



INTERIM LAND USE CONTROL IMPLEMENTATION PLAN



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

FACILITY: Converter Compressor Building
Solid Waste Management Unit 089
CONTAMINANTS: Volatile Organic Compounds in Groundwater
CONTROL: Prohibit Groundwater Use

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 Converter Compressor Building (CCB) 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 CCB, institutional land use controls (LUCs) are necessary to prohibit future use of groundwater at the site. Controls will include periodic inspection, condition certification, and agency notification.

WHY LAND USE CONTROLS ARE NEEDED

During the Solid Waste Management Unit (SWMU) Assessment for CCB, four Locations of Concern (LOCs) were identified. Soil, groundwater, and surface water samples were collected as part of Confirmatory Sampling (CS) activities in June 2004 and March 2005. The CS results

indicated chemicals of potential concern present in all media sampled at concentrations exceeding cleanup criteria. However, surface water is very limited in extent and is only present during periods of high precipitation, and it was recommended in the CS Report (CSR) that no further evaluation of surface water be conducted in the RFI. Three additional LOCs were identified during initial Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) efforts. A soil investigation of all the LOCs resulted in No Further Action (NFA) determinations for all soils at CCB LOCs except for LOC 1 in December 2007. An Interim Measure (IM) was conducted in October 2009 to mitigate human health risks associated with polynuclear aromatic hydrocarbons (PAHs) and polychlorinated biphenyls (PCBs) at LOC 1, and NFA was recommended in the IM Report dated January 2010 and approved by Florida Department of Environmental Protection (FDEP) in February 2010. Groundwater is the only remaining medium of concern at CCB.

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

SITE DESCRIPTION

SWMU 089 includes one primary building (K7-468) and several supporting structures supporting CCB and several buildings supporting Propellants North K7-367, K7-415, K7-416, and K7-417. CCB (K7-468) was constructed from 1963 to 1965. In 1967, the Petroleum, Oil, and Lubricant (POL) Flammables Storehouse (K7-417) and Operations Building (K7-416) were constructed. CCB converts liquid helium received in tankers to a low-pressure helium gas that is pumped to high-pressure compressors and stored in railcars, pipeline, and customer storage batteries. The site also controls and maintains high-pressure gaseous nitrogen that is supplied through an underground pipeline to various customers. During the 1980s, the storage tank for nitrogen was removed and replaced with a pipeline connecting to an off-site facility. In 1993, the Ammonia Boiler Refurbishment/ Test Building (K7-367) was constructed, and in 2005, the Cylinder Test and Fill Facility (K7-415) and retention pond were constructed. No record of spills were identified for the CCB area. The primary contaminants at CCB are trichloroethene (TCE) and degradation daughter products.

SITE LOCATION

SWMU 089 includes approximately 35 acres bordered by wooded areas to the north and east, open land including Crawlerway to the south, and Fluid Servicing Road and CCF to the west (Figure 1). SWMU 089 is found in Section 8, Township 22S, Range 37E, as shown on the 7.5-minute Orsino topographic quadrangle map. The groundwater use control area covered by this Interim LUCIP is shown on Figure 2. Coordinates of the corners of the LUC area are provided on Figure 2 in the State Plane Coordinate System, North American Datum (NAD) 1983, Florida East, meters.

SITE CONTAMINATION AND CONTROL

Groundwater at the site contains volatile organic compounds (VOCs) at concentrations greater than FDEP Groundwater Cleanup Target Levels. The past, current, and projected future land use of CCB is industrial in nature. LUCs are required to prohibit the use of groundwater at the site until cleanup levels are achieved. The current and projected land use of CCB does not include the use of site groundwater; therefore, there is no current or projected future exposure risk.

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.

DECISION DOCUMENT

The Kennedy Space Center (KSC) Remediation Team determined that interim institutional controls should be implemented at CCB. 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 RCRA permit and a Land Use Control Assurance Plan included in a Memorandum of Agreement (MOA)² between National Aeronautics and Space Administration (NASA), FDEP, and United States Environmental Protection Agency (EPA), effective February 23, 2001. 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 CCB 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 and will be conducted by KSC's Environmental Assurance Branch. The inspections will verify that no groundwater use is occurring at CCB.

