



LAND USE CONTROL IMPLEMENTATION PLAN



FUEL STORAGE AREA #1 (PRL 157) LOCATED AT CCAFS NATIONAL AERONAUTICS AND SPACE ADMINISTRATION KENNEDY SPACE CENTER BREVARD COUNTY, FLORIDA

FACILITY: Fuel Storage Area #1
Potential Release Location 157

CONTAMINANTS: VOCs, SVOCs, and TRPH in Soil and Groundwater

CONTROL: Prohibit Groundwater Use, Prevent Hypothetical Future Residential Exposure to Groundwater, Prevent Non-Industrial Site Uses, and Prevent Uncontrolled Excavation/Disturbance of 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 Fuel Storage Area #1 (FSA1) of institutional controls that have been implemented at the site¹. Institutional land use controls (LUCs) are necessary to prevent risks associated with current and future industrial exposure and hypothetical future residential exposure to contaminated soil and hypothetical future potable use of groundwater. Specific controls will include prohibiting the use of groundwater from the site, preventing hypothetical future residential exposure to groundwater, restricting future site uses to industrial activities, and preventing uncontrolled excavation or disturbance of soil at the site. Controls will include periodic inspection, condition certification, and agency notification.

WHY LAND USE CONTROLS ARE NEEDED

FSA1 was assessed under Florida's petroleum cleanup program. Concentrations of volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), and total recoverable petroleum hydrocarbons (TRPH) in groundwater and TRPH in soil

were greater than Petroleum Contamination Site Cleanup Criteria.

SITE DESCRIPTION

FSA1 is part of the larger RP/JP Fuel Handling Facility (SWMU #143) that has been the site of fuel-handling operations since the 1950s. The facility includes a concrete containment area with five 20,000-gallon above-ground storage tanks, a tanker unloading area, Building 1044 (pumphouse) and associated underground storage tank (UST) (Tank 1044-1), a tanker loading area, associated above-ground piping, and an associated asphalt parking area/roadway. Previous leaks at the RP/JP facility included a 3,000-gallon spill in 1989 and a 100-gallon spill in 1991. Tank 1044-1, located west of Building 1044 and northwest of the loading station, was investigated due to a leak detected during maintenance activities in 2006.

SITE LOCATION

FSA1 is a 0.5-acre NASA-operated facility located along the southwestern edge of the Cape Canaveral Air Force Station along the Banana River (Figure 1). The site is located within Section 26 of Township 23S, Range 37E, which is in the Cape Canaveral Quadrangle. The LUC area covered by the LUCIP is shown on Figure 2. Coordinates of the cor-

¹ This LUCIP summarizes institutional controls regarding the NASA FSA1. For detailed information on the site, consult the FSA1 administrative file, which is available for review by contacting the KSC Environmental Assurance Branch at telephone number (321) 867-8402.

ners of the LUC area 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, SVOCs, and TRPH at concentrations greater than FDEP's Groundwater Cleanup Target Levels, and TRPH concentrations in soil are greater than Soil Cleanup Target Levels. The past, current, and projected future land use of FSA1 is industrial in nature. LUCs are required to prevent use of groundwater, to limit site use to industrial activities, and to prohibit uncontrolled excavation/disturbance of soil. Indoor air quality shall be evaluated prior to any construction within the LUC area.

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 NASA, FDEP, and the United States 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 Assurance Branch will provide CCAFS's Master Planning Office with survey coordinates of the LUCs. Restrictions will specify limitations on develop-

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.

ment 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 and will be conducted by KSC's Environmental Assurance Branch. The inspections will verify that no residential groundwater use is occurring, that site activities are limited to industrial activities, and that uncontrolled excavation/disturbance of soil has not occurred.

