APPENDIX D

Emergency Planning and Response

General Project Contacts

GENERAL PROJECT CONTACTS

National Grid Toll-Free Telephone Number for construction-related complaints or concerns: (800) 356-0050

National Grid Project Management Contact

Tom Brim, Project Manager
300 Erie Boulevard West
Syracuse, NY 13202
315-428-5012
Email: thomas.brim@nationalgrid.com

National Grid Construction Management Contact

Pete Doster
300 Erie Boulevard West
Syracuse, NY 13202
315-428-5103
Email: peter.doster@nationalgrid.com

NYS Department of Public Service

General Complaint Contact
Three Empire State Plaza
Albany, NY 12223
800-342-3377 (8:30 am – 4:00 pm)

DPS Environmental Compliance Section
James Austin, Deputy Director
Three Empire State Plaza
Albany, NY 12223
518-402-5786

Richard Powell
Three Empire State Plaza
Albany, NY 12223
518-486-2885

Honorable Kathleen H. Burgess
Secretary of State of New York Public Service Commission
Three Empire State Plaza 20th Floor
Albany, NY 12223
518-474-6530

Environmental Monitor
(To be confirmed prior to construction)

Table D-1
List of Residences Within 100 Feet

Table D-1
Five Mile Road Station Project
List of Residences Within 100 Feet

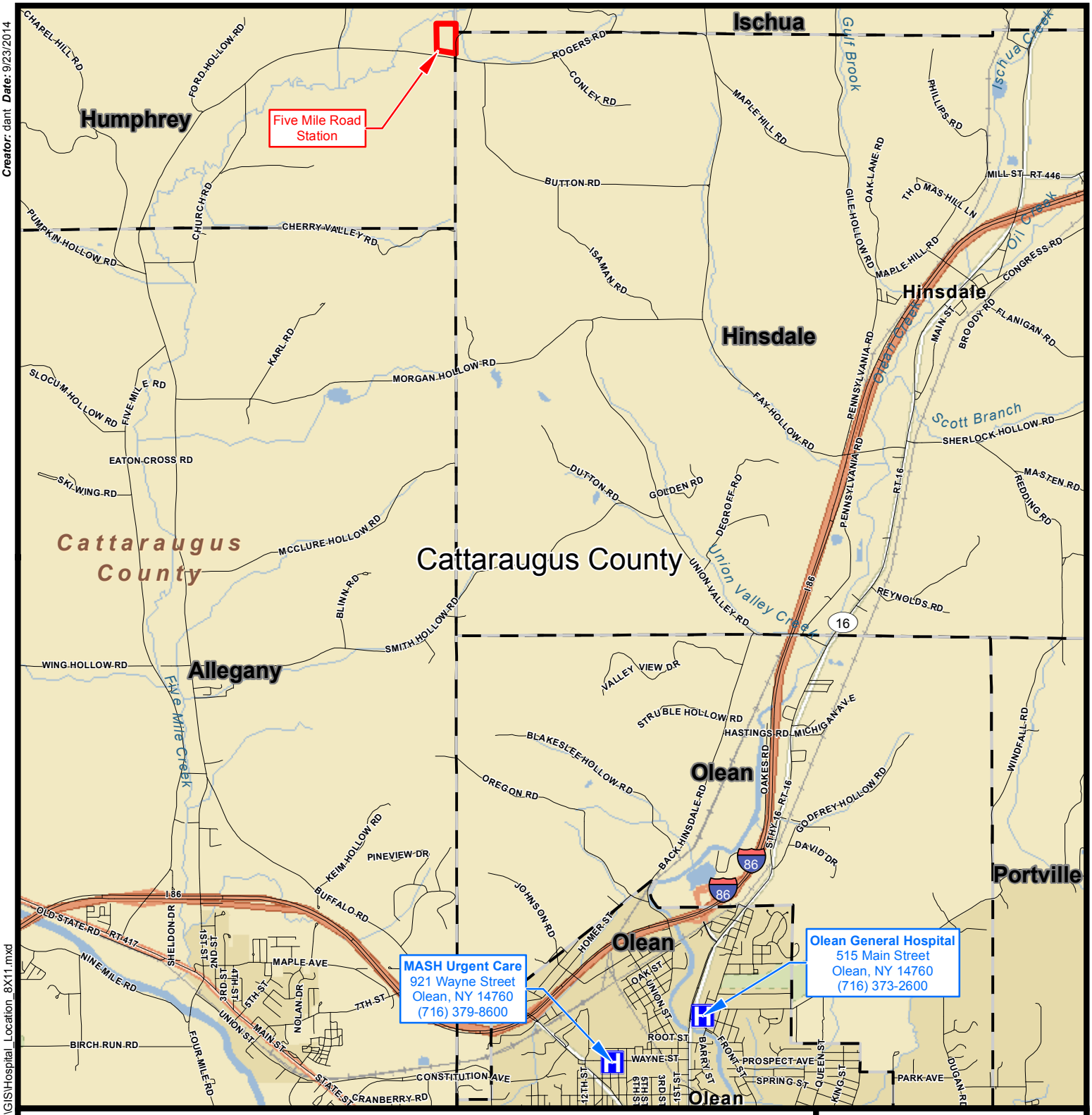
Tax Parcel Number	Property Address	Owner Name	Owner Mailing Address	Residence Within 100 Feet
67.003-1-5	Cooper Hill Road	Eric D. Farr	4 Rowland Avenue, Cheektowaga, NY 14225	No
76.001-2-2.3	4650 Five Mile Road	Raymond & Nancy Survil	4650 Five Mile Road, Allegany, NY 14706	No
76.001-1-6.1	4557 Five Mile Road	Kent & Barbara Cobado	4557 Five Mile Road, Allegany, NY 14706	Yes
76.001-1-6.2	4544 Five Mile Road	Kent & Barbara Cobado	4557 Five Mile Road, Allegany, NY 14706	Yes

Table D-2
Emergency Contact List

Table D-2
Five Mile Road Station Project
Emergency Contact List

Municipality	Fire Department	Police Department	Medical Emergency	Chemical Spill Response
New York State	Call Local Fire Department listed below	New York State Troop A HQ 585-344-6200 Zone 4 (Olean) 716-373-2550	911	NYSDEC Region 9 716-851-7220 24 Hour Hotline 1-800-457-7362
Cattaraugus County		Cattaraugus County Sheriff's Office 911 or 716-938-9191	911	Cattaraugus County Emergency Services 303 Court St., Little Valley, NY 14755 716-938-2213
Town of Humphrey	Allegany Fire Department 911 or 716-373-2310	911 or Cattaraugus County Sheriff's Office	911	Cattaraugus County Emergency Services 303 Court St., Little Valley, NY 14755 716-938-2213

Hospital Location Map

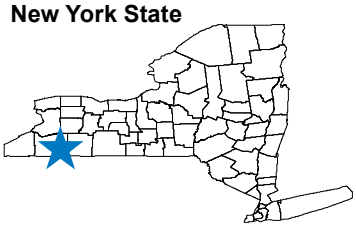


LEGEND

- Emergency Care Location
- Five Mile Road Station
- Municipal Boundary
- Project Location

1 0.5 0 1 Miles

New York State



nationalgrid

FISHERASSOCIATES

NATIONAL GRID
FIVE MILE ROAD STATION
CATTARAUGUS COUNTY, NY
HOSPITAL LOCATION MAP

Creator: dant Date: 9/23/2014

Path: J:\Projects\127013-National_Grid_5_Mile_Rd_Substation\GIS\Hospital_Location_8X11.mxd

Table D-3
Potential Pollutant Sources

Table D-3
Five Mile Road Station Project
Potential Pollutant Sources

Pollutant	Estimated Quantity	Container and Storage Description
Mineral Oil	Station Service Transformer: 115 gallons Main Transformer: 29,000 gallons	Oil will be contained within the transformers.
Medium Weight Used Oil	20 gallons	5-gallon steel containers, on pallets located inside secondary containment area.
Used Oil	100 to 200 gallons	55-gallon drum inside a secondary containment area.
Hydraulic Fluid	Less than 50 gallons	Approved containers
Thinners/Adhesives/Solvents /Xylene/Methyl Ketone/Acetone	Less than 25 gallons	1-gallon steel containers and 5-gallon steel containers, on pallets located inside secondary containment area.
Paint	150 16 oz. spray cans	5-gallon steel containers located inside a secondary containment area.
Gasoline	Less than 100 gallons	5-gallon steel containers located inside secondary containment for chainsaws, pumps, etc. Mobile fueling truck w/ spill kit on board, no full time storage.
Diesel Fuel	Less than 1,350 gallons (less than 90 gallons each for 15 trucks)	Mobile fueling trucks w/ spill kit on board, no full time storage.
Herbicides	Varies	Approved containers and application devices.
Solid Waste(litter and construction debris)	Varies	Covered dumpsters.
Sanitary Waste	Varies	Portable facilities.

Spill Reporting and Cleanup Procedures

1. **PURPOSE:** This guidance document provides instructions for general employees reporting a release/spill of oil or any other chemical to the environment.

2. **SCOPE:** This guidance document covers oil, chemical and herbicide releases to the environment in New York State.

3. **DEFINITIONS:**

   a. **Oil** – means oil of any kind, including petroleum and mineral oil in electrical equipment, motor oil, fuel oil, hydraulic fluid, diesel fuel, etc.
   b. **PCB-Contaminated Oil –** means oil containing PCBs in the quantity ranging from 50-499 ppm.
   c. **PCB Oil –** means oil containing PCBs in a concentration at or greater than 500 ppm.
   d. **Chemical –** any potentially hazardous substance such as sulfuric acid, ethylene glycol (anti freeze), refrigerants, herbicides, etc.
   e. **Release –** means any spilling, leaking, pumping, pouring, emitting, or emptying of an oil or chemical to the environment.
   f. **Reportable Quantity (RQ) –** means that quantity of a material released to the environment as defined in 40 CFR Part 117 and 40 CFR Part 302.

4. **RESPONSIBILITES:**

   a. **Any Employee** – All employees are responsible to report any release of oil, chemical or herbicide to the Regional Control Center.
   b. **Divisional Engineer –** Provide assistance as requested for spill response activities. Responsible for determining whether or not a chemical has exceeded the Reportable Quantity, and follow up notification and reporting as required in EP No. 5.
   c. **Regional Control Center** – Responsible for two hour notification to the New York State Department of Environmental Conservation and notification to the National Response Center, if required.

5. **PROCEDURE:**

   Note: National Grid is required by various federal, state and local laws to notify different governmental agencies in the event of an oil spill or spill of a chemical (hazardous substance) within specified timeframes.

   5.1 GENERAL EMPLOYEES:

   a. Upon discovery of any oil or chemical spill, immediately notify the Regional Control Center.

EAST REGIONAL CONTROL CENTER – (518) 356-6471
CENTRAL REGIONAL CONTROL CENTER – (315) 460-2796
WEST REGIONAL CONTROL CENTER – (716) 831-7325

NOTE: ALL OIL SPILLS ARE REQUIRED TO BE CALLED IN TO THE REGIONAL CONTROL CENTER, REGARDLESS OF THE VOLUME SPILLED.

b. Provide as much information as possible including:
- location of release (including pole number)
- what material was released/spilled
- when the spill was discovered
- estimated amount spilled
- what caused the release
- a description of the spill area
- a description of impacted receptors and
- any other pertinent information

c. The field crew, if necessary, should request clean up help through the Regional Control Center.

NOTE: Using physical barriers, visible warnings (i.e., caution tape, cones, etc.), or other means, restrict access to the spill area. Prevent unauthorized persons from entering the area.

d. If the field crew is to clean the spill, the guidance contained in EG-502NY should be followed.

5.2 REGIONAL CONTROL CENTER:

a. Upon notification of a release, gather information from the caller as to substance spilled, volume, cause, date and time of spill, etc. The form in Appendix A can be used as a guide.
b. Initiate spill report with information in the Incident Management System (IMS).
c. All oil spills, regardless of volume are to be reported to the New York State Spill Hotline: 1-800-457-7362 within 2 hours.
d. Other chemical spills are to be reported to the New York State Spill Hotline: 1-800-457-7362 if they exceed the Reportable Quantity. Contact the Divisional Environmental Engineer for assistance in determining this.

e. In addition, report oil spills to water and PCB oil spills (see definition section) to the National Response Center at 1-800-424-8802.
f. Document assigned spill number(s) in IMS.

5.3 DIVISIONAL ENVIRONMENTAL ENGINEER:

a. Provide assistance in reportability requirements to Regional Control if requested.
b. Provide assistance in deploying spill clean up resources (equipment, contractors) when requested.
c. Classify/complete/close out spill in IMS.
d. Report spill to other required agencies per EP No. 5 as required.
e. Provide assistance to clean up crews in making arrangements for clean up debris disposal.
f. Categorize the spill as a Category 1 or Category 2 spill as outlined in EP No. 15.
g. Confirm clean up.
h. Provide additional information to state agency to close out the spill.
i. See EP-5 for details on all responsibilities.

6.0 Divisional Environmental Engineer Contacts

Western: Lisa Montesano: 716-479-5339
Central: Rich Fox: 315-546-4011
Eastern: Barb Scheurer: 518-577-6712

Appendix A

GAS ☐ ELECTRIC ☐ Other:	**NY Release Incident Information Capture Report**	EG-501NYN-FORM

Incident

Date: _____ Time:_____ AM PM Weather: _____

Reported By: _____ Dept: _____ Phone: _____

Received by: _____ Dept: _____ Phone: _____

Incident Location

Location:_____ Address:_____

City: _____ County: _____

X Street_____ Pole #_____

Description:

_____

_____

_____

_____

_____

_____

Details	Quantity Released: _____ ☐ gallons ☐ pounds Other _____
Material: ___MODF ___Fuel __Hydraulic; Other_____ Source: ___ Transformer (__PT; __PM; __BG) __ Capacitor Other : _____ Cause : ___ Eq Fail; ___MVA; ___Storm; ___Human Error Other :	

Specifics of spill impacts

☐ Pavement, street, driveway, curb, etc. ☐ Storm drain or Water body
☐ Grass, soil, forest, open field, etc. ☐ Private property – ornamental landscaping, patio, fence, pool, etc.

