

SPILL PREVENTION, CONTROL AND COUNTERMEASURES PLAN

April 2021

National Aeronautics and Space
Administration
John F. Kennedy Space Center



SPILL PREVENTION, CONTROL AND COUNTERMEASURES PLAN

Prepared by:



NASA Environmental and Medical Contract (NEMCON)

Approved by:



KSC Environmental Assurance Branch Chief

April 7, 2021

RECORD OF REVISIONS/CHANGES

REV LTR	CHG NO.	DESCRIPTION	DATE
		Basic issue	December 2003
A		5-year professional engineer review and certification Section 4.3.3.6 – Changed certified integrity testing section to include environmental equivalent measures for tanks ≤30,000 gallons and certified integrity testing for tanks >30,000 gallons. Modified language in Table 4-3 to make intent clearer. Content was not changed.	November 2005
B		5-year professional engineer review and certification Administrative Changes. Updates of tables and figures, added reference information, and provided clarification to Section 4.0 and Section 5.0. Updated various facility maps	October 2010
C		General Revision, Administrative Changes.	January 2012
D		General Revision, Administrative Changes.	August 2012
E		5-year professional engineer review and certification Changed the plan to allow for deviations from the general secondary containment requirements for oil-filled operational equipment. Sections 4.3, 4.8 and Appendix G update to define how KSC complies with those requirements to allow for such deviations. Inserted an Oil Spill Contingency Plan reference guide into Appendix G that identifies oil spill contingency plan elements required by 40 CFR 109 Changed the inspection standards for oil-filled operational equipment to allow for risk- based inspections on either a quarterly or annual basis	September 2013
F		5-year professional engineer review and certification Added Section 4.3.2.1 - Permanent Closure & Empty Procedures Revised Section 4.3.3.11 - Appropriate Position of Mobile or Portable Oil Storage Containers Added Section 4.8.1 - Motive Power Containers	April 2016
G		5-year professional engineer review and certification Updates included general revisions/administrative changes and editorial update throughout, update formatting to most current KSC Technical Style guide, and the following changes: Update Management Certification and Certification of Applicability of the Substantial Harm Criteria with new Chief name and signatures Update Appendix A – Amendment Log to include Amendment logs over last 5 years - Most recent document available from NASA EAB Update Appendix B – Most recent KSC-PLN-1920 revision available from Techdocs or NASA EAB Revised Section 1.0 to include requirement for organization to ensure containers are labeled with corresponding SPCC ID number Revised Section 1.4 - Navigable Waters Definition to incorporate June 2020 Navigable Waters Protection Rule and Revisions to CFR 40 Parts 112 and 120	April 2021

		Revised Table 1 Cross Reference Table to include 112.7(k) Qualified oil-filled operational equipment. Revised Section 2.1 Facility Description Revise Figure 2-1 to include scale Revised Section 2.3 Natural Resources based on most current KSC Environmental Resource Document Revised Table 2-1 SPCC Facilities and Drainage Area to remove facilities which are no longer active SPCC sites and to include new SPCC sites since last update Revised Section 3.1.2 Training Requirements, specifically stating SPCC Coordinators will receive annual SPCC training (such as the QG290EPA KSC SPCC course or similar) Revised Appendix F –master transformer inventory to include inspection frequency, most recent inventory available from NASA EAB Revised Section 4.10 Site Security to include revisions to CFR 112 in 2008, streamlining security requirements and stating that site specific security features that may be required will be included on the site-specific plan Revised Table 4-2 General Spill Prevention Guidelines. Revised Section 4.3.3.6 Aboveground Container Periodic Integrity Testing to remove reference to year for Steel Tank Institute Standard SP001, include in section that repairs shall be performed if necessary. Revised Section 4.3.3.11 Mobile or Portable Oil Storage Containers to remove references to fuel tankers removed from site, and change Department of Transportation testing requirement from triannually to triennially. Revised Table 4-3 Oil-Filled Equipment Inspection Matrix to make correction throughout from using Table 4-9 to using Table 4-10 Revised Inspection Checklists 4-4, 4-5, 4-6, and 4-10 Revised Section 4.9 Electrical Transformers to define requirement to label containers Revised Table 6-1 to update agencies, contacts and phone numbers, training requirements for SPCC Coordinators, and incident and discharge notification forms since January 2017 and October 2019 adoptions of 62-762, Florida Administrative Code Revised Section 6.2.3 to reflect changes to definitions and reporting requirements for incidents and discharges based on October 2019 adoption of 62-762 and 62-761, Florida Administrative Code Revised References in Appendix E to reflect most recent reference documents KDP-KSC-P-3008 and KNPR 8715.2 Comprehensive Emergency Management Plan - See Techdocs for most recent copy. Revised Appendix G-1 and G-2. Specifically including the KSC Oil Spill Contingency Plan Reference Guide and revising G-2 EPA SPCC Field Inspection Checklist, using the new/updated forms available from the Environmental Protection Agency	
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ABBREVIATIONS, ACRONYMS, AND SYMBOLS

Elements, units of measure, and other terms commonly understood within the subject disciplines are abbreviated in this document without callouts. Those abbreviations and symbols are among the following.

ANSI	American National Standards Institute
API	American Petroleum Institute
ASNT	American Society for Nondestructive Testing
AST	Aboveground Storage Tank
ATK	ATK Launch Systems, LLC
BFF	Booster Fabrication Facility
BOSS	Base Operations and Spaceport Services
CEMP	Comprehensive Emergency Management Plan
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CLOIS	Cape Launch Operations and Infrastructure Support Contract
CNS	Canaveral National Seashore
CWA	Clean Water Act
DASR	Digital Airport Surveillance Radar
DNCP&R	Delaware North Companies Parks and Resorts, Incorporated
DO	Duty Office
DOC	Department of Commerce
DOI	Department of the Interior
DOT	Department of Transportation
EAB	Environmental Assurance Branch
EH&S	Environmental Health & Safety
EHS	Environmental Health Services
EMS	Emergency Medical Service
EPA	Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-To-Know Act
EPPC	Emergency Preparedness Planning Committee
ERG	Emergency Response Guide
ERRB	Emergency Response and Removal Branch
ESC	Environmental Support Contractor
ESC	Engineering Services Contract
FAC	Florida Administrative Code
FDEP	Florida Department of Environmental Protection
FPL	Florida Power & Light
gal	Gallon
HAZCOM	Hazard Communication
HAZMAT	Hazardous Materials
HAZWOPER	Hazardous Waste Operations and Emergency Response
HMER	Hazardous Materials Emergency Response
HRT	HAZMAT Response Team

HWAF	Hazardous Waste Accumulation Facility
IC	Incident Commander
ICS	Incident Command System
ID	Identification
Jet A	Jet Engine Propellant – Aviation (U.S.)
KARS	Kennedy Athletic, Recreation, and Social Organization
KDP	Kennedy Procedural Document
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
NA	Not Applicable
NASA	National Aeronautics and Space Administration
NEMCON	NASA Environmental and Medical Contract
NEPO	NASA Emergency Preparedness Office
NOAA	National Oceanic and Atmospheric Administration
NOTU	Naval Ordnance Test Unit
NPS	National Park Service
NRC	National Response Center
NRC	National Response Center
OSC	On-Scene Coordinator
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
PSCC	Protective Services Control Center
RQ	Reportable Quantity
SCT	Spill Cleanup Team
SDS	Safety Data Sheets
SDS	Safety Data Sheet
SERC	State Emergency Response Commission
SFS	Space Force Station
SFO	Senior Fire Official
SGS	Space Gateway Support
SLC	Space Launch Complex
SPCC	Spill Prevention, Control, and Countermeasures
SPCC Plan	KSC Spill Prevention, Control, and Countermeasures Plan
SRT	Spill Response Team

STI	Steel Tank Institute
STP	Submersible Turbine Pump
TO	Technical Order
TOSC	Test Operations Support Contract
TSDF	Treatment, Storage, and Disposal Facility
UL	Underwriters Laboratories
USAF	U.S. Air Force
USDI	United States Department of Interior
USFWS	U.S. Fish and Wildlife Service
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, NASA is committed to the implementation of the procedures outlined in this KSC Spill Prevention, Control, and Countermeasures (SPCC) Plan and the prevention of releases of oil to navigable waters of the United States. 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 KSC SPCC Plan will be implemented as herein described. A copy of this KSC 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 onsite review during normal working hours.

Authorized Management Representative:



Printed Name: Rosaly J. Santos-Ebaugh, P.E..

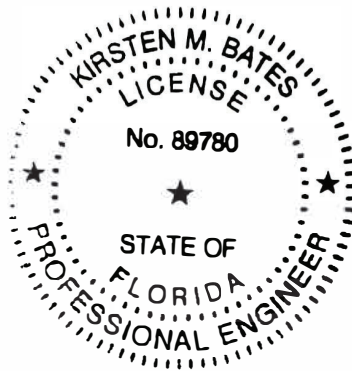
Title: KSC EAB Chief

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**PROFESSIONAL ENGINEERING CERTIFICATION OF THE 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-159 has 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 KSC 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:



Name of Professional Engineer:	Kirsten Bates, P.E.
License Number:	89780
State:	Florida
Authorized Engineering Business Name (if applicable):	Leidos, Inc.
Company Certificate of Authorization Number (if applicable):	31718
Address (if business, use business address):	1000 Legion Place Orlando, Florida 32801

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PREFACE

This document comprises the KSC Spill Prevention, Control, and Countermeasures (SPCC) Plan. It has been prepared to conform with the requirements of 40 Code of Federal Regulations (CFR) 112 and the Oil Pollution Act. The KSC 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 U.S. Fish and Wildlife Service (USFWS) 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), and TPQ-18 Radar and Boresight Tower (Building Q6-0484), which are owned and operated by the U.S. Space Force;
- Florida Power & Light (FPL) 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);
- U.S. National Park Service (NPS) 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 as specified under individual Commercial Space Act agreements.

All spill incidents must immediately be reported to the KSC Fire Department using 911 (321-867-7911 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 2021
Date of Last Management Plan Review:	April 2016

In accordance with 40 CFR 112.5(b), a responsible official of NASA will review and evaluate the KSC 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 designee, must complete the following information:

Review Dates	Representative or Designee Name and Title	Signature	Plan Amended (Yes or No)
1. 04/07/2021	Rosaly Santos-Ebaugh, EAB Chief	ROSALY SANTOS- EBAUGH  Digitally signed by ROSALY SANTOS- EBAUGH Date: 2021.04.07 10:22:33 -04'00'	Yes
2. _____	_____	_____	_____
3. _____	_____	_____	_____

Plan Amendment

This KSC SPCC Plan shall be amended and recertified 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 KSC SPCC Plan must be amended following reportable spills (40 CFR 112.4).

All amendments to this KSC SPCC Plan shall be noted in the Amendment Log (see Appendix A). 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 this KSC SPCC Plan, including plan section and page numbers, and the name and signature of the person making the changes. For those amendments that require certification by a professional engineer, a new certification page will be signed, sealed, and inserted into this plan to complete the amendment process.

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 formula¹) 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 the Department of Commerce/National Oceanic and Atmospheric Administration's (DOC/NOAA's) "Guidance for Facility and Vessel Response Plans" (Section 10, Appendix E, 40 CFR Part 112 for availability) and the applicable area's 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 formula¹) such that a discharge from the facility would shut down a public drinking water intake²?
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, based on my inquiry of those individuals responsible for obtaining this information, I believe that the submitted information is true, accurate, and complete.

Rosalyn Santos-Ebaugh, P.E.

Name (please type or print)

Title KSC EAB Chief

ROSALYN SANTOS-
EBAUGH
Digitally signed by ROSALYN
SANTOS-EBAUGH
Date: 2021.04.07 10:22:50
-04'00'

Signature

Date 04/07/2021

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).

The KSC SPCC Plan has been prepared in accordance with 40 CFR 112 and is organized as specified in the aforementioned regulation. Table 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 Appendix B Site Specific Plans (KSC-PLN-1920).

