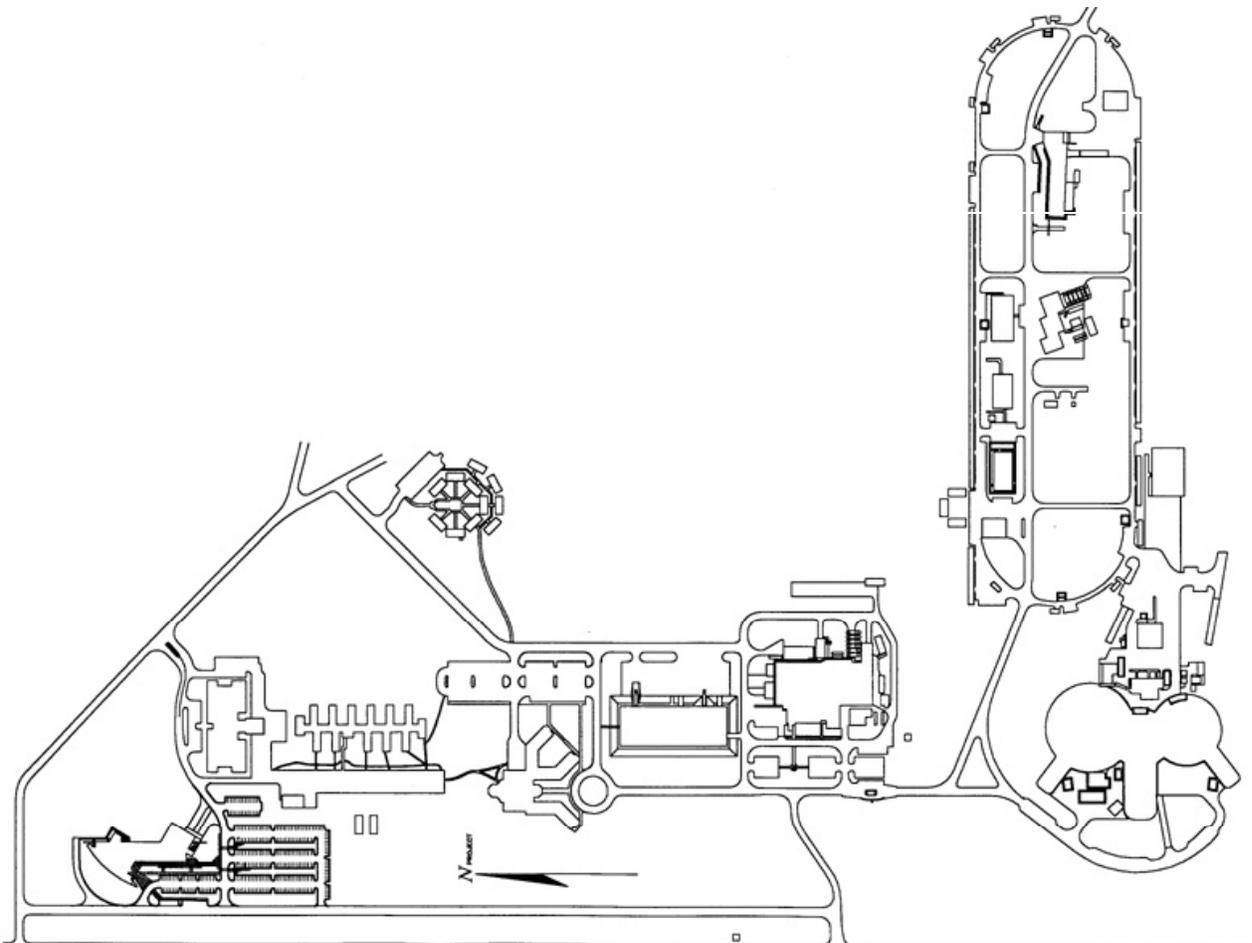




Thomas Jefferson National Accelerator Facility

***Spill Prevention,
Control, and
Countermeasure Plan***



**Jefferson Lab is operated by the
Southeastern Universities Research Association, Inc. for the
United States Department of Energy**

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LIST OF APPENDICES

Appendix No.	Description
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B	SPCC Plan Distribution List
C	Jefferson Lab Facility Spill History
D	Dominion Virginia Power SPCC Plan
E	SPCC Inspection Checklist

**JEFFERSON LAB
SPILL PREVENTION, CONTROL, AND COUNTERMEASURE PLAN**

RECORD OF REVIEW AND AMENDMENTS

Date	Professional Engineer	Section(s)	Amendment	Owner Initials
6/95			Original Issue	
12/96		2, App. B, App. C	Update with completion of Certification Conditions	LE
6/98			Three-Year Review completed. Plan updated. No amendment required.	LE
11/30/01			Three-Year Review completed. Plan updated. I have completed review and evaluation of the SPCC Plan for Jefferson Lab on 11/30/01, and will not amend the Plan as a result.	LE
8/5/04	John R. Sprouse	iii, new 2-3, B-1	Plan amended to update key information and to include the new PE Certification statement.	LE

ACRONYM LIST

AST	Aboveground Storage Tank
CEBAF	Continuous Electron Beam Accelerator Facility
CFR	Code of Federal Regulations
CHL	Central Helium Liquefier
CTF	Cryogenic Test Facility
DEQ	(Virginia) Department of Environmental Quality
DOE	Department of Energy
EH&S	Environment, Health, and Safety
FEL	Free Electron Laser
HRSD	Hampton Roads Sanitation District
HVAC	Heating, Ventilating, and Air Conditioning
Jefferson Lab	Thomas Jefferson National Accelerator Facility
MCC	Machine Control Center
MSDS	Material Safety Data Sheet
PCB	Polychlorinated Biphenyl
PE	Professional Engineer
RQ	Reportable Quantity
SCOT	Service Center for Operations and Transportation
SOP	Standard Operating Procedure
SOTR	Subcontracting Officer's Technical Representative
SPCC	Spill Prevention, Control, and Countermeasure
SRF	Superconducting Radiofrequency
SURA	Southeastern Universities Research Association, Inc.
UOS	Used Oil Storage

1.0 FOREWORD

The objective of this plan is to describe the procedures, which are followed by the Southeastern Universities Research Association, Inc. (SURA) to prevent, control, and/or mitigate releases of oil and related petroleum substances to the environment at the Thomas Jefferson National Accelerator Facility (Jefferson Lab) located in Newport News, Virginia. SURA manages and operates Jefferson Lab for the U.S. Department of Energy (DOE). Jefferson Lab is a research laboratory that meets regulatory criteria for an on-shore, nontransportation-related facility engaged in storing and consuming oil and oil products. The SPCC Plan is required as Jefferson Lab has the potential to store greater than 1,320 gallons of oil and oil products above ground. Most of the site inventory is contained in operating equipment, though as idle or spare items must be counted in the 1,320 gallons, and as the site inventory can vary, Jefferson Lab continues to maintain this Plan. There are no polychlorinated biphenyl (PCB)-containing oils and no buried or partially buried petroleum product tanks at Jefferson Lab. This Plan is specific to petroleum products; if a hazardous material or hazardous waste is mixed with the oil, the Jefferson Lab Emergency Management Plan, as provided in Chapter 3510 of the Jefferson Lab Environment, Health, and Safety (EH&S) Manual, must be followed.

This Plan is prepared in accordance with 40 CFR, Part 112, *Oil Pollution Prevention*. Chapter 6732 of the Jefferson Lab EH&S Manual provides further SPCC implementation details for Jefferson Lab employees.

The references used for SPCC Plan preparations are listed in Appendix A and include the "Spill Prevention, Control, and Countermeasure Information Guide," published by Region III Office of the Environmental Protection Agency and the "Suggested Procedures for Development of Spill Prevention, Control, and Countermeasure Plans," published by the American Petroleum Institute.

A complete controlled copy of this Plan is maintained at Jefferson Lab and is available in VARC, Building 28, Room 78, for review or use during normal working hours. A controlled copy will also be available at the Accelerator Site Guard Station, Building 60, 24-hours a day for reference. A distribution list for other copies appears in Appendix B.

The SPCC Plan is amended whenever a change in design, construction, operation, or maintenance affects the facility's spill potential. It is also amended whenever applicable regulations are revised, or the plan is found ineffective. In accordance with 40 CFR 112.5, no amendment to the SPCC Plan shall be effective unless it has been certified by a Registered Professional Engineer (PE) familiar with the provisions of 40 CFR 112. At a minimum, the SPCC Plan is reviewed and evaluated by SURA once every 5 years. SURA will amend the Plan in accordance with 40 CFR 112.7 (See Section 7.7).

The Remainder of this plan is structured as follows:

- **Section 2.0 - Approval and Certification** - provides the management approval and PE certification.
- **Section 3.0 - Facility Information** - contains ownership and operator information for the site.
- **Section 4.0 - Facility Description** - describes the location, activities, and site drainage characteristics.
- **Section 5.0 - Petroleum Handling and Spill Prevention** - provides an overview of petroleum handling and use at Jefferson Lab. Potential spill sources and spill prevention measures are enumerated.
- **Section 6.0 - Spill Control and Countermeasure** - outlines procedures to be followed in the event of an oil release.
- **Section 7.0 - Administration and Security** - summarizes SPCC administrative elements including SPCC coordination, training, inspections, recordkeeping, and security.
- **Section 8.0 - Emergency Phone Numbers**

In an effort to present a more comprehensive Plan, a description of all three properties that comprise Jefferson Lab, whether held through ownership by the DOE, leased from the Commonwealth of Virginia, or privately owned by SURA, is included. It should be noted that any oil or petroleum product spillage occurring on DOE property or on that leased from the Commonwealth of Virginia and/or owned by SURA will be cleaned up promptly by a responsible subcontractor. If a spill occurs from a Dominion Virginia Power-owned transformer at Jefferson Lab, Dominion Virginia Power will respond using the controls and countermeasures identified in their own SPCC Plan.

2.0 APPROVAL AND CERTIFICATION

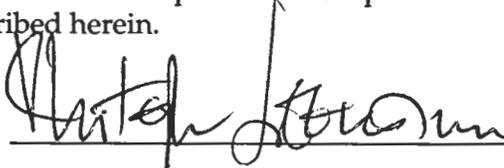
Professional Engineer Certification – August 2004

I hereby certify that I am familiar with the requirements of 40 CFR 112; have visited and examined the facility; attest that this SPCC Plan has been prepared in accordance with good engineering practice, including consideration of applicable industry standards, and with the requirements of Part 112; that procedures for required inspections and testing have been established; and that the Plan is adequate for the facility.

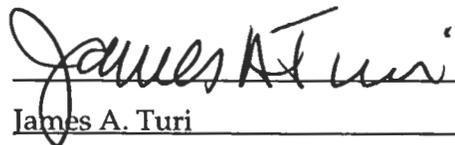
Signature: 
Name: John R. Sprouse
Title: Facilities Management Director,
Thomas Jefferson National Accelerator Facility
Date: 5 Aug 04

Management Approval to Include 2004 Update

This SPCC Plan, that includes the 2004 update, has the approval of the SURA/Jefferson Lab management. Jefferson Lab management shall provide the manpower, equipment and materials required to address spill prevention, to expeditiously control and remove any harmful quantity of oil or related petroleum substances released from the facility, and to take actions to prevent the spill from recurring. This Plan will be implemented as described herein.

Signature: 
Name: Christoph W. Leemann
Title: Director, Thomas Jefferson National Accelerator Facility
Date: August 6, 2004

Owner Concurrence

Signature: 
Name: James A. Turi
Title: Department of Energy, DOE Site Manager
Date: August 10, 2004

3.0 FACILITY INFORMATION

Name of Facility: Thomas Jefferson National Accelerator Facility
(Jefferson Lab or TJNAF) *formerly the Continuous Electron
Beam Accelerator Facility (CEBAF)*

Owner of Facility: United States Department of Energy (163 Acres)

Operator of Facility: Southeastern Universities Research Association, Inc. (SURA)
(Under contract to the U.S. Department of Energy)

Adjoining Neighbors: City of Newport News
Commonwealth of Virginia
SURA

Type of Facility: Nuclear Physics Research

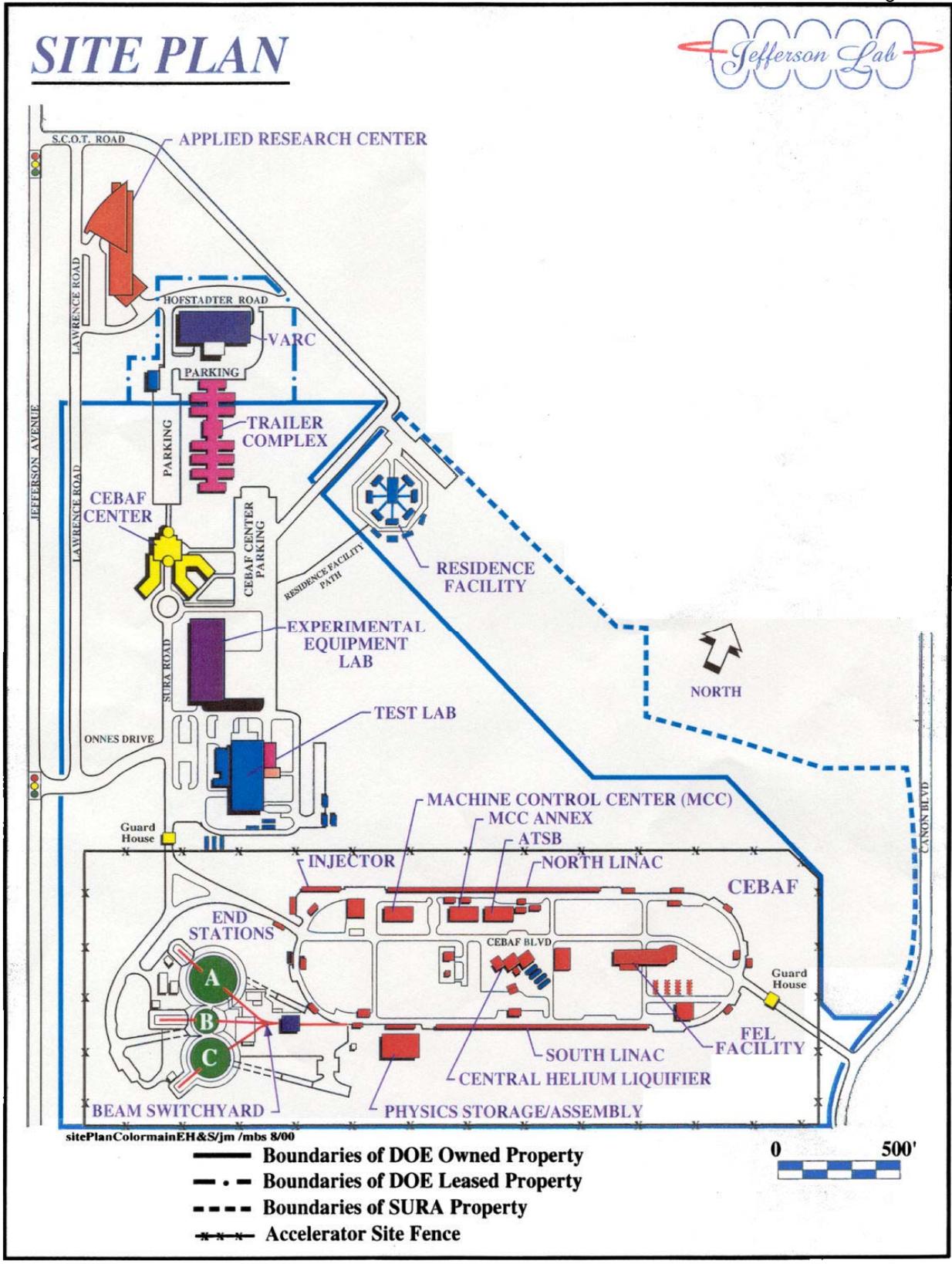
Location of Facility: 12000 Jefferson Avenue
Newport News, Virginia 23606-4350

Mailing Address: Same

Telephone Number: (757) 269-7100 (24 hours non-emergency)

Designated Responsible Person:
Name: Linda Even, SPCC Coordinator
Title: EH&S Reporting
Phone: (757) 269-7308 (working hours)

Figure 3-1



4.0 FACILITY DESCRIPTION

This section describes the location of the facility, the facility operations, and facility drainage.

