



INTERIM LAND USE CONTROL IMPLEMENTATION PLAN

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION KENNEDY SPACE CENTER BREVARD COUNTY, FLORIDA

FACILITY: Contractors Road Heavy Equipment (CRHE) Area
Solid Waste Management Unit 055

CONTAMINANTS: Volatile Organic Compounds in groundwater

CONTROL: Prevent contact with groundwater

PURPOSE OF LAND USE CONTROL IMPLEMENTATION PLAN

This Interim Land Use Control Implementation Plan (LUCIP) has been prepared to inform current and potential future users of the Kennedy Space Center (KSC) Contractors Road Heavy Equipment (CRHE) Area (SWMU 055; “the Site”) of institutional controls that have been implemented at the Site¹. Although there are no current unacceptable risks to human health or the environment associated with the CRHE Area, an interim institutional land use control (LUC) is necessary to prevent human health exposure to volatile organic compound (VOC)-affected groundwater at the Site. Controls will include periodic inspection, condition certification, and agency notification.

WHY LAND USE CONTROLS ARE NEEDED

VOCs have been identified in groundwater at the Site above applicable Florida Department

of Environmental Protection (FDEP) Groundwater Cleanup Target Level (GCTL) and Natural Attenuation Default Concentration (NADC) screening criteria.

SITE DESCRIPTION

The CRHE Area is a group of NASA-operated facilities that includes the Printed Circuit Board Shop (PCBS-SWMU No. 31) and associated Acid Dump Site (SWMU No. 15); Sewage Treatment Plant (STP) No. 15 (SWMU No. 16); a polishing pond on the eastern edge of the SWMU boundary; a fenced area at the north end of the SWMU boundary where sandblasting and painting operations took place in the past; and Heavy Equipment Area buildings and parking areas south of the PCBS (SWMU No. 055). The CRHE Area buildings and parking areas have been used for a variety of operations including heavy equipment storage and maintenance dating back to the construction of NASA’s Vehicle Assembly Building (VAB), and for staging of regulated and hazardous waste. Currently, the area is used

¹ This LUCIP summarizes institutional controls regarding the NASA CRHE. For detailed information on the Site, consult the CRHE administrative file, which is available for review by contacting the KSC Environmental Assurance Branch at telephone number (321) 867-8402.

for heavy equipment storage and maintenance. Hazardous wastes are no longer stored on site.

The PCBS facility has been used for manufacturing printed circuit boards, silk screening, plating, and laminating road signs. Spent chemicals from the circuit board process were temporarily stored in an underground storage tank (UST) located immediately east of the PCBS. The UST ruptured during removal on August 7, 1990 and the location was identified as the Acid Dump Site in a subsequent report. In addition, printed circuit board rinsate water and equipment cooling water were discharged to a hole or drum in a wetland area immediately east of STP No. 15. Printed circuit board manufacturing operations have been discontinued; however, some “closed-loop” plating operations are ongoing. A hazardous waste staging area structure that currently is only used for non-regulated waste is located adjacent to the PCBS building K6-1996.

The STP No. 15 and Polishing Pond were used for treatment of domestic wastewater from the PCBS building and the office building north of the PCBS. Wastewater was reportedly discharged to STP No. 15 from November 1971 until July 1986 when domestic wastes that this unit would have treated were redirected to STP No. 4, which serves the VAB area. From July 1986 to October 1996, STP No. 15 served as a grease treatment plant, where grease collected from grease traps was brought for biological treatment. In October 1996 STP 15 was abandoned.

SITE LOCATION

The CRHE Area is located at KSC on Contractors Road approximately 0.5 mile north of the intersection with Schwartz Road

(Figure 1). The CRHE Area is about 1,100 by 1,350 feet.

The site is bounded on the north and east by woodlands, on the south by KSC’s Roads and Grounds Facility, and on the west by Contractors Road and woods. The site is located within Section 18 of Township 22 South, Range 37 East, which is in the Orsino Quadrangle. Survey coordinates in the State Plane Coordinate System North American Datum (NAD) 1983 meters, Florida East for the corners of the groundwater use control area are shown on Figure 2.