Table 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	KSC SPCC Plan review, evaluation, and amendment requirements.	Preface, Appendix A
§112.7	Management commitment certification.	Page ix
§112.7(a)	General requirements.	
	Discussion of facility's conformance with rule requirements.	1.0-7.0
	Discussion of deviation from applicable requirements.	4.3.2
	Facility characteristics that must be described in the plan (including facility diagram).	4.0, 5.0, 6.0 Figures 2-1 and 2-2, Appendix B
	Spill reporting information in the plan.	6.0
	Emergency procedures.	5.0
§112.7(b)	Discharge analysis.	2.2, Table 2-1, Appendix B
§112.7(c)	Secondary containment.	4.3.1, 4.3.3.12, Appendix B
§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.	4.0 and Tables 4-4 through 4-10
§112.7(f)(1)	Employee training and discharge prevention procedures.	3.1, 3.1.2, and Table 4-2
§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, 4.4.2, and Appendix B
§112.7(i)	Brittle fracture evaluation requirements for field-constructed aboveground storage tanks.	4.5
§112.7(j)	Conformance with state requirements.	4.6

SPCC Rule Citation	Description of Rule	Section
§112.7(k)	Qualified oil-filled operational equipment.	4.8, 4.9, Tables 4-3, 4-10, and Appendix F
§112.8(a)	General and specific discharge prevention and containment requirements.	1.0-7.0, Appendix B, Appendix G
§112.8(b)(1)	Drainage from diked storage areas.	4.3.4.1, Appendix B
§112.8(b)(2)	Valves used on diked area storage.	4.3.4.2, Appendix B
§112.8(b)(3)	Facility drainage systems from undiked areas.	4.3.4.3, Appendix B
§112.8(c)	Bulk storage containers.	4.3.3, Appendix B
§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, Appendix B
§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.	Preface

Notes:

NA = Not Applicable

SPCC = Spill Prevention, Control, and Countermeasures

KSC SPCC Plan = KSC Spill Prevention, Control, and Countermeasures Plan

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1. INTRODUCTION

The KSC Spill Prevention, Control, and Countermeasure (SPCC) Plan documents the procedures for the prevention, response, control, and reporting of spills of oil at the KSC in Florida. This plan serves as a guide for personnel and organizations that are responsible for ensuring all measures are taken to prevent and contain spills and leaks of oil in accordance with all applicable Federal and state 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;
- SPCC training requirements for oil-handling personnel; and
- reporting procedures and recordkeeping requirements for spills.

In conjunction with the facility-wide KSC 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 containers or processing equipment are prescribed an identification number, generated by the KSC SPCC database, and shall be physically labeled with this identification number. The site-specific plans are located in Appendix B and contain the following information:

- an inventory of oil that is located at storage, handling, and transfer facilities;
- a facility diagram depicting the locations of container(s) and connecting pipes and the prescribed KSC SPCC database identification number(s);
- 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 KSC SPCC Plan is maintained at the NASA Environmental Assurance Branch (EAB) Office and is available to the U.S. Environmental Protection Agency (EPA) regional administrator for onsite review during normal working hours.

Professional engineer recommendations describing site-specific and facility-wide action items required to validate the KSC 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 have discharged or could reasonably be expected to discharge oil into navigable waters of the United States 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 CFR's SPCC regulations.

The KSC 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 Appendix B. 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 Appendix B.

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.

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 (updated every six months – refer to KSC Environmental Assurance Branch (EAB) for most recent copy);
- Appendix B provides 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; FDEP Discharge Notification Instructions and Form
- Appendix E contains the KSC Hazardous Material Emergency Response Plan (KDP-KSC-P-3008) and Comprehensive Emergency Response Plan Kennedy NASA Procedural Requirement (KNPR) 8715.2, and 40 CFR 112.
- Appendix F contains the KSC SPCC Oil-Filled Transformer Inventory refer to KSC EAB for most recent copy).
- Appendix G contains the EPA SPCC Field Inspection and Plan Review Checklist and SPCC Contingency Plan Reference Guide.

1.4 Definitions

The definitions in this SPCC Plan are the same as those provided in 40 CFR 112 and in the KSC Comprehensive Environmental Management Plan (CEMP) (KNPR 8715.2) as well as the KSC Hazardous Materials Emergency Response (HMER) Plan (KDP-KSC-P-3008).

Aboveground Storage Tank (AST). Any tank or other container that is aboveground, partially buried, bunkered, or in a subterranean vault. This includes floating fuel systems. 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 gals, used to store oil 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.

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 321-867-7911 on a cellular phone) call is required.

Fish and Wildlife and Sensitive Environments. These areas are 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 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 HAZMAT 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. Navigable waters as defined in 40 CFR 112 means waters of the United States, including the territorial seas, as defined in 40 CFR Part 120. Waters of the United States is defined in 40 CFR Part 120 as “(1) Jurisdictional waters.” For purposes of the Clean Water Act, 33 U.S. Code 1251 et seq. and its implementing regulations, subject to the exclusions in paragraph (2) of 40 CFR Part 120.2, the term “waters of the United States” means: “(i) The territorial seas, and waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including waters which are subject to the ebb and flow of the tide; (ii) Tributaries; (iii) Lakes and ponds, and impoundments of jurisdictional waters; and (iv) Adjacent wetlands.”

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-emergency 911 (or 321-867-7911 on a cellular phone) call is required. The 911 Center (Protective Services Control Center [PSCC]) 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.

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. 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 on the eastern coast of central Florida and occupies approximately 140,000 acres. The Center itself is situated approximately 242 km (150 miles [mi]) south of Jacksonville and 64 km (40 mi) due east of Orlando on the north end of Merritt Island adjacent to Cape Canaveral (Figure 2-1). KSC is relatively long and narrow, being approximately 56 km (35 mi) in length and varying from 8 to 16 km (5 to 10 mi) in width.

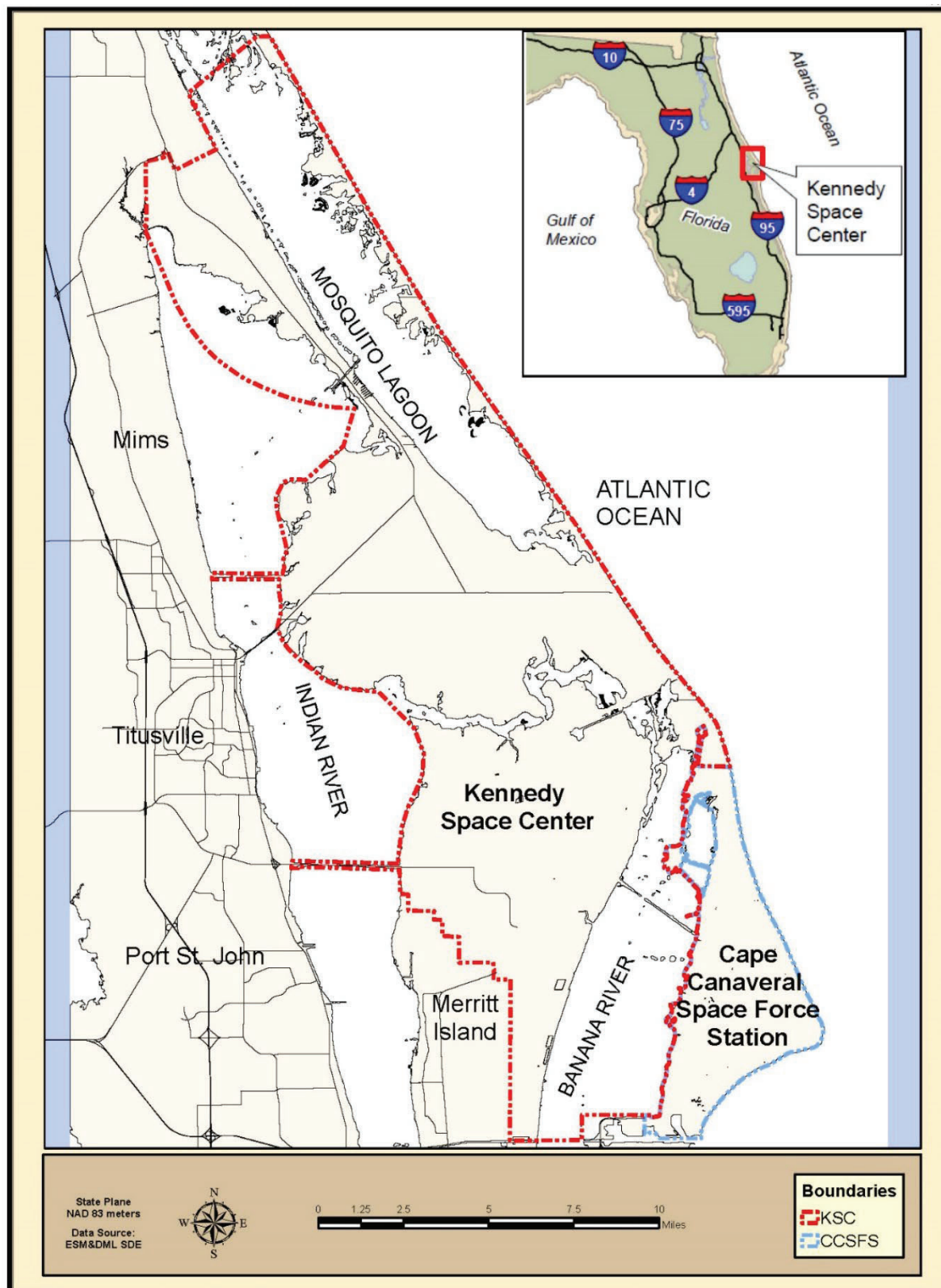
KSC is bordered on the west by the Indian River, a brackish-water lagoon, and on the east by the Atlantic Ocean and the Cape Canaveral Space Force Station (SFS). The northernmost end of the Banana River (another brackish-water lagoon) lies between Merritt Island and Cape Canaveral SFS and is included as part of KSC submerged lands. The southern boundary of KSC runs east-west along the Merritt Island Barge Canal, which connects the Indian River with the Banana River and Port Canaveral at the southern tip of Cape Canaveral. The northern border crosses the Mosquito Lagoon in Volusia County extending west towards Oak Hill. The Indian River, Banana River, and the Mosquito Lagoon collectively make up the Indian River Lagoon system.

Only approximately 5,000-acres of KSC property has been developed or designated for NASA operational and industrial use. The remaining acreage of KSC includes a buffer zone. Specifically, Merritt Island consists of prime habitat for unique and endangered wildlife; therefore, in 1972 NASA entered into an agreement with the U.S. Fish and Wildlife Service (USFWS) to establish a wildlife preserve known as the Merritt Island National Wildlife Refuge (MINWR) within the boundaries of KSC. Public Law 93-626 created the Canaveral National Seashore (CNS); thereby, an agreement with the U.S. Department of the Interior (DOI) was also formed in 1975 due to the location of a portion of CNS within KSC boundaries.

Approximately 135,000 acres of KSC property are not directly under NASA operational control, as they are instead managed by both the U.S. National Park Service (NPS) (approximately 6,700 acres of the CNS) and the USFWS (approximately 129,000 acres from both the CNS and the MINWR).

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, Cape Canaveral SFS and the surrounding area.

Figure 2-1. KSC, CCSFS, and the Surrounding Area



KSC is the primary launch site 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 SFS.

There are multiple 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 (KSC-PLN-1920). The current aggregate storage volume of oil in containers greater than or equal to 55 gals on KSC- and NASA-owned/operated facilities on Cape Canaveral SFS is 491,294 gals as of December 2020. Storage includes ASTs; drums; intermediate bulk containers; and oil-filled process, manufacturing, and electrical equipment. Site-specific information associated with these organizations is provided in Appendix B. Organizations and storage volumes are updated every 6 months with the update of Appendix B. Refer to the current revision of Appendix B (KSC-PLN-1920) for the current volume storage.

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.

- Approximately 129,000 acres of KSC property is managed by the USFWS covering portions of both the CNS and the MINWR. Oil storage associated with operations conducted or managed by USFWS on the MINWR includes fuel and oil tanks required for vehicle and equipment fueling and maintenance and fuel tanks required to operate a water siphon pump. The USFWS has developed a separate SPCC plan for these operations. A copy of that plan is maintained at the USFWS Headquarters.
- The NPS manages approximately 6,700 acres of KSC property that is a portion of the CNS. Oil storage associated with maintenance operations on KSC includes new and used oil stored in 55-gallon drums. The NPS 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 gals, an SPCC plan is not required at this time.
- The TEL-4 telemetry facilities (Buildings N6-2296 through N6-2296A), 19.14 Site (Building 95000), Radar 19.14 Station and Transmitter building (Buildings Q6-0082 and Q6-0082A), TPQ-18 Radar Boresight Tower (Building Q6-0484), and Shiloh Digital Airport Surveillance Radar (DASR) Tower, Building C2-1300) owned and operated by the U.S. Space Force are located on KSC property. A separate SPCC plan has also been prepared for these facilities and is maintained at the Cape Canaveral SFS.
- The Florida Power & Light (FPL) 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 (N6-1050). Oil storage at these facilities includes oil-filled transformers containing greater than 1,320 gals of dielectric fluid. FPL 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. AT&T Wireless 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 gals, an SPCC plan is not required at this time.
- Per their individual lease agreements, entities leasing property or facilities from NASA, under Commercial Space Act agreements for commercial activities, are solely responsible for compliance with all environmental requirements, including SPCC plans and SPCC compliance.

2.1.1 SPCC Organizations

NASA, both on KSC and Cape Canaveral SFS, has multiple base support, infrastructure, engineering, and launch services contracts that use, store, and handle oil in quantities of 55 gals 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 Cape Canaveral SFS are described in detail in Appendix B, Site Specific SPCC Plans (KSC-PLN-1920).

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 their individual construction or remediation contracts.