Other:

Called in to Environmental Date / Time _____ / _____ Enviro Rep: _____	

Record of Change		
Date of Review/Revision:		
Revision	**Date**	**Description**
1	10/05/06	Updated.
2	6/15/12	Updated procedure to include use of the IMS system and deleted spill form no longer in use. (Replaced by IMS).
3	5/10/13	Clarified Responsibilities

SUBJECT	REFERENCE
Spill and Release Clean Up	**EP-5**

1.0 PURPOSE – The purpose of this guidance document is to provide instructions in the clean up of oil and other chemical spills.

2.0 SCOPE – This guidance applies to New York personnel who may be assigned to respond and/or clean up a spill or release.

3.0 DEFINITIONS

a. **Oil** – means oil of any kind, including petroleum and mineral oil in electrical equipment, motor oil, fuel oil, hydraulic fluid, diesel fuel, etc.
b. **PCB Contaminated Oil** – means oil containing PCBs in the quantity ranging from 50-499 ppm.
c. **PCB Oil –** means oil containing PCBs in a concentration at or greater than 500 ppm.
d. **Release –** means any spilling, leaking, pumping, pouring, emitting, or emptying of a substance to the environment

4.0 RESPONSIBILITIES

a. All Personnel:
- Upon discovery of a spill, report details to the appropriate Regional Center (see EG-501NY).
- Attempt to contain spill if feasible and remediate if possible.
- Request assistance for clean up of spills through the Regional Control Center.

b. Regional Control Center:
- Report the spill to appropriate regulatory agency (see EG-501NY).
- Assist field crews with obtaining assistance with spill clean up.
- Dispatch clean up teams.

c. Divisional Engineer:
- Provide assistance as requested for spill response activities and document response actions as appropriate.

c. Clean up Teams:
- Can be in-house National Grid personnel or contractor personnel. Follow clean up guidance as outlined in this document.

5.0 PROCEDURE

NOTE: Large spills should be cleaned up by qualified Hazardous Materials personnel. If the spill is large and/or PCB containing, or has reached a water body, contact Regional Control or the Divisional Environmental Engineer for assistance in obtaining help with the clean up.

5.1 Immediate Actions:

- Attempt to contain spill. Utilize spill kit contained on most company vehicles.
- Secure the area:
    1. Use absorbent/containment materials to minimize or eliminate the spread of contamination.
    2. Do not walk through or touch the spilled material; step away from the spill area;
    3. Using physical barriers, visible warnings (i.e., caution tape, cones, etc.), or other means, restrict access to the spill area. Prevent unauthorized persons from entering the area.

5.2 Clean up Requirements:

5.2.1. Assess the spill. Determine material spilled. If hazardous material such as mercury, acid or PCB oil, contact Regional Control for help in securing Hazardous Materials personnel or spill contractor.

5.2.2. Don personnel protective equipment (PPE) as necessary. PPE may include, but not be limited to gloves, hardhats, safety glasses, steel toed shoes, coveralls, etc. If working near roadway, appropriate cones shall be placed and high visibility clothing shall be worn. Follow all Safety procedures.

Note: All spills are unique. The clean up methodology employed will depend upon the nature of the spill, the amount spilled, location, etc. The guidance listed below is meant to be general and not prescriptive.

5.2.3. Non-PCB oil spills to land:

i) Non-PCB oil spills include non-PCB labeled transformers, hydraulic oil, diesel fuel and motor oil. Clean up requires removal of visible stained oil from the surface. Soil removal, use of oil sorbent pads, speedi-dri, and use of a chemical solvent such as Citri-Kleen may all be used for spill clean up.

ii) Remove all visible traces of oil.

Note: NYS DEC guidance and clean up criteria vary between Regions in NYS. Effort shall be made to clean the area to as close as possible to pre-spill conditions.

iii) Document clean up efforts and provide to divisional environmental engineer.
iv) Containerize waste in appropriate containers and label.

5.2.4. Unlabeled transformer oil spills to land:
i) If an unlabeled transformer has spilled, obtain a sample of the oil from the unit and conduct a field PCB test using a CLOR-N-OIL kit. Collect an additional sample for laboratory analysis. If results reveal > 50 ppm, waste clean up debris must be handled as PCB contaminated and labeled as such until laboratory results determine otherwise. If CLOR-N-OIL results reveal < 50 ppm, the oil and waste may be handled as non-PCB until laboratory results are received. If no oil is left in the unit or a sample cannot be obtained, collect oily soil or debris and send to laboratory for analysis.
ii) Clean up spill as noted above.
iii) Collect additional soil sample or wipe samples to verify clean up.
iv) Containerize waste and label appropriately.
v) Document clean up and provide to divisional environmental engineer.

5.2.5. Clean up should be completed within 48 hours. Otherwise, fully document reason for the delay.

5.2.6. Clean up all reusable equipment using rags and/or cleaners as necessary.

5.2.7. If PCB results confirm that the oil spill was PCB contaminated or PCB oil, an EPA Identification Number may be required prior to disposal of material. Contact the Divisional Engineer for assistance.

6.0 Divisional Environmental Engineer Contacts

Western: Lisa Montesano: 716-479-5339
Central: Rich Fox: 315-546-4011
Eastern: Barb Scheurer: 518-577-6712

7.0 Documentation

7.1 Official record of all releases is maintained in the Incident Management System (IMS.)

7.2 Regional Control centers will initiate the IMS report upon notification from the field and document time of incident, notification from field time, regulatory notification time, release details (material spilled, amount, location, response measures). Regional control follows National Grid Distribution Control Center System Operations Operating Guide 3.7 "Oil Spill Reporting."

7.2.1 If the spill is of sensitive or serious nature (based on public exposure, environmental impact, or public relations issue) such as those involving bodies of water or public buildings in addition to immediate notification to the divisional engineer, notify and document in the Shift Supervisor log book:

- PACC
- Safety
- Legal/Corporate Relations
- Security
- Risk Management (Claims Department)
- Facilities

7.3 Clean up crews (in house and contractor) document remediation efforts including spill area and property items/materials impacted amount of clean up necessary. Submit documentation to Divisional Environmental Engineer.

7.3.1 Any contact with members of the public, emergency agencies or regulatory personnel should be documented by the response crew.

7.4 Divisional Environmental Engineers shall maintain and complete the spill documentation in the IMS system and ensure spill is closed out. Typical information will include clean up efforts, laboratory analytical data, date spill closed out and regulatory contact documentation. See EP-5 for more detail concerning Divisional Environmental Engineer responsibilities.

Spill Prevention, Control, and Countermeasure Plan

nationalgrid

Uniform
Spill Prevention, Control and Countermeasure (SPCC) Plan

for

Five Mile Road Station
4580 Five Mile Road
Humphrey, NY USA

9/2014

Date	Name	Description	Page(s)

This document when utilized in combination with the *Contingency Plan Flow Chart* and the site-specific document comprises the complete SPCC Plan.

Printed copies are not document controlled. For latest authorized version please refer to the certified electronic copy within Documentum, maintained by Substation Engineering Design.

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B CONTINGENCY PLAN FLOW CHART

C SPCC PLAN ATTACHMENTS (THESE SITE-SPECIFIC DOCUMENTS ARE ALSO MAINTAINED IN DOCUMENTUM)

13 HISTORY OF SPILLS
14 RECOMMENDATIONS OR EXCEPTIONS
15 CERTIFICATION OF SUBSTANTIAL HARM DETERMINATION

FIGURES

Figure 1: Site Location Map
Figure 2: Site Layout Sketch

TABLES

Table 1: Summary of Oil-Filled Equipment and Bulk Storage Containers
Table 2: Navigable Waters (Critical Water Use Areas)

U.S. EPA TITLE 40 CFR PART 112 CROSS-REFERENCE

Rule Section	Plan Section(s)
112.7 1st Para	13.0, 14.0
112.7(a)(1)	2.0
112.7(a)(2)	Throughout, 9.3
112.7(a)(3)	Figure 2, Table 1
112.7(a)(3)(i)	Table 1
112.7(a)(3)(ii)	5.0, 7.2
112.7(a)(3)(iii)	6.0, Table 1
112.7(a)(3)(iv)	8.0, 12.0, Figures 1 and 2
112.7(a)(3)(v)	8.4
112.7(a)(3)(vi)	Contingency Plan Flow Chart
112.7(a)(4)	Contingency Plan Flow Chart, 13.0, 8.1, 8.2, 8.5, 8.7, Table 1, Figure 1
112.7(a)(5)	Contingency Plan Flow Chart, 8.3, 8.5, 8.6, 8.8,Table 2, Figure 2
112.7(b)	7.0, Table 1, Table 2, Figure 2
112.7(c)	6.1, Table 1
112.7(d)	Not applicable, impracticability demonstration not required
112.7(d)(1)	8.0, Contingency Plan Flow Chart
112.7(d)(2)	13.0
112.7(e)	9.0
112.7(f)	10.0
112.7(f)(1)	10.0
112.7(f)(2)	10.1
112.7(f)(3)	10.3
112.7(g)(1)	11.0
112.7(g)(2)	11.0
112.7(g)(3)	11.0
112.7(g)(4)	11.0
112.7(g)(5)	11.0
112.7(h)	Not applicable, no rack (see 7.2 for tanker transfers)
112.7(i)	Not applicable, no field constructed containers
112.7(j)	2.0, 13.0

U.S. EPA TITLE 40 CFR PART 112 CROSS-REFERENCE (continued)

Rule Section	Plan Section(s)
112.7(k)	2.0, 6.2, 9.1, 11.0, 8.0, 13.0, Contingency Plan Flow Chart
112.8(b)(1)	9.4
112.8(b)(2)	9.4
112.8(b)(3)	6.1, e.
112.8(b)(4)	Not applicable, no diversion system at final discharge to retain oil
112.8(b)(5)	Not applicable, no treatment units
112.8(c)	Not applicable to Substations without bulk storage containers
112.8(c)(1)	7.1, 7.11
112.8(c)(2)	6.1, d.
112.8(c)(3)	9.4
112.8(c)(4)	Not applicable, no buried storage tanks
112.8(c)(5)	Not applicable, no partially buried or bunkered storage tanks
112.8(c)(6)	9.3
112.8(c)(7)	Not applicable, no tanks with internal heating coils
112.8(c)(8)	6.3, Table 1
112.8(c)(9)	Not applicable, no effluent treatment facility
112.8(c)(10)	9.3
112.8(c)(11)	6.3, d., 7.1
112.8(d)(1)	7.11, 9.4
112.8(d)(2)	11.0
112.8(d)(3)	7.1, 7.11
112.8(d)(4)	9.4
112.8(d)(5)	6.3

REFERENCES

National Grid Electrical Operating Procedure EOP 430.20.2

National Grid Environmental Procedure EP-13, Spill Prevention, Control and Countermeasures

Crisis Management Plan for National Grid USA, January 2006

National Grid New England Emergency Storm/Restoration Plan, August 31, 2006

The EPA's Inland Area Contingency Plan for Region I – New England, Office of Site Remediation and Restoration, Emergency Planning and Response Branch, Boston, MA, September 7, 2006

Rhode Island and Southeastern Massachusetts Area Contingency Plan, Prepared by Rhode Island and Southeastern Massachusetts Area Committee, c/o USCG Marine Safety Office Providence, 20 Risho Ave., Providence, RI, September 12, 2005

Department of Homeland Security (DHS) National Incident Management System, March 1, 2004

Emergency Response Resource Book, Clean Harbors Environmental Services, Clean Harbors National Response Team

1 INTRODUCTION

National Grid USA (National Grid) companies own and operate facilities that are subject to regulatory requirements concerning oil pollution prevention, including the development and implementation of Spill Prevention, Control, and Countermeasure (SPCC) plans. The facilities include electrical Substations that contain oil filled electrical equipment such as transformers, circuit breakers, and capacitors that are required for the transmission and distribution of power. At designated locations, bulk storage containers associated with emergency generators may be in place.

A facility that has the potential to discharge oil to navigable waters and has an aboveground aggregate of oil in storage or uses greater than 1,320 gallons is subject to SPCC regulation. This Substation meets one or both of these criteria and therefore a SPCC plan has been prepared. Refer to Figure 1 for Substation location and Figure 2 for site layout plan. Refer to Table 1 for a summary of oil storage/use information and Table 2 for identification of navigable waters.

2 PURPOSE OF THE PLAN

The purpose of this document is to present procedures and plans implemented to prevent the discharge of oil into or upon the navigable waters of the United States and adjoining shorelines. Should a discharge of oil occur, it is also the intent of this plan to provide procedures that will be implemented to mitigate the release and minimize the threat to the public health and safety or to the environment. The procedures, methods, and equipment described in this document meet the requirements of the United States Environmental Protection Agency (U.S. EPA), Title 40 Code of Federal Regulations (40 CFR) Parts 109, 110, and 112.

Additional state and/or local regulations and requirements may apply to storage tanks and/or storage of oil. However, these requirements are generally addressed separately in National Grid's Environmental Management System. Conformance with the applicable more stringent state regulations are discussed in Section 13.0 as required by 40 CFR 112.7(j).

In the December 2006 amendment to the SPCC regulations, EPA provided an alternative to general secondary containment for qualified oil-filled equipment. This alternative allows owners/operators to rely on contingency planning measures as an equivalent to secondary containment measures.

Per Section 12.2 of National Grid Environmental Procedure (EP) EP-13, National Grid will be implementing this alternative as the base method of compliance with 40 CFR 112.7(c) at applicable facilities.

This plan addresses the requirements of 40 CFR 112.7(k) to demonstrate equivalency to this regulatory requirement. The administrative measures listed below supports National Grid's position in applying to 40 CFR 112.7(k) as the protective measure.