SITE CONTAMINATION AND CONTROL

Groundwater contaminated with VOCs at concentrations over FDEP GCTLs are currently being monitored to assure that off site migration does not occur and contaminants are naturally attenuating. LUCs are therefore required to prohibit groundwater use at the site. Potential for effects on indoor air quality shall be evaluated prior to any construction within the groundwater use control area.

DECISION DOCUMENT

The KSCRT determined that institutional controls should be implemented at the CRHE Area. A Statement of Basis (SB) establishes institutional controls as a component of the remedy for this site. The institutional controls are temporary while long term monitoring documents the reduction of VOCs through natural processes.

IMPLEMENTATION

Institutional controls will be implemented by the KSC Environmental Assurance Branch in accordance with their RCRA permit and a

Land Use Control Assurance Plan included in the Memorandum of Agreement (MOA)² between NASA and the FDEP, effective February 23, 2001. Upon approval of this Interim LUCIP, it will be incorporated into the permit by reference. Property transfer (if conducted in the future) will be conducted in accordance with Section X of the MOA.

KSC's Environmental Assurance Branch will provide KSC's Master Planning Office with survey coordinates of the LUCs. Restrictions will specify limitations on development and reuse for the area for as long as LUCs are necessary to protect human health and the environment.

MONITORING

Quarterly inspections to monitor that the LUCs specified herein are in place and operating will be conducted by KSC's Environmental Assurance Branch. The

inspections will verify that no groundwater use is occurring.

REPORTING

KSC's Environmental Assurance Branch will submit annual reports to FDEP certifying retention of the LUCs.

ENFORCEMENT

KSC's Environmental Assurance Branch will be responsible for stopping any activities that are not compliant with this LUCIP.

MAINTENANCE

The Interim LUCIP shall remain in place until the scenarios managed by the LUCIP are no longer a concern.

² By separate MOA effective February 23, 2001, with the FDEP and KSC, on behalf of NASA, agreed to implement Center-wide, certain periodic site inspections, condition certification, and agency notification procedures designed to ensure the maintenance by Center personnel of any site-specific LUCs deemed necessary for future protection of human health and the environment. A fundamental premise underlying execution of that agreement was that through the Center's substantial good faith compliance with the procedures called for herein, reasonable assurances would be provided to the FDEP as to the permanency of those remedies which included the use of specific LUCs.

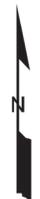
Although the terms and conditions of the MOA are not specifically incorporated or made enforceable herein by reference, it is understood and agreed by NASA KSC and FDEP that the contemplated permanence of the remedy reflected herein shall be dependent upon the Center's substantial good faith compliance with the specific LUC maintenance commitments reflected herein. Should such compliance not occur or should the MOA be terminated, it is understood that the protectiveness of the remedy concurred in may be reconsidered and that additional measures may need to be taken to adequately ensure necessary future protection of human health and the environment.



Legend

 SWMU Boundary

- Notes:
 CRHE - Contractors Road Heavy Equipment Area
 KSC - Kennedy Space Center
 LUCIP - Land Use Control Implementation Plan
 NASA - National Aeronautics and Space Administration
 SWMU - Solid Waste Management Unit
 VAB - Vehicle Assembly Building

