,3,4,6,7,8-HxCDF	ND	U	0.0902	2.45			1
1,2,3,4,6,7,8-HpCDF	ND	U	0.0931	2.45			1
1,2,3,4,7,8,9-HpCDF	ND	U	0.106	2.45			1
OCDF	ND	U	0.867	4.90			1
Total Tetra-Dioxins	0.812		0.180	0.490	0.69		1
Total Penta-Dioxins	0.352**I**		0.183	2.45	1.64		1
Total Hexa-Dioxins	ND	U	0.201	2.45			1
Total Hepta-Dioxins	ND	U	0.113	2.45			1
Total Tetra-Furans	ND	U	0.149	0.490			1
Total Penta-Furans	ND	U	0.329	2.45			1
Total Hexa-Furans	ND	U	0.0866	2.45			1
Total Hepta-Furans	ND	U	0.0986	2.45			1

Client:	Levine Fricke	**Service Request:**	J1407415
Project:	VAB 3903/TL014021.0000	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	Percent
Lab Code:	EQ1400634-01	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	8290	**Date Analyzed:**	10/12/14 00:33
Prep Method:	Method	**Date Extracted:**	10/7/14
Sample Amount:	10.200g	**Instrument Name:**	E-HRMS-04
		GC Column:	DB-5MSUI
Data File Name:	P231884	**Blank File Name:**	P231884
ICAL Date:	08/24/14	**Cal Ver. File Name:**	P231881

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
C13-2,3,7,8-TCDD	2000	802.949	40		40-135	0.76	1.024
C13-1,2,3,7,8-PeCDD	2000	736.100	37		40-135	1.61	1.211
C13-1,2,3,4,7,8-HxCDD	2000	715.473	36		40-135	1.31	0.991
C13-1,2,3,6,7,8-HxCDD	2000	811.486	41		40-135	1.26	0.993
C13-1,2,3,4,6,7,8-HpCDD	2000	849.876	42		40-135	1.14	1.069
C13-OCDD	4000	1776.999	44		40-135	0.93	1.142
C13-2,3,7,8-TCDF	2000	747.025	37		40-135	0.81	0.991
C13-1,2,3,7,8-PeCDF	2000	737.688	37		40-135	1.60	1.164
C13-2,3,4,7,8-PeCDF	2000	693.159	35		40-135	1.59	1.200
C13-1,2,3,4,7,8-HxCDF	2000	767.007	38		40-135	0.52	0.970
C13-1,2,3,6,7,8-HxCDF	2000	762.481	38		40-135	0.48	0.972
C13-1,2,3,7,8,9-HxCDF	2000	993.364	50		40-135	0.55	1.009
C13-2,3,4,6,7,8-HxCDF	2000	723.728	36		40-135	0.48	0.987
C13-1,2,3,4,6,7,8-HpCDF	2000	736.324	37		40-135	0.43	1.044
C13-1,2,3,4,7,8,9-HpCDF	2000	1034.369	52		40-135	0.46	1.082
CL37-2,3,7,8-TCDD	800	296.670	37		40-135	NA	1.025

Accuracy & Precision

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

Client:	Levine Fricke	**Service Request:**	J1407415
Project:	VAB 3903/TL014021.0000	**Date Analyzed:**	10/12/14
Sample Matrix:	Soil	**Date Extracted:**	10/07/14

Duplicate Lab Control Sample Summary
Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	8290	**Units:**	ng/Kg
Prep Method:	Method	**Basis:**	Dry
		Analysis Lot:	415981

	Lab Control Sample EQ1400634-02			Duplicate Lab Control Sample EQ1400634-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
1,2,3,4,6,7,8-HpCDD	92.6	99.6	93	101	98.3	103	70-130	9	25
1,2,3,4,6,7,8-HpCDF	107	99.6	108	102	98.3	104	70-130	5	25
1,2,3,4,7,8,9-HpCDF	102	99.6	102	95.3	98.3	97	70-130	6	25
1,2,3,4,7,8-HxCDD	105	99.6	106	112	98.3	114	70-130	6	25
1,2,3,4,7,8-HxCDF	99.8	99.6	100	93.7	98.3	95	70-130	6	25
1,2,3,6,7,8-HxCDD	106	99.6	106	103	98.3	105	70-130	2	25
1,2,3,6,7,8-HxCDF	97.7	99.6	98	103	98.3	105	70-130	5	25
1,2,3,7,8,9-HxCDD	111	99.6	111	113	98.3	115	70-130	2	25
1,2,3,7,8,9-HxCDF	99.2	99.6	100	91.9	98.3	94	70-130	8	25
1,2,3,7,8-PeCDD	102	99.6	102	103	98.3	105	70-130	1	25
1,2,3,7,8-PeCDF	97.0	99.6	97	98.0	98.3	100	70-130	1	25
2,3,4,6,7,8-HxCDF	107	99.6	108	98.6	98.3	100	70-130	8	25
2,3,4,7,8-PeCDF	101	99.6	102	102	98.3	103	70-130	<1	25
2,3,7,8-TCDD	22.5	19.9	113	20.3	19.7	103	70-130	10	25
2,3,7,8-TCDF	20.3	19.9	102	17.6	19.7	89	70-130	14	25
OCDD	203	199	102	209	197	106	70-130	3	25
OCDF	216	199	108	218	197	111	70-130	1	25

Client:	Levine Fricke	**Service Request:**	J1407415
Project:	VAB 3903/TL014021.0000	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	ng/Kg
Lab Code:	EQ1400634-02	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	8290	**Date Analyzed:**	10/12/14 06:08
Prep Method:	Method	**Date Extracted:**	10/7/14
Sample Amount:	10.044g	**Instrument Name:**	E-HRMS-04
		GC Column:	DB-5MSUI
Data File Name:	P231891	**Blank File Name:**	P231884
ICAL Date:	08/24/14	**Cal Ver. File Name:**	P231881

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	22.5		0.249	0.498	0.71	1.001	1
1,2,3,7,8-PeCDD	102		0.581	2.49	1.51	1.000	1
1,2,3,4,7,8-HxCDD	105		0.170	2.49	1.32	1.000	1
1,2,3,6,7,8-HxCDD	106		0.159	2.49	1.24	1.000	1
1,2,3,7,8,9-HxCDD	111		0.153	2.49	1.23	1.007	1
1,2,3,4,6,7,8-HpCDD	92.6		0.109	2.49	1.07	1.000	1
OCDD	203		1.66	4.98	0.93	1.000	1
2,3,7,8-TCDF	20.3		0.845	0.845	0.77	1.002	1
1,2,3,7,8-PeCDF	97.0		0.161	2.49	1.61	1.001	1
2,3,4,7,8-PeCDF	101		0.179	2.49	1.52	1.000	1
1,2,3,4,7,8-HxCDF	99.8		0.105	2.49	1.25	1.000	1
1,2,3,6,7,8-HxCDF	97.7		0.109	2.49	1.16	1.000	1
1,2,3,7,8,9-HxCDF	99.2		0.119	2.49	1.21	1.000	1
2,3,4,6,7,8-HxCDF	107		0.120	2.49	1.22	1.000	1
1,2,3,4,6,7,8-HpCDF	107		0.155	2.49	1.01	1.000	1
1,2,3,4,7,8,9-HpCDF	102		0.164	2.49	0.96	1.000	1
OCDF	216		2.44	4.98	0.91	1.005	1
Total Tetra-Dioxins	22.5		0.249	0.498	0.66		1
Total Penta-Dioxins	102		0.581	2.49	1.51		1
Total Hexa-Dioxins	323		0.160	2.49	1.32		1
Total Hepta-Dioxins	93.8		0.109	2.49	0.89		1
Total Tetra-Furans	20.3		0.845	0.845	0.77		1
Total Penta-Furans	198		0.284	2.49			1
Total Hexa-Furans	404		0.113	2.49	1.25		1
Total Hepta-Furans	209		0.159	2.49	1.01		1

