KSC-PLN-1919

SPILL PREVENTION, CONTROL & COUNTERMEASURES PLAN

KENNEDY SPACE CENTER, FLORIDA

Prepared for:

Kennedy Space Center, Florida

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April 2016

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Acronym List

AFS	Air Force Station
ANSI	American National Standards Institute
API	American Petroleum Institute
ASNT	American Society for Nondestructive Testing
AST	Aboveground Storage Tank
ATK	Alliant Tech Systems, LLC
BFF	Booster Fabrication Facility
CCAFS	Cape Canaveral Air Force Station
CEMP	Comprehensive Emergency Management Plan
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	*Code of Federal Regulations*
CWA	Clean Water Act
DNCP&R	Delaware North Companies Parks and Resorts, Incorporated
DO	Duty Office
DOC	Department of Commerce
DOT	Department of Transportation
EHS	Environmental Health Services
EH&S	Environmental Health & Safety
EMS	Emergency Medical Service
EPA	Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act
EAB	Environmental Assurance Branch
EPPC	Emergency Preparedness Planning Committee
ERG	Emergency Response Guide
ERRB	Emergency Response and Removal Branch
ESC_1	Engineering Services Contract
ESC_2	Environmental Support Contractor
FAC	*Florida Administrative Code*
FDEP	Florida Department of Environmental Protection
FWS	Fish and Wildlife Service
gal	Gallon
HAZCOM	Hazard Communication
HAZMAT	Hazardous Materials
HAZWOPER	Hazardous Waste Operations and Emergency Response
HRT	HAZMAT Response Team
HWAF	Hazardous Waste Accumulation Facility
IC	Incident Commander
ID	Identification
IOMS	Institutional Operations & Maintenance Support
ISC	Institutional Services Contract
JCCC	Joint Communications Control Center

Acronym List (continued)

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Jet A	Jet Engine Propellant – Aviation (U.S.)
KARS	Kennedy Athletic, Recreation, and Social Organization
KDP	Kennedy Procedural Document
KEMCON	Kennedy Environmental and Medical Contract
KNPR	Kennedy NASA Procedural Requirements
KPLSS	Kennedy Propellants and Life Support Services
KSC	Kennedy Space Center
lb	Pound
LC	Launch Complex
LCC	Launch Control Complex
LEPC	Local Emergency Planning Committee
MINWR	Merritt Island National Wildlife Refuge
MOGAS	Motor Vehicle Gasoline
MSDS	Material Safety Data Sheet
NA	Not Applicable
NASA	National Aeronautics and Space Administration
NEPO	NASA Emergency Preparedness Office
NOAA	National Oceanic and Atmospheric Administration
NOTU	Naval Ordnance Test Unit
NRC	National Response Center
OSC	On-Scene Commander
OSHA	Occupational Safety and Health Administration
OWS	Oil/water separator
PAO	Public Affairs Office
PCB	Polychlorinated biphenyl
PIR	Pollution Incident Report
POL	Petroleum, Oils, and Lubricants
PPE	Personal Protective Equipment
RQ	Reportable Quantity
SCT	Spill Cleanup Team
SERC	State Emergency Response Commission
SFO	Senior Fire Official
SGS	Space Gateway Support
SIR	Statistical Inventory Reconciliation
SLC	Space Launch Complex
SPCC	Spill Prevention, Control, and Countermeasure
SPCC Plan	*KSC Spill Prevention, Control, and Countermeasures Plan*
STI	Steel Tank Institute
STP	Submersible Turbine Pump
TO	Technical Order
TOSC	Test Operations Support Contract
TSDF	Treatment, Storage, and Disposal Facility

Acronym List (continued)

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U.S.	United States
UST	Underground Storage Tank
VAB	Vehicle Assembly Building

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Management Commitment Certification

In accordance with 40 *Code of Federal Regulations* (CFR) 112.7, National Aeronautics and Space Administration (NASA) is committed to the implementation of the procedures outlined in this SPCC Plan and the prevention of releases of oil to navigable waters of the U.S. I certify that the necessary manpower, equipment, and materials required to expeditiously control and remove any quantity of oil discharged that may be harmful will be provided. This SPCC Plan will be implemented as herein described. A copy of this SPCC Plan shall be maintained at the facility at all times and will be made available to the U.S. Environmental Protection Agency (EPA) Regional Administrator for on-site review during normal working hours.

Authorized Management Representative:

Signature: Harold Williams Date: 4/27/2016

Printed Name: HAROLD WILLIAMS Title: Chief, Environmental Assurance Branch

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Professional Engineering Certification of Kennedy Space Center (KSC) Spill Prevention, Control and Countermeasures (SPCC) Plan Modifications

I certify that I have visited and examined the facility, and being familiar with the provisions of 40 CFR 112, attest that the modification(s) to the KSC SPCC Plan (KSC-PLN-1919 and KSC PLN-1920) referenced in Amendment Log A-108 has (have) been prepared in accordance with good engineering practice, including consideration of applicable industry standards and the requirements of the SPCC rules (40 CFR 112). I also certify that the SPCC Plan (KSC-PLN-1919) in effect on the date of this certification includes procedures for inspections and testing and that the modifications to such procedures do not impact the adequacy of the Plan.

Signature/Date/Seal:

The seal appearing on this document was authorized by Jeffrey S. Longshore on the date shown in the electronic signature

Digitally signed by Jeffrey S. Longshore, P.E.
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FOREWORD

This document comprises the Kennedy Space Center (KSC) Spill Prevention, Control, and Countermeasures Plan (SPCC Plan). It has been prepared to conform with the requirements of 40 CFR 112 and the Oil Pollution Act. This SPCC Plan documents the procedures for the prevention, response, control, and reporting of spills of oil at KSC. This document applies to all organizations and contractors at KSC with the exception of the following:

- Facilities owned and/or operated by United States (U.S.) Fish and Wildlife Service (FWS) and located within the Merritt Island National Wildlife Refuge (including citrus groves);
- TEL-4 telemetry facilities (Buildings N6-2296 through N6-2296P), 19.14 Site (Building 9500), Radar 19.14 Station and Transmitter building (Buildings Q6-0082 and Q6-0082A), TPQ-18 Radar and Boresight Tower (Building Q6-0484), which are owned and operated by the United States Air Force;
- Florida Power & Light electrical substation located adjacent to the C-5 transformer yard (Building K6-1090) and the electrical substation located adjacent to the Orsino Yard (Building M6-0996A);
- AT&T Wireless communications tower and diesel fuel for emergency power generation (Building K7-1608);
- United States National Park Service facilities on KSC property involving oil storage;
- Construction and other contractors with temporary operations at KSC; and
- Commercial entities leasing property or facilities from NASA for activities under Commercial Space Transportation Systems (CSTC) Space Act Agreements.

All spill incidents must immediately be reported to the KSC Fire Department using 911 (867-7911 on a cellular phone) as the telephone contact number.

Specific roles, responsibilities, and procedures are included in the body of this document.

Plan Review and Amendment

Original Date of Plan:	December 2003
5-Year Plan Review	April 2016
Date of Last Management Plan Review:	April 2016

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In accordance with 40 CFR 112.5(b), a responsible official of NASA will review and evaluate this SPCC Plan at least once every 5 years. As a result of this review, non-technical changes may be made to the plan to ensure that the document is up-to-date. Such non-technical changes may include updating contact names, phone numbers, or addresses. Such non-technical changes do not require recertification by a professional engineer. In order to document the 5-year management review, the facility manager, or designate, must complete the information below:

	Review Dates	Representative or Designee Name and Title	Signature	Plan Amended (Yes or No)
1.	4/27/2016	HAROLD WILLIAMS	Harold Williams	Yes
2.				
3.				

Plan Amendment

This SPCC Plan shall be amended and re-certified by a Professional Engineer within six months after any change in facility design, construction, operation, or maintenance that materially affects the facility's potential to discharge oil. In addition, if required by the EPA or State oil pollution control agency, this SPCC Plan must be amended following reportable spills (40 CFR 112.4).

All amendments to this SPCC Plan shall be noted on the Amendment Log included as Appendix A of this SPCC Plan. Entries into the log will indicate a general description of the changes that were made to the facility, the corresponding changes that were made to the SPCC Plan, including plan section and page numbers, and the name and signature of the person making the changes. For those amendments requiring a professional engineer certification, a new certification page will be signed, sealed, and inserted into this plan to complete the amendment process.

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Certification of the Applicability of the Substantial Harm Criteria [ref. 40 CFR 112, Appendix C, Attachment C-II]

FACILITY NAME: Kennedy Space Center FACILITY ADDRESS: KSC, FL.

1. Does the facility transfer oil over water to or from vessels **and** does the facility have a total oil storage capacity greater than or equal to 42,000 gallons (gals)?

Yes _____ No X

2. Does the facility have a total oil storage capacity greater than or equal to 1 million gals **and** does the facility lack secondary containment that is sufficiently large to contain the capacity of the largest aboveground oil storage tank plus sufficient freeboard to allow for precipitation within any aboveground oil storage tank area?

Yes _____ No X

3. Does the facility have a total oil storage capacity greater than or equal to 1 million gals **and** is the facility located at a distance (calculated using the appropriate formula in Attachment C-III Appendix C, 40 CFR 112 or a comparable formula[1]) such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments? For further description of fish and wildlife and sensitive environments, see Appendices I, II, and III to Department of Commerce/National Oceanic and Atmospheric Administration (DOC/NOAA's) "Guidance for Facility and Vessel Response Plans" (section 10, Appendix E, 40 CFR Part 112 for availability) and the applicable Area SPCC Plan.

Yes _____ No X

4. Does the facility have a total oil storage capacity greater than or equal to 1 million gals **and** is the facility located at a distance (calculated using the appropriate formula (Attachment C-III, Appendix C, 40 CFR 112 or a comparable formula[1]) such that a discharge from the facility would shut down a public drinking water intake[2]?

Yes _____ No X

5. Does the facility have a total oil storage capacity greater than or equal to 1 million gals **and** has the facility experienced a reportable oil spill in an amount greater than or equal to 10,000 gals within the last 5 years?

Yes _____ No X

CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals responsible for obtaining this information, I believe that the submitted information is true, accurate, and complete.

HAROLD WILLIAMS
Name (please type or print)

Harold Williams
Signature

Title Chief, Environmental Assurance Branch

Date 4/27/2016

[1] If a comparable formula is used, documentation of the reliability and analytical soundness of the comparable formula must be attached to this form.

[2] For the purposes of 40 CFR Part 112, public drinking water intakes are analogous to public water systems as described at 40 CFR 143.2(c).

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This SPCC Plan has been prepared in accordance with 40 CFR 112 and is organized as specified in the aforementioned regulation. Table F-1 is a cross-reference table that provides the location of the requirements listed in 40 CFR 112 and the equivalent requirements in this Plan. Site-specific information for each oil storage facility at KSC necessary to demonstrate conformance with the appropriate SPCC requirements is included in Appendices B-1 through B-11.

Table F-1. CROSS-REFERENCE TABLE

SPCC Rule Citation	Description of Rule	Section
§112.1(d)	Exemptions to the requirements of the SPCC Rule: Permanent Closure Motive Power Containers	 4.3.2.1 4.8.1
§112.3(d)	Professional engineer certification.	Page xi
§112.3(e)	Copy of Plan maintained at the facility and available to EPA.	1.0
§112.4	Discharge reporting requirements.	6.0
§112.5	SPCC Plan review, evaluation, and amendment requirements.	Foreword, Appendix A
§112.7	Management commitment certification.	Page ix
§112.7(a)	General requirements. Discussion of facility's conformance with rule requirements. Discussion of deviation from applicable requirements. Facility characteristics that must be described in the Plan (including facility diagram). Spill reporting information in the Plan. Emergency procedures.	 1.0-7.0 4.3.2 4.0, 5.0, 6.0 Figures 2-1 and 2-2, Appendices B-1 to B-11 6.0 5.0
§112.7(b)	Discharge analysis.	2.2, Table 2-1, Appendices B-1 to B-11
§112.7(c)	Secondary containment.	4.3.1, 4.3.3.12, Appendices B-1-B-11
§112.7(d)	Contingency planning for facilities where installation of containment and/or diversionary structures is "not practicable".	4.3.2, Appendix G
§112.7(e)	Inspections, tests, and records.	Table 3.1, 4.0
§112.7(f)(1)	Employee training and discharge prevention procedures.	3.1.2
§112.7(f)(2)	Person accountable for discharge prevention.	3.1
§112.7(f)(3)	Discharge prevention briefings.	3.1.2
§112.7(g)	Security.	4.10
§112.7(h)	Loading/unloading.	4.4.1 and 4.4.2, Appendices B-1 to B-11
§112.7(j)	Conformance with State requirements.	4.6

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Table F-1. CROSS-REFERENCE TABLE (continued)

SPCC Rule Citation	Description of Rule	Section
§112.7(i)	Brittle fracture evaluation requirements for field-constructed aboveground storage tanks	4.5
§112.8(a)	General and specific discharge prevention and containment requirements.	1.0-7.0, Appendices B-1 to B-11, Appendix G
§112.8(b)(1)	Drainage from diked storage areas.	4.3.4.1, Appendices B-1 to B-11
§112.8(b)(2)	Valves used on diked area storage.	4.3.4.2, Appendices B-1 to B-11
§112.8(b)(3)	Facility drainage systems from undiked areas.	4.3.4.3, Appendices B-1 to B-11
§112.8(c)	Bulk storage containers.	4.3.3, Appendices B-1 to B-11
§112.8(c)(1)	Container compatibility with its contents.	4.3.3.1
§112.8(c)(2)	Diked area construction and containment volume.	4.3.3.2
§112.8(c)(3)	Diked area inspection and drainage of rainwater.	4.3.3.3
§112.8(c)(4)	Corrosion protection of buried metallic storage tanks.	4.3.3.4
§112.8(c)(5)	Corrosion protection of partially buried metallic storage tanks.	4.3.3.5
§112.8(c)(6)	Aboveground container periodic integrity testing.	4.3.3.6
§112.8(c)(7)	Control of leaks through internal heating coils.	4.3.3.7
§112.8(c)(8)	Engineered fail-safe features.	4.3.3.8
§112.8(c)(9)	Observation of disposal facilities for effluent discharges.	4.3.3.9
§112.8(c)(10)	Visible oil leak corrections from tank seams and gaskets.	4.3.3.10
§112.8(c)(11)	Appropriate position of mobile or portable oil storage containers.	4.3.3.11
§112.8(d)	Facility transfer operations, pumping, and facility process.	4.4.3, Appendices B-1 to B-11
§112.8(d)(1)	Buried piping protective wrapping and coating.	4.4.3.1
§112.8(d)(2)	Not-in-service and standby service terminal connections.	4.4.3.2
§112.8(d)(3)	Pipe support design.	4.4.3.3
§112.8(d)(4)	Valve and pipeline examination.	4.4.3.4
§112.8(d)(5)	Aboveground piping protection from vehicular traffic.	4.4.3.5
§112.12	Animal fats and oils and greases, fish and marine mammal oils, and vegetable oils.	4.7, Appendices B-4 and B-7
§112.20	Certification of substantial harm determination.	Foreword

NA = Not Applicable
SPCC = Spill prevention, control, and countermeasure
SPCC Plan = Kennedy Space Center Spill Prevention, Control, and Countermeasure Plan

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1.0 INTRODUCTION

The *Kennedy Space Center Spill Prevention, Control, and Countermeasure Plan* (SPCC Plan) documents the procedures for the prevention, response, control, and reporting of spills of oil at Kennedy Space Center (KSC), Florida. This plan serves as a guide for personnel and organizations that are responsible for ensuring that all measures are taken to prevent and contain spills and leaks of oil in accordance with all applicable state and federal regulations. This plan contains the following information:

- A general description of the installation as it pertains to spill prevention, control, and response;
- An inventory of the storage, handling, and transfer facilities that could potentially produce a significant spill of oil;
- Roles and responsibilities for spill detection and prevention for all organizations that use or store oil;
- Roles and responsibilities for personnel and organizations involved in coordinating and participating in the response to spills of oil;
- Spill prevention, control, and countermeasure (SPCC) training requirements for oil handling personnel; and
- Reporting procedures and recordkeeping requirements for spills.

In conjunction with the facility-wide SPCC Plan, site-specific SPCC Plans were developed for each individual building or area at KSC where oil is stored or used in containers or processing equipment equal to or greater than 55 gallons (gals). The site-specific plans are located in Appendices B-1 through B-11 and contain the following information:

- An inventory of oil that is located at storage, handling, and transfer facilities;
- A detailed description of countermeasures and equipment available for diversion and containment of spills for each facility listed in the inventory; and
- Site-specific guidelines for spill prevention, response, and control.

A full copy of the SPCC Plan is maintained at the National Aeronautics and Space Administration (NASA) Environmental Assurance Branch (EAB) Office and is available to the

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United States (U.S.) Environmental Protection Agency (EPA) Regional Administrator for on-site review during normal working hours.

Professional Engineer recommendations describing site-specific and facility-wide action items required to validate the SPCC Plan and to meet the EPA SPCC compliance standards as specified in 40 *Code of Federal Regulations* (CFR) 112 are contained in the *KSC SPCC Implementation Plan*. This separate document is maintained in the NASA EAB Office, and is used to develop strategies and schedules for continued SPCC compliance. Completion of all the items within the KSC SPCC Implementation Plan is essential to achieve compliance with 40 CFR 112 requirements.

1.1 Background and Regulatory Requirements

Oil pollution prevention regulations in 40 CFR 112 require the preparation and implementation of SPCC Plans for all non-transportation related facilities that store oil in excess of specific quantities [an aggregate aboveground container capacity greater than 1,320 gals (only containers greater than or equal to 55 gals are counted), or completely buried storage capacity greater than 42,000 gals] and that have discharged or could reasonably be expected to discharge oil into navigable waters of the U.S. or its adjoining shorelines. Because KSC stores more than 1,320 gals of oil above ground and a spill could reach navigable U. S. waters, the facility is subject to the SPCC regulations.

The SPCC plan requirements pertaining to spill events and spill prediction [40 CFR 112.7(a) and 112.7(b)] are addressed in Section 2.0, Section 5.0, and Appendices B-1 through B-11. The SPCC plan requirements pertaining to appropriate spill prevention and containment procedures [40 CFR 112.7(c)] are addressed in Sections 3.0, 4.0 and Appendices B-1 through B-11.

In accordance with the SPCC regulations, this SPCC Plan will be reviewed and evaluated every 5 years. In addition, the SPCC Plan will be amended if there has been a change in facility design that affects possible oil discharge.

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1.2 Objective and Scope

This SPCC Plan outlines the criteria established by KSC to prevent, respond to, control, and report spills of oil. Various types and quantities of oil are stored, transported, and handled throughout the installation to support the operations of KSC. The primary objective of this SPCC Plan is to serve as a guide for installation personnel that are responsible for the prevention, response, control, and reporting of all spills of oil.

This SPCC Plan describes both the facility-wide and site-specific approach for preventing and addressing spills. This document serves as the primary guidance for assigning responsibility for the prevention and proper response to spills of oil and supersedes all SPCC Plan versions previously developed for KSC.

1.3 Plan Organization

This SPCC Plan has been organized to address both the facility-wide and site-specific strategy for the prevention, response, control, and reporting of spills at KSC, and includes the following elements:

- Section 1.0 provides an overview of the SPCC Plan;
- Section 2.0 provides general information on the facility including its mission, location, and configuration of installation facilities and infrastructure, critical water resources, land uses, and possible spill migration pathways;
- Section 3.0 describes the roles and responsibilities of key organizations involved with implementing this SPCC Plan and executing spill prevention, response, control, and reporting activities;
- Section 4.0 contains spill prevention procedures and spill response planning requirements;
- Section 5.0 contains spill response, control, and cleanup procedures;
- Section 6.0 describes reporting requirements for releases;
- Section 7.0 contains a summary;
- Appendix A contains an SPCC Plan Amendment Log;

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- Appendices B-1 through B-11 provide site-specific information for each oil storage, handling, and transfer facility capable of producing a significant spill;
- Appendix C contains a KSC pollution incident reporting form; and instructions;
- Appendix D contains the Florida Department of Environmental Protection (FDEP) Incident Notification Instructions and Form;
- Appendix E contains the *KSC Hazardous Material Emergency Response* Plan (KDP-KSC-P-3008) and *Comprehensive Emergency Response Plan* (KNPR 8715.2);
- Appendix F contains the KSC oil-filled transformer inventory; and
- Appendix G contains the EPA SPCC Plan Review Checklist and KSC Oil Spill Contingency Plan Reference Table.

1.4 Definitions

The definitions in this SPCC Plan are the same as those provided in 40 CFR 112 and in the *Kennedy Space Center-Comprehensive Emergency Management Plan* (CEMP) (KNPR 8715.2), Kennedy NASA Procedural Requirements (KNPR) 8715.2, as well as the *KSC Hazardous Materials Response Plan* (KDP-KSC-P-3008).

Aboveground Storage Tank. Any tank or other container that is aboveground, partially buried, bunkered, or in a subterranean vault. This includes floating fuel systems. Aboveground storage tanks (ASTs) used for the storage of petroleum products is regulated primarily under 40 CFR 112.

Bulk Storage Container. Any container, equal or greater than 55 gallons, used to store oil used for the purposes including, but not limited to, the storage of oil prior to use, while being used, or prior to further distribution in commerce. Oil-filled electrical, operating, or manufacturing equipment is not a bulk storage container (40 CFR 112.2).

Completely Buried Tank. Any container completely below grade and covered with earth, sand, gravel, asphalt, or other material. Containers in vaults, bunkered tanks, or partially buried tanks are considered aboveground storage containers for the purposes of 40 CFR 112.2.

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Discharge. Includes, but is not limited to, any spilling, leaking, pumping, pouring, emitting, emptying or dumping of oil, but excludes discharges in compliance with a permit under Section 402 of the Clean Water or Section 13 of the River and Harbor Act of 1899 (40 CFR 112.2).

Emergency Preparedness Planning Committee (EPPC). A group of individuals who bring a distinct area of expertise or area of concern to emergency preparedness situations in order to use a consistent integrated approach to prepare for natural and technological emergencies at KSC. The EPPC is responsible for reviewing current emergency preparedness procedures and establishing policy in all phases of emergency management for natural and technological hazards.

Emergency Spill. Any unplanned release or condition resulting from an accidental or intentional spill or accumulation of hazardous waste or material in concentrations or quantities sufficient to pose a substantial, actual or potential hazard to human health, mission impact, property, or the environment. Cleanup/recovery is beyond the capability of the reporting organization. A 911 (or 867-7911 on a cellular phone) call is required.

Fish and Wildlife and Sensitive Environments. Areas identified by their legal designation or by evaluations of area committees (for planning) or members of the Federal On-Scene Coordinator's (OSC's) spill response structure (during responses). These areas include wetlands, national and state parks, critical habitats for endangered or threatened species, wilderness and natural resource areas, marine sanctuaries and estuarine reserves, conservation areas, preserves, wildlife areas, wildlife refuges, wild and scenic rivers, recreational areas, national forests, federal and state lands that are research national areas, heritage program areas, land trust areas, and historical and archaeological sites and parks. These areas may include unique habitats such as aquaculture sites and agricultural surface water intakes, bird nesting areas, critical biological resources areas, designated migratory routes, and designated seasonal habitats (40 CFR 112.2).

Facility. Any mobile or fixed, onshore or offshore building, structure, installation, equipment, pipe, or pipeline used oil storage, oil processing, oil transfer, oil distribution, and

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waste treatment, or in which oil is used. The boundaries of a facility depend on several site-specific factors, including, but not limited to, the ownership or operation of buildings, structures, and equipment on the same site and the types of activity at the site (40 CFR 112.2).

Hazardous Material (HAZMAT). Any element, compound, mixture, solution or substance listed in 49 CFR 172.101, or 40 CFR 302.4, including untreated sewage, petroleum products and by-products.

HAZMAT Release. The spilling, releasing, discharging, placing, percolating, draining, pumping, leaking, seeping, emitting, disposing, bypassing or other escaping of a hazardous material into the air, water, subsurface water or onto the ground.

Incident Commander (IC). The Senior Fire Official and person designated to coordinate the hazardous materials emergency response efforts related to a HAZMAT release or spill.

Loading / Unloading Rack. A structure necessary for loading or unloading a fuel or oil tank truck or tank car. A loading/unloading rack includes a platform, gangway, or loading/unloading arm, and any combination of the following piping assemblages: valves, pumps, shut-off devices, overfill sensors, or personnel safety devices.

Navigable Waters. The navigable waters of the U.S. as defined in section 502(7) of the Federal Water Pollution Control Act (FWPCA), including all navigable waters of the U.S., as defined in judicial decisions prior to passage of 1972 Amendments of the FWPCA (Pub. L. 92-500) also known as the Clean Water Act (CWA), and tributaries of such waters as; interstate waters; intrastate lakes, rivers, and streams which are utilized by interstate travelers for recreational or other purposes; and intrastate lakes, rivers, and streams from which fish or shellfish are taken and sold in intrastate commerce.

Non-Emergency Spill. Any spill without posing an environmental emergency that can be contained and cleaned up within the capability of the reporting organization. A non-

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emergency 911 (or 867-7911 on a cellular phone) call is required. The 911 Center [Joint Communications Control Center (JCCC)] will contact the fire department. The Fire Chief will respond at his discretion.

Oil. Oil of any kind or in any form, including, but not limited to, fats, oils, or greases of animal, fish, or marine mammal origin; vegetable oils, including oils from seeds, nuts, fruits, or kernels; and other oils and greases, including petroleum (gasoline and diesel), fuel oil, sludge, synthetic oils, mineral oils, oil refuse, or oil mixed with wastes other than dredged spoil.

Oil-Filled Operational Equipment. Is equipment that includes an oil storage container (or multiple containers and associated piping intrinsic to the operation of the equipment) in which the oil is present solely to support the operation of the device. Examples include hydraulic systems, lubricating systems, gear boxes, machining coolant systems, heat transfer systems, transformers, circuit breakers, electrical switches, and other systems containing oil solely to enable the operation of the device.

Permanently Closed. Any container or facility for which (1) all liquid and sludge has been removed from each container and connecting line; and (2) all connecting lines and piping have been disconnected from the container and blanked off, all valves (except for ventilation valves) have been closed and locked, and conspicuous signs have been posted on each container stating that it is a permanently closed container and noting the date of closure.

Pipeline. All parts of an onshore pipeline facility through which oil moves including, but not limited to, line pipe, valves, and other appurtenances connected to line pipe, pumping units, fabricated assemblies associated with pumping units, metering and delivery stations and fabricated assemblies therein, and breakout tanks.

Reportable Quantity (RQ). For any hazardous substance, the RQ is that listed in the "Final RQ" column of Table 302.4 in 40 CFR 302. For an Emergency Planning and Community Right-To-Know Act (EPCRA) extremely hazardous substance, the reported quantity is that listed in the "Reportable Quantity" column of Appendix A or Appendix B in 40 CFR 355.

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Safety Data Sheets (SDSs). Formerly known as Material Safety Data Sheets (MSDSs), SDSs are a compilation of information required under the Occupational Safety and Health Administration (OSHA) Hazard Communication Standard on the identity of hazardous chemicals, health and physical hazards, exposure limits, and precautions. The Federal Hazard Communication Standard is cited in 29 CFR 1910.1200.

SPCC Plan. Document required by 40 CFR Part 112.3 that details the equipment, manpower, procedures, and steps to prevent, control, and provide adequate countermeasures to an oil spill; a written description of the facility's compliance with 40 CFR Part 112.

Storage Capacity. The shell capacity of a tank or container, whether the tank or container is partially or fully filled with oil, or a mixture of oil and other substances. This may also be referred to as the "container capacity".

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2.0 SITE DESCRIPTION

This section presents a description of KSC, its location and geographic setting, the storm water collection and drainage system, and areas with significant spill potential. Environmental conditions as they relate to spill planning, including vulnerable resources, are also discussed in this section.

2.1 Facility Description

KSC is located on Merritt Island in east central Florida and occupies 139,639 acres. NASA maintains operational control over approximately 4,605 acres, supporting both government and commercial spaceflight operations at KSC. The remaining undeveloped area of KSC is managed as a Wildlife Refuge and National Seashore to provide safety buffer zones around existing facilities and launch operations.

The 135,034 acres that are not directly under NASA operational control are managed by the U.S. National Park Service (6,655 acres of the Canaveral National Seashore) and the U.S. Fish and Wildlife Service (FWS) [128,570 acres for a portion of the Canaveral National Seashore, and the Merritt Island National Wildlife Refuge (MINWR)].

The land area of KSC is 35 miles long and 10 miles across at its widest point. KSC is contiguous to the Cape Canaveral Air Force Station (CCAFS), which borders KSC to the south and east. Urban centers in close proximity to KSC include Cape Canaveral, Merritt Island, and Cocoa Beach to the south, and Titusville and Cocoa to the west and southwest, respectively. Figure 2-1 depicts KSC, CCAFS and the surrounding area.

There are approximately 2,200 federal employees and about 8,000 contract employees working at KSC.

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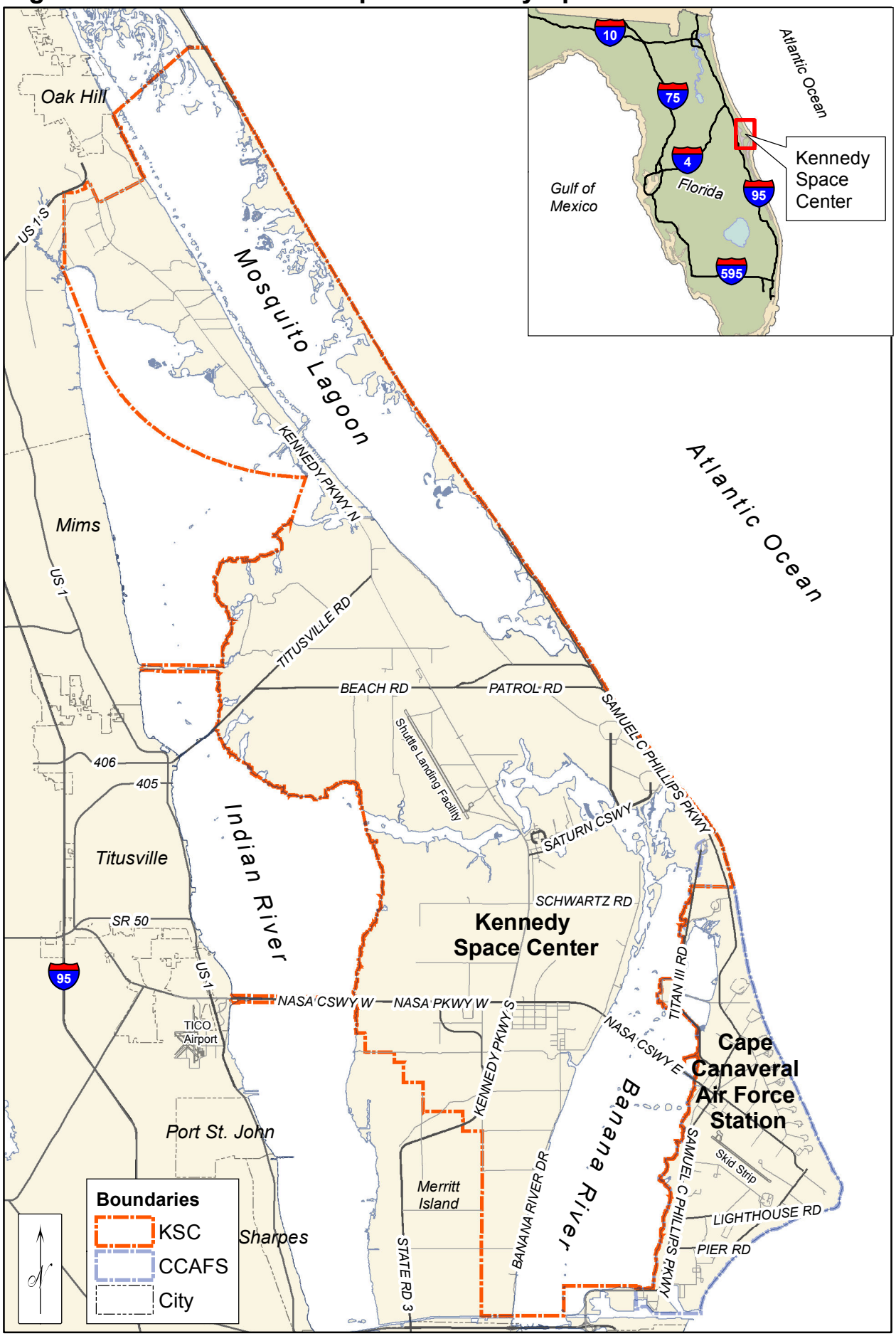
Figure 2-1: Site Location Map for Kennedy Space Center



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KSC is the primary launch center for the country's manned civilian space programs. Existing KSC operational facilities are clustered around four main areas: the former shuttle landing facility, the KSC industrial area, the vehicle assembly building (VAB), and Launch Complex (LC) 39, Pads A and B. KSC also has some operations on land owned by Cape Canaveral AFS.

There are currently eleven primary organizations at KSC that engage in the storage and/or use of oil and that are discussed in this SPCC Plan. These organizations are described in detail in Appendix B, Site-Specific SPCC plans. The current aggregate storage volume of oil in containers greater than or equal to 55-gallons on Kennedy Space Center (KSC) and NASA owned/operated facilities on Cape Canaveral Air Force Station (CCAFS) is 550,422 gallons. Storage includes aboveground tanks, drums, intermediate bulk containers and oil-filled process, manufacturing, and electrical equipment. Site-specific information associated with these organizatons is provided in Appendices B-1 through B-11.

In addition, the following facilities, entities, or activities within the boundaries of KSC may involve the storage of oil but are not further discussed in this SPCC Plan because they are operated by non-NASA organizations or contractors. SPCC Plans, if required, are maintained at the respective facility locations by the managing organization.

- The FWS MINWR consists of approximately 127,000 generally undeveloped acres located within KSC. Oil storage associated with operations conducted or managed by FWS includes fuel and oil tanks required for vehicle and equipment fueling and maintenance, and fuel tanks required to operate a water siphon pump.. The FWS has developed a separate SPCC Plan for these operations. A copy of this Plan is maintained at the FWS Headquarters. The TEL-4 telemetry facilities (Buildings N6-2296 through N6-2296A), 19.14 Site (Building 95000), Radar 191.14 Station and Transmitter building (Buildings Q6-0082 and Q6-0082A), TPQ-18 Radar Boresight Tower (Building Q6-0484) owned and operated by the U.S. Air Force are located on KSC property. A separate SPCC Plan has also been prepared for these facilities and is maintained at Cape Canaveral AFS.

- The Florida Power and Light electrical substations are located near the C-5 electrical substation and yard at Building K6-1090 and at the Orsino Substation at Building M6-0996A. FPL also owns and operates a Solar Plant on KSC leased property (N6-

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1050). Oil storage at these facilities includes oil-filled transformers containing greater than 1,320 gals of dielectric fluid. Florida Power and Light is required to maintain their own SPCC Plan.

- AT&T Wireless owns and operates a communications tower at Building K7-1608 on KSC property. A 1,000-gal double-walled diesel fuel tank for emergency power generation is located at this facility. Because this tank has a storage capacity less than 1,320 gallons, no SPCC Plan is required at this time.

- The U.S. National Parks Service manages a 6,655-acre portion of the Canaveral National Seashore located on KSC property. Oil storage associated with maintenance operations on KSC includes new and used oil stored in 55-gallon drums. The National Parks Service is responsible for developing a site-specific SPCC Plan, if required. However, since the total aboveground storage capacity at this facility is less than 1,320 gallons, a SPCC Plan is not required at this time for this facility.

- Entities leasing property or facilities from NASA for commercial activities. Per their individual lease agreements, these entities are solely responsible for compliance with all environmental compliance requirements, including SPCC plans and SPCC compliance.

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2.1.1 SPCC Organizations

NASA, both on KSC and CCAFS, has multiple base support, infrastructure, engineering, and launch services contracts that use, store and handle oil in quantities of 55-gallons or greater. Each SPCC organization contractor is required to comply with, and manages their oil in accordance with the KSC SPCC Plan, all applicable laws and NASA policy directives. The individual SPCC organizations on KSC and CCAFS are described in detail in Appendix B, Site-Specific SPCC plans, and as a separate document, KSC-PLN-1920, Site-Specific SPCC Plans.

2.1.2 Temporary Onsite Contractors

On a temporary basis, construction or remediation contractors that involve oil storage may be located on KSC property (temporary is defined as lasting no longer than 12 months). All contractors are required to comply with applicable federal, state, and local environmental regulations when working on KSC property. Contractors storing 1,320 or more gallons of oil on KSC property are required to develop and implement their own site-specific SPCC Plan. Construction and remediation contractors on KSC property less than 12 months and/or below the volume threshold must comply with the spill prevention, response and reporting guidelines in the environmental conditions specified in the individual construction or remediation contracts.

2.2 Storm Water Drainage Receiving Waters

Buildings involving oil storage at KSC can be grouped into fifteen distinct areas for purposes of storm water drainage. These areas and receiving waters are also shown in Figure 2-2. The site-specific plans and maps in Appendices B-1 through B-11 describe and illustrate the nearest navigable water and/or natural resource for each oil storage area at KSC. Surface drainage from six of the fifteen designated areas ultimately discharges to the Banana River. Surface drainage from eight of these areas ultimately discharges to the Indian River. Surface

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drainage from one location could ultimately discharge to the Mosquito Lagoon or the Indian River depending on wind direction and tidal influence. Facilities are depicted in Table 2-1.

Table 2-1. SPCC Facilities within Drainage Area

Drainage Area	SPCC Facilities within Drainage Area	Receiving Waters
1	M6-0139, M6-0336, M6-0342, M6-0399, M6-0486, M6-0493C, M6-0495D,M6-0536A, M6-0596, M6-0688, M6-0698, M6-0737, M6-0744, M6-0791,M6-0798A, M6-0894A, M6-0896, M6-0996, M7-0355, M7-0360, M7-0360A, M7-0407A, M7-0505A, M7-0554, M7-0556A, M7-0657, M7-0777, M7-1362	Buck Creek
2	L5-0033, L5-1647, M5-1586, M5-1586A, M6-0166, M6-0213, M6-0409, M6-0409C,M6-0409D, M6-0454, M6-0455, M6-0455F, M6-0458, M6-0505, M6-0510, M6-1757, N6-0107, N6-0407	Indian River
3	K6-0998, K6-1198, K6-1248, K7-1203	Banana River
4	K6-0495, K6-0546-MLP, K6-0696, K6-0743A, K6-0743B, K6-0743C, K6-0743CT1, K6-0743CT2, K6-0794, K6-0794A, K6-0844, K6-0848, K6-0893, K6-0894, K6-0895, K6-0947, K6-0947A, K6-0947D, K6-1046, K6-1091, K6-1141, K6-1145, K6-1246, K6-1247, K6-1345, K6-1347, K6-1397, K6-1547, K6-1547B, K6-1696, K6-1748A, K6-1844A, K6-1847, K6-1847D, K6-1847F, K6-1995, K6-1995A, K6-1996, K6-1996D, K6-1996I, K6-1996T, K6-2197, K7-0852	Banana Creek
5	K7-0114, K7-0115, K7-0165, K7-0468	Banana Creek
6	K7-0188, K7-0287	Banana River
7	L6-0146, L6-0147, L6-0247, L6-0248, L6-0295, L6-0297, L7-0201, L7-0251	Banana River
8	J6-0490, J6-1874, J6-1924, K6-0015	Banana Creek
9	J8-1659, J8-1708, J8-1708K	Banana Creek
10	J7-0337, J7-0337J, J7-0338, J7-1388	Banana Creek
11	01044, 60675, 66336, 73720	Banana River
12	P6-1435	Banana River
13	M3-0147	Indian River
14	H2-1245, E3-1133	Indian River
15	E4-2414A	Haulover Canal then Indian River or Mosquito Lagoon depending upon wind direction and tidal influence.