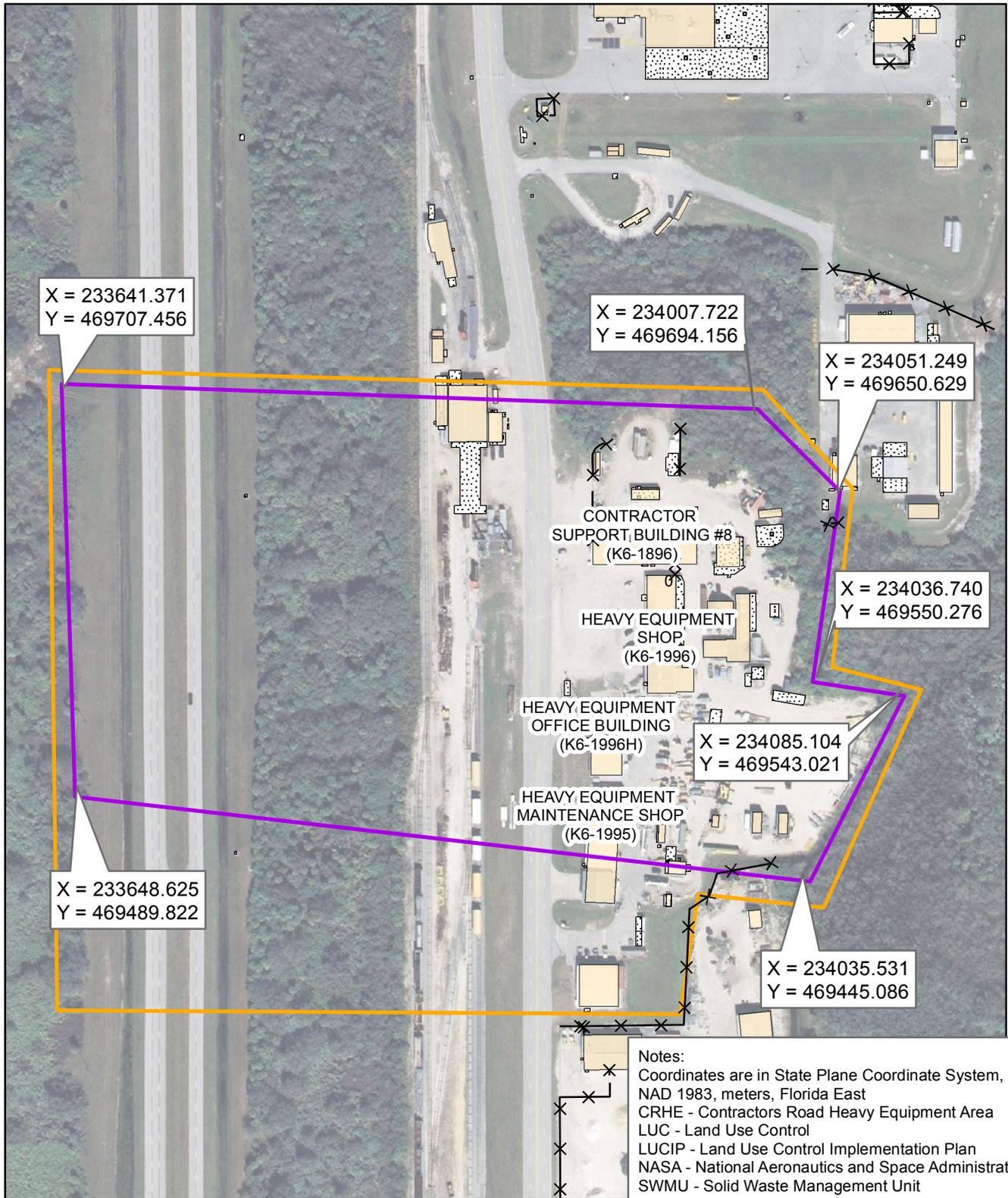


**Site Location Map
 Land Use Control Implementation Plan**

Contractors Road Heavy Equipment Area
 NASA Kennedy Space Center, Florida

Project Number: TL014021.0010

Figure 1
 11/30/14



Notes:
 Coordinates are in State Plane Coordinate System, NAD 1983, meters, Florida East
 CRHE - Contractors Road Heavy Equipment Area
 LUC - Land Use Control
 LUCIP - Land Use Control Implementation Plan
 NASA - National Aeronautics and Space Administration
 SWMU - Solid Waste Management Unit

Legend

-  Groundwater LUC Area
-  SWMU Boundary
-  Structure
-  Concrete
-  Fence



**Site Plan
 Land Use Control Implementation Plan**

Contractors Road Heavy Equipment Area
 NASA Kennedy Space Center, Florida

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Figure 2