Client:	Levine Fricke	**Service Request:**	J1407415
Project:	VAB 3903/TL014021.0000	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	Percent
Lab Code:	EQ1400634-02	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	8290	**Date Analyzed:**	10/12/14 06:08
Prep Method:	Method	**Date Extracted:**	10/7/14
Sample Amount:	10.044g	**Instrument Name:**	E-HRMS-04
		GC Column:	DB-5MSUI
Data File Name:	P231891	**Blank File Name:**	P231884
ICAL Date:	08/24/14	**Cal Ver. File Name:**	P231881

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
C13-2,3,7,8-TCDD	2000	757.394	38		40-135	0.73	1.025
C13-1,2,3,7,8-PeCDD	2000	758.533	38		40-135	1.51	1.212
C13-1,2,3,4,7,8-HxCDD	2000	743.049	37		40-135	1.32	0.991
C13-1,2,3,6,7,8-HxCDD	2000	818.102	41		40-135	1.20	0.993
C13-1,2,3,4,6,7,8-HpCDD	2000	907.508	45		40-135	1.03	1.069
C13-OCDD	4000	1929.694	48		40-135	0.88	1.142
C13-2,3,7,8-TCDF	2000	754.498	38		40-135	0.74	0.992
C13-1,2,3,7,8-PeCDF	2000	747.312	37		40-135	1.48	1.165
C13-2,3,4,7,8-PeCDF	2000	676.529	34		40-135	1.54	1.202
C13-1,2,3,4,7,8-HxCDF	2000	782.343	39		40-135	0.52	0.969
C13-1,2,3,6,7,8-HxCDF	2000	795.946	40		40-135	0.49	0.972
C13-1,2,3,7,8,9-HxCDF	2000	986.691	49		40-135	0.50	1.009
C13-2,3,4,6,7,8-HxCDF	2000	720.921	36		40-135	0.53	0.987
C13-1,2,3,4,6,7,8-HpCDF	2000	754.320	38		40-135	0.40	1.044
C13-1,2,3,4,7,8,9-HpCDF	2000	1149.711	57		40-135	0.39	1.082
CL37-2,3,7,8-TCDD	800	281.248	35		40-135	NA	1.026

Client:	Levine Fricke	**Service Request:**	J1407415
Project:	VAB 3903/TL014021.0000	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	ng/Kg
Lab Code:	EQ1400634-03	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	8290	**Date Analyzed:**	10/12/14 06:55
Prep Method:	Method	**Date Extracted:**	10/7/14
Sample Amount:	10.177g	**Instrument Name:**	E-HRMS-04
		GC Column:	DB-5MSUI
Data File Name:	P231892	**Blank File Name:**	P231884
ICAL Date:	08/24/14	**Cal Ver. File Name:**	P231881

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	20.3		0.324	0.491	0.79	1.001	1
1,2,3,7,8-PeCDD	103		0.214	2.46	1.54	1.000	1
1,2,3,4,7,8-HxCDD	112		0.119	2.46	1.15	1.000	1
1,2,3,6,7,8-HxCDD	103		0.109	2.46	1.37	1.000	1
1,2,3,7,8,9-HxCDD	113		0.106	2.46	1.26	1.007	1
1,2,3,4,6,7,8-HpCDD	101		0.128	2.46	1.01	1.000	1
OCDD	209		1.36	4.91	0.89	1.000	1
2,3,7,8-TCDF	17.6		1.03	1.03	0.70	1.001	1
1,2,3,7,8-PeCDF	98.0		0.234	2.46	1.53	1.001	1
2,3,4,7,8-PeCDF	102		0.243	2.46	1.56	1.001	1
1,2,3,4,7,8-HxCDF	93.7		0.0703	2.46	1.31	1.000	1
1,2,3,6,7,8-HxCDF	103		0.0743	2.46	1.21	1.000	1
1,2,3,7,8,9-HxCDF	91.9		0.0775	2.46	1.28	1.000	1
2,3,4,6,7,8-HxCDF	98.6		0.0751	2.46	1.16	1.000	1
1,2,3,4,6,7,8-HpCDF	102		0.309	2.46	0.99	1.000	1
1,2,3,4,7,8,9-HpCDF	95.3		0.350	2.46	1.00	1.000	1
OCDF	218		3.28	4.91	0.91	1.005	1
Total Tetra-Dioxins	20.6		0.324	0.491	0.72		1
Total Penta-Dioxins	103		0.214	2.46	1.77		1
Total Hexa-Dioxins	330		0.111	2.46	1.15		1
Total Hepta-Dioxins	101		0.128	2.46	1.01		1
Total Tetra-Furans	17.7		1.03	1.03	0.70		1
Total Penta-Furans	201		0.278	2.46			1
Total Hexa-Furans	387		0.0742	2.46	1.31		1
Total Hepta-Furans	197		0.327	2.46	0.99		1

Client:	Levine Fricke	**Service Request:**	J1407415
Project:	VAB 3903/TL014021.0000	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	Percent
Lab Code:	EQ1400634-03	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	8290	**Date Analyzed:**	10/12/14 06:55
Prep Method:	Method	**Date Extracted:**	10/7/14
Sample Amount:	10.177g	**Instrument Name:**	E-HRMS-04
		GC Column:	DB-5MSUI
Data File Name:	P231892	**Blank File Name:**	P231884
ICAL Date:	08/24/14	**Cal Ver. File Name:**	P231881

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
C13-2,3,7,8-TCDD	2000	814.809	41		40-135	0.78	1.024
C13-1,2,3,7,8-PeCDD	2000	734.805	37		40-135	1.65	1.212
C13-1,2,3,4,7,8-HxCDD	2000	685.847	34		40-135	1.24	0.991
C13-1,2,3,6,7,8-HxCDD	2000	821.958	41		40-135	1.25	0.993
C13-1,2,3,4,6,7,8-HpCDD	2000	774.572	39		40-135	1.08	1.069
C13-OCDD	4000	1506.078	38		40-135	0.88	1.142
C13-2,3,7,8-TCDF	2000	780.008	39		40-135	0.82	0.991
C13-1,2,3,7,8-PeCDF	2000	738.791	37		40-135	1.63	1.164
C13-2,3,4,7,8-PeCDF	2000	701.927	35		40-135	1.65	1.200
C13-1,2,3,4,7,8-HxCDF	2000	781.608	39		40-135	0.52	0.969
C13-1,2,3,6,7,8-HxCDF	2000	747.168	37		40-135	0.49	0.972
C13-1,2,3,7,8,9-HxCDF	2000	978.313	49		40-135	0.52	1.008
C13-2,3,4,6,7,8-HxCDF	2000	734.123	37		40-135	0.51	0.987
C13-1,2,3,4,6,7,8-HpCDF	2000	705.979	35		40-135	0.44	1.044
C13-1,2,3,4,7,8,9-HpCDF	2000	1042.823	52		40-135	0.43	1.082
CL37-2,3,7,8-TCDD	800	283.839	35		40-135	NA	1.025

April 15, 2015 Service Request No:J1502744

Mr. Scott Starr
Levine Fricke
14025 Riveredge Drive
Suite 600
Tampa, FL 33637

Laboratory Results for: NASA Press Site

Dear Mr.Starr,

Enclosed are the results of the sample(s) submitted to our laboratory April 02, 2015
For your reference, these analyses have been assigned our service request number **J1502744.**

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. In accordance to the NELAC 2003 Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Please contact me if you have any questions. My extension is 4409. You may also contact me via email at Craig.Myers@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Craig Myers
Project Manager

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ALS Group USA, Corp.
dba ALS Environmental

SAMPLE DETECTION SUMMARY

CLIENT ID: PRES-IDW-20150331-001	Lab ID: J1502744-001					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Aroclor 1016	1050		153	588	ug/L	8082
Aroclor 1254	1240		389	588	ug/L	8082

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Client: Levine Fricke
Project: NASA Press Site/TL014021.0001
Sample Matrix: Water

Service Request:J1502744
Date Received:4/2/15

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II data deliverables, including results of QC samples analyzed from this delivery group. When appropriate to the procedure, method blank results have been reported with each analytical test. Analytical procedures performed by the lab are validated in accordance with NELAC standards. Parameters that are included in the NELAC Fields of Testing but are not included in the lab's NELAC accreditation are identified in the discussion of each analytical procedure.