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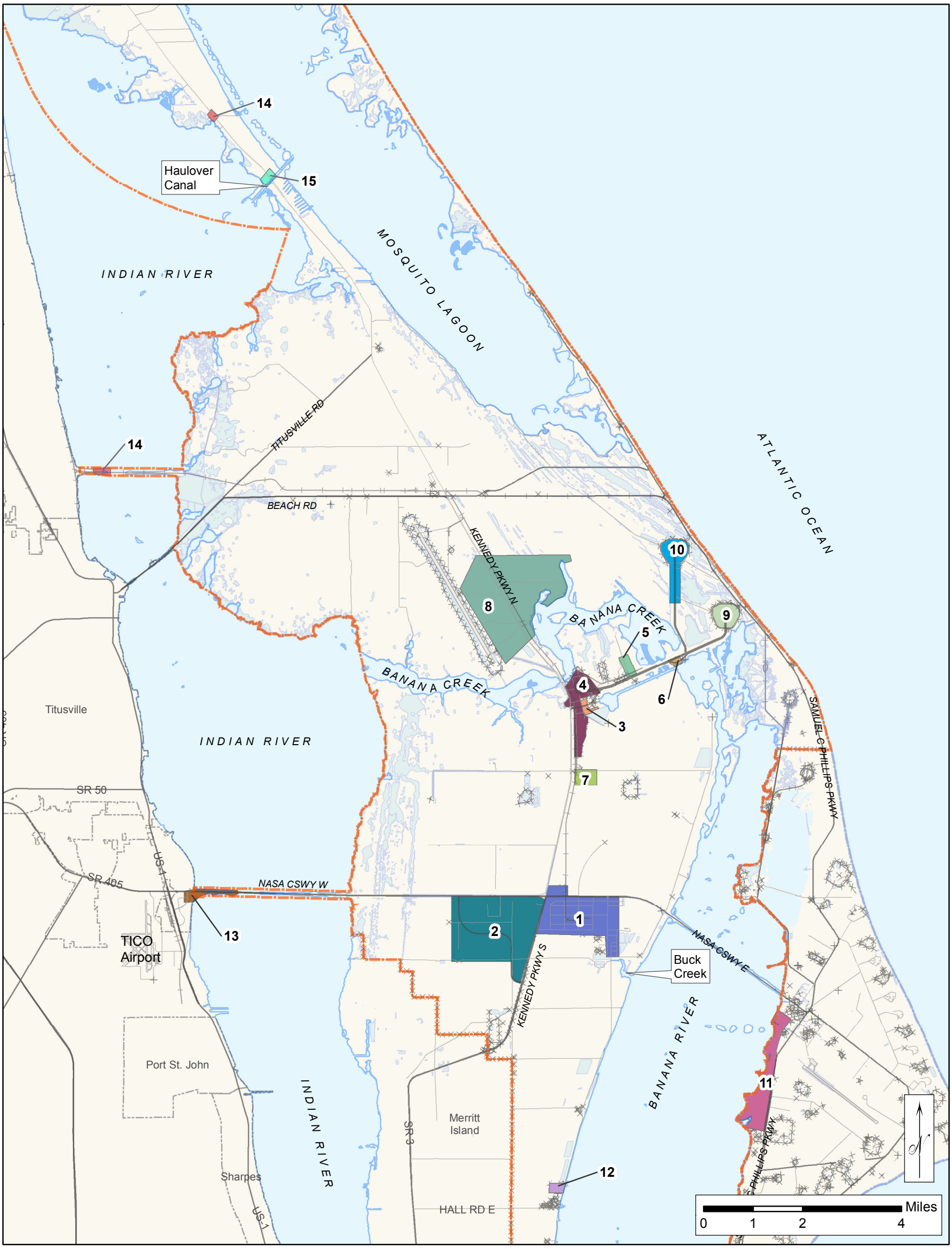
Figure 2-2: Oil Storage Areas for Kennedy Space Center

July 2012



Boundaries

- KSC Boundaries
- City Boundary
- CCAFS Installation Area

Drainage Area

- 1: KSC Industrial Area
- 2: Visitor's Center/MILA Area
- 3: OSB II Area
- 4: VAB Area
- 5: TSDF/Converter Compressor
- 6: Crawler Parking Area
- 7: BFF Area
- 8: SLF/Saturn V Area
- 9: Pad 39A
- 10: Pad 39B/Industrial Water Pump Station
- 11: CCAFS Area
- 12: KARS Park I
- 13: AHOF/Indian River Bridge Area
- 14: Jay Jay RR Yard/C Band Radar
- 15: Haulover Canal Bridge

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2.3 Natural Resources

Approximately 130,000 acres of KSC is a buffer zone consisting of MINWR. About half of the MINWR's 130,000 acres consists of brackish estuaries and marshes. The remaining land consists of coastal dunes, scrub oaks, pine forests and flatwoods, palm and oak hammocks. The MINWR includes over 1,000 species of plants and is a major wintering area for migratory birds. Over 500 species of wildlife inhabit MINWR, with thirty-three being federally or state listed as threatened or endangered. Several wading bird rookeries, twelve active bald eagle nests, numerous osprey nests, up to 200 manatees during the summer months, and an estimated 350 breeding pairs of scrub jays can be found in MINWR. In accordance with 40 CFR 112.1(b), any discharges of oil to lands within the MINWR are regulated by SPCC rules.

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3.0 ROLES AND RESPONSIBILITIES

This section identifies the roles and responsibilities of key organizations that are involved with the development, maintenance, and execution of this SPCC Plan.

3.1 Key Organizations and Training Requirements

The NASA SPCC Coordinator who is accountable for overall discharge prevention at KSC and who reports to KSC management is Mr. Harold G. Williams, the Chief of the NASA EAB. The roles and responsibilities of the NASA EAB are discussed in Table 3-1.

All organizations at KSC, including tenants and contractors, are responsible for the proper initial response to spills and accidental releases of oil at their facilities. In addition, each organization is responsible for implementing proper spill prevention measures and engaging in spill and emergency response planning to levels sufficient to guarantee their capabilities for appropriate and timely spill response considering the routine activities at their facility. This section highlights key organizations or groups and the applicable training requirements.

3.1.1 General Roles and Responsibilities

Spill Discoverer. The person that discovered or caused the spill is the Spill Discoverer. When a spill is first discovered, the Spill Discoverer will determine if they can safely stop and contain the spill, and whether evacuation of the area is necessary. If an evacuation is required, they will do so, then immediately call 911 (867-7911 on a cellular phone) and report the spill.

For small spills that can be contained by the Spill Discoverer or non-emergency spills as defined in Section 1.4 of this plan, the Spill Discoverer will first call 911 (or 867-7911 on a cellular phone) and report a non-emergency spill. The Spill Discoverer will then request a Spill Cleanup Team (SCT), if required and notify his Supervisor and Facility Manager.

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For spills which are not within the facility's capabilities, or emergency spills as defined in Section 1.4 of this plan, the Spill Discoverer will first call 911 (or 867-7911 on a cellular phone) and report an emergency spill and notify his/her Supervisor.

SPCC Organization. For the purposes of this SPCC Plan, an SPCC organization is any organization that stores or uses oil in containers or equipment with a volume of 55 or more gals. This includes KSC organizations as well as tenants and contractors. SPCC organizations are required to engage in spill prevention activities and spill response and cleanup activities for small spills that they are capable of safely working on.

First Responder. For small spills, that are within the capability of the Spill Discoverer (non-emergency releases), the Spill Discoverer is to serve as the first responder to contain and clean up the spill. For spills that are not within the capability of the spill discover or are a threat to safety, health, or the environment, the First Responder will call 911 (867-7911 on a cellular phone) and notify his/her Supervisor.

Senior Fire Official (SFO). The SFO acts as the IC during the initial spill response and control phases of an emergency.

Joint Communications Control Center (JCCC). The JCCC coordinates the activation of the area warning system, if necessary, notifies the NASA EAB and USAF Environmental Support Contractor (ESC), and provides support to the IC.

NASA EAB. The NASA EAB will make any required official internal and external notifications, including notification to the National Response Center (NRC) other federal, state, and local agencies. KSC Public Affairs Office (PAO) will be responsible for all press releases and public notifications to ensure accuracy on the nature of the release and the steps being taken to correct the problem.

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HAZMAT Team. The HAZMAT Team consists of members of the Fire Department that respond to spills and perform spill containment at the direction of the SFO. The HAZMAT team responds to all emergency spills and spills too large for the discoverer, or SPCC organization to handle. The SFO is responsible for contacting members of the HAZMAT Team and coordinating spill containment activities.

Spill Cleanup Team (SCT). The SCT is a KEMCON organization that is responsible for cleanup and decontamination operations, including operation of skimmers and a vacuum truck, deployment and retrieval of absorbents, removal of oil residue, temporary storage of oil, and cleanup of equipment. The SCT performs cleanup operations once the HAZMAT Team has completed initial response and containment. The SPCC organization that is responsible for the spill prepares and submits a Pollution Incident Report (PIR) for submittal to the NASA EAB. PIRs for spills from unknown sources or transient activities are submitted by the SCT. After performing cleanup activities, the SCT augments PIR information by providing summary information to the NASA EAB on spill cleanup measures and quantities of material recovered and/or spill cleanup residues that have been generated by the cleanup.

3.1.2 Training

General SPCC Training Requirements—KSC personnel receive training in various environmental programs as appropriate, including hazardous waste and materials management, petroleum management, spill prevention and cleanup, and general pollution prevention awareness.

All organizations determined to be SPCC organizations as outlined in this SPCC Plan must designate a person as a contact responsible for the management of oil within their organization. This designated person reports to facility management and is referred to as the SPCC coordinator. There may be one or more SPCC coordinators per organization. Each designated SPCC coordinator must ensure that all personnel who handle oil receive spill prevention training on an annual basis as described below.

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The spill prevention training provided at KSC is provided by the onsite contractor organizations. The training program includes training in:

- the operation and maintenance of equipment to prevent discharges;
- discharge procedure protocols;
- applicable SPCC rules and regulations;
- general facility operations; and
- the contents of the KSC SPCC Plan.

The training program also includes a discussion of known discharges or failures, malfunctioning components, and any recently developed precautionary measures. Records documenting the dates and types of spill prevention and response training shall be kept and maintained on file by each organization for at least three years, and are available for review on request.

Training Requirements for HAZMAT Team—All HAZMAT Team members must comply with Hazardous Waste Operations and Emergency Response (HAZWOPER) training, Section 29 CFR 1910.120(q), depending on an employee's function during a hazardous materials incident and the operation zones that their function is performed in. This training includes the following:

- First Responder Operational Level (warm zone, personnel decon);
- HAZMAT Technician Level (Fire Department, other HAZMAT team members);
- HAZMAT Specialists Level (Environmental Health); and
- Incident Commander Level (SFO and IC).

With the exception of the IC, most responders that do not enter the cordon (cold, warm, or hot zone) require only Hazard Communication (HAZCOM) or First Responder Awareness Level training. However, the IC requires awareness, operations, and Incident Management training.

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KSC personnel responding to a HAZMAT incident must also maintain training requirements and certifications in accordance with KSC document KDP-KSC-3008, Rev. A-1 *Hazardous Materials Emergency Response*, found in Appendix E of the SPCC Plan.

In addition to KSC personnel, offsite private contractors used for cleanup operations also must have proper training. The contractors will be responsible for using properly trained personnel, preventing expirations of training requirements through yearly refresher training, and providing proof to the IC that training requirements have been met. The IC or his designee shall give Offsite contractor personnel an initial briefing at the site prior to their participation in any emergency response. The briefing shall include instruction in the wearing of appropriate personal protective equipment (PPE), chemical hazards involved, and duties to be performed.

3.2 Organizational Roles and Responsibilities

Each organization at KSC, including tenants and contractors, is responsible for the proper system design to prevent spills or releases to the environment, planning and siting to reduce consequences of spills or releases, and response to spills and accidental releases of oil at their facilities. In addition, each organization is responsible for engaging in spill and emergency response planning to levels sufficient to guarantee their capabilities for appropriate and timely spill response.

Facility-wide roles and responsibilities are described in Table 3-1. Procedures for carrying out these responsibilities are provided in other sections of this report.

3.3 Mutual Aid Agreements

KSC maintains mutual aid agreements with Brevard County and municipalities within the county. Emergency support is provided under the guidelines of these agreements. For example, emergency services such as fire, rescue, medical, and security could be called to assist local government agencies. Calls from outside agencies for support other than fire, rescue, and medical must be cleared through the KSC Center Director. The JCCC has the authority to

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dispatch emergency fire, rescue, and medical forces outside the KSC confines as deemed necessary by established procedures and mutual aid agreements. The NASA Emergency Preparedness Office (NEPO) must be informed when personnel and equipment are dispatched off-site to support an emergency. At no time will the support provided off-site degrade or jeopardize the ability of emergency response forces to provide on-site protection for personnel and resources.

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Table 3-1. Organizational Roles and Responsibilities for Spill Prevention, Control, Reporting, and Response

Organization	**Responsibility**
Organization Name: NASA Center Director **Phone Number:** 321-867-3333	The NASA Center Director is ultimately responsible for all spills and spill response actions. Specific responsibilities include the following: • Ensure development and implementation of the SPCC Plan. • Designate other specific responsibilities, as required.
Organization Name: NASA Environmental Assurance Branch (EAB) NASA SPCC Coordinator **Phone Number:** 321-867-8411	The NASA EAB will designate a NASA SPCC coordinator who is the focal point for spill planning, prevention, response, containment, cleanup, disposal, and reporting. Specific responsibilities include the following: • Serve as the office of primary responsibility for development and maintenance and distribution of the SPCC Plan. • Ensure SPCC organizations are knowledgeable in their areas of responsibility provided in this SPCC Plan. • Ensure the SPCC Plan is reviewed annually and updated as needed. • Provide technical assistance on policies and procedures for implementing this SPCC Plan (e.g., guidance on spill containment/response equipment, spill prevention, spill response) and on regulatory requirements related to management of oil. • Respond to spills as warranted, to advise and assist on response and cleanup activities in accordance with Section 5.0 of this SPCC Plan. • Participate in the decision-making process concerning situations that may have negative/adverse impact on the mission or environment. • Conduct spill notification and reporting procedures in accordance with Section 6.0 of this plan. • Work with public affairs to coordinate a news release, if necessary. • Provide technical assistance on the classification, management, and disposal of spilled materials and spill by-products (i.e., spill cleanup supplies, contaminated soil, recovered products, etc.). • Ensure integrity testing is performed on all bulk storage containers. Develop and implement a schedule for providing non-visual integrity testing. • Ensure spill prevention training is provided at least annually for personnel who handle oil. • Delegate responsibilities as necessary to the contractor organizations managing oil at KSC.

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Table 3-1. Organizational Roles and Responsibilities for Spill Prevention, Control, Reporting, and Response (continued)

Organization	Responsibility
Organization Name: KSC Fire Department **Phone Number:** 911 (Spill Reporting) 867-7911 (from a cell phone)	The Fire Department is responsible for responding to spills that the responsible organization cannot handle alone. Specific responsibilities include the following: • Implement the incident command system as required. • The SFO will act as the IC during the initial spill response and control phases of the spill management process, according to guidelines specified in Section 5.0 of this SPCC Plan, and will transfer IC duties to the Senior Person on-site once initial spill response is complete. • The SFO will coordinate with other members of the HAZMAT Response Team (HRT) and KEMCON spill cleanup personnel. • Provide equipment and manpower to rescue personnel and provide first aid, and to contain spills and neutralize hazardous substances. • Conduct fire safety inspections at all oil storage/use locations. Ensure that emergency warning equipment (portable fire extinguishers, fire alarm systems, etc.) is inspected routinely. • Provide emergency response materials for the spill response team. • Ensure that all firefighters are aware of safety considerations associated with spill response duties. • Ensure that all fire department personnel have received appropriate training to respond to spills, including annual refresher training once certified at the respective level. • Initiate response to all oil spills. • Work with Security on evacuating personnel and establishing an exclusion zone. • Provide information on potential fire and explosive hazards related to spilled oil. • Construct decontamination areas. • Obtain information including type of spill material, quantity of material, and packaging. • Determine PPE requirements for the area. • Request the services of other members of the HAZMAT Team and direct the various KSC support agencies, as required, to mitigate the incident. • Transfer IC authority to the Senior Person On Site or designee, once the spill has been contained and the cleanup and reporting phase of the spill response process begins.

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Table 3-1. Organizational Roles and Responsibilities for Spill Prevention, Control, Reporting, and Response (continued)

Organization	Responsibility
Organization Name: ISC Fuels Contractor **Phone Number:** 867-2390	The ISC Fuels Contractor is responsible for performing loading/unloading operations in accordance with Section 4.4 and for providing fuel handling equipment and operators to recover spilled fuel if recovery is beyond the capability of the using agency. During oil loading/unloading, the ISC Fuels Contractor is responsible for: • Ensuring an adequate supply of spill response materials is on hand. • Preventing early vehicle departure by chocking wheels and/or setting parking break. • Grounding the tank truck.
Organization Name: SPCC Organizations **Phone Number:** NA	All organizations that have an oil storage tank or container equal to or greater than 55 gals are responsible for spill prevention, initial spill response and notification, and cleanup if capable. Specific responsibilities include the following: • Assign an SPCC coordinator. • Ensure that this individual receives site-specific spill training. • Ensure that this individual is properly trained in spill response procedures and implementation of the SPCC Plan. • Ensure that spill prevention training is provided to all personnel within the organization who handle oil. • Ensure all required training is annotated on appropriate personnel records. • Ensure the spill response procedures in Section 5.0 are understood and followed by personnel in the organization. • Ensure any oil accumulated in overfill basins is drained into the tank or, if contaminated, removed and disposed properly. • Following a spill incident, work with the NASA EAB to determine actions to prevent reoccurrence. • Record information regarding the nature, location, and time of the actions, the costs incurred, and organization(s) responsible for the spill and provide to the NASA EAB for reporting purposes. • Notify the NASA EAB of any changes to your facility and or operations that affect implementation of this plan (e.g., addition/removal of tank, change in product stored, etc.) • Ensure spill kits are equipped with the proper material to contain spills from the area. • Ensure spill kits are easily accessible and the location of spill kits is known. • Control, stop, and clean up spills that can be easily handled by personnel in the organization. Use the checklist in Table 5-1 to determine if help is required to clean up a spill. • Following a spill incident, pay for any costs associated with the spill response and cleanup.

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Table 3-1. Organizational Roles and Responsibilities for Spill Prevention, Control, Reporting, and Response (continued)

Organization	Responsibility
Organization Name: SPCC Organizations (continued) **Phone Number:** NA	• Report all spills to the JCCC via 911. • Perform spill prevention measures in accordance with Section 4.0. • Ensure a current copy of the SPCC Plan and appropriate appendices are kept at all times.

Notes:

AST	=	Aboveground storage tank
EAB	=	Environmental Assurance Branch
HAZMAT	=	Hazardous Materials
HRT	=	HAZMAT Response Team
IC	=	Incident Commander
ISC	=	Institutional Support Contractor
JCCC	=	Joint Communication Control Center
KSC	=	Kennedy Space Center
KEMCON	=	Kennedy Environmental and Medical Contractor
NASA	=	National Aeronautics and Space Administration
PPE	=	Personal Protective Equipment
SFO	=	Senior Fire Official
SPCC Plan	=	KSC Spill Prevention, Control, and Countermeasure Plan
TO	=	Technical Order
UST	=	Underground storage tank

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4.0 SPILL PREVENTION AND PLANNING

This section outlines procedures for preventing spills of oil through regular surveillance and inspection of facilities and operations that have the potential to generate a significant spill. Each SPCC organization at KSC is responsible for implementing proper spill planning and prevention measures to minimize the potential for accidental releases of oil. SPCC organizations must ensure that personnel receive the training necessary to properly identify and respond to spill incidents and that necessary resources are available for timely and effective spill response. It is the responsibility of each organization to ensure that personnel keep their training current and that records documenting the dates and types of training received by personnel are properly maintained. This section provides written procedures for the following aspects of spill prevention and planning:

- Performing operations in a manner that will minimize the potential for spills of oil;
- Conducting regular inspections of facilities and operations to facilitate the early detection of spills and leaks; and
- Documenting the results of inspections and inventories of locations and facilities that could produce a significant spill.

A series of checklists have been developed to assist organizations at KSC in determining spill prevention and planning requirements, and performing inspections and associated reporting for spill prevention purposes. The checklists listed in this document can be substituted with an approved (by SPCC coordinator within the organization) facility-specific checklist where applicable. Checklists are provided in Tables 4-1 through 4-10, and are discussed in greater detail below.

4.1 Spill Prevention and Planning Requirements

The first step in spill prevention and response planning is to identify the operations, equipment, and processes that have the potential to cause a spill. The spill prevention and planning process should include a detailed evaluation of the following, as applicable, for each facility or operation:

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- ASTs and USTs;
- Oil transfer equipment (i.e., piping, valves, etc.);
- Oil/water separators (OWSs) and grease traps;
- Oil container (55-gal drums) storage and handling;
- Oil-filled processing equipment (i.e., transformers, elevators, hydraulic equipment); and
- Oil loading, off-loading, and transportation.

An important step to preventing spills is conducting routine inspections of equipment and operations. Table 4-1 is a guide to aid in identifying inspection and reporting requirements for the operations listed above. SPCC organizations must reference Table 4-1 to determine the appropriate checklists to use when conducting inspections and the frequency that the inspections are required. Appendices B-1 through B-11 provides site-specific information that should be used when referencing Table 4-1; however, responsible organizations must ensure that the site-specific information is kept current by occasionally surveying their facility for operational changes with respect to this SPCC Plan.

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Table 4-1. Spill Prevention Inspection Requirements

Oil Containing Items	Inspection Frequency			
	Monthly	Quarterly	Annually	As Needed
Bulk Storage containers greater than or equal to 55-gals. Includes mobile and portable containers but does not include 55-gal drums.	Use Table 4-4		Use Table 4-5	
55-gal drums of oil or used oil.	Use Table 4-9			
Oil-filled transformers located within 100 feet of water (see Table 2-1).		Use Table 4-10		
Oil-filled transformers located further than 100 feet from water (see Table 2-1).			Use Table 4-10	
Oil filled process equipment such as hydraulic elevator reservoirs, hydraulic lift or test equipment, and fuel/oil tanks on non-DOT regulated mobile equipment such as crawlers and hydraulic forklifts.		Use Table 4-10		
OWSs and above-ground grease traps with oil storage compartments greater than or equal to 55 gals.	Use Table 4-8			
Storm water drainage from secondary containment.				Use Table 4-6

Notes:
DOT = Department of Transportation
gal = gallon
OWS = Oil/water separator

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4.2 General Spill Prevention Guidelines

In addition to performing facility inspections, SPCC organizations must follow general prevention and planning guidelines to prevent the occurrence of spills. Responsible organizations should also develop procedures that facilitate the timely detection, response, and cleanup of spills that do occur. An effective spill prevention and planning program should include:

- Procedures for designating SPCC coordinators responsible for the management and oversight of oil storage tanks and containers, oil/water separators, and oil-filled process units.
- General spill prevention and response training requirements for shop-level personnel and for personnel designated to act as SPCC coordinator.
- Procedures for performing inspections and reporting results.
- Guidelines and training for using and maintaining spill response equipment.
- Procedures for storing, handling, and managing oil.

Table 4-2 is a list outlining general spill prevention guidelines. It is recommended that this list should be referred to annually by all SPCC organizations to ensure each SPCC organization is prepared and ready to prevent and respond to oil spills.

4.3 Prevention of Spills from Storage Tanks, Containers, and Secondary Containment Structures

4.3.1 Drainage Control Diversionary Structures and Containment

A detailed description of secondary containment and/or diversionary structures or equipment for each oil storage or handling unit at KSC is included in Appendices B-1 through B-11. A specific description of the type of containment, material of construction, and containment capacity for each secondary containment structure is provided in Section 2.0 of each site-specific SPCC Plan. Discharge prevention measures, including routine procedures for handling of products, are provided in Section 3.0 of each site-specific SPCC Plan (Appendices B-1 through B-11).

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Table 4-2. General Spill Prevention Guidelines

Training Guidelines

- A representative is appointed by the SPCC Organization as the SPCC Coordinator and receives appropriate training.
- Personnel responsible for handling oil within the organization are trained on spill cleanup procedures including the location and contents of spill kits and use of appropriate PPE.
- Personnel responsible for handling oil within the organization are trained on how to properly handle oil.

Spill Response Equipment Guidelines

- An appropriate supply of in-house spill response materials and equipment available and in good condition.

Inspection Guidelines

- Inspections are documented using the checklists provided in Tables 4-4 through 4-10 (as applicable) or other SPCC Coordinator-approved facility-specific inspection checklist.
- Inspection records are maintained on-site for at least three years.
- Oil storage tanks and containers (not including 55-gal drums) have been scheduled for non-visual integrity testing in accordance with 4.3.3.6, where applicable.
- Records for the most recent non-visual integrity test are maintained and available for inspection, where applicable.
- OWSs are inspected using Table 4-8 when known oily substances are directly discharged to it.
- Tank gauges, leak alarms, and high level alarms are tested at least annually for proper operation.

Oil Fill, Transfer, and Storage Guidelines

- Procedures have been implemented for the transportation, handling, and storage of containers to minimize the potential for spills or container rupture.
- Oil storage tanks (and associated piping) removed from service have been properly drained of remaining product, sludge, and accumulated water, all connecting lines and piping have been disconnected and capped off, all valves (except ventilation) have been closed and locked, and signs have been posted on the tank stating it is permanently closed and noting the date of closure.

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4.3.2 Deviation from SPCC Requirements and Contingency Planning

SPCC rules allow a deviation from some of the requirements in 40 CFR 112 Subparts A, B, and C if equivalent environmental protection by some other means of spill prevention, control, or countermeasure is provided. The reasons for nonconformance must be described in the Plan as well as alternate methods and how equivalent environmental protection will be achieved. A deviation from secondary containment requirements is not allowed for bulk storage containers. A deviation from the engineered fail-safe features requirements of 40 CFR 112.8(c)(8) for transfers of oil to or from 55-gallon drums at KSC is described in Section 4.3.3.8. SPCC rules allow deviation from secondary containment requirements for qualified oil-filled operational equipment.

Under 40 CFR 112.7(d), an oil spill contingency plan and written commitment of manpower, equipment, and materials required to expeditiously control and remove discharged oil is required where the installation of containment or diversionary structures is determined to be not practicable. The KSC oil spill contingency plan includes emergency spill response capability through a dedicated Spill Cleanup Team with spill response materials stored at a central location and within local individual spill kits at SPCC oil storage locations.

The KSC Oil Spill Contingency Plan is part of the overall emergency response capability at KSC. The KSC Comprehensive Emergency Management Plan (CEMP) provides a framework for command, control and reliable communications capability during an oil spill emergency. The *KSC Hazardous Materials Emergency Response Plan (HMERP)* (KDP-KSC-P-3008) provides the specific training, notification, and response procedures for oil spills to navigable waters. The KSC Oil Spill Contingency Plan Reference Guide, located in Appendix G, provides citation and page for each of the required elements of 40 CFR 109.5 and its location within the KSC SPCC Plan, CEMP, and HMERP. The supplemental reference documents are located in Appendix E of the KSC SPCC Plan.

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4.3.2.1 Permanent Closure and Empty Container Management

Permanently closed containers are exempt from SPCC regulation. Once permanently closed, a container no longer counts toward the total facility storage capacity, nor is it subject to the other requirements under the SPCC rule. The SPCC rule does not require that permanently closed containers be removed from a facility. In order for a container to be exempt from SPCC rule requirements, the container must meet the following criteria for a permanently closed container:

- All liquid and sludge has been removed from each container and connecting line;
- All connecting lines and piping have been disconnected from the container and blanked off;
- All valves (except ventilation valves) have been closed and locked; and
- Conspicuous signs have been posted on each container stating that it is a permanently closed container and noting the date of closure.

On KSC, bulk storage containers or oil-filled operational equipment that has held any oil product is empty if:

- All wastes have been removed that can be removed using the practices commonly employed to remove materials from that type of container, e.g., pouring, pumping, and aspirating, *and*
- No more than 2.5 centimeters (one inch) of residue remain on the bottom of the container, *or*
- No more than 3 percent by weight of the total capacity of the container remains in the container if the container is less than or equal to 119 gallons in size; *or*
- No more than 0.3 percent by weight of the total capacity of the container remains in the container if the container is greater than 119 gallons in size.

All containers and equipment to be permanently closed or disposed of shall be emptied as defined herein. Equipment with permanently-sealed oil containment housings may remain filled if certified and/or substantially intact by qualified personnel.

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Containers and equipment to be reused or recycled can remain filled if certified, substantially intact, by qualified personnel. If the containers or equipment are visibly damaged or leaking, then the unit shall be drained using common, industry best management practices. Certain equipment, such as oil filled transformers, may require sampling for hazardous materials prior to acceptance by the receiving facility. Contact the receiving facility prior to transporting and delivering equipment.

4.3.3 Bulk Storage Containers and Secondary Containment

This section contains SPCC requirements applicable to bulk storage containers as defined in Section 1.4 (includes 55-gal drums, ASTs, USTs, and other containers used to store oil, but does not include oil-filled electrical, operating, or manufacturing equipment).

4.3.3.1 Container Compatibility With Its Contents

All of the oil storage containers at KSC are compatible with the material they contain. All tanks have adequate exterior coatings to prevent rust formation. Transportable containers of oil conform to DOT specifications. Specific bulk storage container construction material(s) descriptions are provided in Appendices B-1 through B-11, Section 2.0.

4.3.3.2 Diked Area Construction and Containment Volume for Storage Containers

The majority of bulk storage containers are located within secondary containment structures large enough to contain the entire contents of the largest container in the containment structure while allowing for adequate freeboard to contain precipitation events. A description of the type of secondary containment, material of construction, containment capacity, freeboard allowed for precipitation (if applicable) and impervious nature of diked or curbed secondary containment areas to contain discharged oil (if applicable) for each tank or container is provided in Appendices B-1 through B-11, Section 2.0. (Bulk storage containers lacking adequate secondary containment are identified in the SPCC Implementation Plan document maintained in the NASA EAB).

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If used, diked secondary containment areas, containment curbs or alternate systems consisting of a drainage trench enclosure that allows a discharge to terminate and be safely confined in a facility catchment basin or holding pond are specifically described in Appendices B-1 through B-11, Section 2.

4.3.3.3 Diked Area Inspection and Drainage of Rainwater

Many ASTs and some 55-gal drums located within secondary containment structures are open to precipitation. Manually operated valves or pumps are kept in the closed or off position to retain fluids that enter these structures. Accumulated precipitation is removed from all diked and bermed areas by using a vacuum truck, sump pump, draining to grade, or other appropriate method as described in Section 2.0 of each site-specific SPCC Plan (Appendices B-1 through B-11). Prior to removal, the water is visually inspected for the presence of oil (sheen or odor) and the appearance is documented in the Secondary Containment Drainage Log (or similar form) provided as Table 4-6. The drainage log is then completed with the name of the employee draining the containment as well as the date, time, and approximate quantity of water removed.

The employee draining the containment of storm water monitors the drainage, and when complete, the valve is restored to the closed position and/or the pump is turned off. Pumps shall not be set to operate automatically. If determined to be free of oil, accumulated precipitation is discharged to the ground surface or to a nearby detention basin. If the employee determines that the accumulated precipitation is contaminated with oil, it is containerized and picked up or pumped out by the KSC used oil/oily wastewater contractor for recycling and/or disposal in accordance with applicable regulations.

4.3.3.4 Corrosion Protection of Buried Metallic Storage Tanks

Not applicable. There are no completely buried metallic tanks meeting the definition of a bulk storage container at KSC.

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4.3.3.5 Corrosion Protection of Partially Buried Metallic Storage Tanks

Not applicable. There are no partially buried metallic storage tanks meeting the definition of a bulk storage container at KSC.

4.3.3.6 Aboveground Container Periodic Integrity Testing

Aboveground container periodic integrity testing is conducted on a regular schedule as described below, and whenever material repairs are made.

Monthly Inspections

At least monthly during facility operation, personnel visually inspect all aboveground storage containers (including tanks and 55-gal drums), pumps, and valves for any indication of potential leaks. The AST inspections are conducted in general accordance with the monthly and quarterly inspection requirements specified in the STI Standard: *Standard for Inspection of In-Service Shop Fabricated Aboveground Tanks for Storage of Combustible and Flammable Liquids* (SP001-03) and documented on the Monthly Storage Tank and Secondary Containment Inspection Checklist (or similar form) provided in Table 4-4. The 55-gal drum inspections are documented on the Spill Prevention Checklist for 55-Gallon Drum Storage Locations Checklist (or similar form) provided in Table 4-9.

In accordance with SP001-03, the monthly AST inspections include:

1. Primary and secondary tank(s) or containment(s) are visually inspected for presence of water, corrosion, and leaks.
2. The interstice of double-walled tank(s) is inspected for the presence of fuel. If the interstice is equipped with leak detection systems, these systems are checked to ensure proper functionality. If no leak detection system is present, the valve for the outer tank is opened. All fluid that drains from the interstitial space is collected and visually inspected for the presence of oil. If no oil is present, the water is released to grade. All fluid will be drained from the interstice prior to closing the valve.

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3. All pipe connections are inspected for evidence of leaks. Thread connections are tightened, if necessary.
4. Walk around inspections of the exterior of the tank are conducted. New coating or paint is applied if necessary.
5. Operating vents and emergency vents on primary and secondary tank(s) are inspected and cleaned, if necessary.

Annual Inspections

In addition to the monthly inspections, a detailed, documented inspection of the bulk storage containers greater than or equal to 55 gallons is performed at least annually in general accordance with SP001-03 and documented on the Annual Storage Tank, Container, and Secondary Containment Inspection Checklist (or similar form) provided in Table 4-5. In accordance with SP001-03, the annual inspections for ASTs include the following:

1. A walk around inspection is performed checking for proper drainage around the tank, noting any ground settling or puddling of water near the tank.
2. O-ring gasket(s) of emergency vents are checked for damage or deterioration.
3. Tank supports are checked for signs of damage from vehicles, misuse, and corrosion.
4. The tank foundation is checked for signs of settlement, cracking, pitting, and spalling.
5. Anchor bolts are checked for signs of distortion of the bolts or significant cracking around the bolts.
6. High level alarms are functionally checked.

Certified Integrity Testing

Per 40 CFR 112.7(a)(2) the Integrity Testing requirement is applicable to environmental equivalence protection. Accordingly, for well-designed shop-built containers with a capacity of less than or equal to 30,000 gallons, combining monthly and annual visual inspection (as described above) with either of the following provides environmental protection equivalent to integrity testing listed in the original rule (dated July 17, 2002):

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1. Elevating a shop-built container (therefore decreasing corrosion potential from contact with the soil) where all sides and the bottom are visible during inspection; or,
2. Placing a barrier between the container and the ground, designed and operated to ensure leaks are detected immediately.

At least every ten years and whenever material repairs are made, non-destructive integrity testing is performed on ASTs greater than 30,000 gallons by a Steel Tank Institute (STI) certified tank inspector. These inspections are conducted in accordance with SP001-03. These inspections include the following components:

1. A visual inspection of the outside of the tank by a certified tank inspector in accordance with the above-described monthly and annual inspection checklist; and either,
2. A pressure test in accordance with STI R912-00, "Installation Instructions for Shop Fabricated Stationary Aboveground Storage Tanks for Flammable, Combustible Liquids." In accordance with this standard, cylindrical tanks must be pressurized to between 3 and 5 pounds per square inch gauge (psig) and rectangular tanks must be pressurized to not more than 3 psig using an inert gas. In order to detect for leaks, a leak test solution should be immediately applied to the tank exterior, surfaces, welds, fittings, etc. If no leaks are found, the testing is complete.

   For double-walled tanks that are equipped with an interstitial vacuum monitoring system, vacuum testing of the interstice may be conducted as an alternative to pressurized testing. For double-walled tanks that are not equipped with an interstitial vacuum monitoring system, the pressure in the primary tank must be monitored for at least one hour using the same pressure levels as described above for single-walled tanks. If no leaks are found, the interstitial space should be slowly pressurized to the same level as the primary tank and monitored for at least one hour. In order to detect for leaks, a leak test solution should be applied to the tank exterior, surfaces, welds, fittings etc. If no leaks are found after one hour of monitoring, the testing is complete; or,
3. Ultrasonic testing to determine the minimum remaining wall thickness should be conducted in accordance with SP001-3 by an American National Standards Institute/American Society for Nondestructive Testing (ANSI/ASNT) CP-189 "ASNT Standard for Qualification and Certification of Nondestructive Testing Personnel" qualified person. If available, ultrasonic testing equipment capable of scanning the tank, rather than measuring only individual points should be used. If such equipment is not available, at least 15 points on every 12-square inches of the tank in the bottom 60 degrees of the tank and at all lap joints should be tested. The wall thickness measurements should then be compared against the original wall thickness [available from the tank manufacturer or from the Underwriters Laboratory (UL) label on the tank]. Tests should be conducted once every ten years until less

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than 75 percent of the original wall thickness remains. At this point, repairs need to be performed in accordance with SP001-03. Following completion of tank repairs, the tank must be re-inspected.

During the monthly visual inspections, all 55-gallon drums used to store oil are evaluated for integrity. In order to ensure their integrity, any 55- gallon drums showing signs of visual degradation (i.e., rusting corrosion, etc.) and drums that are 10 or more years in age are replaced.

4.3.3.7 Control of Leaks Through Internal Heating Coils

Not applicable. There are no aboveground storage tanks with internal heating coils at KSC.

4.3.3.8 Engineered Fail-Safe Features

As described in Section 2.0 of each site-specific SPCC Plan (Appendices B-1 through B-11), each bulk storage container that receives oil in quantities greater than 25 gals at any time is equipped with at least one of the following devices:

1. High-liquid-level alarm with an audible or visual signal.
2. High-liquid-level pump cutoff device set to stop flow at a predetermined container content level.
3. Direct audible or code signal communication between the person reading the tank gauge and the person pumping oil to the container.
4. A fast response system for determining the liquid level of each bulk storage container (i.e., direct vision gauge, digital computer, telepulse, etc.)

All fail-safe features are inspected at least annually. Annual inspections are documented on the Annual Storage Tank, Container, and Secondary Containment Inspection Checklist (or similar form) provided in Table 4-5. Oil drums that do not receive oil in quantities greater than 25 gallons at any time typically do not have any fail-safe features. As stated in Section 4.3.2, this is a deviation from the SPCC rules. However, the above-described procedure provides adequate protection to prevent a spill from reaching navigable waters. By limiting transfer

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activities to less than 25 gallons at any one time, the potential maximum spill amount is limited, allowing any spills to be quickly contained and cleaned up by the transfer party using on-hand spill response materials. This is the same transfer limit that exempts USTs from installing overfill prevention equipment as specified in 40 CFR 280.20(c)(2)(ii).

4.3.3.9 Observation of Disposal Facilities for Effluent Discharge

Not applicable. KSC does not provide any treatment for oil-contaminated water drained from secondary containment structures.

4.3.3.10 Visible Oil Leak Corrections From Tank Seams and Gaskets

On-site personnel will properly address or repair any visible oil leaks at the facility (for example removing the oil and procuring a contractor to repair the tank system if it is beyond the on-site capabilities). Spilled oil will be cleaned up immediately using on-site spill response equipment or by requesting cleanup by the KEMCON Spill Response Team (SRT), if deemed necessary. Spill response procedures are described in more detail in Section 5.0.

4.3.3.11 Appropriate Position of Mobile or Portable Oil Storage Containers

All mobile or portable bulk storage containers are positioned or located as far away as possible from storm water ditches and navigable waters to prevent a spill from reaching navigable waters. In addition, mobile or portable bulk storage containers are double-walled or provided with secondary containment, such as a dike or catchment basin in conformance with the general secondary containment provisions found in 40 CFR 112.7(c). Secondary containment and spill prevention measures provided for each mobile or portable bulk storage container are described in Sections 2.0 and 3.0 of the storage location's site specific SPCC Plan (Appendices B-1 through B-11).

KSC's fleet of single walled portable fuel tanks has been greatly reduced as part of the KSC *SPCC Implementation Plan*. All small single-walled portable fuel tanks and single-walled portable generator tanks were permanently closed and excessed through the KSC property

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disposal office. KSC's current inventory of single-walled portable fueling equipment consists of one (1) in-service aviation fuel tanker and five (5) mobile refueler trucks. The aviation fuel tanker is normally stored within secondary containment at Fuel Storage Area #1. The mobile refuelers are DOT-compliant over-the-road vehicles and are certified integrity tested tri-annually by a third party vendor. When stored, mobile refueler trucks utilize either passive or active containment measures in accordance with Section 4.4.2.

4.3.3.12 Secondary Containment for Bulk Storage Container Piping

Aboveground piping associated with bulk storage containers is maintained within either passive or active secondary containment. Passive, permanent secondary containment measures are used for most bulk storage piping, such as:

- Dikes, berms or retaining walls sufficiently impervious to contain oil
- Curbs and drip pans
- Sumps and collection systems
- Culverts, gutters, or other drainage systems
- Weirs or other barriers
- Spill diversion ponds
- Retention ponds.

When drainage controls are used as secondary containment, conformance with undiked drainage area requirements [40 CFR 112.8(b)(3) and/or (4)], described in Section 4.3.4.3, is required.

In locations where passive controls are not used, active secondary containment measures to prevent a possible oil discharge from reaching navigable waters and adjoining shorelines are implemented. Active secondary containment measures examples include:

- Use of booms, drip pads, or sorbent materials
- Storm drain covers over a drain after discharge, but before the oil reaches the drain
- Use of spill kits
- Use of spill response capability.

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Passive measures are employed were practicable. Specific secondary containment measures for bulk storage container piping are described in Appendices B-1 through B-11, Section 2.0.

Secondary containment for piping is sized to address the most likely discharge from the containment system such that the discharge will not escape containment before cleanup occurs. Most piping leaks have been determined to be low risk. For example, emergency generator fuel supplies are suction lines with anti-siphon valves, the returns are under gravity flow, the generators operate infrequently and are inspected routinely, and the piping is welded and coated for corrosion protection. Tank fill operations performed by a contractor are witnessed by a KSC employee. Thus, potential leak quantities from typical generator systems are small (typically less than five gallons) and the probability of leak is very low.

4.3.4 Facility Drainage

4.3.4.1 Drainage From Diked Storage Areas

Precipitation that may accumulate in the containment areas is inspected for the presence of oil prior to removal. Diked storage areas open to precipitation shall be inspected for accumulated rainwater weekly or after major rain events. Removal of water accumulated in the containment areas is conducted under the direct supervision of responsible personnel as described in Section 4.3.3.3 of this plan. Table 4-6 contains an example secondary containment drainage log that may be used to record results of diked storage area drainage inspection.

4.3.4.2 Valves Used on Diked Area Storage

Diked areas are equipped with manually-operated drainage valves. These valves are kept closed except when draining the diked area. No flapper-type drain valves are used to drain diked areas.