1) Facility procedures for inspections or a monitoring program to detect equipment failure and/or a discharge are established and documented (see Section 6.2, Electrical Equipment Protective/Warning Devices; Section 9.1, Visual and Operational Inspections; and Section 11.0, Security);
2) An oil spill contingency plan following the provisions of 40 CFR 109 is in place (see Sections 8.0 and 12.0); and
3) A written commitment of manpower, equipment, and materials required to expeditiously control and remove any quantity of oil discharged that may be harmful is in place (see the Approval and Certification Page in Section 13.0).

3 DEFINITIONS

The following terms used in this document are defined as:

Bulk Storage Container:
Bulk storage container refers to 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.

Documentum: Documentum is the document management software that National Grid uses to manage document content and attributes such as check-in, check-out, workflow, and version management. The Documentum product is a three-tier, client-server system built on top of a relational database. National Grid maintains SPCC Plans and related backup technical information in Documentum.

Discharge: Discharge includes, but is not limited to, any unauthorized spilling, leaking, pumping, pouring, emitting, emptying, or dumping. A discharge of a harmful quantity of oil is a quantity that violates a water quality standard or causes a film or sheen upon or discoloration of surface water.

Division Environmental Engineer:
Person responsible for: 1) ensuring that appropriate regulatory agencies have been notified of releases of oil; 2) ensuring that the spilled oil has been properly cleaned-up and; 3) notifying Management, Emergency Directors and others of the need to elevate the level of emergency response in order to adequately respond to a spill.

Divisional Emergency Director:
Person(s) responsible for activating the Division emergency response plan to differing levels of response as needed, including full implementation, and for directing response activities as the emergency event dictates.

Emergency Coordinator (EC):
The person charged with the responsibility and delegated commensurate authority for directing and coordinating response operations and knowledgeable in requesting assistance from local, state, and federal authorities operating under existing national and regional contingency plans. In addition, the EC is required to assure implementation of training and administration of SPCC records.

MODF: Mineral Oil Dielectric Fluid. MODF is used in the electrical equipment (“MO” in Table 1).

MOSES Electric Power Research Institute (EPRI) developed Mineral Oil Spill Evaluation System (MOSES) model. Software used to

predict the probability of oil spills reaching a defined receptor, remaining on-site or infiltrating to groundwater. The software is generally accepted as industry standard.

National Grid Personnel:
Company personnel with oil handling and/or spill response responsibilities.

Navigable Waters: Waters of the United States, including the territorial seas. The term includes: (1) all navigable waters of the United States, as defined in judicial decisions prior to passage of the 1972 Amendments to the FWPCA (Pub. L. 92-500), and tributaries of such waters; (2) interstate waters, including interstate wetlands; and (3) intrastate lakes, rivers and streams which are utilized by interstate travelers for recreational or other purposes; and (4) intrastate lakes, rivers and streams from which fish or shellfish are taken and sold in interstate commerce.

Oil: Oil of any kind or in any form, including, but not limited to, petroleum, fuel oil, sludge, oil refuse, and oil mixed with wastes other than dredged spoil. Oils used at the Substation include insulating and lubricating oils.

Oil-Filled Operational Equipment:
Oil-filled operational equipment means equipment that includes an oil storage container (or multiple containers) in which the oil is present solely to support the function of the apparatus or the device. Oil-filled operational equipment is not considered a bulk storage container, and does not include oil-filled manufacturing equipment (flow-through process). Examples of oil-filled operational equipment include, but are not limited to, hydraulic systems, lubricating systems (e.g., those for pumps, compressors and other rotating equipment, including pumpjack lubrication systems), gear boxes, machining coolant systems, heat transfer systems, transformers, circuit breakers, electrical switches, and other systems containing oil solely to enable the operation of the device.

Operator: The person(s) in control of or having the responsibility for operating or maintaining any property which is subject to these regulations.

Owner: The person(s) who holds title to, or lawful possession of, real or personal property which is subject to these regulations.

Qualified Oil-filled Operational Equipment:

Qualified oil-filled operational equipment is oil-filled operational equipment located at a facility that has had no single discharge from any oil-filled operational equipment exceeding 1,000 U.S. gallons or no two discharges 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, or since becoming subject to 40 CFR 112 if the facility has been in operation for less than three years.

Spill Event: A discharge of oil in quantities which violate applicable water quality standards or cause a film, sheen, discoloration, or sludge to be deposited on or beneath the surface of the water or upon adjoining shorelines.

Substation Department Personnel:

National Grid personnel who have been assigned to the Substation Operations & Maintenance (O&M) Department. These employees are trained for response according to this plan and are familiar with the operation and maintenance of the equipment present at the facility.

System Operator (SO):

National Grid personnel located in a system Control Room, Trouble Center, Regional Control Center (RCC) or Dispatch Center. On duty 24 hours/day, 365 days/year. The SO receives substation status information and remotely operates or directs operation of electrical apparatus in Substations.

Traveling Operator (TO):

National Grid personnel who is trained as the first responder for spill response and carries materials on his truck in case the station has no spill kit. TO's vehicles are equipped with flood lights to provide adequate lighting for spill response.

4 PLAN ADMINISTRATION

The Emergency Coordinator (EC) is responsible for the implementation and management of this SPCC plan. The responsibilities include ensuring that operational personnel are properly trained and that personnel follow the procedures presented in this plan. Additionally, the EC ensures that the necessary cleanup equipment and supplies are maintained at the designated areas as described in the SPCC plan.

Copies of the SPCC plan are kept at the following locations:

- Controlled Master Copy: Stored in the corporate document management system – Documentum.
- Site Hard Copy: Located in the Substation control house or in an accessible location for unmanned facilities.
- Crew HQ Hard Copy: Located at the Crew Headquarters that is responsible for operation and maintenance of the Substation.

This plan will be amended whenever there is a change in the facility design including construction, operation, or maintenance programs that may materially affect the potential for a discharge of oil. The plan will also be amended when oil-filled equipment is decommissioned, added, replaced, and/or demolished. Revisions to the plan will be made within six (6) months of the changes. The plan will also be reviewed and updated every five (5) years in view of new technologies and regulations. Technical amendments will be certified by a professional engineer. Non-technical amendments, such as name or phone number changes, do not require certification by a professional engineer.

5 SPILL PREVENTION MEASURES

The Substation is constructed, operated, and maintained to prevent and minimize the possibility of a release of oil. Prevention measures, including procedures for the routine handling of products, are presented below.

Oil Handling Operations

Oil is handled during certain maintenance activities or when installing or removing equipment from the Substation. These activities are conducted or supervised by personnel who are familiar with the operation and maintenance of the equipment. Additionally, when performing the activities, personnel follow the instructions and precautionary measures outlined in the "National Grid Oil Handling Procedures." These procedures include instructions for the proper use of drums and portable tanks, instructions for inspecting tankers or equipment prior to transfer operations, and steps that must be taken upon completion of an oil transfer. These steps can be found in "National Grid Oil Handling Procedure," SMP 430.20.2, which is maintained on the “InfoNet” web page under T&D Technical Services/Substation Engineering Services.

Training

Personnel handling oil are instructed on the proper operation and maintenance of equipment in order to prevent a discharge of oil. This instruction occurs at least once per year and is provided through classroom and on-the-job training. Training topics include proper oil handling procedures and spill response procedures. Refer to Section 10.0 for more detailed information regarding personnel training.

Inspections and Preventative Maintenance

Equipment is inspected and maintained to prevent a failure that could result in the failure to deliver power and/or the release of oil. Inspection procedures are described in Section 9.0.

6 SPILL CONTROLS

The following section describes the secondary containment structures, equipment, and procedures that are commonly used for control of a discharge of oil into navigable waters. Section 8.0 provides the specific spill controls used for an operation or equipment, as well as modes of failure and oil migration potential. Table 1 provides additional information relative to the equipment such as oil volume, types of secondary containment, if provided, and the presence of protective/warning devices.

As noted previously, per 40 CFR 112.7(k), the inspections/monitoring program to detect equipment failure and/or a spill event as described in Sections 6.2, 9.1 and 11.0, the oil spill contingency plan as described in Section 8.0 and the written commitment of manpower, equipment, and materials to expeditiously control and remove a spill can be used at Substations to replace general secondary containment for qualified oil-filled operational equipment.

The equipment and procedures that are used in the plan are practicable, cost effective, and consistent with good engineering practices. In addition, the plans and procedures take advantage of the response capabilities of National Grid and the emergency response contractors who have committed resources to National Grid. The letter of commitment along with the vendor capabilities is maintained in the "Supporting Documents" folder in Documentum.

Trap Rock

Oil-filled equipment is surrounded by trap rock in each substation yard. The integrity of the trap rock layer is inspected as part of the bimonthly V&O inspections. Trap rock offers protection in the case of leaking or failing equipment. Two scenarios utilize trap rock as a pretective measure:

1) If a piece of equipment was leaking, the trap rock would slow the spill from migrating offsite until the next V&O inspection, at which point the leak would be addressed.

2) If a transformer looses its oil, it will trip out or fault internally. Consequently, the station and its feeders will go out and customers begin calling National Grid’s call center. As a result, Regional Control will dispatch a Traveling Operator to investigate. The trap rock would slow the spill from migrating offsite while the Traveling Operator is on his way.

Containment and Diversionary Structures

Below is a description of the construction of structures which are sufficiently impervious to contain or detain a potential release of oil to navigable waters in quantities that may be harmful, or used to safely confine the release to facility property. Section 7.0 provides the specific spill controls used for each oil-filled unit and for each operation. Refer to the "Supporting Documents" folder in Documentum for examples of the various types of containment structures.

Equipment or other oil in use (except for qualified oil filled operational equipment as referenced in 40 CFR 112.7(k)) must meet the general containment or diversion

requirements of Part 112.7(c). Bulk storage containers must also meet the additional containment provisions of Part 112.8(c).

a. Oil Containment Sumps Lined with Semi-Permeable Geo-Composite

Oil containment sumps may be constructed under a transformer to contain or confine a release of oil. To construct the sump, soil is excavated to create a pit. The dimensions of the sump are based on the volume of oil and the depth to ground water. The sump is lined with either a 6-inch layer ("6 Sump") or 12-inch layer ("12 Sump") of well compacted silty sand and gravel mix sandwiched between top and bottom layers of 16-ounce polypropylene geotextile. This liner system will significantly slow the migration of oil into the underlying subgrade allowing additional time to initiate a cleanup response. The polypropylene geotextile allows the passage of water but absorbs small quantities of oil.

The 12 Sump is constructed in two 6-inch lifts compacted to 98-percent dry density. Based on the results of field compaction tests and constant head permeameter tests, the 98-percent compaction provides a fluid conductivity of 10^{-4} cm/sec. Therefore, under conditions expected during a potential release of MODF, the 12 Sump is sufficiently impervious to prevent a discharge of oil to navigable waters in quantities that may be harmful. Six-inch PVC standpipes with 3/4-inch perforations are placed in the containment pits to facilitate quick removal of the released MODF. The containment sumps are backfilled with 2-inch crushed stone.

b. Oil Containment Sumps Lined with Concrete

Transformer sumps may be lined with a reinforced concrete containment wall and floor ("C Sump").

To construct the sump, soil is excavated to create a pit. The dimensions of the sump are based on the volume of oil and the depth to ground water. After the floors and walls are set in place, the gravel is compacted and graded around all sides. All joints and lifting holes are caulked and the sump may be backfilled with crushed stone to grade. Discharge of accumulated storm water is controlled by a manually operated valve. For containment sumps with a valve, see Section 9.4 Containment Drainage for drainage of collected storm water from the containment area.

c. Unlined Oil Sumps

Older transformers may be set over unlined oil sumps without standpipes ("U Sumps") or with standpipes ("UP Sumps"). The sumps serve to confine the release of oil to the facility property. The 6-inch PVC standpipes with 3/4-inch perforations are placed in the containment pits to permit quick removal of the released MODF. The containment sumps are backfilled with 2-inch crushed stone.

d. Aboveground Containment Areas

Tanks used for bulk storage of oil are provided with secondary containment to hold the entire contents of the largest single tank plus sufficient freeboard to allow for precipitation. The containment may be constructed of concrete, steel or other sufficiently impervious material. Caulking is used where necessary to maintain containment integrity. The diked area is sufficiently impervious to prevent a discharge of oil to

navigable waters. Storm water entering the containment may be drained from a valve that must be manually opened and closed. The valve must be kept in the normally closed position and locked unless other security provisions are in place to prevent opening by unauthorized persons. See Section 9.4 Containment Drainage for drainage of collected storm water from the containment area.

e. Containment Berms

Containment berms are constructed to prevent released oil from migrating off the facility property. The berms are constructed of silty processed gravel and wrapped with polypropylene geotextile. The berm is covered with crushed stone. Variations to this construction include the addition of a pressure-treated timber along one side of the berm or the installation of a pressure-treated skimmer when the berm is installed across the bottom of a drainage swale. Concrete curbs or asphalt berms may also be used.

Equipment berms immediately surrounding the oil-containing device may be used. Constructed of asphalt or concrete, these berms are used to impede the lateral movement of any oil spill and contain the spill within the immediate area of the oil-filled equipment.

f. Spill Containment Pallets

Small, portable containers, such as 55-gallon drums, may be stored on spill containment pallets. The pallets are typically constructed of plastic or polypropylene and have sufficient capacity to hold at least 55 gallons.

g. Spill Kit/Carts

Spill kits and carts containing spill control, containment and cleanup materials and equipment may be stored on-site. Spill kits are also located on the responder's vehicle (see Section 8.5). A full list of material and equipment in standard spill kits is provided in Section 8 of this plan.