Sample Receipt

Two water samples were received for analysis at ALS Environmental on 4/2/15. The samples were received in good condition and consistent with the accompanying chain of custody form. Samples are refrigerated at ≤6°C upon receipt at the lab except for aqueous samples designated for metals analyses, which are stored at room temperature.

Semi-Volatile Organic Analyses:

Method 8082: The control criterion for the following surrogate in samples J1502744-001 and -002 is not applicable: Decachlorobiphenyl. The analysis of the sample J15002744-001 required a dilution, which resulted in a surrogate concentration below the Method Reporting Limit (MRL). In addition, both samples would not concentrate to the required 1.0mL final volume (20mL and 10mL, respectively). No further corrective action was appropriate.

Method 8082: Two Aroclors were identified in sample J1502744-001: Aroclor 1016 and Aroclor 1254. When mixtures of PCB Aroclors are present in a sample, correct identification and quantitative analysis of the individual Aroclors can be difficult or impossible. When Aroclor mixtures are present in a sample, care is taken to minimize the possibility of double-counting PCBs. Analytical peaks are selected based on the best resolution possible for that particular sample. However, when a mixture of Aroclors are present in a sample, the potential exists for a high bias from contribution of one Aroclor to another due to common peaks or peaks that cannot be completely resolved.

Approved by _____ Date 4/15/2015

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
Department of Defense	66206	9/20/2016
Florida Department of Health	E82502	6/30/2015
Georgia Department of Natural Resources	958	6/30/2015
Kentucky Division of Waste Management	63	6/30/2015
Louisiana Department of Environmental Quality	02086	6/30/2015
Maine Department of Health and Human Services	2015002	2/3/2017
North Carolina Department of Environment and Natural Resources	527	12/31/2015
Pennsylvania Department of Environmental Protection	68-04835	8/31/2015
South Carolina Department of Health and Environmental Control	96021001	6/30/2015
Texas Commision on Environmental Quality	T104704197-13-5	5/31/2015
Virginia Environmental Accreditation Program	460191	12/14/2015

Data Qualifiers

Florida-DEP

!	Data deviates from historically established concentration ranges
*	Not reported due to interference
?	Data is rejected and should not be used
A	Value reported is the arithmetic mean of two or more determininations
B	Results based upon colony counts outside the acceptable range.
D	Measurement was made in the field.
E	Extra samples were taken at composite stations
H	Value based on field kit determination; results may not be accurate.
I	The reported value is between the laboratory method detection limit and the laboratory PQL.
J	Estimated value.
K	Off scale low. The value is less than the lowest calibration standard.
L	Off scale high. The analyte is above the acceptable level of quantitation.
M	The MDL/MRL has been elevated because the analyte could not be accurately quantified.
N	Presumptive evidence of presence of material.
O	Sampled, but analysis lost or not performed
Q	Sample held beyond the acceptable holding time.
R	Significant rain in the past 48 hours (typically in excess of 0.5 inches)
T	Estimated value, less than the MDL
U	Indicates that the compound was analyzed for but not detected.
V	Indicates that the analyte was detected in both the sample and the associated method blank.
X	Insufficient individuals were present in the sample to achieve a minimum of 280 organisms for identification (Stream Condition Index Analysis only)
Y	The laboratory analysis was from an unpreserved or improperly preserved sample.
Z	Too many colonies were present, the numeric value represents the filtration volume

ALS Laboratory Group

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Client: Levine Fricke **Service Request:**J1502744

Project: NASA Press Site/TL014021.0001

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
J1502744-001	PRES-IDW-20150331-001	3/31/2015	1330
J1502744-002	PRES-IDW-20150331-002	3/31/2015	1545

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1502744
Project:	NASA Press Site/TL014021.0001	**Date Collected:**	03/31/15 13:30
Sample Matrix:	Water	**Date Received:**	04/02/15 10:35
Sample Name:	PRES-IDW-20150331-001	**Units:**	ug/L
Lab Code:	J1502744-001	**Basis:**	NA

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082
Prep Method: EPA 3510C

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	**1050**	588	153	50	04/07/15 00:54	4/6/15	
Aroclor 1221	342 U	588	342	50	04/07/15 00:54	4/6/15	
Aroclor 1232	236 U	588	236	50	04/07/15 00:54	4/6/15	
Aroclor 1242	153 U	588	153	50	04/07/15 00:54	4/6/15	
Aroclor 1248	306 U	588	306	50	04/07/15 00:54	4/6/15	
Aroclor 1254	**1240**	588	389	50	04/07/15 00:54	4/6/15	
Aroclor 1260	315 U	588	315	50	04/07/15 00:54	4/6/15	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	0	10 - 151	04/07/15 00:54	*

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1502744
Project:	NASA Press Site/TL014021.0001	**Date Collected:**	03/31/15 15:45
Sample Matrix:	Water	**Date Received:**	04/02/15 10:35
Sample Name:	PRES-IDW-20150331-002	**Units:**	ug/L
Lab Code:	J1502744-002	**Basis:**	NA

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082
Prep Method: EPA 3510C

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	1.50 U	5.75	1.50	1	04/06/15 22:14	4/6/15	
Aroclor 1221	3.34 U	5.75	3.34	1	04/06/15 22:14	4/6/15	
Aroclor 1232	2.30 U	5.75	2.30	1	04/06/15 22:14	4/6/15	
Aroclor 1242	1.50 U	5.75	1.50	1	04/06/15 22:14	4/6/15	
Aroclor 1248	2.99 U	5.75	2.99	1	04/06/15 22:14	4/6/15	
Aroclor 1254	3.80 U	5.75	3.80	1	04/07/15 01:10	4/6/15	
Aroclor 1260	3.07 U	5.75	3.07	1	04/06/15 22:14	4/6/15	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	0	10 - 151	04/06/15 22:14	*

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1502744
Project:	NASA Press Site/TL014021.0001	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	JQ1502470-01	**Basis:**	NA

Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082
Prep Method: EPA 3510C

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	0.130 U	0.500	0.130	1	04/06/15 21:11	4/6/15	
Aroclor 1221	0.290 U	0.500	0.290	1	04/06/15 21:11	4/6/15	
Aroclor 1232	0.200 U	0.500	0.200	1	04/06/15 21:11	4/6/15	
Aroclor 1242	0.130 U	0.500	0.130	1	04/06/15 21:11	4/6/15	
Aroclor 1248	0.260 U	0.500	0.260	1	04/06/15 21:11	4/6/15	
Aroclor 1254	0.330 U	0.500	0.330	1	04/06/15 21:11	4/6/15	
Aroclor 1260	0.267 U	0.500	0.267	1	04/06/15 21:11	4/6/15	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	70	10 - 151	04/06/15 21:11	

Client: Levine Fricke **Service Request:** J1502744
Project: NASA Press Site/TL014021.0001
Sample Matrix: Water

