



INTERIM LAND USE CONTROL IMPLEMENTATION PLAN



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

FACILITY: Hydrocarbon Burn Facility
Solid Waste Management Unit 007

CONTAMINANTS: Volatile Organic Compounds and Light Non-Aqueous-Phase Liquid in Groundwater; Total Recoverable Petroleum Hydrocarbon (TRPH) in Soil

CONTROL: Prohibit Groundwater Use and Industrial and Residential Use Access to Soil

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 Hydrocarbon Burn Facility (HBF) 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 HBF, institutional land use controls (LUCs) are necessary to prohibit future use of groundwater and soil at the site. Controls 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). Chemicals of concern (COCs) were identified as being potentially unacceptable for human health risk during the RFI. The identified

COCs that exceeded Florida Department of Environmental Protection (FDEP) cleanup target levels were volatile organic compounds (VOCs) and petroleum-related light non-aqueous-phase liquids (LNAPL) in groundwater, and total recoverable petroleum hydrocarbon (TRPH) in soil.

SITE DESCRIPTION

SWMU 007 occupies the northwestern portion of the National Aeronautics and Space Administration (NASA)-operated fire-fighting training facility that was operational between 1966 and 1994. HBF includes a former effluent disposal area, large and small burn pans, and former above-ground storage tank (AST) area. Conventional petroleum fuels mixed with waste solvents were used during fire-fighting training activities in the area. In 1992, 170 tons of oil-stained soils were removed from the former effluent disposal area as part of an Interim Remedial Action. Former site structures were removed as part of an Interim Measure (IM) conducted during 2002 and 2003. Chlorinated ethene- and petroleum-contaminated soils were also

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

excavated from the large and small burn pans and former AST area during this IM. The primary contaminants at HBF are VOCs, primarily trichloroethene (TCE) and its daughter products, and petroleum hydrocarbon compounds.

SITE LOCATION

HBF consists of a sparsely-vegetated open space formerly used for fire-fighting training operations and is surrounded by forested areas and a wetland area to the north. The site is located west of Static Test Road and north of NASA Parkway East (Figure 1). HBF is found in Section 28, Township 22S, Range 37E, as shown on the 7.5-minute False Cape topographic quadrangle map. The groundwater and soil use control areas covered by this Interim LUCIP are shown on Figure 2. Coordinates of the corners of the LUC areas 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 VOCs at concentrations greater than FDEP Groundwater Cleanup Target Levels. LNAPL is also present in limited areas. Soils

exceed the industrial and leachability soil cleanup target levels for TRPH. The past, current, and projected future land use of HBF is industrial in nature. LUCs are required to prohibit the use of groundwater at the site and maintain the site to limit exposure to contaminated soil until cleanup levels are achieved. The current and projected land use of HBF does not include the use of site groundwater; therefore, there is no current or projected future exposure risk.

DECISION DOCUMENT

A Statement of Basis (SB) establishes institutional controls as a component of the remedy for the site. The SB for HBF, KSC document number KSC-TA-7131, is available for review by contacting the KSC Environmental Assurance Branch at telephone number (321)867-8402. The Kennedy Space Center (KSC) Remediation Team determined that interim institutional controls should be implemented at HBF. 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

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.

a Memorandum of Agreement (MOA)² between 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 HBF 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 will be conducted by KSC's Environmental Assurance Branch. The inspections will verify that no groundwater use is occurring and exposure to soils is restricted at HBF.

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 007
SWMU 007 - HYDROCARBON BURN FACILITY, KENNEDY SPACE CENTER, FLORIDA