4.1 FACILITY LOCATION

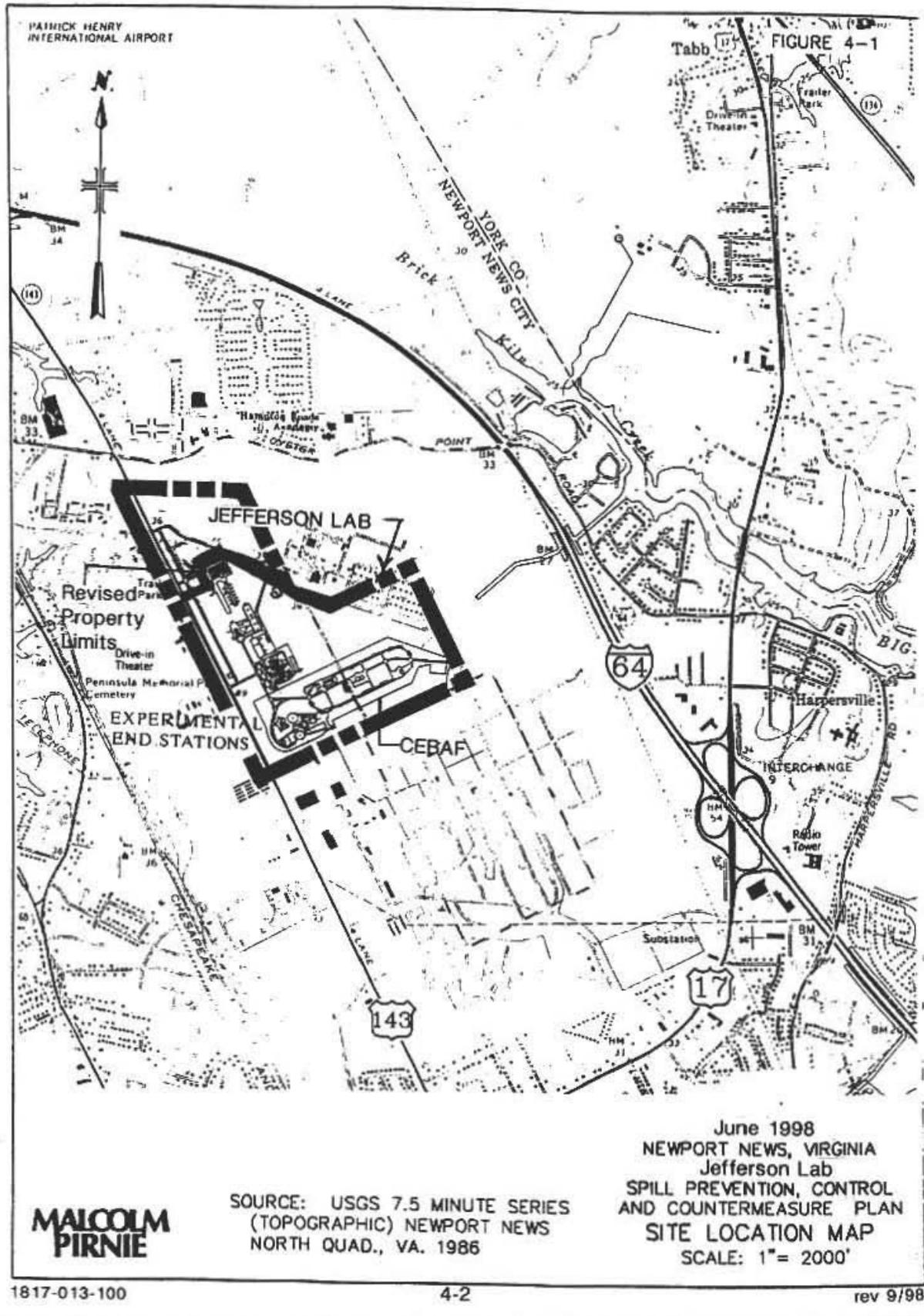
As illustrated on Figure 4-1, the Thomas Jefferson National Accelerator Facility (Jefferson Lab) covers approximately 163 acres along the eastern side of Jefferson Avenue and is located about ¼ mile south of Oyster Point Road in Newport News, Virginia. It is bordered to the north by wooded Commonwealth of Virginia property, to the northeast by the City of Newport News Service Center for Operations and Transportation (SCOT), by Jefferson Avenue to the west, several commercial and industrial properties to the south, and Canon Boulevard to the east.

4.2 FACILITY HISTORY AND USE

Jefferson Lab is a physics research facility focused on the behavior of sub-atomic particles. During accelerator operations, electron beams travel along a 5,500-foot racetrack-shaped path from their origin in an electron gun to any of three end stations where the beam impacts experimental targets. The fenced area containing the accelerator and experiment halls is referred to as the 'accelerator site' and the main accelerator is still named CEBAF. In support of the research program, Jefferson Lab operates and maintains structures, uses oil-filled transformers, and operates oil-containing machinery. Small quantities of used oil are generated through maintenance activities.

The Jefferson Lab site, which includes the VARC Building and the Test Lab, was obtained in 1987. The civil construction was completed in 1993. Accelerator testing and commissioning commenced in 1993 and normal operation of the accelerator in support of the experimental nuclear physics research program began in 1994. The Free Electron Laser (FEL), located in its own facility on the CEBAF site, became operational in 1998. The City of Newport News erected the Applied Research Center on adjacent property, with about 45% of it leased to the DOE for use by SURF staff.

Figure 4-1



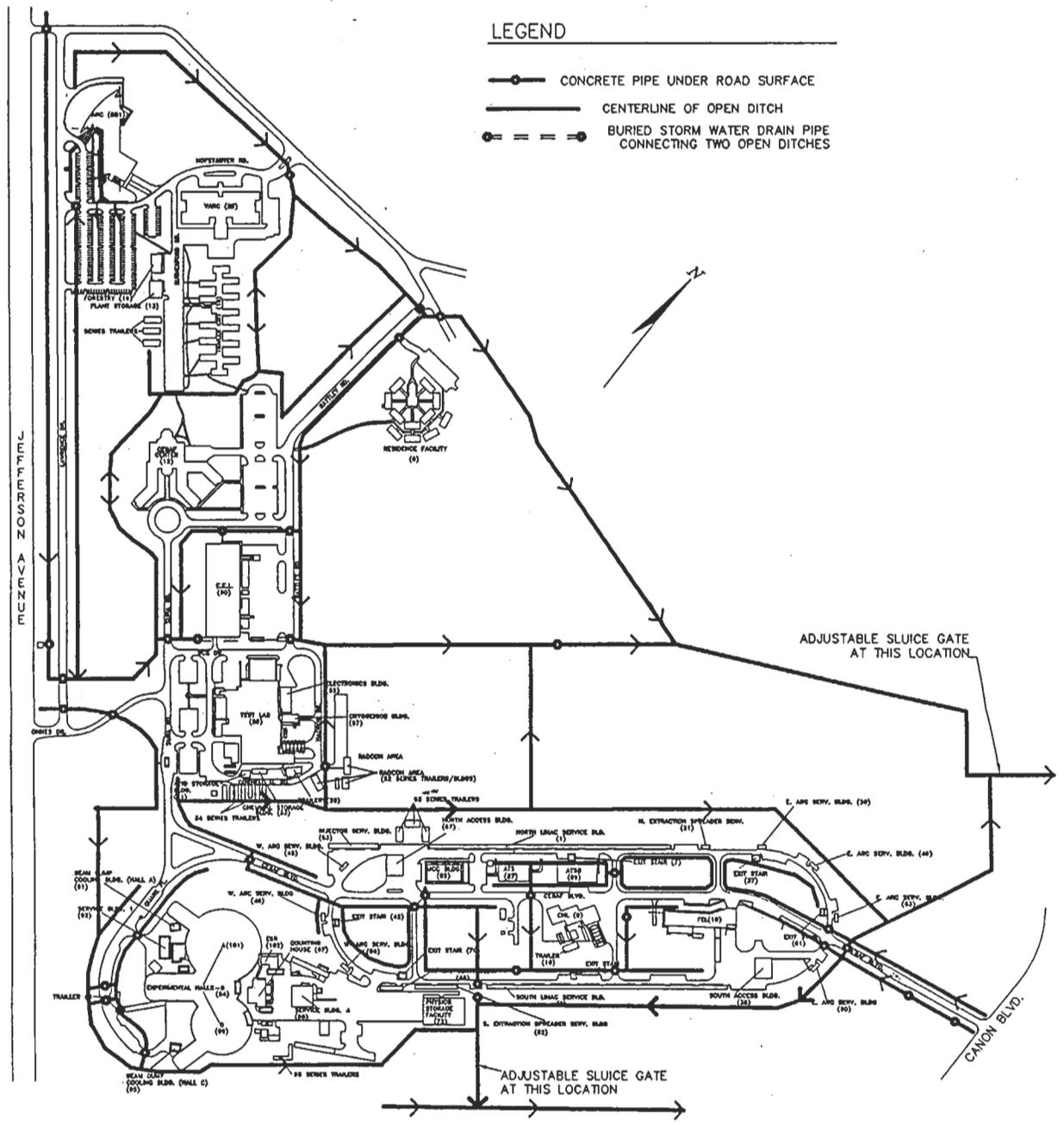
The Jefferson Lab facility spill history is provided in Appendix C and indicates that no oil spills have reached a storm drain or surface channel.

4.3 FACILITY DRAINAGE

As indicated on Figure 4-2, the facility's storm water is conveyed by a network of open drainage channels and swales. Almost the entire site storm channel network drains to Canon Pond, then to Brick Kiln Creek, and eventually to Big Bethel Reservoir. A small portion of the site adjacent to Jefferson Avenue flows to Deep Creek, which flow to the James River. Some areas of the facility drain to catch basins, which are connected by culverts to the surface channel network. There are no existing storm water drainage sumps or flow control devices located outdoors at the facility except for the two manually operated sluice gates installed for emergency use only. Trench drains, located at the bottom of the truck ramps to the three underground experiment halls, receive only limited storm water during rain events since each ramp is covered. In the event of a significant storm event, new flood control gates at the top of each of the truck ramps at the halls and the FEL Facility, Building 18, will be closed to block storm flow and debris, preventing flood damage in the structures. As of September 1998, the trench drains and all floor drains in the experimental halls discharge to the local sanitary sewer under a Hampton Roads Sanitation District (HRSD) permit.

Jefferson Lab complies with 40 CFR 112.7(e)(1), *Facility Drainage (onshore)*, through the following provisions:

- Almost all diked areas at Jefferson Lab, which receive storm water, are transformer oil containment sumps. The pumps, which empty these sumps, are automatically activated; however, the control is interlocked with the oil level in the transformer, preventing oil and/or water discharge if the oil level in the transformer has dropped below a preset level. Flapper valves are not used.
- There is one outdoor chiller that has an open dike to contain coolant and oil leaks from the unit, though there has been no oil noted in it to date. A weather tight cover for the diked area has recently been installed. The contained coolant is verified to be free of oil prior to being pumped into drums for recycling or reuse.
- While drainage from the facility is uncontrolled (no retention basins or lagoons are present), sluice gates that can be manually closed to prevent discharged oil from leaving the site are located as shown on Figure 4-2.



STORM WATER DRAINAGE MAP

JEFFERSON LAB
SPCC Plan

LAST UPDATE - NOVEMBER 2001

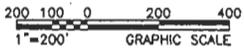


Figure 4-2

5.0 PETROLEUM HANDLING AND SPILL PREVENTION

This section describes basic petroleum handling and spill prevention at Jefferson Lab. The petroleum handling portion provides an overview of how petroleum products enter, are used, and exit Jefferson Lab. The spill prevention section is organized by type of petroleum containing or consuming units.

Jefferson Lab has transformers on-site, which are owned by the DOE and other transformers owned by Dominion Virginia Power, formerly named Virginia Power. Machines with oil reservoirs (compressors, pumps, hydraulics) support operation of the electron beam accelerator and the FEL. Natural gas-powered generators that provide standby power also contain oil. An aboveground diesel tank contains fuel for forklift trucks. Table 5-1 provides a list of the stored petroleum products, tank capacities, and potential spill information for materials present on-site. The locations of transformers, machinery with large oil reservoirs, fixed emergency generators, used oil storage, and the diesel tank are shown on Figure 5-1. Based on the transformer installation and testing dates, there are no PCB-containing oils on-site. With the exception of forklifts, powered industrial trucks, one gas-powered golf car and a variety of electric golf cars maintained on-site by subcontractors, maintenance of Jefferson Lab vehicles is performed offsite.

5.1 PETROLEUM HANDLING

Petroleum products are usually delivered to the site by outside vendors using their own equipment. Some hydraulic oils are delivered from other DOE facilities using qualified transporters. The largest containers delivered to Jefferson Lab are 55-gallon drums.

Occasional bulk movements of petroleum products do occur at Jefferson Lab. They involve diesel deliveries to the 270-gallon diesel tank or used oil pickups at a designated collection area. These movements are prearranged and a responsible staff member oversees the activity. Vendors are required to have a spill kit on the vehicle, which augments the spill response materials available at the delivery/pickup point.

**Table 5-1
Petroleum Product Storage On-Site**

DOE Owned Transformers and Switches				
Quantity	Description	Location	Oil Capacity (Gallons/Unit)	Oil Capacity (Total Gallons)
2	5,000 KVA, 5kV	CHL	396	792
10	1,500 KVA, 480V	End Station	440	4400
11	1,500 KVA, 480 V	Accelerator	440	4840
1	1,000 KVA, 480V	Accelerator	355	355
1	750 KVA, 480V	EEL	325	325
5	1,500 KVA, 480V	Test Lab	440	2200
1	15 KVA, 120V	Test Lab	16	16
1	1,500 KVA, 480V	CEBAF Center	440	440
1	1,500 KVA, 5kV	ESR	242	242
1	2,000 KVA, 480V	FEL	255	255
1	750 KVA, 480V (Spare)	ESR	272	272
1	1,500 KVA, 480V (Spare)	Counting House	440	440
1	Injector High Voltage Switch	Injector Bldg.	30	30
2	High Voltage Switch	CHL	100	200
1	2000 KVA, 480V	Counting House	834	834
TOTAL: 40			TOTAL:	15,641 gallons

Dominion Virginia Power Owned Transformers				
Quantity	Description	Location	Oil Capacity (Gallons/Unit)	Oil Capacity (Total Gallons)
3	Pole # GL68	Behind Bldg. 28 - VARC	30	90
3	Pole # GL62	Same Location Bldg. 28	21	63
1	Pole # GL63	Same Location Bldg. 28	13	13
1	Pad Mount T304	Near Bldg. 28 - VARC	185	185
3	JL45	Near Bldg. 6 - Residence Facility	46	138
1	7.5 MVA	Behind Bldg. 58 - Test Lab	730	730
1	40 MVA	Near Center of Accelerator Area	5000	5000
TOTAL: 13			TOTAL:	6,219 gallons