SURROGATE RECOVERY SUMMARY
Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082
Extraction Method: EPA 3510C

Sample Name	Lab Code	Decachlorobiphenyl 10 - 151
PRES-IDW-20150331-001	J1502744-001	0 *
PRES-IDW-20150331-002	J1502744-002	0 *
Method Blank	JQ1502470-01	70
Lab Control Sample	JQ1502470-04	70
Duplicate Lab Control Sample	JQ1502470-05	60

Client:	Levine Fricke	**Service Request:**	J1502744
Project:	NASA Press Site/TL014021.0001	**Date Analyzed:**	04/06/15
Sample Matrix:	Water	**Date Extracted:**	04/06/15

Duplicate Lab Control Sample Summary
Polychlorinated Biphenyls (PCBs) by GC

Analysis Method:	8082	**Units:**	ug/L
Prep Method:	EPA 3510C	**Basis:**	NA
		Analysis Lot:	439446

	Lab Control Sample JQ1502470-04			Duplicate Lab Control Sample JQ1502470-05					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Aroclor 1016	0.805	1.00	80	0.683	1.00	68	27-120	16	30
Aroclor 1260	0.578	1.00	58	0.488	1.00	49	33-112	17	30

ALS Environmental

Cooler Receipt Form

Client: NasA - Press Service Request #: 1502744

Project: TL01402.0001

Cooler received on 4/2/15 and opened on 4/3/15 by BH

COURIER: ALS UPS FEDEX Client Other _____ Airbill # 8075 7387 9836

1	Were custody seals on outside of cooler?		Yes	No				
	If yes, how many and where?		#:___ on lid		other			
2	Were seals intact and signature and date correct?		Yes	No	N/A			
3	Were custody papers properly filled out?		Yes	No	N/A			
4	Temperature of cooler(s) upon receipt (Should be > 0°C and < 6°C)	2.4						
5	Thermometer ID	T#1						
6	Temperature Blank Present?		Yes	No BW				
7	Were Ice or Ice Packs present		Ice	Ice Packs	No			
8	Did all bottles arrive in good condition (unbroken, etc....)?		Yes	No	N/A			
9	Type of packing material present		Netting	Vial Holder	Bubble Wrap			
			Paper	Styrofoam	Other	N/A		
10	Were all bottle labels complete (sample ID, preservation, etc....)?		Yes	No	N/A			
11	Did all bottle labels and tags agree with custody papers?		Yes	No	N/A			
12	Were the correct bottles used for the tests indicated?		Yes	No	N/A			
13	Were all of the preserved bottles received with the appropriate preservative?		Yes	No	N/A			
	HNO3 pH<2 H2SO4 pH<2 ZnAc2/NaOH pH>9 NaOH pH>12 HCl pH<2							
	Preservative additions noted below							
14	Were all samples received within analysis holding times?		Yes	No	N/A			
15	Were all VOA vials free of air bubbles? If present, note below		Yes	No	N/A			
16	Where did the bottles originate?		ALS	Client				

Sample ID	Reagent	Lot #	ml added	Initials Date/Time

Additional comments and/or explanation of all discrepancies noted above:

Client approval to run samples if discrepancies noted: Date:

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

ALS Environmental

9143 Philips Highway, Ste 200 • Jacksonville, FL 32256 (904) 739-2277 • 800-695-7222 x06 • FAX (904) 739-2011

PAGE 1 OF 1

SR# J1502744
CAS Contract

Project Name: NASA - Press Site	Project Number: TL0140021.0001
Project Manager: SCOTT STARR	Email Address: SCOTT.STARR@Arcadis-us.com
Company/Address: ARCADIS 14025 Rivercdge Dr #600 TAMPA FL 33637	
Phone #: 813-394-9378	FAX #: —
Sampler's Signature:	Sampler's Printed Name: DAVID DANKERL

ANALYSIS REQUESTED (Include Method Number and

J1502744 5
Levine Fricke
NASA Press Site

PRESERVATIVE: 8

CLIENT SAMPLE ID	LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	PCB's
PRES-IDW-20150331-001		3/31/15	1330	W	2	X
PRES-IDW-20150331-002		3/31/15	1545	W	2	X

1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other ICE

REMARKS/ ALTERNATE DESCRIPTION

DD DD

Page 14 of 14

SPECIAL I NSTRUCTIONS/COMMENTS

See QAPP ☐

TURNAROUND REQUIREMENTS
____ RUSH (SURCHARGES APPLY)
____ STANDARD
REQUESTED FAX DATE
REQUESTED REPORT DATE

REPORT REQUIREMENTS
____ I. Results Only
____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data
____ V. Specialized Forms / Custom Report
Edata ____Yes ____No

INVOICE INFORMATION
PO #
BILL TO:

SAMPLE RECEIPT: CONDITION/COOLER TEMP: CUSTODY SEALS: Y N

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature	Signature	Signature	Signature	Signature	Signature
Printed Name: DAVID DANKERL	Printed Name: Brian Wright	Printed Name	Printed Name	Printed Name	Printed Name
Firm: ARCADIS	Firm: ALS	Firm	Firm	Firm	Firm
Date/Time: 4/1/15 VIA Fedex	Date/Time: 4/2/15 0935	Date/Time	Date/Time	Date/Time	Date/Time

DD

Distribution: White - Return to Originator; Yellow - Retained by Client

Appendix C

Field Notes

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Dankerl, David

From: Starr, Scott
Sent: Monday, March 16, 2015 10:40 AM
To: Dankerl, David
Subject: FW: Approved: EPR 17276 Permit Request Submitted by Susan Sitkoff -- EPR
Attachments: 17276_2015_2_13_17_3_45_195.pdf; PRES_IMWP_Rev0_201501.pdf

Importance: High

From: Sitkoff, Susan
Sent: Tuesday, February 17, 2015 11:16 AM
To: Starr, Scott
Subject: Fwd: Approved: EPR 17276 Permit Request Submitted by Susan Sitkoff -- EPR
Importance: High

Sent from my Verizon Wireless 4G LTE DROID

-------- Original Message --------
Subject: Approved: EPR 17276 Permit Request Submitted by Susan Sitkoff -- EPR
From: EPR NASA <ksc-isc-digpermit@mail.nasa.gov>
To: "Sitkoff, Susan" <Susan.Sitkoff@arcadis-us.com>
CC: "Sitkoff, Susan" <Susan.Sitkoff@arcadis-us.com>,Harry.Plaza@nasa.gov,ksc-isc-digpermit@mail.nasa.gov

Permit Request: 17276 (Status: Approved)

You must schedule an Excavation Permit Inspector (EPI) to meet with you on site for the utility locate and to obtain the required signature on this permit.

IMPORTANT: Please call at least 72 hours prior to digging. The Excavator shall maintain an approved copy of this permit, signed by the EPI, on site at all times.

Excavation Permit Inspectors (EPi):

Inspectors Information

Jeff McDowell Phone: (321) 861-6869 Cell: (321) 749-4840
Ryan Ostarly Phone: (321) 861-6946 Cell: (321) 289-2372 FAX: (321) 861-6558

IMPORTANT INFORMATION:

- Excavation Permit Requests will be **immediately cancelled** should digging begin prior to approval from the EPI.
- Orange color paint is assigned to EPIs only unless maintaining the original paint markings.
- Utility Locate/Excavation Permit Requests will be **immediately cancelled** if original EPI paint markings are not maintained.
- You must **hand dig within 24 inches** in either direction of all EPI paint markings.
- **Do not remove or disturb thrust blocks.** A thrust block is a configured piece of concrete located underground at water and sewer utility piping to prevent movement from line pressure fluctuations. When excavating soil at location known to contain buried water or sewer lines, **do not remove any buried concrete without prior approval.**
- Maximum duration of time an EPR can remain in the approval status is one year. All work expecting to extend longer than one year must be re-submitted as a new request, including an updated map and scope of work.
- If the scope of work for the original Utility Locate/Excavation Permit Request is changed or the completion date needs to be extended, you are required to call 867-2406.
- When the job is complete, you are required to call 867-2406. **This permit will be closed upon expiration unless an extension is requested.**
- Accidental Utility line damage, excluding Gas main damage, shall call the ISC Duty Office at 861-5050.
- Accidental Gas Main damage shall call 911, evacuate the area and then call the ISC Duty Office.
- Category Code V Permits must call the ISC Duty office daily and observe all Critical-Days as directed by the ISC Duty Office.

