LUCIP-SWMU 039

LAND USE CONTROL IMPLEMENTATION PLAN

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

FACILITY:	Building M7-505 Treatment Tank Solid Waste Management Unit 039
CONTAMINANTS:	Volatile organic compounds (VOCs) in groundwater and polychlorinated biphenyls (PCBs) in soil
CONTROL:	Prohibit groundwater use and industrial / residential access to soil

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 Building M7–505 of institutional controls that have been implemented at the site[1]. Although there are no current unacceptable risks to human health or the environment associated with Building M7-505, institutional land use controls (LUCs) are necessary to prohibit the use of groundwater from the site. LUCs are also necessary to prevent access to soil under electrical equipment in the northwest portion of the site. Controls necessary to prevent human exposure will include periodic inspection, condition certification, and agency notification.

WHY LAND USE CONTROLS ARE NEEDED

Human health and ecological risk assessments were completed as part of a Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) and Corrective Measure Implementation (CMI). Constituents of concern that exceed Florida Department of Environmental Protection (FDEP) cleanup target levels are chlorinated VOCs (trichloroethene, cis-1,2-dichloroethene, and vinyl chloride) in groundwater and PCBs in soil.

SITE DESCRIPTION

The M7-505 Building is a National Aeronautics and Space Administration (NASA)-operated facility that was constructed in the early 1960s. The facility includes the M7-505 Building, roads, parking lots and storage areas (Figure 1). Past and current operations at the Building M7-505 include material testing, metal treatment and machine shop activities. The treatment tank was used for pH neutralization of waste solutions generated in the metal treatment laboratory.

SITE LOCATION

The M7-505 Building is located in the southeastern portion of the Kennedy Space Center (KSC) Industrial Area at the intersection of D Avenue SE and within Section 5 of Township 23S, Range 37E, which is in the Orsino Quadrangle. The groundwater use control and soil areas covered by the LUCIP are shown on Figure 2.

[1] *This LUCIP summarizes institutional controls regarding the NASA M7-505 Building. For detailed information on the Site, consult the M7-505 Building administrative file, which is available for review by contacting the KSC Environmental Assurance Branch at telephone number (321) 867-8402.*

Coordinates of the corners of the LUC areas are provided on Figure 2 in the State Plane Coordinate System NAD 1983 meters, Florida East.

SITE CONTAMINATION AND CONTROL

Groundwater at the site contains VOCs above the FDEP Groundwater Cleanup Target Levels. Polynuclear aromatic hydrocarbons (PAHs) were also present in swale soil above the FDEP Residential-Soil Cleanup Target Levels, however interim measures have mitigated potential risk to human health and ecological receptors from the swale soil. Soil under electrical equipment in an area in the northwest portion of the site contains PCBs above FDEPs soil cleanup target levels. The past, current and projected future land use of the Building M7-505 is industrial in nature. However, LUCs are required to prohibit the potential future use of groundwater from the site and to restrict access to the soil. Indoor air quality shall also be evaluated prior to any construction within the groundwater use control area.

DECISION DOCUMENT

A Statement of Basis (SB) establishes institutional controls as a component of the remedy for the site. The institutional controls are temporary while long term monitoring documents the reduction of VOCs in groundwater through natural processes and until the PCB-affected soil is removed.

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 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.

The KSC 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 institutional controls specified herein are in place and operating will be conducted by the KSC Environmental Assurance Branch. The inspections will verify that no groundwater use or unauthorized disturbance to soils is occurring at the site.

REPORTING

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

[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.