**Table 5-1 (Cont.)
Petroleum Product Storage On-Site**

Mechanical Equipment		
Location	Description	Oil Quantity (Total Gallons)
Bldg. 8 (CHL)	Drums, Pumps, Compressors	5400
Bldg. 8A (K50)	Drums, Pumps	100
Bldg. 12 (CEBAF Center)	Elevator	20
Bldg. 18 (FEL)	Elevator	100
Bldg. 57 (CTF)	Drums, Pumps, Compressors	705
Bldg. 57 (CTF)	Transportainer	1650
Bldg. 58 (Test Lab)	Elevator	10
Bldg. 58 (Test Lab)	Drums, Buckets, Pumps, Compressors	400
Bldg. 58 (Test Lab)	EB Welder drums, pumps	130
Bldg. 58 (Test Lab)	Hydraulic Press	450
Bldg. 58 (Test Lab)	Helios Storage	770
Bldg. 58 (Test Lab)	Used Oil Storage	200
Bldg. 58 (Test Lab)	Drums	440
Bldg. 58 (Test Lab)	Vacuum Lab	200
Bldg. 58 (Test Lab)	Vertical Test Area	165
Bldg. 90 (EEL, Physics)	Drums, Machine Tools	110
Bldg. 90 (EEL, Machine Shop)	Machine Tools, Equipment, Drums	250
Bldg. 96 (Hall C)	Hydraulic Door	300
Bldg. 97 (Counting House)	Elevator	20
Bldg. 102 (ESR)	Pumps, Compressors	360
Accelerator Site	Vacuum Pumps	200
TOTAL:		11,980 gallons

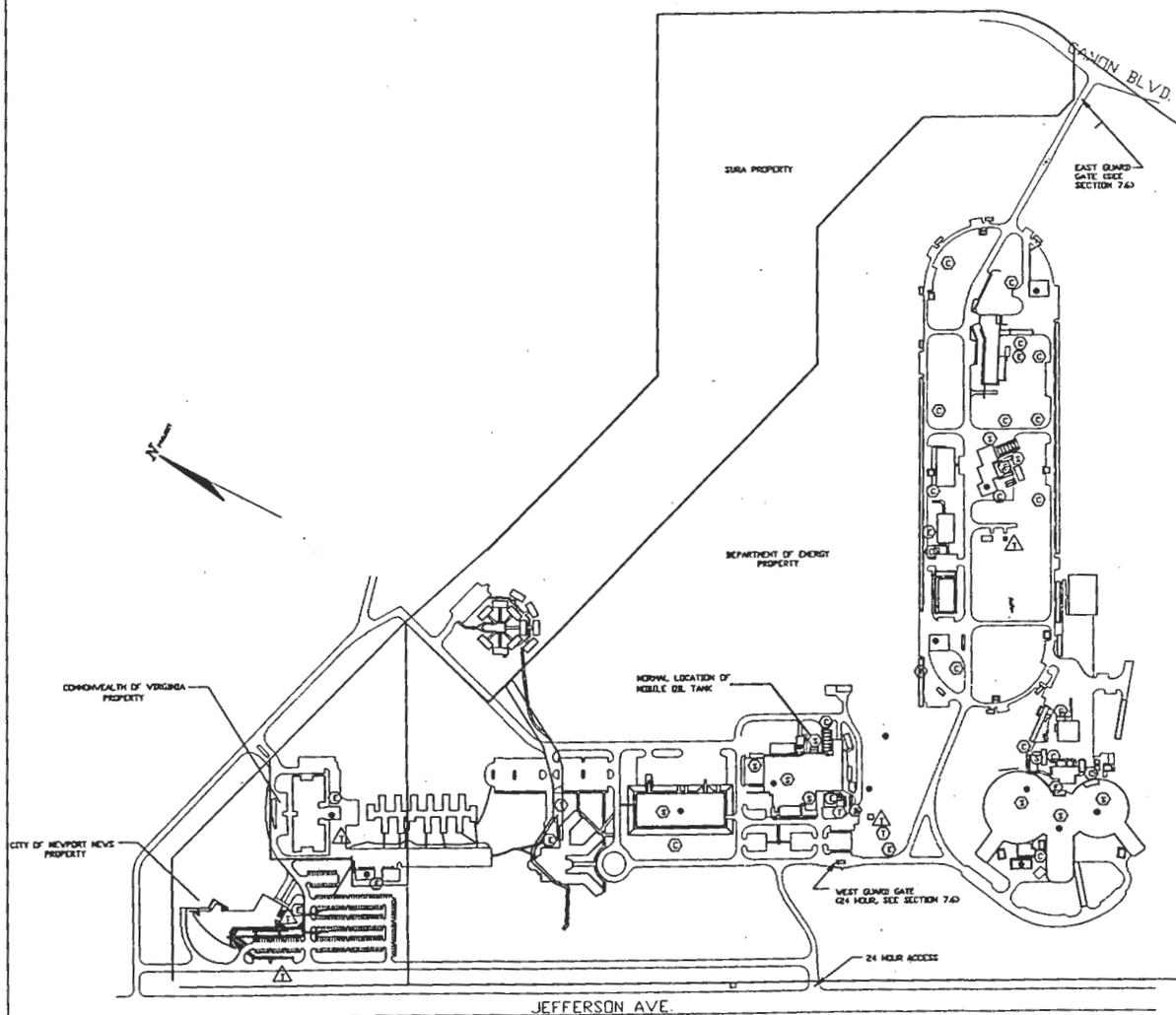
Used Oil	
Location	Quantity (Total Gallons)
A small shed, Bldg. 58a, located adjacent to the Test Lab	Up to 600
TOTAL:	600 gallons

**Table 5-1 (Cont.)
Petroleum Product Storage On-Site**

Generator/Compressor Ratings Combustible Gas Engines								
Device No.	Rating			Location (See Figure 5-1)	Fuel Source	Description	Oil Capacity (Total Gallons)	
	HP	KVA	KW					
1		25	20	VARC, Bldg. 28	Natural Gas	Generator	2	
2		318	255	CEBAF Center, Bldg. 12	Natural Gas	Generator	2	
3		81	65	Test Lab, Bldg. 58	Natural Gas	Generator	2	
4		15	12	Guard Station, Bldg. 60	Natural Gas	Generator	2	
5		25	25	ATS, Bldg. 87	Natural Gas	Generator	2	
6		12.5	10	FEL, Bldg. 18	LP Gas	Generator	2	
7	55			CHL, Bldg. 8	Diesel	Compressor	2	
8		16	16	CHL, Bldg. 8	LP Gas	Generator	2	
9		25	20	Counting House, Bldg. 97	LP Gas	Generator	2	
10		25	20	Counting House, Bldg. 97	LP Gas	Generator	2	
11			23	Counting House, Bldg. 97	Natural Gas	Generator	2	
Portable		75	60	Forestry, Bldg. 19	Diesel	Generator	1.5	
TOTAL: 11							TOTAL:	23.5 gallons

Tanks		
Location	Description	Quantity (Gallons)
Outside & West of Building No. 58	Above Ground Diesel Storage Tank	250
Behind Bldg. 57 (CTF), Typically	Mobile Tank	500
	TOTAL:	750 gallons

MAXIMUM QUANTITY ON-SITE (Estimate)	35,214
Less Dominion Virginia Power	(6,219)
	28,995 gallons



LEGEND

- (T) JLAB TRANSFORMER
- (C) JLAB TRANSFORMER WITH OIL CONTAINMENT PIT
- (E) LOCATIONS OF GENERATORS AND COMPRESSORS
- (D) DIESEL ABOVE GROUND STORAGE
- (T) DOMINION VIRGINIA POWER CO. TRANSFORMER
DOMINION VIRGINIA POWER HAS THEIR OWN APPROVED SPCC PLAN
- (S) OIL STORAGE (NEW, IN USE AND USED)
- LOCATION OF SPILL CONTROL EQUIPMENT

NOV 2001
 NEWPORT NEWS, VA
 JEFFERSON LAB
 SPILL PREVENTION, CONTROL
 AND COUNTERMEASURES PLAN

PROPERTY LINES, OIL STORAGE
 LOCATIONS, SPILL EQUIPMENT
 LOCATIONS & EMERGENCY ACCESS
 ROUTES

NOT TO SCALE

The initial delivery point of contact for container shipments is the Shipping and Receiving Department. The product's Material Safety Data Sheet (MSDS) is provided upon delivery. Before Shipping and Receiving accepts delivery of petroleum products, the containers are visually inspected for cracking, chipping, and corrosion. Petroleum products in damaged or otherwise unsuitable containers are not accepted. Following oil or fuel delivery, petroleum products are transferred within the facility as needed. The MSDS is provided to the Accelerator Division EH&S staff, known as the Safety Lab staff, for product and inventory tracking. The Safety Lab staff also serve as the Lab's Chemical Assistance Team that serves to respond to spills.

Packaged lubricating oil, cooling oil, and grease are internally distributed by truck or forklift to the vicinity of equipment and machinery and then transferred. Oils for machinery are normally dispensed in small quantities for "topping off" of fluid reservoirs or via a specially designed 500-gallon mobile tank that has built in secondary containment.

Used oil is collected at the Used Oil Storage (UOS) Shed and is kept under key control by the Safety Lab staff. Employees generating used oil generally transport it to the UOS Shed in containers of 5 gallons or less. Secondary containment is required if larger containers are to be transported to the UOS Shed, with any movement coordinated with the Safety Lab staff. A log of used oil receipts is maintained in the Safety Lab (Trailer 35) by the Safety Lab staff. When two 55-gallon drums of used oil are accumulated, a subcontractor is contacted to remove the used oil for recycling. Used oil is normally removed from the site before four 55-gallon drums are filled.

5.2 POTENTIAL SPILL SOURCES

A spill is most likely to occur during some type of equipment maintenance operation, heavy equipment operation, or as a result of human error during loading, unloading, or distribution of a product or used material. Potential spill sources include: a line break; puncture of a vessel; valve/fitting failure; an overflow during filling of a fuel tank, machinery oil reservoir, or used oil container; and an accident involving the used oil collection vendor or the diesel fuel vendor. The major oil spill sources at Jefferson Lab are summarized in Table 5-2 and locations of oil-containing items are shown on Figure 5-1.

**Table 5-2
Potential Spill Volumes and Rates**

Transformers		
Potential Event	Volumes Released (Gallons)	Spill Rate
Internal Explosion Rupture	Transformer tank 5000	Instantaneous
Partial Failure of Tank	1 to 5000	Gradual to Instantaneous
Overfill/Filling Accident	1 to several	10 GPM
Leaking Valve or Flange	Several Ounces to several	Ounces per hour

Mechanical Equipment		
Potential Event	Volumes Released (Gallons)	Spill Rate
Internal Explosion Rupture or Break	350	Instantaneous
Valve Break	200	Gradual to Instantaneous
Leaking Valve/Leak	Several	Ounces per Hour
Overfill/Filling Accident	Several	10 GPH

Used Oil Storage		
Potential Event	Volumes Released (Gallons)	Spill Rate
Drum Rupture	55	Quick
Drum/Container leak	55	Gradual
Overfill	< 1	Quick
Collection Truck Accident	> 55	Quick
Collection Truck Overfill/Leak	≤ 55	10 GPM

Diesel Fuel		
Potential Event	Volumes Released (Gallons)	Spill Rate
Rupture, Leak	500	Quick
Overfill/Filling Accident	> 500	Quick
Delivery Accident	> 500	Quick

Note: The purpose of this table is to provide the types of events and the consequential approximate quantity and spill rate of oil that would be released. The maximum amount of oil at Jefferson Lab at any one time is approximately 35,000 gallons. In the event of a catastrophe, that amount of oil could be released. The above-listed scenarios assume an accident limited to a single oil-containing item. Under that scenario, the maximum spill would be 5,000 gallons.

5.3 SPILL PREVENTION

This section discusses specific petroleum handling and equipment operations that are designed to prevent a spill at the facility. Line management is responsible for items described below. Administrative elements of spill prevention are described in Section 7.0.

5.3.1 Jefferson Lab Transformers (Electrical Power)

Ground level Jefferson Lab transformers are mounted on concrete pads that can be clearly seen from the facility roads. There is one pole-mounted unit present on the site and one small transformer inside the Accelerator Tunnel. Each ground level transformer is equipped with a direct-reading oil gauge.

Each transformer is visually inspected at least monthly. This inspection is performed under a site procedure that is located in Appendix E, an Inspection Checklist included in the Jefferson Lab EH&S Manual as a guide. Transformers not in service and transformers that do not have secondary containment are checked twice monthly. The inspection register is submitted to the SPCC Coordinator at the end of the record year.

Concrete oil-containment sumps are provided for 34 of the 40 DOE-owned ground level transformers and switches. The sumps are equipped with sump pumps to remove storm water. Each pump is interlocked with the transformers' oil level indicators to prevent activation if a transformer's oil level is low. The sump pits are designed to handle at least 125 percent of the largest transformer oil capacity in the containment. The sump pumps are inspected monthly during the transformer inspections and any sump problems are noted, reported to Facilities Management, and promptly repaired.

5.3.2 Dominion Virginia Power Transformers

Dominion Virginia Power has 13 transformers at Jefferson Lab and an SPCC Plan for these units. A portion of the approved Dominion Virginia Power SPCC Plan is included as Appendix D to this Plan. Dominion Virginia Power's spill prevention begins on page G-18 of its Plan. Jefferson Lab's response to a release involving a Dominion Virginia Power transformer is addressed in Section 6.4.

5.3.3 Emergency Generators

There are eleven generators (six natural gas-powered, four LP gas-powered, and one diesel) installed near major buildings and the Guard House at the accelerator gate. There is also one portable diesel unit. They are used to support the key building operations in the event of a power failure. Each unit contains approximately 2 gallons of oil. The portable unit contains 1-1/2 gallons of oil. Each unit, including the portable generator, has a dip stick for reading oil levels.

Each generator receives preventative maintenance at least quarterly. This work is documented by Facilities Management.

The fixed units are automatically operated once per week to ensure proper functioning. Facilities Management staff visually inspect each of the units after each power failure to verify equipment and area status.

5.3.4 Machinery Oil Reservoirs and Maintenance

Accelerator Division

Cryogenic equipment

Much of the cryogenic machinery at the facility, which is used in support of accelerator and FEL operations, incorporates large oil reservoirs for cooling and lubrication. Drip pans are positioned to catch any leakage, drainage, and spillage from small units. Large oil sources have secondary containment provisions, which include the buildings where the sources are located. Adjacent floor drains in the equipment vicinity are plugged. The oil used is synthetic and is never replaced. Main shaft seal leakoff is collected at the rate of about 90 gallons per year for all three main system refrigerators. Machinery is refilled by Jefferson Lab technicians who pump the oil from a 500-gallon tank to the reservoir. A technician is present during the entire operation. Spill containment equipment is located in the vicinity. Each division details such job-specific requirements in one or more Standard Operating Procedures (SOPs). The transfer system is visually inspected for leakage in accordance with 40 CFR 112.7(e)(3)(iv). Transfer lines are not normally pressure

tested because they are typically rated at much higher pressure (≥ 5 times the working pressure) than the operating pressure. In some cases, fluid reservoirs are topped off by adding fluid from small containers or drums. Transfer operations are monitored by qualified staff.

The cryogenics group uses a 500-gallon portable oil tank to support maintenance and oil changes involving the helium liquefaction operations. The tank is used about twice per year to transfer oil purified on-site. There is a 110-gallon capacity purifier located in the Cryogenics Test Facility (CTF), Building 57. Oil is transferred to the purifier from drums on containment pallets using either a drum pump or pressure differential. The purifier has secondary containment. Jefferson Lab technicians perform scheduled preventive maintenance on the purifier. Transfer to the mobile oil tank, and subsequently to the equipment, is done using helium pressure to move the oil through Teflon-lined steel mesh pressure lines (4,500 psi rated). The tank is a 100 psi ASME pressure vessel with built-in secondary containment. The tank's trailer serves as secondary containment. Transfer hoses are stored out of direct sunlight. The system typically operates at less than 30 psi and is visually inspected before use.

During regular equipment operation, an oil release from machinery involved in the cryogenic process would be detected quickly by the process control gauges, which would set off alarms in the Central Helium Liquefier (CHL) control room, the Machine Control Center (MCC), and the continuously staffed Guard Station. Additionally, most of the machinery on-site serving various purposes is equipped with automatic low oil level and high temperature shut offs, which would also activate equipment cutoffs.

Machinery used to support the cryogenic program receives comprehensive preventive maintenance because failure of a critical system could result in significant downtime for the accelerator (up to six months). All machinery on-site is monitored. Subcontractors perform the preventive maintenance on the HVAC equipment and the low conductivity water system. Jefferson Lab technicians maintain all other systems.