Electrical Equipment Protective/Warning Devices

In-service oil-filled equipment may be provided with one or more types of electrical protective/warning devices. These devices are designed to prevent or minimize damage to the electrical equipment in the event of a malfunction. Protection of the equipment minimizes the potential for a release of oil. Certain types of devices are remotely alarmed to the System Operator location. The devices are described below.

a. Breather or Vent: These devices are designed to either allow the equipment to operate at atmospheric pressure or at a minimum positive or negative pressure. This prevents a rupture of the equipment as a result of increased internal pressure.

b. Pressure Relief Device: This device relieves large volumes of pressure to prevent a rupture of the equipment as a result of increased internal pressure.

c. Sudden Pressure Relay: This device senses a rapid build-up of internal pressure within the transformer. The relay will cause an interruption of the electrical supply to the transformer and remove it from service to prevent rupture of the equipment.

d. Oil Level Indicator: This mechanism allows visual monitoring of the oil level in the equipment.

e. Low Oil Level Alarm: This device will cause a remote alarm when the oil level in the equipment drops below a set point.

f. Low Oil Level Trip Device: This device will cause the transformer to be removed from service when the oil level drops within the equipment to the minimum operational level.

g. Breaker Status Alarm: This device is provided on all circuit breakers rated at 13.8 kV or greater. This device will cause a remote alarm to activate at the System Operator location whenever a breaker equipped with this device is tripped.

h. Temperature Alarm: This device is provided for Substation power transformers with voltages of 15 kV or above. Some of the 23 kV to 4 kV Substation power transformers are also equipped with this alarm. This device will cause a remote alarm at the System Operator location to activate whenever a high oil temperature condition exists in the transformer.

Storage Tanks Alarms/Warning Devices

Aboveground oil storage tanks may be provided with a variety of alarms/warning devices. These devices are designed to minimize the potential for a release of oil. The liquid level sensing devices are regularly tested to ensure proper operation. Certain types of devices are remotely alarmed to the System Operator. The devices are described below.

a. High liquid level alarms: Tanks may be equipped with an audible and/or visual alarm typically set to alarm at 90% of design capacity of the tank. Smaller tanks may use an audible air vent as an alternative.

b. Fast response system for determining liquid level: All aboveground tanks are equipped with product level gauges. Gauges are located such that they are accessible to allow adequate monitoring of the tank liquid level to prevent overfilling the tank during unloading operations.

c. Vehicle protection: Tank systems (including aboveground piping and pumps) are protected from potential damage from vehicle accidents by installation of bollards. If protective bollards are not present, then vehicles entering the Substation are warned to avoid the tank systems.

d. Container location: Mobile or portable containers are located to prevent a discharge to navigable waters.

7 TYPES OF FAILURES, OIL MIGRATION POTENTIAL, AND SPILL CONTROLS

The following section describes potential types of failures that may result in a release of oil from oil-filled units that are typically found at a Substation. It also addresses oil migration concerns, including the rate of flow and specific spill controls. Although they do not meet the threshold for inclusion in the computation in the facility's aggregate aboveground oil storage capacity, equipment containing less than 55 gallons of oil (e.g. capacitors, reclosers and pole-top distribution transformers) may be included in this section of the plan for completeness. Table 1 provides the containment and diversionary structures for each oil-filled unit as well as oil volume, and the total quantity of oil that could be discharged from the facility as a result of each major type of failure. Additionally, Table 1 provides the presence of protective/warning devices. The MOSES model has been run for this facility to determine SPCC applicability. Figure 2 shows the location of the oil-filled equipment and indicates the presence of containment and diversionary structures.

Should a release of oil occur in the Substation, notification and response procedures will be followed as outlined in Section 8.0 of this SPCC plan.

Mobile Oil Storage Containers in Electric Substations

Mobile oil storage containers can include drums, portable tanks, mobile tanks or tankers which are used to temporarily store or transport oil during equipment servicing or replacement. These drums, portable tanks and tank trucks may remain on site for periods ranging from a few days up to several months. These containers are constructed of materials compatible with the material stored and conditions of storage such as pressure and temperature. Pipe supports, if any, for aboveground piping associated with bulk storage containers, are properly designed to minimize abrasion and corrosion and allow expansion and contraction.

Release Potential and Rate of Flow: Experience indicates the potential modes of a mobile oil storage container failure that could result in a release of oil include discharge from rupture of a tank, or leaks that develop at valves or other fittings.

These potential modes of failure are described below.

a. There is a very small risk of an oil discharge through the rupture of the tank due to a catastrophic failure. In the case of a rupture of the tank, its entire oil content could potentially be released at a rate of hundreds of gallons per minute.

b. Most releases result from small leaks (less than 10 gallons) that develop in valves or other fittings. The rates for this type of release would be drops per day to drops per hour.

Protective Warning Devices: Most mobile oil storage containers have no remote warning devices that indicate a release may be occurring. Refer to Table 1 for a list of the release-prevention devices provided for the container. Refer to Section 6.4 for descriptions of the devices.

Spill Controls: In accordance with 40 CFR Part 112.8(c)(11), mobile or portable oil storage containers must be located to prevent a discharge to navigable waters. To accomplish this, a secondary means of containment, such as a dike or catchment basin, must be furnished while the tank contains oil. When mobile oil storage containers are in a stationary unattended mode and not under the direct oversight or control of facility personnel, secondary containment that can retain the volume of the largest single compartment or tank is required. Covered containment pallets are located at designated locations at the facility for accumulation of drums of used oil. Alternate approved methods may be used as secondary containment for such drums.

Transfer Operations

Oil is transferred to and from drums and tank trucks as required for maintenance activities or when installing or removing equipment from the Substation.

a. Drum Transfers

While performing maintenance on oil-filled equipment, it is occasionally necessary to remove the oil for filtering and reuse. When filtering is necessary, the oil is transferred from the equipment into 55-gallon drums for temporary storage. The oil is transferred to and from the drums using portable oil-filtering equipment connected with flexible hose.

Release Potential and Rate of Flow: A potential release could result from a leaking hose, valve, or from a connection failure prior to, during, or after the operation. A release may also result from damage to a drum. The total quantity that could be released from a drum during this operation is 55 gallons (the capacity of the largest drum used in the Substation). The estimated rate of flow of oil released from a drum is 55 gallons per minute (gpm).

Spill Controls: Prior to transferring oil, a drip pan or sorbent pad is placed beneath the hose connections and remains under connections while transfers are in progress. Once the transfer is complete, oil remaining in the filtering equipment or hose is drained. Upon completion of the transfer, valves and fittings are inspected to ensure proper positioning and connection. The area is also checked for signs of released oil.

b. Tank Truck Transfers

Occasionally, large quantities of MODF must be transferred from the transformer for maintenance or as part of the process of installing or removing a transformer. These transfers are made using a tank truck. Similarly, at certain Substations, diesel fuel must be transferred from tank trucks into aboveground storage tanks associated with emergency generators.

Release Potential and Rate of Flow: A potential release could result from a leaking hose or valve or connection failure prior to, during, or after the operation or, from a tank truck rupture. The total quantity of oil that could be released is approximately 3,000 gallons (typically the largest single compartment of a tank truck). The estimated rate of flow from a leaking valve or hose is less than 1 gpm. If the tank ruptured, the rate of flow may be up to 100 gpm.

Spill Controls: Prior to transfer operations, the wheels of the tank truck are chocked. A flexible hose is attached using a quick-connect coupling. Drip pans or oil absorbent pads are placed beneath connections while transfers are in progress. Once the transfer is complete, oil remaining in the line is drained and controlled by a manually operated valve. Valves and connections are inspected prior to vehicle departure for leaks and proper positions. As noted, secondary containment is required for parked tankers involved in transfer operations that are no longer active. In other words, when the tankers are in a stationary unattended mode and not under the direct oversight or control of facility personnel, secondary containment that can retain the volume of the largest single compartment or tank is required.

Power Transformers

Power transformers are electrical equipment filled with MODF used to change the voltage between portions of the electrical transmission and distribution systems. The MODF is used for cooling and provides electrical insulation for the transformer. Power transformers usually contain the largest volumes of MODF in a Substation. Power transformers are generally equipped with oil level indicators and pressure relief devices.

Release Potential and Rate of Flow: Experience indicates the potential modes of power transformer failure which would result in a release of oil include discharge from a pressure relief device, rupture of a transformer tank, or leaks which develop at bolted flanges, valves, or other fittings.

These potential modes of failure are described below.

a. There is a very small risk of an oil discharge through the pressure relief device. A release could occur during a transformer failure that may result in a 1- to 50-gallon oil release at a rate of 20 gallons per minute.

b. There is a very small risk of an oil discharge through the rupture of the transformer tank due to a catastrophic failure. In the case of a rupture of the transformer tank, its entire oil content could potentially be released at a rate of hundreds of gallons per minute.

c. Most releases from a transformer result from small leaks (less than 10 gallons) which develop in joint seals, bolted flanges, valves, or other fittings. The rates for this type of release would be drops per day to drops per hour.

Protective Warning Devices: Devices are provided on the power transformers at the Substation to either prevent a release or minimize the amount of oil that may be released. Refer to Table 1 for a list of the protective warning devices provided for each power transformer. Refer to Section 6.3 for descriptions of the devices.

Spill Controls: Spill controls are provided on the power transformers at the Substation to either prevent a release to the environment or minimize the amount of oil that may be released. Refer to Table 1 for a list of the spill controls

provided for each power transformer. Refer to Section 6.1 and 6.2 for descriptions of the controls.

Spare Transformer Storage Area

Spare transformers may be stored at the Substation. These transformers are typically not in service.

Release Potential and Rate of Flow: Potential modes of failure that could result in an oil release include damage to a transformer from handling or leaks developed in seals or fittings.

These potential modes of failure are described below.

a. Experience indicates the risk of an oil discharge during handling is very small. Based on historical experience, a typical release could occur that results in a 1 to 75 gallon oil release at an approximate rate of 20 gallons per minute.

b. Other releases from a transformer result from small leaks (less than 10 gallons) that develop in seals or other fittings. The rates for this type of release could be drops per day to drops per hour.

Protective Warning Devices: Devices may be provided on the spare transformers at the Substation to either prevent a release or minimize the amount of oil that may be released. Refer to Table 1 for a list of the protective warning devices provided for each spare transformer. Refer to Section 6.3 for descriptions of the devices.

Spill Controls: Spill controls are provided at the Substation to either prevent a release to the environment or minimize the amount of oil that may be released. Refer to Table 1 for a list of the spill controls provided for each power transformer. Refer to Section 6.1 and 6.2 for descriptions of the controls.

Station Service and Instrument Transformers

Station service transformers and instrument transformers are electrical equipment filled with MODF used to change voltage for instrumentation and control functions and to supply power to operate the station itself. The MODF is used for cooling and provides electrical insulation for the transformer. These transformers usually contain small amounts of MODF (ranging from 10 to 250 gallons).

Release Potential and Rate of Flow: Experience indicates that the potential modes of failure that could result in an oil release include discharge from a pressure relief device, rupture of a tank, or leaks from other fittings.

These potential modes of failure are described below.

a. Experience shows that there is a slight risk of a rupture of the transformer tank due to a catastrophic failure. In the case of a rupture of the

transformer tank, its entire oil content could potentially be released at a rate of 50 gallons per minute.

b. Other releases from a transformer result from small leaks (less than 10 gallons) which develop in seals or other fittings. The rates for this type of release would be drops per day to drops per hour.

Protective Warning Devices: Devices may be provided on the station service transformers at the Substation to either prevent a release or minimize the amount of oil that may be released. Refer to Table 1 for a list of the release-prevention devices provided for each station service transformer. Refer to Section 6.3 for descriptions of the devices.

Spill Controls: Spill controls may be provided for the station service transformers at the Substation to either prevent a release to the environment or minimize the amount of oil that may be released. Refer to Table 1 for a list of the spill controls provided for each station service transformer. Refer to Section 6.1 and 6.2 for descriptions of the controls.

Distribution Electrical Equipment and Staging Area

Distribution electrical equipment, typically pole-top transformers, is occasionally stored at Substations to support local operations. Pole-top distribution transformers are non-energized electrical equipment filled with MODF used to change distribution voltage to secondary voltage at a customer location. The MODF is used for thermal cooling and provides electrical insulation for the transformer. Some of these transformers may contain amounts of oil below the 55 gallon threshold; however, they are discussed in this section of the plan for completeness. Occasionally, there are oil level indicators or pressure relief devices on this equipment.

Release Potential and Rate of Flow: Experience indicates the potential modes of distribution transformer failure or other staged oil-filled equipment that could result in a release of oil include discharge from a rupture of a transformer tank, or leaks which develop at bolted flanges, valves, or other fittings.

These potential modes of failure are described below.

a. There is a very small risk of an oil discharge through the rupture of the transformer tank due to a catastrophic failure. In the case of a rupture of the tank, the entire oil content could potentially be released at a rate of several gallons per minute. Because of the low volume of oil typically used in these transformers, even a catastrophic failure would normally be contained in the station stone.

b. Most releases result from small leaks (less than 5 gallons) which develop in joint seals, bolted flanges, valves, or other fittings. The rates for this type of release would be drops per day to drops per hour.

Based on spill distance calculations, a potential release is not expected to spill beyond the boundary of the Substation yard.

Oil Circuit Breakers

Oil circuit breakers (OCBs) are electrical equipment filled with MODF used to interrupt the flow of electricity in a portion of the transmission or distribution systems. The MODF is used in an OCB for internal electrical insulation and power interruption. OCBs are constructed of either single or multiple tanks filled with MODF. Oil level indication devices are generally provided on each OCB tank to monitor internal oil levels.

Release Potential and Rate of Flow: Potential modes that could result in an oil release include a discharge through the breather or vent, rupture of the tank, and leaks that develop in joint seals, valves, or other fittings.