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4.3.4.3 Facility Drainage Systems From Undiked Storage Areas

The undiked oil storage areas at KSC are generally limited to areas that contain aboveground transfer piping, transformers and other oil-filled equipment such as elevators, oil-water separators, and hydraulic lifts. Aboveground transfer piping is generally engineered such that the piping only contains oil when transfers are being made. In addition, leaks from piping associated with the larger fuel storage areas (i.e., Buildings 01044, K6-0947) are directed to an engineered storm water retention basin compliant with 40 CFR 112.8(b)(3) and/or (4). Facility drainage systems and spill prevention measures at transformers and other process-type equipment not located within diked areas are described further in Sections 4.8 and 4.9.

4.4 Spill Prevention During Fill and Transfer Operations

4.4.1 Facility Tank Car and Truck Loading/Unloading Procedures

Transfer operations of oil to storage tanks, tanker trucks, vehicles, and aircraft have a potential to spill large amounts of fuel. Proper operating techniques will minimize this potential. All tank truck drivers are required to comply with U.S. DOT regulations in 49 CFR Part 177, and facility standard operating procedures. During bulk loading/unloading, the following procedures are followed:

- Smoking is prohibited;
- The engine of the tank truck will be stopped unless the engine is used to operate the pump;
- To prevent accidental departure before complete disconnection of oil transfer lines, the following measures are employed:
  - the parking brake is set,
  - the wheels are chocked, or
  - warning signs are posted;
- A qualified operator will attend the tank truck at all times;

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- The tank truck will be grounded at all times during loading or unloading; and
- Prior to filling and departure of any tank truck, the lowermost drain and all outlets are closely inspected to ensure that they are tightened, adjusted, or replaced to prevent liquid discharge while in transit.

In addition, when drums of oil products or waste are delivered or removed from the site, the drums are secured within the truck to protect against movement during transport.

A bulleted list outlining inspection guidelines/procedures for organizations involved in oil fill and transfer operations is included in Table 4-7. It is recommended that this list (or similar procedure) be referred to during oil transfer operations by each organization involved with fuel transfer from trucks.

4.4.2 Secondary Containment for Tank Trucks

As described in Section 2.0 of the Site-Specific SPCC Plans (Appendices B-1 through B-11), bulk fuel tank loading/unloading areas, where multiple tanks are present or where tanks (except emergency generator tanks) are located adjacent to waters of the U.S. or wildlife areas are equipped with secondary containment or diversionary structures. This system generally consists of curbing and/or sloping routed to a catchment basin or containment sump. When storm drains are near unloading operations, the flow route to the storm drain is blocked by either placing a magnetic mat over the drain or by installing temporary curbing or booms around the entrance to the drain.

For response to small spills that may occur during fuel loading/unloading operations, all tank trucks are equipped with spill response equipment such as pads, socks, or booms to aid in containing the release.

4.4.3 Facility Transfer Operations

4.4.3.1 Buried Piping Protection and Installation

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All buried oil piping that is installed or replaced after August 15, 2002 is provided with secondary containment. In addition, all buried oil piping installed or replaced after 15 August 2002 complies with FDEP UST System rules [62-761, Florida Administrative Code (FAC)]**.** Whenever a section of buried piping is exposed, it is carefully inspected for deterioration and repairs are made as necessary. Additional details on piping construction are provided in Section 2.0 of the site-specific SPCC Plans (Appendices B-1 through B-11).

4.4.3.2 Not-in-Service and Standby Service Terminal Connections

When a pipe is not in service, or is in a standby service for an extended period of time, valves are kept closed and locked and lines are ball-plugged or blind-flanged and marked as to their tie-in connection.

4.4.3.3 Pipe Support Design

All pipe supports at the facility are designed to minimize abrasion and corrosion and to allow for expansion and contraction of piping.

4.4.3.4 Valve and Pipeline Examination

All aboveground valves, piping, and appurtenances are inspected monthly to assess the general condition of flange joints, expansion joints, valve glands and bodies, catch pans, pipeline supports, locking of valves, and metal surfaces. Piping and valves are routinely inspected as part of the general facility inspections described in Sections 4.3.3.6, 4.3.3.12 and 4.10. In addition, breach of integrity and leak testing of buried piping is conducted at the time of installation, modification, construction, relocation, or replacement.

4.4.3.5 Aboveground Piping Protection From Vehicular Traffic

Vehicular traffic is warned by placing clearance signs near the piping to ensure that vehicles will not endanger aboveground piping at the facility.

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4.5 Evaluation of Field-Constructed ASTs

This section is not applicable, as there are currently no field-constructed ASTs storing oil at KSC.

4.6 More Stringent State Requirements

KSC complies with all Florida Department of Environmental Protection (FDEP) construction, registration, and secondary containment requirements for FDEP-registered USTs [Florida Administrative Code (FAC) 62-761] and ASTs (FAC 62-762). In addition, as described in Section 6.2.3, KSC complies with all FDEP spill reporting requirements.

4.7 OWSs and Grease Traps

All Oil-Water-Separators on KSC have been permanently closed by capping all flow lines, filling with concrete or physically removed. There are no aboveground grease traps 55-gallons or greater in volume in use on KSC. Below ground grease traps are exempt from regulation under SPCC rules.

4.8 Oil-Filled Operational Equipment

Oil-filled operational equipment with capacities of 55 gals or more such as hydraulic elevator reservoirs, electrical transformers, hydraulic machinery, and lift or test equipment are subject to SPCC rules. Secondary containment is provided for the majority of this equipment to prevent any oil releases from reaching navigable waters. Site specific secondary containment details for KSC oil-filled operational equipment are found in Appendix B-1 thru B-11. Where secondary containment is impracticable due to equipment design, safety and or site considerations, SPCC rules provide an alternative to the general secondary containment requirements.

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KSC utilizes oil-filled operational equipment and meets the following qualifying criteria for oil-filled equipment in that KSC has *"had no single discharge as described in §112.1(b) from any oil-filled operational equipment exceeding 1,000 U.S. gallons or no two discharges as described in §112.1(b) from any oil-filled operational equipment each exceeding 42 U.S. gallons within any twelve month period in the three years prior to the SPCC Plan certification date."*

In lieu of secondary containment for qualified oil-filled operational equipment, KSC utilizes an oil spill contingency plan and a written commitment of manpower, equipment and materials to quickly control and remove discharged oil. The oil spill contingency plan is addressed in Section 4.3.2: Deviations from Secondary Containment and Contingency Planning, and Appendix E: *KSC Hazardous Materials Emergency Response Plan (KDP-KSC-P-3008)*. In addition, the KSC Oil Spill Contingency Plan Reference Guide located in Appendix G, addresses specific actions and guidance for oil spill response personnel at KSC. The KSC Management Commitment Certification is found on Page *ix* of the Plan.

All SPCC-regulated oil-filled operational equipment is inspected on either a quarterly or annual basis to verify the operating condition and structural integrity of the equipment. Quarterly inspections must be performed on oil-filled equipment where there is a high risk of release to navigable waters. Criteria to determine inspection frequency include distance from navigable waterways, storm drains and other conveyances, and failure mode. Where secondary containment is provided or where the distance to navigable water or other conveyances is greater than 100 feet, and where the volume and/or failure mode have been considered by a professional engineer, SPCC organizations may choose to utilize annual inspection to satisfy integrity testing requirements. Individual site specific plans must reflect the above considerations prior to initiating reductions in inspection frequency. An Oil-Filled Electrical Transformer and Process Equipment Inspection checklist is included in Table 4-10. This checklist (or similar form) should be completed to document SPCC-regulated process equipment inspections. The completion of regular inspections, in conjunction with the emergency response capabilities of KSC, enable adequate manpower and spill response materials to be on-scene within minutes of spill discovery, thus resulting in a minimal risk of releases from SPCC-regulated process

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equipment to reach navigable waters. An Oil-Filled Operational Equipment Inspection Matrix is located in Table 4.3.

Table 4-3. Oil-Filled Equipment Inspection Matrix

Oil-Filled Operational Equipment Inspection Matrix		
Double-walled or secondary containment provided		Use Table 4.9 and inspect at a minimum annually to ensure integrity
Single-walled within 100 feet of navigable water or conveyance to navigable water	Use Table 4.9 and inspect at a minimum quarterly to ensure integrity	
Single-walled greater than 100 feet from navigable water or conveyance to navigable water		Use Table 4.9 and inspect at a minimum annually to ensure integrity
Failure mode is unknown or system has not been evaluated by a Professional Engineer	Use Table 4.9 and inspect at a minimum quarterly to ensure integrity	

4.8.1 Motive Power Containers

Motive Power Containers are any onboard bulk storage containers used primarily to power the movement of a motor vehicle, or ancillary onboard oil-filled operational equipment. Examples of motive power containers include: trucks, automobiles, bulldozers, aircraft, cherry pickers, self-propelled cranes, self-propelled heavy vehicles, self-propelled heavy transport vehicles and locomotives. They do not include oil drilling or work-over equipment, including

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rigs, or any onboard bulk storage containers which are used to store or transfer oil for further distribution. The exemption does not include non-self-propelled stationary or towed equipment, such as towed ground service equipment or any type of oil-powered generator. The following are examples of equipment that are *not* motive power containers because they do not include containers used for propulsion:

- Towed aviation or aerospace ground service equipment,
- Non-self-propelled construction/cargo cranes,
- Non-self-propelled (mining, excavation or construction) equipment,
- Oil-powered generators,
- Fire pumps, and
- Compressors.

KSC utilizes a wide array of mobile cranes, spacecraft transports, and other heavy vehicles that could potentially be considered motive power containers. Certifying Professional Engineers may evaluate such vehicles and determine applicability of the motive power exemption within each contractor's site-specific SPCC plan. However, such exempted heavy vehicles shall continue to require maintenance plans that include spill control provisions.

4.9 Electrical Transformers

KSC maintains an inventory of SPCC-regulated oil-filled electrical equipment that includes specific oil storage capacities and distance to navigable waters or storm drain inlets. The KSC SPCC oil-filled transformer inventory is located in Appendix F. The list also includes two electrical substations and associated switchyards that house large capacity oil-filled electrical transformers (K6-1141, M6-0996). The site-specific SPCC Plans for building numbers K6-1141 and M6-0996, located in Appendix B-1 of this Plan, provide details on the oil-filled electrical equipment at the two ISC-operated electrical substations.

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All SPCC transformers and other oil-filled electrical equipment without secondary containment utilize contingency planning and commitment of manpower and resources in lieu of the general secondary containment requirement. Specific spill response, control, and cleanup measures are provided in Section 5.1 of the Plan and in Section 2 of individual site-specific SPCC plans, where applicable. The KSC oil-spill contingency plan information is found in Section 4.3.2: Deviations from Secondary Containment and Contingency Planning, Appendix E, *KSC Hazardous Materials Emergency Response Plan*, and Appendix G, KSC Oil Spill Contingency Plan Reference Guide.

The ISC Electric Shop is responsible for the maintenance of this oil-filled electrical equipment, including periodic inspection and reporting of spills associated with a leaking transformer. At the two ISC-operated electrical substations, low oil level alarms, high temperature alarms, and low nitrogen pressure alarms are present on all the large transformers. These alarms are connected to the Launch Control Complex (LCC) that is manned 24-hours a day. If one of these alarms is tripped, the Fire Department is notified and rapidly responds to the spill. In addition, drainage at the electrical substation(s) at building number K6-1141 (the C-5 substation) and M6-0996 (Orsino substation) are each directed, via bituminous-coated corrugated steel pipe and drainage control structures, to large retention areas that does not discharge to a navigable waterway.

It is also noted that there are oil-filled transformers located on the Kennedy Space Center property that are not owned or operated by NASA or its tenant contractors [Florida Power Solar Energy Plant (N6-1050), C-5 substation, Orsino substation]. In the event of a release from this equipment, NASA will provide notification to the transformer owner/operator (e.g. Florida Power & Light) in the event a release is detected by KSC personnel.

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4.10 Site Security

Security requirements for qualified SPCC facilities were finalized in the 2006 amendments to streamline the process and allow owner/operators to tailor site security to the facility's specific characteristics and location. The facility owner/operator is required to describe in the SPCC Plan how they will:

- Secure and control access to all oil handling, processing and storage areas;
- Secure master flow and drain valves;
- Prevent unauthorized access to starter controls on oil pumps;
- Secure out-of-service and loading/unloading connections of oil pipelines; and
- Address the appropriateness of security lighting to both prevent acts of vandalism and assist in the discovery of oil discharges.

4.10.1 Fencing

Access to KSC is controlled by fencing and manned security gates at designated entrances. All visitors are required to obtain authorization and an access badge prior to entering KSC.

4.10.2 Flow Valves

Flow valves controlling the flow of oil from tanks or equipment at KSC are located within the secured area of the facility and are locked closed when in non-operating or non-standby status.

4.10.3 Start Controls

Starter controls for all oil transfer pumps are kept in the off position and located in areas only accessible by authorized personnel.

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4.10.4 Pipeline Loading and Unloading Connections

All loading and unloading piping and hoses are securely capped during regular operation and blind-flanged when not in service for a period of six months or more.

4.10.5 Lighting

Adequate facility lighting is provided at all SPCC oil storage locations to assist in the discovery of discharges occurring during hours of darkness and to prevent discharges occurring through acts of vandalism.

4.11 Inspections and Recordkeeping

As described in Sections 4.3, 4.4, 4.8, and 4.9, tanks, containers, and oil-filled equipment storing oil will be inspected on a recurring schedule to ensure that equipment is properly maintained and the potential for a significant spill or leak due to a failure of one or more tank or container component(s) is minimized. Records of storage tank, container, and secondary containment structure inspections are properly maintained for three years and readily accessible for review. Inspections will be conducted to evaluate and record the following information for the storage tank, container, and/or associated components:

- Structural integrity and condition of the storage tank, container, and associated piping;
- Leaks from the storage tank, container, and associated components;
- Evidence of spills or leaks in the area surrounding the storage tank or container; and
- Structural integrity and condition of secondary containment features.

Secondary containment features associated with ASTs and containers will be inspected during storage tank and container inspections to ensure that equipment and structures are

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maintained and functioning properly. Secondary containment dikes should be inspected monthly and after each precipitation event to determine the presence of oil in accumulated water.

Monthly and annual storage tank, container and secondary containment inspection checklists are included in Table 4-4 and Table 4-5. A secondary containment drainage checklist is included in Table 4-6. Spill prevention checklists for 55-gal drums, oil fill and transfer operations, OWSs and grease traps, and oil-filled transformers and process equipment are provided in Tables 4-7 through 4-10. These checklists (or equivalent forms) must be completed each time that inspections are completed to document the inspections, as prescribed by the certifying Professional Engineer.

Signed and dated records of inspections and other pertinent information, such as spills, removal and disposal of spill contaminated materials, replacement or repair of equipment, and SPCC training are kept at KSC for a minimum of three years.

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Table 4-4. Monthly Storage Tank, Container, and Secondary Containment Inspection Checklist

Tank Number:

Building/Area Designation:

Storage/Container Tank Type: (FDEP Registered, IBC, Portable, Other)

Inspection Date: **Previous Inspection Date:**

Inspector's Signature: **Organization:**

Inspection Item	Satisfactory	Unsatisfactory	Comments
Storage and Container Tank Inspection			
Check aboveground tanks, containers, and piping for deterioration, corrosion, and deformation.			
Determine if leaks are present at seams, rivets, gaskets, nozzles, etc. Tighten thread connections, if necessary.			
Check the foundation and support for heaving, cracking weathering.			
Inspect exterior surface of tank, initiate corrective action, if necessary.			
Ensure storage tanks containing flammable materials have grounding devices installed.			
Ensure fill ports are closed.			
Visually inspect the tank level gauge/sensor for damage.			
Check tank and piping secondary containment to ensure discharges are prevented (no deterioration, cracks, heaving, etc.)			
Ensure secondary containment drain valve is in a closed position.			
Inspect double-walled tanks for the presence of liquid in the annular space. Check leak detection system, if equipped.			
Check secondary containment vents on double-walled tanks and clean by removing visual obstructions.			
Confirm the secondary containment berm is free of water. If water is present, inspect for a visual sheen and log the information in Table 4-6 before removing the water.			
No evidence of spills or leaks exists in the area surrounding the secondary containment structure.			

Notes:

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Table 4-5. Annual Storage Tank, Container, and Secondary Containment Inspection Checklist

Facility Name		**Tank (Container) ID**	
		Contents	
Date		**Capacity (gal)**	
Inspector		**Working Capacity (gal)**	

Inspector or Supervisor Signature: **Date:**

TANK (CONTAINER) INSPECTION	**Yes**	**No**	**NA**	**Comments/Description**
Exterior surface in good condition (i.e., no signs of leakage).				
External coating shows no signs of bubbling, cracking, or damage.				
Tank (container) shows no signs of corrosion, pitting, or damage.				
Bolts, rivets, or seams are in good condition (i.e., no signs of damage, cracking, or corrosion).				
Tank supports are in good condition (i.e., no signs of damage from vehicles, misuse, or corrosion).				
Tank (container) foundation is in good condition (i.e., no signs of erosion, settling, cracking, or leakage).				
Tank foundation drains properly (no presence of water around tank).				
High level alarms are functioning properly.				
Visual tank gauge matches stick reading.				
Vents and pressure release devices are operating properly and have no obstructions.				
Emergency vents and o-rings (gaskets) are in good condition (no signs of damage or deterioration).				
External stairways/walkways are sound with no obstructions.				
Level controls physically checked and operational				
Interstitial monitor physically checked and operational				
PIPING, VALVES, PUMPS, GAUGES	**Yes**	**No**	**NA**	**Comments/Description**
Piping, piping joints, or flanges are in good condition (no signs of leakage).				
Pumps and valves are in good condition (no signs of leaking or staining near this equipment).				
Piping is in good condition (no signs of rusting or corrosion).				
SECONDARY CONTAINMENT (BERM) INSPECTION	**Yes**	**No**	**NA**	**Comments/Description**
Berm drainage valve is closed.				
Berm is in good condition (i.e., no indications of erosion or disrepair).				
Berm is free of holes, cracks, or other breaches that could result in leaks.				
Containment area is free of accumulated water.				
Containment area contains no pooled oil or stained soil.				
Drainage pipes or structures are free of clogs and accumulated debris.				
Containment drainage outfall is free of erosion, disrepair, or staining.				

Notes:
NA = Not applicable
Gal = gallon

Additional Remarks:

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Table 4-6. Secondary Containment Drainage Log

Date and Time of Drainage	Containment Area Drained (ID #)	Presence or Absence of Sheen*	Time of Unlocking & Opening Valve	Time of Closing & Relocking Valve	Method of Removal and Disposal

Notes:
ID # = Identification Number

*Do not discharge water containing any contaminant and/or oil sheen.

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Table 4-7. Oil Fill and Transfer Operations Procedure

1. Total capacity of the receiving tank is verified to ensure that the available tank capacity is not exceeded.
2. Existing level of oil in the receiving tank is verified and compared against total tank capacity to determine safe fill levels
3. Receiving and transfer tanks are electrically grounded before transfer activities begin.
4. Tanker truck engine is turned off and other sources of ignition are removed from the area before oil transfer operations begin.
5. The parking brake is set, the tires of a tanker truck are chocked or warning signs are posted to ensure the vehicle does not depart early.
6. Transfer operation is continuously monitored. A spill kit is available during the transfer operation.
7. Pump starter controls are locked in the "off" position when transfer operations are not being conducted.
8. Receiving tank is filled to no more than 90% capacity to ensure there is adequate capacity for thermal expansion.
9. Operations are suspended if a leak is identified or suspected.
10. Valves are closed tightly after oil fill and transfer operations are complete.
11. Residual oil in transfer lines is properly drained at the end of operations.
12. After oil fill and transfer operations have been completed, the area is inspected to verify that no product has leaked or spilled.
13. Prior to departure of the tank truck, the lower most drain and all outlets are inspected to ensure they are tightened.
14. Nearby storm drains are blocked.

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Table 4-8. Oil/Water Separator and Grease Trap Inspection Checklist

OWS Designation: **Influent Source:** **Effluent/Discharge Location:** **Inspection Date:** **Inspector Name:** **Inspector Phone Number:** **Organization:**		
Inspection Item	**Item Inspected or Performed (Check Box)**	**Comments**
Chambers and grates are free of debris.		
Accumulated oil or grease has been removed frequently (at least quarterly).		
Pumping operations from the OWSs and grease traps are performed in ways to minimize spills.		
Accumulated sludge has been removed as necessary.		
Wastewater containing soaps or detergents is prevented from discharging to the OWS or grease traps.		
OWS or grease trap operation problems have been reported to appropriate management		

Notes:
ISC = Institutional Services Contractor
KSC = Kennedy Space center
OWS = Oil/water separator

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Table 4-9. Spill Prevention Checklist for 55-Gallon Drums and Other Containers of Oil

Building/Area Designation:
Inspection Date:
Inspector Name:
Inspector Organization:
Inspector Phone Number:

Inspection Item	Satisfactory	Unsatisfactory	Comments
Drums and containers are stored on a secondary containment pallet, or within a secondary containment berm or building.			
Containers and drums are stored away from direct traffic routes to prevent accidental spills.			
Containers are filled to no more than 95% capacity.			
Containers are kept tightly closed when not adding or removing wastes.			
Drums and containers are stored with adequate aisle space to facilitate material transfer and easy access for inspections.			
Drums, containers, and secondary containment are in good condition with no signs of rust or damage.			
No floor drains, sewers, or other features are located nearby that would provide a pathway for spilled materials.			
Appropriate equipment (i.e., drum grappling devices, drum slings) is available to move drums safely.			
Drums and containers are properly labeled so the contents can be easily identified.			
Transport vehicle is inspected before and after containers are loaded.			
The drums are properly sealed for transportation.			
All drums are securely fastened to the transfer vehicle to prevent spills during transportation.			
Drums that show signs of degradation are taken out of service.			

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Table 4-10. Oil-Filled Transformer and Process Equipment Inspection Checklist

Container Number:
Building/Area Designation:
Storage/Container Tank Type (Transformer, Elevator, Lube Oil Reservoir, Hydraulic Lift, etc.):
Inspection Date:
Previous Inspection Date:
SPCC Coordinator:
SPCC Coordinator Phone Number:
Organization:

Inspection Item	Satisfactory	Unsatisfactory	Comments
Oil-Filled Transformer and Process Equipment Inspection			
Check oil-filled tanks, containers, and equipment for deterioration, corrosion, and deformation.			
Determine if leaks or small seeps are present at seams, rivets, gaskets, nozzles, etc.			
Check the foundation and support for heaving, cracking weathering.			
Ensure fill ports are closed.			
Inspect the drainpipe and valve associated with the equipment. Ensure no leaks are present.			
Inspect for evidence of spills or staining.			
Test the nitrogen, temperature, and oil level alarms at the C-5 Electrical Substation (Building K6-1141) and at the Orsino Substation (Building M6-996).			
Secondary Containment Inspection (if installed)			
Check the secondary containment structure (if present) for deterioration, cracks, heaving, etc.			
Ensure secondary containment drain valve is closed.			
Confirm secondary containment berm is free of water.			

Notes:
SPCC = Spill prevention, control, and countermeasures

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5.0 SPILL RESPONSE, CONTROL, AND CLEANUP MEASURES

Incident mitigation includes those actions taken by response personnel to prevent, stop or contain a spill or a leak, reduce damage to property or the environment, and prevent personal injury or loss of life. The Comprehensive Emergency Management Plan (CEMP) (KNPR 8715.2) documents the KSC emergency management policy. Kennedy Procedural Document KDP-KSC-P-3008 contains the *KSC Hazardous Materials Emergency Response Plan* and includes a description of the immediate response actions that should be taken when a spill is first discovered at KSC and a description of the spill cleanup process. Appendices B-1 through B-11 of the SPCC plan provides site-specific spill response procedures for all facilities.

5.1 General Spill Response Procedures

If a spill occurs follow the procedures in KNPR 8715.2, Hazardous Materials Response. A summary of the response procedure is as follows:

1. **Assess the hazards associated with the spill and Call 911 (867-7911 from a cellular phone)**.
   - Assess the hazards associated with the spill. The most important consideration must be for the safety of the personnel working in the area. Before continuing with spill response, determine whether or not the spill is an emergency to Safety, Health, or the Environment. If the spill constitutes a **potential** emergency to Safety, Health, or the Environment, **evacuate the area**. Oil spills at KSC are categorized as either emergency or non-emergency according to the following definitions:

     a) Emergency Spill—Any unplanned release or condition resulting from an accidental or intentional spill or accumulation of hazardous waste or material in concentrations or quantities sufficient to pose a substantial, actual or potential hazard to human health, mission impact, property, or the environment. Cleanup/recovery is beyond the capability of the reporting agency. A 911 call (867-7911 from a cellular phone) is required.

     b) Non-Emergency Spill—Any spill without posing an environmental emergency that can be contained and cleaned up within the capability of the reporting agency. A non-emergency 911 call is required. The 911 Call Center will contact the fire department. The Senior Fire Official (SFO) will respond at his discretion.

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- Call 911 (867-7911 from a cellular phone) and report the following:
  1. Exact location of the spill or release (i.e., building number, room number, and location in the room)
  2. Identity and quantity of material spilled
  3. Determination of whether the spill is an emergency spill or a non-emergency spill
- For non-emergency spills, the Fire Department will request the SCT (Section 3.1.1 states the Spill Discoverer will request the SCT if required), and notify the Supervisor and Facility Manager.
- For emergency spills, the 911 Call Center will dispatch Fire, Security, EHS, and the HAZMAT Team, as required.

2. **If Safe, Stop the spill.** For spills that are determined to be non-emergency the Spill Discoverer, with consultation from his supervisor and/or facility manager will determine if spill response and cleanup are within the capabilities of the on-site staff. If so, the supervisor and/or facility manager will direct properly trained site personnel to safely enter the area and perform actions to stop the spill at its source. This may include closing a valve or moving a drum into an upright position. The supervisor and/or facility manager will ensure that workers are using appropriate PPE when entering a spill site.
3. **Block access to storm drains or drainage ditches**. Once the spill has been stopped, use spill booms or absorbent socks from the spill kit to block nearby storm drains or ditches.
4. **Use absorbents or other material to clean up spill.** Once the storm drains have been protected, the spill may be cleaned up. The spill kit should have a sufficient supply of absorbent material for small spills. Contact 911 (867-7911 from a cellular phone) to request assistance from the Spill Cleanup Team if requirements exceed on-site capabilities.
5. **Properly dispose of waste**. Waste derived from the cleanup of petroleum products is disposed of as hazardous or controlled waste. Follow Kennedy NASA Procedural Requirement (KNPR) 8500.1 Kennedy Space Center Environmental Requirements, for proper evaluation and disposal procedures.

Depending on the size and type of spill, you may not always be able to follow these general procedures. The *KSC Hazardous Materials Emergency Response Plan* documents the response procedures to be followed for all hazardous material spills.

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5.2 Off-Site Spills

In the event that a spill of oil or hazardous substance occurs on KSC and cannot be contained within the boundaries of KSC, threatens a drinking water resource, or the spill occurs off-site, the following actions must be taken in addition to the spill response procedures identified in Section 5.1:

- The organization that caused the spill or the Spill Discoverer will immediately call the Fire Department at 911 (867-7911 from a cellular phone). The Fire Department will then in turn contact the 911 Call Center.
- The 911 Call Center will notify the Duty Office who will immediately notify the KSC EAB and required state and federal emergency response authorities.
- The KSC EAB will notify state and federal regulatory agencies of all reportable spills.

The KSC response to off-site spills/damages will be limited to notification actions, spill control, collection of standing product, and fire prevention.

5.3 Spill Cleanup and Disposal Methods

Certain procedures and guidelines must be followed when cleaning up and disposing of wastes generated from spills. Depending on the location of the spill and the type of material spilled, the cleanup and disposal methods can vary.

For non-emergency spills, the responsible organization or on-site personnel conduct cleanup activities and are responsible for waste disposal. When non-emergency spills occur at SPCC-regulated locations, refer to the site-specific plan data (Appendices B-1 through B-11) for spill response and cleanup procedures. Spills that are limited to impervious surfaces should be collected and cleaned up using appropriate absorbent materials. Collected materials (e.g., free product, contaminated soil, spent cleanup materials) should be placed in proper containers and managed as hazardous or controlled waste per KNPR 8500.1. The KEMCON post-emergency spill cleanup team should clean up any spill which reaches the soil or water.

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For emergency spills, after the emergency has been mitigated, the IC may transfer control to the SCT to oversee the post-emergency cleanup. Members of the KEMCON SCT will complete the spill cleanup activities in accordance with the KEMCON Post-Emergency Spill Cleanup Plan. The KEMCON SCT will obtain assistance from outside contractors, if required, to complete recovery, cleanup, disposal, and restoration activities. A list of potential spill cleanup contractors is maintained by the KEMCON Waste Management Group.

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6.0 SPILL REPORTING AND RECORDKEEPING

This section presents spill reporting and recordkeeping requirements applicable to oil spills at KSC.

6.1 General Spill Reporting Requirements

Once spills have been reported by dialing 911 (867-7911 from a cellular phone), the responsible organization must follow up by verbally reporting the release to the NASA EAB (867-9005) pursuant to KDP-KSC-P-3008 *KSC Hazardous Materials Emergency Response Plan* and KNPR 8500.1 Kennedy Space Center Environmental Requirements. Within three working days of a spill, a KSC Pollution Incident Reporting and Notification Form (KSC Form 21-555) must be submitted to the NASA EAB. A copy of this form and applicable pollution incident reporting instructions (KDP-KSC-P-1728) are provided in Appendix C.

The NASA EAB will determine if the spill requires reporting to external agencies, and if so, make the necessary notifications and reports, including notification to the NRC, U.S. Coast Guard, and other federal and state agencies as described in the Table 6-1 below:

Table 6-1. Spill Reporting Agencies

Agency/Spill Type	Telephone Number
Federal Agencies	
NRC • Any release to a **navigable water** that causes a film or sheen upon or discoloration of the water or adjoining shorelines or causes a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines must be reported immediately. • Releases of hazardous materials in excess of CERCLA or EPCRA reportable quantities must be reportedly immediately.	1-800-424-8802
U.S. EPA, Region 4 ERRB 11th Floor 61 Forsyth St. SW Atlanta, GA 30303 • Any single oil discharge >= 1,000 gals reaching a navigable water or two oil spill events of more than 42 gals each reaching a navigable water and which occur within a 12-month period. • Within 60 days of the discharge, a written report must be submitted as described in Section 6.2.2.	(404) 562-8705

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Table 6-1. Spill Reporting Agencies (continued)

Agency/Spill Type	Telephone Number
Federal Agencies (continued)	
U.S. Coast Guard Marine Safety Office 7820 Arlington Expressway, Suite 4000 Jacksonville, FL 32211 • Any release to **waters of the coastal zone** that causes a film or sheen upon or discoloration of the water or adjoining shorelines or causes a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines should be reported immediately. All discharges to navigable waters at KSC are to waters of the coastal zone.	(321) 868-4250
U.S. DOT Information Systems Manager, DHM-63 Research and Special Programs Administration Washington DC 20590-0001 • Releases of hazardous waste or hazardous materials in excess of CERCLA or EPCRA reportable quantities occurring on public roads (federal, state, or local) must be reported in writing using DOT Form F 5800.1 within 30 days of the release.	NA
State Agencies	
Florida State Warning Point c/o Florida Division of Emergency Management 2555 Shumard Oak Boulevard Tallahassee FL 32399-2100 • Releases of hazardous materials in excess of CERCLA or EPCRA reportable quantities must be reportedly verbally within 24 hours. • Written notification must also be made within 7 days of the spill event.	(850)413-9911 24 hr: 1-800-320-0519
FDEP Office of Emergency Response 3900 Commonwealth Boulevard Tallahassee, FL 32399-3000 • Any single oil discharge >= 1,000 gals reaching a navigable water or two oil spill events of more than 42 gals each reaching a navigable water and which occur within a 12-month period. • Within 60 days of the discharge, a written report must be submitted as described in Section 6.3.1.	Tallahassee Office: (850) 245-2010 Orlando Office: (407) 897-4100
FDEP Bureau of Petroleum Storage Systems 2600 Blair Stone Road, MS-4575 Tallahassee, FL 32399-2400 • Incident and discharge notifications required to be made to the Brevard County Office of Emergency Management (the locally-administered program under contract with FDEP) as described below.	(850) 922-9000

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Table 6-1. Spill Reporting Agencies (continued)

Agency/Spill Type	Telephone Number
Local Agencies	
Brevard County Office of Emergency Management LEPC 1746 Cedar St. Rockledge, FL 32955 • **Incident** notification must be made on County Incident Notification Form 62-761.900(6) within 24 hours or before the close of the County's next business day. See Section 6.2.3 for a description of incidents requiring notification. • **Discharge** notification must be made on County Incident Notification Form 62-761.900(6) within 24 hours or before the close of the County's next business day. Reportable discharges include those causing free product or a sheen to be observe in soil, surface water, or groundwater and oil releases ≥ 25 gals to soil or other pervious surface. See Section 6.2.3 for a detailed description of discharges requiring notification.	(321)637-6670

Notes:
CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act
DOT = Department of Transportation
EPA = U.S Environmental Protection Agency
EPCRA = Emergency Planning and Community Right-To-Know Act
ERRB = Emergency Response & Removal Branch
FDEP = Florida Department of Environmental Protection
gal = Gallon
LEPC = Local Emergency Planning Committee
NRC = National Response Center
U.S. = United States

6.2 Federal, State, and Local Agency Reporting Requirements

Federal, state, and local agency requirements for reporting spills are described in Table 6-1 and in more detail in the following sections.

6.2.1 Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)/EPCRA

Releases of CERCLA hazardous substances in amounts exceeding threshold quantities must be reported to the State Emergency Response Commission (SERC), the Local Emergency Planning Committee (LEPC), and the NRC. The list of CERCLA hazardous substances and their reportable quantities is found in 40 CFR 302.4. Some CERCLA hazardous substances are components of oil products that may be used at KSC.

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Table 6-2 includes a listing of oil products containing CERCLA hazardous components and their respective reportable quantities.

Table 6-2. Reportable Quantities for Hazardous Substance Spills as Defined in 40 CFR 302 and 40 CFR 117

Substance	U.S. EPA Reportable Quantity (RQ)[1]	DOT ERG Number
Diesel Fuel	25 gal	128
Engine Oil	25 gal	128
Gasoline	25 gal	128
Hydraulic Oil	25 gal	128
JP-8	25 gal	128
Lubricating Oil	25 gal	128
Naphtha	100 lb	128
PCBs	1 lb	171
Synthetic Oil	25 gal	128

[1] Reportable quantity listed in 40 CFR 302.4

Notes:

CFR	=	*Code of Federal Regulations*	lb	=	Pound
DOT	=	Department of Transportation	PCB	=	Polychlorinated biphenyls
EPA	=	U.S. Environmental Protection Agency	RQ	=	Reportable Quantity ERG = Emergency Response Guide
gal	=	Gallon	U.S.	=	United States
JP-8	=	Jet Propulsion Fuel			

Releases of CERCLA hazardous substances into the air inside a building or structure that do not reach outdoor ambient air, and releases that do not reach water, soil, air, or other portion of the environment are not reportable. A reportable spill of a CERCLA hazardous substance would be a spill above threshold quantities which reaches outdoor ambient air, soil, or other portions of the environment (i.e., paved parking area). If a spill occurs that meets the above criteria, the applicable state, Federal and local agencies listed in Table 6-1 will be notified as soon as possible.

6.2.2 Clean Water Act (CWA)

Releases of oil and hazardous substances to waters of the state in harmful quantities must be immediately reported to the applicable state, Federal, and local agencies. “Waters of the state” in Florida include surface and subsurface waters, except for water in sewage systems,

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water in treatment works, or disposal systems. The harmful or reportable quantities of hazardous substances are the same as those under CERCLA (see Section 6.2.1). The "sheen test" (i.e., presence of a visible oil sheen or discoloration on the water surface) defines harmful quantities of oil (40 CFR 110.3 - .5). A discharge of oil that causes a violation of an applicable water quality standard is also considered a harmful quantity. If a spill occurs that meets the above criteria, the applicable state, Federal and local agencies listed in Table 6-1 must be verbally notified as soon as possible.

Under the SPCC regulations, the EPA requires that discharges to a navigable water of more than 1,000 gals of oil in a single discharge or the discharge of more than 42 gals of oil to navigable water in each of two or more discharges occurring within any 12-month period be reported in writing. For all SPCC-reportable spills, the following information must be submitted in writing to the EPA and FDEP, Bureau of Emergency Response within 60 days of the spill event:

1. Name of facility;
2. Spill reporter’s name;
3. Location of facility;
4. Maximum storage or handling capacity of the facility and normal daily throughput;
5. Corrective actions and countermeasures you have taken, including a description of equipment repairs and replacements;
6. An adequate description of the facility, including maps, flow diagrams, and topographical maps, as necessary;
7. The cause of the discharge, including a failure analysis of the system or subsystem in which the failure occurred;
8. Additional preventative measures you have taken or contemplated to minimize the possibility of recurrence; and,
9. Any other information the EPA or state oil pollution control agency specifically requests.

The EPA or state agency may, after reviewing the information, require additional information, or an amendment to the SPCC Plan.

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6.2.3 Florida Department of Environmental Protection (FDEP)

Under FDEP rules, incidents and reportable discharges of oil from regulated USTs (those with capacities greater than 110 gals) and ASTs (those with capacities greater than 550 gals) must be reported to the Brevard County Office of Emergency Management (the locally-administered program under contract with FDEP) on Incident Notification Form 62-761.900(6) within 24 hours or before the close of the County's next business day. A copy of this form is included in Appendix D.

An **"incident"** is defined as:

1. Failed or inconclusive Statistical Inventory Reconciliation (SIR) evaluation, or a failed or inconclusive tank tightness, pressure, or integrity test.
2. Internal tank inspection results that indicate a release could have occurred.
3. Unusual operating conditions (i.e., sudden loss of product from a storage tank system, unexplained presence of water in a tank, unexplained presence of water in a piping sump, etc.)
4. Presence of odors in surface water, groundwater, soil, basements, sewers, or utility lines that may indicate a release or discharge of oil has occurred.
5. The loss of over 100 gals of oil on impervious surfaces (i.e., concrete driveways, airport runways, etc.), other than secondary containment.
6. The loss of over 500 gals inside a secondary containment dike.
7. A positive response of release detection devises indicating a release of oil or a breach of integrity of a storage tank system.
8. The presence of free product in a piping sump.

A **"reportable discharge"** is defined as:

1. Analytical or field-test results of surface or groundwater indicating the presence of contamination petroleum chemical products of concern (see Table 6-3).
2. Free product or sheen in soil, surface water, groundwater, basement floors, utility conduits or vaults, or sewer lines.
3. A spill or overflow of oil to soil or another pervious surface $\geq$ 25 gals, unless a more stringent report requirement exists under 40 CFR 302 (see Table 6-2).

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4. Analytical or field test results of soils indicating the presence of contamination petroleum chemical products of concern above specified cleanup target levels.
5. Stained soils observed during a closure assessment.

Table 6-3. Petroleum Products' Contaminants of Concern

Acenaphthene
Acenaphthylene
Anthracene
Arsenic
Benzene
Benzo(a)anthracene
Benzo(a)pyrene
Benzo(b)fluoranthene
Benzo(g,h,i)perylene
Benzo(k)fluoranthene
Cadmium
Chloride
Chromium
Chrysene
Dibenz(a,h)anthracene
Dibromoethane, 1,2-
Dichloroethane, 1,2-
Ethylbenzene
Fluoranthene
Fluorene
Indeno(1,2,3-cd)pyrene
Lead
Methyl tert-butyl ether
Methylnaphthalene, 1-
Methylnaphthalene, 2-
Naphthalene
Phenanthrene
Pyrene
Sulfate
Toluene
Total Dissolved Solids
TRPHs
Xylenes, total

Note: TRPH = Total Recoverable Petroleum Hydrocarbons

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6.3 Recordkeeping

The NASA EAB is responsible for maintaining records of the spill and its cause. The NASA EAB will provide a monthly status of the PIRs received during the previous month to the affected organization, if requested. Corrective actions to prevent recurrence will be determined and implemented by the responsible organization. A database of PIRs is maintained by NASA EAB and is used to store information on reported releases and to support other environmental programs at KSC.

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7.0 SUMMARY

This SPCC Plan developed for KSC provides guidance on spill prevention, control, cleanup, and disposal to all organizations handling oil at KSC and those NASA–KSC operations on CCAFS. Sections 4.0 and 5.0 provide important checklists for the various responsible organizations at KSC for spill prevention, response, and cleanup. Site-specific spill plans have been developed for each responsible organization and are provided in Appendices B-1 through B-11. Individual facility site-specific SPCC plans are located in KSC-PLN-1920.

Action items required to meet current EPA SPCC compliance standards as specified in 40 CFR 112 are described in the KSC *SPCC Implementation Plan* that is maintained at the NASA EAB Office.