Vacuum group

The vacuum group supports vacuum systems in the CEBAF accelerator, the three experimental halls and in the FEL. Bulk storage consists of 4 x 55 gallon drums, with secondary containment, located in the Test Lab accelerator component storage area. Absorbent pillows are kept in a cabinet in the Vacuum Lab. Usually 1-gallon jugs are dispensed from the 55-gallon drums for use throughout the site. Hundreds of pumps are used throughout the site, with an average reservoir of 4-5 quarts of oil.

SRF (Superconducting Radiofrequency) Institute

The Electron Beam (Ebeam) Welder and the hydraulic press are the Institute's two major oil users.

The Ebeam welder is located in the Test Lab, Building 58. Oil sources are: a roughing pump that contains 15 gallons; a holding pump containing 2 quarts; and a high voltage tank with 20 gallons of transformer oil. The unit's containment is addressed by the presence of a berm around the two pumps. As well, the area floor drains are plugged and spill control equipment, a 55-gallon drum of absorbent, is located outside the room.

The hydraulic press is located in the Test Lab Machine Shop and holds 450 gallons of hydraulic fluid. A built-in sump has been constructed to hold the fluid in case of a spill, and spill control equipment is located in the vicinity.

Physics Division

The 300-gallon oil reservoir for the short orbit spectrometer located in Hall C (Bldg. 96) is fitted with engineering controls and a perimeter dike that could contain the entire volume of oil in the event of a tank failure.

5.3.5 Oil Storage

Unused oil is situated in various places on the site. It is stored on secondary containment and is sheltered from the elements. For specific locations and quantities, see Table 5-1. Spill control equipment is located in the vicinity of each storage area.

5.3.6 Oil Disposal

The used oil generated during maintenance is normally transported by the generator to the UOS Shed in containers of 5 gallons or less. Larger containers can be used if secondary containment is provided. After the Safety Lab staff logs in the used oil, the contents of smaller containers are transferred to 55-gallon drums for storage. The receiving drum level is visually inspected and the drum logbook is checked before transfer to preclude overfilling. The transfer is accomplished by manually pouring the used oil through a funnel in the drum's bung hole. At least one qualified, trained Safety Lab staff member is always present during transfer. A 4-inch curb surrounds the interior of the UOS Shed. This building curb provides secondary containment though secondary containment pallets for drums may also be used.

Subcontracted oil recyclers transfer the used oil directly from the 55-gallon storage drums in the UOS Shed via a drum pump with direct-feed hosing to the subcontractor's truck. Subcontractor pick-up of used oil is monitored by Safety Lab staff and does not occur during or shortly after any rainfall. An SOP addresses this operation. The transfer system is inspected before use. The subcontractor is required to maintain all necessary spill response plans, provide his own spill control and containment equipment, and respond to spills occurring during used oil transfers.

5.3.7 Diesel Fuel Operations

The diesel tank is a portable, 270-gallon skid-mounted tank contained within a 500-gallon steel tank for double-wall protection. A vendor delivers the diesel fuel by pumping directly into the tank. Qualified forklift operators use a standard electrical gasoline station type pump nozzle with automatic cut-off to dispense fuel to forklifts. A padlock secures the pump when not in use. Concrete-filled bollards are provided at the exposed corners of the tank to minimize the chances for an accident. The delivery truck driver is required to check in with the Material Handling Safety Representative before filling the tank. The diesel fuel vendor is required to maintain all necessary spill response plans, and the truck is equipped with containment equipment. In addition, a weather-tight drum containing absorbent material is kept in a convenient location close to the tank.

5.3.8 Other Materials

Jefferson Lab has numerous non-petroleum chemicals on-site which can be spilled. The SPCC Plan relates only to petroleum product releases. Refer to the Jefferson Lab EH&S Manual, Chapter 6610, *Chemical Hygiene*, and Appendix 6750-T3, *Spill and Release Reporting Requirements*, for information on spill prevention, control, and reporting for non-petroleum chemicals.

6.0 SPILL CONTROLS AND COUNTERMEASURES

Spill controls and countermeasures are safety measures to ensure prompt response to spills and mitigation of the consequences. In the event of a spill, the general procedure includes: notification of the Jefferson Lab Security Post #2, Facilities Management, and the Accelerator Division Safety Lab staff; spill containment and isolation; and clean-up and disposal of small spills by the Safety Lab staff, with assistance by the Chemical Assistance Team, who are available on request, and for large releases, a licensed disposal contractor. In addition, appropriate regulatory agencies will be notified, if required.

See the tabbed page marked emergency procedures for the initial actions to take to control and/or mitigate an oil spill (see Figure 6-1).

Line managers have overall responsibility to address any oil spill from their processes or equipment.

Spill response actions by Facilities Management generally consist of notifying appropriate personnel, including the Facilities Management Director and the Chemical Assistance Team (Safety Lab staff) as necessary, and securing the area while the responsible line manager continues to control and contain the spill. Sorbent pillows, blankets, and other materials are stored in the locations indicated on Figure 5-1. Locations of two sluice gates are also shown. A summary of spill control material storage locations and equipment inventories is provided in Table 6-1. Small contained spills (less than 5 gallons) resulting from transfer operations are cleaned up by the staff involved, using oil dry at the time of the spill. If not already involved, Safety Lab staff are contacted for disposal of the used sorbent material. It is placed in the UOS Shed to await disposal.

The responsible line manager shall implement oil spill controls and countermeasures including the assignment of personnel to stop additional spillage. The Chemical Assistance Team (notified through a rapid paging system) can assist if needed. The Facilities Management Director will direct response actions for spills that reach the ground or surface water. Spill control and clean-up take priority over routine activities or operations. A flowchart indicating general response procedures is shown on Figure 6-2. Specific procedures to be implemented upon detection of an oil or petroleum substance spill are summarized below. The associated division EH&S staff conduct a review of the spill event and provide lessons learned to the Jefferson Lab community. This review would then become part of the Spill Report, which is

FIGURE 6-1

JEFFERSON LAB OIL RELEASE EMERGENCY PROCEDURES

The following steps are to be taken immediately in the event of an oil spill. Subsequent emergency procedures can be found in Section 6.0 of the Jefferson Lab Spill Prevention, Control, and Countermeasure (SPCC) Plan.

If You Are Not Trained

1. Evacuate and warn others as necessary of the release size and location.
2. **If there are injuries or immediate off-site expertise is needed, call 911.**
3. Contact Jefferson Lab Security Post #2 at x4444, and provide the following information:
 - Location of spill
 - Approximate quantity and identity of product
 - Other hazards, emergency conditions
4. Notify responsible line manager and, if within Accelerator Area Fence, on-duty Crew Chief, x7050.
5. Meet the responders at a safe distance from the release and direct them to it.

If You Are Trained

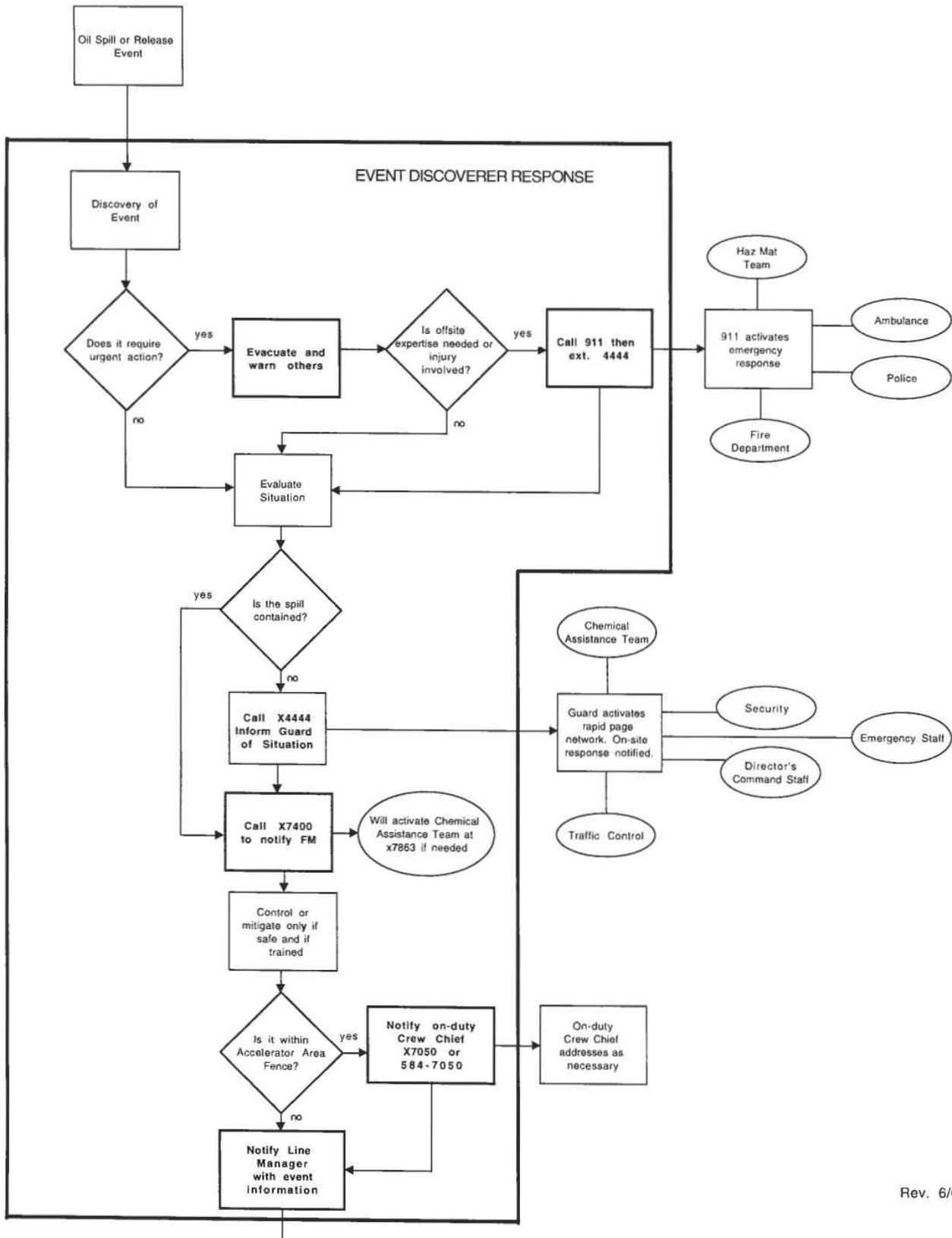
1. Evacuate and warn others as necessary of the release size and location.
2. **If there are injuries or immediate off-site expertise is needed, call 911.**
3. Contact Jefferson Lab Security Post #2 at x4444, and provide the following information:
 - Location of spill
 - Approximate quantity and identity of product
 - Other hazards, emergency conditions
4. Take the following actions **only if they can be completed safely.**
 - a. Shut down equipment
 - b. Close valves to isolate a leak in a line
 - c. Upright leaking drums or containers
 - d. Plug a leak utilizing a peg, duct tape, etc.
 - e. Block floor drains, storm drains, or stormwater drainage channels
 - f. Construct a dike to contain the material utilizing sorbents, booms, or soils
 - g. Apply sorbent to contain petroleum product
5. Notify responsible line manager and, if within Accelerator Area Fence, on-duty Crew Chief, x7050.

6. Meet and orient the responders at a safe distance from the release and direct them to it.

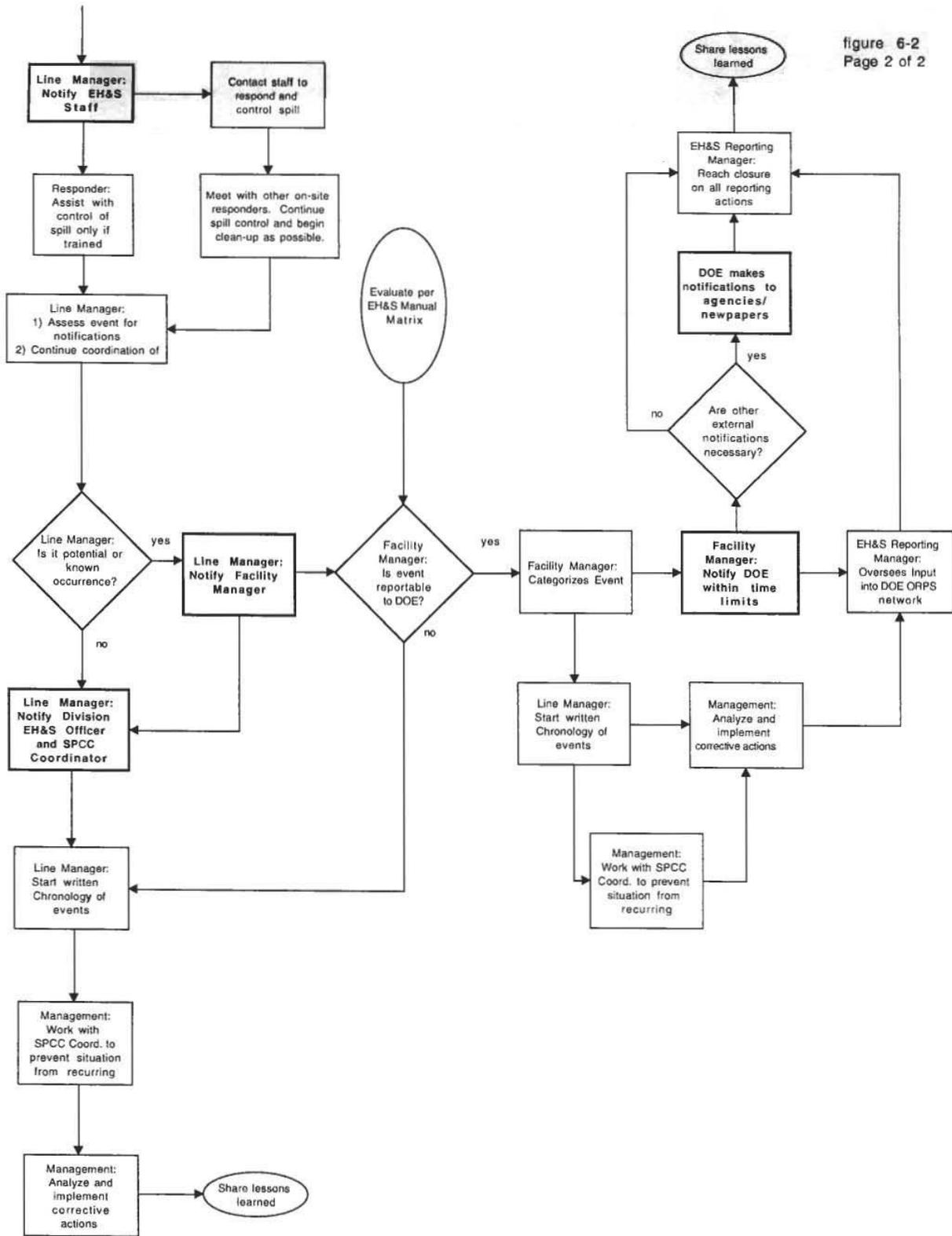
**Table 6-1
Location and Quantities of Spill Containment
and Clean-up Materials**

Location		
Location	Description	Min. Quantity
Bldg. 8 (CHL)	40 Lb. Bag of Oil Dry and Spill Kit	1
	Secondary Containment Around Buckets and Drums	n/a
Bldg. 8A (K50)	55 Gal. Drum for Waste Oil Dry	1
Bldg. 57 (CTF) Transportainer (CTF)	55 Gal. Drum of Oil Dry	2
	Drums on Secondary Containment Pallets	30
	Drip Pan Under Lube Oil Heater	n/a
Bldg. 58 (Test Lab)	55 Gal. Drum of Oil Dry	1
	Spill Kit w/Bags & Pillows	1
	Drums on Secondary Containment Pallets	18
	55 Gal. Drum for Waste Oil Dry	1
Bldg. 58A (Used Oil Storage Shed)	40 Lb. Bag of Oil Dry	2
	Spill Pillows	n/a
	Curbing Inside Building	n/a
Bldg. 58A (Diesel Tank Fueling Station)	55 Gal. Drum of Oil Dry	1
	Absorbent Pillows	10
	Absorbent Rolls	50'
Bldg. 72 (Physics Storage Building)	55 Gal. Drum of Spill Pads	2
	Oil Dry	55 gal.
	Absorbent Socks	15
Bldg. 90 (EEL) Room 127	50 Lb. Bag of Oil Dry	1
	Adsorbent Pads	200
	Adsorbent Socks	25
	Overpak For Barrel	1
	Spill Pads	2 boxes
Bldg. 92 (Service Bldg.)	Absorbent Pillows	10
Bldg. 94 (Hall B)	Large Spill Kit of Spill Pads & Pigs	1 large box
Bldg. 96 (Hall C)	Rolls of Mats	3
	Thick Pads	10+
	Large Can of Absorbent	1
	40 lb. Bag of Absorbent	1
Bldg. 101 (Hall A)	Rolls of Spill Pads	3
	Large Spill Kit of Spill Pads & Pigs	1 large box

OIL EVENT RESPONSE FLOWCHART



Rev. 6/04



prepared by the responsible line manager. The SPCC Coordinator is responsible to oversee the implementation of lessons learned into the site program.