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 FSA1 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 LOCATION OF KENNEDY SPACE CENTER AND FUEL STORAGE AREA #1
FUEL STORAGE AREA #1, CAPE CANAVERAL AIR FORCE STATION, FLORIDA

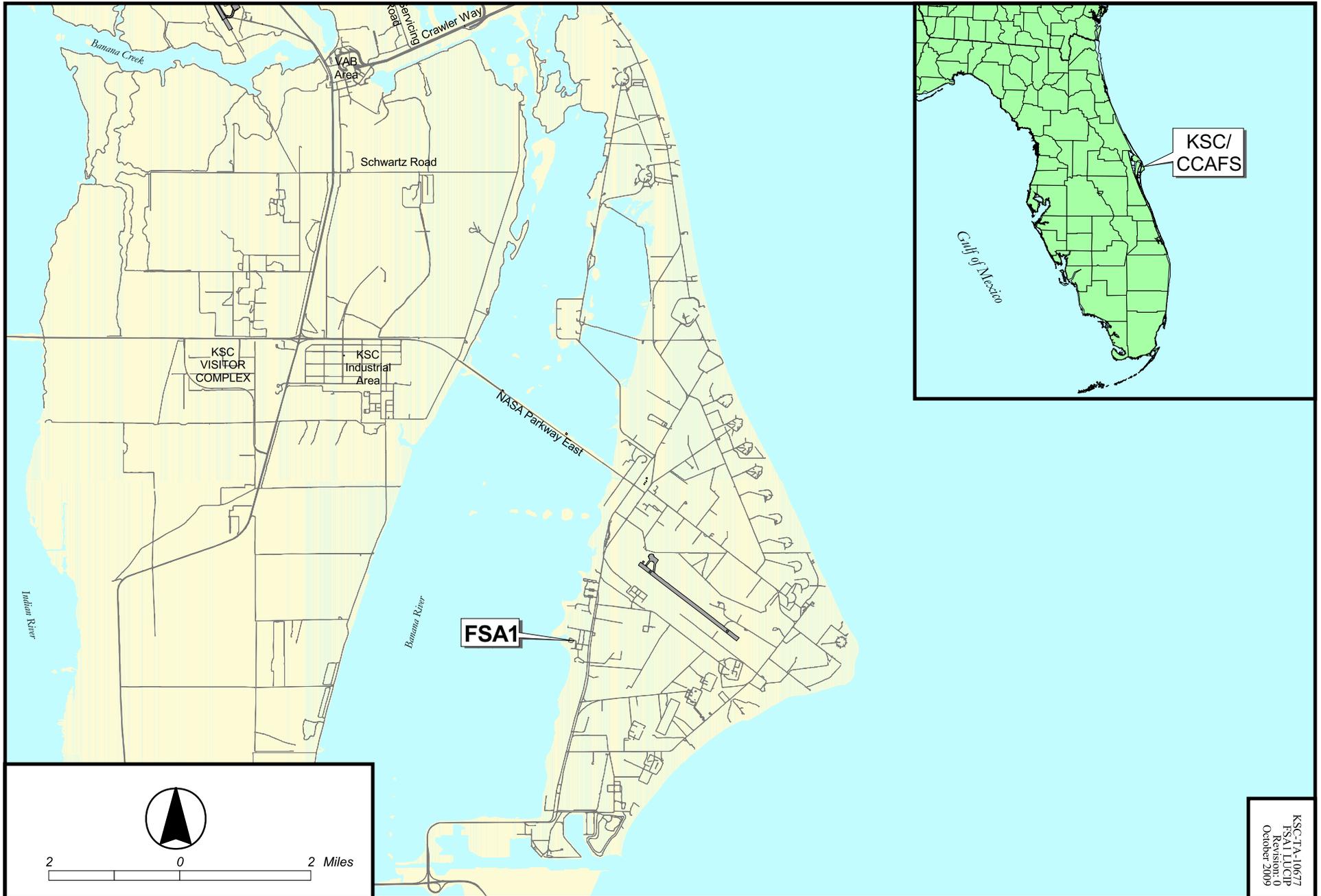


FIGURE 2 GROUNDWATER LAND USE CONTROL AREA
 FUEL STORAGE AREA #1, CAPE CANAVERAL AIR FORCE STATION, FLORIDA