REPORTING

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

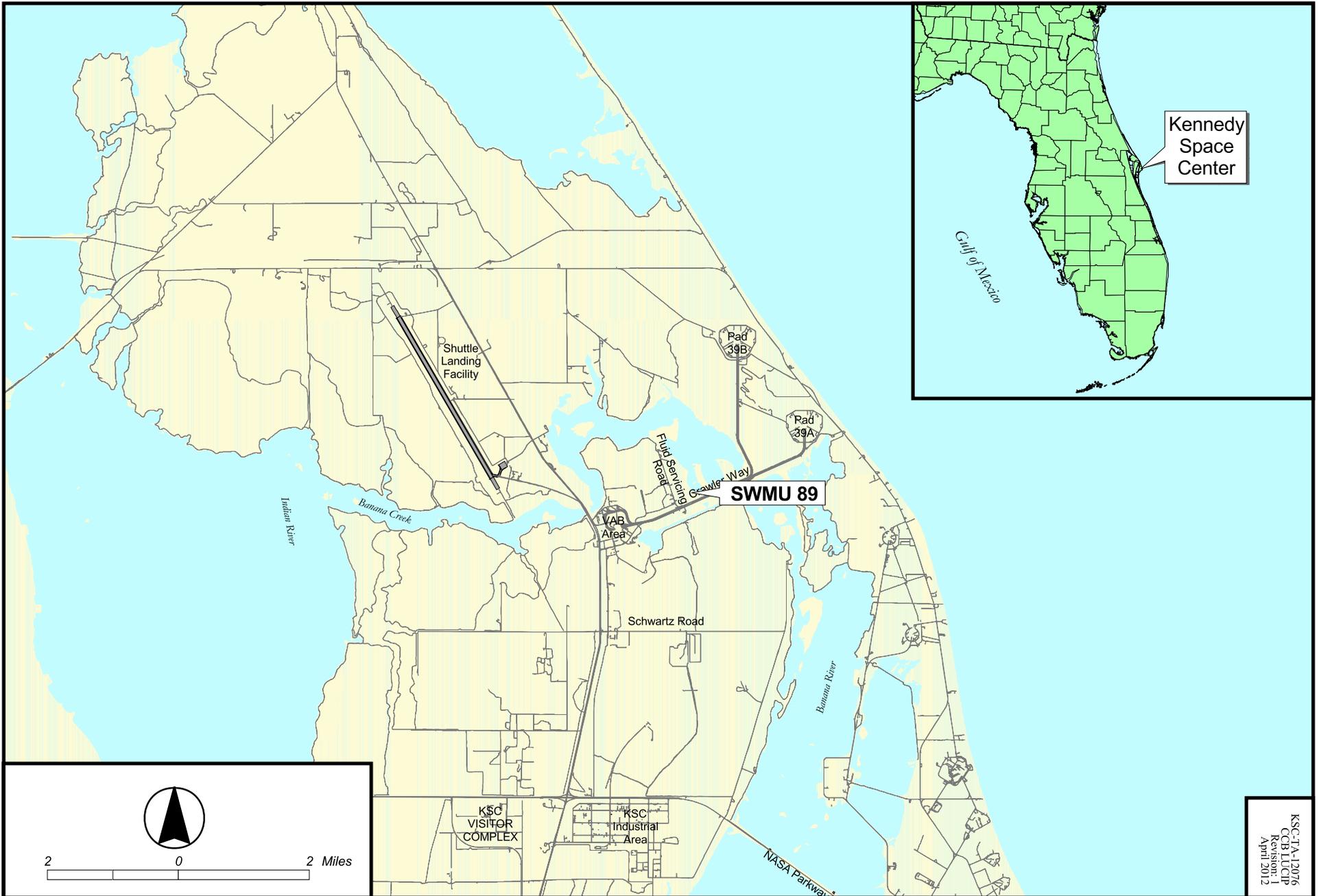
ENFORCEMENT

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

MAINTENANCE

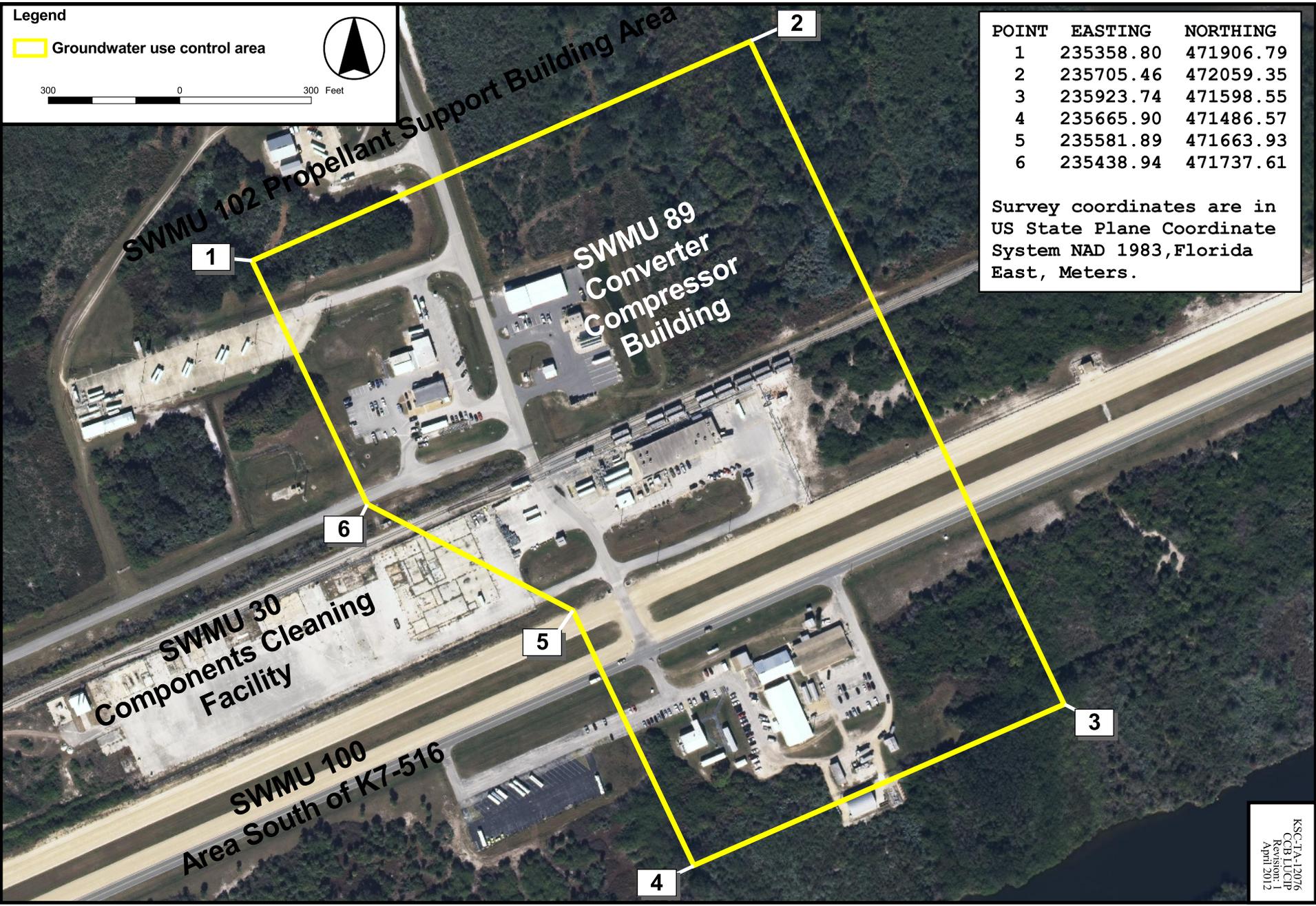
The Interim LUCIP shall remain in place until a land use change is implemented or the concerns managed by the Interim LUCIP are mitigated, or until there is a discovery, based on analytical evidence, that scenarios managed by the Interim LUCIP are no longer a concern.

FIGURE 1 LOCATION OF KENNEDY SPACE CENTER AND SWMU 89
 SWMU 89 - CONVERTER COMPRESSOR BUILDING K7-0468, KENNEDY SPACE CENTER, FLORIDA



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FIGURE 2 GROUNDWATER LAND USE CONTROL AREA
 SWMU 89 - CONVERTER COMPRESSOR BUILDING K7-0468, KENNEDY SPACE CENTER, FLORIDA



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