These potential modes are described below.

a. There is a very small risk of an oil discharge through the breather vents or rupture of the tank due to a sudden increase in the OCB's internal pressure. In the case of a catastrophic rupture of the OCB, the entire oil content of each individual self-contained tank could potentially be released, while a release through the breather or vent may result in a 1- to 10-gallon oil release.

b. Most releases from an OCB result from small leaks (less than 10 gallons) that develop in joint seals, valves, or other fittings. The rates for this type of release would be drops per day to drops per hour.

Protective Warning Devices: Devices are provided on the OCBs at the Substation to either prevent a release or minimize the amount of oil that may be released. Refer to Table 1 for a list of the protective warning devices provided for each OCB. Refer to Section 6.3 for descriptions of the devices.

Spill Controls: Spill controls are provided on the OCBs at the Substation to either prevent a release to the environment or minimize the amount of oil that may be released. Refer to Table 1 for a list of the spill controls provided for each OCB. Refer to Section 6.1 and 6.2 for descriptions of the controls.

Voltage Regulators

Voltage regulators are electrical equipment filled with MODF used to control or adjust the output station voltage within set limits. The MODF is used to provide internal cooling, arc interruption, and electrical insulation for the equipment. Voltage regulators are typically equipped with oil level indicators and pressure relief devices.

Release Potential and Rate of Flow: Potential modes of voltage regulator failure that could result in an MODF release include discharge from a pressure relief device, rupture of the regulator tank, or leaks from seals, valves, or other fittings.

These potential modes of failure are described below:

a. There is a very small risk of an oil discharge through the relief valve or rupture of the tank due to a sudden increase in the voltage regulator's internal pressure. In the case of a catastrophic rupture of the voltage regulator, the entire oil content could potentially be released, while a release through the relief valve may result in a 1- to 10-gallon oil release.

b. Most releases from a voltage regulator result from small leaks (less than 10 gallons) which develop in seals, valves, or other fittings. The rates for this type of release would be drops per day to drops per hour.

Protective Warning Devices: Devices may be provided on the voltage regulators at the Substation to either prevent a release or minimize the amount of oil that may be released. Refer to Table 1 for a list of the release-prevention devices provided for each voltage regulator. Refer to Section 6.3 for descriptions of the devices.

Spill Controls: Spill controls may be provided for the voltage regulators at the Substation to either prevent a release to the environment or minimize the amount of oil that may be released. Refer to Table 1 for a list of the spill controls provided for each voltage regulator. Refer to Section 6.1 and 6.2 for descriptions of the controls.

Capacitors

Capacitors are electrical equipment devices that help to improve the efficiency of transmission and distribution systems by reducing energy losses. Internally they are comprised of a continuous wrapping of oil-impregnated paper and film, or film and film, with a very small volume of free-flowing oil. Capacitors are sealed self-contained units. The capacitor bodies do not have breather vents or relief valves.

Release Potential and Rate of Flow: Potential modes of capacitor failure that could result in a release of oil include leakage from a bulging capacitor or a rupture of the capacitor. Experience indicates there is only a very small potential of oil being released from a capacitor, since a majority of the total volume of oil (approximately 2 gallons per unit) is absorbed by the paper within the capacitor. The rates for this type of release would be drops per day to drops per hour.

Protective Warning Devices: Devices are not provided on the capacitors at the Substation to either prevent a release or minimize the amount of oil that may be released.

Spill Controls: Spill controls may be provided for the capacitors at the Substation to either prevent a release to the environment or minimize the amount of oil that may be released. Refer to Table 1 for a list of the spill controls provided for each capacitor bank. Refer to Section 6.1 and 6.2 for descriptions of the controls.

Reclosers

Reclosers are electrical equipment used to interrupt the flow of electricity in a portion of the distribution system. Reclosers may contain MODF. The MODF is used in a recloser for internal electrical insulation and power interruption.

Reclosers are single unit construction.

Release Potential and Rate of Flow: Potential modes of recloser failure that could result in a MODF release include discharge from a rupture of the tank, or leaks from seals, valves, or other fittings.

These potential modes of failure are described below:

a. There is a very small risk of an oil discharge through rupture of the unit due to a sudden increase in the recloser's internal pressure. In the case of a catastrophic rupture of the recloser, the entire oil content of 30 to 50 gallons could potentially be released, while a release through seals, valves, or other fittings may result in a 1- to 5-gallon oil release.

b. Releases that may occur from a recloser would result from small leaks (less than 5 gallons) that develop in seals, valves, or other fittings. The rates for this type of release could be drops per day to drops per hour.

Protective Warning Devices: Devices typically are not provided on the reclosers at the Substation to either prevent a release or minimize the amount of oil that may be released.

Spill Controls: Spill controls may be provided for the reclosers at the Substation to either prevent a release to the environment or minimize the amount of oil that may be released. Refer to Table 1 for a list of the spill controls provided for each recloser. Refer to Section 6.1 and 6.2 for descriptions of the controls.

Aboveground Storage Tanks

Aboveground storage tanks (ASTs) are present at various National Grid Substations (refer to Table 1). Bulk storage tanks are located at each Substation equipped with an emergency generator. Typical bulk storage tanks are aboveground diesel storage tanks for emergency generators. The tanks, when present, are smaller shop-built tanks that pose a minimal risk of failure. These tanks are constructed of materials compatible with the material stored and conditions of storage such as pressure and temperature.

Pipe supports for aboveground piping associated with the AST, are properly designed to minimize abrasion and corrosion and allow expansion and contraction. Buried piping associated with the AST, if present, satisfies the State corrosion protection standards for piping. If such piping was installed or replaced after August 16, 2002, it is equipped with protective wrapping and coating.

Release Potential and Rate of Flow: Potential modes of tank failure that could result in a fuel oil release include discharge from a pressure relief device, rupture of the tank, or leaks from seals, valves, or other fittings.

The potential modes of failure are described below:

a. There is a very small risk of a fuel oil discharge through the vent line in the case of an over fill or rupture of the tank due to an unanticipated accident

or event. In the case of a catastrophic rupture of the tank, the entire oil contents of the tank would be retained within secondary containment.

b. Most releases from the tank or its piping result from small leaks (less than 10 gallons) that develop in seals valves, or other fittings. The rates for this type of release could be drops per day to drops per hour.

Protective Warning Devices: Devices are typically provided on the tank in the form of secondary containment for both the tank and its associated piping to either prevent a release or minimize the amount of oil that may be released. Refer to Table 1 for a list of the release-prevention devices provided for the tank. Refer to Section 6.3 for descriptions of the devices.

Spill Controls: Spill controls may be provided for the tank at the Substation to either prevent a release to the environment or minimize the amount of oil that may be released. Refer to Table 1 for a list of the spill controls provided for tank. Refer to Section 6.1 and 6.2 for descriptions of the controls.

Mobile Substations

Mobile Substations include power transformers filled with MODF mounted on trailers. They can be transported to locations where they are needed. Mobile Substations may be deployed when Substation equipment fails or to facilitate maintenance. They typically remain at the location until the emergency is resolved or maintenance is completed. The transformers on mobile Substations are generally equipped with oil level indicators and pressure relief devices.

Release Potential and Rate of Flow: Experience indicates the potential modes of mobile power transformer failure that could result in a release of oil include discharge from a pressure relief device, rupture of a transformer tank, or leaks which develop at bolted flanges, valves, flexible connections, or other fittings.

These potential modes of failure are described below.

a. There is a very small risk of an oil discharge through the pressure relief device. A release could occur during a transformer failure that may result in a 1- to 50-gallon oil release at a rate of 20 gallons per minute.

b. There is a very small potential for an oil discharge through the rupture of the transformer tank due to a catastrophic failure. In the case of a rupture of the transformer tank, its entire oil content could potentially be released at a rate of hundreds of gallons per minute.

c. Most releases from a transformer result from small leaks (less than 10 gallons) which develop in joint seals, bolted flanges, valves, or other fittings. The rates for this type of release would be drops per day to drops per hour.

Protective Warning Devices: Devices are provided on the power transformers at the mobile Substation to either prevent a release or minimize the amount of oil that may be released. Refer to Table 1 for a list of the protective warning devices

provided for each power transformer. Refer to Section 6.3 for descriptions of the devices.

Spill Controls: Spill controls are provided on the power transformers at the mobile Substation to either prevent a release to the environment or minimize the amount of oil that may be released. Refer to Table 1 for a list of the spill controls provided for each power transformer. Refer to Section 6.1 and 6.2 for descriptions of the controls. Where such installations are not available or cannot be used, temporary containment will be installed in accordance with National Grid's Electrical Operating Procedure EOP 430.20.2. Refer to the environmental InfoNet page for copies of the procedure. In some cases at mobile Substations, installation of both permanent and temporary containment may be impracticable due to safety concerns resulting from the proximity to active electrical equipment and/or safe access for the equipment operators. Where installation of containment would infringe on required safety procedures, an oil spill contingency plan in accordance with the provisions of 40 CFR Part 112.7(k) will be applied instead of containment.

8 OIL SPILL CONTINGENCY PLAN

The following sections describe the response actions that will be taken in the event of a release of oil to the environment. The sections include the following: identification of multi-level emergency response system, the roles and responsibilities of personnel and organizations that may be involved with a response; notification procedures; containment and cleanup actions; and available staff and equipment. It should be noted that although this SPCC plan addresses releases of oil to water, the procedures below describe the actions to be taken for release to any environmental medium.

In addition to its use as a best management practice, National Grid will use this detailed oil spill contingency plan in lieu of general secondary containment for qualified oil-filled operational equipment in combination with (1) the inspection/monitoring program to detect equipment failure and/or a discharge and (2) the written commitment of manpower, equipment, and materials required to expeditiously control and remove a spill. The contingency plan follows the provisions of 40 CFR 109 as indicated in this plan.

Section 12 provides a spill response flow chart which outlines the reporting procedures in order of occurrence and provides notification information to be used in the event of a release. Titles and not names are used because Company personnel serve in these on-call positions on a rotating basis; however, the System Operator is provided a list of on-call operations supervisors from the Overhead, Underground, and O&M Departments and from the Environmental Department on a weekly basis. This information is input into the On-Call Auto-Call System, thus ensuring that a person filling the role of Emergency Coordinator and On-Call Team Leader can be reached at all times.

Roles and Responsibilities

National Grid Personnel

National Grid personnel have the responsibility to:

- Be aware of the initial reporting procedures for a spill as posted at the facility;
- Be familiar with the contents of this plan and know how to respond upon discovery of an oil spill; and
- Be aware of the potential failure modes of the Substation equipment and report to their supervisor any conditions which may lead to a failure.

Emergency Coordinator (EC)

The Emergency Coordinator (EC) that is notified will respond to the site of the release and manage the spill response and cleanup.

It is the responsibility of the EC to:

- Supervise the containment and cleanup effort in accordance with this SPCC plan;
- Assess the spill to determine the appropriate action in accordance with the contingencies established in the plan;

- Instruct responding personnel (the Traveling Operator, for instance) on the methods to be employed for containing and cleaning up the spill;
- Enlist the assistance of outside contractors if it is determined that the spill cannot be managed by National Grid personnel;
- Inform other company officials, including the Division Environmental Engineer (DEE), and the appropriate local, state, and federal agencies listed in Section 8.2.;
- Ensure that the personnel identified in this section attend training classes. The training classes will be conducted annually and will cover the topics listed in Section 10.0; and
- Complete appropriate cleanup and response actions for the spill, including notification as described in Sections 8.3 and 8.4.

System Operator (SO)

Responsible for:

- Staffing the Dispatch and Control Room 24 hours per day and 365 days per year;
- Maintaining and updating the titles and names of Company personnel listed in the On Call Auto-Call System;
- Receiving information from internal and external sources regarding the status of equipment such as malfunctions and oil releases etc.; and
- Notifying appropriate Company personnel of equipment malfunctions and oil leaks including the Substation Department Supervisor in Charge, the EC and the Division Environmental Engineer.

Division Environmental Engineer (DEE)

Responsible for:

- Ensuring that the EC has made notifications to regulatory agencies as appropriate and that the spilled oil has been properly cleaned up.

- Determining if additional resources beyond what is available at the local level (on-site and at the Company's clean-up contractor's locations) are required to respond to the spill.

Notification Procedures

Emergency notification information described in this section is provided on the Contingency Plan Flow Chart (Section 12).

National Grid Personnel contact:

Both during business hours and after hours: System Operator.
The System Operator will notify the designated EC.

Substation Department personnel contact:

Their supervisor or the System Operator as noted above.

ECs contact:

The Division Environmental Engineer.

Division Environmental Engineer

- If the discharge of oil cannot be adequately responded to under the site-specific emergency plan and additional resources beyond what are available locally may be required, then the Division Environmental Engineer will notify the Divisional Emergency Director of such need.
- The Division Environmental Engineer will also notify the Director of Environmental when such additional resources may be required.

Federal Agencies

- National Response Center (NRC)

  If any oil discharges into water, including wetlands, streams, lakes, ponds, or sanitary or storm sewers, the National Response Center (NRC) will be notified by the EC immediately. General release identification and characterization is performed by identifying the following prior to reporting a spill:

  - Facility name and address.
  - Date and time of discharge.
  - Source, cause, and extent of spill/release and the type of material released.
  - Any potential hazards that may occur as a result of the spill/release.
  - Description of any media affected by the discharge.
  - Any damages or injuries have been caused by the discharge.
  - If the material poses a significant health or safety hazard, determine if evacuation is necessary.
  - Names of individuals or organizations who have already been contacted.
  - Actions being taken to stop, remove, or mitigate the discharge.

- U.S. EPA

  If the spill results in the discharge of more than 1,000 gallons of oil into or upon navigable waters of the United States, or if there are two spill events of 42 gallons or more of oil into waters within a 12-month period, the EC will submit a written report to the Regional Administrator of the U.S. EPA as specified in Section 8.7 within 60 days of the event.