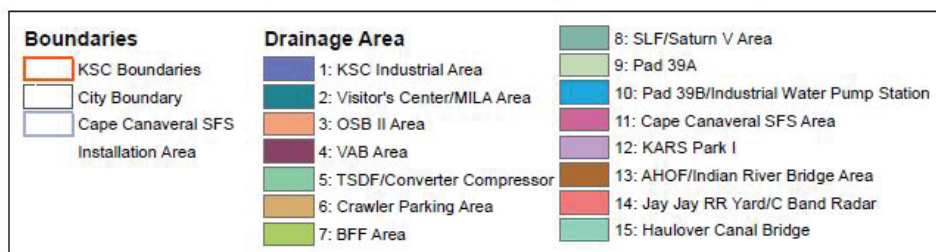
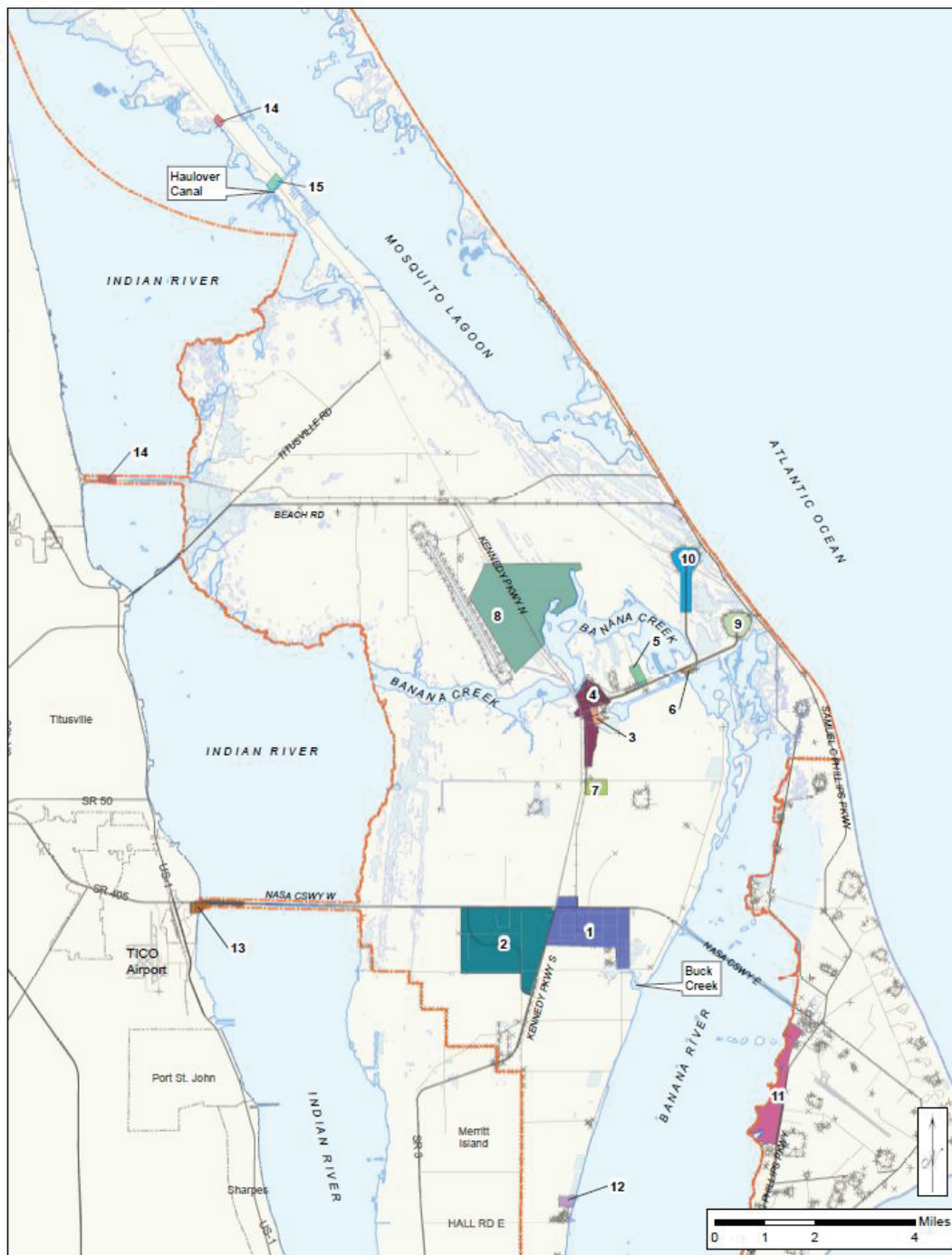
2.2 Storm Water Drainage Receiving Waters

Buildings involving oil storage at KSC can be grouped into 15 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 Appendix B describe and illustrate the nearest navigable water and/or natural resource for each oil storage area at KSC. Surface drainage from 6 of the 15 designated areas ultimately discharges to the Banana River. Surface drainage from eight of these areas ultimately discharges to the Indian River. Surface 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, M6-0486, M6-0493C, M6-0495D, M6-0536A, M6-0547, M6-0596, M6-0688, M6-0695, M6-0737, M6-0744, M6-0798A, M6-0894, M6-0996, M7-0301, M7-0355, M7-0360, M7-0407A, M7-0409, M7-0505, M7-0505A, M7-0531, M7-0555A, M7-0556B, M7-0556C, M7-0557, M7-0581, M7-0777, M7-1104, M7-1354, M7-1362, N6-1010	Buck Creek
2	M5-1586, M5-1586A, M6-0213, M6-0319, M6-0409, M6-0409D, M6-409G, M6-0410, M6-0455, M6-0455F, M6-0457, M6-0458, M6-0510, M6-0552, M6-1629, M6-1671	Indian River
3	K6-0998, K7-1203	Banana River
4	K6-0497, K6-0545, K6-0546-ML, K6-0743A, K6-0743B, K6-0743C, K6-0743CT1, K6-0743CT2, K6-0743E, K6-0794, K6-0848, K6-0895, K6-0947, K6-0947A, K6-0947E, K6-1091, K6-1141, K6-1145, K6-1246, K6-1247, K6-1345, K6-1347, K6-1347F, K6-1446F, K6-1446M, K6-1547, K6-1547B, K6-1547E, K6-1844, K6-1847, K6-1847D, K6-1847F, K6-1847G, K6-1995	Banana Creek
5	K7-0114, K7-0115, K7-0165, K7-0468, K7-0570	Banana Creek
6	K7-0287	Banana River
7	L6-0146, L6-0147, L6-0247, L6-0248, L6-0295, L6-0297, L7-202, L7-0251	Banana River
8	J6-0490, J6-1874, J6-1924, J6-2026, J6-2370, J6-2466,	Banana Creek
9	Commercial Space Act Agreement KCA-4360	Banana Creek
10	J7-0337, J7-0338, J7-1387, J7-1388	Banana Creek
11	60675, 66336, 73720	Banana River
12	P6-1335	Banana River
13	M3-0147	Indian River
14	E3-1133, H2-1245,	Indian River
15	E4-2414A	Haulover Canal then Indian River or Mosquito Lagoon depending on wind direction and tidal influence

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



2.3 Natural Resources

Approximately 135,000 acres of KSC property is an operational buffer zone consisting of MINWR managed by the USFWS and CNS managed by the NPS. About half of that area consists of brackish estuaries and marshes. The remaining land consists of coastal dunes, freshwater wetlands, scrub oaks, pine forests, flatwoods, and palm and oak hammocks. KSC has more than 1,000 species of plants and is a major wintering area for migratory birds. More than 500 species of wildlife inhabit KSC, with 21 being federally or state listed as threatened or endangered. Several wading bird rookeries, an average of 12 active bald eagle nests each year, numerous osprey nests, up to 20 percent of Florida's total manatee population in the spring, and an estimated 275 breeding pairs of Scrub-jays can be found on KSC. 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. 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 the Chief of the NASA EAB. The roles and responsibilities of the NASA EAB are discussed in Section 3.3, 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 (321-867-7911 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 321-867-7911 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 or her supervisor and facility manager.

For spills that 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 321-867-7911 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 gals or more. 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 discoverer or are a threat to safety, health, or the environment, the first responder will call 911 (321-867-7911 on a cellular phone) and notify his or her supervisor.

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

Protective Services Control Center (PSCC). The PSCC coordinates the activation of the area warning system, if necessary, notifies the NASA EAB and U.S. Space Force (USSF) Environmental Support Contractor (ESC), and provides support to the IC.

NASA Environmental Assurance Branch (EAB). The NASA EAB will make any required, official, internal and external notifications, including notification to the National Response Center (NRC) and other Federal, state, and local agencies. The 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.

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 spill 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 NASA Environmental and Medical Contract (NEMCON) 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. The SPCC coordinator shall receive appropriate training annually (such as QG290EPA KSC SPCC Training, or similar).

Each designated SPCC coordinator must ensure that all personnel who handle oil receive spill prevention training on an annual basis as described below.

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 this 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 3 years and are available for review on request.

Training Requirements for the 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 where their function is performed. This training includes the following:

- First Responder Awareness Level (basic knowledge, how to identify and report);
- First Responder Operational Level (warm zone, personnel decontamination);
- 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.

KSC personnel responding to a HAZMAT incident must also maintain training requirements and certifications in accordance with KDP-KSC-3008, Rev. A-2 HMER, found in Appendix E of this 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 Section 3.3, 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 PSCC has the authority to 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 offsite to support an emergency. At no time will the support provided offsite degrade or jeopardize the ability of emergency response forces to provide onsite protection for personnel and resources.

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: 321-861-6035	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: • Has primary responsibility for the development, 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 news releases, if necessary.

Organization	Responsibility
	• 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). • 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.
Organization Name: Protective Services Control Center (PSCC) Phone Number: 911 (Spill Reporting) 321-867-7911 (from a cell phone)	The PSCC is responsible for dispatching Fire, Security, Environmental Health, and the HAZMAT Team as required. 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 (ICS) 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 onsite once initial spill response is complete. • The SFO will coordinate with other members of the HAZMAT Response Team (HRT) and NEMCON spill cleanup personnel. • Provide equipment and manpower to rescue personnel, administer first aid, 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 HRT and direct the various KSC support agencies, as required, to mitigate the incident. Transfer IC authority to the senior person onsite or designee, once the spill has been contained and the cleanup and reporting phase of the spill response process begins.
Organization Name: KSC Fuels Contractor Phone Number: 321-867-6092	The KSC fuels contractor is responsible for performing loading/unloading operations in accordance with Section 4.4 and Table 4-7 and for providing oversight during fuel loading and unloading. During oil loading/unloading, the KSC fuels contractor is responsible for: • Ensuring an adequate supply of spill response materials is on-hand to contain a minor release.

Organization	Responsibility
	- Preventing early vehicle departure by chocking wheels and/or setting parking break. - Ground the tank truck where appropriate.
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 annually (such as QG290EPA KSC SPCC Training, or similar). - Ensure that this individual is properly trained in spill response procedures and implementation of the SPCC Plan annually. - Ensure that spill prevention training is provided to all personnel within the organization who handle oil annually. - 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 of 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 the facility and or operations that affect implementation of this plan (e.g., addition/removal of tank, change in product stored) - Ensure spill kits are equipped with the proper material to contain area spills. - 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 Section 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. - Report all spills to the PSCC 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 up to date at all times.

Notes:

AST = Aboveground storage tank
EAB = Environmental Assurance Branch
HAZMAT = Hazardous Materials
HRT = HAZMAT Response Team
IC = Incident Commander
PSCC = Protective Services Control Center
KSC = Kennedy Space Center
NASA = National Aeronautics and Space Administration

NEMCON = NASA Environmental and Medical Contract
PPE = Personal Protective Equipment
SFO = Senior Fire Official
SPCC Plan = Spill Prevention, Control, and Countermeasure Plan
TO = Technical Order
UST = Underground storage tank

4. 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:

- ASTs and underground storage tanks (USTs);
- oil transfer equipment (i.e., piping, valves);
- oil/water separators (OWSs) and grease traps;
- oil container (55-gallon or greater 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. Appendix B 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.

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-gallon drums.	Use Table 4-4		Use Table 4-5	
55-gallon 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 aboveground 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

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, OWSs, 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; and
- procedures for storing, handling, and managing oil.

Table 4-2 is a list outlining general spill prevention guidelines. It is recommended that this list 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 Appendix B. 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 Appendix B (KSC-PLN-1920, Site Specific SPCC Plans).

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 including annually (such as QG290EPA KSC SPCC Training, or similar). • Personnel responsible for handling oil within the organization are trained annually 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 is available and in good condition.
Inspection Guidelines
• Inspections are documented using the checklists provided in Tables 4-4 through 4-10 (as applicable) or with another SPCC coordinator-approved, facility-specific inspection checklist. • Inspection records are maintained onsite for at least 3 years. • Oil storage tanks and containers (not including 55-gallon drums) have been scheduled for non-visual integrity testing in accordance with Section 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 alarm sensors, or visual gauges and high-level alarm sensors or visual gauges (or other overfill prevention devices) 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.

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 SPCC 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 an emergency spill response capability through a dedicated SCT 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 CEMP provides a framework for command, control, and reliable communications capability during an oil spill emergency. The KSC HMER Plan (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 HMER. The supplemental reference documents are located in Appendix E of this SPCC Plan.

