



LAND USE CONTROL IMPLEMENTATION PLAN

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



FACILITY: Orsino Power Substation

Solid Waste Management Unit No. 96

CONTAMINANTS: Barium, Copper, PCBs, and TPH in Soil

CONTROL: Prohibit Residential Use

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 Orsino Power Substation 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 the Orsino Power Substation, institutional land use controls (LUCs) are necessary to prohibit residential use of the site. Controls will include periodic inspection, condition certification and agency notification.

The proposed remedy for SWMU 96 includes implementation of soil LUCs. Soil contamination levels are below the Florida Department of Environmental Protection's (FDEP) industrial commercial soil cleanup target levels (SCTLs). Soils remaining in place will require a land use control to restrict the site to non-residential use only. Non-residential land use restrictions prohibit residential or residential-like uses, including but not limited to, any form of housing, child-care facilities, any kind of school including pre-schools, elementary schools, and

secondary schools, playgrounds, and adult convalescent and nursing care facilities.

WHY LAND USE CONTROLS ARE NEEDED

Soil and groundwater sampling 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 FDEP and Environmental Protection Agency (EPA) cleanup target levels were barium, copper, polychlorinated biphenyls (PCBs) and Total Petroleum Hydrocarbons in soil.

SITE DESCRIPTION

The Orsino Power Substation is a NASA-operated facility that has been used to provide electrical power to the KSC Industrial Area since 1964. The facility comprises an area of approximately 3.5 acres and contains transformers, circuit breakers, power structures, sheds, a control building, and a Florida Power and Light (FP&L) substation. The facility is mostly fenced and is unpaved with crushed rock covering the ground surface

¹ This LUCIP summarizes institutional controls regarding the NASA KSC Orsino Power Substation. For detailed information on the site, consult the Orsino Power Substation administrative file, which is available for review by contacting the KSC Environmental Assurance Branch at telephone number (321) 867-8411.

within the fenced area. Past and current operations at the Orsino Power Substation include equipment storage, battery storage, and electrical power distribution.

SITE LOCATION

The Orsino Power Substation is located southeast of the intersection of Southeast 5th Street and C Avenue in the KSC Industrial Area (Figure 1). The site is located within Section 5 of Township 23S, Range 37E which is in the Orsino Quadrangle. The soil use control area covered by the LUCIP is shown on Figure 2. Coordinates of the corners of the LUC are provided in Figure 2 in the State Plane Coordinate System NAD 1983 meters, Florida East.

SITE CONTAMINATION AND CONTROL

Barium, copper, PCBs, and TPH are present in soil above FDEP's residential SCTL but are less than FDEP's industrial SCTL. The past, current, and projected future land use of the Orsino Power Substation is industrial in nature. LUCs are therefore required to prohibit residential use/exposure to soils, including gravel.

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-8620, is available

for review by contacting the KSC Environmental Assurance Branch at telephone number (321) 867-8411.

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 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 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 Assurance Branch. The inspection will verify that no residential 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 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 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.