  The U.S. EPA is also contacted within 24 hours in the event of a release of material into water with a PCB contamination over 50 parts per million (ppm), or a release of 1 pound or more PCBs by weight into soil. (One gallon of askarel contains at least 10 pounds PCBs by weight; 270 gallons of MODF with a concentration of 499 ppm or greater contains at least 1 pound PCB by weight; and 2,700 gallons MODF with a PCB concentration of 50 ppm or greater contains at least 1 pound PCB by weight.)

State Agencies

When a release of any quantity of oil discharges into waters of the United States, including wetlands, streams, lakes, ponds, or sanitary or storm sewers, or when there is a release to land over the State reportable quantity, the EC will notify the applicable Regional Office of the appropriate state agency. Notification must be made as soon as possible, but not more than two hours after obtaining knowledge of a release. The EC will work with the Division Environmental Engineer to ensure all required notification forms and reports regarding the release are properly submitted to the appropriate state agency.

Local Agencies

The EC will determine the need to contact the local police and fire departments or other local emergency planning organizations, as appropriate.

Federal, state, and local agency names, addresses, and telephone numbers are listed on the Contingency Plan Flow Chart (Section 12).

Environmental Department

In accordance with existing Company environmental procedures, all oil release notifications by the EC to any federal, state, or local agency should be reported to the corporate environmental department as soon as practical during normal business hours.

Spill Response Procedures

In the event of a release of oil, the following steps will be taken:

a. Upon discovery of a release of oil, notification procedures as presented above and in the Contingency Plan Flow Chart (Section 12) are implemented. The first National Grid Personnel responding to the release will attempt to isolate and repair the leak or to stop the flow of oil using mechanical methods.

b. If the release occurs during a transfer operation, the transfer will be immediately stopped and measures taken to stop the leak and contain the oil will commence immediately. Notification procedures will be initiated as soon as practical.

c. Sorbent materials will be used to the maximum extent possible to contain and remove the spilled oil. The first National Grid Personnel to arrive at the spill location will respond to the spill using available spill response equipment and materials consistent with their training. Upon arrival, the EC will determine whether additional National Grid resources will be needed. Spill materials and equipment available are listed in Section 8.8.

d. If the EC determines that the response to the release requires assistance from a licensed oil and hazardous waste cleanup contractor, one or more of those listed in Section 12 will be contacted.

e. If enough oil is released to saturate the crushed stone in a portion of one of the containment structures, one or both of the local cleanup contractors will be notified at the discretion of the EC, to remove the discharged oil and any oil-

contaminated debris. Smaller releases into containment structures can be handled by National Grid Personnel. With an emphasis on worker safety, the EC will determine whether to resume operations prior to completion of cleanup operations. Any transfer operations that were occurring at the time of the release will not resume until the discharged oil is contained and the cleanup procedure is initiated.

Cleanup and Disposal Procedures

All containment and cleanup operations shall be performed in accordance with safe work practices. Personnel shall utilize personal protective clothing and equipment when appropriate. There may be a spill cleanup kit at the Substation whose contents are adequate to mitigate a small to moderate release by containing, absorbing and removing the released materials. Spill cleanup kits are available at the nearest Crew Headquarters. Contracted cleanup services will arrive with necessary resources. Cleanup of the oil and debris should include the following precautions and procedures:

a. Once a spill has been contained and the leak repaired, cleanup crews may begin to remove the spilled oil using oil sorbent materials. On permeable surfaces, this will include removing the affected surface material around the spill site. The oil spill area will be cleaned up to visible traces.

b. All cleanup materials, including protective clothing (if contaminated with oil), will be placed in standard Department of Transportation (DOT) open-top drums. Drums should be filled with sufficient absorbent material to eliminate liquids.

c. Full drums should be covered with the appropriate lid and ring. The drum should be labeled in accordance with state regulations and Company procedures.

If a licensed oil and hazardous waste cleanup contractor has responded to the spill, the oil and oil-contaminated material will be removed from the site by the contractor and brought to a licensed disposal facility or to a National Grid facility with an established USEPA Hazardous Waste ID Number. If the release has been cleaned up only by Company personnel, the removal of oil and oil-contaminated materials will be conducted by National Grid. The removed oil and oil-contaminated debris will be returned to a National Grid facility with an established USEPA Hazardous Waste ID Number for temporary storage before transport and disposal to an approved facility based on waste profile. Storage and disposal procedures will be conducted according to guidelines presented in the National Grid "Waste Management Procedure, EP-1." Refer to the environmental InfoNet page for copies of the procedure. Upon completion of the spill cleanup, the EC will prepare a "National Grid Release Report Form" for submittal to the Division Environmental Engineer. Refer to Environmental Guidance (EG) EG-501MA, EG-501RI, EG-501NH, and EG-501NY on the environmental InfoNet page for examples of the Form. These actions, as well as the plan of notifications, are summarized in the Contingency Plan Flow Chart that is included in Section 12.

Letters of commitment from the cleanup contractors are included in the "Supporting Documents" folder in Documentum.

Personnel, Equipment, and Materials Available

In the event of a release of oil, facility personnel are prepared to respond appropriately. All personnel responding to an emergency are trained according to the level of response expected from that employee. The ECs are responsible for coordinating emergency response measures. One of the ECs is available 24 hours a day, 7 days a week, and is either on site or able to reach the Substation within 2 hours.

Whenever there is an imminent or actual release of oil, the person discovering the oil release will notify the EC or notify the System Operator (who will then notify the EC). Generally, the release would be "discovered" by customers. In other words, if equipment were to fail at one of the stations, the power is lost in the service area and our customer call center starts receiving customer complaints. The customer call center rolls the work orders for outages received to the Regional Control Center (RCC), and within fifteen minutes, the RCC would dispatch an operator to the station to investigate. In the worse case scenario, it would take a maximum of two hours for the operator to get to the site (a remote location) to investigate and take necessary actions as set forth in the Contingency Plan. The majority of the response times will be less than the two hours where the stations are in closer proximity to our crew locations.

If the primary EC is not available, an alternate is contacted. All National Grid supervisors in the division have been trained in emergency response, including notification procedures. There are additional National Grid personnel based in other locations who may be utilized, as necessary, to respond to a spill. Although certain personnel may not be immediately available, all may be contacted at any time to assist in the response measures. Also, National Grid has made arrangements with an outside contractor to provide assistance in the event additional manpower or equipment is necessary. Refer to the "Supporting Documents" folder in Documentum for the contractor's letter of commitment.

Personnel responding to a release of oil are authorized to use whatever resources are necessary to control the spill. Spill kits are available at many Substation locations. At locations where there is no spill kit, the first responder (Traveling Operator (TO), in New York State) will have equipment and materials necessary to control and clean up a spill in their vehicle. The TO's vehicle will also be equipped with flood lights to provide adequate lighting for spill response. For the standard list of emergency equipment available on site, refer to Section 8.8. Additionally, spill control equipment such as DuraSorb, absorbent booms, pillows and sheets, shovels, and brooms are maintained in the Materials Management Department and are accessible to employees. Clean, empty DOT drums are available for containment of spill debris.

Emergency response contractors may also supply equipment and materials necessary to control and clean up a spill. For a complete list of emergency equipment available through emergency response contractors, refer to the "Supporting Documents" folder in Documentum. This equipment is sufficient to remove the maximum amount of oil discharge anticipated to be released from a National Grid Substation.

Navigable Waters (Critical Water Use Areas)

To the greatest extent possible, all response actions will be taken to ensure the protection of navigable waters such as wetlands, streams, lakes, or other surface

waters. Locations of these waters will also be considered when reporting spill events to regulatory agencies.

Table 2 and Figure 2 provide information regarding navigable waters in close proximity to the Substation. Table 2 provides a ranking of these waters in order of sensitivity and potential for impact.

Post-Spill Reporting Procedures

If a release of greater than 1,000 gallons of oil into or upon navigable waters of the United States occurs in a single spill event or if there are two spill events of 42 gallons or more of oil into or upon navigable waters occurring within a 12-month period, the EC (or designate) shall submit the following information within 60 days to the Regional office of the U.S. EPA.

1. A copy of this plan for the facility;

2. Name of a company contact;

3. Amount and type of oil released;

4. Name and address of third parties damaged by the spill, including description and cost estimate of damages;

5. Cause of spill or failure analysis;

6. Containment and removal methods employed, including costs; and

7. Measures taken for recurrence prevention.

If a release of oil equal to or greater than the state reportable quantity occurs on land and/or a release of any quantity of oil into water occurs, the EC will submit an Oil, Hazardous Substances and PCB Release Report Form to the Division Environmental Engineer. Refer to EG-501MA, EG-501RI, EG-501-NH, and EG-501NY on the environmental InfoNet page for examples of the Form. The EC will work with the Division Environmental Engineer to ensure all required notification forms and reports regarding the release are properly submitted to the appropriate state and local agencies.

Spill Response Equipment Inventory

Spill control, containment and cleanup materials and equipment may be stored in on-site spill kits or spill carts. Additional spill response materials and resources are available from other National Grid facilities and from contractors.

The inventory for National Grid standard spill carts is included on the following pages for two geographical regions: New York and New England.

New York

SPILL CLEANUP EQUIPMENT

SPILL CLEANUP KITS = Green, steel 85-gallon overpack/salvage drums labeled "Oil Spill Kit."

Contained in Oil Spill Kit:

2	Tyvek coverall with hood and boot
2	Pair nitrile gloves
2	Pair chemical goggle
100-pack	Absorbent Pad, 3/8"
4-pack	Absorbent Boom, 5' x 10′
1	40-lb bag SpeediDri

New England

SPILL CLEANUP EQUIPMENT

SPILL CLEANUP KITS = "ANDAX BARREL PACS"

Contained in 55-gallon yellow poly drum:

200	Oil Selective Absorbent Pads, 17′ x 19″
48 ft.	Oil Selective Absorbent Booms, 6′3″ x 8′
16	Oil Selective Absorbent Pillows, 9″ x 15″
10	Poly Bags 58″ x 34″ 5 mil
10	Fluorescent Nylon Ties
2	Rolls Barrier Tape, 100 ft. per roll

Also Available:

8″ dia. x 10 ft.	Oil Selective Boom

Available from the Stores Department:

Standard DOT Barrels
Speedi-dry Absorbent (50 pounds)
Shovel
Broom
Goggle
Gloves
Eye Shields
Light Duty Nitrile Gloves
Heavy Duty Granflex Gloves
Coveralls, Disposable
Overalls, Disposable
Booties, Disposable
Plastic Drop Cloth
Rags
2″ Duct Tape
Metal Marker - Yellow
Plastic Bags
3M Absorbent Pillows
3M Absorbent Pads

Super Wash (5 gallons)

Andax Vacuum Pack Spill Kits

9 INSPECTIONS AND RECORD-KEEPING

National Grid is responsible for the operation and maintenance of the containers and oil-filled equipment at its facilities. Several types of inspections are conducted by National Grid Personnel. These inspections are described below.

Visual and Operational Inspections (V&O)

A bimonthly V&O inspection, conducted at all electric Substations, includes a visual check of all equipment and an operational check of automatic equipment such as regulator controls, air compressors, and transformer cooling fans. Visual inspections of the electrical apparatus include a check of oil level indicators. The Substation is also inspected for evidence of leakage from the oil-filled equipment at the time of the V&O. The trap rock surrounding the electrical equipment is also inspected. Trap rock should be level and graded and of adequate thickness across the yard.

Results of the V&O inspections are recorded electronically in the Asset Information and Maintenance Management System (cascade) database using a PDA. The maintenance history of each electrical apparatus is maintained electronically in cascade for the life of the asset.

Diagnostic and Maintenance Inspections

Maintenance inspections are performed on electric Substation apparatus at periodic intervals established by company maintenance standards. Each piece of electrical apparatus is tested and operated to ensure that all components are functioning properly and efficiently. Results from these tests determine whether a piece of equipment will undergo additional follow up maintenance.

Integrity Testing—Aboveground Storage Tanks (ASTs)

Section 112.8(c)(6) of the SPCC regulations establishes requirements for testing of regulated aboveground containers for integrity on a regular basis. Per Section 112.8(c)(6), aboveground containers must be tested for integrity on a regular schedule and whenever material repairs are made. The frequency and type of testing must take into account container size and design. Tests must combine visual inspection with another testing technique such as hydrostatic testing, radiographic testing, ultrasonic testing, acoustic emissions testing, or another system of non-destructive shell testing. Per Section 112.7(a)(2) of the SPCC regulations, environmentally equivalent alternatives to integrity testing may be implemented, provided the SPCC Plan states the reason for nonconformance, and describes, in detail, the alternative measures to be used.

The aboveground storage tanks will be inspected for integrity in accordance with API 653, STI SP001-03 or an equivalent industry standard. This integrity testing meets the requirements of 40 CFR 112.8(c)(6) for visual inspection plus another testing technique. For the purposes of this SPCC Plan, a minimum inspection frequency has been developed for the site. At Substations where AST(s) are located, monthly inspections of the AST(s) are conducted in accordance with applicable state and local regulations. The inspection includes a check for leaks and structural integrity. National Grid implements the state requirements for tank inspections per EG-200MA, EG-200NY, EG-200NH, and EG-200RI.