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APPENDIX A

SPCC Plan Amendment Log

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Appendix A - List of Amendment Logs

Amendment Log #	Organization	Location	PE	Date
A-1	All	KSC-PLN-1919	Robert Kline, Jacobs	11-04-05
A-2	ASRC	M7-0505A, M7-0556A, M7-556	Dennis Lobmeyer, ASRC	4-21-06
A-3	NASA, C of F	MCAR (E3-1133)	Al Rose, Fred Wilson and Assoc.	6-22-06
A-4	NASA, TA-C3	M&O (M6-0486)	Robert Kline, Jacobs	8-29-06
A-5	DNCP&R	Various Locations	Jennifer Hill, JEA	2-6-07
A-6	Lackmann	K6-1145, L6-0146, M6-0342, M7-0355, M7-0360, M6-0399	Ron Traylor, SGS	1-21-07
A-7	NASA, TA-C3	Generator Shop, K6-1446	Robert Kline, Jacobs	10-23-06
A-8	JBOSC	01044, J5-1197, J6-2362, K6-0947, K7-0468, K7-1203, M6-0688, M7-0737, M6-0896	Ron Traylor, SGS	1-21-07
A-9	SFOC	Various Locations, see Amendment Log A-9	Blain L. Nelson, Nelson Engineering	1-25-07
A-10	MILA	M5-1443, M5-1444, M5-1544, M5-1594	Jim Long, Honeywell	1-19-07
A-11	JBOSC	M6-0039A	Ron Traylor, SGS	3-3-08

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Amendment Log #	Organization	Location	PE	Date
A-12	DNCP&R	Various Locations	Rich Davis, JEA	12-10-07
A-13A	SFOC	Various Locations	Blain Nelson, Nelson Engineering	11-02-07
A-13B	JBOSC	Various Locations	Ron Traylor, SGS	4-29-08
A-14	Boeing	Various Locations	Fulin Gui, Jacobs Technology	11-02-07
A-15	Amendment Log # Issued in Error	Issued in Error	Issued in Error	Issued in Error
A-16	JBOSC	Various Locations	Ron Traylor, SGS	3-3-08
A-17	SFOC	Various Locations	Blain Nelson, Nelson Engineering	6-16-08
A-18	MILA	Various	James Long, Honeywell	6-16-08
A-19	JBOSC	FSA 1	Ron Traylor, SGS	6-30-08
A-20	Lackmann	K6-1547-4 Newly Added	Ron Traylor, SGS	7-01-08
A-21	DNCP&R	Various	N/A Administrative Changes	6-30-08
A-22	NASA-All	KSC PLN 1919	Randall Byrd PE	3-20-09
A-23	SPOC-USA	Various Locations	Blain Nelson Engineering	12-2-08
A-24	DNCP&R	Various	Rich Davis-Jones Edmunds	12-08-08
A-25	USTDC	M7-505A-2 removed	N/A Administrative Changes	12-08-08
A-26	ISC	Various Locations	Carol Noble, Noble Eng.	12-11-08
A-27	Lackmann	Various Locations	N/A Administrative Changes	12-12-08
A-28	MESC-IHA	K7-114, K7-115	N/A Administrative Changes	12-15-08
A-29	Boeing	Various Locations	N/A Administrative Changes	12-18-08
A-30	MILA/Honeywell	M5-1443 & M5-1444	James L. Long PE	12-18-08
A-31	IOMS	1044, 80700, 60683	N/A Administrative Changes	12-23-08
A-32	SGS	K7-0287	N/A Administrative Change	1-16-19
A-33	USA- SPOC	Various Locations	Blain Nelson, Nelson Engineering	5-18-09
A-34	USTDC	M7-0505A	N/A Administrative Change	5-29-09

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Amendment Log #	Organization	Location	PE	Date
A-35	ISC-EG&G	Various Facilities	N/A Administrative Change	6-2-09
A-36	ISC-EG&G	Various Facilities	Carol Noble, Noble Eng.	10-29-09
A-37	SPOC-USA	Various Facilities	Blain Nelson, Nelson Engineering	11-13-09
A-38	CAPPS-Boeing	Various Facilities	N/A Administrative Change	11-13-09
A-39	SGS	K7-0287	N/A Administrative Change	11-24-09
A-40	Delaware North	Various	PE Required-	12-02-09
A-41	IHA-MESC	K7-0014	N/A Administrative Change	12-03-09
A-42	Lackmann	M6-0493, Various	N/A Administrative Change	12-11-09
A-43	IOMS-Indyne	1044, 60683	N/A Administrative Change	12-07-09
A-44	LSSC-Dynamac	M6-1025	VOID PE Required change	12-21-09
A-45	LSSC-Dynamac	M6-1025	Add M6-1025-2 Randall Byrd PE	04-26-10
A-46	ISC-URS	Various Facilities	PE Required-Noble Eng.	04-27-10
A-47	MILA-Honeywell	Various Facilities	N/A Administrative Changes	04-28-10
A-48	SPOC-USA	Various Facilities	PE Required-Nelson Eng.	04-29-10
A-49	CAPPS-BOIENG	Various	N/A Administrative Changes	04-29-10
A-50	Delaware North	Various	N/A Administrative Change	05-21-10
A-51	IHA-MESC	K7-0114, K7-0115, K7-0165	David Leggett, HSA Golden	06-2-10
A-52	IOMS-Indyne	80700A	N/A Administrative Change	06-15-10
A-53	NASA Exchange	K6-1345, M6-0596	N/A Administrative Change	06-16-10
A-54	NASA EAB- All	KSC-PLN-1919	N/A Administrative Changes	09-30-10
A-55	SPOC-USA	Various Facilities	PE Required- Nelson Eng.	10-28-10
A-56	IHA-MESC	K6-0114	N/A Administrative Change	11-02-10
A-57	URS-ISC	J6-2370	URS Orlando-Steven Cobert	11-30-10
A-58	NASA-EAB	M6-1025 deleted from KSC SPCC	N/A Administrative Change	12-09-10
A-59	United Launch Alliance	28406, 28503, 28414, 56616,	PE Carolyn Seringer, Nelson Eng.	4-10-11

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Amendment Log #	Organization	Location	PE	Date
A-60	SPOC-USA	M6-0139	PE Carolyn Seringer, Nelson Eng.	2-13-11
A-61	URS	Various Facilities	URS Orlando-Steven Cobert	9-7-11
A-62	Lackmann	ARF, USA Logistics, CIF	N/A Administrative Changes	9-7-11
A-63	SPOC-USA	Various Facilities	PE Nelson Engineering-Tullis	9-13-11
A-64	ESC-QinetiQ	M7-505, M7-557	PE Nelson Engineering-Tullis	9-16-11
A-65	Delaware North	KSC-AHOF	N/A Administrative Change	10-11-11
A-66	SPOC-USA	Various Facilities	PE-Nelson Eng. - Nelson	04-26-12
A-67	Delaware North	Shuttle Exhibit elevator-delete	N/A Administrative Change	6-4-12
A-68	URS	Various	TBD	5-31-12
A-69	Boeing	M7-0360	PE Nelson Eng.- Seringer	06-21-12
A-70	ESC-QinetiQ	Various	PE Nelson Eng. -Terry Tullis	06-20-12
A-71	NASA-IHA	KSC-PLN-1919	PE Nelson Eng.- Seringer	07-06-12
A-72	ISC-URS	Various		10-12-12
A-73	IOMS	77615-77616	N/A Administrative Changes	10/19/12
A-74	SPOC-USA	Various		10/22/12
A-75	NASA Exchange	M6-0596, K6-1345, P6-1335	PE Nelson Eng. Seringer	10-29-12
A-76	Delaware North	M6-0505	N/A Administrative Change	11-26-12
A-77	Food Services	Various	N/A Administrative Change	11-28-12
A-78	ESC-QinetiQ	Various	PE Nelson Eng. -	12-03-12
A-79	IOMS-Indyne	60690	TBD (See A-84 Nelson Eng.)	04-18-13
A-80	TOSC-Jacobs	Various	TBD	04-18-13
A-81	ATK	Various	N/A Administrative Changes	05-09-13
A-82	Delaware North	Various	TBD	05-22-13
A-83	ISC-URS	Various	TBD	06-04-13

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Amendment Log #	Organization	Location	PE	Date
A-84	NASA TA-A4B	KSC-PLN-1919;KSC-PLN-1920, Food Service and IOMS facilities	Nelson Eng.-Seringer	08-28-13
A-85	ISC-URS	Various	Steven Colbert-URS	10-22-13
A-86	ATK	Various	N/A Administrative Changes	11-14-13
A-87	TOSC-Jacobs	Various	N/A Administrative Changes	11-25-13
A-88	ISC	Various	TBD	03-21-14
A-89	IHA	K7-114, K7-165	N/A Administrative Changes	03-31-14
A-90	TOSC-Jacobs	Various	Jeff Longshore, Nelson Eng.	05-12-14
A-91	ATK	L6-0247	Jeff Longshore, Nelson Eng.	05-09-14
A-92	NASA TA-A4B	28406, 28503	N/A Administrative Changes	05-26-14
A-93	ATK	Various locations	N/A Administrative Changes	10/31/2014
A-94	ISC	Various	TBD	11/10/2014
A-95	TOSC-Jacobs	Various Facilities	Carolyn Seringer- Nelson Eng.	11/10/2014
A-96	InoMedic Health Applications	M6-0495	N/A Administrative Change	11/18/2014
A-97	Engineering Services Contract	Buildings M7-0556A, M7-0556B & M7-0505A	N/A Administrative Change	12/1/2014
A-98	ISC-URS	Various	Steven Colbert-URS Orlando	4/9/2015
A-99	ESC-Vencore	M7-0557	Brian Brotheridge	4/14/2015
A-100	Orbital ATK Inc.	Various facilities	N/A Administrative Change	4/21/2015
A-101	TOSC-Jacobs	Various Facilities	TBD	4/22/2015
A-102	ISC-AECOM/URS	Various	Steven Colbert-URS	12-2-15
A-103	KEMCON-IMSS	K7-0114, K7-0115, K7-0165	N/A Administrative Changes	11-16-15
A-104	ESC-Vencore	M7-0505	Bryan Brotheridge, ESC-Vencore	10-31-15

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A-105	KPLSS-AECOM	Various	Steven Colbert-URS	12-2-15
A-106	TOSC-Jacobs	K6-0794, K6-1547	Jeff Longshore, Nelson Eng.	11-11-15
A-107	Delaware North	M6-0410	Jeff Longshore, Nelson Eng.	11-16-15
A-108	NASA SI-E2	KSC-PLN-1919, K6-0015, M6-0399	Jeff Longshore, Nelson Eng.	04-01-16

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APPENDIX B

KSC SPCC Contractor Descriptions

Site-Specific SPCC Plans-KSC-PLN-1920 (hyperlink only)

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Appendix B
SPCC Contractor Descriptions

There are currently eleven primary organizations at KSC that engage in the storage and/or use of oil in containers greater than or equal to 55 gallons included in the KSC SPCC Plan. Storage includes oil stored in aboveground storage tanks (ASTs), drums, intermediate bulk containers and oil-filled process and electrical equipment. Descriptions of the various KSC tenant contractor operations are listed below. The designations B-1 through B-11 coincide with the contractor and/or organization oil product storage table above.

B-1 Institutional Services Contract (ISC)

The ISC contractor is responsible for roads, grounds, utilities, propellant storage and delivery, airfield services, and most building maintenance at KSC. Oil storage associated with ISC operations includes diesel-powered emergency generators, hydraulic elevators, bulk fuel storage tanks, electrical transformers, oil and diesel fuel present in portable and mobile equipment, and new and used oil stored in 55-gal drums and ASTs. The ISC contractor is AECOM-URS Technical Services, Inc.

Approximately 325 electrical transformers, filled with 55-gals or more of oil are present at KSC. Although not specifically addressed in the site-specific SPCC Plans (Appendix B-1 thru B-11), compliance with the KSC spill prevention, control and countermeasure policy is discussed in detail in Section 4.9, of KSC-PLN-1919. KSC maintains an inventory of transformers and other oil-filled equipment that includes oil storage capacity, age condition and distance to navigable waters or storm drain inlets.

B-2 Test and Operations Support Contract (TOSC)

The TOSC contractor is responsible for all flight hardware, launch system processing and future launch operations at KSC, including the maintenance of all flight hardware, and the

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crawler transporter fleet. The TOSC contractor, Jacobs Technology, is responsible for all launch flow processing on current and future rocket programs. Current oil storage associated with TOSC operations includes: hydraulic oil, oily wastewater collected in tanks and drums, new and used oil stored in 55-gal drums, and oil and diesel fuel present in mobile equipment (i.e., crawlers and spacecraft transport equipment).

B-3 Space Launch System (SLS) Booster Fabrication and Assembly

Orbital ATK, Inc., formerly Alliant Techsystems (ATK), is responsible for Solid Rocket Booster (SRB) fabrication and assembly for the Space Launch System (SLS) program. Oil storage associated with operations conducted by Orbital ATK at KSC and Cape Canaveral Air Force Station includes new and used oil stored in 55-gal drums, and in oil-filled process equipment such as hydraulic lifts and test stands used for booster assembly and check-out.

B-4 Kennedy Space Center Visitor Complex Concessionaire

Delaware North Companies Parks and Resorts, Inc. is the concessionaire operating the KSC Visitor Center. DNCPR and its subcontractors are responsible for operating and maintaining the Visitor Center. Oil storage associated with operations conducted by Delaware North includes fuels required for Visitor Center buses, new and used oil stored in ASTs, 55-gal drums associated with vehicle maintenance operations, and waste cooking oil stored outside each cafeteria in 55-gal drums.

B-5 Engineering Services Contract (ESC)

The Engineering Services Contract, currently managed by Vencore, Inc., is responsible for developing applications of new technology for ground support tasks and in testing and validating ground systems and components. Additional services provided by the ESC contractor include engineering studies and investigations, conceptual, preliminary, detail and developmental engineering, laboratory technical services, and laboratory operations and maintenance. Oil

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storage associated with operations conducted by the ESC contractor includes hydraulic oil contained in process equipment tanks and new and used oil contained in 55-gal drums.

B-6 NASA Exchange Council Concessionaires and Vendors

The NASA Exchange has oversight of two functions at KSC that are included in the KSC SPCC Plan. First, the Kennedy Athletic, Recreation and Social Organization (KARS) operates two employee recreational parks on KSC property. Oil storage associated with operations conducted at the KARS Park locations includes a compartmented aboveground fuel tank containing diesel fuel and gasoline.

Secondly, the NASA Exchange Council has a concessionaire's agreement with Southeast Petroleum, LLC to operate a Mobil™ service station located at Building M6-0596, and a remote E-85 fuel station (K6-1345) on Contractor's Rd. The Mobil™ station includes a compartmented underground storage tank (USTs) storing highway diesel, premium unleaded and regular unleaded gasoline, an aboveground storage tank storing E-85 Ethanol, and used oil contained in 55-gal drums, as well as the E-85 ethanol storage tank at facility K6-1345.

B-7 Food Services Concessionaires Agreements

The Food Services Concessionaires, managed by the NASA Exchange Council, are responsible for operating the cafeterias on KSC property (excluding those at the Visitor Center operated by DNCPR). Oil storage associated with operations conducted by the food services contractor includes waste cooking oil stored outside each cafeteria in bulk storage containers of 55-gals or more in volume.

B-8 Kennedy Environmental Management Contract (KEMCON)

The KEMCON contractor is responsible for provision of medical and environmental support services on Kennedy Space Center. These services include: Occupational Health, Industrial Hygiene, Environmental Sampling, Analysis, and Monitoring (ESAM), Compliance and Permitting Support, and Waste Management Services. Presently, this contract is managed

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by Integrated Mission Support Services, L.L.C. (IMSS) Current oil storage locations associated with this contract include the KSC Waste Treatment, Storage and Disposal Facility (TSDF) located at Facility(s) K7-114, K7-115 and K7-0165.

B-9 Protective Services Contract

The KSC Protective Services Contract provides EMS, fire and center security services to KSC. Oil storage associated with the Security Services operations includes a 500-gal gasoline AST located at the Security Boathouse, Facility K7-0287. This contract is managed by Chenega Corporation.

B-10 Infrastructure Operations and Maintenance Support (IOMS)

The IOMS contractor, InDyne, is responsible for roads, grounds, utilities, propellant storage and delivery, waste management, airfield services, and most building maintenance at Cape Canaveral Air Force Station (CCAFS). NASA-owned facilities located on CCAFS are maintained by the IOMS contractor. Oil storage associated with IOMS operations for NASA includes a diesel-powered emergency generator tank system at Hangar AE, Facility 60675.

B-11 Kennedy Propellants and Life Support Services Contract (KPLSS)

The KPLSS contractor, an AECOM-URS company, is responsible for propellant storage and delivery, airfield fuel services, Self-Contained Atmospheric Protective Ensemble (SCAPE) life support services, and maintenance of fuel tankers and life support equipment. Oil storage associated with KPLSS operations for NASA includes jet fuel storage in mobile tanks and refueler trucks, and storage of various oil types in drums and used in oil-filled equipment. KPLSS operations and oil storage locations can be found on both KSC and CCAFS.

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APPENDIX C

KSC Pollution Incident Reporting and Notification Form

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KSC Pollution Incident Reporting and Notification

Date of Incident	Time of Incident	Reported or Found By	Organization/Company Name	Phone

Substance / Material Involved	Amount Released *(Estimated)*

Location of Incident *(Include Facility Number)*

Environmental Impact *(Check all that apply) (If Other, please explain)*

- ☐ Stormwater Ditch
- ☐ Paved Area
- ☐ Air Emission
- ☐ Stormwater Sewer
- ☐ Grass/Soil
- ☐ Direct Discharge to Surface Water body
- ☐ Domestic Sewer
- ☐ Secondary Containment
- ☐ Abandoned Waste/Materials
- ☐ Other (Explain below)

Description of Incident *(Explain)*

Cause of Incident if Known *(Check all that apply and provide details below)*

☐ Equipment Failure ☐ Operator Error ☐ Transportation Accident ☐ Unknown ☐ Found on Station ☐ Other

Action Taken to Contain Incident and Clean-up *(Explain)*

Notifications Made

Call: ☐ 911 ☐ NASA Environmental Spill Line (867-9005) ☐ Other (Explain below)

Was the spill cleaned-up or contained within 24 hours? _____ Cleaned-up By _____

DO NOT WRITE BELOW THIS LINE - NASA ENVIRONMENTAL OFFICE USE ONLY

Material Identified As _____ ☐ Unable to Identify

Clean-up By _____ ☐ No Clean-up Required ☐ Clean-up Required

Follow-up Assigned to _____ ☐ No Follow-up Required

Notifications: ☐ FDEP ☐ Brevard County ☐ SJRWMD ☐ NRC ☐ SWP ☐ NASA HQ ☐ RQ

Comments/Followup

Closed	Incident Reviewed By (Name/Organization)	Signature	Date

KSC FORM 21-555V2 NS (REV. 10/12) PREVIOUS EDITIONS ARE OBSOLETE

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KSC POLLUTION INCIDENT REPORTING AND NOTIFICATION FORM 21-555V2 INSTRUCTIONS

All releases must be reported immediately to 911 from a KSC phone or 321-867-7911 from a cell phone

A **Hazardous Material (HAZMAT)** is defined as any element, compound, mixture, solution or substance listed in 49 CFR 172.101, or 40 CFR 302.4, including untreated sewage, petroleum products and by-products. A HAZMAT release is the spilling, releasing, discharging, placing, percolating, draining, pumping, leaking, seeping, emitting, disposing, bypassing or other escaping of a hazardous material into the air, water, subsurface water or onto the ground.

Releases at KSC are reported via 911 to the Protective Services Control Center (PSCC) for emergency response operations and/or environmental reporting purposes. If the caller is unsure if the spill is non-emergency or emergency, the call will be treated as an emergency. The spill team will "NOT" respond until 911 has been notified. The caller reporting the release to 911 shall additionally report the release to the EAB by calling the dedicated pollution incident release reporting number 867-9005 or by email at KSC-DL-NASA-Env-Spill@mail.nasa.gov

All releases at KSC that do not meet the reporting exemptions listed below shall be documented using the KSC Pollution Incident Reporting and Notification Form (PIR), KSC Form 21-555V2.

1. Small amounts (4 ounces or less) of hazardous materials released inside the facility on impervious surfaces that are immediately cleaned up, do not migrate out of the facility, and do not reach soil, sediment, groundwater, or surface water. Floors with cracks, expansion joints, drains, etc. are not considered "impervious surfaces." This exemption does not apply to spills or releases requiring assistance from the KSC post-emergency spill clean-up team.

2. Releases of hazardous materials (vapors or liquids) 4 ounces or less, that occur during normal operations or scheduled activities (e.g. drips from a hose disconnection) as long as they are immediately cleaned up and do not reach soil, sediment, groundwater, or surface water. This exemption does not apply to spills or releases requiring assistance from the KSC post-emergency spill clean-up team.

3. Discharges or releases covered by a permit or discharge authorization as long as the release meets the permit or discharge authorization conditions/limits.

4. Any releases of major atmospheric gases (nitrogen and oxygen) or non-radioactive isotopes of noble gases (helium, neon, argon, etc.)

5. Potable water or sewage releases. The Institutional Services Contract (ISC) shall submit malfunction reports to the NASA EAB for accidental releases associated with the KSC potable water and domestic wastewater systems.

Within three working days of the release, the discoverer of the release, the organization reporting the release or the responsible organizations environmental office shall submit a PIR (KSC Form 21-555V2) as completely as possible based on the best available knowledge of the release.

The KSC Form 21-555V2 is an electronic form that can be filled out, saved and submitted electronically by email to the KSC Environmental Assurance Branch at KSC-DL-NASA-Env-Spill@mail.nasa.gov. When the form cannot be submitted electronically, it should be faxed to 321-867-4446. The PIR will be reviewed and dispositioned by the KSC Environmental Assurance Branch staff. A copy of the form will be returned to the submitter indicating the need for additional information or follow-up actions. The returned PIR is the reporting organization's copy of record documenting that the PIR has been reviewed by NASA.

PIR Information Requirements:

1. **Date of Incident**: Enter the actual or estimated date of the pollution incident in mm/dd/yyyy. If a small release occurring over many days is discovered the date and time should be estimated and an explanation provided in the "Description of Incident".

2. **Time of Incident**: Enter the actual or estimated time of the release in standard format 00:00 AM or PM.

3. **Reported By**: Enter the name of the individual submitting the KSC Form 21-555V2. If no single individual is responsible for submitting the form, list the person most familiar with the spill or release.

4. **Organization/Company Name**: Enter the organization or company name of the individual submitting the KSC Form 21-555V2.

5. **Phone**: Enter the telephone number of the individual submitting the KSC Form 21-555V2.

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FORM 21-555V2 INSTRUCTIONS CONTINUED

6. **Substance/Material Involved**: Enter the substance or material that was released. An example may be: Hydraulic Fluid (01657 Rondo Oil HD 68) or Black Beauty & StarBlast Sand Blast Media Contaminated W/Lead or Methyl trimethoxysilane MSDS# 4132750.

7. **Amount Released**: Enter the actual or approximate amount of the substance or material released. Quantity entered should be in US Units. An example may be: 10 fl oz, 1/2 pint, 5 gal, 50 lbs. "Unknown" is not an acceptable entry.

8. **Location of Incident**: Enter the location of the release by the KSC or CCAFS Facility Number and provide a brief, complete description of the location. An example may be: H2-1198, Jay Jay Railroad Bridge trestle way approximately 500 ft. from west side land approach; or CCAFS 66242, West Wash in the Hangar AF complex next to the fence approximately 100 yards from the Indian River Lagoon. Additional specific information not included on the PIR Form can be faxed to 321-867-4446.

9. **Environmental Impact**: Check applicable box or boxes that the release affected. If the "Other" box is selected you must provide a brief, complete explanation.

10. **Description of Incident**: Provide a brief, complete description of the release. An example may be: A mowing tractor experienced a leaking hydraulic line and oil was spread over a large area of grass, and some on the pavement. The operator shut down the machine when he became aware of the leak.

11. **Cause of Incident**: Check applicable box or boxes for the cause of the incident (if known). Provide a brief, complete description of the cause. An example description may be: The inner tank leaked due to the vibration of the crawler during roll-out to the Pad. The exterior tank plug was faulty and the diesel fuel leaked onto the deck of Launcher Platform.

12. **Action Taken to Contain Incident and Clean-up**: Provide a brief, complete description of the actions taken to contain and clean-up the spill. Containment is defined as methods/actions taken to prevent or reduce the impact of the release. An example may be: The KSC Spill Team responded and cleaned up the spill. Approximately 30 cubic yards of grass and soil was excavated and disposed of with like waste. Additionally, absorbent was utilized in an effort to remove oil from the pavement. An absorbent boom was installed across the ditch to prevent any contaminate release into surface waters if we should get a heavy rain over the next few days.

13. **Notifications Made**: Check what notifications were made. If Other, please explain. An example maybe: Safety, Department Management, Project/Program Manager.

14. **Was the Spill Cleaned-up or Contained Within 24 Hours**: Select Yes or No.

15. **Cleaned-up By**: Enter the Organization or Company who cleaned-up the release. An example may be: KSC Spill Response Team or Utilities Maintenance Technicians.

The shaded area which states **DO NOT WRITE BELOW THIS LINE** is for NASA Environmental to fill-in. The submitter of the KSC Form 21-555V2 should check the information on the form for completeness before emailing or faxing.

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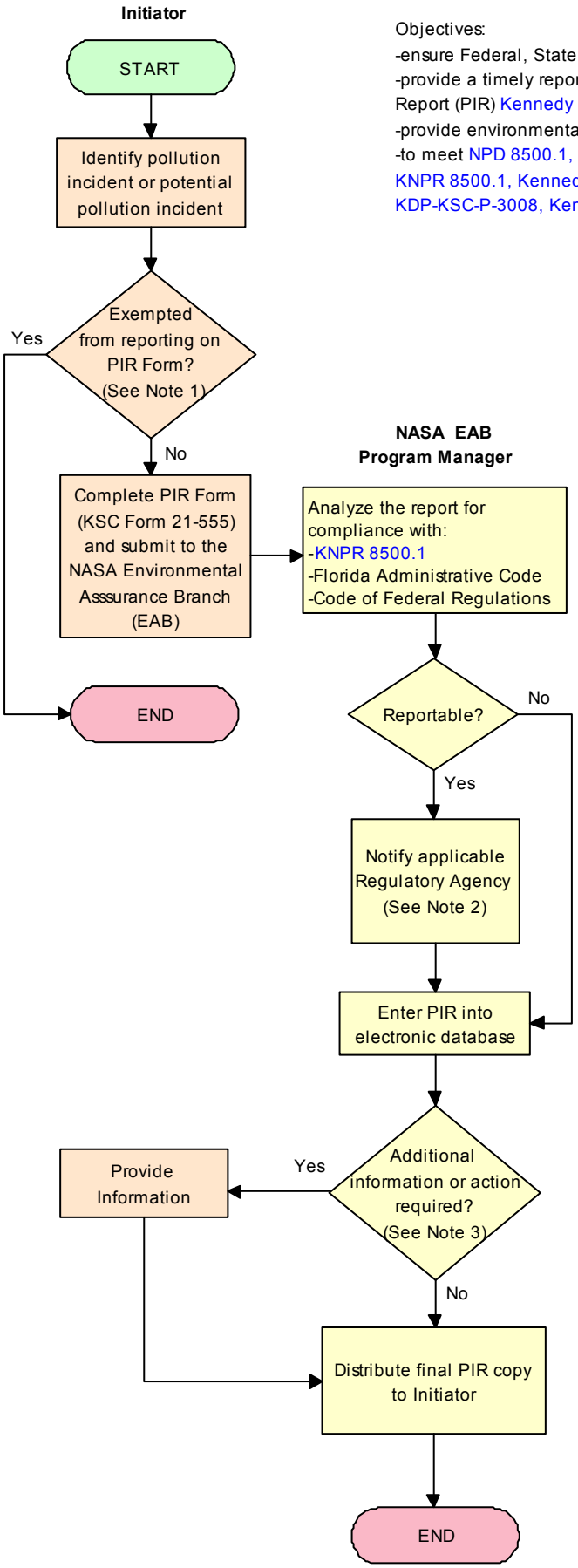
KSC POLLUTION INCIDENT REPORT (PIR)

KDP-KSC-P-1728
Rev. D

Objectives:
-ensure Federal, State and Agency environmental requirements are met
-provide a timely reporting channel to NASA Environmental Assurance Branch through Pollution Incident Report (PIR) Kennedy Space Center (KSC) Form 21-555
-provide environmental incident data to Center Operations management
-to meet NPD 8500.1, NASA Environmental Managment,
KNPR 8500.1, Kennedy Space Center Environmental Requirements, and
KDP-KSC-P-3008, Kennedy Space Center (KSC) Hazardous Materials Emergency Response

Approval: _____
Director, Center Operations



Note 1: All releases that do not meet the reporting exemptions listed below shall be reported using the KSC Pollution Incident Reporting and Notification (PIR) Form (KSC Form 21-555). The PIR form is an electronic form at:
FileNet http://kscboc-forms/KSCForms2/ref/KSC28-1010V2.itr
that can be filled out and submitted electronically by email to the NASA EAB at: ksc-dl-nasa-env-spill@mail.nasa.gov (Global Address List: KSC-DL-NASA-Env-Spill). If the form cannot be submitted electronically, it should be faxed to 321-867-5619.

1. Small amounts (4 ounces or less) of hazardous materials released inside a facility on impervious surfaces that are immediately cleaned up, do not migrate out of the facility, and do not reach soil, sediment, groundwater, or surface water. Floors with cracks, expansion joints, drains, etc. are not considered "impervious surfaces". This exemption does not apply to spills or releases requiring assistance from the KSC post-emergency spill clean-up team.

2. Releases of hazardous materials (vapors or liquids) 4 ounces or less, that occur during normal operations or scheduled activities (e.g. drips from a hose disconnection) as long as they are immediately cleaned up and do not reach soil, sediment, groundwater, or surface water. This exemption does not apply to spills or releases requiring assistance from the KSC post-emergency spill clean-up team.

3. Discharges or releases covered by a permit or discharge authorization as long as the release meets the permit or discharge authorization conditions/limits.

4. Any releases of major atmospheric gases (nitrogen and oxygen) or non-radioactive isotopes of noble gases (helium, neon, argon, etc.).

5. Potable water or sewage releases. The Institutional Services Contract (ISC) shall submit malfunction reports to the NASA EAB for accidental releases associated with the KSC potable water and domestic wastewater systems.

Note 2: Regulatory Agency notification is made immediately by phone if a release is above the Federal or State limits. This is identified as a reportable quantity (RQ). If follow-up is required a written report will be submitted.

Note 3: May consist of photos, spill response, corrective action report, cleanup and remedial action reports.

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APPENDIX D

FDEP Incident Notification Form & Instruction

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DEP Form # 62-761.900(6)

Form Title Incident Notification Form

Effective Date: July 13, 1998

Incident Notification Form

PLEASE PRINT OR TYPE

Instructions are on the reverse side. Please complete all applicable blanks

1. Facility ID Number (if registered):_____ **2. Date of form completion**:_____

3. General information

Facility name:_____
Facility Owner or Operator: _____
Contact Person:_____Telephone number: ( )_____County: _____
Facility mailing address: _____
Location of incident (facility street address):_____
Latitude and Longitude of incident (If known.)_____

4. Date of Discovery of incident:_____month/day/year

5. Monitoring method that indicates a possible release or an incident: (check all that apply)

[ ] Liquid detector (automatic or manual)
[ ] Vapor detector (automatic or manual)
[ ] Tightness test
[ ] Pressure test
[ ] Breach of integrity test
[ ] Visual observation
[ ] Groundwater samples
[ ] Monitoring wells
[ ] Internal inspection
[ ] Odors in the vicinity
[ ] Automatic tank gauging
[ ] Manual tank gauging
[ ] Closure
[ ] Inventory control
[ ] Statistical Inventory Reconciliation
[ ] Groundwater analytical samples
[ ] Soil analytical tests or samples
[ ] Other_____

6. Type of regulated substance stored in the storage system: (check one)

[ ] Diesel
[ ] Gasoline
[ ] Heating oil
[ ] Used\waste oil
[ ] Aviation gas
[ ] Jet fuel
[ ] New/lube oil
[ ] Kerosene
[ ] Other _____
[ ] Hazardous substance - includes CERCLA substances, pesticides, ammonia, chlorine, and their derivatives, and mineral acids.
(write in name or Chemical Abstract Service (CAS) number)_____

7. Incident involves or originated from a: (check all that apply)

[ ] Tank
[ ] Unusual operating conditions
[ ] Dispensing equipment
[ ] Pipe
[ ] Overfill protection device
[ ] Piping sump
[ ] Release detection equipment
[ ] Secondary containment system
[ ] Other
[ ] Dispenser Liners
[ ] Loss of >100 gallons to an impervious surface other than secondary containment
[ ] Loss of >500 gallons within secondary containment

8. Cause of the incident, if known: (check all that apply)

[ ] Overfill (<25 gallons)
[ ] Spill (<25 gallons)
[ ] Theft
[ ] Corrosion
[ ] Faulty Probe or sensor
[ ] Human error
[ ] Installation failure
[ ] Other_____

9. Actions taken in response to the incident: _____

_____
_____
_____

10. Comments: _____

_____
_____
_____

11. Agencies notified (as applicable):

[ ] Fire Department.
[ ] Local Program
[ ] DEP (district/person)

12. To the best of my knowledge and belief, all information submitted on this form is true, accurate, and complete.

_____
Printed Name of Owner, Operator or Authorized Representative

_____
Signature of Owner, Operator or Authorized Representative.

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Instructions for completing the Incident Notification Form

This form must be completed to notify the County of all incidents, or of the following suspected releases:

1. A failed or inconclusive tightness, pressure, or breach of integrity test,
2. Internal inspection results, including perforations, corrosion holes, weld failures, or other similar defects that indicate that a release has occurred.
3. Unusual operating conditions such as the erratic behavior of product dispensing equipment, the sudden loss of product from the storage tank system, or any unexplained presence of water in the tank, unless system equipment is found to be defective but not leaking;
4. Odors of a regulated substance in surface or groundwater, soils, basements, sewers and utility lines at the facility or in the surrounding area;
5. The loss of a regulated substance from a storage tank system exceeding 100 gallons on impervious surfaces other than secondary containment, driveways, airport runways, or other similar asphalt or concrete surfaces;
6. The loss of a regulated substance exceeding 500 gallons inside a dike field area with secondary containment; and
7. A positive response of release detection devices or methods described in Rule 62-761.610, F.A.C., or approved under Rule 62-761.850, F.A.C. A positive response shall be the indication of a release of regulated substances, an exceedance of the Release Detection Response Level or a breach of integrity of a storage tank system.

If the investigation of an incident indicates that a discharge did not occur (for example, the investigation shows that the situation was the result of a theft or a malfunctioning electronic release detection probe), then a letter of retraction should be sent to the County within fourteen days with documentation that verifies that a discharge did not occur. If within 24 hours of an incident, or before the close of the County's next business day, the investigation of the incident does not confirm that a discharge has occurred, an Incident Report Form need not be submitted.

A copy of this form must be delivered or faxed to the County within 24 hours of the discovery of an incident, or before the close of the next business day. It is recommended that the original copy be sent in the mail. If the incident occurs at a county-owned facility, a copy of the form must be faxed or delivered to the local DEP District office.

DEP District Office Addresses:

Northwest District
160 Governmental Center
Pensacola FL. 32501-5794
Phone: 850-595-8360
FAX: 850-595-8417

Northeast District
7825 Baymeadows Way Suite B 200
Jacksonville FL. 32256-7590
Phone: 904-488-4300
FAX: 904-488-4366

Central District
3319 Maguire Blvd. Suite 232
Orlando, FL. 32803-3767
Phone: 407-894-7555
FAX: 407-897-2966

Southwest District
3804 Coconut Palm Dr.
Tampa FL. 33619-8218
Phone: 813-744-6100
FAX: 813-744-6125

South District
2295 Victoria Ave. Suite 364
Ft. Myers FL. 33901-2549
Phone: 813-332-6975
FAX: 813-332-6969

Southeast District
400 N. Congress Ave.
West Palm Beach, FL. 33416-5425
Phone: 561-681-6600
FAX: 561-681-6790

(02/01/98)

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APPENDIX E

References:

KDP-KSC-P-3008 Rev. A-1 Hazardous Material Emergency Response Plan

KNPR 8715.2 Comprehensive Emergency Management Plan (hyperlink only)

40 CFR 112 Oil Pollution Prevention (hyperlink only)

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KENNEDY SPACE CENTER

KENNEDY DOCUMENTED PROCEDURE KDP-KSC-P-3008

HAZARDOUS MATERIALS EMERGENCY RESPONSE

_____
Director, John F. Kennedy Space Center

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APPENDIX B. **ACRONYMS AND ABBREVIATIONS**

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1. PURPOSE

This document is intended for the National Aeronautics and Space Administration (NASA) Kennedy Space Center (KSC) to ensure implementation of Kennedy NASA Procedural Requirements 8715.2, "Comprehensive Emergency Management Plan (CEMP)." This Kennedy Documented Procedure (KDP) provides employees emergency response procedures for the reporting, control, and cleanup of a hazardous material (HAZMAT) release. This KDP also provides guidance and direction on HAZMAT releases requiring external resources such as HAZMAT response teams and HAZMAT spill cleanup teams.

2. APPLICABILITY

This KDP applies to all KSC civil servants and KSC contractor organizations operating within the boundaries of KSC.

3. ROLES AND RESPONSIBILITIES

3.1 Discoverer

The discoverer (HAZMAT user or personnel frequenting HAZMAT areas) is required to be trained in hazardous communications, the proper identification of a HAZMAT leak or spill, and reporting the incident to the proper authorities.

3.2 Senior Fire Official

The Senior Fire Official is the highest ranking officer responding from the fire department with all the necessary authority, training, and credentials to direct, command, and control the situation at the scene.

3.3 Incident Commander (IC)

For HAZMAT response purposes, the IC is also the Senior Fire Official and is trained in accordance with KDP-KSC-P-3018, National Incident Management System Component Structure at KSC.

3.4 Spill Cleanup Team

The Spill Cleanup Team is operated by the Medical and Environmental Support Contract (MESC) and shall respond to the IC to perform cleanup of a HAZMAT spill or leak.

3.5 Protective Services Control Center (PSCC)

The PSCC is the 911 dispatch center and the location for receipt of all calls related to an emergency response. The PSCC supports the IC by dispatching the necessary equipment and personnel to contain and neutralize a HAZMAT release.

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3.6 Oil Spill Response Organization

The Oil Spill Response Organization is operated by Institutional Services Contract (ISC) and is the organization that maintains and uses specialized equipment to clean up oil spills on water.

4. EXECUTION

4.1 Implementation of this KDP commences when the release of a hazardous substance is detected. Each organization that handles, uses, or comes in contact with HAZMATs shall develop ancillary plans and procedures to be implemented when there is a HAZMAT incident within their area of responsibility. The required HAZMAT response process is depicted in Appendix A, Hazardous Materials Emergency Response. When there is a release of a hazardous material, the discoverer shall:

4.1.1 Verbally alert others in the area.

4.1.2 Activate emergency alarms, if appropriate.

4.1.3 Call 911 for emergency and nonemergency release.

4.1.4 Isolate and contain any spillage that can be accomplished safely (nonflammable and nontoxic chemicals only).

4.1.5 Proceed to the marshalling area if the release involves toxic, explosive, or flammable chemicals, unidentified HAZMATs or hazardous wastes, or if personal safety is jeopardized in any manner.

4.1.6 Assist in safe evacuation of personnel without risking personal safety.

4.1.7 Provide the following information to the 911 dispatcher, if known or can reasonably be determined:

- Name of person reporting release.
- Release location.
- Number of injured personnel and nature of injuries.
- Substance released.
- Amount released (estimated).
- Rate substance currently releasing (estimated).
- Time release occurred (estimated).
- Extent to which release has traveled and any other pertinent information.

4.1.8 Advise the Senior Fire Official on the specifics at the release site.

4.1.9 Remain with the Senior Fire Official to provide information or assistance until dismissed.

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4.1.10 Notify immediate supervisor of HAZMAT incident.

4.2 The IC shall implement the 8-step process for a HAZMAT response, outlined as follows:

4.2.1 Step 1 – Site Evaluation and Management.

1. IC establishes on-scene command post.
2. IC directs MESC Environmental Health response.
3. IC activates follow-on elements, such as cleanup and recovery, as required.
4. ISC Duty Office notifies appropriate agencies, e.g., Port Authority, Coast Guard, NASA Emergency Management Officer, and KSC Environmental Program Office, of HAZMAT incident.

4.2.2 Step 2 – HAZMAT Identification.

1. IC forms Oil/HAZMAT Reconnaissance Team.
2. Environmental Health identifies hazards.

4.2.3 Step 3 – HAZMAT Evaluation.

IC evaluates hazards and risks reported by Reconnaissance Team

4.2.4 Step 4 – Personal Protective Equipment Assessment.

IC consults with Environmental Health and specifies level of personal protective equipment.

4.2.5 Step 5 – Emergency Response Planning.

1. IC identifies options and hazards with appropriate emergency support functions.
2. IC implements most appropriate option.
3. IC evaluates need for additional resources available through Emergency Operations Center.
4. IC develops a plan that:
   - Reflects operational priorities.
   - Includes strategy and tactics for the prevention of fire, explosion, and loss of life.
   - Includes strategy and tactics for the protection of environmentally sensitive shoreline areas.
   - Includes strategy and tactics for the containment or capture of spill.
   - Includes strategy and tactics for the isolation of facilities and vessels from spill effects.

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4.2.6 Step 6 – Containment and Control Operations.

1. Conducted by Fire Department HAZMAT Team.
2. Marine Patrol to provide surveillance and perimeter security as required.

