LAND USE CONTROL IMPLEMENTATION PLAN
FIREX WATER TANK SWMU 69
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
KENNEDY SPACE CENTER

FACILITY: Firex Water Tank
Solid Waste Management Unit No. 69
CONTAMINANTS: PAHs and Arsenic in Soil/Dry Sediment
CONTROL: Maintain Swale Configuration

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 Firex Water Tank (FWT) of institutional controls that have been implemented at the site[1]. Although there are no current unacceptable risks to human health or the environment associated with the FWT site, institutional land use controls (LUCs) are necessary to: (i) ensure the swales at the site remain in their current configuration and that human activity within the swale is limited to intermittent maintenance. 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 polynuclear aromatic hydrocarbons (PAHs), and arsenic in soil/dry sediment.

SITE DESCRIPTION

The FWT site is a NASA-operated facility that includes a one- million gallon capacity steel and concrete tank, pump station including several back- up diesel generators, a 15,000 gallon diesel above ground storage tank, and a 1,000-gallon waste oil underground storage tank. The FWT was constructed in 1964 and moved to its current location in 1986. The pump station and other appurtenant structures were constructed in 1986. The FWT site is used to support fire suppression systems in the KSC Industrial Area.

SITE LOCATION

The FWT site is located in the Hypergol/ Payload Test Area in the southeastern corner of the KSC Industrial Area (Figure 1). It is located at the intersection of Ninth Street S.E. and G Avenue S.E. The site is located within Section 4 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 pro-

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

vided in Figure 2 in the State Plane Coordinate System NAD 1983 meters, Florida East.

SITE CONTAMINATION AND CONTROL

PAHs and arsenic are present in soil/dry sediment above FDEP's residential and/or industrial soil cleanup target level (SCTL). Alternative SCTLs were developed for a groundskeeper scenario at the site and all soil contaminants were below the alternative SCTLs. The past, current, and projected future land use of the FWT site is industrial in nature. A LUC is therefore required to ensure the swales remain in their current configuration and that human activity within the swale is limited to intermittent maintenance.

DECISION DOCUMENT

A Statement of Basis (SB) establishes institutional controls as a component of the remedy for this site. The SB for the site, KSC document number KSC-TA-5721, 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 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 institutional controls specified herein are in place and operating will be conducted by KSC's Environmental Program Office. The inspection will verify that the swales meet the alternative SCTL assumptions.

REPORTING

KSC's Environmental Program Office will submit annual reports to EPA and FDEP certifying retention of the implemented LUC.

ENFORCEMENT

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

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.

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.