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 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.
- 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 cm (1 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 gals 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 gals 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 determined to be substantially intact by qualified personnel.

Containers and equipment to be reused or recycled can remain filled if determined to be substantially intact by qualified personnel. If the containers or equipment are visibly damaged or leaking, then the unit shall be drained using best management practices common to the industry.

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 Section 2.0 of Appendix B (KSC-PLN-1920, Site Specific SPCC Plans).

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 the impervious nature of diked or curbed secondary containment

areas to contain discharged oil (if applicable) for each tank or container is provided in Section 2.0 of Appendix B (KSC-PLN-1920, Site Specific SPCC Plans). Bulk storage containers lacking adequate secondary containment are identified in the SPCC Implementation Plan document maintained in the NASA EAB.

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 Section 2.0 of Appendix B (KSC-PLN-1920, Site Specific SPCC Plans).

4.3.3.3 Diked Area Inspection and Drainage of Rainwater

Many ASTs and some 55-gallon 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 Appendix B (KSC-PLN-1920, Site Specific SPCC Plans). 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.

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-gallon drums), pumps, piping, and valves for any indication of potential leaks and to determine necessary repairs to prevent potential leaks. The storage tank, container, and secondary containment inspections are conducted in general accordance with the monthly and quarterly inspection requirements specified in this document and in accordance with the most current Steel Tank Institute (STI) Standard: Standard for Inspection of In-Service Shop Fabricated Aboveground Tanks for Storage of Combustible and Flammable Liquids (SP001). The storage tank, container, and secondary containment inspections are documented on the Monthly Storage Tank, Container, and Secondary Containment Inspection Checklist (or similar form) provided in Table 4-4. The 55-gallon 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, the monthly AST inspections include:

1. Primary and secondary tank(s) or containment(s) are visually inspected for presence of water or oil, deterioration, corrosion, and leaks. Liquids are removed and repairs are performed as necessary.
2. The interstice of double-walled tank(s) is inspected for the presence of oil. If the interstice is equipped with leak detection systems, these systems are checked to ensure proper functionality. Repairs shall be performed as necessary. 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, if necessary. The presence and removal of any fluid (water or oil) from the interstice will be documented on the monthly inspection checklist.
3. All pipe connections are inspected for evidence of leaks. Thread connections are tightened and corrosion control is performed, 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 gals is performed at least annually, in general accordance with this document, and SP001. The annual inspection is documented on the Annual Storage Tank, Container, and Secondary Containment Inspection Checklist (or similar form) provided in Table 4-5. In accordance with this document, SP001, and Table 4-5, 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. Repairs shall be performed as necessary, and liquids removed where required.

2. O-ring gasket(s) of emergency vents are checked for damage or deterioration. Repairs shall be performed as necessary.
3. Tank supports are checked for signs of damage from vehicles, misuse, and corrosion. Corrosion control and/or repairs are performed as necessary.
4. The tank foundation is checked for signs of settlement, cracking, pitting, and spalling. Repairs shall be performed as necessary.
5. Anchor bolts are checked for signs of distortion of the bolts or significant cracking around the bolts. Repairs and/or tightening of bolts shall be performed as necessary.
6. The engineered fail-safe feature for overfill prevention (high-level alarm, direct vision capacity gauge, etc.) is inspected for material defects, and is tested for operability.
7. Interstitial sensor or direct vision leak gauge are inspected for material defects and tested for operability.

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 gals, combining monthly and annual visual inspection (as described above) with either of the following provides an environmental protection equivalent to integrity testing listed in the original rule (dated July 17, 2002):

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 10 years and whenever material repairs are made, nondestructive integrity testing is performed on ASTs greater than 30,000 gals by an STI-certified tank inspector. These inspections are conducted in accordance with SP001. 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.
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 is 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 1 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 1 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 1 hour of monitoring, the testing is complete.

Alternatively, ultrasonic testing to determine the minimum remaining wall thickness can be conducted in accordance with SP001 by an American National Standards Institute (ANSI)/American Society for Nondestructive Testing (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 Laboratories [UL] label on the tank). Tests should be conducted once every 10 years until less than 75 percent of the original wall thickness remains. At this point, repairs need to be performed in accordance with SP001. 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) 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 ASTs with internal heating coils at KSC.

4.3.3.8 Engineered Fail-Safe Features

As described in Section 2.0 of Appendix B (KSC-PLN-1920, Site Specific SPCC Plans), 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; and/or
4. a fast response system for determining the liquid level of each bulk storage container (i.e., direct vision gauge, digital computer, telepulse).

All fail-safe features are inspected and tested 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 gals 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 activities to less than 25 gals 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 or Container Seams and Gaskets

Onsite 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 or container system if it is beyond the onsite capabilities). Spilled oil will be cleaned up immediately using onsite spill response equipment or by requesting cleanup by the NEMCON 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 (Appendix B).

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 disposal office. KSC's current inventory of single-walled portable fueling equipment consists of three mobile refueler trucks. The mobile refuelers are DOT-compliant, over-the-road vehicles and are certified integrity tested triennially by a third-party vendor. When stored, mobile refueler trucks use 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; and
- 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; and
- use of spill response capability.

Passive measures are employed where practicable. Specific secondary containment measures for bulk storage container piping are described in Appendix B, 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 5 gals) 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 monthly 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.

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 M6-0744 and 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, and
 - the wheels are chocked, or
 - warning signs are posted.
- A qualified operator will attend the tank truck at all times.
- The tank truck will be grounded at all times during loading or unloading.
- 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 and 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 Appendix B (KSC-PLN-1920, Site Specific SPCC Plans), 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 United States 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*

All buried oil piping that is installed or replaced after August 16, 2002, is provided with secondary containment. In addition, all buried oil piping associated with an FDEP-regulated storage tank system (greater than 550 gals for aboveground tank and greater than 110 gals for an underground tank) installed or replaced after August 16, 2002, complies with FDEP Storage Tank System rules (62-761 and 62-762, 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 Appendix B (KSC-PLN-1920, Site Specific SPCC Plans).

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, 4.8, and 4.9. 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.

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 FDEP construction, registration, and secondary containment requirements for FDEP-registered USTs (62-761 FAC) and ASTs (62-762 FAC). In addition, as described in Section 6.2.3, KSC complies with all FDEP incident and 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 them with concrete, or they have been physically removed. There are no aboveground grease traps 55 gals or greater in volume in use on KSC. Belowground 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. 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.

KSC uses oil-filled operational equipment and meets the following qualifying criteria in CFR 112 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 uses 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 HMER 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 xii of this plan.

All SPCC-regulated oil-filled operational equipment is inspected on either a quarterly or annual basis based on the matrix within Table 4-3, 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 oil-filled 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 equipment to reach navigable waters. An Oil-Filled Equipment Inspection Matrix is located in Table 4.3.

Table 4-3. Oil-Filled Equipment Inspection Matrix

Equipment Design and/or Distance to Navigable Water or Conveyance	Inspection Frequency	
	Quarterly	Annually
Double-walled or secondary containment provided	Not applicable	Use Table 4.10 and inspect at a minimum annually to ensure integrity
Single-walled within 100 feet of navigable water or conveyance to navigable water	Use Table 4.10 and inspect at a minimum quarterly to ensure integrity	Not applicable
Single-walled greater than 100 feet from navigable water or conveyance to navigable water	Not applicable	Use Table 4.10 and inspect at a minimum annually to ensure integrity
Failure mode (e.g., overfill, fracture in container wall) is unknown or system has not been evaluated by a professional engineer	Use Table 4.10 and inspect at a minimum quarterly to ensure integrity	Not applicable

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, rigs, or any onboard bulk storage containers 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 uses 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 inspection frequency (based on the matrix in Table 4-3). 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 of this plan, provide details on the oil-filled electrical equipment at the two KSC electrical substations.

All SPCC transformers and other oil-filled electrical equipment without secondary containment use 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 this 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 KSC 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. Oil-filled electrical equipment, specifically transformers listed in Appendix F, are labeled with an identification number. This identification number is not generated within the KSC SPCC database like those discussed in Section 1.0, but are determined by the KSC Electrical Shop. At the two KSC 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 KSC 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 a release from this equipment is detected by KSC personnel, NASA will provide notification to the transformer owner/operator (e.g., FPL).

4.10 Site Security

Security requirements for qualified SPCC facilities were finalized in the 2008 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 or fill devices;
- 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.

Security features at KSC are outlined in Sections 4.10.1 through 4.10.5. Security requirements remain subject to the environmental equivalence provision, but there may be limited instances where a certifying professional engineer would determine that a deviation from security features outlined in Sections 4.10.1 through 4.10.5 is necessary. In such cases, the site-specific plans in Appendix B provide a description of the security measures and how they are implemented at the facility.

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 closed and locked when in non-operating or non-standby status.

4.10.3 Starter Controls

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

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 6 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 3 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 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-gallon 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 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 3 years.

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, and weathering.			
Inspect exterior surface of tank, containers, and piping, 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, container, 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 for functionality, 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.			
Ensure no evidence of spills or leaks exist 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 OR 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 or other overfill prevention devices tested for operability.				
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 tested for operability.				
Interstitial monitor physically checked and tested for operability.				
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

Inspector Name	Date and Time of Drainage	Containment Area Drained (ID #)	Presence or Absence of Sheen*	Time of Unlocking and Opening Valve	Time of Closing and 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 percent 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:

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.			
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:			
Inspector Name:			
Inspector Phone Number:			
Inspector Organization:			
Inspection Item	Satisfactory	Unsatisfactory	Comments
Oil-Filled Transformer and Process Equipment Inspection			
Check oil-filled tanks, containers, and associated equipment for deterioration, corrosion, and deformation.			
Determine if deterioration, corrosion, deformation leaks, or small seeps are present on piping or at couplers, seams, rivets, gaskets, nozzles, etc.			
Check the foundation and support for heaving, cracking, or weathering.			
Ensure fill ports are closed.			
Inspect the drainpipe and valve(s) 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. 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 CEMP (KNPR 8715.2) documents the KSC emergency management policy. The HMER Plan (KDP-KSC-P-3008) 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. Appendix B of this 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 (321-867-7911 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 (321-867-7911 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 SFO will respond at his discretion.

- Call 911 (321-867-7911 from a cellular phone) and report the following:
 - Exact location of the spill or release (i.e., building number, room number, and location in the room)
 - Identity and quantity of material spilled
 - 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, Environmental Health and Safety, 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 or her supervisor and/or facility manager will determine if spill response and cleanup are within the capabilities of the onsite 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 (321-867-7911 from a cellular phone) to request assistance from the SCT if requirements exceed onsite capabilities.

5. Properly dispose of waste.

Waste derived from the cleanup of petroleum products is disposed of as hazardous or controlled waste. Follow KNPR 8500.1 KSC 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 HMER Plan documents the response procedures to be followed for all hazardous material spills.

5.2 Offsite 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 offsite, 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 (321-867-7911 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 which 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 offsite 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 onsite 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 (Appendix B) 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 NEMCON post-emergency SCT should clean up any spill which reaches the soil or water.

For emergency spills, after the emergency has been mitigated, the IC may transfer control to the NEMCON SCT to oversee the post-emergency cleanup. Members of the SCT will complete the spill cleanup activities in accordance with the NEMCON Post-Emergency Spill Cleanup Plan. The NEMCON 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 NEMCON Waste Management Group.

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6. 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 (321-867-7911 from a cellular phone), the responsible organization must follow up by verbally reporting the release to the NASA EAB (321-867-9005) pursuant to KDP-KSC-P-3008 KSC Hazardous Materials Emergency Response Plan and KNPR 8500.1 KSC Environmental Requirements. Within 3 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 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.

Table 6-1. Spill Reporting Agencies

Agency/Spill Type	Telephone
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 reported immediately.	1-800-424-8802 (24 hr)
U.S. EPA, Region 4 Emergency Response, Removal, Prevention and Preparedness Branch 11 th 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 that 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 or (404) 562-8799 (24 hr)
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 or (813) 228-2189 (24 hr)
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

Agency/Spill Type	Telephone
State Agencies	
Florida State Watch Office (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) 815-4001 or (850) 320-0519 (24 hour) Brevard County 24-Hour Warning Point Phone: 321-633-1737
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 that 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 Permitting and Compliance Program, 2600 Blair Stone Road, MS-4575, Tallahassee, FL 32399-2400 Incident and discharge notifications required to be made to the Brevard County Natural Resources Management (the locally administered program under contract with FDEP) as described below.	(850) 245-8849
Local Agencies	
Brevard County Natural Resources Management Office 2725 Judge Fran Jamieson Way, Building A, Viera, FL 32940 Incident notification (for regulated aboveground storage tank systems) must be made on County Incident Notification Form 62-762.901(6) within 72 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 Discharge Notification Form 62-762.901(1) 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 observed 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) 633-2017

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
FDEP = Florida Department of Environmental Protection
gal = Gallon
hr = Hour
LEPC = Local Emergency Planning Committee
NRC = National Response Center

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.