4.2.7 Step 7 – Cleanup and Decontamination.

1. Response phase ends.
2. IC demobilizes emergency response assets.
3. IC transfers command and control to cleanup agency (Spill Cleanup Team).
4. Cleanup operations include:
   - Operation of skimmers and vacuum truck.
   - Deployment and retrieval of sorbents.
   - Removal of residue.
   - Temporary storage of residue.
   - Cleanup of equipment.

4.2.8 Step 8 – Termination, Recovery, and Reporting.

1. MESC Environmental Services prepares pollution incident reports for KSC and forwards to NASA Environmental Program Office. Pollution incident reports are also submitted to the NASA Emergency Management Officer, as requested.
2. All media releases will be coordinated and released by KSC Public Affairs.
3. The KSC Environmental Assurance Branch shall conduct all regulatory reporting to state and Federal environmental agencies.

4.3 HAZMAT Spills on Water

Operational priorities in order of precedence for a spill-on-water response shall include:

1. The prevention of fire or explosion.
2. The prevention of loss of life.
3. The protection of environmentally sensitive shoreline areas.
4. The containment and capture of the spill.
5. The isolation of facilities and vessels from the effects of the spill.
6. Compliance with Environmental Protection Agency and Florida law.

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7. Deploying containment equipment on the water within one hour after discovery of the release.
8. Providing the capability within a reasonable time period to contain, control, clean up, and dispose of up to 10,000 gallons of pollutants. (Note: Any amount over 10,000 gallons will require assistance from a service outside of KSC.)

5. TRAINING REQUIREMENTS

5.1 Hazardous Waste Operations and Emergency Response Standard Training

In addition to the National Incident Management System training required by KDP-KSC-P-3018, KSC emergency response organizations shall also comply with Hazardous Waste Operations and Emergency Response Standard training (see Code of Federal Regulations (CFR) 29, Part 1910.120(q)). The extent and depth of Hazardous Waste Operations and Emergency Response Standard training depends on an employee's function during a HAZMAT incident and the operation zones where the function is performed. The training levels in 29 CFR 1910.120(q) are listed as follows:

- First Responder Awareness Level (basic knowledge, how to identify and report).
- First Responder Operational Level (warm zone, personnel decontamination).
- HAZMAT Technician Level (Fire Department, HAZMAT team, propellant teams, and pad systems mechanics).
- HAZMAT Specialists Level (Environmental Health).
- IC Level (Senior Fire Officials and ICs).

NOTE: Most responders do not enter the cordon (cold, warm, or hot zone) and require only Hazardous Communications Level or First Responder Awareness Level training.

5.2 HAZMAT Exercises

5.2.1 An annual HAZMAT exercise shall be performed demonstrating all the levels of the Incident Management System.

5.2.2 Exercises shall be conducted in a hazardous payload facility or flight hardware processing facility and incorporate modes of transportation and carriers utilized to respond to the scene of the incident. The required exercises may be tabletop or functional in nature.

6. DEFINITIONS

6.1 HAZMAT

HAZMAT is considered any element, compound, mixture, solution, or substance listed in 49 CFR 172.101, or 40 CFR 302.4, including untreated sewage, petroleum products, by-products, and hypergolic propellants.

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6.2 Hypergolic Propellant

Hypergolic propellants are defined as any substance containing any of the following: anhydrous hydrazine; monomethylhydrazine; aerozine-50, a 50:50 mixture by volume of anhydrous hydrazine and unsymmetrical dimethylhydrazine; and nitrogen tetroxide.

6.3 HAZMAT Release

A HAZMAT release is defined as the spilling, discharging, placing, percolating, draining, pumping, leaking, seeping, emitting, disposing, bypassing, or other escaping of a HAZMAT into the air, water, subsurface water, or onto the ground.

NOTE: All HAZMAT releases must be reported via 911 to the PSCC for environmental reporting purposes and emergency response operations. If caller is unsure if the release is nonemergency or emergency, the call will be treated as an emergency. The HAZMAT team will not respond until PSCC (911) has been notified. (See Appendix A.)

6.4 Planned Release

A planned release is a scheduled event (e.g., “quick disconnect during fueling operations”) where relatively small amounts of liquid or vapors are intentionally discharged into the environment and are covered by permits and written operational procedures. A 911 call is not required. Notification should be made to the KSC Environmental Assurance Branch for appropriate reporting determination for releases greater than 4 ounces.

6.5 NonEmergency Release

A nonemergency release is any release that does not pose a risk to health and safety of occupants or an environmental emergency that can be contained and cleaned up within the capability of the reporting organization. A nonemergency 911 call is required. The PSCC (911) shall contact fire services, and they shall respond at their determination.

6.6 Emergency Release

An emergency release is any unplanned release or condition resulting from an accidental or intentional spill or accumulation of HAZMAT in concentrations or quantities sufficient to pose a substantial, actual, or potential hazard to human health, mission impact, property, or the environment. A 911 call is required when cleanup and recovery is beyond the capability of the reporting organization.

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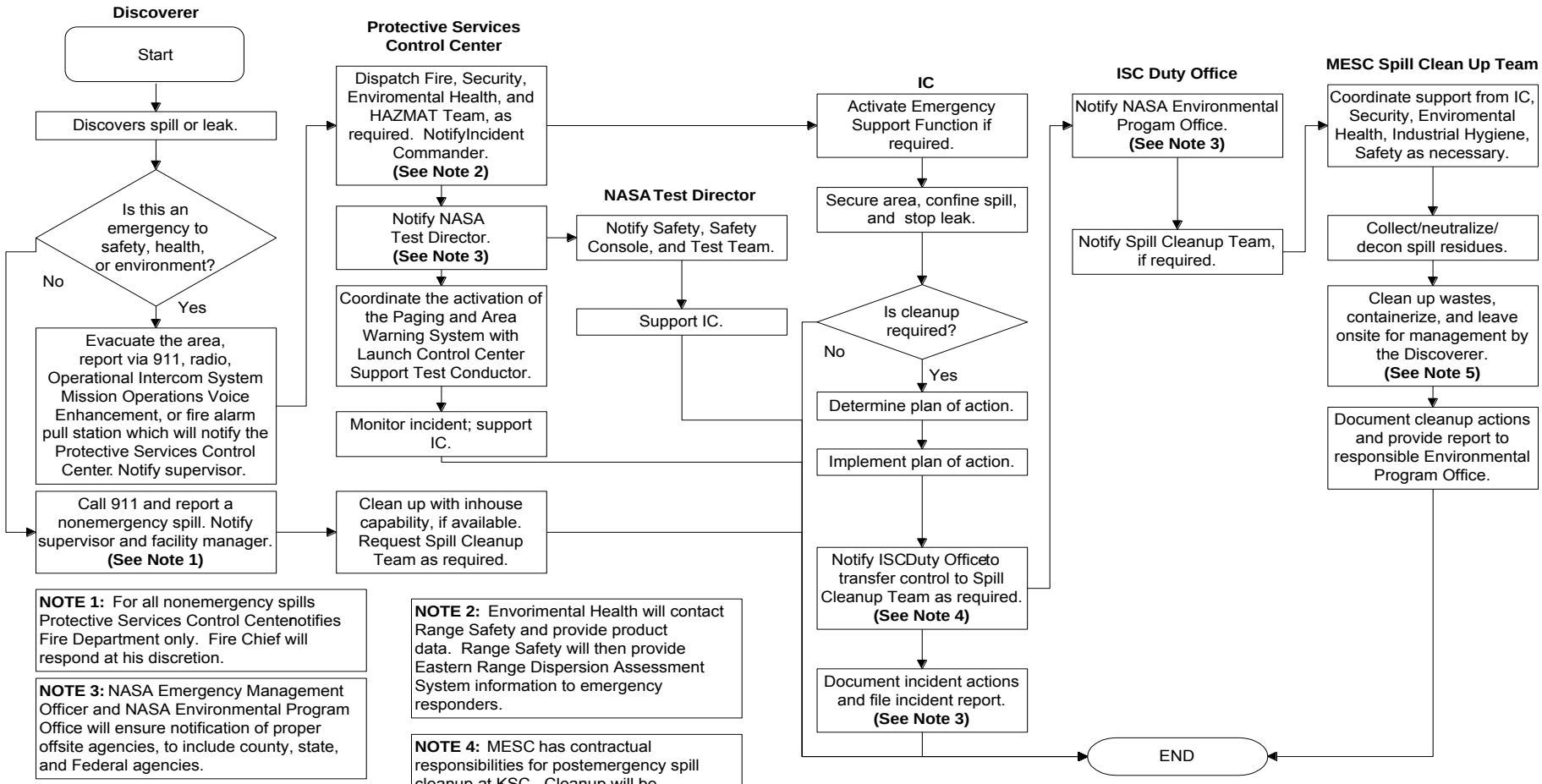
APPENDIX A

HAZARDOUS MATERIALS EMERGENCY RESPONSE



NOTE 1: For all nonemergency spills Protective Services Control Centenotifies Fire Department only. Fire Chief will respond at his discretion.

NOTE 2: Envorimental Health will contact Range Safety and provide product data. Range Safety will then provide Eastern Range Dispersion Assessment System information to emergency responders.

NOTE 3: NASA Emergency Management Officer and NASA Environmental Program Office will ensure notification of proper offsite agencies, to include county, state, and Federal agencies.

NOTE 4: MESC has contractual responsibilities for postemergency spill cleanup at KSC. Cleanup will be accomplished in accordance with applicable MESC procedures.

NOTE 5: Cleanup wastes from unaccountable sources will be transferred to permitted onsite storage area on Kennedy Space Center.

HAZMAT	**Hazardous Materials**
IC	**Incident Commander**
ISC	**Instutitutional Services Contract**
MESC	**Medical and Envroimental Support Contractor**
NASA	**National Aeronautics and Space Administration**

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APPENDIX B

ACRONYMS AND ABBREVIATIONS

CEMP	Comprehensive Emergency Management Plan
CFR	Code of Federal Regulations
HAZMAT	Hazardous Material
IC	Incident Commander
ISC	Institutional Services Contract
KDP	Kennedy Documented Procedure
KSC	Kennedy Space Center
MESC	Medical and Environmental Support Contract
NASA	National Aeronautics and Space Administration
PSCC	Protective Services Control Center

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APPENDIX F

KSC Oil-Filled Transformer Inventory

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Oil Transformer Spreadsheet

9/6/2013

Sub Name	Unit No.	Location	Additional Descrip	KVA	Primary Voltage	Sec Voltage	Serial#	Manuf	Gal	Type oil	visual inspection	Equipment Description	Age	Install date	Comments
SS 1040B	LBE15002	J7-0337	PAD 39B	1500	13.8KV	480V	0126002177	COOPER	473	oil	GOOD	SS 1040B 2000KVA 13.8KV/480V PDMT	10	2003	N/C
SS 1040A	LBE15001	J7-0337	PAD 39B	1500	13.8KV	480V	0126002176	COOPER	473	oil	GOOD	SS 1040A 2000KVA 13.8KV/480V PDMT	10	2003	N/C
SS 1021A	LYE03001	J7-0182	PAD 39B LOX PAD	500	13.8KV	480V	0326000286	COOPER	253	oil	FAIR	SS 1021A 500KVA 13.8KV/480V PDMT	10	2003	N/C
SS 1023A	GLE01001	J7-0686	GATE HOUSE PAD B	500	13.8KV	480V	0337003268	COOPER	253	oil	GOOD	SS 1023A 500KVA 13.8KV/480V PDMT	10	2003	N/C
SS 1030	LYE02001	J7-0182	LOX FACILITY PAD B	500	13.8KV	480V	0326000288	COOPER	253	oil	FAIR	SS 1030 500KVA 13.8KV/480V PDMT	10	2003	N/C
SS 1023B	GLE02001	J7-0686	GATE HOUSE PAD B	500	13.8KV	480V	0337003269	COOPER	253	oil	GOOD	SS 1023B 500KVA 13.8KV/480V PDMT	10	2003	N/C
SS 1021B	LYE04001	J7-0182	PAD 39B LOX PAD	500	13.8KV	480V	0326000287	COOPER	253	oil	FAIR	SS 1021B 500KVA 13.8KV/480V PDMT	10	2003	N/C
SS 950B	PTE10001	J8-1708	PAD 39A	1500	13.8KV	480V	04J123340	CUTLER-HAMMER	459	oil	GOOD	SS 950B 1500KVA 13.8KV/480V PDMT	8	2005	N/C
SS 157	CIE01001	M6-0493	IND AREA SUP BLD	750	13.2KV	208V	0537000289	COOPER	99	oil	GOOD	SS 157 750KVA 13.2KV/208V PDMT	8	2005	N/C
SS 1052A	LBE08001	J7-0337	PAD 39B	1500	13.8KV	480V	0326001650	COOPER	497	oil	GOOD	SS 1052A 1500KVA 13.8KV/480V PDMT	9	2004	N/C
SS 1052B	LBE09001	J7-0337	PAD 39B	1500	13.8KV	480V	0326001649	COOPER	497	oil	GOOD	SS 1052B 1500KVA 13.8KV/480V PDMT	9	2004	N/C
SS 950A	PTE11001	J8-1708	PAD 39A	1500	13.8KV	480V	04J123307	CUTLER-HAMMER	459	oil	GOOD	SS 950A 1500KVA 13.8KV/480V PDMT	8	2005	N/C
SS 101A	CLE01001	M7-1354	PAYLOAD HAZARDOUS SERVICING BLDG S PAD	2000	13.2KV	480V	PDT-1596-0101	BROWN	198	oil	FAIR	SS 101A 2000KVA 13.2KV/480V BROWN	28	1985	N/C
SS 101B	CLE02001	M7-1354	PAYLOAD HAZARDOUS SERVICING BLDG S PAD	2000	13.2KV	480V	PDT1596-0102	BROWN	198	oil	FAIR	SS 101B 2000KVA 13.2KV/480V BROWN	28	1985	scheduled for replacement
SS 820B	LCE06001	K6-0900	LAUNCH CONTROL CENTER	1500	13.8KV	480V	0026001708	COOPER	543	oil	GOOD	SS 820B 1500KVA 13.8KV 480V S#0026001708 COOPER	14	1999	N/C
SS 1053	LBE05001	J7-0337	PAD 39B	1000	13.8KV	480V	0126002172	COOPER	388	oil	GOOD	SS 1053 1000KVA 13.8KV/480V	10	2003	N/C
SS 1029A	RFE01001	J7-0432	PAD B-REMOTE AIR	500	13.8KV	480V	0326000277	COOPER	253	oil	FAIR	SS 1029A 500KVA 13.8KV/480V PDMT	9	2004	N/C
SS 820A	LCE05001	K6-0900	LAUNCH CONTROL CENTER	1500	13.8KV	480V	0026001706	COOPER	543	oil	GOOD	SS 820A 1500KVA 13.8KV 480V S#0026001706 COOPER	14	1999	N/C
SS 833A	TEE01001	K6-1193	REPEATER BUILDING	300	13.2KV	480V	PFA-0001	CUTLER-HAMMER	163	oil	GOOD	SS 833A 300KVA 13.2KV 480V S#PFA-0001	13	2000	N/C
SS 833B	TEE02001	K6-1193	REPEATER BUILDING	300	13.2KV	480V	PFA-0002	CUTLER-HAMMER	90	oil	GOOD	SS 833B 300KVA 13.2KV 480V S#PFA-0002	13	2000	N/C
T3 (T3S2)	DRE01001	K6-0309	RUNWAY T3S2	45	4KV	208V	0537006886	COOPER	182	FR3	GOOD	T3 (T3S2) 45KVA 4KV/208V PDMT	8	2005	6/3/13 WILL BE EXCESSED / WILL NOT BE KEPT AS SPARE
T3 (T3S3)	DLE01001	J5-2000	MSBLS ELEVATION R/W 33 STA	45	4KV	208V	05370068867	COOPER	182	FR3	FAIR	T3 (T3S3) 45KVA 4KV/208V PDMT	8	2005	6/3/13 WILL BE EXCESSED / WILL NOT BE KEPT AS SPARE

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Oil Transformer Spreadsheet

Sub Name	Unit No.	Location	Additional Descrip	KVA	Primary Voltage	Sec Voltage	Serial#	Manuf	Gal	Type oil	visual inspection	Equipment Description	Age	Install date	Comments
SS 891	LCE09002	K6-0900	LAUNCH CONTROL CENTER	1500	13.8KV	480V	0026001707	COOPER	543	oil	GOOD	SS 891 1500KVA 13.8KV 480V S#0026001707 COOPER	14	1999	N/C
SS 117B	S1E02001	M7-0360	SSPF	3000	13.2KV	277/480V	SET-6511-0101	WESTINGHOUSE	301	Silicone	GOOD	USS 117B 3000KVA 13.2KV-480/277	20	1993	N/C
SS 118A	S1E03001	M7-0360	SSPF	3000	13.2KV	4160/2400V	SET-6648-0101	WESTINGHOUSE	301	Silicone	FAIR	USS 118A 3000KVA 13.2KV-4160/2400	20	1993	N/C
T2 ORSINO	MSE01002	M6-0996	ORSINO	15000	115KV	13.2KV	GM012209	WAUKESHA	5230	oil	GOOD	XFMR 2 115KV 15MVA S#GM012209 WAUKESHA	11	2002	N/C
T9 C5	EUE01009	K6-1141	C5A	18000	115KV	13.8KV	242710-94-2	KUHLMAN	4800	oil	FAIR	XFMR 9 MAIN 115/13.8KV KUHLMAN	18	1995	N/C
SS 118B	S1E04001	M7-0360	SSPF	3000	13.2KV	4160/2400V	SET-6682-0101	WESTINGHOUSE	301	Silicone	GOOD	USS 118B 3000KVA 13.2KV-4160/2400	20	1993	N/C
SS 1029B	RFE01002	J7-0432	PAD B-REMOTE AIR	500	13.8KV	480V	0326000278	COOPER	253	oil	GOOD	SS 1029B 500KVA 13.8KV/480V PDMT	9	2004	N/C
SS 117A	S1E01001	M7-0360	SSPF	3000	13.2KV	277/480V	SET-6501-0101	WESTINGHOUSE	301	Silicone	FAIR	USS 117A 3000KVA 13.2KV-480/277	20	1993	N/C
T10 C5	EUE01010	K6-1141	C5A	18000	115KV	13.8KV	242710-94-1	KUHLMAN	4800	oil	POOR	XFMR 10 MAIN 115/13.8KV KVHLMAN	18	1995	poor / visual noted / paint only
SS 109	FTE03001	M7-1061	HYPERGOL SUPPORT	750	13.2KV	277/480V	R277211	GE	142	oil	POOR	SS 109 750KVA 13200/480Y 277V GE	23	1990	poor / visual noted / paint only
SS 114	Q9E01001	M7-0777	TRANS / CANISTER FACILITY	1000	13.2KV	277/480V	PBL2552-0101	WESTINGHOUSE	192	oil	GOOD	SS 114 1000KVA 13.2KV-480/277V 3PH WEST	21	1992	N/C
SS 811B	VAE38001	K6-0848	VAB TWR F FL 32	1000	13.8KV	277/480V	E-693457J	GE	146	Silicone	FAIR	SS 811B 1000KVA 13.8/480/277V S#E693457J GE	47	1966	age only
SS 810A	VAE34001	K6-0848	VAB TWR F FL 10	750	13.8KV	277/480V	E-693456F	GE	125	Silicone	FAIR	SS 810A 750KVA 13.8/480/277V S#E693456F GE	47	1966	age only
SS 920A	RAE01001	J8-1753	Pad A Remote Air Intake Bld	500	13.8KV	480V	0137019804	COOPER	204	oil	GOOD	SS 920A 500KVA 13.8KV S#0137019804, COOPER	11	2002	N/C
SS 920B	RAE02001	J8-1753	Pad A Remote Air Intake Bld	500	13.8KV	480V	0137019803	COOPER	204	oil	GOOD	SS 920B 500KVA 13.8KV S#0137019803, COOPER	11	2002	N/C
SS 923	OXE03001	J8-1502	LOX FAC PAD A	300	13.8KV	480V	0137019464	COOPER	200	oil	GOOD	SS 923 300KVA 13.8KV S#0137019464, COOPER	11	2002	N/C
T3 (T3S5)	DJE01001	H5-2274	SLF	45	4KV	208V	0537006955	COOPER	182	FR3	FAIR	T3 (T3S5) 45KVA 4KV/208V PDMT	8	2005	6/3/13 WILL BE EXCESSED / WILL NOT BE KEPT AS SPARE
SS 2C	LOE04001	M6-0399	KSC HQ	750	13.2KV	277/480V	0537000380	COOPER	326	oil	GOOD	SS 2C 750KVA 13.2KV-480/277V OIL TYPE PDMT COOPER	8	2005	has numbering of 'SS 197' / has not been changed in MAXIMO as of 6/29/12
SS 807B	VAE22001	K6-0848	VAB TWR D FL 31	1000	13.8KV	277/480V	E-693457E	GE	146	Silicone	FAIR	SS 807B 1000KVA 13.8/480/277V S#E693457E GE	47	1966	11/9/12 / leak from valve reported
SS 806B	VAE20001	K6-0848	VABTWR D FL 10	1000	13.8KV	480V	E-693457B	GE	146	Silicone	FAIR	SS 806B 1000KVA 13.8KV 480V S#E693457B GE	47	1966	N/C
SS 821B	LCE04001	K6-0900	LAUNCH CONTROL CENTER	1000	13.8KV	480V	37014068	COOPER	2742	oil	GOOD	SS 821B 1000KVA 13.8KV 480V S#0037014068 COOPER	14	1999	N/C
T3 ORSINO	MSE01003	M6-0996	ORSINO	15000	115KV	13.2KV	GM012208	WAUKESHA	5230	oil	GOOD	XFMR 3 115KV 15MVA S#GM012208 WAUKESHA	11	2002	N/C
SS 829A	UAE08001	K6-0947	UTILITY ANNEX	10000	13.8KV	4160V	0526001932	COOPER	1163	oil	FAIR	SS 829A 10,000 KVA COOPER	7	2006	N/C
T4 (T4S4)	DKE02001	J5-0583	LIGHTING VAULT	45	4KV	208V	0537006958	COOPER	182	FR3	FAIR	T4 (T4S4) 45KVA 4KV/208V PDMT	8	2005	6/3/13 WILL BE EXCESSED / WILL NOT BE KEPT AS SPARE
T3 (T3S4)	DKE01001	J5-0583	MSBLS ELEVATION R/W 15 STA	45	4KV	208V	0537006957	COOPER	182	FR3	FAIR	T3 (T3S4) 45KVA 4KV/208V PDMT	8	2005	6/3/13 WILL BE EXCESSED / WILL NOT BE KEPT AS SPARE

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Oil Transformer Spreadsheet

Sub Name	Unit No.	Location	Additional Descrip	KVA	Primary Voltage	Sec Voltage	Serial#	Manuf	Gal	Type oil	visual inspection	Equipment Description	Age	Install date	Comments
SS B - M7-035	OCE03001	M7-0355	O&C PAD S OF BLDG	1500	13.2KV	2400V	E-689245A	GE	305	oil	FAIR	SS B 1500KVA 13.2 2400V S#E689245A GE	47	1966	de-energized / abandoned in place
SS D	OCE05001	M7-0355	O&C PAD S OF BLDG	500	13.2KV	480V	E-689240B	GE	90	oil	GOOD	SS D 500KVA 13.2/480V S#E689240B GE	47	1966	N/C
SS C M7-0355	OCE04001	M7-0355	O&C PAD S OF BLDG	1500	13.2KV	2400V	E-689245B	GE	305	oil	FAIR	SS C 1500KVA 13.2/2400V S#688749 GE	47	1966	de-energized / abandoned in place
SS 849	ARE01001	K6-0743	W OF BLDG	300	13.8KV	277/480V	M5800DTR	GE	130	oil	FAIR	SS 849 300KVA 13.8KV-480/277V OIL PDMT GE	27	1986	visual / paint only poor condition
SS 804B	VAE16001	K6-0848	VAB TWR C FL 10	750	13.8KV	277/480V	E693456C	GE	125	Silicone	FAIR	SS 804B 750KVA 277/480V S#E693456C GE	47	1966	scheduled for replacement
SS 1158	GME01001	J7-0689	OPS BLDG PAD B	500	13.8KV	480V	0237001481	COOPER	276	oil	FAIR	SS 1158 500KVA 13.8KV/480V PDMT	10	2003	N/C
SS 1167	UFE01001	J6-0393	CAMERA PAD-16	45	13.8KV	120/208V	P188766TUC	GE	205	oil	GOOD	SS 1167 45KVA 13.8KV-208/120V OIL TYPE PDMT GE	18	1995	N/C
SS 1054	WAE01001	J7-1388	INDUSTRIAL WATER PUMPING STATION	225	13.8KV	480V	CP0237008679	COOPER	201	oil	GOOD	SS 1054 225KVA 13.8KV-480V PDMT	11	2002	N/C
SS 1157	I5E01001	J8-2109	OPS BLDG PAD A	500	13.8KV	480V	0337001375	COOPER	248	oil	FAIR	SS 1157 500KVA 13.8KV/480V PDMT	10	2003	N/C
SS 925A	EEE01001	J8-1563	ELECT EQUIP BLDG. #1	500	13.8KV	480V	04J123078	CUTLER-HAMMER	231	oil	GOOD	SS 925A 500KVA 13.8KV/480V PDMT	8	2005	N/C
SS 926A	CBE01001	J8-1659	HPG STRG AREA	1000	13.8KV	480V	0126002170	COOPER	388	oil	GOOD	SS 926A 1000KVA 13.8KV/480V PDMT	10	2003	N/C
SS 925B	EEE02001	J8-1563	ELECT EQUIP BLDG. #1	500	13.8KV	480V	04J123251	CUTLER-HAMMER	231	oil	GOOD	SS 925B 500KVA 13.8KV/480V PDMT	8	2005	N/C
SS 926B	CBE02001	J8-1659	COMPRESSED AIR BLDG. HPG STRG AREA	1000	13.8KV	480V	0126002171	COOPER	388	oil	GOOD	SS 926B 1000KVA 13.8KV/480V PDMT	10	2003	N/C
SS 921A	OXE01001	J8-1502	LOX FAC PAD A	750	13.8KV	480V	97J339030	ABB	232	oil	FAIR	SS 921A 750KVA 13.8/480V S#97J339030 ABB	15	1998	N/C
SS 1145	OZE01001	J8-1821	BEACH TRACKING SITE, NORTH	150	13.8KV	480V	0237008440	COOPER	172	oil	GOOD	SS 1145 150KVA 13.8KV/480V S#0237008330	10	2003	N/C
SS 930A	PTE20002	J8-1708	PAD 39A	1500	13.8KV	480V	0326000306	COOPER	511	oil	GOOD	SS 930A 1500KVA 13.8KV/480V PDMT	9	2004	N/C
SS 824	BTE01001	K7-1005	BARGE TERMINAL FACILITY	225	13.8KV	480V	0237008680	COOPER	75	oil	FAIR	SS 824 225KVA 13.8KV/480V PDMT	10	2003	N/C
SS 1133A	M3E02001	K6-1094	PROCESSING CONTROL CENTER	3000	13.8KV	480V	SET6527-0101-2	WESTINGHOUSE	349	Silicone	POOR	SS 1133A 3000KVA 13.8KV/480V SILICONE WEST	22	1991	N/C
T1 ORSINO	MSE01001	M6-0996	ORSINO	15000	115KV	13.2KV	GM012210	WAUKESHA	5230	oil	GOOD	XFMR 1 115KV 15MVA S#GM012210 WAUKESHA	11	2002	N/C
SS 952A	PTE09001	J8-1708	PAD 39A W OF PTCR PAD	1500	13.8KV	480V	0326001648	COOPER	497	oil	GOOD	SS 952A 1500KVA 13.8KV/480V PDMT	8	2005	N/C
SS 1118	DOE03001	K7-0569	CONVERTER/ COMPRESSOR OPERATIONS BLDG.	750	13.8KV	480V	M154811	GE	145	oil	FAIR	SS 1118 PRI SW & XFMR 750KVA GE	26	1987	N/C
SS 952B	PTE08001	J8-1708	PAD 39A W OF PTCR PAD	1500	13.8KV	480V	0326001647	COOPER	497	oil	GOOD	SS 952B 1500KVA 13.8KV/480V PDMT	8	2005	N/C

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Oil Transformer Spreadsheet

Sub Name	Unit No.	Location	Additional Descrip	KVA	Primary Voltage	Sec Voltage	Serial#	Manuf	Gal	Type oil	visual inspection	Equipment Description	Age	Install date	Comments
SS 930B	PTE21002	J8-1708	PAD 39A PTCR E S RM103	1500	13.8KV	480V	0326000307	COOPER	511	oil	GOOD	SS 930B 1500KVA 13.8KV/480V PDMT	9	2004	N/C
SS 921B	OXE02001	J8-1502	LOX FAC PAD A	750	13.8KV	480V	126002146	COOPER	423	oil	GOOD	SS 921B 750KVA 13.8KV S#0126002146, COOPER	11	2002	N/C
C5 Sta Service	EUE10001	K6-1141	C5A SWYD BAY 10	45	13.8KV	277/480V	956001885	COOPER	89	oil	FAIR	XFMR STA.SER. SS1 45KVA 13.8KV-480/277V OIL TYPE PDMT COOPER	16	1997	N/C
SS 1127B	M1E02001	K6-1096	OPERATIONS SUPPORT BUILDING	1500	13.8KV	277/480V	P495244TND	GE	345	oil	FAIR	SS 1127B 1500KVA 13.8KV-277/480V 3PH GE	24	1989	6/22/12 leak @ drain port repaired / no concerns / 6/30/13 no reported leak
SS 1128B	M1E04001	K6-1096	OPERATIONS SUPPORT BUILDING	1500	13.8KV	277/480V	P495243TND	GE	345	oil	FAIR	SS 1128B 1500KVA 13.8KV-277/480V 3PH GE	24	1989	N/C
SS 1127A	M1E01001	K6-1096	OPERATIONS SUPPORT BUILDING	1500	13.8KV	277/480V	P495245TND	GE	345	oil	FAIR	SS 1127A 1500KVA 13.8KV-277/480V 3PH GE	24	1989	N/C
C5 Sta Service	EUE10002	K6-1141	C5A SWYD BAY 30	45	13.8KV	277/480V	956001884	COOPER	89	oil	FAIR	XFMR STA.SER. SS2 45KVA 13.8KV-480/277V OIL TYPE PDMT COOPER	16	1997	N/C
SS 860	ENE01001	J5-1198	SLF OLVS	300	13.8KV	208V	FF09274885	ATLANTIC POWER	254	oil	FAIR	SS 860 300KVA S#E693452 GE	31	1982	N/C
SS 1128A	M1E03001	K6-1096	OPERATIONS SUPPORT BUILDING	1500	13.8KV	277/480V	P495246TMD	GE	345	Silicone	GOOD	SS 1128A 1500KVA 13.8KV-277/480V 3PH GE	24	1989	N/C
SS 807A	VAE21001	K6-0848	VAB TWR D FL 31	1000	13.8KV	277/480V	E-693457D	GE	146	Silicone	FAIR	SS 807A 1000KVA 13.8/480/277V S#E693457D GE	47	1966	scheduled to remove
SS 1151	MZE01001	J6-0490	500 ft WT EQUIP BUILDING	75	13.8KV	277/480V	99V5037	VANTRAN	225	oil	FAIR	SS 1151 75KVA 13.8KV-480/277V 3P OIL TYPE PDMT VANTRAN	19	1994	N/C
SS 138A	CTE01001	M6-0138	COMM DIST & SW CENTER	750	13.2KV	480V	PEL-1510	CUTLER-HAMMER	267	oil	POOR	SS 138A 750 KVA 13.2KV 480V S#PEL-1510	14	1999	Paint corrosion reported / 6/30/13 / SME reported unit is stainless steel / no concern to unit
SS 132B	ICE06001	M6-0342	CIF	750	13.2KV	480V	PEG-0791	CUTLER-HAMMER	265	oil	FAIR	SS 132B 750 KVA 13.2/480V S#PEG-0791 CUT-HAM	14	1999	N/C
SS 131B	ICE02001	M6-0342	CIF	750	13.2KV	208V	PEG-0790	CUTLER-HAMMER	265	oil	GOOD	SS 131B 750 KVA 13.2/208V S#PEG-0790 CUT-HAM	14	1999	N/C
SS 138B	CTE02001	M6-0138	COMM DIST & SW CENTER	750	13.2KV	480V	PEL-1509	CUTLER-HAMMER	267	oil	POOR	SS 138B 750KVA 13.2KV 480V S#PEL-1509	14	1999	Paint corrosion reported / 6/30/13 / SME reported unit is stainless steel / no concern to unit
SS 131A	ICE01001	M6-0342	CIF	750	13.2KV	208V	PEG-0793	CUTLER-HAMMER	265	oil	GOOD	SS 131A 750 KVA 13.2/208V, S#PEG-0793, CUT-HAM	14	1999	N/C
SS 132A	ICE10001	M6-0342	CIF	750	13.2KV	480V	PEG-0792	CUTLER-HAMMER	265	oil	GOOD	SS 132A 750 KVA 13.2/480V S#PEG-0792 CUT-HAM	14	1999	N/C
SS 811A	VAE37001	K6-0848	VAB TWR E FL 11	1000	13.8KV	277/480V	E-693457H	GE	146	Silicone	FAIR	SS 811A 1000KVA 13.8/480/277V S#E693457H GE	47	1966	N/C
SS 1133B	M3E03001	K6-1094	PROCESSING CONTROL CENTER	3000	13.8KV	480V	SET6526-0101-1	WESTINGHOUSE	352	Silicone	FAIR	SS 1133B 3000KVA 13.8KV/480V SILICONE WEST	22	1991	N/C
SS 802A	VAE07001	K6-0848	VAB TWR B FL 11	1500	13.8KV	480V	E-693459A	GE	190	Silicone	FAIR	SS 802A 1500KVA 13.8KV 480V S#E693459A GE	47	1966	scheduled for replacement
SS 1112	ABE02001	K6-0894	ORBITER PROCESSING FACILITY N OF PAD	300	13.8KV	120/208V	850957-D1	SQUARE D	100	oil	POOR	SS 1112 300KVA 13.8KV 120/208V SQ D	27	1986	Paint corrosion reported / 2/24/12

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Oil Transformer Spreadsheet

Sub Name	Unit No.	Location	Additional Descrip	KVA	Primary Voltage	Sec Voltage	Serial#	Manuf	Gal	Type oil	visual inspection	Equipment Description	Age	Install date	Comments
SS 1169	CYE01001	H4-1840	HEADQUARTERS & VISITORS CENTER WILDLIFE REF	112.5	13.2KV	120/208V	84JH24413	WESTINGHOUSE	165	oil	FAIR	SS 1169 112.5KVA 13.2KV-208/120V OIL TYPE PDMT WESTINGHOUSE	28	1985	N/C
SS 1105	UDE02001	H7-0163	UNIVERSAL CAMERA PAD #9 (aka 95611)	45	13.8KV	208V	0237008536	COOPER	169	oil	GOOD	SS 1105 45KVA 13.8KV/208V PDMT	10	2003	N/C
SS 186	FSE01001	M6-0695	FIRE STATION #1	112.5	13.2KV	208V	FF09274881	APS	214	oil	GOOD	SS 112.5KVA 13.2/208V S#FF09274881 ATLANTIC PO	19	1994	formerly SS M6-0695
SS 126	FTE04001	M7-1059	HYPERGOLIC MAINTENANCE FACILITY SPRT BLDG. #2	500	13.2KV	480V	0137013660	COOPER	227	oil	GOOD	SS 126, 500KVA, 13.25KV-480V PDMT	11	2002	N/C
SS 123	I3E01001	M6-0897	WASTE WATER TREATMENT FACILITY E SIDE OF BLDG	150	13.2KV	277/480V	946001639	COOPER	130	oil	POOR	USS-123 150KVA 13.2KV-277/480V 3PH COOPER TRANS.	19	1994	5/8/12 / visual inspection reported as poor
SS 1168	MKE01001	H4-1797	WILDLIFE REF SHOP & SERVICE BLDG	225	13.2KV	120/208V	83JE949100	WESTINGHOUSE	165	oil	FAIR	SS 1168 225KVA 13.2KV-208/120V OIL TYPE PDMT WESTINGHOUSE	30	1983	N/C
SS 122	VHE05001	M6-0306	CENTER FOR SPACE EDUCATION (SS 5)	750	13.2KV	480V	936001506	COOPER	351	oil	FAIR	USS-122 TRANSFORMER, PADMOUNT, OIL FILLED, 750KVA	18	1995	N/C
SS 812B	VAE10001	K6-0848	VAB TWR B FL 11	500	13.8KV	277/480V	G-9549-1	GE	99	Silicone	GOOD	SS 812B 500KVA 13.8KV-480/277V SILICON OIL PIONEER	15	1998	N/C
SS 810B	VAE35001	K6-0848	VAB TWR F FL 10	750	13.8KV	277/480V	E-693456E	GE	125	Silicone	FAIR	SS 810B 750KVA 13.8/480/277V S#E693456E GE	47	1966	old unit / scheduled to remove
SS 829B	UAE09001	K6-0947	UTILITY ANNEX	10000	13.8KV	4160V	0526001922	COOPER	1163	FR3	FAIR	SS 829B 10,000KVA 13.8KV-4160V OIL TYPE COOPER	7	2006	N/C
SS 812A	VAE09001	K6-0848	VAB TWR B FL 11	500	13.8KV	277/480V	E-693455B	GE	99	Silicone	FAIR	SS 812A 500KVA 13.8KV-480/277V SILICON OIL GE	47	1966	N/C
SS 1116B	B8E12001	L7-0251	AFT SKIRT TEST BLDG.	300	13.8KV	277/480V	850864B-1	SQUARE D	192	R-Temp	GOOD	SS 1116B 300KVA 13.8KV-480/277	27	1986	N/C
SS 1116A	B8E11001	L7-0251	AFT SKIRT TEST BLDG.	300	13.8KV	277/480V	850864A-1	SQUARE D	192	R-Temp	GOOD	SS 1116A Transformer 300KVA 13.8KV-480/277	27	1986	N/C
SS 102	Q9E02001	M7-0777	TRANSPORTER/CANISTER FACILITY	500	13.2KV	277/480V	R276776A	GE	147	oil	POOR	SS 102 500KVA 13.2KV 480/277V S#25206001	27	1986	5/8/12 / visual inspection reported as poor
SS 121	G8E01001	M6-1625	ADMINISTRATION/PAINT BUILDING	750	13.2KV	277/480V	930304-A1	SQUARE D	210	oil	FAIR	USS 121 750KVA 13.2KV - 480/277	20	1993	N/C
SS 177	HPE01001	M6-0595D	EXTERIOR	750	13.2KV	277/480V	856001838	ITE SIEMENS	301	oil	GOOD	SS 177 750KVA 13.2KV-480/277V OIL TYPE ITE	28	1985	N/C
SS 190	SQE01001	M7-1112	HEATING PLANT	75	13.2KV	277/480V	M321074THPA	GE	94	oil	FAIR	SS 190 75KVA 13.2KV-480/277V OIL TYPE PDMT GE	34	1979	N/C