Line management, with assistance from division EH&S staff, will perform a Notable Event if the spill is ≥ 5 -gallons and/or if it meets any DOE or regulatory reporting criteria.

6.1 SPILLAGE IN DIKED OR CURBED AREAS

Spills in diked or curbed areas are considered controlled unless the diking or curbing is inadequate to contain an ongoing spill. If the diking or curbing are insufficient, the procedures in Section 6.2 are applicable. The responsible line manager should follow the process as identified here and in area SOPs.

If the spill is controlled:

1. The individual discovering the spill must notify Facilities Management (x7400), who in turn will activate the response by notifying the responsible line manager. The following information is reported:
 - Location of spill
 - Approximate quantity and identity of product
 - Other hazards or emergency conditions
2. The individual should also contact the responsible line manager if known.
3. The responsible line manager or authorized delegate should assess the size and nature of the spill and the hazards, and attempt to halt any further spillage by use of available control measures without subjecting responders to safety hazards. The Chemical Assistance Team Leader should be consulted as necessary during normal working hours.
4. The oil should be pumped out of any containment into drums under direction of the responsible line manager or Facilities Management Director.
5. Sorbent material should be used to remove residual oil. Oil and oil-containing wastes should then be transferred to the UOS shed for pick-up for treatment or disposal.

6. The event should be reported and analyzed as detailed in Section 6.5. The spill would also be recorded in Appendix C (facility spill history).

6.2 SPILLAGE IN UNDIKED OR UNCURBED AREAS

Five transformers, vendor transfer operations, and certain machinery components, including all the cryogenics compressors and major pumps, create a potential for releases in undiked or uncurbed areas. Machinery releases could be significant but would likely be confined within a building. The transformers without oil containment pits and vendor transfer operations could release hundreds of gallons. The responsible line managers should follow the response process identified here and in area SOPs.

In the event of a spill, the following procedures should be followed:

1. The individual discovering the spill should notify Jefferson Lab Security Post #2 at ext. **4444** to activate site personnel through the rapid page notification system. This would notify Facilities Management and the Safety Lab who in turn should contact any other necessary on-site responders. The following information should be reported:
 - Location of spill
 - Approximate quantity and identity of product
 - Other hazards or emergency conditions
2. The individual should also contact the responsible line manager if known.
3. The responsible line manager, or upon request, the Facilities Management Director, would assess the size and nature of the spill and the hazards, and attempt to halt any further spillage by use of available control measures without subjecting responders to safety hazards. The Chemical Assistance Team Leader may be consulted as necessary during normal working hours.
4. The spread of the spill would be controlled by constructing make-shift dikes of dirt and/or sorbent pads or booms.
5. If material contained in the make-shift dike is of sufficient quantity, the responsible line manager, or upon request, the Facilities Management Director, would have it pumped out and transferred into drums. Alternatively, sorbent material could be utilized. Oil

and oil-containing wastes would then be transferred to the UOS shed for pick-up for treatment or disposal.

6. The event should be reported and analyzed as detailed in Section 6.5. The spill should also be recorded in Appendix C (Facility Spill History).

6.3 SPILLAGE INTO THE SURFACE DRAINAGE CHANNEL

Generally, the normal flow of a spill from a petroleum storage vessel, machinery, transformer, secondary containment, or transport vehicle would be toward the nearest drainage channel. In the event of a catastrophic spill, the oil or petroleum would flow or migrate toward the facility boundary. In this event, fixed sluice gates should be closed, then adjusted as determined necessary according to identified Facilities Management Department procedures. These sluice gates are located as indicated on Figure 4-2. Oil booms, socks, and other available control measures, prepositioned near the equipment or transfer operation, would be deployed promptly in the immediate vicinity of the spill. The blocked or boomed product should then be quickly skimmed and pumped into drums and transported to a permitted treatment or disposal facility.

Specific steps are outlined below:

1. The individual discovering the spill should notify Jefferson Lab Security Post #2 at ext. **4444** to activate site personnel through the rapid page notification system. This would notify Facilities Management and the Safety Lab staff who in turn should contact any other necessary on-site responders. The following information should be reported:
 - Location of spill
 - Approximate quantity and identity of product
 - Other hazards or emergency conditions
2. The individual should also contact the responsible line manager if known.
3. The responsible line manager and the Facilities Management Director should assess the size and nature of the spill and attempt to halt any further spillage by use of available control measures without subjecting responders to safety hazards. The Chemical Assistance Team Leader should be consulted as necessary during normal working hours.

4. Sluice gates should be adjusted to contain oil on-site under direction of the Facilities Management Director. Sorbent materials should be spread in the area of the spill by qualified, trained Jefferson Lab personnel or a subcontractor, to remove accumulations on the ground, if feasible.
5. The Facilities Management Director should coordinate any booming and skimming from storm water channels or pathways. Recovered oil should be pumped into tank trucks by a subcontractor and transported for treatment/disposal. The Facilities Management Director oversees the operation.
6. The event should be reported and analyzed as detailed in Section 6.5. The spill should also be recorded in Appendix C (Facility Spill History).

6.4 DOMINION VIRGINIA POWER TRANSFORMER RELEASE

As shown in Table 5-1, Dominion Virginia Power owns and operates transformers located at Jefferson Lab, and has prepared an SPCC Plan for its operations. Dominion Virginia Power takes complete responsibility for discharges from its transformers. Jefferson Lab's responsibility, through the Facilities Management Director, is notifying Dominion Virginia Power and phone numbers are provided in Section 8.0. Applicable sections of the Dominion Virginia Power SPCC Plan are included in Appendix D of this Plan.

6.5 SPILL REPORT AND EVENT ANALYSIS

The responsible line manager should record the event on an Oil Spill Report as included in Chapter 6732 of the EH&S Manual. A blank form is included as Figure 6-3.

A Notable Event should be completed following any discharge of oil greater than five gallons, or any oil discharge to a storm water channel, swale, or sewer (storm or sanitary). The appropriate division line manager, with assistance from the division EH&S staff will conduct this formal review and analysis of the incident. The process will include at a minimum:

- Interviews with the person or persons involved in the incident, any witnesses, the person in charge of the process/equipment involved, and the building Safety Warden to understand the event, its cause, and how the response was handled.

Figure 6-3

6732-T5

Appendix 6732-T5 SPCC Oil-Spill Report Form

Date/time discovered _____ Notification Date _____
 Name of Responder _____ Work Phone _____
 First reported by _____ Phone where first reporter can be reached _____
 Reported Injuries _____

If so, was ambulance dispatched? _____ Yes _____ No

Fire Hazards _____
 If so, was fire department dispatched? _____ Yes _____ No



Type of Oil or Fuel discharged _____
 Quantity Spilled _____ gallons
 Exact Location of Spill _____
 Source _____
 Is it flowing? _____ Is it contained? _____

Weather Conditions _____

Ground Conditions _____

Miscellaneous Information (note cause if known) _____

Was ≥ 5 gallons spilled? _____ Yes _____ No

Did any reach a ditch or storm drain? _____ Yes _____ No

Did any reach a sanitary sewer? _____ Yes _____ No

If yes to any of the above, notify EH&S staff to coordinate the preparation of an Event Analysis. Ensure Facility Manager notified at 876-1750.

Signature: _____ Date: _____

**Fill out this form the same day the spill event is discovered and hand carry to:
 SPCC Coordinator, MS 28H and Division EH&S officer.**

Please note actions taken and completion status on back of this form

- Discussion with others involved with similar processes/equipment to identify possible changes to prevent a similar incident and to relay lessons learned from the event.
- Preparation of a written brief to the division's Associate Director detailing the cause and response, and any recommended changes to prevent similar occurrences.
- After consultation with the SPCC Coordinator and the responsible division's EH&S staff, a safety briefing should be held for all involved and a memorandum to concerned staff could be issued.

Copies of the Spill Report, including the Notable Event if applicable, should be provided by the responsible line manager to the Division EH&S Officer, the EH&S Reporting Manager, and the SPCC Coordinator.

The SPCC Coordinator should provide a copy to the Facility Manager, the DOE ES&H Manager, and the Chemical Assistance Team Leader to ensure they have a record of the event.

Some discharges, as identified in the regulations and the Jefferson Lab Occurrence Reporting Plan, contain additional reporting requirements. This information can be found in the Jefferson Lab EH&S Manual, Chapter 5300, *Occurrence Reporting*.

7.0 ADMINISTRATION AND SECURITY

This section describes the administrative elements essential to proper implementation of the SPCC Plan, including SPCC coordination, training, inspections, recordkeeping, and security.

7.1 SPILL PREVENTION AND RESPONSE COORDINATION

The SPCC Coordinator at Jefferson Lab (identified in Section 3.0) is responsible for assisting line management by providing oversight of oil spill prevention and response activities. Duties include surveying the facilities and overseeing the spill prevention program. Training programs are coordinated with the Training and Performance Manager and provided by line management. In addition, the SPCC Coordinator works with line management to update and amend the SPCC Plan as detailed in Section 7.7. Subsequent to approved plan revisions, the SPCC Coordinator communicates appropriate changes to the EH&S Policy and Manuals Manager to assure that Chapter 6732, *Oil-Spill Prevention, Control, and Countermeasures*, of the Jefferson Lab EH&S Manual reflects the identified changes. Chapter 6732 implements the SPCC Plan in accordance with requisite regulations and the Jefferson Lab's organizations and capabilities.

7.2 SPILL PREVENTION BRIEFINGS AND TRAINING

40 CFR 112.7 requires that facility personnel be properly instructed in the operation and maintenance of equipment to prevent spills. Additionally, spill prevention briefings for operating personnel should be frequent enough to assure adequate understanding of the pertinent aspects of the SPCC Plan. The objective of the spill prevention and control training program is to reduce the likelihood and impact of oil spills. The training program consists of a formal training session, SAF 123, available on-line, that is required for all "Oil workers" (staff with oil handling responsibilities). A yearly briefing (starting in 2004) must be provided to all Oil Workers. As part of the program, periodic follow-up briefings by line management reinforce the formal training. Jefferson Lab ensures that employees are instructed in and understand their roles as described in Chapter 6732 of the Jefferson Lab EH&S Manual.

General spill prevention and response awareness training is provided to all Jefferson Lab employees, users, and subcontractors through the Jefferson Lab EH&S Orientation training program. Line Managers and their designees and Subcontracting Officer's Technical

Representatives (SOTRs) conduct briefings to make certain that facility personnel and subcontractors who handle petroleum products understand the SPCC Plan, are properly instructed in the operation and preventive maintenance of equipment to prevent spills, and are informed about the provisions in Chapter 6732 of the EH&S Manual. At a minimum, the training is provided once every three years and when new or newly transferred personnel begin work at places where petroleum products are stored or handled. Oil spill prevention training of new or newly transferred personnel occurs within 1 month of beginning the assignment. Line management and SOTRs are responsible for adding this requirement to each Oil Workers individual training plan (ITP) and ensuring the staff complete the training. Supervisors may elect to have training requirements met through web-based interactive training, to the extent this type of training is available. This setup and implementation would be coordinated through the Training and Performance Manager. This group has a system in place to track individual training requirements based on each individual's ITP. Supervisors are encouraged to use ITPs for all employee training needs.

The following topics should be addressed during facility training and briefings:

- Facility SPCC Plan
- Recent spills at the facility, causes, corrective actions taken, and lessons learned from facility releases and throughout the DOE community
- New spill prevention measures, equipment utilization, and safety procedures
- Upcoming equipment changes that might affect spill control planning or implementation
- Emergency procedures
- Inspection procedures
- Safety and health factors

The following topics should be addressed in the annual briefings: (new 112.7(f)(3))

- Review of discharge prevention procedures
- Description of known discharges or failures, such as spill events
- Information on any new precautionary measures
- Any other related lessons learned information

Task-specific practices and procedures are conveyed through on-the-job training. Security guards should be trained by Facilities Management line management. Records of oil spill prevention and response training should be maintained by the EH&S Training and

Development Manager during the employee, user, or subcontractor's tenure at Jefferson Lab plus 1 year.

7.3 STANDARD OPERATING PROCEDURES

Written SOPs and other work-control documents (see the Jefferson Lab EH&S Manual) are required and include:

- Inspections (see Section 7.4)
- Proper loading and unloading operations
- Scheduled maintenance

In addition to the specific SOPs identified above, EH&S staff should note additional operations at Jefferson Lab which require standard procedures to avoid a spill. A copy of all petroleum-related SOPs are available in the work area involved, and kept on file by the SPCC Coordinator, the Division EH&S Officer, and the EH&S Reporting Manager.

7.4 INSPECTIONS

40 CFR 112.7(e)(8) requires that inspections be a regular part of the SPCC program. Inspection frequency varies depending on the use of the equipment. In general, formal monthly inspections are performed at Jefferson Lab for petroleum operations and equipment other than those involving spare and non-curbed transformers, which are inspected twice monthly. Details are provided in Chapter 6732 of the EH&S Manual.

Items to be inspected include the following:

- Tanks and containers
- Oil-level monitoring or control systems
- Transfer system operations and components
- Spill control equipment and kits (annually or after a spill event)

- Drainage control systems

A visual inspection is the simplest way to detect corroded or broken equipment. An inspection checklist from Chapter 6732 of the EH&S Manual is provided in Appendix E of this Plan. During these inspections, facility personnel may discover deficiencies in equipment or in procedures. These deficiencies should be reported on the checklist and relayed to the appropriate line manager. The SPCC Coordinator receives copies of all written transformer inspections for inclusion in the SPCC Plan master file. Other inspection records are provided to the SPCC Coordinator upon request, and filed as determined necessary. The line managers should provide an annual summary report of deficiencies to the SPCC Coordinator if not already provided as part of the record. The SPCC Coordinator should compile information to determine if program adjustment is necessary and share it with the Lab oil worker community.

7.5 RECORDKEEPING

SPCC regulations require records of inspections, training, incidents, and maintenance. These records must be organized and readily accessible at the facility. The SPCC Coordinator retains the Master SPCC Plan, written inspection procedures, and records of identified inspections for 3 years. Appropriate line management should retain copies in their work areas. Training record retention is discussed in Section 7.2.

The following records are maintained:

- Training Documentation. Records that show the briefings and training sessions for those facility personnel working at or with the oil facilities.
- Inspection Documentation. Written procedures for required inspections; records of those inspections performed by facility personnel; records of corrective action taken to remedy identified deficiencies.
- Maintenance Documentation. Maintenance schedules, including integrity test schedules for drums, mechanical equipment, valves and piping, transfer structures, containment structures, and oil/water separators, and records of construction, maintenance, repair, and/or integrity testing.

- Spill Incident Documents. Spill event reports, Notable Event reports, and costs associated with response including subcontractor and material costs.