In addition, National Grid implements the specific provisions applicable to each type of tank that may be in use, as listed below: (if there is difference between the state requirements and those listed below, then the more stringent requirements are implemented).

a) Tanks on saddles or supports
These shop built tanks are raised tanks such that all sides of the tank, including the tank bottom are accessible for visual inspection. Such elevated shop built single-wall tanks will be inspected every month by a knowledgeable National Grid inspector per Section 6.0 of the STI Standard SP-001 (revised July 2006). In addition, such tanks with a capacity greater than 5,000 gallons will be subject to formal external inspections by a certified inspector every 20 years per Section 7.0 of the STI Standard SP-001 (revised July 2006).

b) Double-wall tanks
These shop built tanks are located on a concrete pad or other relatively impervious material and the outer shell is supported off the pad by steel supports. These features act as a barrier between the outer wall and the ground and by design the inner tank wall is not in contact with the ground (soil). In addition, the interstitial space is provided with leak detection or is included in the tank inspection, so that any leaks will be readily detected. Leakage from the outer shell would also be readily detected during inspection due to the impervious surface upon which the tank is located. Double-wall tanks will be inspected every month by a knowledgeable National Grid inspector per Section 6.0 of the STI Standard SP-001 (revised July 2006). In addition, double wall tanks with a capacity greater than 5,000 gallons will be subject to formal external inspections by a certified inspector every 20 years per Section 7.0 of the STI Standard SP-001 (revised July 2006). The formal external inspections do not include non-destructive integrity testing. Rather, they include the detailed visual external inspection, verification that the leak detection system, if present, is working, and the check for a leak or the presence of water in the interstice.

c) Integral (Belly) tanks
Integral or belly tanks are tanks that are integral to emergency generators and are UL-listed tanks located at the base of the generator within a diked containment basin. The containment basin is sized to contain the loss of the AST contents, engine lube oil and engine coolant fluid, and is equipped with an audible and visual containment basin alarm indicating if a leak has occurred, or inspection access to the basin is provided so that it may be inspected for leaks during scheduled inspections. The bottom of the basin and the enclosed AST are not visible. However, by design the AST is not in contact with the ground (soil), and any leaks to the basin will be contained and readily detected. For such belly tanks, National Grid uses environmentally equivalent protective measures in lieu of integrity testing. The configuration of the emergency generator system, provisions for secondary containment with leak alarms, weekly system inspections and annual alarm testing, and provisions for follow-up actions in accordance with the STI Standard SP-001 (revised July 2006), are considered good

engineering practices to ensure that small leaks that could develop in the tank shell will be detected before they become significant, escape secondary containment, and reach the environment. This approach provides adequate environmentally equivalent protection to the requirements of 112.8(c)(6) for integrity testing of the belly tanks integral to emergency generators.

Inspections of Piping for Aboveground Storage Tanks

The limited amount of piping at a Substation is associated with the aboveground storage tank. This piping typically connects the AST with the emergency generator and the AST with the fill port. Piping at the Substation associated with the underground cable system is not addressed in this Plan.

Aboveground valves, piping and appurtenances associated with the AST(s) are assessed during the monthly inspection.

Certain Substations may have underground (buried) piping associated with AST(s). When underground (buried) piping associated with the AST(s) is exposed, it is carefully inspected for deterioration. If corrosion damage to the underground piping is discovered, then additional examination and corrective action is taken depending on the extent of the damage. When underground piping is installed, modified, or replaced, integrity testing and leak testing are performed in accordance with State regulations or industry standards.

Containment Drainage

Storm water collected in containment areas is drained using a valve that must be manually opened and closed. Collected storm water shall be visually inspected for oil before it is discharged from the area. If oil is detected, the valve shall not be opened, and the DEE and the Substation Department supervisor shall be notified. The DEE will determine the appropriate cleanup and disposal measures to be taken. Handling and disposal of materials or waste will be performed in accordance with the appropriate Environmental Guidances and Environmental Procedures. A record of all discharges including date, time and inches of water drained, and certification that valve was closed shall be documented in the station log. Station Logs are kept on record for a period of not less than 3 years.

10 PERSONNEL TRAINING

National Grid personnel are properly instructed in the operation and maintenance of equipment to prevent the discharge of oil. Additionally, in the event of an emergency, National Grid personnel are prepared to respond appropriately. All personnel responding to an emergency are trained according to the level of response expected from that employee. A description of employee training is presented below.

Responsibility for Training

The Environmental Department is responsible for ensuring that training in SPCC-related activities and policies is provided for appropriate National Grid personnel. The EC is required to ensure the implementation of SPCC training sessions or coordinate the training effort with qualified consultants. The Environmental Department is responsible for developing the content of the training program. Work Methods training and on-the-job training provide instruction regarding the proper operation and maintenance of equipment to prevent a release of oil.

Position and Training

Company personnel are trained according to their positions and the level of spill response expected of the employee.

Company Personnel

Company personnel are trained to be familiar with initial notification procedures in the event an oil spill is observed.

Substation Department Personnel

Substation Department personnel must complete an in-house training course within six months of assignment to a Substation Department and have on-the-job supervision until this course has been completed. Substation Department personnel will receive training in the following areas:

- Company work methods and safe work practices;
- Oil spill prevention and notification procedures, including inspection and record-keeping procedures;
- Emergency procedures, equipment, and systems, including response to fire, explosions, and oil contamination;
- Spill cleanup procedures, materials and equipment;
- Awareness of the definition of navigable waters;
- Storage, labeling, and oil-handling procedures;
- Communications/alarm systems within the facility; and
- Applicable environmental regulations and responsibilities to public and regulatory agencies.

Emergency Coordinator (EC)

In addition to the training given to the Substation Department personnel, the ECs will receive training in applicable federal and state regulations and company policies. ECs will be familiar with this SPCC plan, and on an annual basis will attend environmental training which includes an SPCC briefing.

System Operator

As part of their position orientation, these personnel are made aware of the SPCC program and the notification procedures for this SPCC plan.

Annual Briefing

Annual briefings are conducted to assure adequate understanding of the SPCC plan. The briefing highlights and describes any spill events or equipment failures that may have occurred in the previous year. The briefing also includes any new precautionary measures or changes of response actions.

11 SECURITY

The Substation is unstaffed. It is operated by National Grid personnel for equipment inspection, maintenance, or operation. Substations are typically enclosed by a chain-link fence topped with barbed wire. Access to the Substation is through a gate, which is locked to prevent unauthorized persons and vehicles from accessing the Substation when it is unattended. Facility lighting or lighting existing on the first responder's vehicle is available and is commensurate with the provision of other security measures adequate to permit night-time cleanup of spills.

Intrusion alarms that would notify National Grid of an unauthorized entry into the Substation may or may not be present. There is a monitoring alarm system that provides the System Operator an indication of equipment operations and station alarms. The System Operator function is staffed 24 hours a day. In addition, specific alarms such as low oil level alarms or transformer lockout alarms are identified by specific signals in the alarm system. If an equipment alarm is activated, the System Operator will initiate steps to send the appropriate personnel to the Substation to investigate the source of the alarm, notify appropriate personnel, if necessary, and begin corrective action. Personnel can respond to a Substation alarm 24 hours per day, 7 days a week, within 2 hours. If an oil release is discovered, the responding personnel will follow the procedures described in this SPCC plan.

Valves permitting direct outward flow of oil from equipment or storage containers are normally closed. Oil pumps are not located at Substations. Unloading/loading connections, if present, are normally securely capped. These valves, pumps and connections, if present at the Substation, are only accessible to authorized Substation personnel.

12 COMPLIANCE WITH STATE SPILL PREVENTION AND CONTAINMENT REGULATIONS

Per 40 CFR 112.7(j), the SPCC Plan must include a complete discussion of conformance with the applicable requirements and other effective discharge prevention and containment procedures listed in this part or any applicable more stringent State rules, regulations, and guidelines. National Grid Substation facilities are in compliance with the applicable State rules and regulations indicated in the following tables.

APPLICABLE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION PETROLEUM BULK STORAGE REGULATIONS (6 NYCRR PART 613)

Requirement	Reference
Responsibility for transfer	613.3(a)
Color Coding of Fill Ports	613.3(b)
Gauges for Aboveground Tanks	613.3(c)
Secondary Containment for Aboveground Tanks	613.3(c)(6)
Spill Prevention Equipment	613.3(d)
Inventory Monitoring for Underground Tanks	613.4
Testing of Underground Tanks	613.5
Inspection of Aboveground Tanks	613.6

APPLICABLE RI OIL POLLUTION CONTROL REGULATIONS (OPC)

Requirement	Reference
500-gallon or larger aboveground tanks must have accurate visible level gauge	10(b)(4)(A)
Containment of 110% for 500-gallon or larger aboveground tanks (AST)	10(c)(1)
Marking of design capacity, working capacity, I.D. number on 500-gallon or larger AST	10(b)(4)(B)
Monthly inspection of 500-gallon or larger AST	10(d)(1)
Monthly inspection reports maintained, annual report submitted to DEM each Dec. 31	10(d)(3)
Emergency plan with:	
(1) up-to-date schematic of AST location/piping,	14(b)(1)
(2) description of on-site spill control equipment,	14(b)(2)
(3) description of off-site spill control equipment and list of cleanup contractors, and	14(b)(3)
(4) List of emergency phone numbers of local, state, and federal officials	14(b)(4)

APPLICABLE VT HAZARDOUS WASTE MANAGEMENT REGULATIONS §7-806 (d)(2) and (d)(4)

Requirement	Reference
Used oil AST located out-of doors must be equipped with secondary containment	§7-806 (d)(4)
Used oil AST clearly marked with the words “Used Oil”	§7-806 (d)(2)

APPLICABLE NH CONTROL OF ABOVEGROUND PETROLEUM STORAGE FACILITIES (NH Admin Rules Section Env-Wm 1402)

Requirement	Reference
Overfill protection gauge and independent audible and visible high level alarm	1402.24(a),(b),(c)
Tank markings	1402.18(f)
Transfer Area on concrete pad or other impermeable surface	1402.27(b)
Secondary containment	1402.21
Monthly Inspections	1402.29(a)
Upgrading of ASTs to meet construction, spill detection and prevention requirements for new ASTs	1402.35
SPCC Plan	1402.30

APPLICABLE MA FIRE PROTECTION REGULATIONS (527 CMR 9.00)

Requirement	Reference
Secondary containment for 10,000 gallon – ASTs	9.03(c)
Outside Fuel Oil ASTs (660 gallons or more) must meet separation requirements (5 to 30 feet) depending on capacity	9.03(f)(1)
Outside Fuel Oil ASTs (660 gallons or more) must be securely located on pads, equipped with bollards (or similar), provided with anchoring in areas subject to flooding, and have protective coating	9.03(f)(2-6)
Outdoor Waste Oil Tanks must have double walls or 110% secondary containment	9.06(a)(1)(d)
Indoor Waste Oil Tanks must have spill pans or spill kits to handle minor spills	9.06(a)(2)(d)
Indoor Waste Oil Tanks fill port shall be a funnel-type hopper with a tight-fitting hinged or chained cap which shall be closed when not in use.	9.06(a)(2)(i)
Marking and Labeling of Waste Oil Tank with “Hazardous Waste, Waste Oil, Toxic”, accumulation dates	9.06(a)(2)(l)
Any AST whose capacity exceeds 10,000 gallons must be tested annually according to 527 CMR 9.00	

Spill Prevention, Control and Countermeasure (SPCC) Plan Flow Chart

for

OLEASU

4/2014

REVISIONS

Number	Date	Name	Description	Page(s)

This document when utilized in combination with the *Contingency Plan Flow Chart* and the site-specific document comprises the complete SPCC Plan.

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Contingency Plan Flowchart

NY
OLEASU

Revisions This Section: Revisions which are incorporated into the Contingency Plan Flow Chart shall be recorded below by the individual making the revision, noting the date of incorporation and the description of the revision.

Date	Change By	Description

SPCC Contingency Plan Flow Chart

NY – OLEASU

The following chart is a summary of the response to be made in the event of a spill at the substation. For additional details of the response procedures, available cleanup materials, and other spill prevention procedures, refer to the Spill Prevention Control and Countermeasure (SPCC) plan, or contact the DEE, or the EC.

1. Notification and Response

If a spill is discovered:

The individual discovering the spill will immediately notify their immediate supervisor, the EC, and the System Operator (SO).

System Operator **716-831-7325**

A. The Emergency Coordinator (EC) is responsible for all decisive actions in the event of a spill at the substation. The EC will supervise efforts to provide immediate containment of the spill to prevent a more difficult cleanup situation and prevent a release to surface water. Under the direction of the EC, O&M personnel should isolate or repair the source of the leak/spill to prevent additional spillage. O&M personnel will utilize spill cleanup materials provided and employ National Grid safe work practices. For additional details on oil spill cleanup procedures, refer to the SPCC plan.

B. The EC, or designee, will notify the Division Environmental Engineer (DEE) as needed or by the next business day. The Manager of Energy Services (New York) or Director of Division Operations (New England) will be notified when appropriate.

C. The responding EC will determine the need and be responsible for calling in additional assistance of outside contractors. Contractors include the following:

NYWD
OpTech 800-225-6750
EPS 518-465-4000

2. Federal and State Notification

If a spill occurs on:

Water: The SO will notify the National Response Center and the State Agency immediately at the telephone numbers provided below if the spill results in a discharge of any quantity of oil into an adjacent stream, wetlands or other surface water. The DEE will notify the Environmental Protection Agency (EPA) within 24 hours of a discharge of >50 ppm PCBs to water.

Land: The SO will notify the State Agency if the spill results in the release of any quantity of oil to land other than within a qualified containment. The DEE will notify the EPA within 24 hours of 1 pound or more of PCBs to soil.

The EC will prepare an in-house Oil, Hazardous Substances and PCB Release Report Form upon completion of the spill cleanup. The EC will work with the DEE to ensure all required notification forms and reports are submitted to the appropriate regulatory agencies.

National Response Center	State, Spill Response Hotline	U.S. EPA Region I or II
(800) 424-8802	**(800) 457-7362**	**(202) 554-1404**

3. Local Notification

In the event emergency assistance is required from either the fire or police departments, call 911.

4. Spill Contingency Response Actions

Immediate response actions that should be implemented at this facility in the event of a significant oil release are as follows:

- Report the spill to the SO and immediate supervisor
- Work with the SO to de-energize the equipment
- Stop the migration of the oil spill from reaching the sensitive receptors by:
    i. Identify the prioritized sensitive receptors on Table 2 in the SPCC Plan
    ii. Identify the expected flow path of oil and the sensitive receptors on Figure 2 in the SPCC Plan
    iii. Deploy spill response equipment

Additional protective measures that may be required will be identified and implemented at the direction of the EC or the DEE.