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Oil Transformer Spreadsheet

Sub Name	Unit No.	Location	Additional Descrip	KVA	Primary Voltage	Sec Voltage	Serial#	Manuf	Gal	Type oil	visual inspection	Equipment Description	Age	Install date	Comments
SS 189	AUE01001	M7-0351	AUDITORIUM & TRAINING BUILDING	225	13.2KV	120/208V	E693274	GE	74	oil	FAIR	SS 189 225KVA 13.2KV-208/120V OIL TYPE GE	47	1966	N/C
SS 1B	LOE01001	M6-0399	KSC HQ	750	13.2KV	480V	97J409362	ABB	247	oil	GOOD	SS 1B 750KVA 13.2KV/480V ABB	15	1998	N/C
SS 2D	LOE03001	M6-0399	KSC HQ	750	13.2KV	277/480V	0537000379	COOPER	326	oil	GOOD	SS 2D 750KVA 13.2KV-480/277V OIL TYPE PDMT COOPER	8	2005	N/C
SS 197	WBE02001	M7-1522	SUPPORT BLDG	750	13.2KV	277/480V	52287	NIAGARA	218	oil	POOR	SS 197 750KVA 13.2KV-480/277V OIL USS TYPE NIAGARA	23	1990	poor / visual noted / numbering has changed to SS 197 from SS 2
SS 1156	UGE01001	J8-0754	UNIVERSAL CAMERA PAD #7	75	13.8KV	208V	237008434	COOPER	167	oil	FAIR	SS 1156 75KVA 13.8KV/208V PDMT	11	2002	N/C
SS 188	SWE01001	M6-0794	SUPPLY WAREHOUSE #1	500	13.2KV	277/480V	906010225	COOPER	225	R-Temp	FAIR	SS 188 500KVA 13.2KV-480/277V R-TEMP OIL PDMT COOPER	22	1991	N/C
SS 191	OLE01001	M7-1417	ORDNANCE LAB #2	225	13.2KV	277/480V	7437108	ESCO	142	oil	FAIR	SS 191 225KVA 13.2KV-480/277V OIL TYPE ESCO	47	1966	added SME mod to comp health ('0' cannot be counting number) - checking for replacement project
SS 145	WPE01001	N6-1007	WATER PUMP STATION	225	13.2KV	277/480V	850004110	COOPER	185	oil	GOOD	SS 145 225KVA 13.2KV-480/277V OIL PDMT COOPER	5	2008	N/C
SS 119B	K8E02001	M7-0407	IACP	10000	13.2KV	4160/2400V	HBB1199-1	ABB	1010	oil	FAIR	USS 119B 10000 KVA 13.2KV-4160Y/2400V ABB	16	1997	N/C
SS 922A	GKE01001	J8-1708	GATE HOUSE	500	13.8KV	480V	04J123167	CUTLER-HAMMER	231	oil	GOOD	SS 922A 500KVA 13.8KV/480V PDMT	7	2006	N/C
SS 139	IDE01001	N6-1009	PASS & I.D. BUILDING GATE #2	75	13.2KV	120/208V	0237008523	COOPER	93	oil	FAIR	SS 139 75KVA XFMR13.2KV-208/120V PADMOUNT	11	2002	N/C
SS 198	PLE01001	M6-0894	POL	45	13.2KV	120/208V	FF09274880	APS	175	oil	FAIR	SS 198 45KVA 13.2KV-208/120V OIL TYPE PDMT ATLANTIC POWER SYSTEM	49	1964	N/C
SS 922B	GKE02001	J8-1708	LAUNCH PAD 39A Main Gate	500	13.8KV	480V	04J123213	CUTLER-HAMMER	231	oil	FAIR	SS 922B 500KVA 13.8KV/480V PDMT	7	2006	N/C
SS 119A	K8E01001	M7-0407	IACP	10000	13.2KV	4160/2400V	HBT0911-0101	WESTINGHOUSE	1071	Silicone	FAIR	USS 119A 10,000 KVA 13.2KV-4160/2400	20	1993	N/C
SS 187	CPE01001-R1	M6-0698	O/S W BLDG	500	13.2KV	480V	0659000745	COOPER	242	FR3	POOR	SS 187 500KVA 13.2KV/480V PDMT	7	2006	former SS 161 / replaced former SS 187 (now a spare @ ORSINO - poor visual noted (paint) / 6/5/13 former SS 187 @ Orsino will be excessed
SS 844	BAE01001	J5-1195	PLTS, SHUTTLE LANDING FACILITY	112.5	13.8KV	208V	776003745	SQUARE D	146	oil	FAIR	SS 844 112.5KVA 13.8/208V S#776003745 SQ D	35	1978	possibly decommission after Shuttle missions
SS 1119 - RUN	ENE03001	J5-1198	RUNWAY VIEWING AREA	750	13.8KV	277/480V	7290000	PORTER	201	oil	FAIR	SS 1119 750KVA 13.8KV-480/277V OIL TYPE PORTER-DELTA STAR	25	1988	possibly decommission after Shuttle missions
SS 146	UME01001	N6-2245	UNIVERSAL CAMERA SITE #1	75	13.2KV	120/208V	0237008522	COOPER	100	oil	FAIR	SS 146 75KVA 13.2KV-120/208V PDMT	10	2003	N/C
SS 120B	S2E02001	M7-1104	MULTI-PAYLOAD PROCESSING FACILITY	2500	13.2KV	277/480V	R275928B	GE	211	Silicone	GOOD	USS 120B 2500KVA 13.2KV-480/277	20	1993	N/C

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Sub Name	Unit No.	Location	Additional Descrip	KVA	Primary Voltage	Sec Voltage	Serial#	Manuf	Gal	Type oil	visual inspection	Equipment Description	Age	Install date	Comments
SS 120A	S2E01001	M7-1104	MULTI-PAYLOAD PROCESSING FACILITY	2500	13.2KV	277/480V	R275928A	GE	211	Silicone	GOOD	USS 120A 2500KVA 13.2KV-480/277	20	1993	N/C
SS 148	K-E01001	UK-0020	PRIMARY UNDERGROUND C/O NASA & COMMERCE WAY	75	13.2KV	480V	Q581149-TYT	GE	315	oil	GOOD	SS 148 75KVA 13.2KV/480V PDMT	10	2003	N/C
SS 107	MDE01001	L7-0940	FIRE TRAINING BLD	300	13.2KV	277/480V	88J254265	WESTINGHOUSE	95	oil	FAIR	SS 107 300KVA 13.2KV 480/277V 3PH WEST	25	1988	N/C
SS 141	TPE03001	Q6-0082	RADAR STATION PTQ18	500	13.2KV	480V	003701090	COOPER	236	oil	GOOD	SS 141 500KVA 13.2KV/480V COOPER	13	2000	N/C
SS 803B	VAE48001	K6-0848	VAB TWR B FL 32	1000	13.8KV	480V	F-962294	GE	180	Silicone	FAIR	SS 803B 1000KVA 13.8KV S#E962294 GE	47	1966	scheduled for replacement / leak reported @ sample port for 4/18/13 (no concern)
SS 802B	VAE08001	K6-0848	VAB TWR B FL 11	1500	13.8KV	480V	E-692459B	GE	190	Silicone	FAIR	SS 802B 1500KVA 13.8KV 480V S#E693459B GE	47	1966	scheduled for replacement
SS EE	OCE35001	M7-0355	O&C RM 1410	500	13.2KV	480V	YGR-43901	WESTINGHOUSE	179	Silicone	FAIR	SS EE 500KVA 13.2/480V S#YGR43901 WEST	47	1966	scheduled for replacement
SS 185	VME01001	M6-0688	AUTO MAINT&SVC#1 (GSA)	500	13.2KV	120/208V	P804539TXE	GE	240	oil	POOR	SS 185 500KVA 13.2KV-208/120V OIL TYPE GE	22	1991	N/C
SS 1138	K1E01001	J6-1924	APOLLO/SATURN 5 DISPLAY FACILITY	2000	13.8KV	480V	956000469	COOPER	709	oil	FAIR	SS 1138 2000KVA 13.8KV/480V PDMT	18	1995	N/C
SS 1142	HCE01001	E4-2414	HAULOVER CANAL BRIDGE	112.5	13.2KV	480V	0037010009	COOPER	136	oil	FAIR	SS 1142 112.5KVA 13.2KV/480V PDMT	10	2003	N/C
SS 899	FAE01001	J6-1725	UNIVERSAL CAMERA PAD #6	300	13.2KV	120/208V	850957-C1	SQUARE D	130	oil	FAIR	SS 899 300KVA 13.2/120/208V 13.8KV 850957-01	27	1986	visual / paint only poor condition
SS 816A	VAE40001	K6-0848	VAB LOW BAY W	1500	13.8KV	480V	15324366-002-01	SQUARE D	436	oil	FAIR	SS 816A 1500KVA 13.8KV/480V PDMT	10	2003	N/C
SS 1124	E1E01001	TRM-0024	TEMPORARY BUILDING #43	150	13.8KV	120/208V	82JC654039	WESTINGHOUSE	75	oil	FAIR	SS 1124 150KVA 13.8/208/120V WEST	25	1988	N/C
SS 130	ZRE02001	M6-1723	PROPERTY DISPOSAL OFFICE	75	13.2KV	480V	0337001655	COOPER	155	oil	GOOD	SS 130 75KVA 13.2KV/480V PDMT	10	2003	N/C
SS 816B	VAE41001	K6-0848	VAB LOW BAY W	1500	13.8KV	480V	15324366-002-02	SQUARE D	436	oil	GOOD	SS 816B 1500KVA 13.8KV/480V PDMT	10	2003	N/C
SS 1163	FPE01001	J6-2370	SLF FIRE STATION	500	13.8KV	277/480V	0650000553	COOPER	203	oil	FAIR	SS 1163 500KVA 13.8KV-480/277	7	2006	N/C
SS 152	J9E01001	M6-0409	SPACEPORT CENTRAL	1500	13.2KV	277/480V	06J510076	ABB	396	oil	GOOD	SS 152 1500KVA 13.2KV-480/277	7	2006	N/C
SS 140	IKE01001	M6-0489	NASA TECHNICAL RECORDS CENTER	225	13.2KV	480V	99V4733	VANTRAN	215	oil	GOOD	SS 140, 225KVA 13.2KV/480V PAD MOUNT	14	1999	N/C
SS 1131	YYE01001	H6-1557	SOUTH DISTRICT RANGER STATION	75	13.8KV	120/208V	06H1829	ROBERTS	120	oil	FAIR	SS 1131 75KVA 13.8KV-120/208V 3PH GE	22	1991	N/C

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SS 822	SSE01001	K6-0792	SEWAGE TREATMENT PLANT #4	300	13.8KV	480V	95J777204	ABB	143	oil	FAIR	SS 822 300 KVA 480V S#95J777204 ABB	18	1995	N/C
SS 1164	WRE02001	H5-1630	WILSON CORNER	45	13.2KV	208V	0650012678	COOPER	112	oil	GOOD	SS 1164 45KVA 13.2KV/208V S# 0650012678	7	2006	N/C
SS 153	J9E02001	M6-0409	SPACEPORT CENTRAL	1500	13.2KV	277/480V	06J509374	ABB	396	oil	GOOD	SS 153 1500KVA 13.2KV-480/277	7	2006	N/C
SS 828	BVE01001	K6-1298	MISSION SUPPORT BLDG	225	13.8KV	208V	850071A1	SQUARE D	225	oil	FAIR	SS 828 225KVA 13.8KV S#850071A1 SQ D	28	1985	visual / paint only poor condition
SS 1139A	Y4E01001	K6-1696	COMPONENT REFURB. & CHEMICAL ANALYSIS FAC.	2500	13.8KV	277/480V	PAB 0070-1	SIEMENS	421	oil	FAIR	SS 1139A 2500KVA 13.8KV-480Y/277 SIEMENS	16	1997	N/C
SS 1162	HCE02001	E3-1134	MCAR	750	13.8KV	277/480V	0659000488	COOPER	380	oil	GOOD	SS 1162 750KVA 13.8D-480/277	7	2006	N/C
SS 870	VAE02001	K6-0848	VAB TWR A FL 10	500	13.8KV	480V	14639498-00601	SQUARE D	301	oil	GOOD	SS 870 500KVA 13.8KV/480V PDMT	9	2004	N/C
SS 149	RSE01001	N6-1118	SOUTH REPEATER BUILDING	500	13.2KV	208V	03J871108	ABB	183	oil	FAIR	SS 149 500KVA 13.2KV/208V PDMT	10	2003	visual / paint only poor condition
SS 1139B	Y4E02001	K6-1696	COMPONENT REFURB. & CHEMICAL ANALYSIS FAC.	2500	13.8KV	277/480V	PFB2217-1	SIEMENS	457	oil	FAIR	SS 1139B 2500KVA 13.8KV-480Y/277 SIEMENS	17	1996	visual / paint only poor condition
T4 (T4S3)	DLE02001	J5-2000	MSBLS ELEVATION R/W 33 STA PAD N OF BLDG	45	4KV	208V	0537006956	COOPER	182	FR3	GOOD	T4 (T4S3) 45KVA 4KV/208V PDMT	8	2005	6/3/13 WILL BE EXCESSED / WILL NOT BE KEPT AS SPARE
T4 (T4S5)	DJE02001	H5-2274	MICROWAVE SCAN BEAM L/S R/W 33 PAD N OF BLDG	45	4KV	208V	0537006889	COOPER	182	FR3	FAIR	T4 (T4S5) 45KVA 4KV/208V PDMT	8	2005	6/3/13 WILL BE EXCESSED / WILL NOT BE KEPT AS SPARE
T4 (T4S2)	DRE02001	K6-0309	MSBLS AZ/DME RW 15 PAD S OF BLDG	45	4KV	208V	0537006888	COOPER	182	FR3	GOOD	T4S2 45KVA 4KV/208V PDMT	8	2005	6/3/13 WILL BE EXCESSED / WILL NOT BE KEPT AS SPARE
T4 @ SLF	DAE03001	J6-2363	LIGHTING VAULT	500	4.16KV	480V	04J160121	ABB	189	oil	GOOD	SS T4 500KVA 4.16KV/480V PDMT	9	2004	N/C
T3 @ SLF	DAE02001	J6-2363	POWER SUB: actually @ the lighting vault @ SLF	500	4.16KV	480V	04J160159	ABB	189	oil	GOOD	SS T3 500KVA 4.16KV/480V PDMT	9	2004	N/C
SS 800A	VAE03001	K6-0848	VAB TWR A FL 10	750	13.8KV	480V	14639498-005-01	SQUARE D	346	FR3	GOOD	SS 800A 750KVA 13.8KV/480V PDMT	10	2003	N/C
SS 885	LCE13001	K6-0900		1000	13.8KV	480V	M123839	GE	157	oil	POOR	SS 885 1000KVA S#M123839	30	1983	scheduled to remove
SS 150	ECE01001	M7-0961	HYPERGOL MODULE PROCESSING, NORTH - S OF BLDG	500	13.2KV	480V	0337015500	COOPER	233	oil	GOOD	SS 150 500KVA 13.2KV/480V PDMT	10	2003	N/C
SS 858B	BEE02001	K6-0495	PAD SUPPORT BLDG.	1000	13.8KV	480V	0337016607	COOPER	4.3	oil	GOOD	SS 858B 1000KVA 13.8KV/480V PDMT	10	2003	N/C

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Oil Transformer Spreadsheet

Sub Name	Unit No.	Location	Additional Descrip	KVA	Primary Voltage	Sec Voltage	Serial#	Manuf	Gal	Type oil	visual inspection	Equipment Description	Age	Install date	Comments
SS 837B	GGE04001	K7-0468	CONVERTER/ COMPRESSOR BUILDING	2000	13.2KV	480V	0326001907	COOPER	566	oil	GOOD	SS 837B 2000KVA 13.2KV/480V PDMT	10	2003	N/C
SS D7	K8E02700	M7-0407	IACP - NE CRNR (O/S)	1500	4.16KV	277/480V	966001587	CUTLER-HAMMER	1071	Silicone	FAIR	XFMR T-D7 1500KVA 4160-480/277V OIL TYPE PDMT CUTLER-HAMMER	17	1996	N/C
SS 837A	GGE03001	K7-0468	CONVERTER/ COMPRESSOR BUILDING	2000	13.2KV	480V	0326001906	COOPER	566	oil	FAIR	SS 837A 2000KVA 13.2KV/480V PDMT	10	2003	N/C
SS WF	OCE45001	M7-0355	O&C - RM 1278	500	13.2KV	208V	YGR43881	WESTINGHOUSE	190	Silicone	FAIR	SS WF 500KVA 13.2/208V S#YGR43881 WEST	47	1966	scheduled for replacement
SS WG	OCE46001	M7-0355	O&C - RM 2280	500	13.2KV	277/480V	YGR43903	WESTINGHOUSE	179	Silicone	GOOD	SS WG 500KVA S#YGR43903 oil WEST	49	1964	N/C
SS 821A	LCE03001	K6-0900	LAUNCH CONTROL CENTER - NE OF LCC	1000	13.8KV	480V	0037014067	COOPER	368	oil	FAIR	SS 821A 1000KVA 13.8KV 480V S#0037014067 COOPER	14	1999	N/C
TX-9 C5A Tap	EUE01009	K6-1141	C5A	N/A	13.8KV	N/A	242710-94-2	KUHLMAN	360	oil	GOOD	XFMR 9 MAIN 115/13.8KV KUHLMAN	18	1995	N/C / Tap Changer for XFMR main T9 / oil test results are not indication of tap changer condition
SS 1148	GDE03001	K6-0696	OPRF HIGH BAY 3 - W. OF OPF 3	300	13.8KV	480V	17623139-003-01	SQUARE D	252	oil	GOOD	SS 1148 300KVA 13.8KV/480V PDMT	9	2004	N/C
SS 858A	BEE01001	K6-0495	SRB AREA SUPPORT BLDG.	1000	13.8KV	480V	337016606	COOPER	403	oil	FAIR	SS 858A 1000KVA 13.8KV/480V PDMT	10	2003	N/C
SS 806A	VAE19001	K6-0848	VAB TWR D FL 10	1000	13.8KV	480V	E-693457A	GE	146	Silicone	FAIR	SS 806A 1000KVA 13.8KV 480V S#E693457A GE	47	1966	scheduled to remove
SS 1120	MQE01001	J7-1339	FIRE STATION #6 - IND H20 PUMP	225	13.8KV	120/208V	88JE149166	WESTINGHOUSE	235	oil	GOOD	SS 1120 225KVA 13.8KV 208/120V WEST	25	1988	N/C
SS 108	M7E01001	M6-0883	KENNEDY CHILDREN'S CENTER - 5TH ST & A AVE	225	13.2KV	277/480V	P502581TVD	GE	215	oil	FAIR	SS 108 225KVA 13200V-480/277V GE	24	1989	N/C
SS 151	HTE01001	M7-1212	HYPERGOL MODULE PROCESSING, SOUTH	500	13.2KV	480V	0337015499	COOPER	233	oil	GOOD	SS 151 500KVA 13.2KV/480V PDMT	9	2004	N/C
SS 1143	8VE01001	K7-0141	LC39 OBSERVATION TOWER	500	13.8KV	480V	Q523300-TTM	GE	215	oil	GOOD	SS 1143 500KVA 13.8KV/480V PDMT	16	1997	N/C
SS 113	IRE01001	M3-0003	INDIAN RIVER BRIDGE - SW IRB	150	13.2KV	480V	98J508243	ABB	140	oil	GOOD	SS 113 150KVA 13.2KV/480 S#98J508243 PADMOUNT ABB	21	1992	N/C
GEN PLANT S	EVE03002	K6-1141	C5 @ power plant	150	13.8KV	120/208V	98J732022	ABB	127	R-Temp	FAIR	TRANSFORMER GEN PLANT STA. SER. 150KVA 13.8KV-208/120V OIL TYPE PDMT ABB	10	2003	N/C
REGULATOR (	DGE03009	K6-0261	ALS Sub 33	70	N/A	N/A	95GM950704-A2	HEVI Duty	95	oil	FAIR	REGULATOR CONSTANT CURRENT #1 20A 70KW 1PH HEVI-DUTY ELEC	18	1995	SME review / Randy Morris / no concern with current test results
REGULATOR (	DFE03013	H5-2176	ALS SUB 15	70	N/A	N/A	95GM950704-B3	HEVI Duty	95	oil	FAIR	REGULATOR CONSTANT CURRENT #3 20A 70KW 1PH HEVI-DUTY ELEC	18	1995	SME review / Randy Morris / no concern with current test results
REGULATOR (	DGE03011	K6-0261	ALS Sub 33	70	N/A	N/A	95GM950704-A1	HEVI Duty	95	oil	FAIR	REGULATOR CONSTANT CURRENT #2 20A 70KW 1PH HEVI-DUTY ELEC	18	1995	SME review / Randy Morris / no concern with current test results

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Oil Transformer Spreadsheet

Sub Name	Unit No.	Location	Additional Descrip	KVA	Primary Voltage	Sec Voltage	Serial#	Manuf	Gal	Type oil	visual inspection	Equipment Description	Age	Install date	Comments
REGULATOR (	DFE03009	H5-2176	ALS SUB 15	70	N/A	N/A	95GM950704-A3	HEVI Duty	95	oil	FAIR	REGULATOR CONSTANT CURRENT #1 20A 70KW 1PH HEVI-DUTY ELEC	18	1995	SME review / Randy Morris / no concern with current test results
REGULATOR (	DFE03011	H5-2176	ALS SUB 15	70	N/A	N/A	95GM950704-B1	HEVI Duty	95	oil	FAIR	REGULATOR CONSTANT CURRENT #2 20A 70KW 1PH HEVI-DUTY ELEC	18	1995	SME review / Randy Morris / no concern with current test results
REGULATOR (	DGE03013	K6-0261	ALS Sub 33	70	N/A	N/A	95GM950704-B2	HEVI Duty	95	oil	FAIR	REGULATOR CONSTANT CURRENT #3 20A 70KW 1PH HEVI-DUTY ELEC	18	1995	SME review / Randy Morris / no concern with current test results
SS 125	VHE06001	M6-0409	BEHIND ORBIT FOOD COURT	1000	13.2KV	480V	0659002214	COOPER	352	FR3	FAIR	SS 125 1000KVA 13.2KV/480V PDMT	6	2007	N/C
SS 106	E9E01001	K6-2359	WEAPONS RANGE - CENTER OF COMPLEX	75	13.2KV	208V	959001547	FLORIDA TRANS	147	oil	FAIR	SS 106 75KVA 13.2KV/208V PDMT	9	2004	N/C
SS 1101	GAE02001	K6-1446	LC-39 AREA GEN OPS SHOP	300	13.8KV	480V	84V4794	VANTRAN	230	oil	FAIR	SS 1101 13.8KV PRI PAD MNTD	28	1985	4/18/13 leak reported at sample valve - N/C / PCN 98778.5 (design package in NASA Procurement Office) for replacement project - CHECK
SS 1032A	CCE01001	J7-0338	PAD 39B HP E Gas Storage	1000	13.8KV	277/480V	04J123306	CUTLER-HAMMER	324	oil	GOOD	SS 1032A 1000KVA 13.8KV-480/277	6	2007	N/C
SS 1032B	CCE02001	J7-0338	PAD 39B HP E Gas Storage	1000	13.8KV	277/480V	04J124059	CUTLER-HAMMER	324	oil	POOR	SS 1032B 1000KVA 13.8KV-480-277	6	2007	4/18/13 paint poor
SS 158B	OCE57001	M7-0355	O&C	1500	13.2KV	480V	22066535-063-01	SQUARE D	406	FR3	GOOD	SS 158B 1500KVA 13.2KV/480V PDMT	6	2007	N/C
SS 158A	OCE55001	M7-0355	O&C	1500	13.2KV	480V	22066535-063-02	SQUARE D	406	FR3	GOOD	SS 158A 1500KVA 13.2KV/480V PDMT	6	2007	N/C
SS 1108	L8E01001	K6-1446D	BASE ELECTRIC SHOP	225	13.8KV	277/480V	850957-A1	SQUARE D	125	oil	GOOD	SS 1108 225KVA 13.8KV-277/490V 3PH SQ D	27	1986	N/C
SS 147	CEE01001	M6-0336		150	13.2KV	208V	237008439	FLORIDA TRANS	179	oil	GOOD	SS 147 150KVA 13.2KV/208V PDMT	10	2003	N/C
SS 803A	VAE12001	K6-0848	VAB TWR B FL 32	1000	13.8KV	480V	E-693457C	GE	146	Silicone	FAIR	SS 803A 1000KVA 13.8KV 480V GE	47	1966	scheduled for replacement
SS 843A	DCE01001	J6-2313	LANDING AIDS CONTROL BLDG.	750	13.8KV	480V	04J995307	ABB	231	oil	GOOD	SS 843A 750KVA 13.8KV/480V PDMT	9	2004	N/C
SS 1110	UTE01001	H6-1629	UNIVERSAL CAMERA PAD #5 (aka 95535)	45	13.8KV	208V	337018592	COOPER	120	oil	FAIR	SS 1110 45KVA 13.8KV/208V PDMT	9	2004	N/C
SS 1160	W1E02001	H5-2140	GUARD HOUSE 4 (KSC)	75	13.8KV	480V	437008475	COOPER	166	oil	GOOD	SS 1160 75KVA 13.8KV/480V PDMT	9	2004	N/C
SS 843B	DCE02001	J6-2313	LANDING AIDS CONTROL BLDG.	750	13.8KV	480V	45995330	ABB	231	oil	GOOD	SS 843B 750KVA 13.8KV/480V PDMT	9	2004	N/C
SS 128	MCE02001	L6-0133	RADAR WIND PROFILER SITE C (aka 95375)	75	13.2KV	208V	959006114	COOPER	131	oil	FAIR	SS 128 75KVA 13.2KV/208V PDMT	17	1996	N/C
SS 800B	VAE04001	K6-0848	TWR A FL 10	750	13.8KV	277/480V	14639498-005-02	SQUARE D	346	FR3	GOOD	SS 800B 750KVA 13.8KV-480/277V OIL PDMT SQ D	9	2004	N/C

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Oil Transformer Spreadsheet

Sub Name	Unit No.	Location	Additional Descrip	KVA	Primary Voltage	Sec Voltage	Serial#	Manuf	Gal	Type oil	visual inspection	Equipment Description	Age	Install date	Comments
SS TC-2	TCE02001	N6-2296	CENTRAL TELEMETRY (aka 95151) TEL-IV	750	13.2KV	277/480V	HF08045457	ATLANTIC POWER	278	oil	POOR	SS TC-2 750KVA 13.2KV-480/277V OIL TYPE PDMT ATLANTIC	15	1998	send info to: alex mendosa/gary wienard/david vanvuken/gary cooper 6/30/13 reported paint poor
SS 1161	UHE01001	J8-2228	UNIVERSAL CAMERA PAD #12 (aka 95148)	75	13.8KV	208V	78F755381	WESTINGHOUSE	UNK	oil	POOR	SS 1161 75KVA 13.8KV/208V PDMT / NOTE: MFG date is 1978 - was spare in yard and refurbished and installed in 2004 (WON 10164923)	35	1978	WON#E1467454 (ESR0003433) SME/ recommends to replace unit / bad corrosion
SS 1147	Y6E01001	J6-2466	RLV HANGAR - FLIGHT VEHICLE FACILITY	1000	13.8KV	277/480V	9937016845	COOPER	413	oil	GOOD	SS 1147 1000KVA 13.8KV-480/277V OIL PDMT COOPER	13	2000	N/C
SS TC-1	TCE01001	N6-2296	CENTRAL TELEMETRY (aka 95151) TEL-IV	750	13.2KV	277/480V	HF8045456	ATLANTIC POWER	278	oil	POOR	SS TC-1 750KVA 13.2KV-480/277V OIL TYPE PDMT ATLANTIC	15	1998	send info to: alex mendosa/gary wienard/david vanvuken/gary cooper 6/30/13 reported paint poor
SS 1109	WME01001	UK-0019 - GATE 6	RR & BEACH ROAD	15	7.8KV	240V	305055437	G&W	38	oil	FAIR	SS 1109 15KVA 7.8KV/240V PDMT	9	2004	N/C
SS 1031A	EHE01001	J7-0241	PAD B RP1-LH2	500	13.8KV	480V	04J123035	CUTLER-HAMMER	231	oil	FAIR	SS 1031A 500KVA 13.8/480V PDMT	6	2007	N/C
SS 1123	M5E01001	J6-2025	W VIP VIEWING	112.5	13.8KV	277/480V	04H1336	ROBERTS	148	oil	GOOD	SS 1123 112.5KVA 13.8KV-480/277V OIL TYPE PDMT ROBERTS	7	2006	N/C
SS 1031B	EHE02001	J7-0241	PAD B RP1-LH2	500	13.8KV	480V	04J123124	CUTLER-HAMMER	231	oil	FAIR	SS 1031B 500KVA 13.8/480V PDMT	6	2007	N/C
SS 1140	APE03001	K6-2196	ROADS & GROUNDS MAINTENANCE #3	112.5	13.8KV	277/480V	969000037	COOPER	107	oil	GOOD	SS 1140 112.5KVA 13.8KV-480/277V OIL TYPE PDMT COOPER	18	1995	N/C
TAT 3	9BE01002	J5-0386	SLF OPTICAL TRACKER SITE A	750	4.16KV	208V	949004938	COOPER	133	oil	POOR	XFMR TAT3 75KVA 4160-120/208V 3PH COOPER	18	1995	6/3/13 XFMR WILL BE REMOVED FROM SLF / CHECKING TO SEE IF CAN BE SAVED AS SPARE
SS 133	CSE01001	M6-0744	CENTRAL SUPPLY FACILITY	500	13.2KV	277/480V	979001126	COOPER	318	oil	FAIR	SS-133 500KVA 13.2KV-277/480V 3PH COOPER POWER SY	16	1997	N/C
SS 866	LEE02001	K6-1246	UTILITY SHOPS FACILITY	750	13.8KV	480V	CO0750010613	COOPER	305	FR3	GOOD	SS 866 750KVA 13.8KV/480V PDMT	6	2007	N/C
SS 827	IBE01001	K7-1557	INSTRUMENTATION FACILITY BUILDING	300	13.8KV	120/208V	11437554	ESCO	170	oil	FAIR	USS 827 300KVA 13.8K-208Y/120V ESCO	47	1966	generate CAT REPORT
SS 124	STE01001-R1	M6-0895	SEWAGE PLANT,OFFICE & LAB	500	13.2KV	277/480V	94J668046	ABB	184	oil	GOOD	SS 124 500KVA 13.2KV-480/277V OIL TYPE PDMT ABB	19	1994	N/C
SS 1103	OPE02001	K6-1996	HEAVY EQUIPMENT SHOP	750	13.8KV	480V	84V4795	VANTRAN	320	oil	POOR	SS 1103 13.8KV PRI PAD MTD	28	1985	generate CAT REPORT
SS 169	MFE01001	N6-2274	WEATHER EQUIP BLDG 803 (aka 95170)	15	13.2KV	240V	72031666	COOPER	48	FR3	GOOD	SS 169 15KVA 13.2KV/240V PDMT	6	2007	N/C
SS 804A	VAE15001	K6-0848	TWR C FL 10	750	13.8KV	277/480V	E693456D	GE	125	Silicone	POOR	SS 804A 750KVA 13.8KV-480/277V OIL GE	47	1966	scheduled for replacement / 6/6/13 Paint reported poor condition / 7/17/13 SME stated 'low priority' and will submit request for work order to paint

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Oil Transformer Spreadsheet

Sub Name	Unit No.	Location	Additional Descrip	KVA	Primary Voltage	Sec Voltage	Serial#	Manuf	Gal	Type oil	visual inspection	Equipment Description	Age	Install date	Comments
SS 143	Z7E02001	M6-1025	SPACE LIFE SCIENCES LAB	2500	13.2KV	480V	226001345	COOPER	807	oil	GOOD	SS 143 2500KVA 13.2KV/480V COOPER PDMT	11	2002	NC
SS 831	PEE01001	K7-1205C	PRESS SITE TRANSFORMER BLDG.	1500	13.8KV	480V	98J665114	ABB	586	R-Temp	GOOD	SS 831 1500KVA 13.8KV/480V PDMT	15	1998	N/C
SS 142	Z7E01001	M6-1025	SPACE LIFE SCIENCES LAB	2500	13.2KV	480V	2260001343	COOPER	807	oil	GOOD	SS 142 2500KVA 13.2KV/480V COOPER PDMT	11	2002	N/C
SS 144	Z7E03001	M6-1025	SPACE LIFE SCIENCES LAB	2500	13.2KV	480V	226001344	COOPER	807	oil	GOOD	SS 144 2500KVA 13.2KV/480V COOPER PDMT	11	2002	N/C
SS 848	LPE01001	K6-0546	MLP REFURBISHMENT AREA	500	13.8KV	480V	750015775	COOPER	229	FR3	GOOD	SS 848 500KVA 13.8KV/480V PDMT	6	2007	N/C
SS 104	CRE02001	M7-1412A	EQUIPMENT SHELTER	500	13.2KV	480V	337015498	COOPER	233	oil	GOOD	SS 104 500KVA 13.2KV/480V PDMT	9	2004	N/C
SS 846	LPE03007	K6-0546	MLP PARK SITE	750	13.8KV	480V	75001577	COOPER	245	FR3	GOOD	SS 846 500KVA 13.8KV/480V PDMT	6	2007	N/C
SS 163	PME02001	M6-0486	BASE SUPPORT M&O BUILDING	500	13.2KV	277/480V	750015776	COOPER	229	FR3	FAIR	SS 163 500KVA 13.2KV-480/277V OIL TYPE PDMT COOPER	6	2007	N/C
XFMR MAIN T2	MSE01002	M6-0996	ORSINO	N/A	13.2KV	N/A	GM012209	WAUKESHA	4818	oil	GOOD	XFMR MAIN T2 15/21/27MVA 115-13.2KV OIL WAUKESHA	11	2002	N/C
SS 171	TPE01001	Q6-0082	TPQ-18 RADAR 19.14 SITE (aka 95000)	150	13.2KV	480V	07J834194	ABB	146	FR3	GOOD	SS 171 150KVA 13.2KV/480V PDMT	5	2008	N/C
SS 172	TPE02001	Q6-0082	TPQ-18 RADAR 19.14 SITE (aka 95000)	150	13.2KV	480V	07J834174	ABB	146	FR3	GOOD	SS 172 150KVA 13.2KV/480V PDMT	5	2008	N/C
SS 199	ISE02001	L7-1557	ENVIRONMENTAL HEALTH BUILDING	225	13.2KV	120/208V	Q101522-TRG	GE	250	oil	GOOD	SS 199 300KVA 13.2KV-208/120V OIL TYPE GE	17	1996	N/C
SS 154	LOE05001	M6-0570	NE NASA TRAINING FAC.	300	13.2KV	480V	04J167047	CUTLER-HAMMER	214	oil	GOOD	SS 154 300KVA 13.2KV/480V PDMT	8	2005	N/C
SS 825	OME01001	K7-0506	ORDNANCE LAB #1	300	13.8KV	480V	437020525	COOPER	182	oil	GOOD	SS 825 300KVA 13.8KV/480V PDMT	8	2005	N/C
XFMR MAIN T1	MSE01001	M6-0996	ORSINO	N/A	13.2KV	N/A	GM012210	WAUKESHA	4818	oil	FAIR	XFMR MAIN T1 15/21/27MVA 115-13.2KV OIL WAUKESHA	11	2002	N/C
SS 170	IEE02001	M6-0224	PASS and IDENTIFICATION BUILDING	300	13.2KV	480V	750020852	COOPER	273	FR3	GOOD	SS 170 300KVA 13.2KV/480V PDMT	5	2008	N/C
SS 155	BBE01001	M7-1150	BANANA RIVER BRIDGE	112.5	13.2KV	480V	84J177229	WESTINGHOUSE	UNK	oil	FAIR	SS 155 112.5 KVA/480V PDMT	8	2005	N/C
SS 1137	UKE01001	K8-1648	UNIVERSAL CAMERA SITE #3 (aka 95415)	75	13.2KV	120/208V	969003182	FL TRANSFORME	142	oil	FAIR	USS 1137, 75KVA, 13.2KV 208/120V, PAD MNT	13	2000	N/C

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Sub Name	Unit No.	Location	Additional Descrip	KVA	Primary Voltage	Sec Voltage	Serial#	Manuf	Gal	Type oil	visual inspection	Equipment Description	Age	Install date	Comments
SS 1102	9GE01001	K6-1745	COMM CROSS CONNECT TERMINAL #4	75	13.8KV	208V	437020597	COOPER	143	oil	GOOD	SS 1102 75KVA 13.8KV/208V PDMT	8	2005	N/C
SS 1126	OQE02001	K6-1844B	ABRASIVE RECOVERY BUILDING	500	13.8KV	480V	966002857	COOPER	284	oil	POOR	SS 1126 500KVA 13.8KV/480V PDMT	16	1997	N/C
SS 1152	HOE01001	J6-0407	C-BAND RADAR BUILDING	112.5	13.8KV	208V	237008537	COOPER	182	oil	FAIR	SS 1152,112.5KVA S#0237008537	11	2002	N/C
SS 173	SHE01001	M6-0589	SUPPORT BLDG	112.5	13.2KV	208V	759002906	COOPER	134	FR3	GOOD	SS 112.5KVA 13.2/208V S#8437210 ESCO	5	2008	N/C
SS 159A	OCE58001	M7-0355	OPERATIONS & CHECKOUT BUILDING	2000	13.2KV	480V	859000460	COOPER	593	FR3	GOOD	SS 159A 2000KVA 13.2KV/480V PDMT	5	2008	N/C
SS 159B	OCE59001	M7-0355	OPERATIONS & CHECKOUT BUILDING	2000	13.2KV	480V	859000461	COOPER	593	FR3	GOOD	SS 159B 2000KVA 13.2KV/480V PDMT	5	2008	N/C
SS 1149B	FIE02001	K6-1249	OPERATIONS SUPPORT BUILDING II	1500	13.8KV	480V	03J900196	CUTLER-HAMMER	459	oil	GOOD	SS 1149B 1500KVA 13.8KV/480V PDMT	8	2005	N/C
SS 896	BXE01001	K6-1397	PAINT SHOP	225	13.8KV	277/480V	759002880	COOPER	155	FR3	GOOD	SS 896 225KVA 13.8KV-480/277V OIL PDMT COOPER	5	2008	N/C
SS 1134	UHE02001	K8-0600	PRE-FAB CONCRETE BUILDING (NEW CENTURY)	45	13.2KV	120/208V	939003109	COOPER	128	oil	FAIR	XFMR USS1134 45KVA 13.2KV-208/120V 3PH COOPER PWR	20	1993	N/C
SS 156	DIE01001	M6-0495	DISPENSARY	112.5	13.8KV	208V	537000425	COOPER	152	oil	GOOD	SS 156 112.5KVA 13.8KV/208V PDMT	20	1993	N/C
SS 1132	M3E01001	K6-1094	PROCESSING CONTROL CENTER	2000	13.8KV	480V	PBL26400101	WESTINGHOUSE	252	Silicone	GOOD	SS 1132 3000KVA 13.8KV/480V SILICONE WEST	22	1991	N/C
SS 823	GTE03001	K7-0853	HIGH PRESSURE GAS STORAGE BLDG	225	13.8KV	480V	850011071	COOPER	165	FR3	GOOD	SS 823 225KVA 13.8KV/480V PDMT	5	2008	N/C
SS 110	CME02001	M6-0791	COMMUNICATIONS MAINTENANCE & STORAGE	500	13.2KV	277/480V	850011074	COOPER	203	FR3	GOOD	SS 110 500KVA 13200-480/277V SQ D	4	2009	N/C
SS 1149A	FIE01003	K6-1249	OPERATIONS SUPPORT BUILDING II	1500	13.8KV	480V	226000117	COOPER	471	oil	GOOD	SS 1149A 1500KVA 13.8KV/480V PDMT	8	2005	N/C
C5 Sta Service	EUE13002	K6-1141A	SWITCH GEAR BUILDING	150	13.8KV	120/208V	959000713	COOPER	113	oil	FAIR	XFMR STA.SER. SS5 45KVA 13.8KV-208/120V OIL TYPE PDMT COOPER	17	1996	N/C
C5 Sta Service	EUE13001	K6-1141	SWITCH GEAR BUILDING	150	13.8KV	120/208V	959000712	COOPER	113	oil	GOOD	XFMR STA.SER. SS4 45KVA 13.8KV-208/120V OIL TYPE PDMT COOPER	17	1996	4/15/13 - retest workorder submitted
SS 181	OSE01001	M7-1472	ORDNANCE STORAGE	150	13.2KV	120/208V	850011002	COOPER	146	FR3	GOOD	SS 181 150KVA 13.2KV-208/120V 3PH 4W COOPER PDMT	4	2009	N/C

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Oil Transformer Spreadsheet

Sub Name	Unit No.	Location	Additional Descrip	KVA	Primary Voltage	Sec Voltage	Serial#	Manuf	Gal	Type oil	visual inspection	Equipment Description	Age	Install date	Comments
TET 4	9CE01002	J5-1441	SLF OPTICAL TRACKER SITE E	75	4.16KV	120/208V	949004939	COOPER	133	oil	FAIR	XFMR TET4 75KVA 4160-120/208V 3PH COOPER	18	1995	3/19/12 - reported leak from 1" plug
SS E	AFE01001	N6-2296	ANTENNA BASE #5 (aka 95154)	225	13.2KV	120/208V	FF09274884	ATLANTIC POWER	248	oil	POOR	SS E 225KVA 13.2/208/120V S/N# FF09274884 ATLANT	16	1997	2012 - poor / visual noted
SS 164	CIE03001	M6-0490	LIFE SUPPORT FACILITY	500	13.2KV	277/480V	526001075	COOPER	219	oil	GOOD	SS 164 500KVA 13.2KV-480/277V 3PH OIL PDMT COOPER	9	2004	N/C
SS 162	PME01001	M6-0486	BASE SUPPORT M&O BUILDING	75	13.2KV	120/208V	537000251	COOPER	154	oil	GOOD	SS 162 75KVA 13.2KV-208/120V OIL TYPE PDMT COOPER	7	2006	N/C
SS 179	FRE01001-R1	M7-0409	ENGINEERING DEVELOPMENT LAB	500	13.2KV	277/480V	850010826	COOPER	275	FR3	GOOD	SS 179 500KVA 13.2KV-480/277V OIL TYPE PDMT COOPER	4	2009	N/C
SS 180	FRE02001-R1	M7-0409	ENGINEERING DEVELOPMENT LAB	500	13.2KV	120/208V	850010914	COOPER	270	FR3	GOOD	SS 180 500KVA 13.2KV-208/120V OIL TYPE PDMT COOPER	4	2009	N/C
SS 1121	DZE11001	J5-0341	ASCENT WIND PROFILER/PWR PEDESTAL	112.5	4.16KV	120/208V	950007636	COOPER	124	FR3	GOOD	SS 1121 112.5KVA 4160V-208/120V FR-3 OIL PDMT COOPER	4	2009	N/C
SS 834	HKE01001-R1	K6-1145	MULTI-FUNCTION FACILITY	300	13.8KV	277/480V	PHH-7069	INTERSTATE	171	oil	FAIR	SS 834 13.8KV 480/277V OIL TYPE INTERSTATE	11	2002	N/C
T8 C5	EUE01008	K6-1141	ORSINO	18000	115KV	13.8KV	E362308008	DELTA STAR	3840	oil	GOOD	XFMR MAIN T8 18/24/30MVA 115-13.8KV OIL DELTA STAR INC	5	2008	N/C
SS 111	G7E01001	UK-0020	2ND ST & B AVE	250	13.2KV	120/208V	850957-B1	SQUARE D	125	oil	POOR	SS 111 225KVA 13.2-120/208V 3PH SQ D - NEW ASSET NUMBER IS KE01006 -	27	1986	4/15/13 / SME submitting workorder to corrosion ctl to paint unit
SS 165	VHE01001	M6-0409	SPACEPORT CENTRAL	1000	13.2KV	480V	659002227	COOPER	352	FR3	FAIR	SS 165 1000KVA 13.2KV/480V PDMT	5	2008	N/C
SS 166	VHE02001	M6-0409	SPACEPORT CENTRAL	1000	13.2KV	480V	659002228	COOPER	352	FR3	GOOD	SS 166 1000KVA 13.2KV/480V PDMT	5	2008	N/C
SS 167	VHE04001	M6-0409	SPACEPORT CENTRAL	1000	13.2KV	480V	659002215	COOPER	352	FR3	GOOD	SS 167 1000KVA 13.2KV/480V PDMT	5	2008	N/C
SS 127	J8E01001	M6-0798A	HEAVY EQUIPMENT STORAGE SHED	225	13.2KV	277/480V	97J408301	ABB	133	oil	FAIR	SS 127 225KVA 13.2KV-480/277V OIL PDMT ABB	11	2002	N/C
SS 847	LPE02001-R1	K6-0546	MLP REFURBISHMENT AREA	750	13.8KV	277/480V	24960148-121-01	SQUARE D	367	oil	GOOD	SS 847 750KVA 13.8KV-480/277V OIL TYPE PDMT SQ D	3	2010	N/C
SS 1154	MAE02001-R1	J6-0553	WEATHER SUBSTATION B	75	13.8KV	120/208V	G1068-10	ABB	167	oil	GOOD	SS 1154 75KVA 13.8KV-208/120V OIL TYPE PDMT RTS XFMR	3	2010	N/C
SS 1155	Y6E02001	J6-2465	FLIGHT VEHICLE SUPPORT BUILDING	750	13.2KV	277/480V	916001984	COOPER	295	oil	POOR	SS 1155 750KVA 13.2KV-480/277V OIL PDMT COOPER	11	2002	SME assessed visual - no concern
SS 1A	LOE02001	M6-0399	NASA HQ	750	13.2KV	277/480V	97J410142	ABB	247	oil	GOOD	SS 1A 750KVA 13.2KV-480/277V OIL TYPE PDMT ABB	16	1997	N/C
SS 1111	WDE01001	L6-0043	RECHLORINATION BUILDING	150	13.8KV	277/480V	1050002619	COOPER	130	oil	GOOD	SS 1111 150KVA 13.8KV-480/277V OIL TYPE PDMT COOPER	3	2010	N/C