EPR Administrator:

If you have any questions regarding your Utility Locate/Excavation Permit Request, please contact the EPR administrator at the following:

EPR Administrator's Information

Phone: (321) 867-2406
Fax: (321) 867-1175
Email: KSC-ISC-DIGPERMIT@mail.nasa.gov

Permit Request: 17276 (Status: Approved)

Submitter's Information	
Submitter First Name	Susan
Submitter Last Name	Sitkoff
Submitter Email Address	susan.sitkoff@arcadis-us.com
Submitter Company Name	ARCADIS-US, Inc.
Submitter Address	20342 Peabody Street
Submitter City	Orlando
Submitter State	FL
Submitter Zip	32833
Submitter Phone	407-568-7934
Submitter Fax	407-568-7934
Technical Contact Information	
Technical Contact First	Susan

Name	
Technical Contact Last Name	Sitkoff
Technical Contact Email Address	susan.sitkoff@arcadis-us.com
Technical Contact Address	20342 Peabody Street
Technical Contact City	Orlando
Technical Contact State	FL
Technical Contact Zip	32833
Technical Contact Phone	407-568-7934
Technical Contact Fax	407-568-7934
NASA COTR Contact Information	
NASA COTR First Name	Harry
NASA COTR Last Name	Plaza
NASA COTR Email Address	Harry.Plaza@nasa.gov
NASA COTR Phone	321-867-8414
Permit Request Info	
PermitType	Dig
PermitStatus	Approved
Permit Start Date	03/02/2015
Permit End Date	09/30/2015
Scope of Work/Justification	Excavation activities to support environmental contract. Former permit numbers 8283 and 16796. For excavation of soil/concrete in the vicinity of K7-1205C. Soil excavation activities are slated to be completed on the east and west side of the building.
Facility Info	
Facility	K7-1205C
Grid	K7
Additional Forms and Identifying Numbers	
Work Order Number	NNK11395113R
Contract PCN	ENV2351
Environmental Check List Completed	No
Category Codes	

1	I
2	V
3	VI

Related Documents	
File Name	**Description**
17276.pdf	

Reviews			
Reviewed By:	Date:	Results:	Comments:
Locator	2/17/2015 10:58:54 AM	Agree	RO
Environmental	2/17/2015 9:09:59 AM	Agree	A Land Use Control Implementation Plan (LUCIP) has been prepared for SWMU 56 and it is under land use controls for soil and groundwater. These controls are necessary to prohibit exposure to soil & groundwater present at the site. No soil disturbance or dewatering may occur without first coordinating with and obtaining (NEW) approval from the NASA Remediation Project Manager (RPM-Harry Plaza, 321-867-8414). IMPORTANT: Contact the RPM for the latest information on suspected/known analytes of concern and for proper disposal methods. (NOTE: Per Harry Plaza, of 2/17/2015, 30 day clock is ticking on letter of concurrence back from regulatory agency.)
Master Planner	2/13/2015 5:05:29 PM	Agree	TL
Final	2/17/2015 11:08:19 AM	Agree	HF

Map	
Map associated with this request	None

Permit Request: 17276 (Status: Approved)

Approvals

3/18/15

Approved by: Jeff McDowell

Approved by: Ryan Ostarly

Approved by:

Approved by:

Notes:

_____

_____

_____

_____

_____

_____

_____

[ ] LOCATED AREA TO BE HAND EXCAVATED ONLY!

Locator's Signature: _____

Reason for Hand Excavation: _____

_____

_____

_____

_____

_____

Permit Request: 17276 (Status: Approved)

EXCAVATION PERMIT CATEGORIES:
If you have questions about assigned category codes contact the Excavation Permit Inspectors at 321-289-7829 or 321-749-4840. Remember - for permits with more than one category code, the most restrictive category code applies.

LAUNCH
For the latest launch, landing or test schedule, contact the ISC Duty Office at 321-861-5050.

Category I *
Seventy-two (72) prior to launch, test or landing, excavation will stop at, around or involving the following KSC facilities:

Facilities			
Launch Control Center - LCC (K6-0900)	Old MILA Area	Communication Distribution and Switching Center - CD&SC (M6-0138)	Operations & Checkout O&C (M6-0355)
LC 39 A & B (all areas and buildings inside the fence) & all 8 Repeater	Press Site (all buildings, roads, parking areas in and around the	Payload Facility Supporting Launch (M7-0777, & M7-0360) [2]	Central Instrumentation Facility (M6-0342)

3/30/15 NASA Press Site

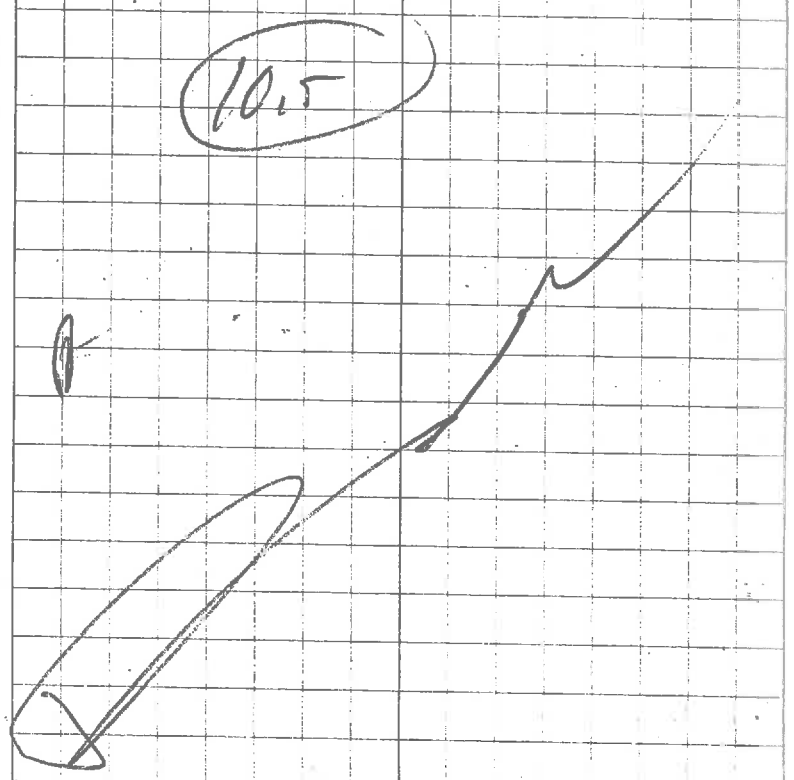
- D70

0600 Mob to site
0830 Onsite @ Press Site
0900 CFES, NASA SAFety & HARRY PLAZA Onsite
- SAFety meeting
1030 Escort Neff Rental on/off base
1100 Concrete SAW cutting Activities
1130 SAW cutting Complete
- Dump trucks w/soil @ badging
1205 Soil (clean) Onsite
1210 Jack-Hammering Concrete + removal
1300 load truck w/ Concrete
1400 Concrete Off site
- Manifest # 15,0003
1420 CFES @ lunch, I stayed onsite I ran CAUTION TAPE + cones took pics - watched site
1530 Excavated 6" From Area A Note: Concrete slab by door measured 7-8" in Depth (below reqd excavation Depth) Engineer allowed it to stay in place. sides to be

