



LAND USE CONTROL IMPLEMENTATION PLAN

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



FACILITY: Hydrocarbon Burn Facility
Solid Waste Management Unit 7

CONTAMINANTS: VOCs and LNAPL in Groundwater

CONTROL: Prohibit Use of Groundwater

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 Hydrocarbon Burn Facility (HBF) of institutional controls that have been implemented at the site¹. 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

Human health and ecological risk assessments were completed as part of a Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI). Chemicals of concern identified for human health risk during the RFI that exceeded Florida Department of Environmental Protection (FDEP) and Environmental Protection Agency (EPA) cleanup target levels were volatile organic compounds (VOCs) and petroleum related light, non-

aqueous phase liquids (LNAPL) in groundwater.

SITE DESCRIPTION

The HBF occupies the northwestern portion of the approximately 13-acre National Aeronautics and Space Administration (NASA)-operated fire-fighting training facility. The HBF was operational between 1966 and 1994 during which time fire-fighting training activities were conducted. Former site structures removed/destroyed during a 2002 through 2003 interim measure (IM) included three above ground storage tanks (ASTs), a large, 75-foot diameter hydrocarbon burn pan, a smaller hydrocarbon burn pan, a new and old oil/water separator, a new and old effluent disposal area, and associated piping for these structures. Past fire-fighting training operations at the HBF were restricted to use of conventional petroleum fuels mixed with volatile waste solvents and associated impurities.

SITE LOCATION

The HBF is located on the eastern portion of Kennedy Space Center (KSC) near the

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

Banana River (Figure 1). It is located on the west side of Static Test Road approximately 1.8 miles north of its intersection with NASA Parkway East. The site is located within Section 28 of Township 22S, Range 37E of the False Cape, Florida 7.5-minute United States Geological Survey (USGS) Quadrangle Map [USGS 1976]. The groundwater use control area covered by this LUCIP is shown on Figure 2. Coordinates of the corners of the LUCIP control area provided on Figure 2 are in the State Plane Coordinate System NAD 1983 meters, Florida East.

SITE CONTAMINATION AND CONTROL

Groundwater at the site contains VOCs above FDEP's groundwater cleanup target levels as discussed in the Corrective Measures Study (CMS) Report¹. LNAPL is also present in limited areas. The past, current, and projected future land use of the HBF is industrial in nature. LUCs are therefore required to prohibit the use of groundwater at the site for potable purposes, for irrigation and to manage construction dewatering water. Indoor air quality shall 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 SB for the site,

KSC document number KSC-TA-7131, is available for review by contacting the KSC Environmental Program Office at telephone number (321) 867-8411.

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 NASA, FDEP, and 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 groundwater use is occurring.

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.

REPORTING

KSC’s Environmental Program Office will submit annual reports to EPA and 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 EPA and FDEP and implemented by modification of NASA’s operating permit.

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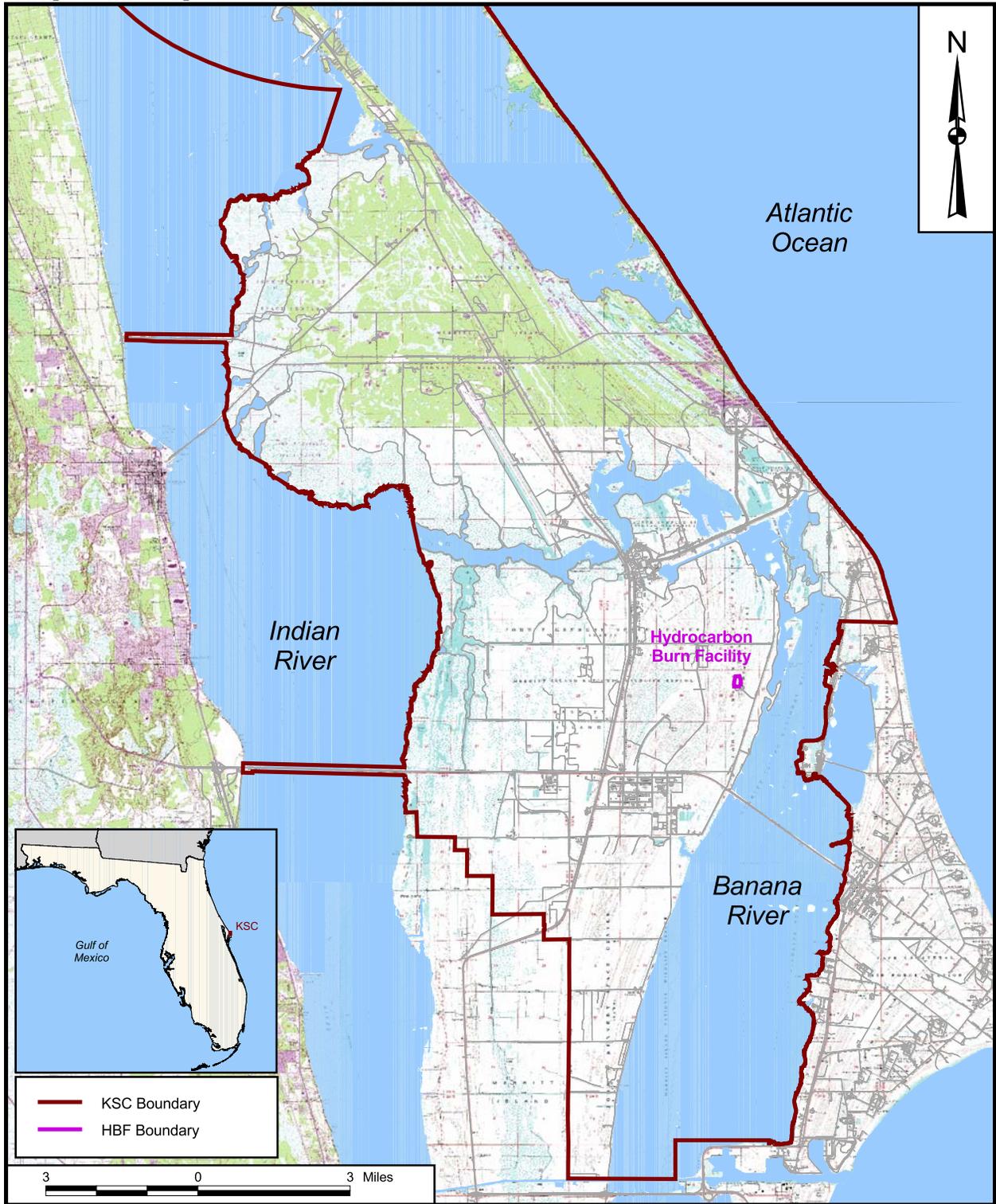


FIGURE 1
LOCATION OF HYDROCARBON BURN FACILITY
AT KENNEDY SPACE CENTER



FIGURE 2
 SITE MAP OF HYDROCARBON BURN FACILITY
 AT KENNEDY SPACE CENTER