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

JP-8 = Jet Propulsion Fuel

gal = Gallon

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 that reaches outdoor ambient air, soil, or other portions of the environment (i.e., paved parking area). If a spill occurs that meets these criteria, the applicable Federal, state, 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 Federal, state, and local agencies. "Waters of the state" in Florida include surface and subsurface waters, except for water in sewage systems, 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 Federal, state, 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 to the EPA. 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 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 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.

6.2.3 Florida Department of Environmental Protection (FDEP)

Under FDEP rules, incidents from regulated USTs (those with capacities greater than 110 gals) and ASTs (those with capacities greater than 550 gals) and reportable discharges of oil must be reported to the Brevard County Natural Resources Management Office (the locally-administered program under contract with FDEP). Incidents for ASTs must be reported on Incident Notification Form 62-762.901(6) within 72 hours or before the close of the county’s next business day. A copy of this form and instructions is included in Appendix D. Additionally, discharges must be reported on Discharge Notification Form 62-762.901(1) within 24 hours or

before the close of the county's next business day. A copy of this form and instructions is included in Appendix D.

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

(a) the following positive responses of release detection devices or methods described in Rules 62-761.600, 62- 762.601, and 62-762.602, FAC:

1. any visual observation of regulated substances in a piping, dispenser, or sump;
2. any visual inspection of a storage tank system that reveals uncontrolled pitting corrosion, structural damage, leakage, or other similar problems;
3. any alarm that indicates that liquid, vacuum, or pressure monitoring levels are not being maintained, or that liquid has been detected by a sensor in a normally dry interstice or sump;
4. any visual observation that indicates that liquid monitoring levels are not being maintained;
5. any 50 percent pressure change from one month to the next, or any change in pressure exceeding 50 percent of the initial level or of a pressure level that is reestablished at the time of an incident investigation or annual testing of the gauge, and for vacuum systems, any complete loss of vacuum or positive pressure reading;
6. any visual inspection that indicates the presence of groundwater or surface water (other than condensate), or regulated substances in the interstice;
7. any instance where a mechanical line leak detector is restricting flow;
8. any instance where an electronic line leak detector has shut off power to the pump;
9. any instance where a monitoring device has shut off the pump; and
10. liquid in excess of one inch in an out-of-service storage tank (USTs);

(b) a failed integrity test for the following components:

1. double-walled storage tanks;
2. double-bottomed field erected storage tanks;
3. double-walled integral piping;
4. piping sumps;
5. dispenser sumps;
6. spill containment systems; and
7. hydrant sumps;

(c) other unusual operating conditions, such as the erratic behavior of product dispensing equipment, the sudden loss of product from a storage tank system, or any unexplained presence of groundwater or surface water in a tank or an interstitial space;

(d) the presence of odors of a regulated substance from surface water or groundwater, soil, basements, sewers, and utility lines at a facility or in the surrounding area from which it could be reasonably concluded that a release or discharge may have occurred;

(e) the loss of a regulated substance exceeding 500 gals inside a dike field area with secondary containment (ASTs);

(f) the loss of a regulated substance from a storage tank system exceeding 100 gals on impervious surfaces, other than secondary containment, such as driveways, airport runways, or other similar asphalt or concrete surfaces, provided that the loss does not come in contact with pervious surfaces; and

(g) a failed Closure Integrity Evaluation.

A “reportable discharge” is defined as:

(a) results, or receipts of results, of analytical tests of surface water or groundwater indicating the presence of contamination, in excess of Department Cleanup Target Levels by:

1. petroleum products’ contaminants of concern listed in Table B as applicable in Chapter 62-780, FAC; or
2. a regulated substance, other than petroleum products;

(b) the presence of free product, a visible sheen, sludge, or emulsion of a regulated substance, or a regulated substance that is visibly observed in soil, on or in surface water, in groundwater samples, on basement floors, in open drainage ditches, in open excavations or trenches, in subsurface utility conduits or vaults, or in sewer lines at the facility;

(c) a spill or overfill event of a regulated substance to soil or another pervious surface, equal to or exceeding 25 gals, unless the regulated substance has a more stringent reporting requirement specified in 40 CFR Part 302, July 2002;

(d) results of analytical tests of soil indicating the presence of contamination, in excess of Department Cleanup Target Levels by:

1. petroleum products’ contaminants of concern listed in Table B as applicable in Chapter 62-780, FAC;
2. a regulated substance, other than petroleum products;

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

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.

7. 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 Cape Canaveral SFS. 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 Appendix B.

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

(Most current document available through NASA KSC EAB)

Log number	Organization	Location	PE	Log Date
A-1	All	KSC-PLN-1919	Robert Kline, Jacobs	11/4/2005
A-2	ASRC	M7-0505A, M7-0556A, M7-556	Dennis Lobmeyer, ASRC	4/21/2006
A-3	NASA, C of F	MCAR (E3-1133)	Al Rose, Fred Wilson and Assoc.	6/22/2006
A-4	NASA, TA-C3	M&O (M6-0486)	Robert Kline, Jacobs	8/29/2006
A-5	DNCP&R	Various Locations	Jennifer Hill, JEA	2/6/2007
A-6	Lackmann	K6-1145, L6-0146, M6-0342, M7-0355, M7-0360, M6-0399	Ron Traylor, SGS	1/21/2007
A-7	NASA, TA-C3	Generator Shop, K6-1446	Robert Kline, Jacobs	10/23/2006
A-8	JBOSC	01044, J5-1197, J6-2362, K6-0947, K7-0468, K7-1203, M6-0688, M7-0737, M6-0896	Ron Traylor, SGS	1/21/2007
A-9	SFOC	Various Locations, see Amendment Log A-9	Blain L. Nelson, Nelson Engineering	1/25/2007

A-10	MILA	M5-1443, M5-1444, M5-1544, M5-1594	Jim Long, Honeywell	1/19/2007
A-11	JBOSC	M6-0039A	Ron Traylor, SGS	3/3/2008
A-12	DNCP&R	Various Locations	Rich Davis, JEA	12/10/2007
A-13A	SFOC	Various Locations	Blain Nelson, Nelson Engineering	11/2/2007
A-13B	JBOSC	Various Locations	Ron Traylor, SGS	4/29/2008
A-14	Boeing	Various Locations	Fulin Gui, Jacobs Technology	11/2/2007
A-15	Amendment Log # Issued in Error	Issued in Error	Issued in Error	
A-16	JBOSC	Various Locations	Ron Traylor, SGS	3/3/2008
A-17	SFOC	Various Locations	Blain Nelson, Nelson Engineering	6/16/2008
A-18	MILA	Various	James Long, Honeywell	6/16/2008
A-19	JBOSC	FSA 1	Ron Traylor, SGS	6/30/2008
A-20	Lackmann	K6-1547-4 Newly Added	Ron Traylor, SGS	7/1/2008

A-21	DNCP&R	Various	N/A Administrative Changes	6/30/2008
A-22	NASA-AII	KSC PLN 1919	Randall Byrd PE	3/20/2009
A-23	SPOC-USA	Various Locations	Blain Nelson Engineering	12/2/2008
A-24	DNCP&R	Various	Rich Davis-Jones Edmunds	12/8/2008
A-25	USTDC	M7-505A-2 removed	N/A Administrative Changes	12/8/2008
A-26	ISC	Various Locations	Carol Noble, Noble Eng.	12/11/2008
A-27	Lackmann	Various Locations	N/A Administrative Changes	12/12/2008
A-28	MESC-IHA	K7-114, K7-115	N/A Administrative Changes	12/15/2008
A-29	Boeing	Various Locations	N/A Administrative Changes	12/18/2008
A-30	MILA/Honeywell	M5-1443 & M5-1444	James L. Long PE	12/18/2008
A-31	IOMS	1044, 80700, 60683	N/A Administrative Changes	12/23/2008
A-32	SGS	K7-0287	N/A Administrative Change	1/16/2009

A-33	USA- SPOC	Various Locations	Blain Nelson, Nelson Engineering	5/18/2009
A-34	USTDC	M7-0505A	N/A Administrative Change	5/29/2009
A-35	ISC-EG&G	Various Facilities	Carol Noble PE	6/2/2009
A-36	ISC-EG&G	Various Facilities	Carol Noble, Noble Eng.	10/29/2009
A-37	SPOC-USA	Various Facilities	Blain Nelson, Nelson Engineering	11/13/2009
A-38	CAPPS-Boeing	Various Facilities	N/A Administrative Change	11/13/2009
A-39	SGS	K7-0287	N/A Administrative Change	11/24/2009
A-40	Delaware North	Various	N/A Administrative Change	12/2/2009
A-41	IHA-MESC	K7-0014	N/A Administrative Change	12/3/2009
A-42	Lackmann	M6-0493, Various	N/A Administrative Change	12/11/2009
A-43	IOMS-Indyne	1044, 60683	N/A Administrative Change	12/7/2009

A-44	LSSC-Dynamac	M6-1025	VOID PE Required change	12/21/2009
A-45	LSSC-Dynamac	M6-1025	Add M6-1025-2 Randall Byrd PE	4/26/2010
A-46	ISC-URS	Various Facilities	PE Required-Noble Eng.	4/27/2010
A-47	MILA-Honeywell	Various Facilities	N/A Administrative Changes	4/28/2010
A-48	SPOC-USA	Various Facilities	PE Required-Nelson Eng.	4/29/2010
A-49	CAPPS-BOIENG	Various	N/A Administrative Changes	4/29/2010
A-50	Delaware North	Various	N/A Administrative Change	5/21/2010
A-51	IHA-MESC	K7-0114, K7-0115, K7-0165	David Leggett, HSA Golden	6/2/2010
A-52	IOMS-Indyne	80700A	N/A Administrative Change	6/15/2010
A-53	NASA Exchange	K6-1345, M6-0596	N/A Administrative Change	6/16/2010
A-54	NASA EAB- All	KSC-PLN-1919	N/A Administrative Changes	9/30/2010

A-55	SPOC-USA	Various Facilities	PE Required- Nelson Eng.	10/28/2010
A-56	IHA-MESC	K6-0114	N/A Administrative Change	11/2/2010
A-57	URS-ISC	J6-2370	URS Orlando- Steven Cobert	11/30/2010
A-58	NASA-EAB	M6-1025 deleted from KSC SPCC	N/A Administrative Change	12/9/2010
A-59	United Launch Alliance	28406, 28503, 28414, 56616,	PE Carolyn Seringer, Nelson Eng.	4/10/2011
A-60	SPOC-USA	M6-0139	PE Carolyn Seringer, Nelson Eng.	2/13/2011
A-61	URS	Various Facilities	URS Orlando- Steven Cobert	9/7/2011
A-62	Lackmann	ARF, USA Logistics, CIF	N/A Administrative Changes	9/7/2011
A-63	SPOC-USA	Various Facilities	PE Nelson Engineering-Tullis	9/13/2011
A-64	ESC-QinetiQ	M7-505, M7-557	PE Nelson Engineering-Tullis	9/16/2011
A-65	Delaware North	KSC-AHOF	N/A Administrative Change	10/11/2011

A-66	SPOC-USA	Various Facilities	PE-Nelson Eng. - Nelson	4/26/2012
A-67	Delaware North	Shuttle Exhibit elevator-delete	N/A Administrative Change	6/4/2012
A-68	URS	Various	StevenColbert-URS	5/31/2012
A-69	Boeing	M7-0360	PE Nelson Eng.-Seringer	6/21/2012
A-70	ESC-QinetiQ	Various	PE Nelson Eng. - Terry Tullis	6/20/2012
A-71	NASA-IHA	KSC-PLN-1919	PE Nelson Eng.-Seringer	7/6/2012
A-72	ISC-URS	Various	Steven Cobert-URS	10/12/2012
A-73	IOMS	77615-77616	N/A Administrative Changes	10/19/2012
A-74	SPOC-USA	Various	Nelson Eng.-Nelson	10/22/2012
A-75	NASA Exchange	M6-0596, K6-1345, P6-1335	PE Nelson Eng. Seringer	10/29/2012
A-76	Delaware North	M6-0505, M6-0211	N/A Administrative Change	11/26/2012
A-77	Food Services	M7-0360, M6-0493, M6-0399, K6-1345	N/A Administrative Change	11/28/2012

A-78	ESC-QinetiQ	M7-0557	PE-Dennis Lobmeyer	12/13/2012
A-79	IOMS-Indyne	60690	TBD (See A-84 Nelson Eng.)	4/18/2013
A-80	TOSC-Jacobs	Various	Carolyn Seringer-Nelson Eng.	4/18/2013
A-81	ATK	Various	N/A Administrative Changes	5/9/2013
A-82	Delaware North	Various	N/A Administrative Change	5/22/2013
A-83	ISC-URS	Various	Steve Cobert PE-URS	6/4/2013
A-84	NASA TA-A4B	KSC-PLN-1919;KSC-PLN-1920, Food Service and IOMS facilities	Nelson Eng.-Seringer	8/28/2013
A-85	ISC-URS	Various	Steven Colbert-URS	10/22/2013
A-86	ATK	Various	N/A Administrative Changes	11/14/2013
A-87	TOSC-Jacobs	Various	N/A Administrative Changes	11/25/2013
A-88	ISC-URS	Various locations	Steven Colbert-URS	5/29/2014