7.6 SECURITY

The Site Safeguards and Security Plan (SSSP) serves as the master security planning document at Jefferson Lab. Cross reference the Jefferson Lab SSSP for security operations and physical security measures relevant to spill prevention, control, and countermeasures. Since the plan identifies the generic threat, security interests, and specific security measures that could assist a person in exploiting vulnerabilities in the Jefferson Lab security program the plan is protected as business sensitive and exempt from public release under the Freedom of Information Act.

7.7 SPCC REVIEW AND AMENDMENT

Jefferson Lab shall amend the SPCC Plan in accordance with 40 CFR 112.7 whenever there is a change in facility design, construction, operation, or maintenance which materially affects Jefferson Lab's potential for the discharge of oil into local waterways or into any navigable waters of the United States. The SPCC Coordinator shall oversee the amendment process. Such amendments shall be fully implemented by line management, as overseen by the SPCC Coordinator, as soon as possible, but not later than 6 months after such change occurs.

Under the direction of the SPCC Coordinator, a review and evaluation of the SPCC Plan shall be completed at least once every 5 years starting from the date last certified by a Professional Engineer. As a result of this review, the SPCC Coordinator shall amend the SPCC Plan within 6 months of the review to include more effective prevention and control technology if: 1) such technology will significantly reduce the likelihood of a spill event and 2) if such technology has been field-proven at the time of the review.

Any time an amendment is made to the SPCC Plan, certification by a Professional Engineer shall be obtained.

The results of SPCC Plan reviews will be reflected in chapter 6732 of the EH&S Manual which provides SPCC Plan implementation details for Jefferson Lab personnel.

8.0 EMERGENCY PHONE NUMBERS

The first point-of-contact for reporting a spill is Jefferson Lab Security Post #2, unless an injury is involved.

No Injuries: Jefferson Lab Security Post #2 (CEBAF Accelerator Site Entry Point)
Ext. **4444** (24 Hour Number)

Injuries: 911
Then Ext. **4444**

The Jefferson Lab Security Post #2 officer Gate Guard should activate the staff notification system that includes rapid paging of all regular response staff during normal work hours and identified key staff during other hours. Facilities Management should always be notified. The Facilities Management Director, or an assigned delegate, is notified by Facilities Management response staff immediately following the notification of an incident. The Facilities Management Director shall assist responsible line management by providing support as necessary. The Facilities Management Director will contact the Chemical Assistance Team Leader, if necessary, for spill control corrective actions and clean-up notifications.

Facilities Management Director
Ext. **7400**

Chemical Assistance Team Leader
Ext. **7863**

page 584-7863

In the event a spill meets any of the following criteria, the appropriate line management should coordinate response efforts and notify the Jefferson Lab Facility Manager. Internal notification requirements are: ≥ 5 gallons any place or any discharge that results in a sheen in a storm channel, a storm drain, or a drain leading to the sanitary sewer system.

Facility Manager (or Designee)
757-876-1750

The Responsible Line Manager then notifies the Division EH&S Officer and the SPCC Coordinator at x7308. The Facility Manager should coordinate any necessary notification of the Department of Energy.

Department of Energy Pager Numbers
Jefferson Lab Facility Representative
(Primary) 1-800-918-3951 (B. Morgan)
(Alternate) 1-800-918-3947 (R. Korynta)

The Facility Manager and the DOE should evaluate external requirements. The Reportable Quantity (RQ) for oil is:

- a visible sheen or emulsion in navigable waters (National Response Center and Virginia Department of Environmental Quality (DEQ));
- 25 gallons to land (DEQ); or
- 10 gallons to land (special DOE notification).

If required, DOE should notify the National Response Center and the DEQ - Water Division. Telephone numbers for these agencies are:

National Response Center
1-800-424-8802
202-267-2675 (Direct #)

Department of Environmental Quality - Water Division
Virginia Beach, Virginia
(757) 518-2077
Emergency Operations Center (EOC)
Department of Emergency Management
1-800-468-8892

EPA Region III
Regional Response Center
215-814-9016
1-800-424-8802

Hampton Roads Sanitation District
Emergency Notification
757-874-3979 (Peninsula #)
1-877-261-8411

In the event of a release from a Dominion Virginia Power transformer, the Facilities Management Director should contact Dominion Virginia Power. The following Dominion Virginia Power reporting numbers are used:

1-800-827-6937, Code 63 for Transformer Leak and
for any power outage or equipment failure
757-393-3850, Paul McConvey, Account Manager

In the case of a spill requiring disposal and cleanup beyond Jefferson Lab's capabilities, the responsible line manager or, upon request, the Facilities Management Director, should notify the following contractor:

Industrial Marine Service, Inc.
P.O. Box 1779
Norfolk, Virginia 23501
1-800-229-4671 or 757-543-5718 (both available 24-hours)

Spill containment materials are available from the following suppliers:

Empire Machinery & Supply 711 Howmet Drive Hampton, VA 23661 757-827-1440 (7:30 am - 5:00 pm) 888-5812 Emergency Pager # after hours	Parker Safety 2105-1 - 50th Street Hampton, VA 23661 757-827-9557 (24 hours)
--	---

OBBCO Safety 1737 South Park Court Chesapeake, VA 23320 757-420-4000 (8-5, Monday-Friday)	Industrial Supply Corp. 11621 Ingel Side Road Norfolk, VA 23502 Emergency Contact 1-800 552-3878 x338 (Pager Number)
---	--

APPENDIX A

SPCC REFERENCE INFORMATION

APPENDIX A
VIRGINIA ABOVEGROUND STORAGE TANK (AST) REGULATIONS
(Not Applicable to Jefferson Lab - For Information Only)

9 VAC 25-91-10 et seq. – Above Ground Storage Tanks. This regulation has three basic requirements:

- 1) All facilities that have an aggregate AST storage capacity of over 1,320 gallons of oil or a single storage AST of more than 660 gallons must register with the state. Excluded from this reporting are fuel tanks attached to boilers and AST's attached to working machinery, such as hydraulic reservoirs.
- 2) Requires all facilities with 25,000 gallons or greater of oil in AST's to implement a Spill Prevention Program to minimize the potential for environmental damage in the event of a leak or tank rupture.
- 3) Specifies the requirements for an Oil Discharge Contingency Plan if an individual AST exists that is at least 25,000 gallons or if the total AST capacity at the facility is 25,000 gallons or greater.
- 4) Requires all facilities with 1,000,000 gallons or greater of oil in either one AST or by a combination of ASTs to conduct a Groundwater Characterization Study, implement monthly groundwater sampling, and apply more stringent reporting requirements.

Currently Jefferson Lab does not have any AST over the 660-gallon size nor do we have an aggregate amount of non-exempt oil exceeding the 1320-gallon limit. For these reasons Jefferson Lab does not have to report nor register with the state.

Note: If a change in regulations or in Jefferson Lab's petroleum product management occurs and these regulations become effective, then this SPCC Plan will be amended to comply with the additional Virginia requirements.

REFERENCE INFORMATION

Spill Prevention, Control, and Countermeasures (SPCC) Information Guide August 1993.
United States Environmental Protection Agency Region III Office of the
Environmental Protection Agency, Superfund Removal Branch.

Suggested Procedures for Development of Spill Prevention Control, Countermeasure Plan.
Published by the American Petroleum Institute.

APPENDIX B

SPCC PLAN DISTRIBUTION LIST

APPENDIX B

SPCC PLAN DISTRIBUTION LIST

Control Copy #	Title	Name	Extension Number
01	SPCC Coordinator	Linda Even	(757) 269-7308
02	Facilities Management Director	Rusty Sprouse	(757) 269-7589
03	Cryo System Manager	Dana Arenius	(757) 269-7276
04	EH&S Reporting Manager	Carter Ficklen	(757) 269-7007
05	Security Manager & SOTR* (copy at Jefferson Lab Security Post 2)	Mike Lewellen	(757) 269-7169
06	DOE Site Manager	James Turi	(757) 269-5094
07	DOE Site Office ES&H Program Manager	Barbara Morgan	(757)-269-7139
08	Physics Division Representative	Bert Manzlak	(757) 269-7556
09	MCC Building	Mike Spata	(757) 269-7497
10	EH&S Reporting File Copy	Betty Beeler	(757) 269-7491
11	Director's Command Staff (CEBAF Center)	John Kelly	(757) 269-7531
12	Director's Command Staff (ARC Building)	John Kelly	(757) 269-7531

* Subcontracting Officer's Technical Representative

APPENDIX C

FACILITY SPILL HISTORY

**JEFFERSON LAB
FACILITY SPILL HISTORY**

Date	Description of Spill	Quantity Spilled	Reported to	Corrective Action
10/16/91	Compressor failure resulted in small oil loss released as smoke as it came into contact with hot components. There was no release to the ground. All system interlocks were operating properly. (CHL Building)	Negligible	DOE	Actions involved equipment testing, not oil issues.
11/15/92	A discharge line ruptured on a relocated pump within the K-50 Building behind the CHL Building and on the nearby pavement. There was no discharge to soil.	60 gallons	DOE	Line management addressed equipment installation procedures.
4/13/94	Main hydraulic hose broke loose on a refuse hauling vehicle. Oil spilled onto an asphalt road (outside the EEL Bldg).	8 to 10 gallons	CEBAF	Good weather. CEBAF provided absorbent at start. Subcontractor completed clean-up.
5/3/94	Hydraulic line in a subcontractor's refuse collection truck ruptured onto a concrete loading area.	< 10 gallons	CEBAF	Covered with absorbent by on-site staff. Subcontractor removed oil and oil-contaminated soil
3/22/95	Pole-mounted transformer seal loosened and resulted in slow drips in gravel area.	< 1 gallon	VPCO to CEBAF	Gravel and soil collected for potential recycling

**JEFFERSON LAB
FACILITY SPILL HISTORY (cont'd.)**

Date	Description of Spill	Quantity Spilled	Reported to	Corrective Action
8/11/95	Transformer Mineral Oil leaking at Test Lab Substations 1 and 3. Unit #1 drip at housing and at exterior pipe. Unit #3 has drip at exterior pipe. Small releases to the ground noted. Described in actions to address Condition No. 6.	< 1 gallon	Jefferson Lab	At Unit #1, a container to collect housing leak was installed. Records of collected amounts kept. Concrete cracks at unit were cleaned and sealed. Oil-only sorbent pads and socks were placed around both units. These are inspected at semi-monthly intervals, along with transformers, and replaced as necessary. Upon need of other repairs at transformer, the leaks will also be repaired.
9/19/95	75 gallon oil release from 1/4" semi-rigid tubing break. 5 gallons of oil leaked outside building. No water sources affected. (ESR Building)	75 gallons total (<5 gallons to soil)	Jefferson Lab	Exterior oil covered with sorbent by Jefferson Lab staff. Line Management and EH&S staff cleaned up area and collected contaminated soil.
11/2/95	Diesel fuel residue from overflow pressure valve at tank formed light coating on surrounding pavement. No water or ground affected. (outside Used Oil Storage Shed)	< 1 gallon	Jefferson Lab	Sorbent and control socks placed on area by Jefferson Lab staff. New non-leaking valve installed.
2/9/96	Water side of head exchanger froze, end caps popped and ruptured oil side. Oil (40 gallons±) and water spilled into the secondary containment and onto the adjacent exterior concrete pad (5 gal). No contact with the ground. (K50 Bldg.).	40 gallons total (5 gallons to concrete)	Jefferson Lab	Jefferson Lab provided sorbent at start. Area cleaned up by Jefferson Lab staff.

**JEFFERSON LAB
FACILITY SPILL HISTORY (cont'd.)**

Date	Description of Spill	Quantity Spilled	Reported to	Corrective Action
6/7/96	Tiny oil leak in unit substation E-3 at a threaded gage. No oil reaching floor.	Negligible	Jefferson Lab	No action beyond maintenance and inspection necessary.
1/9/98	The shaft seal at the elevator in CEBAF Center leaked hydraulic fluid beyond the 5-gallon containment and was identified during a City elevator code inspection.	17 gallons	Jefferson Lab	The hydraulic fluid was cleaned up to extent possible. The shaft seal was repaired and the frequency of visual inspections was increased.
1/29/98	During tower demolition work, transmission oil (about 1 pint) from a cooling tower fan was spilled on the concrete pad and ground at the Test Lab (Bldg. 58).	1 pint to ground. Remainder contained (< 1 quart)	Jefferson Lab	Contractor cleaned up area with oil dry. Disposed of contaminated soil and rags off site.
6/11/98	Transformer repair at Test Lab for units identified in 8/11/95 spill was accomplished over the Memorial Day weekend. The oil leak was minimized to extent possible.	< 1 oz/day	Jefferson Lab	Spill pads will remain in place. Visual inspections will continue.
10/14/98	While using a forklift off the road 40 feet north of Building 42, the fuel line broke spilling diesel fuel.	6 oz	Jefferson Lab	Fuel was to be replaced on 10/15/98.

**JEFFERSON LAB
FACILITY SPILL HISTORY (cont'd.)**

Date	Description of Spill	Quantity Spilled	Reported to	Corrective Action
10/20/98	Oil was discharged from a Building 58 transformer onto the transformer pad and the adjacent ground	3.5 gallons	Jefferson Lab	The used oil company was to pump down the internal tank to stop the leak. Also, spill control 'litter' and socks were put down to prevent any further spillage to the ground. A small amount of affected earth along the edge of the pad was removed to a drum for later disposal.
4/1/99	During the process of lowering the gear casing from the cooling tower fan on top of Building 28 to the ground, gear oil leaked onto pavement below, resulting in a sheen.	< 1 quart	Jefferson Lab	Spill socks were put in place. Cleaned up by Plant Engineering (now Facilities Management) and Safety Lab staff. No oil reached any non-paved surface.
11/22/99	On CEBAF Blvd. near the FEL Building a subcontractors boring machine experienced a hose failure in the hydraulic system and a small quantity of hydraulic oil dripped onto the pavement.	< 1 quart	Jefferson Lab	Absorbent socks were placed on the pavement to contain the spill to the pavement. Plant Engineering (now Facilities Management) staff obtained clean up materials and completed clean up by about 1:30 PM, 45 minutes after the spill.
7/26/00	Hydraulic Fluid leak outside CTF building. Leak came from a break in a vendor truck hose. A fine spray was directed toward the building. The line was shut down immediately.	<1 quart	Jefferson Lab	The small amount of oil on ground was cleaned up using absorbent materials. Safety Lab staff wiped down building walls and doors. Contaminated materials were properly disposed of.

**JEFFERSON LAB
FACILITY SPILL HISTORY (cont'd.)**

Date	Description of Spill	Quantity Spilled	Reported to	Corrective Action
8/31/00	Manlift (JLG) hydraulic hose broke spilling hydraulic fluid onto the concrete floor of the Hall A truck ramp.	< 3 gallons	Jefferson Lab	Absorbent socks were placed on the ramp to prevent hydraulic fluid from reaching the floor drain at bottom of ramp. Contaminated materials were properly disposed of.
10/31/00	An oil drum was delivered to Shipping and Receiving and had a small hole in the bottom of the drum. The leak was limited to the concrete floor inside the EEL Building	< 3 gallons	Jefferson Lab	Safety Lab staff controlled the spill. Spilt oil was cleaned up using absorbent materials. The remaining drum contents were transferred to another container. Contaminated materials were properly disposed of.
6/1/01	The pump for the excavation dewatering at the CHL Building had a small leak directly beneath the unit.	< 1 quart	Jefferson Lab	The spill was cleaned up when noticed, but did not leave the vicinity of the pump. Cleanup included replacing the local pavement, which was to happen anyway.
10/16/01	Diesel fuel was discharged from a manlift that was parked on a pad behind the Safety Lab (Bldg. 35). The leak was confined to the pad. The manlift was on an incline and diesel fuel overflowed.	3 quarts	Jefferson Lab	The diesel fuel was contained and peat moss as well as absorbent pads were used to soak up the fuel. The Spill Team leader disposed of the material once the fuel was absorbed.
11/30/01	Pump oil was discharged outside Building 35 from a spill tray pallet. The leak was contained.		Jefferson Lab	The oil was not flowing, so did not reach any storm drain or channel.

