



**LAND USE CONTROL IMPLEMENTATION PLAN
SUPPLY WAREHOUSE NO. 3, SWMU 88
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
KENNEDY SPACE CENTER**



FACILITY: Supply Warehouse No. 3
Solid Waste Management Unit No. 88

CONTAMINANTS: Chlorinated Volatile Organic Compound Contamination In Groundwater

CONTROL: Prohibit Groundwater Use

PURPOSE OF LAND USE CONTROL IMPLEMENTATION PLAN

This Land Use Control Implementation Plan (LUCIP) has been prepared to inform current and potential future users of the Supply Warehouse No. 3 (SW3) 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 SW3 site, institutional land use controls (LUCs) are necessary to prohibit the use of groundwater from the site. Controls will include periodic inspection, condition certification and agency notification.

WHY LAND USE CONTROLS ARE NEEDED

A human health risk assessment was completed as part of a Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI). The chemicals of concern identified for human health risk during the RFI that exceeded the Florida Department of Environmental Protection (FDEP) cleanup target levels are chlorinated vola-

tile organic compounds (CVOCs) in groundwater.

SITE DESCRIPTION

The SW3 site contains one numbered building, M6-891. SW3 is used as a storage building for drywall, door frames and other building materials. Kennedy Space Center (KSC) was required to perform an investigation to determine the nature and extent of contamination at Solid Waste Management Unit (SWMU) No. 88, SW3 (Figure 1).

SITE LOCATION

The SW3 site encompasses approximately 12 acres, which includes the parcel located southeast of the intersection of B Avenue and 4th Street, as well as the approximate area of impacted groundwater to the south and southwest. The Paint and Oil Locker Facility (POL) is located adjacent to the east side of SW3, the General Service Administration (GSA) Vehicle Maintenance Facility (VMF) is located adjacent to the northwest, and the Communications, Maintenance and Storage Facility (CM&S) is

¹ This LUCIP summarizes institutional controls regarding the SW3. For detailed information on the site, consult the SW3 administrative file, which is available for review by contacting the KSC Environmental Program Office at telephone number (321) 867-8411.

located adjacent to the north. The groundwater use control area covered by the LUCIP is shown on Figure 2. Coordinates of the corners of the LUC are provided in the State Plane Coordinate System NAD 1983 meters, Florida East.

SITE CONTAMINATION AND CONTROL

Groundwater at the site contains CVOCs above FDEP's groundwater cleanup target levels (GCTLs). A Preliminary Risk Evaluation showed that assuming future use of groundwater for drinking water, cancer and non-cancer risks would be unacceptable. The estimated lifetime excess cancer risk for the hypothetical future resident was determined to be 6.4×10^{-3} , which exceeds FDEP's acceptable level of 1.0×10^{-6} . However, there is no current use of site groundwater; therefore, no exposure or current risk. The past, current, and projected future land use of SW3 is industrial in nature. LUCs are therefore required to prohibit the use of groundwater at the site. Indoor air quality shall be evaluated prior to any construction within the groundwater use control area.

IMPLEMENTATION

Institutional controls will be implemented by the KSC Environmental Program Office

in accordance with their RCRA permit and a Land Use Control Assurance Plan included in a Memorandum of Agreement (MOA)² between the National Aeronautics and Space Administration (NASA), FDEP, and the Environmental Protection Agency (EPA), effective February 23, 2001. Upon approval of this 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 Program Office 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 institutional controls specified herein are in place and operating will be conducted by KSC's Environmental Program Office. The inspection will verify that no residential groundwater use is occurring.

REPORTING

KSC's Environmental Program Office will submit annual reports to the EPA and

² By separate MOA effective February 23, 2001, with the EPA and FDEP, 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 EPA and 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, EPA 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.

FDEP certifying retention of the implemented LUCs.

ENFORCEMENT

KSC's Environmental Program Office will be responsible for stopping any activities at KSC that are not compliant with this LUCIP.

MAINTENANCE

The LUCIP shall remain in place until a land use change is implemented and the concerns managed by the LUCIP are mitigated; or there is a discovery, based upon analytical evidence, that scenarios managed by the LUCIP are no longer a concern. Any change in LUC management must be approved by the FDEP and implemented by modification of NASA's operating permit.