Spill Prevention, Control and Countermeasure (SPCC) Plan Attachments

for

Five Mile Road Station
4580 Five Mile Road
Humphrey, NY USA

9/2014

REVISIONS

Number	Date	Name	Description	Page(s)

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MANAGEMENT APPROVAL

Management has provided approval to commit the necessary resources to implement this SPCC Plan to expeditiously control and remove any quantity of oil discharged that may be harmful to property and/or the environment.

This management approval can be found in National Grid's Engineering Document Policy entitled "SPCC Plan Management Approval, Doc. #PL.01.00.004." It can be found within Documentum.

FACILITY NAME: Five Mile Road Station

Certification: I hereby certify that I or my agent has examined this facility and, being familiar with the provisions of Environmental Protection Agency (U.S. EPA) Regulations 40 CFR 112, I attest that this SPCC plan has been prepared in accordance with good engineering practices. In addition, I attest that procedures for required inspections and testing have been established, and that this SPCC Plan is adequate for the facility.

Name: G. Michael McPeck, P.E.

Signature: G. M. McPeck P.E.

Date: September 2014

State: New York

Registration Number: 060881-1

Owner or Operator Certification: The table below serves as the owner or operator's certification of the 5-year review. By signing below, the owner or operator certifies the following:

"I have completed review and evaluation of the SPCC Plan for the subject facility on the date indicated below and will (or will not) amend the Plan as a result."

Date	Name and Title of Owner or Operator's Representative	Signature	Will Plan be Amended (Yes/No)?	Date Plan Amended

13 HISTORY OF SPILLS

If a release of more than 1,000 gallons of oil into or upon navigable waters of the United States occurs in a single spill event or if there are two spill events of 42 gallons of oil or more each into or upon navigable waters occurring within a 12-month period, the event(s) must be reported to the U.S. EPA. Refer to Post-Spill Reporting Procedures in Section 8.7. There have been no releases subject to SPCC reporting requirements at this substation.

14 RECOMMENDATIONS OR EXCEPTIONS

There are no recommendations for this facility.

15 CERTIFICATION OF SUBSTANTIAL HARM DETERMINATION

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?

YES: _____ NO: **X**

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons?

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.

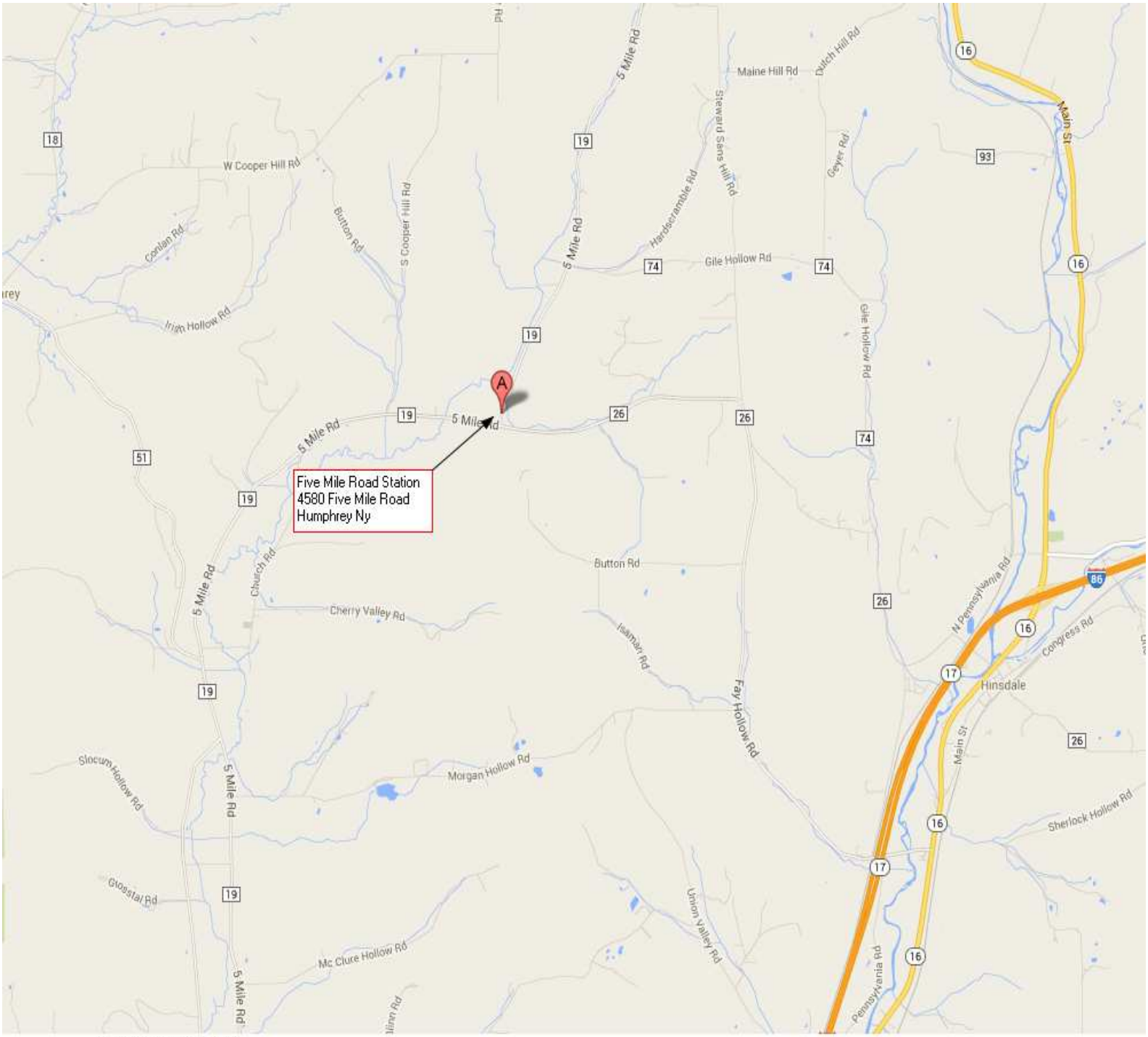
Signature: G. M. McPeck P.E. Professional Engineer

Title

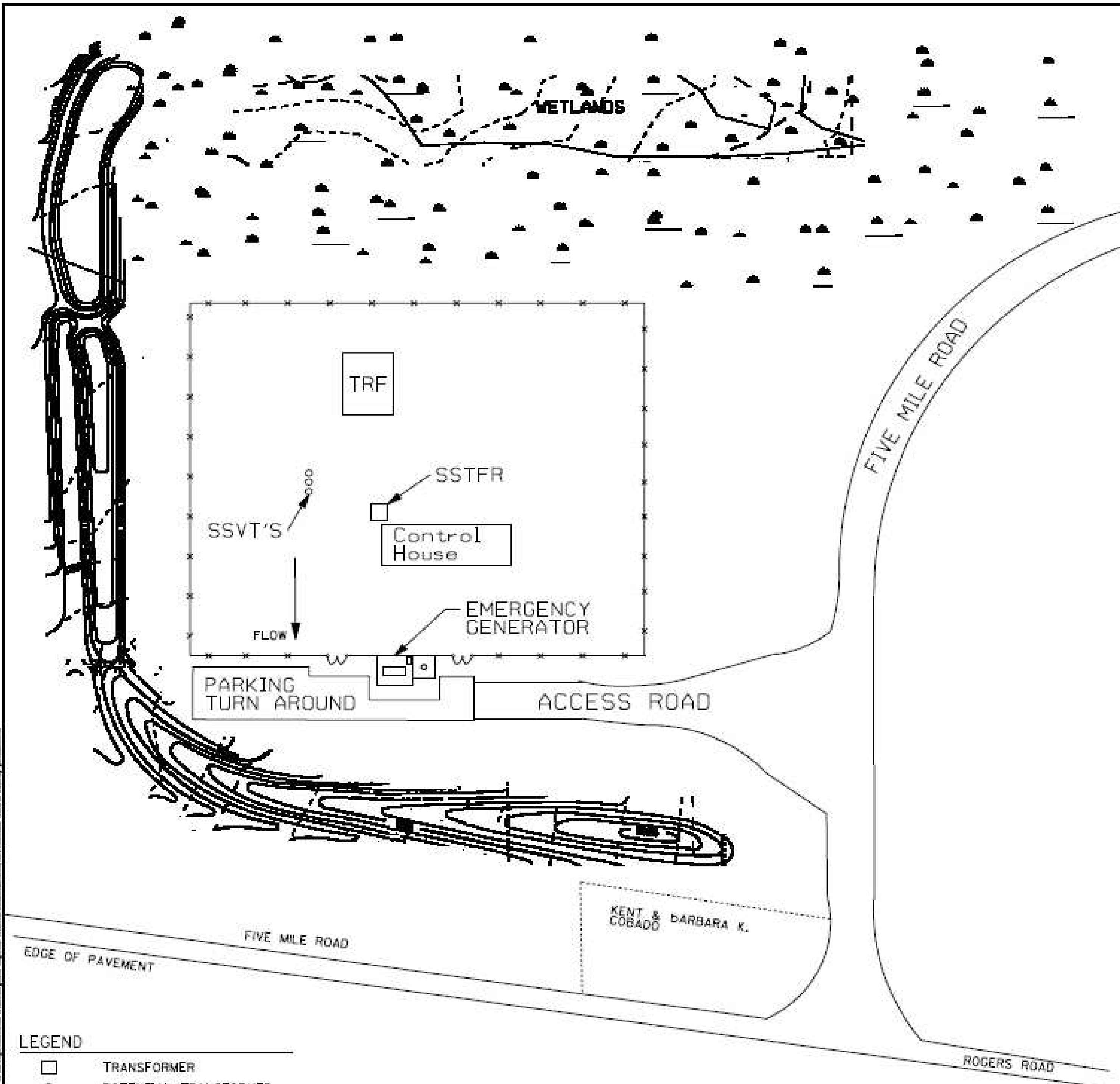
Michael McPeck September 2014

Name (print) Date

Figures



Five Mile Road Station
4580 Five Mile Road
Humphrey Ny



LEGEND

- □ TRANSFORMER
- ● POTENTIAL TRANSFORMER
- ○ SSVT'S
- ■ OIL CIRCUIT BREAKER
- ▨ REGULATOR
- ▦ ⊕ STORM DRAINS
- Ⓔ ELECTRIC MANHOLE
- Ⓓ STORM MANHOLE
- ⊗ MUD VALVE
- —►A PRIMARY FLOW DIRECTION
- - - -►B SECONDARY FLOW DIRECTION
- —×—×— CHAIN LINK FENCE
- - - - - - SUBSURFACE DRAINAGE
- —△—△— TOP OF BANK
- —⊥—⊥— BOTTOM OF BANK

NO.	DATE	BY	DESCRIPTION OF REVISION	CK.	APP.

PREPARED BY

nationalgrid

FIVE MILE ROAD STATION

4580 FIVE MILE ROAD

SOUTHWEST REGION NO. 51

SPCC PLAN

DES.	DR.	CK.	DATE	SCALE N.T.S.
APPROVED		APPROVED		INDEX
APPROVED		APPROVED		NO.
				SHEET NUMBER

Tables

Table 1 SUMMARY OF OIL-FILLED EQUIPMENT AND BULK STORAGE CONTAINERS

Five Mile Road Station

Oil-Filled Electrical Equipment (or Bulk Storage Container)						Electrical Equipment Protective Devices (X Indicates Installed) [4]											
Operating ID	Type	No. of Tanks	Product	Capacity [1]	Spill Control Measures [2,3]	A	B	C	D	E	F	LTC A	LTC B	LTC C	LTC D	LTC E	LTC F
1 LTC TRF	TRF	2	MO	27,000			X	X	X	X							
3 SSVT TR-5 SSVT	SSVT	3	MO	240					X								
SSTR-10 TRF	TRF	1	MO	113					X								
EMERGENCY GENERATOR	AST	1	DL	720		X			X	X							

TABLE 1 NOTES

[1] For equipment, capacity is main compartment volume; for ASTs, capacity is shell capacity. For equipment with LTCs, LTC capacity is indicated in parenthesis, following main compartment volume.
[2] Refer to Figure 2 for direction of flow.
[3] Refer to Section 8.8 for Spill Response Equipment Inventory.
[4] Protective/warning devices for LTCs are distinguished from those for the main compartment.

Protective/Warning Devices for Main Tank or LTC
A. Breather or Vent (main tank)
B. Pressure Relief Device
C. Sudden Pressure Relay
D. Oil Level Indicator
E. Low Oil Alarm
F. Low Oil Trip

Oil-Filled Compartment Container Project Type	
AS	Askeral
MO	Mineral Oil
SF	SF6 Gas
SI	Silicone
DL	Diesel
UN	Unknown
CO	Cable Cooling Oil

Oil-Filled Equipment Type	
CB	Circuit Breaker
DISC	Disconnect
REAC	Reactor
SA	Disconnect
SNDV	Sensing Device
TRF	Transformer
VREG	Voltage Regulator
AST	Aboveground Storage Tank
SPARE TRF	Spare Transformer

TABLE 2 NAVIGABLE WATERS (CRITICAL WATER USE AREAS) [1]
Five Mile Road Station

ID [2]	DESCRIPTION	PRIORITY RANKING [3]				
		Pathway A	Pathway B	Pathway C	Pathway D	Pathway E
River/Stream	Five Mile Creek is North of the substation	1				

Notes:
(1) For the purposes of this SPCC Plan, the Critical Water Use Areas are equivalent to Navigable Waters as defined in 40 CFR 112.2.
(2) Critical Water Use Areas are identified in the field using the most practicable methods including visual observation in combination with topographic maps of the immediate area.
(3) According to 40 CFR 109.5(d)(5), the Critical Water Use Areas must be identified and ranked where appropriate. Critical pathways are identified on Figure 2. Priorities are based on best professional judgment. Ranking is from 1 (highest) to 5 (lowest) priority.