**JEFFERSON LAB
FACILITY SPILL HISTORY (cont'd.)**

Date	Description of Spill	Quantity Spilled	Reported to	Corrective Action
12/14/01	The Ensolv leak was from its storage cabinet in front of building 98. The leak was contained.	2 - 3 gallons	Jefferson Lab	The spill was contained and promptly cleaned up.
12/26/01	UCON LB170X oil spilled behind the CHL Building 8, valve problem on a vacuum pump tank.	0.75 gallons	Jefferson Lab	The spill was contained using oil dry valve repair...
3/27/02	Coolant leaked in BSY parking lot.	1 liter	Jefferson Lab	Cooling radiator fluid contained and cleaned up.
6/25/02	Diesel tank cord leaking.	<1 quart	Jefferson Lab	Cord replaced.
1/24/03	Coolant from the furnace system behind the Test Lab leaked from a frozen pipe.	15 gallons	Jefferson Lab	A Notable Event report was filed. Material cleaned up to extent possible. A mix adjustment for temperature was determined necessary.
4/1/03	Pump oil was discharged on gravel in storage area near Canon Boulevard.	3 - 4 gallons	Jefferson Lab	The oil had been at this site for some time. It was cleaned up upon discovery. No impact on local storm water channels.
6/10/03	Gasoline spill seeped out of the fuel line of a car in the parking lot behind the Test Lab, Bldg. 58.	~ 1 gallon	Jefferson Lab	It was verified that no gasoline had entered a nearby storm manhole. The spill was cleaned up the extent possible.
6/11/03	Snorkel Man Lift leaked oil on the parking lot of the Physics Storage Building.	< 1 gallon	Jefferson Lab	The local Physics Safety Warden placed some oil dry under the lift. Improvement suggestions including the addition of a drip pan and a cover on the lift were considered by Facilities Management. It was also suggested to move the lift to a protected area.

**JEFFERSON LAB
FACILITY SPILL HISTORY (cont'd.)**

Date	Description of Spill	Quantity Spilled	Reported to	Corrective Action
7/1/03	Mixture of Polypropylene Glycol and Water, 50/50 spilled at CEBAF Center loading dock (overflow when refilling the Computer Center Glycol Cooling System.)	10-15 gallons	Jefferson Lab	A Notable Event was filed. The material was collected to extent possible, and the minimal remainder hosed down. Extra containment will be provided when performing such operations.
7/8/03	Snorkel Man Lift leaked oil on the parking lot of the Physics Storage Building.	< 1 gallon	Jefferson Lab	Admin and EH&S Reporting staff again went out and emptied the drip pans and replaced absorbent pads. It was again suggested to move the lift to a protected area or just remove from JLab.
10/27/03	Lead shot spill on the corner of Quark Place and CEBAF Bldg. Appeared it had spilled from a vehicle - golf cart or fork lift.	Not noted	Jefferson Lab	The contaminated area was cleaned.
11/7/03	Gycol Freez Control was spilled at the Test Lab, Bldg. 58, in breezeway behind room 144 from a chiller.	1 gallon	Jefferson Lab	Air got into chiller lines and caused the air vent valves to open discharging air and a small amount of Gycol.
2/25/04	A delivery truck hydraulic line broke on the west side of the CHL, Bldg. 8. (on disconnection of filling a compressed gas tank)	~1 to 2 gallons	Subcontractor vehicle	Chemical Assistance Team responded and assisted the driver with clean up, protecting the area with a tarp. The vendor removed the contaminated soil and added topsoil and seed within a few days of the event.
3/26/04	There was an interior spill of lead-containing water inside the Test Lab in the 1 MW test area.	No information	Jefferson Lab	Chemical Assistance Team responded and collected the spill for hazardous waste disposal.
4/8/04	Hydraulic fluid and engine oil was discharged at the Canon Site Boneyard in the gate 15 feet from the front gate. This discharge came from forklift #5 and a Mycom compressor that was being relocated.	2 gallons	Jefferson Lab	There was no flow. The Chemical Assistance Team responded, cleaned up as possible, and protected the area with a tarp. Facilities Management is to remove and dispose of the contaminated gravel.

APPENDIX D

VPCO SPCC PLAN



**VIRGINIA POWER
NORTH CAROLINA POWER**

Memorandum

[REDACTED]

To: Mr. Paul Powers

June 2, 2000

From: Steve Heroux

As you requested, I am sending you a copy of our Oil Spill Counter Measure Plan.

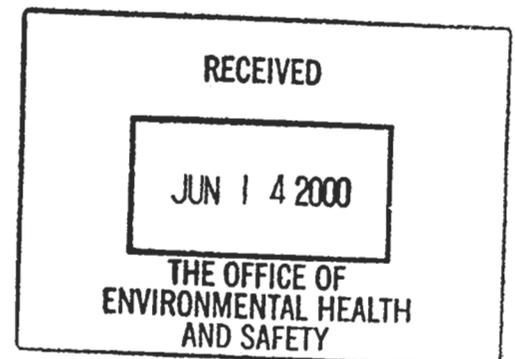
The telephone numbers you requested are:

1-888-667-3000

1-800-827-6937

If you have additional questions, please call me at 757-928-2065.

Steve





VIRGINIA POWER
NORTH CAROLINA POWER

Spill Prevention, Control, and Countermeasure Plan

Eastern Region Office-Hampton
Eastern Region Office-Williamsburg

Virginia Power

October 23, 1997

AGENCY INCIDENT REPORTING CONTACTS

STATE

Virginia

The following DEQ Regional Offices should be contacted during normal business hours (8:15-5:00) to report chemical or oil spills, overflows, bypasses, etc., to the DEQ-Pollution Response Line. Outside of normal business hours, please contact the Department of Emergency Services.

<u>DEQ-Pollution Response Office</u>	<u>Telephone Numbers</u>
Northern (Woodbridge)	(703) 583-3800
Piedmont (Richmond)	(804) 527-5020
Southwest (Abingdon)	(540) 676-4800
Tidewater (Virginia Beach)	(757) 518-2000
Valley (Harrisonburg)	(540) 574-7800
West Central (Roanoke)	(540) 562-6700

Department of Emergency Services (VA) (24 hours)	(804) 674-2400 or (800) 468-8892
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West Virginia

Division of Environmental Protection 24 hours (weekends and holidays)	(804) 642-3074
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Maryland

Department of the Environment 24 hours (weekends and holidays)	(410) 974-3551
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North Carolina

Division of Emergency Management 24 hours (weekends and holidays)	(800) 858-0368
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LOCAL

Local Emergency Planning Committees are established for each locality and for certain incidents may need to be contacted. Each facility should, prior to actual incident reporting needs, contact local official to determine the appropriate local officials to determine the appropriate local contact(s), usually the local fire department.

FEDERAL

National Response Center 24 hours (weekends and holidays)	(800) 424-8802
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FACILITY INFORMATION

Name of Facilities: Eastern Region Office - Hampton
Eastern Region Office - Williamsburg

Type of Facilities: Electric Distribution and Operations Field Offices
(Non-Transportation Related)

Name of Owner/Operator: Virginia Power

Location of Facilities: Hampton Office
902 G Street
Hampton, Va. 23661

Williamsburg Office
4059 Ironbound Road
Williamsburg, Va. 23188-2507

CERTIFICATIONS

Management Certification

This plan has been developed or reviewed by personnel under my supervision. I have the authority to commit the resources to carry out the duties required by this plan, and the plan, will be implemented as written.

Vice President - Distribution Operations: Mr. T. A. Hyman, Jr.

Signature: T. A. Hyman, Jr. Date: 11/13/97

Manager - Distribution Operations: Mr. W. F. Briggs, Jr.

Signature: W. F. Briggs, Jr. Date: 11/13/97

Professional Engineer Certification

I hereby certify that I have examined this plan, and being familiar with the provisions of 40 CFR Part 112, attest that this SPCC Plan has been prepared in accordance with good engineering practices.

Professional Engineer: Claude D. Allen

Signature: Claude D. Allen Date: 10-29-97

Registration Number: 5938



January 6, 1995



VIRGINIA POWER

C.E.B.A.F.
c/o Mr. Paul Powers
12000 Jefferson Avenue
Newport News, Virginia 23606

Virginia Power SPCC Plan - Plan's Effective date: August 8, 1993

Dear Mr. Powers,

Attached is the current Spill Prevention Control and Countermeasure (SPCC) Plan. This plan is prepared in accordance with guidelines contained in the December, 1973, U. S. Environmental Protection Agency (EPA) Issued Regulations in the Federal Register, CFR Title 40, Part 112, to deal with oil pollution prevention.

It is Virginia Power's responsibility and commitment to promptly cleanup and prevent further spillage of any amount of oil into the environment caused by any of its facilities. C.E.B.A.F.'s sole responsibility in the event of an oil spillage will be to notify Virginia Power immediately. Virginia Power can be notified at the following phone number during the specified hours:

(804) 928-2024 (During normal working hours)

(804) 857-2644 (Outside normal working hours)

If you should have any further questions, please contact Todd M. Blanks at (804) 928-2096.

Sincerely,

T. V. Sutor
Director of Customer Service

cc: Mr. Dale F. Robertson
Mr. Robert C. Matthews
Mr. Todd M. Blanks

EASTERN DIVISION

SPILL PREVENTION CONTROL AND COUNTERMEASURE PLAN

This Spill Prevention Control and Countermeasure (SPCC) Plan has been reviewed and approved by me. I authorize commitment of resources necessary for implementation of the plan.

Thomas E. Blaylock
Thomas E. Blaylock

Division SPCC Coordinator
Director of Substation

D. L. Dobbs
D. L. Dobbs

Manager Operations

T. L. Caviness, Jr.
T. L. Caviness, Jr.

Vice President

CERTIFICATION

I hereby certify that I have examined the General Plan, and being familiar with the provisions of 49 CFR, Part 112, attest that the SPCC Plan has been prepared in accordance with good engineering practices.

D. L. Dobbs
D. L. Dobbs

Date: 8-3-93

Registration No.: ⁶⁷³⁰~~10076~~
Commonwealth of Va.

SPILL RESPONSE PROCEDURE

THE FOLLOWING PROCEDURE IS TO BE USED IN THE EVENT OF A SPILL:

1. DISCOVERY AND NOTIFICATION

The manner in which a spill is discovered may be as follows:

- a. Through a routine inspection of a facility
- b. By someone who incidentally observes a spill
- c. By a customer service complaint or notification
- d. By an automatic remote alarm system

Regardless of how a spill is discovered, it should be handled according to the appropriate Spill Response Flow Chart (Exhibit A or B). Should an oil spill occur, immediate action must be taken. If practicable, the person discovering the spill should try to contain the spill by plugging the hole with a wooden peg, duct seal, etc., by upright overturned units, or any other method available. It is imperative that good communication lines be established throughout the cleanup effort. Exhibits C and D provides a telephone listing of Division and System personnel that could become involved.

2. EVALUATION AND INITIATION

The spill should be evaluated quickly to determine the possible consequences. Is the oil PCB or PCB contaminated? What is the probability of the oil reaching a waterway? Are there any governing bodies that need to be notified such as Fire Department, Police, or Coast Guard? The D.O.C., the Division Substation personnel, and the Districts will work together in this effort

according to the appropriate spill response flow chart (Exhibit A or B). A cleanup coordinator should be assigned as quickly as possible for overseeing the cleanup effort. The spill can be contained by:

1. Constructing an earth dam to contain the spill
2. Digging a pit to collect the oil
3. Damming up any ditches to block flow
4. Applying absorbent materials to cleanup the oil

Appendix B contains the information on the movement, containment, and cleanup of oil on land. Appendix A explains the methods that may be used to contain oil in water.

Each district storeroom has materials and equipment that is useful in containment and cleanup operations. This includes 55 gallons drums, absorbent material, portable lighting (big bean lanterns), shovels, and other hand tools. Exhibit E provides a listing of vendors in each district area that can provide additional items like straw bales, wire, and hand tools. In addition, two equipped oil

spill response trailers are available. These trailers are located at the Norfolk and Peninsula offices. Any team truck equipped with a standard company towing package can tow the trailers. Exhibit F provides a listing of what each of these trailers contain.

3. MANPOWER

If an oil spill cannot be quickly contained with Company resources, Exhibit G provides a listing of outside contractors specialized to do this work. The cleanup coordinator has the authority to request this help. The D.O.C. and/or the Division oil spill coordinator can assist in this effort.

4. DISPOSAL OF SPOILS

The solid spoils from the cleanup of an oil spill can be disposed in local landfills provided they will accept this type of material. Any spills of PCB contaminated materials will be cleaned up and disposed of as outlined in Appendix D, PCB Management Plan. Additionally, Exhibit H, pages 1-5 provides oil spill cleanup flow charts showing the specific regulatory requirements for dealing with PCB contaminated and PCB spills.

5. REPORTING

After emergency notification procedures have been followed and the spill has been contained, the spill report form in Appendix E should be completed and submitted.

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The solid spoils from the cleanup of an oil spill can be disposed in local landfills provided they will accept this type of material. Any spills of PCB contaminated materials will be cleaned up and disposed of as outlined in Appendix D, PCB Management Plan. Additionally, Exhibit H, pages 1-5 provides oil spill cleanup flow charts showing the specific regulatory requirements for dealing with PCB contaminated and PCB spills.

5. REPORTING

After emergency notification procedures have been followed and the spill has been contained, the spill report form in Appendix E should be completed and submitted.

PREVENTION OF SPILL

GENERAL

Persons handling oil should follow the procedure described below to prevent possible oil spills:

- a) Oil-filled equipment should be handled with extremes care to prevent rupturing tanks, breaking valves, or overturning units.
- b) Oil-filled equipment should be stored on solid bases to prevent them from turning over.
- c) Extreme care should be taken when transferring oil to prevent overflow of tanks and spillage when connecting and disconnecting hoses.

DISTRICTS

Oil spills that occur outside of substations are generally reported by the public or law enforcement personnel because of an accident involving the public and our facilities. Additionally, trouble calls can result in a serviceman or other Company personnel discovering damaged equipment and oil spills.

Leaking equipment discovered in a field location is placed into a drip pan before hauling to the respective district office location. If the oil cannot be contained to prevent further spillage, the remaining oil in the equipment will be pumped into 55 gallon drums in the field prior to transporting the equipment.

Each district location has a covered area containing a drip pan for any leaking equipment brought into the district yard. Small equipment like reclosers or polemount and small padmount transformers that leak are placed on a raised rack in this drip pan. The remaining oil in the equipment is drained into the drip pan and then into a 55 gallon drum(s), properly labeled, and shipped to the M&S Center for disposal. Once the leaking equipment is cleaned up and secured from further oil spillage, it also is transported to the M&S Center for repair or disposal.

Each district yard contains many pieces of stock oil filled equipment. all of these yards are fenced to discourage unauthorized personnel from tampering with oil filled equipment. In addition, there is a continuous daily movement of Company personnel throughout the district yards which makes spotting oil leaks easier.