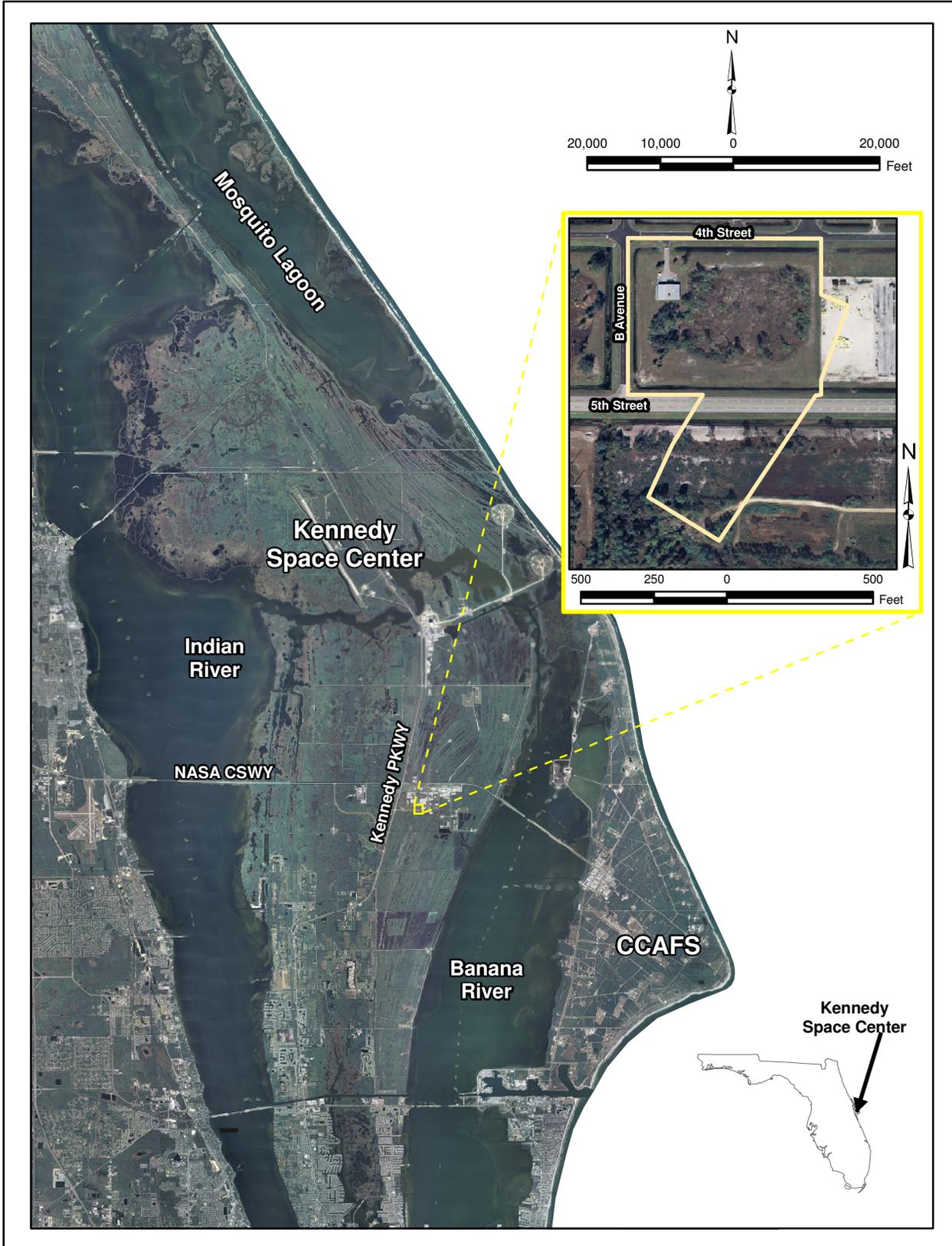


Figure 1
Site Location Map

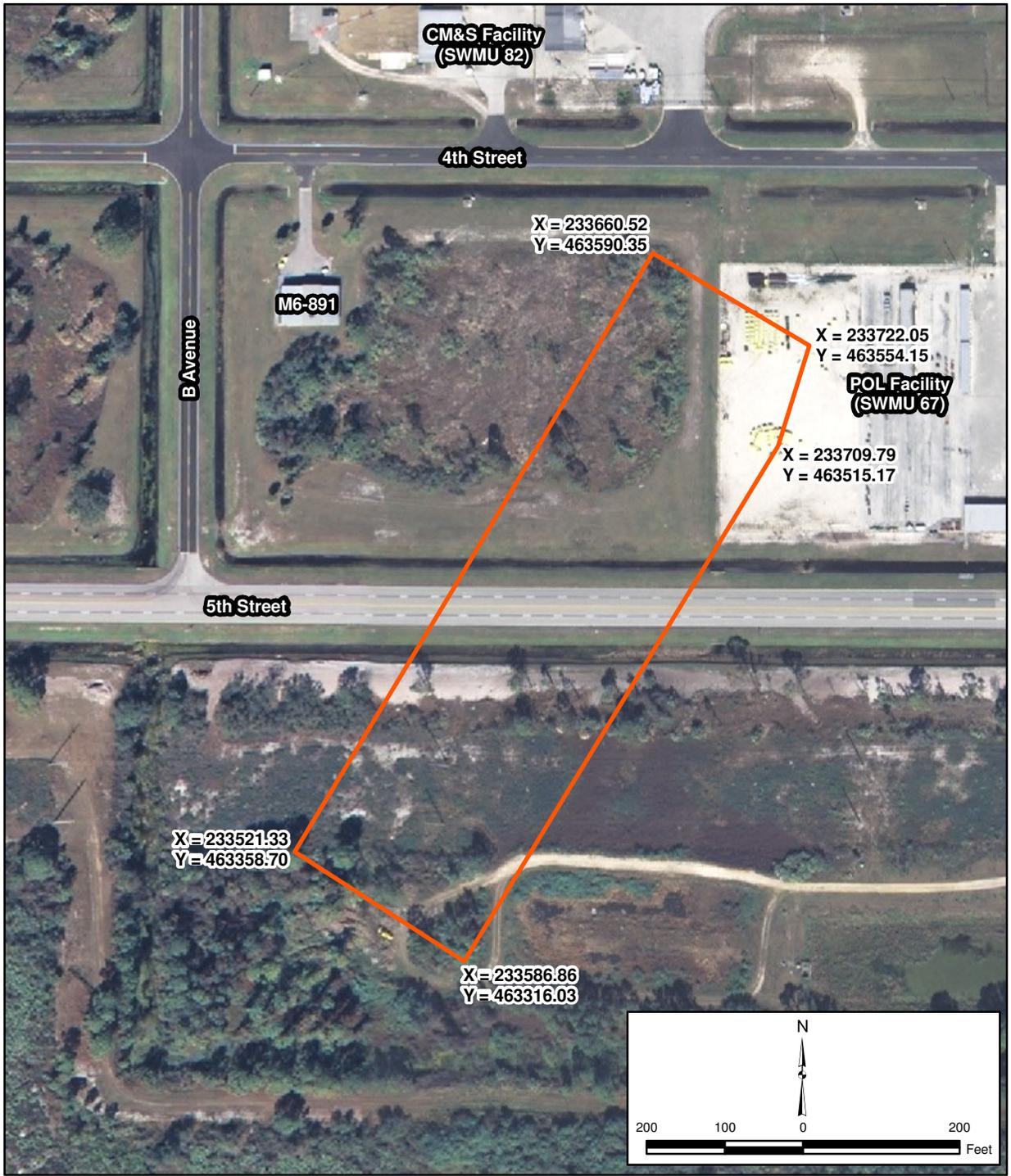


Figure 2
Groundwater Use Control Area

Legend

 Area Covered by Groundwater Use Control

Note: Survey Coordinates are in US State Plane
Coordinate System NAD1983 meters, Florida East.