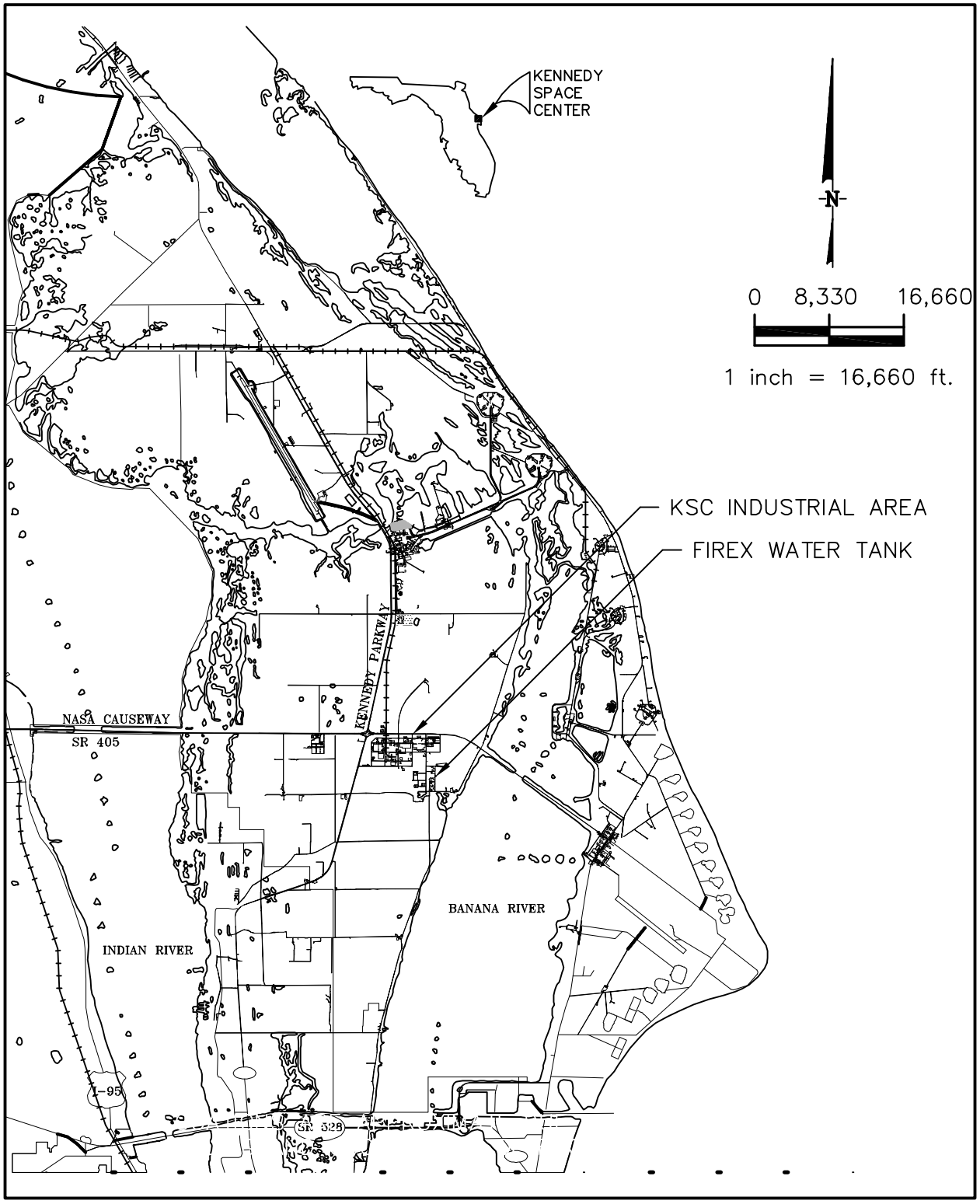

FIGURE 1

KENNEDY SPACE CENTER
FIREX WATER TANK SITE LOCATION MAP

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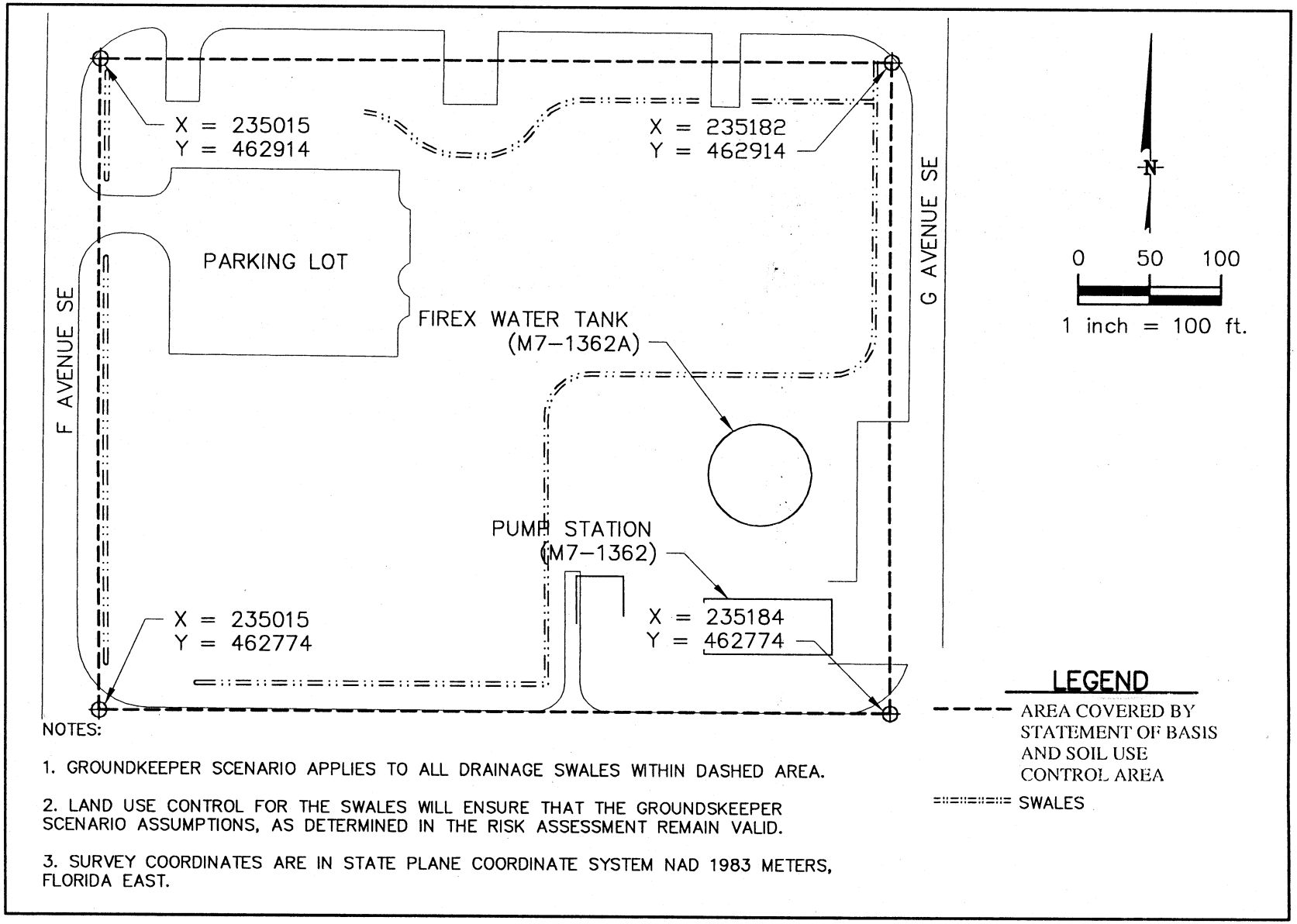

FIGURE 2
SITE MAP
FIREX WATER TANK