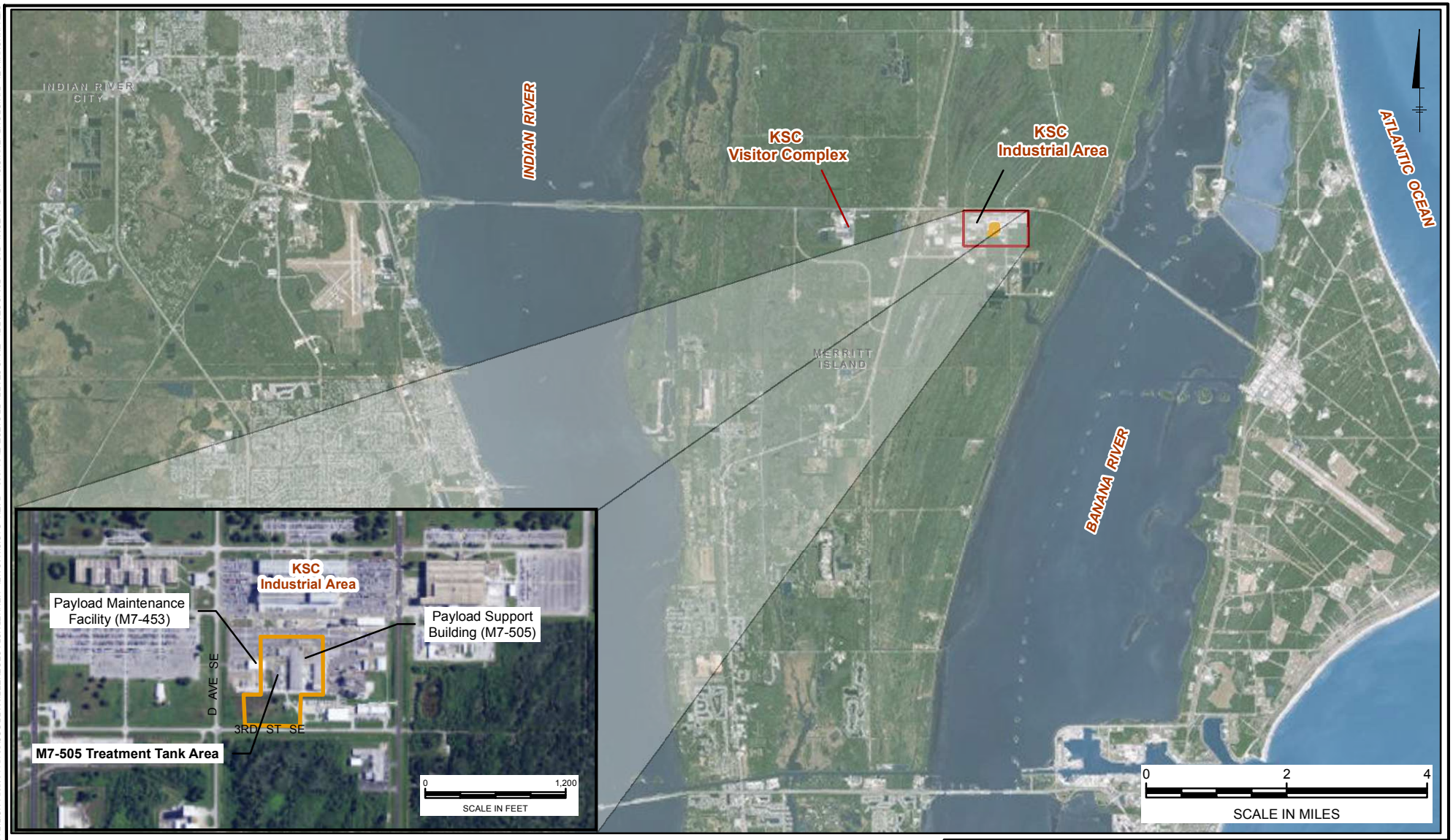
Although the terms and conditions of the MOA are not specifically incorporated or made enforceable herein by reference, it is understood and agreed by NASA KSC and FDEP that the contemplated permanence of the remedy reflected herein shall be dependent upon the Center's substantial good faith compliance 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.

ENFORCEMENT

The KSC Environmental Assurance Branch 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 until 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.



PROJECTION: NAD 1983 StatePlane Florida East FIPS 0901
AERIAL SOURCE: ESRI Online Services (NAIP, June 2013).

LEGEND

SWMU 039 Boundary

NASA - National Aeronautics and Space Administration
KSC - Kennedy Space Center
LUCIP - Land Use Control Implementation Plan
SWMU - Solid Waste Management Area