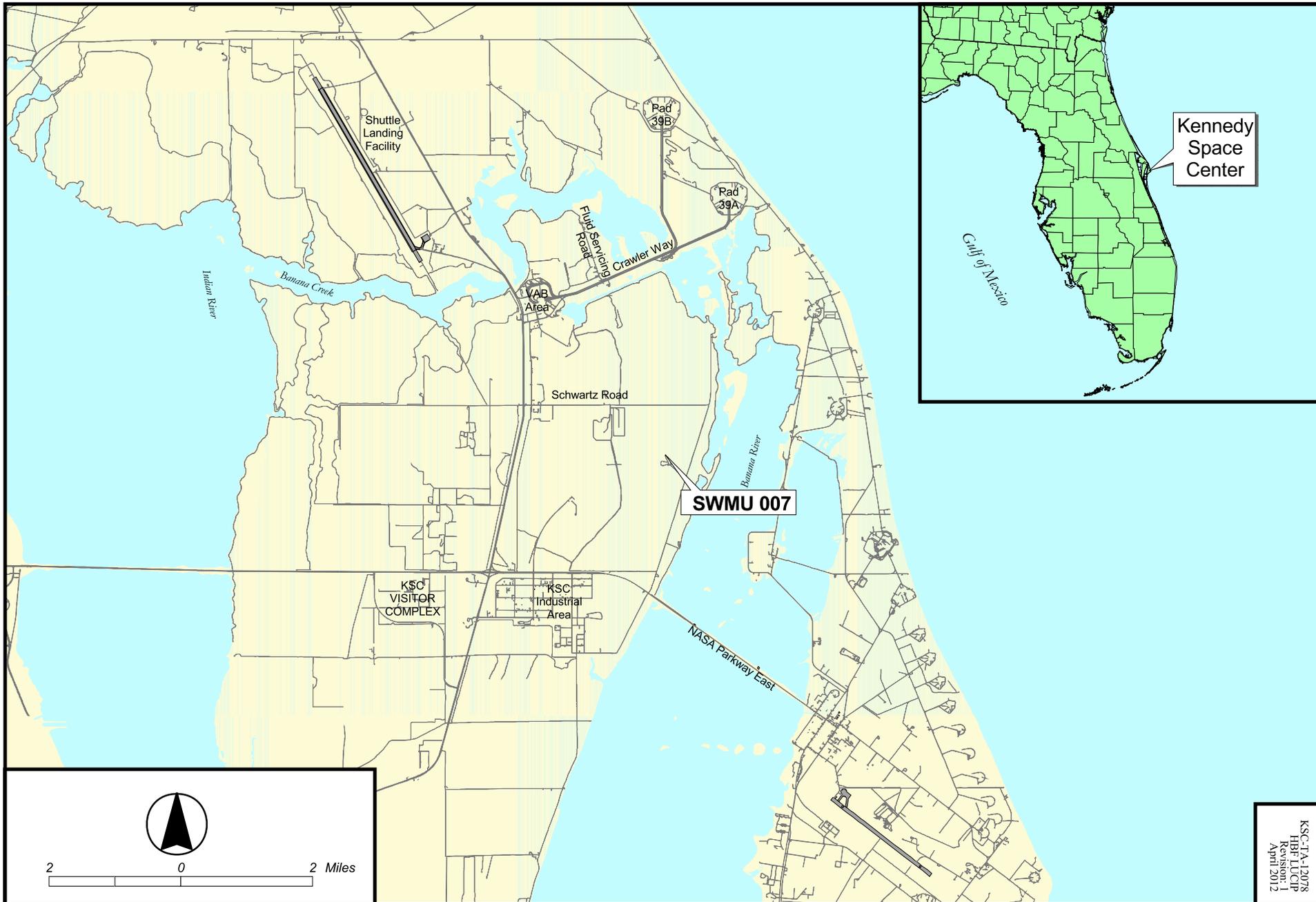
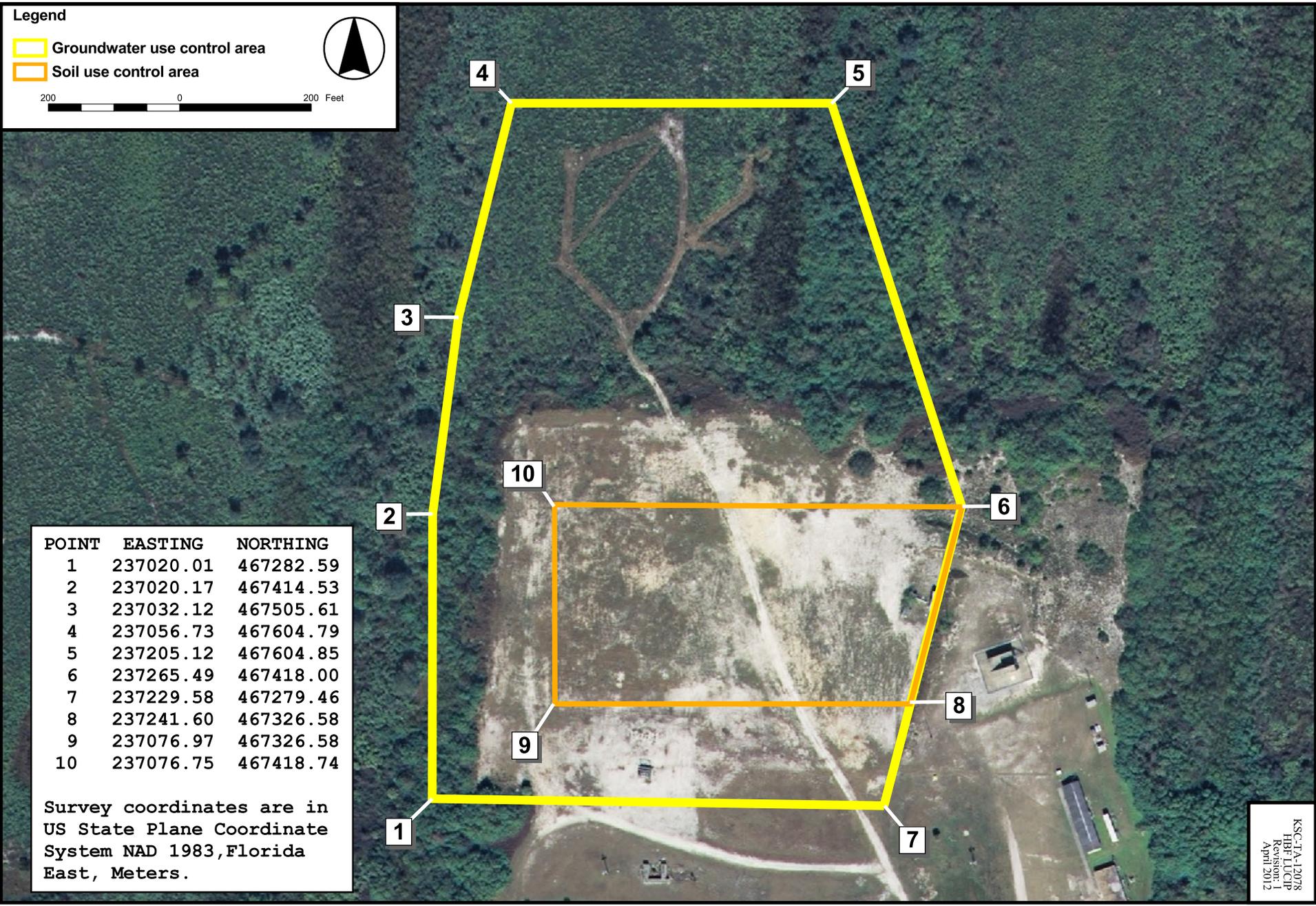


FIGURE 2 LAND USE CONTROL AREA
 SWMU 007 - HYDROCARBON BURN FACILITY, KENNEDY SPACE CENTER, FLORIDA



Legend

- Groundwater use control area
- Soil use control area





POINT	EASTING	NORTHING
1	237020.01	467282.59
2	237020.17	467414.53
3	237032.12	467505.61
4	237056.73	467604.79
5	237205.12	467604.85
6	237265.49	467418.00
7	237229.58	467279.46
8	237241.60	467326.58
9	237076.97	467326.58
10	237076.75	467418.74

Survey coordinates are in US State Plane Coordinate System NAD 1983, Florida East, Meters.

KSC-TA-12078
 HBF LUCIP
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