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Sub Name	Unit No.	Location	Additional Descrip	KVA	Primary Voltage	Sec Voltage	Serial#	Manuf	Gal	Type oil	visual inspection	Equipment Description	Age	Install date	Comments
STA SER #2	MSE05001-R1	M6-0996	ORSINO	75	13.2KV	120/208V	1050007500	COOPER	94	FR3	GOOD	XFMR STA.SER. SS2 75KVA 13.2KV-208/120V FR3 OIL PDMT COOPER	3	2010	N/C
STA SER #1	MSE05002-R1	M6-0996	ORSINO	75	13.2KV	120/208V	1050007501	COOPER	94	FR3	GOOD	XFMR STA.SER. SS1 75KVA 13.2KV-208/120V FR3 OIL PDMT COOPER	3	2010	N/C
SS 1141	ZSE01001	H7-1682	RANGER STATION	25	13.8KV	120/240V	961106289	COOPER	61	oil	GOOD	SS 1141 25KVA 13.8KV-240/120V 1PH OIL TYPE PDMT COOPER	17	1996	N/C
SS 196	I1E01001	M7-0912	GENERAL WAREHOUSE	300	13.2KV	277/480V	1050009228	COOPER	166	FR3	GOOD	SS 196 300KVA 13.2KV-480/277V FR3 TYPE PDMT COOPER	3	2010	N/C
SS 183	SAE06001	M7-0505A	LAUNCH EQUIPMENT TEST FACILITY	1500	13.2KV	277/480V	859002335	COOPER	559	FR3	GOOD	SS 183 1500KVA 13.2KV-480/277V FR3 OIL TYPE PDMT COOPER	4	2009	N/C
SS 105	SAE07001	M7-0505A	LAUNCH EQUIPMENT TEST FACILITY	1500	13.2KV	480V	859002334	COOPER	559	FR3	GOOD	SS 105 1500KVA 13.2KV/480V PDMT COOPER	4	2009	N/C
SS 809A	VAE31001-R1	K6-0848	TWR E FL 32	1000	13.8KV	277/480V	CP0950008661	COOPER	315	FR3	GOOD	SS 809A 1000KVA 13.8KV-480/277V FR3 OIL PDMT COOPER	4	2009	N/C
SS 838	PVE01001	K7-0418	ADMIN BUILDING	1000	13.8KV	277/480V	1050012180	COOPER	317	FR3	GOOD	SS 838 1000KVA 13.8KV-480/277V FR3 TYPE PDMT COOPER	2	2011	N/C
SS 878	VAE24001-R1	K6-0848	TWR E FL 11	750	13.8KV	277/480V	850009770	COOPER	447	FR3	GOOD	SS 878 750KVA 13.8KV-480/277V FR3 OIL PDMT COOPER	4	2009	N/C
SS 879	VAE29001-R1	K6-0848	TWR E FL 32	500	13.8KV	277/480V	CP0950008657	COOPER	315	FR3	GOOD	SS 879 500KVA 13.8KV-480/277V FR3 OIL PDMT COOPER	4	2009	N/C
SS 1166	UOE01001	H7-1986	UNIVERSAL CAMERA PAD #4	75	13.8KV	120/208V	9937007193	COOPER	126	oil	GOOD	SS 1166 75KVA 13.8KV-208/120V OIL TYPE PDMT COOPER	14	1999	N/C
SS 808A	VAE25001-R1	K6-0848	TWR E FL 11	750	13.8KV	277/480V	850009772	COOPER	447	FR3	GOOD	SS 808A 750KVA 13.8KV-480/277V FR3 OIL PDMT COOPER	4	2009	N/C
SS 809B	VAE30001-R1	K6-0848	TWR E FL 32	1000	13.8KV	277/480V	CP0950008660	COOPER	316	FR3	GOOD	SS 809B 1000KVA 13.8KV-480/277V FR3 OIL PDMT COOPER	4	2009	N/C
SS 808B	VAE26001-R1	K6-0848	TWR E FL 11	750	13.8KV	277/480V	850009771	COOPER	447	FR3	GOOD	SS 808B 750KVA 13.8KV-480/277V FR3 OIL PDMT COOPER	4	2009	N/C
SS 224	SBE04001-R1	M7-0505	REAR EAST SIDE	300	13.2KV	277/480V	1050008427	COOPER	190	FR3	GOOD	SS 224 300KVA 13.2KV-480/277V FR3 TYPE PDMT COOPER	2	2011	N/C
SS 221	SBE01001-R1	M7-0505	REAR E SIDE	500	13.2KV	277/480V	1050008429	COOPER	214	FR3	GOOD	SS 221 500KVA 13.2KV-480/277V FR3 TYPE PDMT COOPER	3	2010	N/C
T3 TAP CHANG	MSE01003	M6-0996	ORSINO	N/A	13.2KV	N/A	B0109-08	WAUKESHA	100	oil	FAIR	T3 TAP CHANGER	11	2002	SME to assign a new asset number separate from T-3 ORSINO XFMR
SS OY	OCE52001-R1	M7-0355	O&C	500	13.2KV	277/480V	950011289	COOPER	233	FR3	GOOD	SS OY 500KVA 13.2KV-480/277V FR3 TYPE PDMT COOPER	4	2009	N/C
SS 223	SBE03001-R1	M7-0505	REAR W SIDE	300	13.2KV	120/208V	1050008426	COOPER	208	FR3	GOOD	SS 223 300KVA 13.2KV-208/120V FR3 TYPE PDMT COOPER	2	2011	N/C
SS 222	SBE02001-R1	M7-0505	REAR W SIDE	500	13.2KV	277/480V	1050008428	COOPER	212	FR3	GOOD	SS 222 500KVA 13.2KV-480/277V FR3 TYPE PDMT COOPER	2	2011	N/C
SS 1050B	LBE07001-R1	J7-0337	PAD 39B	1500	13.8KV	277/480V	11JC552480001	COOPER	400	oil	GOOD	SS 1050B 1500KVA 13.8KV-480/277V OIL TYPE PDMT COOPER	2	2011	N/C
SS 1050A	LBE06001-R1	J7-0337	PAD 39B	1500	13.8KV	277/480V	11JC552480002	COOPER	400	oil	GOOD	SS 1050A 1500KVA 13.8KV-480/277V OIL TYPE PDMT COOPER	2	2011	N/C
SS 830A	UAE30001	K6-0947	UTILITY ANNEX	750	13.8KV	277/480V	850020799	COOPER	446	FR3	GOOD	SS 830A 750KVA 13.8KV-480/277V FR3 OIL PDMT COOPER	3	2010	N/C
SS 830B	UAE31001	K6-0947	UTILITY ANNEX	750	13.8KV	277/480V	850020800	COOPER	446	FR3	GOOD	SS 830B 750KVA 13.8KV-480/277V FR3 OIL PDMT COOPER	3	2010	N/C
SS 175	IQE01001	M6-0552	ARTIFACT STORAGE WAREHOUSE	500	13.2KV	277/480V	950002623	COOPER	354	FR3	FAIR	SS 175 500KVA 13.2KV-480/277V FR3 OIL PDMT COOPER	4	2009	N/C

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Oil Transformer Spreadsheet

Sub Name	Unit No.	Location	Additional Descrip	KVA	Primary Voltage	Sec Voltage	Serial#	Manuf	Gal	Type oil	visual inspection	Equipment Description	Age	Install date	Comments
SS 137	IXE01001	M6-0455	TOUR BUS SERVICING BUILDING	1000	13.2KV	277/480V	980344-VA	SQUARE D	459	oil	FAIR	SS 137 1000KVA 13.2KV-480/277V OIL PDMT SQ.D	15	1998	N/C
SS 136	VHE07001	M6-0457	EARLY SPACE EXPLORATIO N BUILDING	750	13.2KV	277/480V	9937007452	COOPER	475	R-Temp	FAIR	SS 136 750KVA 13.2KV-480/277V OIL PDMT COOPER	15	1998	N/C
SS 852	FKE01002	K6-1249	OSB II	500	13.8KV	120/208V	010718-VA1	SQUARE D	309	oil	FAIR	SS 852 500KVA 13.8KV 120/208 S#010718-VA1 SQ D	11	2002	not new XFMR / has never had PM performed in past / had accidently been XSD in MAXIMO / reactivated by MAR on 7/1/12
SS 1165	K-E020001	UK-0020	END OF S. SCHWARTZ ROAD	45	13.2KV	120/208V	09F223101	RTS TRANS	175	oil	GOOD	SS 1165 45KVA 13.2KV-208/120V OIL PDMT	4	2009	N/C
T-BUC	S1E04101	M7-0360	SPACE STATION PROCESSING FACILITY	1000	4.16KV	277/480V	9937000045	COOPER	474	oil	GOOD	TRANSFORMER 1000 KVA, OIL ENCLOSURE 4160V TO 480/277V	14	1999	N/C
2 MVA TO LOA	S1E03219	M7-0360	SPACE STATION PROCESSING FACILITY	2000	4.16KV	277/480V	26001679	COOPER	613	oil	GOOD	TRANSFORMER 2MVA TO LOAD BANK	20	1993	N/C
TD 1	S1E04011	M7-0360	SPACE STATION PROCESSING FACILITY	1000	4.16KV	277/480V	PBL2604-0101	WESTINGHOUSE	233	Silicone	FAIR	TRANSFORMER TD1 1000KVA (OIL) TO MDP-D1	20	1993	N/C
TD 2	S1E04021	M7-0360	SPACE STATION PROCESSING FACILITY	500	4.16KV	277/480V	PBL2605-0101	WESTINGHOUSE	128	Silicone	FAIR	TRANSFORMER TD2 500KVA TO PNL MDP-D2	20	1993	N/C
SS 1146	Z4E02001	K8-0590	EQUIPMENT BUILDING (aka 95393)	75	13.2KV	120/208V	9937004945	COOPER	193	oil	GOOD	SS 1146 75KVS 13.2KV-208/120V OIL TYPE PDMT COOPER	14	1999	send info to: alex mendosa/gary wienard/david vanvuken/gary cooper
SS E - M7-035	OCE06001	M7-0355	O&C PAD S OF BLDG	1000	13.2KV	480V	E-694831	GE	210	oil	FAIR	SS E 1000KVA 13.2/480V S#E694831 GE	47	1966	2/7/13 - informed by SME Son Ho that documentation / MAR was issued in 2012 that considers the PCB count of 72 ppm at last reading no longer a concern (document attached to equipment worksheet)
SS 134	RNE01001-R1	M7-0531	N OR BLDG / BANANA RI REP STA	75	13.2KV	120/208V	1150005822	COOPER	96	FR3	GOOD	SS 134 75KVA 13.2KV-208/120V FR3 TYPE PDMT COOPER	2	2011	N/C
SS 178	XSE01001-R1	M6-0688	PROP MAINT FACILITY	225	13.2KV	120/208V	1050009227	COOPER	165	FR3	GOOD	SS 178 225KVA 13.2KV-208/120V FR3 TYPE PDMT COOPER	2	2011	N/C
SS 826	LEE01001-R1	K6-1247	LAUNCH EQUIPMENT SHOP	500	13.8KV	277/480V	1050009230	COOPER	209	FR3	GOOD	SS 826 500KVA 13.8KV-480/277V FR3 TYPE PDMT COOPER	2	2011	N/C
SS 1153	W1E01004	H5-2140	GUARD HOUSE 4 (KSC)	25	13.8KV	120/240V	99F7295	ROBERTS	UNK	oil	GOOD	SS 1153 25KVA XFMR 13.8KV-120/240 PDMT	14	1999	FORMERLY SPARE @ ORSINO YARD
SS 1104	APE02001	K6-2196 / LC-39 AREA	ROADS & GROUNDS MAINTENANC E #3	75	13.8KV	120/240V	84V4796	VANTRAN	80	oil	POOR	SS 1104 75KVA 13.8KV-240/120V 1PH OIL TYPE PDMT VANTRAN	28	1985	transformer is oil-filled / cannot draw oil for analysis - no oil port / PI readings performed / visual

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Oil Transformer Spreadsheet

Sub Name	Unit No.	Location	Additional Descrip	KVA	Primary Voltage	Sec Voltage	Serial#	Manuf	Gal	Type oil	visual inspection	Equipment Description	Age	Install date	Comments
SS 1117	B9E01001	K6-1847	GENERATOR MAINTENANCE SHOP	225	13.8KV	277/480V	P178756	GE	130	oil	GOOD	SS 1117 225KVA 13.8KV-480/277V OIL TYPE PDMT GE	26	1987	transformer is oil-filled / cannot draw oil for analysis - no oil port / PI readings performed / visual
SS 1122	L6E02001	K6-2496	SECURITY HQ	225	13.8KV	480V	880330A1	SQUARE D	160	oil	GOOD	SS 1122 225KVA 13.8KV S#880330A1 SQ D	25	1988	transformer is oil-filled / cannot draw oil for analysis - no oil port / PI readings performed / visual
SS 1135	Z4E01001	K8-0741	BEACH TRACKING SITE, SOUTH	75	13.8KV	120/208V	06B1740	ROBERTS	182	oil	GOOD	SS 1135 75KVA 13.8KV-208/120V OIL PDMT ROBERTS	24	1989	transformer is oil-filled / cannot draw oil for analysis - no oil port / PI readings performed / visual
SS 1136	SME will assign asset number	CX 41		10	N/A	N/A	931072754	COOPER	59	oil	GOOD	NO DESCRIPTION	20	1993	Not in MAXIMO - no connected loads
SS 115	J7E01001	M6-0639	FILM STORAGE BUILDING	300	13.2KV	277/480V	929003433	COOPER	213	oil	GOOD	SS 115 300KVA 13.2KV-480/277V OIL TYPE PDMT COOPER	21	1992	transformer is oil-filled / cannot draw oil for analysis - no oil port / PI readings performed / visual
SS 1150	EPE01001	J5-0441	TACAN SITE	75	4.16KV	120/208V	73C2642	WESTINGHOUSE	unk	oil	FAIR	SS 1150 75KVA 4160-208/120V OIL PDMT WESTINGHOUSE	30	1983	reactivated SS 1150 per SME MAR on 6/6/13
SS 116	J5E01001	M6-0785	SOURCE EVALUATION BOARD BUILDING	225	13.2KV	277/480V	929003556	COOPER	205	oil	GOOD	SS 116 225KVA 13.2KV-480/277V OIL TYPE PDMT COOPER	20	1993	transformer is oil-filled / cannot draw oil for analysis - no oil port / PI readings performed / visual
SS 129	RDE03001	M6-1671	SURPLUS STORAGE & DISPOSAL BUILDING	75	13.2KV	120/208V	956002229	COOPER	198	oil	GOOD	SS 129 75KVA 13.2KV-208/120V OIL TYPE PDMT COOPER	18	1995	transformer is oil-filled / cannot draw oil for analysis - no oil port / PI readings performed / visual
SS 135	KBE01001	M6-0232	SW NASA OVERPASS	75	13.2KV	277/480V	F6229601	LINE MATERIAL IND.	UNK	oil	GOOD	SS 135 75KVA 13.2KV-480/277V OIL TYPE PDMT LINE MATERIALS IND.	45	1968	transformer is oil-filled / cannot draw oil for analysis - no oil port / PI readings performed / visual
SS 184	NNE01001	M6-0596	SW CORNER OF GAS STATION	25	13.2KV	120/240V	931080515	COOPER	48	R-Temp	GOOD	SS 184 25KVA 13.2KV-240/120V 1PH R-TEMP OIL PDMT COOPER	18	1995	N/C
SS 195	UJE01001	K8-1403	UNIVERSAL CAMERA SITE #15 (aka 95420)	75	13.2KV	120/208V	D6853104	LINE MATERIAL IND.	UNK	oil	FAIR	SS 195 75KVA 13.2KV-208/120V OIL TYPE PDMT LINE MATERIAL IND.	47	1966	transformer is oil-filled / cannot draw oil for analysis - no oil port / PI readings performed / visual
SS 850	LPE04001	K6-0546	MLP REFURB SITE	250	13.8KV	120/240V	08F2086	RTS TRANS	68	oil	GOOD	SS 850 250KVA 13.8KV-240/120V 1PH OIL TYPE PDMT RTS TRANS.	5	2008	SPARE / INSTALLED PER PCN 98535 DRAWING 242M2700002 TO SUPPORT ML CONSTRACTOR TRAILERS.
SS 861	MCE01001	L6-0075	WEATHER EQUIP BLDG 509 (aka 95370, 95371, 95372)	25	13.8KV	120/240V	H685559Y68	GE	15	oil	GOOD	SS 861 25KVA 13.8KV-240/120V 1PH OIL TYPE S#H685559Y68 GE	48	1965	transformer is oil-filled / cannot draw oil for analysis - no oil port / PI readings performed / visual
SS 862	UIE01001	K6-2498	UNIVERSAL CAMERA PAD #18 (aka 95340)	75	13.2KV	120/208V	D6853101	LINE MATERIAL IND.	UNK	oil	GOOD	SS 862 75KVA 13.2KV-208/120V OIL TYPE PDMT LINE MATERIAL IND.	49	1964	transformer is oil-filled / cannot draw oil for analysis - no oil port / PI readings performed / visual
SS 892	RIE01001	K7-0422	REPEATER BLDG #2	75	13.8KV	277/480V	78F740360	WESTINGHOUSE	UNK	oil	FAIR	SS 892 75KVA 13.8/480/277V S#78F740360 WEST	47	1966	6/21/13 oil leak at seam / transformer is oil-filled / cannot draw oil for analysis - no oil port / PI readings performed / visual

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Oil Transformer Spreadsheet

Sub Name	Unit No.	Location	Additional Descrip	KVA	Primary Voltage	Sec Voltage	Serial#	Manuf	Gal	Type oil	visual inspection	Equipment Description	Age	Install date	Comments
SS TV1-1	DUE01001	J6-1808	PAD E OF BUILDING	15	2.4KV	240V	76D1045701	DOWZER	52	oil	GOOD	XFMR 1 15KVA 2400/240V S#76D1045701 DOWZ	38	1975	transformer is oil-filled / cannot draw oil for analysis - no oil port / PI readings performed / visual
SS TV1-2	DUE01002	J6-1808	PAD E OF BUILDING	15	2.4KV	240V	76D1045704	DOWZER	52	oil	GOOD	XFMR 2 15KVA 2400/240V S#76D1045704 DOWZ	37	1976	transformer is oil-filled / cannot draw oil for analysis - no oil port / PI readings performed / visual
SS TV2-1	DVE01001	J5-0677	PAD N OF BUILDING	15	2.4KV	240V	76D1045703	DOWZER	52	oil	GOOD	XFMR 1 15KVA 2400/240V S#76D1045703 DOWZ	37	1976	transformer is oil-filled / cannot draw oil for analysis - no oil port / PI readings performed / visual
SS TV2-2	DVE01002	J5-0677	PAD N OR BUILDING	15	2.4KV	240V	76D1045705	DOWZER	52	oil	GOOD	XFMR 2 15KVA 2400/240V S#76D1045705 DOWZ	37	1976	transformer is oil-filled / cannot draw oil for analysis - no oil port / PI readings performed / visual
SS1159	MBE01001	J6-1869B	ELECTRICAL SUBSTATION (aka 95407)	15	2.4KV	240V		ESCO	unk	oil	FAIR	SS 1159 15KVA IPH 120/240V ESCO	31	1982	no oil sampling port / SME directed to enter in workbook for accountability / XFMR in MAXIMO / send info to: alex mendosa/gary wienard/david vanvuken/gary coope

URS

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APPENDIX G

Contingency Plan & EPA Cross-Reference Documents

G-1 KSC Oil Spill Contingency Plan Reference Guide

G-2 EPA SPCC Field Inspection and Plan Review Checklist

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ATTACHMENT C: SPCC CONTINGENCY PLAN REVIEW CHECKLIST

40 CFR PART 109 – Criteria for State, Local and Regional Oil Removal Contingency Plans

If SPCC Plan includes an impracticability determination for secondary containment in accordance with §112.7(d), the facility owner/operator is required to provide an oil spill contingency plan following 40 CFR part 109, unless he or she has submitted a FRP under §112.20. An oil spill contingency plan may also be developed, unless the facility owner/operator has submitted a FRP under §112.20 as one of the required alternatives to general secondary containment for qualified oil filled operational equipment in accordance with §112.7(k).

109.5 – Development and implementation criteria for State, local and regional oil removal contingency plans.
(a) Definition of the authorities, responsibilities and duties of all persons, organizations or agencies which are to be involved in planning or directing oil removal operations. • KSC-PLN-1919; Section 3.2 (Organizational Roles & Responsibilities) • KDP-KSC-P-3008; Section 3 (Roles and Responsibilities) • KSC-PLN-1919; Section 5.1 (Spill Response Control and Clean-Up)
(b) Establishment of notification procedures for the purpose of early detection and timely notification of an oil discharge including: • KSC-PLN-1920; Section 4 (Site-Specific Spill Response Procedures) • KSC-PLN-1919; Section 5.1 (Spill Response Control and Clean-Up) • KDP-KSC-P-3008; Appendix A (Hazardous Materials Emergency Response)
(1) The identification of critical water use areas to facilitate the reporting of and response to oil discharges. • KSC-PLN-1919; Figure 2-3 (Oil Storage and Critical Water Use Areas) - Corresponding with KSC-PLN-1919; Table 2-1 (SPCC Facilities and Watershed Drainage Area) • KSC-TA-6166; Section 6 (Surface Water and Stormwater)
(2) A current list of names, telephone numbers and addresses of the responsible persons (with alternates) and organizations to be notified when an oil discharge is discovered. • KSC-PLN-1919; Section 3.2 (Organizational Roles & Responsibilities) – Table 3-1
(3) Provisions for access to a reliable communications system for timely notification of an oil discharge, and the capability of interconnection with the communications systems established under related oil removal contingency plans, particularly State and National plans (e.g., National Contingency Plan (NCP)). • KSC-PLN-1919; Section 5.1 (Spill Response Control and Clean-Up) • KSC-PLN-1919; Section 3.2 (Organizational Roles & Responsibilities) – Table 3-1
(4) An established, prearranged procedure for requesting assistance during a major disaster or when the situation exceeds the response capability of the State, local or regional authority. • KNRP 8715.2 (Comprehensive Emergency Management Plan (CEMP)) • KSC-PLN-1919; Section 6.1 (General Spill Reporting Requirements) – Table 6-1 • KSC-PLN-1919; Section 6.2 (Federal, State and Local Agency Reporting Requirements)
(c) Provisions to assure that full resource capability is known and can be committed during an oil discharge situation including:
(1) The identification and inventory of applicable equipment, materials and supplies which are available locally and regionally. • KSC-PLN-1919; Section 3.3 (Mutual Aid Agreements) • EVS-P-4203; Appendix A (Organizational Resources) • EVS-P-4203; Appendix B (IHA Equipment for Spill Clean-Up) • EVS-P-4203; Appendix C (Equipment for Spill Clean-Up)

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(2)	An estimate of the equipment, materials and supplies that would be required to remove the maximum oil discharge to be anticipated. • KSC-PLN-1919; Section 3.3 (Mutual Aid Agreements) • EVS-P-4203; Appendix A (Organizational Resources) • EVS-P-4203; Appendix B (IHA Equipment for Spill Clean-Up) • EVS-P-4203; Appendix C (Equipment for Spill Clean-Up)
(3)	Development of agreements and arrangements in advance of an oil discharge for the acquisition of equipment, materials and supplies to be used in responding to such a discharge. • KSC-PLN-1919 Section 3.3 (Mutual Aid Agreements) • EVS-P-4203; Appendix A (Organizational Resources)
(d)	Provisions for well-defined and specific actions to be taken after discovery and notification of an oil discharge including: • KDP-KSC-P-3008; Appendix A (Hazardous Materials Emergency Response) • EVS-P-4203; Section 5.2 (Figure 1 – Spill Cleanup Process)
(1)	Specification of an oil discharge response operating team consisting of trained, prepared and available operating personnel. • EVS-P-4203; Section 5 • KSC-PNL-1919; Section 3.1.1 – Training Requirements in Section 3.1.2
(2)	Pre-designation of a properly qualified oil discharge response coordinator who is charged with the responsibility and delegated commensurate authority for directing and coordinating response operations and who knows how to request assistance from Federal authorities operating under existing national and regional contingency plans. • EVS-P-4203; Section 4.2 (Spill Cleanup Team Leader)
(3)	A preplanned location for an oil discharge response operations center and a reliable communications system for directing the coordinated overall response operations. • KNRP 8715.2; Section 4.3.1 (Activating the Emergency Operations Center (EOC))
(4)	Provisions for varying degrees of response effort depending on the severity of the oil discharge. • KSC-PNL-1919; Section 5 (Spill Response, Control and Clean-Up Measures)
(5)	Specification of the order of priority in which the various water uses are to be protected where more than one water use may be adversely affected as a result of an oil discharge and where response operations may not be adequate to protect all uses. • KSC-TA-6166; Section 6 (Surface-Water Bodies)
(e)	Specific and well defined procedures to facilitate recovery of damages and enforcement measures as provided for by State and local statutes and ordinances. • Not Applicable (Federal Government Agency)

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U.S. ENVIRONMENTAL PROTECTION AGENCY
SPCC FIELD INSPECTION AND PLAN REVIEW CHECKLIST

ONSHORE FACILITIES (EXCLUDING OIL DRILLING, PRODUCTION AND WORKOVER)

Overview of the Checklist

This checklist is designed to assist EPA inspectors in conducting a thorough and nationally consistent inspection of a facility's compliance with the Spill Prevention, Control, and Countermeasure (SPCC) rule at 40 CFR part 112. It is a required tool to help federal inspectors (or their contractors) record observations for the site inspection and review of the SPCC Plan. While the checklist is meant to be comprehensive, the inspector should always refer to the SPCC rule in its entirety, the SPCC Regional Inspector Guidance Document, and other relevant guidance for evaluating compliance. This checklist must be completed in order for an inspection to count toward an agency measure (i.e., OEM inspection measures or GPRA). The completed checklist and supporting documentation (i.e. photo logs or additional notes) serve as the inspection report.

This checklist addresses requirements for onshore facilities including Tier II Qualified Facilities (excluding facilities involved in oil drilling, production and workover activities) that meet the eligibility criteria set forth in §112.3(g)(2).

Separate standalone checklists address requirements for:
Onshore oil drilling, production, and workover facilities including Tier II Qualified Facilities as defined in §112.3(g)(2);
Offshore drilling, production and workover facilities; and
Tier I Qualified Facilities (for facilities that meet the eligibility criteria defined in §112.3(g)(1))

Qualified facilities must meet the rule requirements in §112.6 and other applicable sections specified in §112.6, except for deviations that provide environmental equivalence and secondary containment impracticability determinations as allowed under §112.6.

The checklist is organized according to the SPCC rule. Each item in the checklist identifies the relevant section and paragraph in 40 CFR part 112 where that requirement is stated.

- Sections 112.1 through 112.5 specify the applicability of the rule and requirements for the preparation, implementation, and amendment of SPCC Plans. For these sections, the checklist includes data fields to be completed, as well as several questions with "yes," "no" or "NA" answers.
- Section 112.6 includes requirements for qualified facilities.
- Section 112.7 includes general requirements that apply to all facilities (unless otherwise excluded).
- Sections 112.8 and 112.12 specify requirements for spill prevention, control, and countermeasures for onshore facilities (excluding production facilities).

The inspector needs to evaluate whether the requirement is addressed adequately or inadequately in the SPCC Plan and whether it is implemented adequately in the field (either by field observation or record review). For the SPCC Plan and implementation in the field, if a requirement is addressed adequately, mark the "Yes" box in the appropriate column. If a requirement is not addressed adequately, mark the "No" box. If a requirement does not apply to the particular facility or the question asked is not appropriate for the facility, mark the "NA" box. Discrepancies or descriptions of inspector interpretation of "No" vs. "NA" may be documented in the comments box subsequent to each section. If a provision of the rule applies only to the SPCC Plan, the "Field" column is shaded.

Space is provided in each section to record comments. Additional space is available on the comments page at the end of the checklist. Comments should remain factual and support the evaluation of compliance.

Appendices

- Appendix A is for recording information about containers and other locations at the facility that require secondary containment.
- Appendix B is a checklist for documentation of the tests and inspections the facility operator is required to keep with the SPCC Plan.
- Appendix C is a checklist for oil spill contingency plans following 40 CFR 109. Unless a facility has submitted a Facility Response Plan (FRP) under 40 CFR 112.20, a contingency plan following 40 CFR 109 is required if a facility determines that secondary containment is impracticable as provided in 40 CFR 112.7(d). The same requirement for an oil spill contingency plan applies to the owner or operator of a facility with qualified oil-filled operational equipment that chooses to implement alternative requirements instead of general secondary containment requirements.

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FACILITY INFORMATION

FACILITY NAME: Kennedy Space Center			
LATITUDE: 28-31-27 N	LONGITUDE: 80-39-02 W	Section/Township/Range: S 11 - T 23 - R 36	
FRS#:	OIL DATABASE ID NO:	ICIS#:	
ADDRESS: NASA KSC Headquarters Building M6-0399, S.R. 405			
CITY: KSC	STATE: FL	ZIP: 32899	COUNTY: Brevard
MAILING ADDRESS (IF DIFFERENT FROM FACILITY ADDRESS – IF NOT, PRINT "SAME"): Same			
CITY:	STATE:	ZIP:	COUNTY:
TELEPHONE: 321-867-8411	FACILITY REPRESENTATIVE NAME: Harold Williams		
OWNER NAME: National Aeronautics and Space Administration (NASA) a federal government agency			
OWNER ADDRESS: Washington, DC 20546-0001			
CITY:	STATE:	ZIP:	COUNTY:
OWNER CONTACT PERSON: Harold Williams, Branch Chief, Environmental Assurance SI-E2			
TELEPHONE: 321-867-8411	FAX:	EMAIL:	
FACILITY OPERATOR NAME (IF DIFFERENT FROM OWNER – IF NOT, PRINT "SAME"): Same			
OPERATOR ADDRESS:			
CITY:	STATE:	ZIP:	COUNTY:
TELEPHONE:	OPERATOR CONTACT PERSON:		
FACILITY TYPE: federal installation - spaceport			NAICS CODE:
HOURS PER DAY FACILITY ATTENDED: 24		TOTAL FACILITY CAPACITY: 550,422 Gallons US	
TYPE(S) OF OIL STORED: automotive, aviation, and rocket fuels; lubricants, cooking and specialty oils			
LOCATED IN INDIAN COUNTRY? ☐ YES ☑ NO RESERVATION NAME:			

INSPECTION INFORMATION

INSPECTION DATE:	TIME:	ACTIVITY ID NO:
LEAD INSPECTOR:		
OTHER INSPECTOR(S):		

INSPECTOR ACKNOWLEDGMENT

I performed an SPCC inspection at the facility specified above.

INSPECTOR SIGNATURE:	DATE:

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FACILITY RESPONSE PLAN (FRP) APPLICABILITY

A non-transportation related onshore facility is required to prepare and implement an FRP as outlined in 40 CFR 112.20 if:

- ☐ The facility transfers oil over water to or from vessels and has a total oil storage capacity greater than or equal to 42,000 U.S. gallons, **OR**
- ☐ The facility has a total oil storage capacity of at least 1 million U.S. gallons, **AND** at least one of the following is true:
  - ☐ The facility does not have secondary containment sufficiently large to contain the capacity of the largest aboveground tank plus sufficient freeboard for precipitation.
  - ☐ The facility is located at a distance such that a discharge could cause injury to fish and wildlife and sensitive environments.
  - ☐ The facility is located such that a discharge would shut down a public drinking water intake.
  - ☐ The facility has had a reportable discharge greater than or equal to 10,000 U.S. gallons in the past 5 years.

Facility has FRP: ☐ Yes ☐ No ☑ Not Required	FRP Number:

Facility has a completed and signed copy of Appendix C, Attachment C-II, "Certification of the Applicability of the Substantial Harm Criteria." ☑ Yes ☐ No

Comments: Located on page F-3

SPCC GENERAL APPLICABILITY—40 CFR 112.1

IS THE FACILITY REGULATED UNDER 40 CFR part 112?

The completely buried oil storage capacity is over 42,000 U.S. gallons, **OR** the aggregate aboveground oil storage capacity is over 1,320 U.S. gallons **AND** ☑ Yes ☐ No

The facility is a non-transportation-related facility engaged in drilling, producing, gathering, storing, processing, refining, transferring, distributing, using, or consuming oil and oil products, which due to its location could reasonably be expected to discharge oil into or upon the navigable waters of the United States ☑ Yes ☐ No

AFFECTED WATERWAY(S): Indian & Banana Rivers, Mosquito Lagoon, Atlantic Ocean	DISTANCE: Adjacent

FLOW PATH TO WATERWAY: Multiple pathways depending on activity and storage location. Reference Figure 2.2

Note: The following storage capacity is not considered in determining applicability of SPCC requirements:

- *Equipment subject to the authority of the U.S. Department of Transportation, U.S. Department of the Interior, or Minerals Management Service, as defined in Memoranda of Understanding dated November 24, 1971, and November 8, 1993; Tank trucks that return to an otherwise regulated facility that contain only residual amounts of oil (EPA Policy letter)*
- *Completely buried tanks subject to all the technical requirements of 40 CFR part 280 or a state program approved under 40 CFR part 281;*
- *Underground oil storage tanks deferred under 40 CFR part 280 that supply emergency diesel generators at a nuclear power generation facility licensed by the Nuclear Regulatory Commission (NRC) and subject to any NRC provision regarding design and quality criteria, including but not limited to CFR part 50;*
- *Any facility or part thereof used exclusively for wastewater treatment (production, recovery or recycling of oil is not considered wastewater treatment); (This does not include other oil containers located at a wastewater treatment facility, such as generator tanks or transformers)*
- *Containers smaller than 55 U.S. gallons;*
- *Permanently closed containers (as defined in §112.2);*
- *Motive power containers(as defined in §112.2);*
- *Hot-mix asphalt or any hot-mix asphalt containers;*
- *Heating oil containers used solely at a single-family residence;*
- *Pesticide application equipment and related mix containers;*
- *Any milk and milk product container and associated piping and appurtenances; and*
- *Intra-facility gathering lines subject to the regulatory requirements of 49 CFR part 192 or 195.*

Does the facility have an SPCC Plan? ☑ Yes ☐ No

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SPCC TIER II QUALIFIED FACILITY APPLICABILITY—40 CFR 112.3(g)(2)	
The aggregate aboveground oil storage capacity is 10,000 U.S. gallons or less **AND**	☐ Yes ☑ No
In the three years prior to the SPCC Plan self-certification date, or since becoming subject to the rule (if the facility has been in operation for less than three years), the facility has **NOT** had:	
• A single discharge as described in §112.1(b) exceeding 1,000 U.S. gallons, **OR**	☐ Yes ☑ No
• Two discharges as described in §112.1(b) each exceeding 42 U.S. gallons within any twelve-month period[1]	☐ Yes ☑ No
IF ***YES*** TO ALL OF THE ABOVE, THEN THE FACILITY IS CONSIDERED A TIER II QUALIFIED FACILITY[2]	

REQUIREMENTS FOR PREPARATION AND IMPLEMENTATION OF A SPCC PLAN—40 CFR 112.3			
Date facility began operations: 1962			
Date of initial SPCC Plan preparation: 12/2003		Current Plan version (date/number): KSC-PLN-1919, Revision E: 09/2013	
112.3(a)	**For facilities (except farms), including mobile or portable facilities:**		
	• In operation on or prior to November 10, 2011: Plan prepared and/or amended and fully implemented by **November 10, 2011**		☑ Yes ☐ No ☐ NA
	• Beginning operations after November 10, 2011, Plan prepared and fully implemented before beginning operations		☐ Yes ☐ No ☑ NA
	For farms (as defined in §112.2):		
	• In operation on or prior to August 16, 2002: Plan maintained, amended and implemented by **May 10, 2013**		☐ Yes ☐ No ☑ NA
	• Beginning operations after August 16, 2002 through May 10, 2013: Plan prepared and fully implemented by **May 10, 2013**		☐ Yes ☐ No ☑ NA
	• Beginning operations after May 10, 2013: Plan prepared and fully implemented before beginning operations		☐ Yes ☐ No ☑ NA
112.3(d)	Plan is certified by a registered Professional Engineer (PE) and includes statements that the PE attests:		☑ Yes ☐ No ☐ NA
	• PE is familiar with the requirements of 40 CFR part 112		☑ Yes ☐ No ☐ NA
	• PE or agent has visited and examined the facility		☑ Yes ☐ No ☐ NA
	• Plan is prepared in accordance with good engineering practice including consideration of applicable industry standards and the requirements of 40 CFR part 112		☑ Yes ☐ No ☐ NA
	• Procedures for required inspections and testing have been established		☑ Yes ☐ No ☐ NA
	• Plan is adequate for the facility		☑ Yes ☐ No ☐ NA
PE Name: Randall Byrd	License No.: 23451	State: FLorida	Date of certification: March 20, 2009
112.3(e)(1)	Plan is available onsite if attended at least 4 hours per day. If facility is unattended, Plan is available at the nearest field office. *(Please note nearest field office contact information in comments section below.)*		☑ Yes ☐ No ☐ NA
Comments: Current PE Certification on page XI of KSC-PLN-1919. Refer to Appendix A of plan for Technical Amendment log			

[1] Oil discharges that result from natural disasters, acts of war, or terrorism are not included in this determination. The gallon amount(s) specified (either 1,000 or 42) refers to the amount of oil that actually reaches navigable waters or adjoining shorelines not the total amount of oil spilled. The entire volume of the discharge is oil for this determination.

[2] An owner/operator who self-certifies a Tier II SPCC Plan may not include any environmentally equivalent alternatives or secondary containment impracticability determinations unless reviewed and certified by a PE.

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AMENDMENT OF SPCC PLAN BY REGIONAL ADMINISTRATOR (RA)—40 CFR 112.4		
112.4(a),(c)	Has the facility discharged more than 1,000 U.S. gallons of oil in a single reportable discharge or more than 42 U.S. gallons in each of two reportable discharges in any 12-month period?[3]	☐Yes ☑No
If **YES**	• Was information submitted to the RA as required in §112.4(a)?[4]	☐Yes ☐No ☑NA
	• Was information submitted to the appropriate agency or agencies in charge of oil pollution control activities in the State in which the facility is located§112.4(c)	☐Yes ☐No ☑NA
	• Date(s) and volume(s) of reportable discharges(s) under this section: _____	
	• Were the discharges reported to the NRC[5]?	☐Yes ☐No
112.4(d),(e)	Have changes required by the RA been implemented in the Plan and/or facility?	☐Yes ☐No ☑NA
Comments: No reportable discharge(s) in excess of the stated limits above.		

