



INTERIM LAND USE CONTROL IMPLEMENTATION PLAN



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

FACILITY: Fire Station No. 6 Area
Solid Waste Management Unit 106

CONTAMINANTS: Vinyl Chloride in Groundwater, PCBs in soil

CONTROL: Prohibit Groundwater Use, Prevent Exposure to Soil Under Active Transformer

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 Fire Station No. 6 Area (currently known as Fire Station No. 3; FS6) 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 FS6, an institutional land use control (LUC) is necessary to prohibit groundwater use at the site, and to prevent exposure to soils under the site's active transformer. Controls will include periodic inspection, condition certification, and agency notification.

WHY LAND USE CONTROLS ARE NEEDED

Soil and groundwater impacts were documented during the Confirmation Sampling events in the FS6 Area. Vinyl chloride was detected in groundwater at concentrations exceeding the Florida Department of Environmental Protection

(FDEP) cleanup target level. Additionally, there was a documented spill of transformer oil at the site (1991) and the soil underneath the active transformer (USS 1054) has concentrations of polychlorinated biphenyls (PCBs) above FDEP cleanup target levels. The current transformer pad is acting as a cap and preventing exposure to impacted soils underneath the transformer pad.

SITE DESCRIPTION

The FS6 Area includes the following structures: Industrial Water Pumping Station (J7-1388); 1-million gallon Groundwater Storage Tanks (J7-1387 and J7-1389); Hazardous Waste Staging Building/Portable (J7-1388B); one concrete mounted transformer north of the Industrial Water Pumping Station (USS 1054); and five undesignated diesel above ground storage tanks (one 5,000 gallon tank and four 500 gallon tanks). The Industrial Water Pumping Station J7-1387 provides Firex Water to LC39A and LC39B.

¹ This LUCIP summarizes institutional controls regarding the NASA FS6. For detailed information on the site, consult the FS6 administrative file, which is available for review by contacting the KSC Environmental Assurance Branch at telephone number (321) 867-8402.

SITE LOCATION

The FS6 Area is located along Pad B Road and encompasses approximately 6 acres (Figure 1). The facility is bordered by the Scape Building (J7-1338) and Emergency Response Building (J7-1339) immediately to the north, Pad B Road to the west, and wooded areas to the south and east. The groundwater and soil land use control areas covered by the Interim LUCIP are presented on Figure 2. The Coordinates of the corners of the LUCs provided on Figure 2 are in the US State Plane Coordinate System NAD 1983, meters, Florida East.

SITE CONTAMINATION AND CONTROL

The concentration of vinyl chloride present in groundwater is above the FDEP's Groundwater Cleanup Target Level (GCTL), but is less than the FDEP Natural Attenuation Default Concentration. Since groundwater exceeds the FDEP GCTL, LUCs prohibiting the use of groundwater are required until the cleanup level is achieved. The current and projected land use of the FS6 Area does not include the use of site groundwater; therefore, there is no current or projected exposure risk.

The concentration of PCBs in site soil is above the FDEP Residential and/or Industrial Soil Cleanup Target Level (SCTL). The past, current and projected future land use of the FS6 Area is industrial in nature. LUCs are therefore required to maintain the integrity of

the transformer pad to prevent contact with impacted soil.

DECISION DOCUMENT

The Kennedy Space Center (KSC) Remediation Team determined that interim institutional controls should be implemented at FS6. The interim institutional controls are temporary while investigation, interim measures, and corrective measures are in progress.

IMPLEMENTATION

Institutional controls will be implemented by the KSC Environmental Assurance Branch in accordance with their Resource Conservation and Recovery Act (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 RCRA 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.

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.

MONITORING

Quarterly inspections to monitor that the institutional controls specified herein are in place and operating will be conducted by KSC's Environmental Assurance Branch. The inspections will verify that no groundwater use or residential exposure to site soil is occurring at the site.

REPORTING

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

ENFORCEMENT

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

MAINTENANCE

The Interim LUCIP shall remain in place until the concerns managed by the Interim LUCIP are mitigated, or until there is a discovery, based upon analytical evidence, that scenarios managed by the Interim LUCIP are no longer a concern.