3/30/15 NASA Press Site

Cont'd → - D70

Vac'd out + under edges of slab. Pictures taken w/ measurements.
1605 off site - GOTO M505 for Empty Drum.
1630 off base



(9.5) NASA Press Site 3/31/15 ①
"excavation IM" -DJD

0730 on base 0745 onsite
0800 CFES onsite, Vac truck onsite
• Safety meeting.
0830 Commence Vac Truck work
@ Area's B+C
1100 Area's B+C completed
• Work started on primary
scrub of concrete in trans. Rm.
1200-1230 CFES @ lunch / I stayed
onsite to watch over site
1230 Work re-commenced on
scrubbing transformer Rm
Concrete (Primary Scrub)
1315 Concrete scrub complete
(Secondary scrubbing)
1330 Pres-IDW-20150331-001 Sample
1340 Backfilling Activities
Commenced @ Area B+C
1430 loading truck for trans-
-port to landfill
Manifest # 15.0001
1545 Decon Machine Sample
1545 Pres-IDW-20150331-002
1600 site cleanup + secure
1630 off base 1645 Home Depot ...

② NASA Press Site 3/31/15
-DJD

Notes: Overpack # 196994
• Drum #1 198395
PPE ~10% full

• Drum #2 198993
Sample "002" Decon water ~10% full
• Drum #3 ~20% full
Sample "001" (198394) Concrete Decon water
~~Drum #4~~ N/A

(9.5)

NASA Press Site 4/1/15

-DJD

0700 on base 0710 on site (S.M)
- Truck onsite w/ clean fill
0730 excavation Area backfilled + compacted (Area ready for concrete)
0900 Transformer room painted (Red)
1000 Painting completed (1st layer)
1015 Concrete crew @ Padging.
1030 Concrete crew (1 guy) onsite
1100 Concrete truck onsite
- Pouring + leveling concrete
1200-1230 - CFES @ lunch - I stayed w/ concrete guy
1315 Final touches on concrete - CFES clean up, stock pile barricades + cones, RM locked up
1405 CFES off site
- notice @ Fire station + Dump trash
1430 off base - Goto ship samples
1500 End of DAY

(8)

(S.M) = safety meeting.

NASA Press Site 4/2/15

-DJD

0755 on base 0805 on site
- CFES onsite, Electrical crew onsite Room opened
0830 Painting commenced (gray)
0930 Painting gray coat complete*
- CFES will remove barricades + cones + pull cones from dry Concrete on 4/3/15
1000 off site - Demob TAMPA
1230 End of DAY

(4,5)

62,93c end.

* PCB (2) Placards in Place by Door entry Areas (High visibility)

ARCADIS

Document Control Number:TGM - _____

TGM + *project number plus date as follows: xxxxxxxx.xxxx.xxxxx - dd/mm/year*

TAILGATE HEALTH & SAFETY MEETING FORM

This form documents the tailgate meeting conducted in accordance with the Project HASP. Personnel who perform work operations on-site during the day are required to attend this meeting and to acknowledge their attendance, at least daily.

Project Name: NASA Press Site		**Project Location:** KSC, NASA	
Date: 4/30/15	**Time:** 0900	**Conducted by:** DAVID D.	**Signature/Title:** Tedas
Client: NASA		**Client Contact:** HARRY PLAZA	**Subcontractor companies:** CFEs

TRACKing the Tailgate Meeting

Think through the Tasks (list the tasks for the day):

1 SAW cut concrete 3 EQUIP Drop off. 5 _____

2 Set up exclusion Zone 4 _____ 6 _____

Other Hazardous Activities - Check the box if there are any other ARCADIS, Client or other party activities that may pose hazards to ARCADIS operations ☐ If there are none, write "None" here: _____

If yes, describe them here: _____

How will they be controlled? _____

Prework Authorization - check activities to be conducted that require permit issuance or completion of a checklist or similar before work begins.

	Doc #		Doc #		Doc #
☐ Not applicable		☐ Working at Height		☐ Confined Space	
☐ Energy Isolation (LOTO)		☐ Excavation/Trenching		☐ Hot Work	
☐ Mechanical Lifting Ops		☒ Overhead & Buried Utilities		☐ Other permit	

Discuss following questions (for some review previous day's post activities). **Check if yes :**

☐ Incidents from day before to review?	☐ Lessons learned from the day before?	☐ Topics from Corp H&S to cover?
☐ Any corrective actions from yesterday?	☐ Will any work deviate from plan?	☐ Any Stop Work Interventions yesterday?
☐ JLAs or procedures are available?	☐ Field teams to "dirty" JLAs, as needed?	☐ If deviations, notify PM & client
☑ Staff has appropriate PPE?	☒ Staff knows Emergency Plan (EAP)?	☒ All equipment checked & OK?
		☒ Staff knows gathering points?

Comments: _____

Recognize the hazards (check all those that are discussed) (Examples are provided) and **A**ssess the Risks (Low, Medium, High - circle risk level) - Provide an overall assessment of hazards to be encountered today and briefly list them under the hazard category

☑ Gravity (i.e., ladder, scaffold, trips) (L M H)	☑ Motion (i.e., traffic, moving water) (L M H) Minor traffic	☑ Mechanical (i.e., augers, motors) (L M H) Concrete Saw
☑ Electrical (i.e., utilities, lightning) (L M H) Marked	☐ Pressure (i.e., gas cylinders, wells) (L M H)	☑ Environment (i.e. heat, cold, ice) (L M H) Cold AM, Hot PM
☑ Chemical (i.e., fuel, acid, paint) (L M H) PCO's, PAINT	☑ Biological (i.e., ticks, poison ivy) (L M H)	☑ Radiation (i.e., alpha, sun, laser) (L M H)
☑ Sound (i.e., machinery, generators) (L M H) SAW Cutting	☐ Personal (i.e. alone, night, not fit) (L M H)	☐ Driving (i.e. car, ATV, boat, dozer) (L M H)

Continue TRACK Process on Page 2

TAILGATE HEALTH & SAFETY MEETING FORM - Pg. 2

Control the hazards (Check all and discuss those methods to control the hazards that will be implemented for the day) Review the HASP, applicable JLAs, and other control processes. Discuss and document any additional control processes

- [X] **STOP WORK AUTHORITY** (Must be addressed in every Tailgate meeting - (*See statements below*)
- [X] Elimination
- [X] Engineering controls
- [X] General PPE Usage
- [X] Personal Hygiene
- [X] Emergency Action Plan (EAP)
- [ ] JLA to be developed/used ***(specify)***
- [ ] Substitution
- [X] Administrative controls
- [X] Hearing Conservation
- [X] Exposure Guidelines
- [ ] Fall Protection
- [ ] LPO conducted ***(specify job/JLA)***
- [ ] Isolation
- [X] Monitoring N/A
- [X] Respiratory Protection
- [X] Decon Procedures
- [X] Work Zones/Site Control
- [ ] Traffic Control
- [ ] Other ***(specify)***

Signature and Certification Section - Site Staff and Visitors

Name/Company/Signature	Initial & Sign in Time	Initial & Sign out Time	I have read and understand the HASP
DAVID DANKERL / Arcadis / [illegible]	0900		
ROMEO ENRIQUEZ NASA SAFETY	0920		
ALLEN BRASHEARS CFES /	0920		
HARRY PLAZA	0920		
Brandon Stern	0920		
Henry K Towns / Henry K. Towns			

Important Information and Numbers

All site staff should arrive fit for work. If not, they should report to the supervisor any restrictions or concerns.