AMENDMENT OF SPCC PLAN BY THE OWNER OR OPERATOR—40 CFR 112.5		
112.5(a)	Has there been a change at the facility that materially affects the potential for a discharge described in §112.1(b)?	☑Yes ☐No
If **YES**	• Was the Plan amended within six months of the change?	☑Yes ☐No
112.5(b)	Review and evaluation of the Plan completed at least once every 5 years?	☑Yes ☐No ☐NA
	Following Plan review, was Plan amended within six months to include more effective prevention and control technology that has been field-proven to significantly reduce the likelihood of a discharge described in §112.1(b)?	☑Yes ☐No ☐NA
	Amendments implemented within six months of any Plan amendment?	☑Yes ☐No ☐NA
	Five year Plan review and evaluation documented?	☑Yes ☐No ☐NA
112.5(c)	Professional Engineer certification of any technical Plan amendments in accordance with all applicable requirements of §112.3(d) *[Except for self-certified Plans]*	☑Yes ☐No ☐NA

Name:	License No.:	State:	Date of certification:

Reason for amendment: Log of Technical Amendments in Appendix A of plan categorized by contractor and listed in Appendix B of SPCC Plan. Individual spill plans located in KSC-PLN-1920 Site-Specific SPCC Plans.

Plan amended within six months of the change?	☑Yes ☐No ☐NA
Amendments implemented within six months of any Plan amendment?	☑Yes ☐No ☐NA

Comments: Individual PE signing statements and amendment logs located in file room and online on NASA TA3 server at Z:\PERMITTING_&_COMPLIANCE\SPCC

[3] A reportable discharge is a discharge as described in §112.1(b)(see 40 CFR part 110). The gallon amount(s) specified (either 1,000 or 42) refers to the amount of oil that actually reaches navigable waters or adjoining shorelines not the total amount of oil spilled. The entire volume of the discharge is oil for this determination

[4] Triggering this threshold may disqualify the facility from meeting the Qualified Facility criteria if it occurred in the three years prior to self certification

[5] Inspector Note-Confirm any spills identified above were reported to NRC

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TIER II QUALIFIED FACILITY PLAN REQUIREMENTS —40 CFR 112.6(b)		
112.6(b)(1)	**Plan Certification:** Owner/operator certified in the Plan that:	☐Yes ☐No ☑NA
(i)	He or she is familiar with the requirements of 40 CFR part 112	☐Yes ☐No ☑NA
(ii)	He or she has visited and examined the facility[6]	☐Yes ☐No ☑NA
(iii)	The Plan has been prepared in accordance with accepted and sound industry practices and standards and with the requirements of this part	☐Yes ☐No ☑NA
(iv)	Procedures for required inspections and testing have been established	☐Yes ☐No ☑NA
(v)	He or she will fully implement the Plan	☐Yes ☐No ☑NA
(vi)	The facility meets the qualification criteria set forth under §112.3(g)(2)	☐Yes ☐No ☑NA
(vii)	The Plan does not deviate from any requirements as allowed by §§112.7(a)(2) and 112.7(d), except as described under §112.6(b)(3)(i) or (ii)	☐Yes ☐No ☑NA
(viii)	The Plan and individual(s) responsible for implementing the Plan have the full approval of management and the facility owner or operator has committed the necessary resources to fully implement the Plan.	☐Yes ☐No ☑NA
112.6(b)(2)	**Technical Amendments:** The owner/operator self-certified the Plan's technical amendments for a change in facility design, construction, operation, or maintenance that affected potential for a §112.1(b) discharge	☐Yes ☐No ☑NA
If **YES**	• Certification of technical amendments is in accordance with the self-certification provisions of §112.6(b)(1).	☐Yes ☐No ☑NA
(i)	A PE certified a portion of the Plan (i.e., Plan is informally referred to as a hybrid Plan)	☐Yes ☐No ☑NA
If **YES**	• The PE also certified technical amendments that affect the PE certified portion of the Plan as required under §112.6(b)(4)(ii)	☐Yes ☐No ☑NA
(ii)	The aggregate aboveground oil storage capacity increased to more than 10,000 U.S. gallons as a result of the change	☐Yes ☐No ☑NA
If **YES**	*The facility no longer meets the Tier II qualifying criteria in §112.3(g)(2) because it exceeds 10,000 U.S. gallons in aggregate aboveground storage capacity.*	
	The owner/operator prepared and implemented a Plan within 6 months following the change and had it certified by a PE under §112.3(d)	☐Yes ☐No ☑NA
112.6(b)(3)	**Plan Deviations:** Does the Plan include environmentally equivalent alternative methods or impracticability determinations for secondary containment?	☑Yes ☐No ☐NA
If **YES**	Identify the alternatives in the hybrid Plan:	
	• Environmental equivalent alternative method(s) allowed under §112.7(a)(2);	☑Yes ☐No ☐NA
	• Impracticability determination under §112.7(d)	☐Yes ☑No ☐NA
112.6(b)(4)	• For each environmentally equivalent measure, the Plan is accompanied by a written statement by the PE that describes: the reason for nonconformance, the alternative measure, and how it offers equivalent environmental protection in accordance with §112.7(a)(2);	☑Yes ☐No ☐NA
	• For each secondary containment impracticability determination, the Plan explains the reason for the impracticability determination and provides the alternative measures to secondary containment required in §112.7(d)	☐Yes ☐No ☑NA
	AND	
(i)	PE certifies in the Plan that:	
(A)	He/she is familiar with the requirements of 40 CFR Part 112	☑Yes ☐No ☐NA
(B)	He/she or a representative agent has visited and examined the facility	☑Yes ☐No ☐NA
(C)	The alternative method of environmental equivalence in accordance with §112.7(a)(2) or the determination of impracticability and alternative measures in accordance with §112.7(d) is consistent with good engineering practice, including consideration of applicable industry standards, and with the requirements of 40 CFR Part 112.	☑Yes ☐No ☐NA
Comments:	The SPCC plan was prepared and certified at a time when an environmental equivalence determination was required for certified integrity testing. This is no longer required, however the PE statement remains in the plan in reference to certified integrity testing. This is located in Section 4.3.3.6 Aboveground Container Periodic Integrity Testing on page 4-10. PE amendment information located in Appendix A.	

[6] Note that only the person certifying the Plan can make the site visit

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GENERAL SPCC REQUIREMENTS—40 CFR 112.7		PLAN	FIELD
Management approval at a level of authority to commit the necessary resources to fully implement the Plan[7]		☑ Yes ☐ No	
Plan follows sequence of the rule or is an equivalent Plan meeting all applicable rule requirements and includes a cross-reference of provisions		☑ Yes ☐ No ☐ NA	
If Plan calls for facilities, procedures, methods, or equipment not yet fully operational, details of their installation and start-up are discussed *(Note: Relevant for inspection evaluation and testing baselines.)*		☑ Yes ☐ No ☐ NA	
112.7(a)(2)	The Plan includes deviations from the requirements of §§112.7(g), (h)(2) and (3), and (i) and applicable subparts B and C of the rule, except the secondary containment requirements in §§112.7(c) and (h)(1), 112.8(c)(2),112.8(c)(11), 112.12(c)(2), and 112.12(c)(11)	☑ Yes ☑ No ☐ NA	
If **YES**	• The Plan states reasons for nonconformance	☐ Yes ☐ No ☑ NA	
	• Alternative measures described in detail and provide equivalent environmental protection *(Note: Inspector should document if the environmental equivalence is implemented in the field, in accordance with the Plan's description)*	☑ Yes ☐ No ☐ NA	☑ Yes ☐ No ☐ NA
Describe each deviation and reasons for nonconformance: The SPCC plan was prepared and certified at a time when an environmental equivalence determination was required for certified integrity testing. This is no longer required, however the PE statement remains in the plan in reference to certified integrity testing only. This is located in Section 4.3.3.6 Aboveground Container Periodic Integrity Testing on page 4-10. PE amendment information located in Appendix A. Deviations form general secondary containment for oil-filled operational equipment is addressed in Section 4.3.2, and Appendix G.			
112.7(a)(3)	Plan describes physical layout of facility and includes a diagram[8] that identifies: • Location and contents of all regulated fixed oil storage containers • Storage areas where mobile or portable containers are located • Completely buried tanks otherwise exempt from the SPCC requirements (marked as "exempt") • Transfer stations • Connecting pipes, including intra-facility gathering lines that are otherwise exempt from the requirements of this part under §112.1(d)(11)	☑ Yes ☐ No	☑ Yes ☐ No
	Plan addresses each of the following:		
(i)	For each fixed container, type of oil and storage capacity (see Appendix A of this checklist). For mobile or portable containers, type of oil and storage capacity for each container or an estimate of the potential number of mobile or portable containers, the types of oil, and anticipated storage capacities	☑ Yes ☐ No	☑ Yes ☐ No
(ii)	Discharge prevention measures, including procedures for routine handling of products (loading, unloading, and facility transfers, etc.)	☑ Yes ☐ No	☑ Yes ☐ No
(iii)	Discharge or drainage controls, such as secondary containment around containers, and other structures, equipment, and procedures for the control of a discharge	☑ Yes ☐ No	☑ Yes ☐ No
(iv)	Countermeasures for discharge discovery, response, and cleanup (both facility's and contractor's resources)	☑ Yes ☐ No	☑ Yes ☐ No
(v)	Methods of disposal of recovered materials in accordance with applicable legal requirements	☑ Yes ☐ No	
(vi)	Contact list and phone numbers for the facility response coordinator, National Response Center, cleanup contractors with an agreement for response, and all Federal, State, and local agencies who must be contacted in the case of a discharge as described in §112.1(b)	☑ Yes ☐ No	

[7] May be part of the Plan or demonstrated elsewhere.
[8] Note in comments any discrepancies between the facility diagram, the description of the physical layout of facility, and what is observed in the field

RELEASED - Printed documents may be obsolete; validate prior to use.

		PLAN	FIELD
112.7(a)(4)	***Does not apply if the facility has submitted an FRP under §112.20:*** Plan includes information and procedures that enable a person reporting an oil discharge as described in §112.1(b) to relate information on the: • Exact address or location and phone number of the facility; • Date and time of the discharge; • Type of material discharged; • Estimates of the total quantity discharged; • Estimates of the quantity discharged as described in §112.1(b); • Source of the discharge; • Description of all affected media; • Cause of the discharge; • Damages or injuries caused by the discharge; • Actions being used to stop, remove, and mitigate the effects of the discharge; • Whether an evacuation may be needed; and • Names of individuals and/or organizations who have also been contacted.	☑ Yes ☐ No ☐ NA	
112.7(a)(5)	***Does not apply if the facility has submitted a FRP under §112.20:*** Plan organized so that portions describing procedures to be used when a discharge occurs will be readily usable in an emergency	☑ Yes ☐ No ☐ NA	
112.7(b)	Plan includes a prediction of the direction, rate of flow, and total quantity of oil that could be discharged for each type of major equipment failure where experience indicates a reasonable potential for equipment failure	☑ Yes ☐ No ☐ NA	
112.7(c)	Appropriate containment and/or diversionary structures or equipment are provided to prevent a discharge as described in §112.1(b), **except as provided in §112.7(k) of this section for certain qualified operational equipment**. The entire containment system, including walls and floors, are capable of containing oil and are constructed to prevent escape of a discharge from the containment system before cleanup occurs. The method, design, and capacity for secondary containment address the typical failure mode and the most likely quantity of oil that would be discharged. See Appendix A of this checklist. **For onshore facilities**, one of the following or its equivalent: • Dikes, berms, or retaining walls sufficiently impervious to contain oil; • Curbing or drip pans; • Sumps and collection systems; • Culverting, gutters or other drainage systems; • Weirs, booms or other barriers; • Spill diversion pond; • Retention ponds; or • Sorbent materials.		
	Identify which of the following are present at the facility and if appropriate containment and/or diversionary structures or equipment are provided as described above:		
	☑ Bulk storage containers	☑ Yes ☐ No ☐ NA	☑ Yes ☐ No ☐ NA
	☑ Mobile/portable containers	☑ Yes ☐ No ☐ NA	☑ Yes ☐ No ☐ NA
	☑ Oil-filled operational equipment (as defined in 112.2)	☑ Yes ☐ No ☐ NA	☑ Yes ☐ No ☐ NA
	☑ Other oil-filled equipment (i.e., manufacturing equipment)	☑ Yes ☐ No ☐ NA	☑ Yes ☐ No ☐ NA
	☑ Piping and related appurtenances	☑ Yes ☐ No ☐ NA	☑ Yes ☐ No ☐ NA
	☑ Mobile refuelers or non-transportation-related tank cars	☑ Yes ☐ No ☐ NA	☑ Yes ☐ No ☐ NA
	☑ Transfer areas, equipment and activities	☑ Yes ☐ No ☐ NA	☑ Yes ☐ No ☐ NA
	☐ Identify any other equipment or activities that are not listed above: _____	☐ Yes ☐ No ☑ NA	☐ Yes ☐ No ☑ NA

Comments:

Figures 2-1 thru 2-2 represent oil storage locations and physical layout of the facility.
Figure 2-1 site boundaries and location, Table 2-2 lists all oil storage facilities on KSC/CCAFS and potential receiving waters
(i) Site Specific Plan information in KSC-PLN-1920, Rev. L.
(ii) Section 4.1 thru 4.4
(iii) Section 4.1 thru 4.4
(iv) Section 5.0 thru 5.2
(v) Section 5.3
(vi) Section 6.1 thru 6.3; Table 6-1

112.7(a)(4) Section 5.1 and Section 6.2.2
112.7(b) and (c) refer to KSC-PLN-1920 Site-Specific SPCC plans
**Oil-Filed operational equipment utilize secondary containment and/or contingency planning. Refer to Sections 4.3.2, 4.8, & 4.9

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		PLAN	FIELD
112.7(d)	Secondary containment for one (or more) of the following provisions is determined to be impracticable: ☐ General secondary containment §112.7(c) ☐ Bulk storage containers §§112.8(c)(2)/112.12(c)(2) ☐ Loading/unloading rack §112.7(h)(1) ☐ Mobile/portable containers§§112.8(c)(11)/112.12(c)(11)	☐Yes ☑No	
If **YES**	• The impracticability of secondary containment is clearly demonstrated and described in the Plan	☐Yes ☐No ☑NA	☐Yes ☐No ☑NA
	• For bulk storage containers,[9] periodic integrity testing of containers and integrity and leak testing of the associated valves and piping is conducted	☐Yes ☐No ☑NA	☐Yes ☐No ☑NA
	(Does not apply if the facility has submitted a FRP under §112.20): • Contingency Plan following the provisions of 40 CFR part 109 is provided (see Appendix C of this checklist) **AND**	☑Yes ☐No ☐NA	
	• Written commitment of manpower, equipment, and materials required to expeditiously control and remove any quantity of oil discharged that may be harmful	☑Yes ☐No ☐NA	☑Yes ☐No ☐NA
112.7(e)	Inspections and tests conducted in accordance with written procedures	☑Yes ☐No	☑Yes ☐No
	Record of inspections or tests signed by supervisor or inspector	☑Yes ☐No	☑Yes ☐No
	Kept with Plan for at least 3 years (see Appendix B of this checklist)[10]	☑Yes ☐No	☑Yes ☐No
112.7(f)	Personnel, training, and oil discharge prevention procedures		
(1)	Training of oil-handling personnel in operation and maintenance of equipment to prevent discharges; discharge procedure protocols; applicable pollution control laws, rules, and regulations; general facility operations; and contents of SPCC Plan	☑Yes ☐No ☐NA	☑Yes ☐No ☐NA
(2)	Person designated as accountable for discharge prevention at the facility and reports to facility management	☑Yes ☐No ☐NA	☑Yes ☐No ☐NA
(3)	Discharge prevention briefings conducted at least once a year for oil handling personnel to assure adequate understanding of the Plan. Briefings highlight and describe known discharges as described in §112.1(b) or failures, malfunctioning components, and any recently developed precautionary measures	☑Yes ☐No ☐ NA	☑Yes ☐No ☐NA
112.7(g)	Plan describes how to: • Secure and control access to the oil handling, processing and storage areas; • Secure master flow and drain valves; • Prevent unauthorized access to starter controls on oil pumps; • Secure out-of-service and loading/unloading connections of oil pipelines; and • Address the appropriateness of security lighting to both prevent acts of vandalism and assist in the discovery of oil discharges.	☑Yes ☐No ☐NA	☑Yes ☐No ☐NA

Comments:
112.7(d) No impracticability determination for secondary containment of bulk storage containers.
112.7(e) Inspections and tests addressed in Section 4.2 thru 4.3, and Tables 4-1, 4-2
112.7(f) Training requirements in Section 3.1.2 and each KSC-PLN-1920 Site-Specific Plan, Section 3.0
112.7(g) Addressed in Section 4.10 Site Security

[9] These additional requirements apply only to bulk storage containers, when an impracticability determination has been made by the PE
[10] Records of inspections and tests kept under usual and customary business practices will suffice

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		PLAN	FIELD
112.7(h)	Tank car and tank truck loading/unloading rack[11] is present at the facility *Loading/unloading rack* means a fixed structure (such as a platform, gangway) necessary for loading or unloading a tank truck or tank car, which is located at a facility subject to the requirements of this part. A loading/unloading rack includes a loading or unloading arm, and may include any combination of the following: piping assemblages, valves, pumps, shut-off devices, overfill sensors, or personnel safety devices.		☑ Yes ☐ No
If **YES** (1)	Does loading/unloading rack drainage flow to catchment basin or treatment facility designed to handle discharges or use a quick drainage system?	☑ Yes ☐ No ☐ NA	☑ Yes ☐ No ☐ NA
	Containment system holds at least the maximum capacity of the largest single compartment of a tank car/truck loaded/unloaded at the facility	☑ Yes ☐ No ☐ NA	☑ Yes ☐ No ☐ NA
(2)	An interlocked warning light or physical barriers, warning signs, wheel chocks, or vehicle brake interlock system in the area adjacent to the **loading or unloading rack** to prevent vehicles from departing before complete disconnection of flexible or fixed oil transfer lines	☑ Yes ☐ No ☐ NA	☑ Yes ☐ No ☐ NA
(3)	Lower-most drains and all outlets on tank cars/trucks inspected prior to filling/departure, and, if necessary ensure that they are tightened, adjusted, or replaced to prevent liquid discharge while in transit	☑ Yes ☐ No ☐ NA	☑ Yes ☐ No ☐ NA
112.7(i)	Brittle fracture evaluation of field-constructed aboveground containers is conducted after tank repair, alteration, reconstruction, or change in service that might affect the risk of a discharge or after a discharge/failure due to brittle fracture or other catastrophe, and appropriate action taken as necessary (applies to only field-constructed aboveground containers)	☐ Yes ☐ No ☑ NA	☐ Yes ☐ No ☑ NA
112.7(j)	Discussion of conformance with applicable more stringent State rules, regulations, and guidelines and other effective discharge prevention and containment procedures listed in 40 CFR part 112	☑ Yes ☐ No ☐ NA	
112.7(k)	Qualified oil-filled operational equipment is present at the facility[12] *Oil-filled operational equipment* means equipment that includes an oil storage container (or multiple containers) in which the oil is present solely to support the function of the apparatus or the device. Oil-filled operational equipment is not considered a bulk storage container, and does not include oil-filled manufacturing equipment (flow-through process). Examples of oil-filled operational equipment include, but are not limited to, hydraulic systems, lubricating systems (e.g. , those for pumps, compressors and other rotating equipment, including pumpjack lubrication systems), gear boxes, machining coolant systems, heat transfer systems, transformers, circuit breakers, electrical switches, and other systems containing oil solely to enable the operation of the device.		☑ Yes ☐ No
If **YES**	Check which apply: ☑ Secondary Containment provided in accordance with 112.7(c) ☑ Alternative measure described below (confirm eligibility)		
112.7(k)	Qualified Oil-Filled Operational Equipment • Has a single reportable discharge as described in §112.1(b) from any oil-filled operational equipment exceeding 1,000 U.S. gallons occurred within the three years prior to Plan certification date?	☐ Yes ☑ No ☐ NA	
	• Have two reportable discharges as described in §112.1(b) from any oil-filled operational equipment each exceeding 42 U.S. gallons occurred within any 12-month period within the three years prior to Plan certification date?[13]	☐ Yes ☑ No ☐ NA	
	*If **YES** for either, secondary containment in accordance with §112.7(c) is required*		
	• Facility procedure for inspections or monitoring program to detect equipment failure and/or a discharge is established and documented	☑ Yes ☐ No ☐ NA	☑ Yes ☐ No ☐ NA
	Does not apply if the facility has submitted a FRP under §112.20: • Contingency plan following 40 CFR part 109 (see Appendix C checklist) is provided in Plan **AND**	☑ Yes ☐ No ☐ NA	
	• Written commitment of manpower, equipment, and materials required to expeditiously control and remove any quantity of oil discharged that may be harmful is provided in Plan	☑ Yes ☐ No ☐ NA	

[11] Note that a tank car/truck loading/unloading rack must be present for §112.7(h) to apply
[12] This provision does not apply to oil-filled manufacturing equipment (flow-through process)
[13] Do not include oil discharges that result from natural disasters, acts of war, or terrorism in this qualification determination

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ONSHORE FACILITIES (EXCLUDING PRODUCTION) 40 CFR 112.8/112.12		PLAN	FIELD
112.8(b)/ 112.12(b) Facility Drainage			
Diked Areas (1)	Drainage from diked storage areas is: • Restrained by valves, except where facility systems are designed to control such discharge, **OR** • Manually activated pumps or ejectors are used and the condition of the accumulation is inspected prior to draining dike to ensure no oil will be discharged	☑ Yes ☐ No ☐ NA	☑ Yes ☐ No ☐ NA
(2)	Diked storage area drain valves are manual, open-and-closed design (not flapper-type drain valves)	☑ Yes ☐ No ☐ NA	☑ Yes ☐ No ☐ NA
	If drainage is released directly to a watercourse and not into an onsite wastewater treatment plant, retained storm water is inspected and discharged per §§112.8(c)(3)(ii), (iii), and (iv) or §§112.12(c)(3)(ii), (iii), and (iv).	☑ Yes ☐ No ☐ NA	☑ Yes ☐ No ☐ NA
Undiked Areas (3)	Drainage from undiked areas with a potential for discharge designed to flow into ponds, lagoons, or catchment basins to retain oil or return it to facility. Catchment basin located away from flood areas.[14]	☐ Yes ☐ No ☑ NA	☐ Yes ☐ No ☑ NA
(4)	If facility drainage not engineered as in (b)(3) (i.e., drainage flows into ponds, lagoons, or catchment basins) then the facility is equipped with a diversion system to retain oil in the facility in the event of an uncontrolled discharge.[15]	☐ Yes ☐ No ☑ NA	☐ Yes ☐ No ☑ NA
(5)	Are facility drainage waters continuously treated in more than one treatment unit and pump transfer is needed?	☐ Yes ☐ No ☑ NA	☐ Yes ☐ No ☑ NA
If ***YES***	• Two "lift" pumps available and at least one permanently installed	☐ Yes ☐ No ☑ NA	☐ Yes ☐ No ☑ NA
	• Facility drainage systems engineered to prevent a discharge as described in §112.1(b) in the case of equipment failure or human error	☐ Yes ☐ No ☑ NA	☐ Yes ☐ No ☑ NA

Comments:

112.7(h) Loading-unloading addressed in Section 4.4.1. Loading rack located at Facility 1044. Information regarding this facility's site-specific Plan located in KSC-PLN-1920.
112.7(j) More stringent state requirements in Section 4.6
112.7(k) Oil-Filed operational equipment relies on containment for high-risk sites, contingency planning and dedicated spill response capability. Refer to Section 4.3.2, 4.8 & 4.9 for information, Appendix F for transformer information, and Appendix G for Oil Spill Contingency Plan. Refer to KSC-PLN-1920 for individual oil storage locations and site-specific secondary containment provisions.
112.8(b) Drainage from diked storage areas, Section 4.3.3.2, Section 4.3.4 and Table 4-5

112.8(c)/112.12(c) Bulk Storage Containers ☐ NA

Bulk storage container means any container used to store oil. These containers are used for purposes including, but not limited to, the storage of oil prior to use, while being used, or prior to further distribution in commerce. Oil-filled electrical, operating, or manufacturing equipment is not a bulk storage container.

If bulk storage containers are not present, mark this section Not Applicable (NA). If present, complete this section and Appendix A of this checklist.

(1)	Containers materials and construction are compatible with material stored and conditions of storage such as pressure and temperature	☑ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
(2)	Except for mobile refuelers and other non-transportation-related tank trucks, construct all bulk storage tank installations with secondary containment to hold capacity of largest container and sufficient freeboard for precipitation	☑ Yes ☐ No ☐ NA	☑ Yes ☐ No ☐ NA
	Diked areas sufficiently impervious to contain discharged oil **OR**	☑ Yes ☐ No ☐ NA	☑ Yes ☐ No ☐ NA
	Alternatively, any discharge to a drainage trench system will be safely confined in a facility catchment basin or holding pond	☐ Yes ☐ No ☑ NA	☐ Yes ☐ No ☑ NA

[14] Do not include oil discharges that result from natural disasters, acts of war, or terrorism in this qualification determination.
[15] These provisions apply only when a facility drainage system is used for containment; otherwise mark NA

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		PLAN	FIELD
(3)	Is there drainage of uncontaminated rainwater from diked areas into a storm drain or open watercourse?	☑ Yes ☐ No ☐ NA	☑ Yes ☐ No ☐ NA
If **YES**	• Bypass valve normally sealed closed	☑ Yes ☐ No ☐ NA	☑ Yes ☐ No ☐ NA
	• Retained rainwater is inspected to ensure that its presence will not cause a discharge as described in §112.1(b)	☑ Yes ☐ No ☐ NA	☑ Yes ☐ No ☐ NA
	• Bypass valve opened and resealed under responsible supervision	☑ Yes ☐ No ☐ NA	☑ Yes ☐ No ☐ NA
	• Adequate records of drainage are kept; for example, records required under permits issued in accordance with 40 CFR §§122.41(j)(2) and (m)(3)	☑ Yes ☐ No ☐ NA	☑ Yes ☐ No ☐ NA
(4)	For completely buried metallic tanks installed on or after January 10, 1974 (if not exempt from SPCC regulation because subject to all of the technical requirements of 40 CFR part 280 or 281):		
	• Provide corrosion protection with coatings or cathodic protection compatible with local soil conditions	☐ Yes ☐ No ☑ NA	☐ Yes ☐ No ☑ NA
	• Regular leak testing conducted	☐ Yes ☐ No ☑ NA	☐ Yes ☐ No ☑ NA
(5)	The buried section of partially buried or bunkered metallic tanks protected from corrosion with coatings or cathodic protection compatible with local soil conditions	☐ Yes ☐ No ☑ NA	☐ Yes ☐ No ☑ NA
(6)	• Test or inspect each aboveground container for integrity on a regular schedule and whenever you make material repairs. Techniques include, but are not limited to: visual inspection, hydrostatic testing, radiographic testing, ultrasonic testing, acoustic emissions testing, or other system of non-destructive testing	☑ Yes ☐ No ☐ NA	☑ Yes ☐ No ☐ NA
	• Appropriate qualifications for personnel performing tests and inspections are identified in the Plan and have been assessed in accordance with industry standards	☑ Yes ☐ No ☐ NA	☑ Yes ☐ No ☐ NA
	• The frequency and type of testing and inspections are documented, are in accordance with industry standards and take into account the container size, configuration and design	☑ Yes ☐ No ☐ NA	☑ Yes ☐ No ☐ NA
	• Comparison records of aboveground container integrity testing are maintained	☑ Yes ☐ No ☐ NA	☑ Yes ☐ No ☐ NA
	• Container supports and foundations regularly inspected	☑ Yes ☐ No ☐ NA	☑ Yes ☐ No ☐ NA
	• Outside of containers frequently inspected for signs of deterioration, discharges, or accumulation of oil inside diked areas	☑ Yes ☐ No ☐ NA	☑ Yes ☐ No ☐ NA
	• Records of all inspections and tests maintained[16]	☑ Yes ☐ No ☐ NA	☑ Yes ☐ No ☐ NA
Integrity Testing Standard identified in the Plan: Steel Tank Institute (STI) SP-001-03. Refer to Section 4.3.3.6			
112.12 (c)(6)(ii) *(Applies to AFVO Facilities only)*	Conduct formal visual inspection on a regular schedule for bulk storage containers that meet all of the following conditions: • Subject to 21 CFR part 110; • Elevated; • Constructed of austenitic stainless steel; • Have no external insulation; and • Shop-fabricated.	☐ Yes ☐ No ☑ NA	☐ Yes ☐ No ☑ NA
	In addition, you must frequently inspect the outside of the container for signs of deterioration, discharges, or accumulation of oil inside diked areas.	☐ Yes ☐ No ☑ NA	☐ Yes ☐ No ☑ NA
	You must determine and document in the Plan the appropriate qualifications for personnel performing tests and inspections.[16]	☐ Yes ☐ No ☑ NA	☐ Yes ☐ No ☑ NA

[16] Records of inspections and tests kept under usual and customary business practices will suffice

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		PLAN	FIELD
(7)	Leakage through defective internal heating coils controlled: • Steam returns and exhaust lines from internal heating coils that discharge into an open watercourse are monitored for contamination, **OR** • Steam returns and exhaust lines pass through a settling tank, skimmer, or other separation or retention system	☐ Yes ☐ No ☑ NA ☐ Yes ☐ No ☑ NA	☐ Yes ☐ No ☑ NA ☐ Yes ☐ No ☑ NA
(8)	Each container is equipped with at least one of the following for liquid level sensing: • High liquid level alarms with an audible or visual signal at a constantly attended operation or surveillance station, or audible air vent in smaller facilities; • High liquid level pump cutoff devices set to stop flow at a predetermined container content level; • Direct audible or code signal communication between container gauger and pumping station; or • Fast response system for determining liquid level (such as digital computers, telepulse, or direct vision gauges) and a person present to monitor gauges and overall filling of bulk containers. ☑ Liquid level **sensing devices regularly tested to ensure** proper operation *(check if liquid level sensing devices are present at the facility and the Plan addresses testing)*	☑ Yes ☐ No ☐ NA	☑ Yes ☐ No ☐ NA
(9)	Effluent treatment facilities observed frequently enough to detect possible system upsets that could cause a discharge as described in §112.1(b)	☐ Yes ☐ No ☑ NA	☐ Yes ☐ No ☑ NA
(10)	Visible discharges which result in a loss of oil from the container, including but not limited to seams, gaskets, piping, pumps, valves, rivets, and bolts are promptly corrected and oil in diked areas is promptly removed	☑ Yes ☐ No ☐ NA	☑ Yes ☐ No ☐ NA
(11)	Mobile or portable containers positioned to prevent a discharge as described in §112.1(b). Mobile or portable containers (excluding mobile refuelers and other non-transportation-related tank trucks) have secondary containment with sufficient capacity to contain the largest single compartment or container and sufficient freeboard to contain precipitation	☑ Yes ☐ No ☐ NA ☐ Yes ☐ No ☑ NA	☑ Yes ☐ No ☐ NA ☐ Yes ☐ No ☑ NA
112.8(d)/112.12(d)Facility transfer operations, pumping, and facility process			
(1)	Buried piping installed or replaced on or after August 16, 2002 has protective wrapping or coating Buried piping installed or replaced on or after August 16, 2002 is also cathodically protected or otherwise satisfies corrosion protection standards for piping in 40 CFR part 280 or 281 Buried piping exposed for any reason is inspected for deterioration; corrosion damage is examined; and corrective action is taken	☑ Yes ☐ No ☐ NA ☑ Yes ☐ No ☐ NA ☑ Yes ☐ No ☐ NA	☑ Yes ☐ No ☐ NA ☑ Yes ☐ No ☐ NA ☑ Yes ☐ No ☐ NA
(2)	Piping terminal connection at the transfer point is marked as to origin and capped or blank-flanged when not in service or in standby service for an extended time	☑ Yes ☐ No ☐ NA	☑ Yes ☐ No ☐ NA
(3)	Pipe supports are properly designed to minimize abrasion and corrosion and allow for expansion and contraction	☑ Yes ☐ No ☐ NA	☑ Yes ☐ No ☐ NA
(4)	Aboveground valves, piping, and appurtenances such as flange joints, expansion joints, valve glands and bodies, catch pans, pipeline supports, locking of valves, and metal surfaces are inspected regularly to assess their general condition Integrity and leak testing conducted on buried piping at time of installation, modification, construction, relocation, or replacement	☑ Yes ☐ No ☐ NA ☑ Yes ☐ No ☐ NA	☑ Yes ☐ No ☐ NA ☑ Yes ☐ No ☐ NA
(5)	Vehicles warned so that no vehicle endangers aboveground piping and other oil transfer operations	☑ Yes ☐ No ☐ NA	☑ Yes ☐ No ☐ NA

Comments: 112.8 Engineered fail-safe features are described in Section 4.3.3.8. Procedures to detect, and correct leaks in Section 4.3.3.10. Mobile and portable oil-storage tanks addressed in Section 4.3.3.11. Mobile/portable oil tanks are listed individually, addressed by facility where they are stored. Information located in KSC-PLN-1920 by facility.
112.8(d) Facility transfer operations addressed in Section 4.4.3, including valve and piping design and examination.
All buried piping is secondarily contained (Facility M6-0596, K6-1345) See KSC-PLN-1920

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ADDITIONAL COMMENTS	
Provision	**Comment**
	Oil Spill Contingency Plan information located in Section 4.3.2 and Appendix G.

PHOTO DOCUMENTATION LOG		
Photo#	**Photographer Name**	**Description (include date, location and direction)**

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APPENDIX A: SPCC FIELD INSPECTION AND PLAN REVIEW TABLE

Documentation of Field Observations for Containers and Associated Requirements

Inspectors should use this table to document observations of containers as needed.

Containers and Piping

Check containers for leaks, specifically looking for: drip marks, discoloration of tanks, puddles containing spilled or leaked material, corrosion, cracks, and localized dead vegetation, and standards/specifications of construction.

Check aboveground container foundation for: cracks, discoloration, and puddles containing spilled or leaked material, settling, gaps between container and foundation, and damage caused by vegetation roots.

Check all piping for: droplets of stored material, discoloration, corrosion, bowing of pipe between supports, evidence of stored material seepage from valves or seals, evidence of leaks, and localized dead vegetation. For all aboveground piping, include the general condition of flange joints, valve glands and bodies, drip pans, pipe supports, bleeder and gauge valves, and other such items (Document in comments section of §112.8(d) or 112.12(d).)

Secondary Containment (Active and Passive)

Check secondary containment for: containment system (including walls and floor) ability to contain oil such that oil will not escape the containment system before cleanup occurs, proper sizing, cracks, discoloration, presence of spilled or leaked material (standing liquid), erosion, corrosion, penetrations in the containment system, and valve conditions.

Check dike or berm systems for: level of precipitation in dike/available capacity, operational status of drainage valves (closed), dike or berm impermeability, debris, erosion, impermeability of the earthen floor/walls of diked area, and location/status of pipes, inlets, drainage around and beneath containers, presence of oil discharges within diked areas.

Check drainage systems for: an accumulation of oil that may have resulted from any small discharge, including field drainage systems (such as drainage ditches or road ditches), and oil traps, sumps, or skimmers. Ensure any accumulations of oil have been promptly removed.

Check retention and drainage ponds for: erosion, available capacity, presence of spilled or leaked material, debris, and stressed vegetation.

Check active measures (countermeasures) for: amount indicated in plan is available and appropriate; deployment procedures are realistic; material is located so that they are readily available; efficacy of discharge detection; availability of personnel and training, appropriateness of measures to prevent a discharge as described in §112.1(b).

Container ID/ General Condition[17] Aboveground or Buried Tank	Storage Capacity and Type of Oil	Type of Containment/ Drainage Control	Overfill Protection and Testing & Inspections

[17] Identify each tank with either an A to indicate aboveground or B for completely buried

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APPENDIX B: SPCC INSPECTION AND TESTING CHECKLIST

Required Documentation of Tests and Inspections

Records of inspections and tests required by 40 CFR part 112 signed by the appropriate supervisor or inspector must be kept by all facilities with the SPCC Plan for a period of three years. Records of inspections and tests conducted under usual and customary business practices will suffice. Documentation of the following inspections and tests should be kept with the SPCC Plan.

Inspection or Test		Documentation		Not Applicable
		Present	Not Present	
112.7–General SPCC Requirements				
(d)	Integrity testing for bulk storage containers with no secondary containment system and for which an impracticability determination has been made	☐	☐	☐
(d)	Integrity and leak testing of valves and piping associated with bulk storage containers with no secondary containment system and for which an impracticability determination has been made	☐	☐	☐
(h)(3)	Inspection of lowermost drain and all outlets of tank car or tank truck prior to filling and departure from loading/unloading rack	☐	☐	☐
(i)	Evaluation of field-constructed aboveground containers for potential for brittle fracture or other catastrophic failure when the container undergoes a repair, alteration, reconstruction or change in service or has discharged oil or failed due to brittle fracture failure or other catastrophe	☐	☐	☐
k(2)(i)	Inspection or monitoring of qualified oil-filled operational equipment when the equipment meets the qualification criteria in §112.7(k)(1) and facility chooses to implement the alternative requirements in §112.7(k)(2) that include an inspection or monitoring program to detect oil-filled operational equipment failure and discharges	☐	☐	☐
112.8/112.12–Onshore Facilities (excluding oil production facilities)				
(b)(1), (b)(2)	Inspection of storm water released from diked areas into facility drainage directly to a watercourse	☐	☐	☐
(c)(3)	Inspection of rainwater released directly from diked containment areas to a storm drain or open watercourse before release, open and release bypass valve under supervision, and records of drainage events	☐	☐	☐
(c)(4)	Regular leak testing of completely buried metallic storage tanks installed on or after January 10, 1974 and regulated under 40 CFR 112	☐	☐	☐
(c)(6)	Regular integrity testing of aboveground containers and integrity testing after material repairs, including comparison records	☐	☐	☐
(c)(6), (c)(10)	Regular visual inspections of the outsides of aboveground containers, supports and foundations	☐	☐	☐
(c)(6)	Frequent inspections of diked areas for accumulations of oil	☐	☐	☐
(c)(8)(v)	Regular testing of liquid level sensing devices to ensure proper operation	☐	☐	☐
(c)(9)	Frequent observations of effluent treatment facilities to detect possible system upsets that could cause a discharge as described in §112.1(b)	☐	☐	☐
(d)(1)	Inspection of buried piping for damage when piping is exposed and additional examination of corrosion damage and corrective action, if present	☐	☐	☐
(d)(4)	Regular inspections of aboveground valves, piping and appurtenances and assessments of the general condition of flange joints, expansion joints, valve glands and bodies, catch pans, pipeline supports, locking of valves, and metal surfaces	☐	☐	☐
(d)(4)	Integrity and leak testing of buried piping at time of installation, modification, construction, relocation or replacement	☐	☐	☐

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APPENDIX C: SPCC CONTINGENCY PLAN REVIEW CHECKLIST

40 CFR Part 109–Criteria for State, Local and Regional Oil Removal Contingency Plans

If a facility makes an impracticability determination for secondary containment in accordance with §112.7(d), it is required to provide an oil spill contingency plan following 40 CFR part 109, unless the facility has submitted a FRP under §112.20. An oil spill contingency plan may also be developed, unless the facility has submitted a FRP under §112.20 as one of the required alternatives to general secondary containment for qualified oil filled operational equipment in accordance with §112.7(k).

109.5–Development and implementation criteria for State, local and regional oil removal contingency plans[18]		**Yes**	**No**
(a)	Definition of the authorities, responsibilities and duties of all persons, organizations or agencies which are to be involved in planning or directing oil removal operations.	☐	☐
(b)	Establishment of notification procedures for the purpose of early detection and timely notification of an oil discharge including:	☐	☐
(1)	The identification of critical water use areas to facilitate the reporting of and response to oil discharges.	☐	☐
(2)	A current list of names, telephone numbers and addresses of the responsible persons (with alternates) and organizations to be notified when an oil discharge is discovered.	☐	☐
(3)	Provisions for access to a reliable communications system for timely notification of an oil discharge, and the capability of interconnection with the communications systems established under related oil removal contingency plans, particularly State and National plans (e.g., National Contingency Plan (NCP)).	☐	☐
(4)	An established, prearranged procedure for requesting assistance during a major disaster or when the situation exceeds the response capability of the State, local or regional authority.	☐	☐
(c)	Provisions to assure that full resource capability is known and can be committed during an oil discharge situation including:	☐	☐
(1)	The identification and inventory of applicable equipment, materials and supplies which are available locally and regionally.	☐	☐
(2)	An estimate of the equipment, materials and supplies that would be required to remove the maximum oil discharge to be anticipated.	☐	☐
(3)	Development of agreements and arrangements in advance of an oil discharge for the acquisition of equipment, materials and supplies to be used in responding to such a discharge.	☐	☐
(d)	Provisions for well defined and specific actions to be taken after discovery and notification of an oil discharge including:	☐	☐
(1)	Specification of an oil discharge response operating team consisting of trained, prepared and available operating personnel.	☐	☐
(2)	Pre-designation of a properly qualified oil discharge response coordinator who is charged with the responsibility and delegated commensurate authority for directing and coordinating response operations and who knows how to request assistance from Federal authorities operating under existing national and regional contingency plans.	☐	☐
(3)	A preplanned location for an oil discharge response operations center and a reliable communications system for directing the coordinated overall response operations.	☐	☐
(4)	Provisions for varying degrees of response effort depending on the severity of the oil discharge.	☐	☐
(5)	Specification of the order of priority in which the various water uses are to be protected where more than one water use may be adversely affected as a result of an oil discharge and where response operations may not be adequate to protect all uses.	☐	☐
(e)	Specific and well defined procedures to facilitate recovery of damages and enforcement measures as provided for by State and local statutes and ordinances.	☐	☐

[18] The contingency plan should be consistent with all applicable state and local plans, Area Contingency Plans, and the NCP.

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