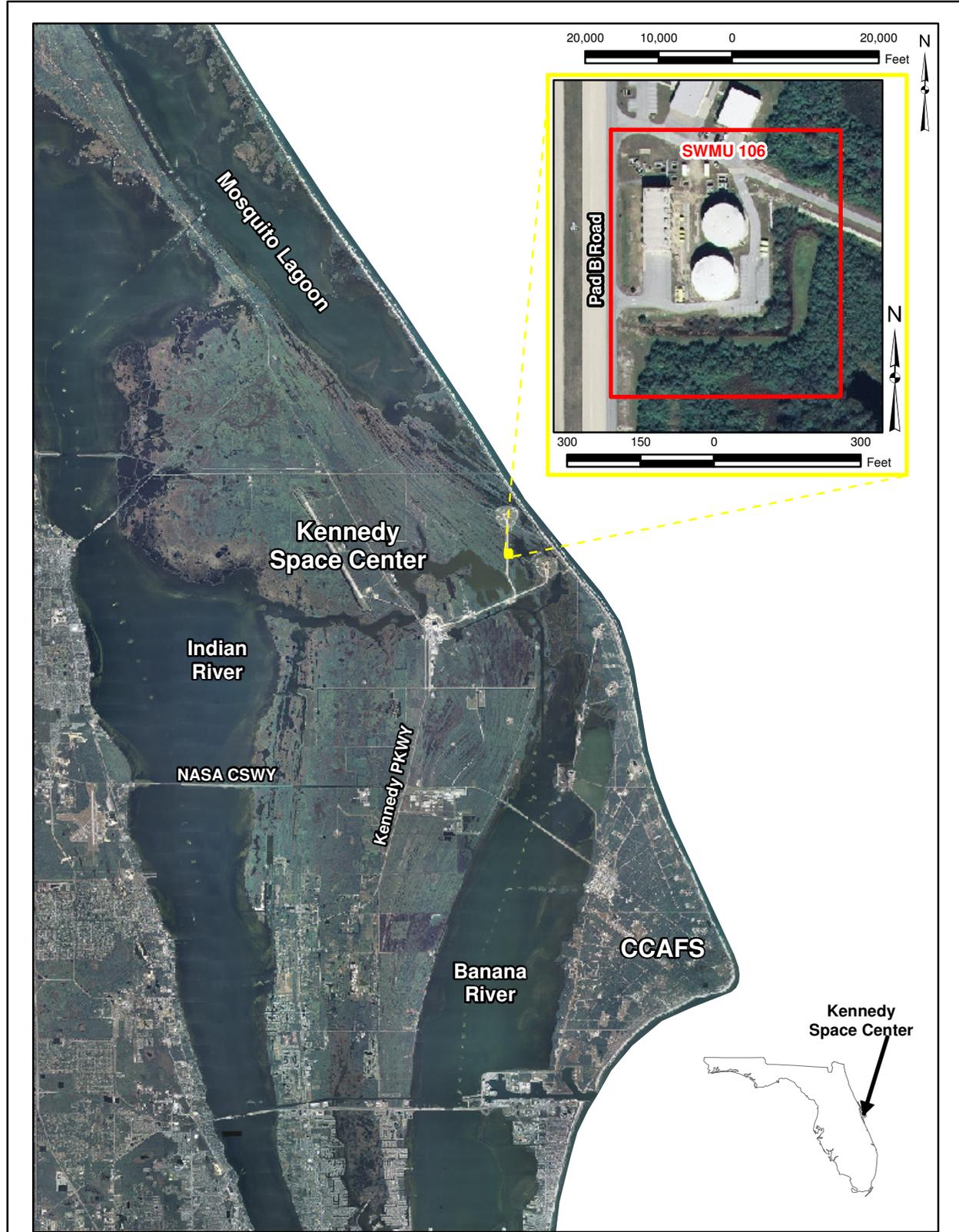
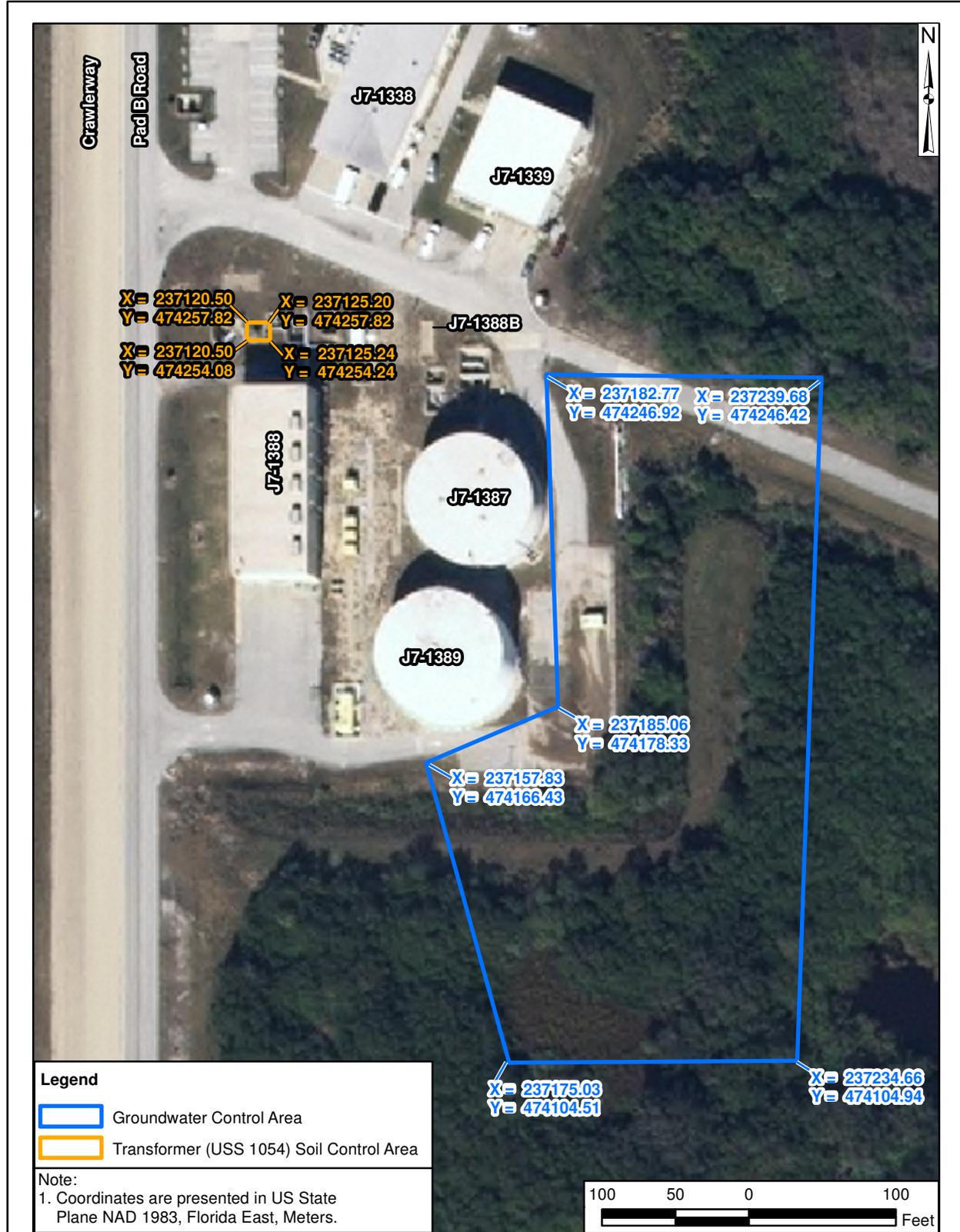


Figure 1
Fire Station No. 6 Site Location Map



Legend

- Groundwater Control Area
- Transformer (USS 1054) Soil Control Area

Note:
 1. Coordinates are presented in US State Plane NAD 1983, Florida East, Meters.

Figure 2
 FS6 Groundwater and Soil Land Use Control Areas