In the event of an injury, employees will call WorkCare at 1.800.455.6155 and then notify the field supervisor who will, in turn, notify Corp H&S at 1.720.344.3844.

In the event of a motor vehicle accident, employees will notify the field supervisor who will then notify Corp H&S at 1.720.344.3844 and then Corp Legal at 1.720.344.3756.

In the event of a utility strike or other damage to property of a client or 3rd party, employees will immediately notify the field supervisor, who will then immediately notify Corp Legal at 1.678.373.9556 and Corp H&S at 1.720.344.3500

Visitor Name/Co - not involved in work

In	Out
In	Out
In	Out
In	Out

I will STOP the job any time anyone is concerned or uncertain about health & safety or if anyone identifies a hazard or additional mitigation not recorded in the site, project, job or task hazard assessment.

I will be alert to any changes in personnel, conditions at the work site or hazards not covered by the original hazard assessments.

If it is necessary to **STOP THE JOB,** I will perform **TRACK**; and then amend the hazard assessments or the HASP as needed.

I will not assist a subcontractor or other party with their work unless it is absolutely necessary and then only after I have done TRACK and I have thoroughly controlled the hazard.

Post Daily Activities Review - Review at end of day or before next day's work (Check those applicable and explain)

- [ ] Lessons learned and best practices learned today: _____
- [ ] Incidents that occurred today: _____
- [ ] Any Stop Work interventions today? _____
- [ ] Corrective/Preventive Actions needed for future work: _____
- [ ] Any other H&S issues: _____

Keep H&S 1st in all things

WorkCare - 1.800.455.6155
Near Loss Hotline - 1.866.242.4304

Safety Meeting 3/31/15 0800

NAME	SIGN	COMPANY
David Dankerl		Arcadis
Brandon Skeen		CFES
Allen Brasher		CFES
Henry Towns		

Safety meeting 4/1/15 0710

NAME	COMPANY	Signature
DAVID DANKERL	Arcadis	
Brandon Skeen	CFES	
Allen Brasher	CFES	
Jeff Vest		(concrete man)
Henry Towns		

4/2/15

Safety Meeting 4/2/15 0815

DAVID DANKERL	Arcadis	
Brandon Skeen	CFES	
Henry Towns	CFES	

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Appendix D

KSC Correspondence on Pad Management

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National Aeronautics and
Space Administration

John F. Kennedy Space Center
Kennedy Space Center, FL 32899

April 14, 2015

Reply to Attn of: Environmental Assurance Branch (TA-A4B)

To: TA-A4B/Lead, Remediation Projects

From: TA-A4B/Lead, Permitting and Compliance

Subject: SWMU 074, KSC Press Site Transformer Building, Concrete Pad

TSCA concentrations (120.5 ppm) of PCBs in the concrete transformer pad at KSC Press Site Transformer Building (K7-1205C) were confirmed in 2014. During the week of March 30, 2015 your office completed an Interim Measure excavating PCB contaminated soils and encapsulating the concrete pad in accordance with 40 CFR 761.30(p). A red undercoat was painted over the affected concrete pad area and a gray overcoat was painted atop the red undercoat. The slab was subsequently marked as required by 40 CFR 761.40 with a PCB label fixed atop the concrete pad.

This memorandum is in response to a verbal communication by Harry Plaza, a Remediation Project Manager with your office, on April 6, 2015 requesting my written verification of plans to monitor and maintain regulatory compliance of the PCB-contaminated concrete pad at the site.

My office will coordinate the appropriate schedule of inspections, maintenance activities, and potential future replacement and disposal of the transformer and concrete pad with the relevant support contractor to ensure compliance with regulatory requirements per 40 CFR 761. Inspection, maintenance, and future disposition shall include:

- Routine scheduled inspections
- Replacement of M_LMark when worn or illegible
- Inspection for visual indication of wear through or loss of outer coating integrity and repair if warranted
- Proper future disposal of the transformer and concrete pad if/when taken out of service

John P. Matthews

Cc: TA-A4B/Harry Plaza

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Appendix E

IM Photographs

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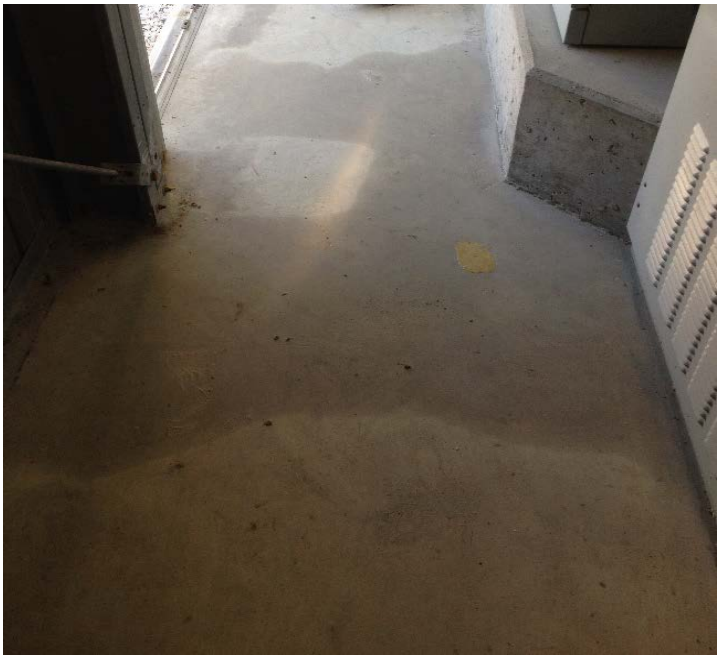
PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.
NASA	Press Site KSC, FL	TL014021.0001

Areas B (blue) and C (green) with utility mark-outs in orange pre-excavation

Area D
Stained Slab



PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.
NASA	Press Site KSC, FL	TL014021.0001

Site Set-up

Soil excavation via vac truck of Area B

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.
NASA	Press Site KSC, FL	TL014021.0001

Area A pre-excavation

Area A slab
7-inches thick

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.
NASA	Press Site KSC, FL	TL014021.0001

Area A excavation to 0.5 feet below ground surface

Areas B and C Excavations to 3 and 0.5 feet, respectively

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.
NASA	Press Site KSC, FL	TL014021.0001

Concrete restoration
Areas B and C

Areas B and C
Concrete restoration

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.
NASA	Press Site KSC, FL	TL014021.0001

Area D slab preparation for cleaning

Area D double wash-rinse

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.
NASA	Press Site KSC, FL	TL014021.0001

Base coat of Area D encapsulation with PSX-700

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.
NASA	Press Site KSC, FL	TL014021.0001

Area D encapsulation and PCB marking

Appendix F

Weigh Tickets and Disposal Manifests

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Omni Waste of Osceola County, LLC
A Progressive Waste Solutions Company
1501 Omni Way
St Cloud, FL 34773
PH: 407-891-3720

SITE	TICKET #	OPERATOR
44	715034	KASMITH

IN	OUT	TRUCK	CONT.	LICENCE
3/30/15 3:10 pm	3/30/15 3:23 pm	CFES		

REFERENCE	ORIGIN
125 15.0003	BREVARD

002233
CENTRAL FLORIDA ENVIRONMENTAL SERVICES
NASA KENNEDY SPACE CENTER
CONTRACT: CFES2233-15-001

INVOICE
INBOUND

GROSS 42,140 lb Scale In
TARE 26,480 lb Scale Out
NET 15,660 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION			TRACKING QTY	RATE	TAX	TOTAL
7.83	TN	Contaminated Soil	42,140.00	26,480.00	15,660.00			

New Hours of Operations
Monday thru Friday 5:00 am to 4:00 pm
Saturday 6:00 am to 12:00 pm
Sunday - Closed

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE: Jerry Smith

CUSTOMER COPY

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number

2. Page 1 of

3. Emergency Response Phone

4. Waste Tracking Number: 15.0003

5. Generator's Name and Mailing Address
NASA Kennedy Space Center
Building K7-1205C
Kennedy Space Center, Fl 32889
Generator's Phone: 813-671-0025

Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name
Soil Tech Distributors 813-671-0025

U.S. EPA ID Number

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address
Omni Waste of Osceola County LLC
1501 Omni Way
St. Cloud. Florida 34773
Facility's Phone: 407-891-3720

U.S. EPA ID Number

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
	1. NON Regulated/ NON Hazardous Material	1	T	20Y		
	2. Contaminated Soil					
	3.					
	4.					