A-89	IHA	K7-114, K7-165	N/A Administrative Changes	3/31/2014
A-90	TOSC-Jacobs	Various	Jeff Longshore, Nelson Eng.	5/12/2014
A-91	ATK	L6-0247	Jeff Longshore, Nelson Eng.	5/9/2014
A-92	NASA TA-A4B	28406, 28503	N/A Administrative Changes	5/26/2014
A-93	ATK	Various locations	N/A Administrative Changes	10/31/2014
A-94	ISC	Various	Steve Cobert-URS	11/10/2014
A-95	TOSC-Jacobs	Various Faciltiites	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

<u>A-100</u>	Orbital ATK Inc.	Various facilities	N/A Administrative Change	4/21/2015
<u>A-101</u>	TOSC-Jacobs	Varoius Facilities	Nelson Engineering- Seringer	4/22/2015
<u>A-102</u>	ISC-URS / AECOM	Varoius Facilities	Steven Colbert- URS	10/9/2015
<u>A-103</u>	InoMedic Health Applications	K7-0165, K7-0014, K7-0015	N/A Administrative Changes	11/2/2015
<u>A-104</u>	ESC-Vencore	M7-0505	Bryan Brotheridge- ESC Vencore	10/13/2015
<u>A-105</u>	KPLSS-URS	1044, 77612, M6-0688	Steven Colbert- URS AECOM	10/19/2015
<u>A-106</u>	TOSC - Jacob's	K6-0794, K6-1547	Jeffrey Lonshore, Nelson Eng.	11/3/2015
<u>A-107</u>	Delaware North Parks and Concessions	M6-0410	Jeff Longshore- Nelson Eng.	11/16/2015
<u>A-108</u>	NASA SI-E2	K6-0015, M6-0399, KSC PLN 1919 Rev. F	Jeff Longshore- Nelson Eng.	3/25/2016
<u>A-109</u>	ISC	Vatious Facilities	Steve Colbert-URS AECOM	6/16/2016
<u>A-110</u>	TOSC	Various Facilities	Nelson Engineering	5/18/2016

<u>A-111</u>	IMSS	K7-0114	N/A Administrative Change	5/27/2016
<u>A-112</u>	Delaware North Parks & Concessions	M6-0455-1	N/A Administrative Change	6/10/2016
<u>A-113</u>	ISC-AECOM	Various	Steven Cobert- URS	10/24/2016
<u>A-114</u>	TOSC-Jacob's Technologies	Various	Jeffrey Longshore- Nelson Eng.	11/7/2016
<u>A-115</u>	KPLSS- AECOM	K7-0468	Steven Cobert- URS	11/8/2016
<u>A-116</u>	Delaware North Parks and Concessions	Various Facilites	Brian Barfus PE - Aces 3	12/1/2016
<u>A-117</u>	ISC-AECOM URS	Varoius Facilities	Steve Colbert-URS AECOM	6/15/2017
<u>A-118</u>	ESC-Vencore	M7-0556B	Dennis Lobmeyer- ESC Vencore	5/23/2017
<u>A-119</u>	TOSC-Jacobs	M6-0848, M7-0188	Jeff Longshore- Nelson Eng.	5/18/2017
<u>A-120</u>	KPLSS-AECOM	Various Facilitites	Steve Colbert-URS AECOM	6/20/2017
<u>A-121</u>	ISC-AECOM	Various Facilities	Steve Cobert-URS Orlando	12/11/2017

<u>A-122</u>	KPLSS-AECOM URS	Various Facilities	N/A Administrative Changes Only	11/18/2017
<u>A-123</u>	TOSC- Jacobs	Various Facilities	Jeff Longshore- Nelson Engineering	12/5/2017
<u>A-124</u>	Delaware North Parks and Concessions	M6-0319, J6-2026	Jeff Longshore- Nelson Engineering	12/1/2017
<u>A-125</u>	LASSO-AECOM URS	K6-1696	N/A Administrative Change Only	12/13/2017
<u>A-126</u>	Delaware North Parks and Concessions	M6-0409	Jeffery Longshore- Nelson Eng.	2/28/2018
<u>A-127</u>	Orbital ATK	L6-0247, L6-0248, L6-0202	N/A Administrative Change	4/18/2018
<u>A-128</u>	TOSC-Jacob's Technology	Various	Jeff Longshore- Nelson Eng.	4/23/2018
<u>A-129</u>	ISC AECOM URS	Various	N/A Administrative changes only	4/25/2018
<u>A-130</u>	NASA Exchange Food Services Concessionaire	M6-0399	N/A Administrative Change	5/16/2018

<u>A-131</u>	Delaware North Parks and Concessions	M6-0319, M6-0409	Jeff Longshore-Nelson Engineering	5/18/2018
<u>A-132</u>	KPLSS-AECOM	K6-0015	N/A Administrative Change	6/21/2018
<u>A-133</u>	LASSO-AECOM	K6-1696	N/A Administrative Change only	10/22/2018
<u>A-134</u>	ISC-AECOM	Various locations	Steve Colbert-URS AECOM	11/29/2018
<u>A-135</u>	Delaware North Parks and Concessions	M6-0505, M6-0409D, M6-0552 & J6-1924	Jeff Longshore-Nelson Eng.	12/14/2018
<u>A-136</u>	TOSC-JACOB's	Various facilities	Jeff Longshore-Nelson Eng.	11/27/2018
<u>A-137</u>	IMSS	TSDF Locations: K7-0114, K7-0115, & K7-0165	N/A Administrative change	12/18/2018
<u>A-138</u>	KPLSS-AECOM	K7-0468	N/A Administrative change	11/26/2018
<u>A-139</u>	BOSS	Various Locations	Hemant Solanky-KBR	6/14/2019
<u>A-140</u>	TOSC-Jacob's Engineering	Various Locations	Jeff Longshore-Nelson Eng.	5/24/2019

A-141	ATK-Northrup Grumman	L7-0247, L7-0248	N/A Administrative Change	5/1/2019
A-142	Created in Error. See A-145	M7-0301	TBD	5/1/2019
A-143	Delaware North Parks and Concessions	Various	N/A Administrative Change	5/15/2019
A-144	KPLSS-AECOM	1044	N/A Administrative Change	6/3/2019
A-145	Food Services	M7-0301	Eric Sculthorpe-Leidos	6/24/2019
A-146	ATK Launch Systems	Various locations	N/A Administrative Change	10/23/2019
A-147	BOSS	Various locations	N/A Administrative Changes	10/28/2019
A-148	IMSS	K7-0165, K7-0114, K7-0115	N/A Administrative Change	11/5/2019
A-149	TOSC-Jacobs	Various	Jeff Longshore-Nelson Eng.	11/21/2019
A-150	Created in Error	VOID	N/A	4/17/2020
A-151	TOSC-Jacobs	K6-1844, K6-1247, and M7-0505A	Nelson Eng.	5/4/2020
A-152	IMSS-KEMCON	K7-0115	N/A Administrative Change	5/15/2020

A-153	KPLSS	73720	N/A Administrative Change	5/20/2020
A-154	BOSS	Multiple Locations (see amendment log A-154 for list)	BOSS-Ron Traylor	10/21/2020
A-155	NEMCON	K6-0497, N6-1010, K7-0114, K7-0115, and K7-0165	Leidos - Kirsten Bates	10/22/2020
A-156	KPLSS	K7-0468		11/4/2020
A-157	Food Services and NASA Exchange	M7-301 KSC Central Campus Headquarters, M7-0355, K6-1145, K6- 1345, M6-0596, and P6-1335	N/A Administrative Changes	11/10/2020
A-158	TOSC-Jacobs	K6-1844 & K6-0546 ML	Jeffrey Longshore- Nelson Engineering	11/10/2020
A-159	KSC-PLN-1919	KSC-PLN-1919	Kirsten Bates	4/1/2021

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APPENDIX B

KSC SPCC Contractor Descriptions and

Site-Specific SPCC Plans - KSC-PLN-1920

(Most current document available through Techdocs or NASA KSC EAB)

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APPENDIX C

KSC Pollution Incident Reporting Procedure and Notification Form and Instructions

KSC Pollution Incident Reporting and Notification

Date	Time	Reported or Found By	Organization/Company Name	Phone												
Substance / Material Involved			Amount Released (Estimated)													
Location of Incident (Include Facility Number and GPS coordinates)																
Environmental Impact (Check all that apply) (If Other, please explain) <table style="width: 100%; margin-top: 10px;"> <tr> <td>☐ Stormwater Ditch</td> <td>☐ Paved Area</td> <td>☐ Air Emission</td> </tr> <tr> <td>☐ Stormwater Sewer</td> <td>☐ Grass/Soil</td> <td>☐ Direct Discharge to Surface Water body</td> </tr> <tr> <td>☐ Domestic Sewer</td> <td>☐ Secondary Containment</td> <td>☐ Abandoned Waste/Materials</td> </tr> <tr> <td colspan="3">☐ Other (Explain below)</td> </tr> </table>					☐ 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)		
☐ 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) <table style="width: 100%; margin-top: 10px;"> <tr> <td>☐ Equipment Failure</td> <td>☐ Operator Error</td> <td>☐ Transportation Accident</td> <td>☐ Unknown</td> <td>☐ Found on Station</td> <td>☐ Other</td> </tr> </table>					☐ Equipment Failure	☐ Operator Error	☐ Transportation Accident	☐ Unknown	☐ Found on Station	☐ Other						
☐ 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/Follow-up																
Closed	Incident Reviewed By (Name/Organization)		Signature													
			Date													

KSC Pollution Incident Reporting and Notification

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, leaking, discharging, emitting, escaping, pouring, dumping, draining, leaching, seeping, injecting, placing or disposing 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 21-555.

1. Small amounts (4 ounces or less) of 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 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 21-555) as completely as possible based on the best available knowledge of the release.

The KSC Form 21-555 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. 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 24 hour format.
3. **Reported By:** Reported or Found By.
4. **Organization/Company Name:** Enter the organization or company name of the individual submitting the KSC Form 21-555.
5. **Phone:** Enter the telephone number of the individual submitting the KSC Form 21-555

KSC Pollution Incident Reporting and Notification

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. The PIR must include the following information: a map of appropriate scale showing the location of the discharge area(s), general dimension of affected area, and photos, if available. Additional specific information not included on the PIR Form can be attached to the email submitted to the KSC Environmental Assurance Branch at KSC-DL-NASA-Env-Spill@mail.nasa.gov.
9. **Environmental Impact:** Check applicable box or boxes that the release impacted. Provide as much detail as possible.
10. **Description of Incident:** Provide as much detail as possible regarding the description of the release/incident.
11. **Cause of Incident:** Check applicable box or boxes for the cause of the incident. Provide as much detail as possible regarding the cause of the incident. 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 as much detail as possible regarding the actions taken. 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 may be: Safety, Department Management, Project/Program Manager, Environmental Point-of-Contact, etc.
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.

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APPENDIX D

FDEP Incident and Discharge Notification Forms & Instructions



Department of Environmental Protection

2600 Blair Stone Road ♦ Tallahassee, Florida 32399-2400

DEP Form 62-762.901(6)
Form Title: Incident Notification Form
Effective Date: January 2017
Incorporated in Rule 62-762.411 F.A.C.