Site Location Map
Land Use Control Implementation Plan

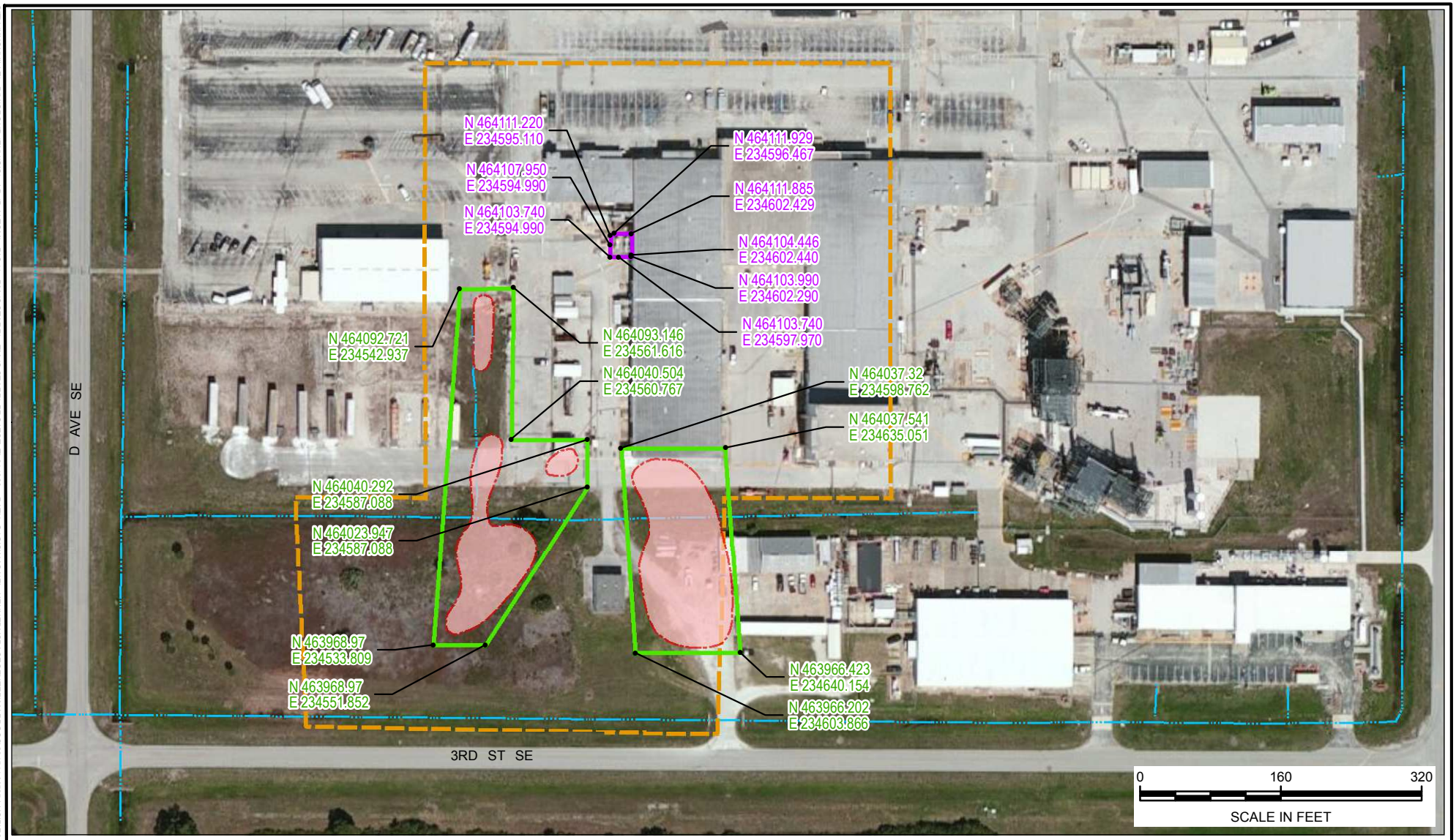
M7-505 Treatment Tank Area
NASA Kennedy Space Center, Florida

Project Number: TL014020

Figure 1

12/30/2015

LUCIP - SWMU 039



PROJECTION: NAD 1983 StatePlane Florida East FIPS 0901
AERIAL SOURCE: ESRI Online Services (NAIP, June 2013).

LEGEND

- SWMU 039 Boundary
- Swale/Ditch
- VOCs Detected in Groundwater >GCTL (2015)
- Soil LUCIP Area
- Groundwater LUCIP Area

NASA - National Aeronautics and Space Administration
KSC - Kennedy Space Center
LUCIP - Land Use Control Implementation Plan
SWMU - Solid Waste Management Area

VOCs - Volatile Organic Compounds
GCTL - Groundwater Cleanup Target Level
LUCIP North and East Coordinates are in State Plane Florida East (meters).
Groundwater shown in green; Soil shown in purple.

Site Plan
Land Use Control Implementation Plan

M7-505 Treatment Tank Area
NASA Kennedy Space Center, Florida

Project Number: TL014020

Figure 2

12/30/2015