13. Special Handling Instructions and Additional Information

PROFILE NUMBER: CFES2233-15-001

WSI CUSTOMER: Central Florida Environmental Services
11227 McMullen Road
Riverview, Florida 33569 Contact: Allen Brackner 813-363-7785

424
12 C

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Printed/Typed Name: HARRY PLAZA
Signature:
Month: 3 Day: 30 Year: 15

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: JERRY E SMITH
Signature:
Month: Day: Year:

Transporter 2 Printed/Typed Name:
Signature:
Month: Day: Year:

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator)

U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator)

Month: Day: Year:

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: K Smith
Signature:
Month: 3 Day: 30 Year: 15

DESIGNATED FACILITY TO GENERATOR

GENERATOR
INT'L
TRANSPORTER
DESIGNATED FACILITY

Omni Waste of Osceola County, LLC
A Progressive Waste Solutions Company
1501 Omni Way
St Cloud, FL 34773
PH: 407-891-3720

SITE	TICKET #	OPERATOR
44	715435	tyates

IN	OUT	TRUCK	CONT.	LICENCE
4/1/15 10:14 am	4/1/15 10:27 am	CFES		

REFERENCE	ORIGIN
125 15.0001	BREVARD

002233
CENTRAL FLORIDA ENVIRONMENTAL SERVICES
NASA KENNEDY SPACE CENTER

CONTRACT: CFES2233-15-001

INVOICE
INBOUND

GROSS 63,940 lb Scale In
TARE 26,700 lb Scale Out
NET 37,240 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION			TRACKING QTY	RATE	TAX	TOTAL
18.62	TN	Contaminated Soil	63,940.00	26,700.00	37,240.00			

New Hours of Operations
Monday thru Friday 5:00 am to 4:00 pm
Saturday 6:00 am to 12:00 pm
Sunday - Closed

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE: _____

CUSTOMER COPY

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
				15.0001

5. Generator's Name and Mailing Address
NASA Kennedy Space Center
Building K7-1205C
Kennedy Space Center, Fl 32899 813-671-0025
Generator's Phone:

Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name
Soil Tech Distributors 813-671-0025

U.S. EPA ID Number

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address
Omni Waste of Osceola County LLC
1501 Omni Way
St. Cloud. Florida 34773 407-891-3720
Facility's Phone:

U.S. EPA ID Number

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1.	NON Regulated/ NON Hazardous Material	1	T	20Y		
2.	Contaminated Soil					
3.						
4.						

GENERATOR

13. Special Handling Instructions and Additional Information

PROFILE NUMBER: CFES2233-15-001

WSI CUSTOMER: Central Florida Environmental Services
11227 McMullen Road
Riverview, Florida 33569 Contact: Allen Brackner 813-363-7785

63940
125

14. **GENERATOR'S CERTIFICATION:** I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Printed/Typed Name: X HARRY PLAZA
Signature: X
Month 3 Day 31 Year 15

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: X TOM B FLECK
Signature: X
Month 3 Day 31 Year 15

Transporter 2 Printed/Typed Name
Signature
Month Day Year

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

17c. Signature of Alternate Facility (or Generator)
Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: T Yates
Signature
Month 4 Day 1 Year 15

DESIGNATED FACILITY TO GENERATOR

Appendix G

IDW Drum Log

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DRUM INVENTORY LOG
Contractor: ARCADIS

Site	Generation Date	Media	Source	o/o Full	Pallet 10 (Bar Code)	Drum Bar Code& (Number)	NASA Contact	Location of Pallet	IDW Source	Drum pH
Press Site	03/31/2015	PPE, Misc. Solids	Excavation / Slab Cleaning	10	196994	198395	Harry Plaza	SW Area by Microwave Dish	PPE, Misc Solids	N/A
	03/31/2015	Water	Excavation Equipment	10		196993			Decon Water - Excavation Equipment	7.0
	03/31/2015	Water	Concrete Slab	20		198394			Decon Water - Slab Cleaning	6.5

NOTES:

Laboratory Analytical Results	Tie Down Strap Yes/ No
Not Analyzed	
Aroclor 1016 - 1,050 µg/L Aroclor 1254 - 1,240 µg/L	
PCBs - ND	
	Yes

Appendix H

KEDD Submission Completion Tickets

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DATA CHECKER

Completion Ticket

On 2/25/2014 at 2:53 PM the following files were submitted to TtNUS

COMPLETION_LFRTA_PRES_20140225.txt

LITHOLOGY_LFRTA_PRES_20140225.txt

LOCATION_LFRTA_PRES_20140225.txt

PROJECT_LFRTA_PRES_20140225.txt

RESULT_LFRTA_PRES_20140225.txt

SAMPLE_LFRTA_PRES_20140225.txt

WATER_LFRTA_PRES_20140225.txt

The following comment was provided with this submission:
Samples associated with PCB-affected soil at the Press Site in the vicinity of Facility K7-1205C

If you need to identify this session at a later date you may use the Ticket Key:

Repository2014225_73691_kedd_LFROR

You may print this page by clicking on the "Print This Page" button

Thank you for using the Data Checker, to upload more files click the "Upload Files" link in the menu.

Print this Page

Data Checker

Completion Ticket

On 7/18/2014 at 12:01 PM the following files were submitted to TtNUS

COMPLETION_LFRTA_PRES_20140718.txt

LITHOLOGY_LFRTA_PRES_20140718.txt

LOCATION_LFRTA_PRES_20140718.txt

PROJECT_LFRTA_PRES_20140718.txt

RESULT_LFRTA_PRES_20140718.txt

SAMPLE_LFRTA_PRES_20140718.txt

WATER_LFRTA_PRES_20140718.txt

The following comment was provided with this submission:
Press Site samples in the vicinity of the transformer building

If you need to identify this session at a later date you may use the Ticket Key:

Repository2014718_16046_kedd_LFRTA

You may print this page by clicking on the "Print This Page" button

Thank you for using the Data Checker, to upload more files click the "Upload Files" link in the menu.

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Data Checker

Completion Ticket

On 3/11/2015 at 5:51 AM the following files were submitted to TtNUS

COMPLETION_LFRTA_PRES_20150311.txt

LITHOLOGY_LFRTA_PRES_20150311.txt

LOCATION_LFRTA_PRES_20150311.txt

PROJECT_LFRTA_PRES_20150311.txt

RESULT_LFRTA_PRES_20150311.txt

SAMPLE_LFRTA_PRES_20150311.txt

WATER_LFRTA_PRES_20150311.txt

The following comment was provided with this submission:
dioxin sampling

If you need to identify this session at a later date you may use the Ticket Key:

Repository2015311_5250535925_kedd_LFRTA

You may print this page by clicking on the "Print This Page" button

Thank you for using the Data Checker, to upload more files click the "Upload Files" link in the menu.

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