Incident Notification Form

Complete all applicable blanks

Facility ID Number (if registered): _____

Facility Name: _____

Telephone Number: _____

Facility Owner or Operator: _____

Mailing Address: _____

Location of Incident (facility street address): _____

Date of Form Completion: _____

Date of Discovery of Incident: _____

County: _____

Monitoring method or activity that indicates an incident: (Check all that apply)

- | | | |
|--|---|---|
| ☐ Visual Observation | ☐ Electronic sensors, probes or cables | ☐ Closure |
| ☐ Primary integrity test | ☐ Interstitial monitoring | ☐ Line leak detectors |
| ☐ Interstitial integrity test | ☐ Closure integrity evaluation | ☐ Automatic tank gauging |
| ☐ Containment integrity test | ☐ Tracer or helium testing | ☐ Other (specify): _____ |

Type of regulated substance stored in the storage system: (Check all that apply)

- | | | |
|--|---|--|
| ☐ Gasoline | ☐ Jet fuel | ☐ Mineral acid (ASTs) |
| ☐ Diesel | ☐ Used/waste oil | ☐ Ammonia compound ☐ Chlorine compound |
| ☐ Heating oil | ☐ New motor/lube oil | ☐ Biofuel blends |
| ☐ Kerosene | ☐ Pesticide | ☐ Unknown |
| ☐ Aviation gas | ☐ Grades 5 & 6 residual oils | ☐ Other (specify): _____ |
| ☐ Hazardous substance (USTs) – write name or Chemical Abstract Service (CAS) #: _____ | | |

Incident involves or originated from: (Check all that apply)

A positive response of release detection device:

A failed integrity test:

Or:

- | | | |
|---|--|--|
| ☐ 1. Visual observation | ☐ 1. Double-walled tank | ☐ 1. Odors in the vicinity |
| ☐ 2. Alarm | ☐ 2. Double-walled piping | ☐ 2. Loss > 100 gallons on impervious surface |
| ☐ 3. Vacuum or pressure change | ☐ 3. Containment sump | ☐ 3. Loss > 500 gallons in AST dike field |
| ☐ 4. MLLD restricting flow | ☐ 4. Spill containment system | ☐ 4. Unusual operating conditions |
| ☐ 5. ELLD/other device shutting power off to pump | ☐ 5. Double bottom AST | ☐ Other (specify): _____ |
| ☐ 6. Liquid > 1 inch in out-of-service tank (UST only) | | |

Cause of the incident, if known: (Check all that apply)

- | | | |
|--|---|---|
| ☐ Improper installation | ☐ Spill/Overfill > 100 gallons on impervious surface | ☐ Human error |
| ☐ Material failure (crack, split, etc.) | ☐ Spill/Overfill > 500 gallons in AST dike field | ☐ Vandalism or theft |
| ☐ Material incompatibility | ☐ Corrosion | ☐ Unknown |
| ☐ Faulty probe or sensor | ☐ Weather | ☐ Other (specify): _____ |

Actions taken in response to the incident:

Comments:

Agencies notified (as applicable):

- ☐ Fire Department ☐ County Program _____ ☐ District Office _____ ☐ State Watch Office 800-320-0519 ☐ National Response Center 800-424-8802

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 and Authorized Representative

Instructions for Completing the Incident Notification Form

This form must be completed to notify the County of the following incidents:

- (a) The following positive responses of release detection devices or methods described in Rules 62-761.600, 62-762.601, and 62-762.602, F.A.C.:
 - 1. Any visual observation of regulated substances in a piping, dispenser, or sump;
 - 2. Any visual inspection of a storage tank system that reveals uncontrolled pitting corrosion, structural damage, leakage, or other similar problems;
 - 3. Any alarm that indicates that liquid, vacuum, or pressure monitoring levels are not being maintained, or that liquid has been detected by a sensor in a normally dry interstice or sump;
 - 4. Any visual observation that indicates that liquid monitoring levels are not being maintained;
 - 5. Any 50% pressure change from one month to the next, or any change in pressure exceeding 50% of the initial level or of a pressure level that is reestablished at the time of an incident investigation or annual testing of the gauge, and for vacuum systems, any complete loss of vacuum or positive pressure reading;
 - 6. Any visual inspection that indicates the presence of groundwater or surface water (other than condensate), or regulated substances in the interstice;
 - 7. Any instance where a mechanical line leak detector is restricting flow;
 - 8. Any instance where an electronic line leak detector has shut off power to the pump;
 - 9. Any instance where a monitoring device has shut off the pump; and
 - 10. Liquid in excess of one inch in an out-of-service storage tank (USTs).
- (b) A failed integrity test for the following components:
 - 1. Double-walled storage tanks;
 - 2. Double-bottomed field erected storage tanks;
 - 3. Double-walled integral piping;
 - 4. Piping sumps;
 - 5. Dispenser sumps;
 - 6. Spill containment systems; and
 - 7. Hydrant sumps.
- (c) Other unusual operating conditions, such as the erratic behavior of product dispensing equipment, the sudden loss of product from a storage tank system, or any unexplained presence of groundwater or surface water in a tank or an interstitial space;
- (d) The presence of odors of a regulated substance from surface water or groundwater, soil, basements, sewers and utility lines at a facility or in the surrounding area from which it could be reasonably concluded that a release or discharge may have occurred;
- (e) The loss of a regulated substance exceeding 500 gallons inside a dike field area with secondary containment (ASTs);
- (f) The loss of a regulated substance from a storage tank system exceeding 100 gallons on impervious surfaces, other than secondary containment, such as driveways, airport runways, or other similar asphalt or concrete surfaces, provided that the loss does not come in contact with pervious surfaces; and
- (g) A failed Closure Integrity Evaluation.

A copy of this form must be delivered, emailed, or faxed to the County within 72 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, the form must be delivered, emailed, or faxed to the local DEP District Office. *However, if the investigation of the incident concludes within 72 hours of the discovery of the incident that a*

discharge did not occur (for example, the investigation shows that the situation was the result of a malfunctioning electronic release detection sensor); this form is not required to be submitted to the County.

An investigation shall be completed within 14 days of the date of discovery of the incident to determine if a discharge has occurred. Incident investigations that require additional time can be extended with the written approval of the Department or the County. However, if the investigation goes beyond 45 days of the date of discovery, the storage tank system shall be placed out-of-service until such time the investigation is completed and resolved.

Also, please remember to properly notify your insurance company of the incident in accordance with any reporting requirements outlined in your insurance policy.

This form, including test results and reports which support the investigation findings, must be maintained until storage tank system closure.

[Instructions for Forms 62-761.900(6) and 62-762.901(6)]
(January 2017)



Department of Environmental Protection

2600 Blair Stone Road ♦ Tallahassee, Florida 32399-2400

DISCHARGE REPORT FORM

DEP Form: 62-762.901(1)

Form Title: Discharge Report Form

Effective Date: January 2017

Incorporated in Rule 62-762.411, F.A.C.

Complete all applicable blanks, and submit copies of any analytical or field test results confirming contamination to soils, surface water, or groundwater to the County via email or mail.

Facility ID Number (If Registered): _____ Date of Form Completion: _____ Date of Discovery: _____

Facility Name: _____ County: _____

Facility (Property) Owner: _____ Telephone Number: _____

Owner Mailing Address: _____

Location of Discharge (Facility Street Address): _____ Lat/Long: _____

Date of receipt of any test or analytical results confirming a discharge: _____ Estimated number of gallons discharged: _____

Discharge affected: (Check all that apply)

☐ Soil ☐ Groundwater ☐ Soil water (water body name) _____
☐ Drinking water well(s) ☐ Shoreline ☐ Other (specify) _____

Evidence of discharge: (Check all that apply)

☐ Visual observation of sheen ☐ Results or receipt of results of analytical tests ☐ Stained soils
☐ Visual observation of free product ☐ Spill or vehicle overfill > 25 gallons to a pervious surface ☐ Other (explain in comments)

Method of discovery and confirmation of discharge: (Check all that apply, see rule language explanation on instructions for this form)

☐ Visual observation ☐ Closure/Closure sampling assessment ☐ Surface water analytical results
☐ Groundwater analytical results ☐ Soil analytical results ☐ Other (specify) _____

Type of regulated substance discharged: (Check all that apply)

☐ Gasoline ☐ Jet fuel ☐ Mineral acids (ASTs)
☐ Diesel ☐ Used/waste oil ☐ Ammonia compound Chlorine compound
☐ Heating oil ☐ New motor/lube oil ☐ Biofuel blends
☐ Kerosene ☐ Pesticide ☐ Unknown
☐ Aviation gas ☐ Grade 5 & 6 residual oils ☐ Other (specify) _____
☐ Hazardous substance (USTs) – write name or Chemical Abstract Service (CAS) #: _____

Discharge originated from a: (Check all that apply)

☐ Tank ☐ Other secondary containment ☐ Railroad tankcar
☐ Piping ☐ Fitting or pipe connection ☐ Barge, tanker ship or other vessel
☐ Spill bucket ☐ Valve ☐ Pipeline
☐ Dispenser ☐ Tank truck ☐ Drum
☐ Piping sump ☐ Vehicle or customer vehicle ☐ Unknown
☐ Dispenser sump ☐ Aircraft ☐ Other (specify) _____

Cause of the discharge: (Check all that apply)

☐ Spill ☐ Material failure (crack, split, etc.) ☐ Collision ☐ Weather
☐ Overfill ☐ Material incompatibility ☐ Vehicle accident ☐ Human error
☐ Corrosion ☐ Improper installation ☐ Fire/explosion ☐ Unknown
☐ Puncture ☐ Loose connection ☐ Vandalism ☐ Other (specify) _____

Actions taken in response to the discharge:

Comments:

Agencies notified (as applicable):

☐ Fire Department ☐ County Program _____ ☐ District Office _____ ☐ State Watch Office 800-320-0519 ☐ National Response Center 800-424-8802

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

Discharge Report Form Instructions

Oil spills to navigable waters of the United States, and releases of reportable quantities of CERCLA hazardous substances must be reported immediately to the National Response Center. Reports to the National Response Center of oil spills to navigable waters need not be repeated to any other federal, state, or local agency. Conditions at the site that do not involve spills to navigable waters of the United States, or CERCLA hazardous substances, that pose an immediate threat to human health or the environment must be reported to the State Watch Office or the Local Fire Department. Nevertheless, this form must be submitted for all discharges from facilities with storage tank systems, and sites in accordance with Chapters 62-761, 62-762, and 62-780, F.A.C.

State Watch Office
1-800-320-0519

National Response Center
1-800-424-8802

Local Fire Department
911

This form must be used to report any confirmed discharge, or of any one of the following, unless the discharge is from a previously known and reported discharge:

1. Results, or receipts of results, of analytical tests of surface water or groundwater indicating the presence of contamination, in excess of Department Cleanup Target Levels by:
 - a. Petroleum products' contaminants of concern listed in Table B as applicable in Chapter 62-780, F.A.C.; or
 - b. A regulated substance, other than petroleum products.
2. The presence of free product, a visible sheen, sludge, or emulsion of a regulated substance, or a regulated substance that is visibly observed in soil, on or in surface water, in groundwater samples, on basement floors, in open drainage ditches, in open excavations or trenches, in subsurface utility conduits or vaults, or in sewer lines at the facility;
3. A spill or overfill event of a regulated substance to soil or another pervious surface, equal to or exceeding 25 gallons, unless the regulated substance has a more stringent reporting requirement specified in 40 CFR Part 302, July 2002;
4. Results of analytical tests of soil indicating the presence of contamination, in excess of Department Cleanup Target Levels by:
 - a. Petroleum products' contaminants of concern listed in Table B as applicable in Chapter 62-780, F.A.C.;
 - b. A regulated substance, other than petroleum products.

According to Rules 62-761.440 and 62-762.441, F.A.C., a copy of this form must be delivered, emailed, or faxed to the County within 24 hours of the discovery of a discharge from a regulated storage tank system, or before the close of the County's next business day. If, however, this discovery is thought to be a previously reported discharge, the owner or operator will have 30 days to investigate and submit supporting documentation or this form. It is recommended that the original copy be sent in the mail. If the discharge occurs at a county-owned facility, the form must be delivered, emailed, or faxed to the local DEP District Office. Also, please remember to properly notify your insurance company of this reported discharge in accordance with the reporting requirements outlined in your insurance policy. This form must be maintained until storage tank system closure.

[Instructions for Forms 62-761.900(1) and 62-762.901(1)]
(January 2017)

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APPENDIX E

References

E-1: KDP-KSC-P-3008 Hazardous Material Emergency Response Plan (See Techdocs for most recent document)

E-2: KNPR 8715.2 Comprehensive Emergency Management Plan (CEMP) (See Techdocs for most recent document)

E-3: [40 CFR 112 Oil Pollution Prevention](#) (hyperlink only)

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APPENDIX F

KSC Oil-Filled Transformer Inventory

(Most current document available through NASA KSC EAB)

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APPENDIX G

Contingency Plan and EPA Cross-Reference Documents

G-1: KSC Oil Spill Contingency Plan Reference Guide

G-2: EPA SPCC Field Inspection and Plan Review Checklist

KSC OIL SPILL CONTINGENCY PLAN REFERENCE GUIDE

To be used as a guide to cross-reference KSC SPCC plan elements with criteria from 40 CFR 109

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 2-2 (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)

(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)



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. These provisions are addressed in Attachment D.
- 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 as "NA". 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 throughout the checklist to record comments. Additional space is available as Attachment E at the end of the checklist. Comments should remain factual and support the evaluation of compliance.

Attachments

- Attachment A is for recording information about containers and other locations at the facility that require secondary containment.
- Attachment B is a checklist for documentation of the tests and inspections the facility operator is required to keep with the SPCC Plan.
- Attachment 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 as provided in 40 CFR 112.7(k).
- Attachment D is a checklist for Tier II Qualified Facilities.
- Attachment E is for recording additional comments or notes.
- Attachment F is for recording information about photos.

FACILITY INFORMATION				
FACILITY NAME: Kennedy Space Center				
LATITUDE: 28-31-27 N		LONGITUDE: 80-39-02 W		GPS DATUM:
Section/Township/Range: S 11 - T 23 - R 36		FRS#/OIL DATABASE ID:		ICIS#:
ADDRESS: NASA KSC Central Campus Headquarters Building M7-0301, S.R. 405				
CITY: KSC		STATE: FL		ZIP: 32899
COUNTY: Brevard				
MAILING ADDRESS (F DIFFERENT FROM FACILITY ADDRESS – IF NOT, PRINT "SAME"): same				
CITY:		STATE:		ZIP:
COUNTY:				
TELEPHONE: 321-867-8411		FACILITY CONTACT NAME/TITLE: Rosaly J. Santos-Ebaugh		
OWNER NAME: National Aeronautics and Space Administration (NASA) a federal government agency				
OWNER ADDRESS: Washington, DC 20546-0001				
CITY:		STATE:		ZIP:
COUNTY:				
TELEPHONE: 321-867-8411		FAX:		EMAIL:
FACILITY OPERATOR NAME (F DIFFERENT FROM OWNER – IF NOT, PRINT "SAME"): same				
OPERATOR ADDRESS:				
CITY:		STATE:		ZIP:
COUNTY:				
TELEPHONE:		OPERATOR CONTACT NAME/TITLE:		
FACILITY TYPE: federal installation - spaceport				NAICS CODE:
HOURS PER DAY FACILITY ATTENDED: 24			TOTAL FACILITY CAPACITY: 491,582	
TYPE(S) OF OIL STORED: automotive, lubricants, cooking and specialty oils				
LOCATED IN INDIAN COUNTRY? ☐ YES ☒ NO RESERVATION NAME:				
INSPECTION/PLAN REVIEW INFORMATION				
PLAN REVIEW DATE:		REVIEWER NAME:		
INSPECTION DATE:		TIME:	ACTIVITY ID NO:	
LEAD INSPECTOR:				
OTHER INSPECTOR(S):				
INSPECTION ACKNOWLEDGMENT				
I performed an SPCC inspection at the facility specified above.				
INSPECTOR SIGNATURE:				DATE:
SUPERVISOR REVIEW/SIGNATURE:				DATE:

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 ☐ NoAFFECTED WATERWAY(S): [Multiple Reference Table 2-1 and Figure 2-2](#)DISTANCE: [Adjacent](#)

FLOW PATH TO WATERWAY:

[Multiple pathways depending on activity and storage location. Reference Appendix B, Table 2-1 and 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**FACILITY RESPONSE PLAN (FRP) APPLICABILITY—40 CFR 112.20(f)**

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 ☒ NA

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 3](#)

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 period¹

☐ Yes ☒ No

IF **YES** TO ALL OF THE ABOVE, THEN THE FACILITY IS A TIER II QUALIFIED FACILITY²
SEE ATTACHMENT D FOR TIER II QUALIFIED FACILITY CHECKLIST

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, Rev G(April 2021)

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**
- Beginning operations after November 10, 2011, Plan prepared and fully implemented before beginning operations

☒ Yes ☐ No ☐ NA

☐ 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**
- Beginning operations after August 16, 2002 through May 10, 2013: Plan prepared and fully implemented by **May 10, 2013**
- Beginning operations after May 10, 2013: Plan prepared and fully implemented before beginning operations

☐ Yes ☐ No ☒ NA

☐ Yes ☐ No ☒ NA

☐ Yes ☐ No ☒ NA

112.3(d) Plan is certified by a registered Professional Engineer (PE) and includes statements that the PE attests:

- PE is familiar with the requirements of 40 CFR part 112
- PE or agent has visited and examined the facility
- Plan is prepared in accordance with good engineering practice including consideration of applicable industry standards and the requirements of 40 CFR part 112
- Procedures for required inspections and testing have been established
- Plan is adequate for the facility

☒ Yes ☐ No ☐ NA

☒ Yes ☐ No ☐ NA

☒ Yes ☐ No ☐ NA

☒ Yes ☐ No ☐ NA

☒ Yes ☐ No ☐ NA

☒ Yes ☐ No ☐ NA

PE Name: Kirsten Bates

License No.:

State: FL

Date of certification: 4/1/2021

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 XV 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 include environmentally equivalent alternatives and/or secondary containment impracticability determinations when reviewed and certified by a PE.

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 - 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) - Date(s) and volume(s) of reportable discharges(s) under this section: - Were the discharges reported to the NRC⁵?	☐ Yes ☐ No ☒ NA ☐ Yes ☐ No ☒ NA ☐ 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? - Were amendments implemented within six months of any Plan amendment?	☒ Yes ☐ No ☒ Yes ☐ No
112.5(b)	Review and evaluation of the Plan completed at least once every 5 years? 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)? Amendments implemented within six months of any Plan amendment? Five year Plan review and evaluation documented?	☒ Yes ☐ No ☐ NA ☒ Yes ☐ No ☐ NA ☒ Yes ☐ No ☐ NA ☒ Yes ☐ No ☐ NA
112.5(c)	Professional Engineer certification of any technical Plan amendments in accordance with all applicable requirements of §112.3(d) <i>[Except for self-certified Plans]</i>	☒ 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 Plans.

Comments:

Individual PE signing statements and amendment logs located online on NASA EAB sharepoint site

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

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 ⁶		☒ 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 (<i>Note: Relevant for inspection evaluation and testing baselines.</i>)		☒ Yes ☐ No ☐ NA	
112.7(a)(2) If YES	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) - The Plan states reasons for nonconformance - Alternative measures described in detail and provide equivalent environmental protection (<i>Note: Inspector should document if the environmental equivalence is implemented in the field, in accordance with the Plan's description</i>)	☒ Yes ☐ No ☐ NA	
		☐ 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 is located in Appendix A. Deviations from secondary containment for oil-filled operational equipment is addressed in Section 4.3.2, and Appendix G.			

⁶ May be part of the Plan or demonstrated elsewhere.

		PLAN	FIELD
112.7(a)(3)	Plan describes physical layout of facility and includes a diagram ⁷ 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 Attachment 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	
112.7(a)(4)	Does not apply if the facility has submitted an FRP under §112.20: ☒ Yes ☐ No ☐ NA 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.		
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	
Comments:			

⁷ Note in comments any discrepancies between the facility diagram, the description of the physical layout of facility, and what is observed in the field

		PLAN	FIELD																							
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 Attachment 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: <table border="1"> <tr> <td>☒ Bulk storage containers</td> <td>☒ Yes ☐ No ☐ NA</td> <td>☒ Yes ☐ No ☐ NA</td> </tr> <tr> <td>☒ Mobile/portable containers</td> <td>☒ Yes ☐ No ☐ NA</td> <td>☒ Yes ☐ No ☐ NA</td> </tr> <tr> <td>☒ Oil-filled operational equipment (as defined in 112.2)</td> <td>☒ Yes ☐ No ☐ NA</td> <td>☒ Yes ☐ No ☐ NA</td> </tr> <tr> <td>☒ Other oil-filled equipment (i.e., manufacturing equipment)</td> <td>☒ Yes ☐ No ☐ NA</td> <td>☒ Yes ☐ No ☐ NA</td> </tr> <tr> <td>☒ Piping and related appurtenances</td> <td>☒ Yes ☐ No ☐ NA</td> <td>☒ Yes ☐ No ☐ NA</td> </tr> <tr> <td>☒ Mobile refuelers or non-transportation-related tank cars</td> <td>☒ Yes ☐ No ☐ NA</td> <td>☒ Yes ☐ No ☐ NA</td> </tr> <tr> <td>☒ Transfer areas, equipment and activities</td> <td>☒ Yes ☐ No ☐ NA</td> <td>☒ Yes ☐ No ☐ NA</td> </tr> <tr> <td>☐ Identify any other equipment or activities that are not listed above:</td> <td>☐ Yes ☐ No ☒ NA</td> <td>☐ Yes ☐ No ☒ NA</td> </tr> </table>	☒ 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	
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112.7(d)	Secondary containment for one (or more) of the following provisions is determined to be impracticable: <table border="0"> <tr> <td>☐ General secondary containment §112.7(c)</td> <td>☐ Bulk storage containers §§112.8(c)(2)/112.12(c)(2)</td> </tr> <tr> <td>☐ Loading/unloading rack §112.7(h)(1)</td> <td>☐ Mobile/portable containers §§112.8(c)(11)/112.12(c)(11)</td> </tr> </table>	☐ 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																				
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☐ Loading/unloading rack §112.7(h)(1)	☐ Mobile/portable containers §§112.8(c)(11)/112.12(c)(11)																									
If YES	- The impracticability of secondary containment is clearly demonstrated and described in the Plan - For bulk storage containers,⁸ periodic integrity testing of containers and integrity and leak testing of the associated valves and piping is conducted (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 Attachment C of this checklist) AND - 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 ☒ Yes ☐ No ☐ NA ☒ Yes ☐ No ☐ NA	☐ Yes ☐ No ☒ NA ☐ 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 (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-Filled operational equipment utilize secondary containment and/or contingency planning. Refer to Sections 4.3.2, 4.8, & 4.9																										

⁸ These additional requirements apply only to bulk storage containers, when an impracticability determination has been made by the PE

		PLAN	FIELD
112.7(e)	Inspections and tests conducted in accordance with written procedures Record of inspections or tests signed by supervisor or inspector Kept with Plan for at least 3 years (see Attachment B of this checklist) ⁹	☒ Yes ☐ No ☒ Yes ☐ No ☒ Yes ☐ No	☒ Yes ☐ No ☒ 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
112.7(h)	Tank car and tank truck loading/unloading rack ¹⁰ is present at the facility <i>Loading/unloading rack</i> 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	☒ 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? 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	☒ 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
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 Records of inspections and tests kept under usual and customary business practices will suffice

¹⁰ Note that a tank car/truck loading/unloading rack must be present for §112.7(h) to apply

		PLAN	FIELD
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 facility¹¹ ☒ Yes ☐ No <i>Oil-filled operational equipment</i> 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. 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?¹² ☐ Yes ☒ No ☐ NA <i>If YES for either, secondary containment in accordance with §112.7(c) is required</i> - Facility procedure for inspections or monitoring program to detect equipment failure and/or a discharge is established and documented ☒ Yes ☐ No ☐ NA Does not apply if the facility has submitted a FRP under §112.20: - Contingency plan following 40 CFR part 109 (see Attachment C of this 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		
Comments:			

¹¹ This provision does not apply to oil-filled manufacturing equipment (flow-through process)

¹² 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.

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) 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	☒ 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. ¹³	☐ 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. ¹⁴	☐ 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 • 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	☐ Yes ☐ No ☒ NA ☐ Yes ☐ No ☒ NA
Comments: 112.7(h) Loading-unloading addressed in Section 4.4.1. 112.7(j) More stringent state requirements in Section 4.6. 112.7 (k) Oil-Filled 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 Reference Guide. 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 <i>Bulk storage container</i> 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 Attachment 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 Diked areas sufficiently impervious to contain discharged oil OR 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 ☐ Yes ☐ No ☒ NA	☒ Yes ☐ No ☐ NA ☒ Yes ☐ No ☐ NA ☐ Yes ☐ No ☒ NA

¹³ 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.

¹⁴ These provisions apply only when a facility drainage system is used for containment; otherwise mark NA

		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 ¹⁵	☒ Yes ☐ No ☐ NA	☒ Yes ☐ No ☐ NA
Integrity Testing Standard identified in the Plan:			
Steel Tank Institute (STI) SP-001. 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:	☐ Yes ☐ No ☒ NA	☐ Yes ☐ No ☒ NA
	• Subject to 21 CFR part 110; • Elevated; • Constructed of austenitic stainless steel; • Have no external insulation; and • Shop-fabricated.		
	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

¹⁵ Records of inspections and tests kept under usual and customary business practices will suffice

		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; - 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; or - Regularly test liquid level sensing devices to ensure proper operation.	☒ Yes ☐ No ☐ NA ☒ Yes ☐ No ☐ NA	☒ 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 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 in KSC-PLN-1920). 112.8(d) Facility transfer operations in Section 4.4.3, includes valve, piping design and examination. All buried piping is secondarily contained.

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ATTACHMENT 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 ¹⁶ Aboveground or Buried Tank	Storage Capacity and Type of Oil	Type of Containment/ Drainage Control	Overfill Protection and Testing & Inspections
See KSC-PLN-1920, most recent copy from NASA EAB			

¹⁶ Identify each tank with either an A to indicate aboveground or B for completely buried

ATTACHMENT A: SPCC FIELD INSPECTION AND PLAN REVIEW TABLE (CONT.)

Documentation of Field Observations for Containers and Associated Requirements

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

ATTACHMENT 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 owner/operator 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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ATTACHMENT C: SPCC CONTINGENCY PLAN REVIEW CHECKLIST

☐ NA

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 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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ATTACHMENT D: TIER II QUALIFIED FACILITY CHECKLIST

☒ NA

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
(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 ¹⁹	☐ 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	<i>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.</i>	
	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); - 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:		

¹⁹ Note that only the person certifying the Plan can make the site visit

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ATTACHMENT E: ADDITIONAL COMMENTS

Attachment B and F of this checklist are not completed as records and documentation/photographs are maintained by each organization for each site specific plan within KSC-PLN-1920 (or Appendix B of KSC-PLN-1919). Records are maintained for a period of at least 3 years. Checklists for inspections are provided in KSC-PLN-1919 for organizations use.

ATTACHMENT E: ADDITIONAL COMMENTS (CONT.)

ATTACHMENT F: PHOTO DOCUMENTATION NOTES

Photo#	Photographer Name	Time of Photo Taken	Compass Direction	Description

ATTACHMENT F: PHOTO DOCUMENTATION NOTES (CONT.)

Photo#	Photographer Name	Time of Photo Taken	Compass Direction	Description

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