SUBSTATIONS

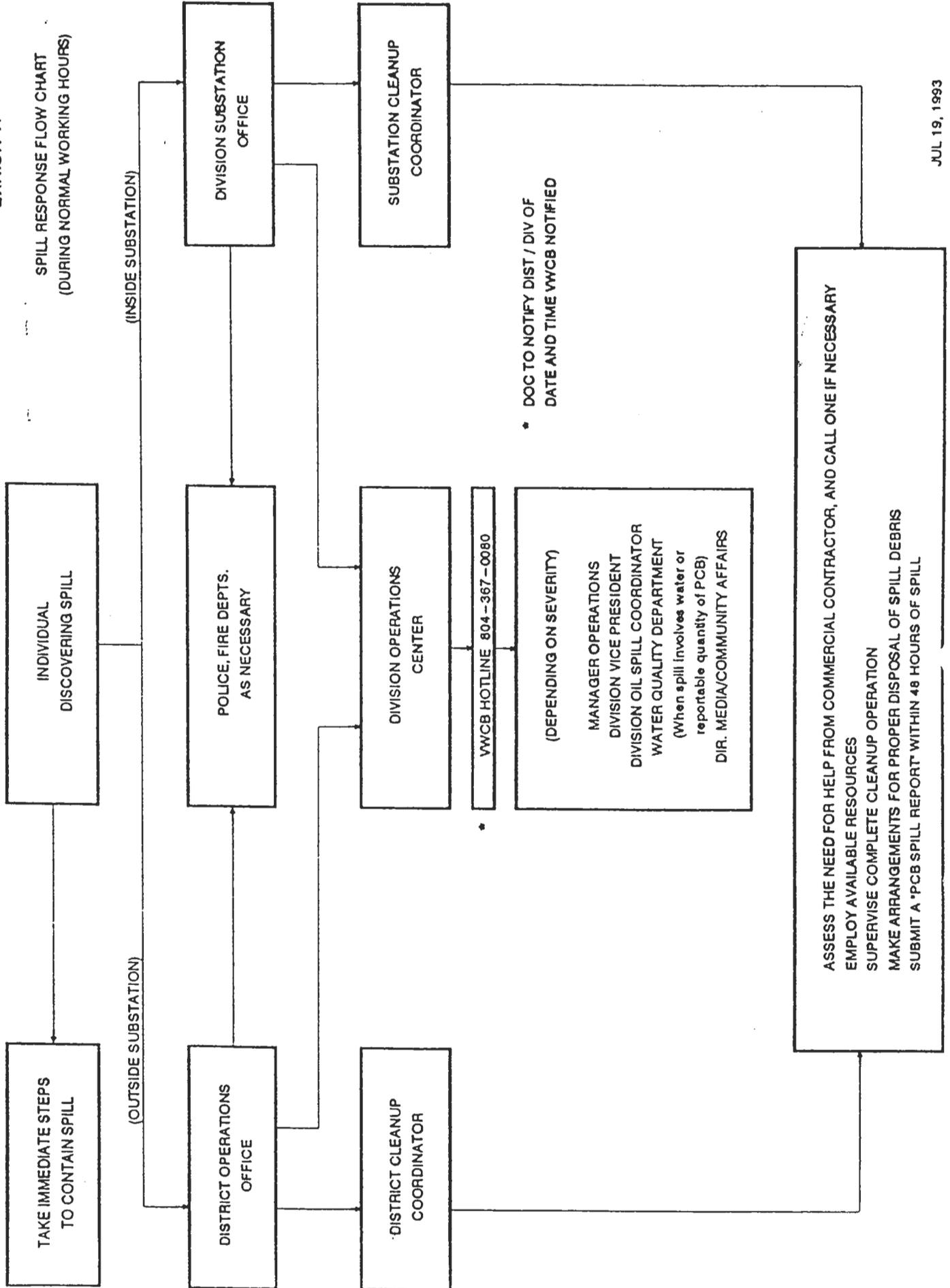
All Virginia Power substations are inspected routinely by personnel familiar with substation equipment and operations. Records of the inspections are kept for three years.

One of the objectives of the inspections is to look for possible oil leaks from Substation equipment. The inspection will help prevent a small oil leak from becoming an oil spill.

If the inspector discovers an oil spill, he will immediately notify the Substation office. Any small leaks like wet areas around gaskets, will be reported on the inspection report forms. A copy of the report will be sent to the Division Substation office for scheduling the equipment for repairs.

All substation sites are fenced to discourage unauthorized personnel from tampering with oil-filled equipment.

EXHIBIT A



APPENDIX B

MOVEMENT, CONTAINMENT AND CLEANUP OF OIL AND LAND

Movement of Oil on Land

Like water, if the oil is not immediately contained, it will tend to flow into existing drainage ditches and storm sewers and enter the surface water that may be adjacent to a spill. Advance knowledge of the locations of storm sewers, sanitary sewers and their destinations should be obtained. If a spill occurs in a location where this is not known, prompt action is required to locate manholes and inlet structures. These structures should be protected immediately before the oil enters drains.

Like some instances, fire departments and others wash spills from accidents into the nearest sewer or ditch to reduce fire or explosion hazards. First priority must go to preventing these hazards but this practice must be avoided if there are other alternatives.

Immediate Measures

Step to be taken following a land spill are as follows: 1) stop the flow of oil at the source, 2) minimize fire and explosion hazards, 3) take immediate measures to minimize seepage to the groundwater or movement to surface waters, and 4) return the area to its original condition.

Immediately after the spill, oil moves into the soil at the fastest rate. The rate of movement will then diminish with time. Some typical vertical velocities for water and various soils are shown in Table 1. If a spill occurred in soil that allowed water to move downward with a velocity of 10 feet per day, then gasoline could move 52 feet per day and crude oil could move only 3 feet per day (see Table 2).

TABLE 1
Rate of Vertical flow of Water into Soil

TYPE OF SOIL	PERMEABILITY (WATER) ft/day
Unweathered Clay	almost nil
Weathered Clay or Clay with Vegetation	30 to almost nil
Very Fine Silt & Sand	3 to almost nil
Clean Sands	3,000 to 3
Clean Gravel	300,000 to 3,000
Mixtures of Silt & Sand with Some Clay	50 to 3

TABLE 2
RELATIVE VELOCITIES OF VARIOUS FLUIDS AT 60°F

FLUID	SPECIFIC GRAVITY	RELATIVE VISCOSITY	VELOCITY*	
			RELATIVE ACROSS THE SURFACE	VERTICAL VELOCITY
WATER	1.0	1.0	1.0	1.0
GASOLINE	0.715	0.4	1.0	5.0
KEROSENE	0.813	1.5	1.0	1.6
CRUDE OIL	0.855	8.0	0.5	0.3
FUEL OIL	0.940	600.0	0.3	0.005

* Velocity compared to water

To be effective, action must be taken immediately. Generally land spills will be recovered in one of the following three places: 1) on the land surface, 2) in the soil below the surface but above the water table, or 3) from the capillary zone above the water table. Usually the most economical recovery takes places from the surface and the most expensive is to remove the oil from the capillary zone.

If oil is to be removed from the soil surface, then the oil must be immediately contained. One method is to construct dikes or ditches to contain the oil. If dikes are constructed, the diked area can be flooded with a shallow layer of water which will cause the oil to float and prevent it from permeating the soil. Ditches can also be effectively flooded to keep oil from infiltrating into the soil. As soon as the oil is contained, it must be removed from the soil and transferred to a tank. A vacuum truck is usually the most efficient method of picking up oil from diked areas or ditches.

If the groundwater is shallow, or the soil is very permeable, it may be advantageous to spread the oil over as large an area as possible. The larger the area for a given volume of oil, the less depth the oil will penetrate. If oil penetrates the soil from only a few feet, it can sometimes be removed by excavation equipment. Oil can sometimes be removed from the soil by use of water sprayed into the loosened soil. Another alternative is to remove the oil and soil and dispose of both at the same time. However, many landfill sites prohibits the dumping of oil and/or oil containment soils. Removal of soil and oil can only be effective if there is a disposal site available.

A new technique that is being tested is to pump nutrients and aerated water into contaminated soil to accelerate biological decomposition. A modification of this is called land farming and is accomplished by periodically plowing and cultivating the soil and adding nutrients.

REMOVAL OF OIL FROM THE WATER TABLE

The primary method of removing oil from the water table is to create a depression on the water table so that the oil will flow into this depression. Oil floating on the water table toward the depression is prevented from migrating further and can be pumped off for disposal. The depression can be created by pumping as shown in Figure 1. The same result can be obtained by use of ditches as shown in Figure 2 if the groundwater table is near the surface.

The use of a well for lowering of the water table will produce from about 3 to 20 barrels of water for each barrel of oil. The use of a ditch will normally produce less water per barrel of oil. As part of your planning for a ground spill, you should locate a place to dispose of the contaminated groundwater or a facility for temporary storage or separation of the oil from the water.

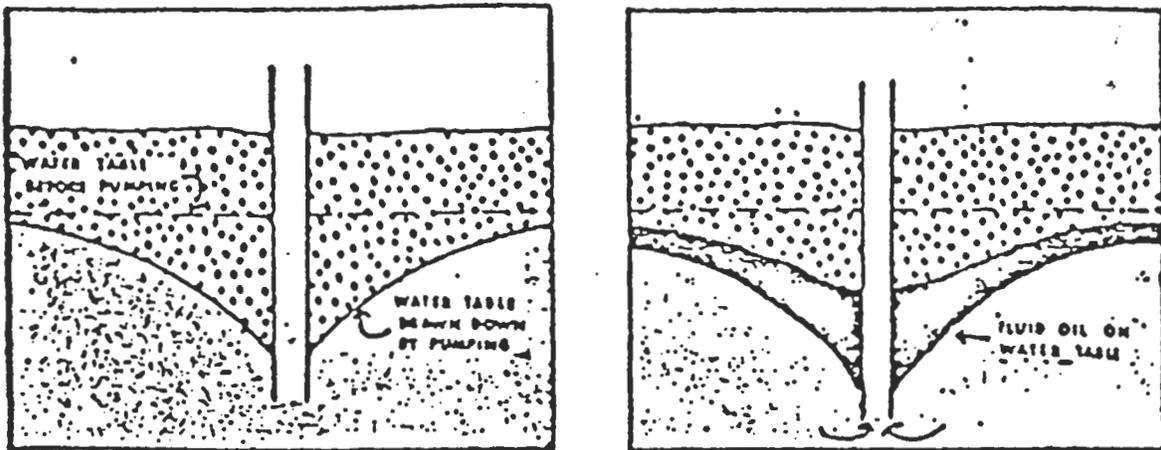


FIGURE 1: Removing Oil from the Water Table by Pumping

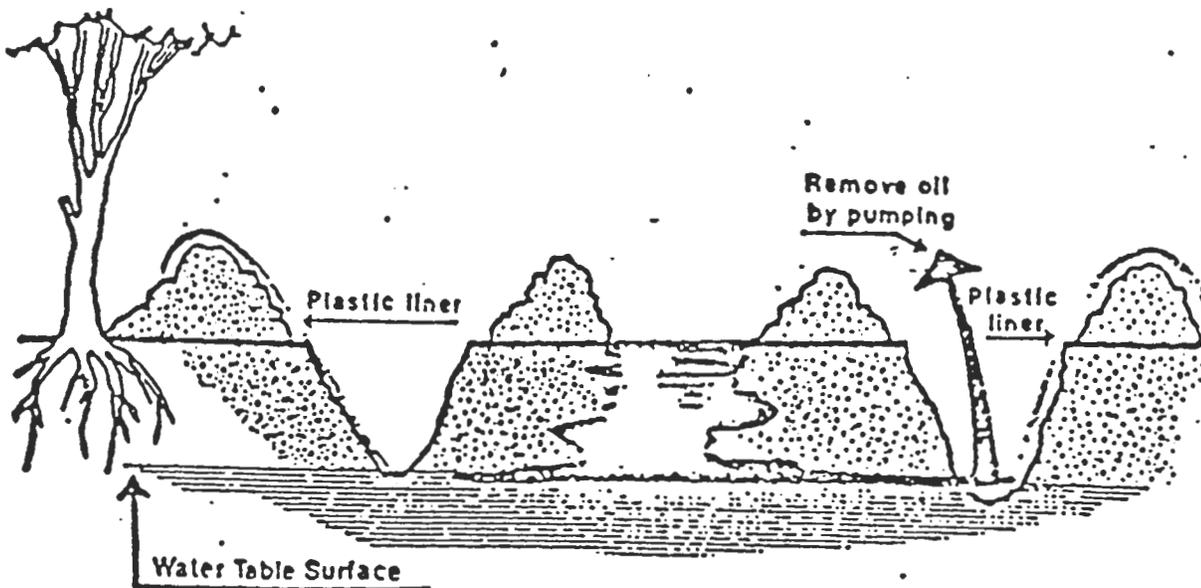


FIGURE 2: Using Ditches to Remove Oil from the Water Table

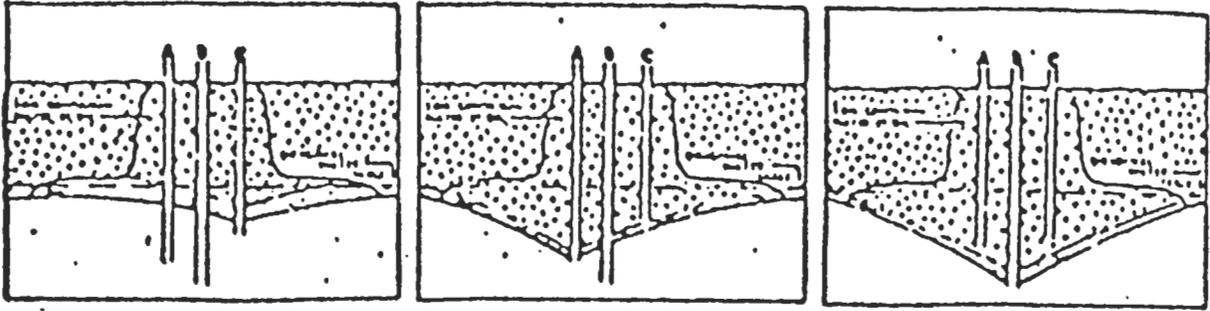


FIGURE 3: Greater Oil Removal Efficiency by Completing Wells to Different Depths

Pumping oil from the water table is not a simple task because it may be difficult to determine the exact location of the oil, the depth to the water table, and the slope of the water table. As a first step, it is usually necessary to dig holes to the water table at points around the periphery of the spill. This can be accomplished by driving or jetting pipe. The presence of the oil can be determined by smell and taste of the recovered water. If oil is detected in a well it is necessary to move further away from the spill until uncontaminated water is found. In this way, the extent of the spill can be determined. The observation holes can be used to estimate the slope of the water table and thus predict the direction of movement of the oil. When the slope and depth of the water table is known, as well as the location of oil, discharge wells can be constructed. Several wells may be located in the proposed zone of depression as shown in Figure 3. If wells are completed to different depths, greater oil removal efficiency can be obtained.

SUMMARY

Oil spilled on land moves over and through soil in a similar manner as water. As oil moves vertically through soil, the oil is sorbed by the soil and vertical movement ceases when: 1) all of the oil is sorbed, 2) when the oil meets an impervious layer of soil, or 3) the oil reaches the water table.

Oil can be removed from the water table by pumps or open drains. Oil can be removed from soil by washing the soil with a pressure hose. Another method is to excavate the oil and soil and dispose of it in a landfill. Accelerated biological decomposition of the oil may be accomplished by adding nutrients and cultivating.

Horizontal movement of oil can be stopped by use of ditches, levees and other barriers. Vertical movement of oil can be prevented by placing a water barrier under the soil.

SPILL PREVENTION AND EMERGENCY RESPONSE PLAN

1.0 Regulatory Authority for Plan

1.1 This Spill Prevention and Emergency Response Plan has been prepared to comply with Section 311(b)(3) of the Federal Water Pollution Control Act (the Act) which prohibits the discharge of oil and hazardous substances into or upon the waters of the United States, adjoining shorelines, or into or upon the waters of the contiguous zone. Further, the Act requires the immediate removal of such spilled material from the environment.

The regulations supporting the intent of the Federal Water Pollution Control Act include 40 CFR Part 300, 40 CFR Part 110, 33 CFR Part 153, 49 CFR Part 171.17, and 40 CFR Part 263.30.

2.0 Potential for Spill Events

2.1 Virginia Power's System Transportation Section of the Transportation Department operates a 22 unit tanker fleet which transports transformer oil and PCB contaminated oil daily throughout Virginia Electric and Power Company's entire system. Each tanker can carry a maximum of 6,500 gallons of product per trip. In addition, hazardous materials and substances are transported by System Transportation vehicles during routine freight shipments between various Company locations. The potential for a highway spill event is further increased when System Transportation moves such equipment as transformers, breakers, regulators, capacitors, oil streamliners, and mobil substations. Therefore, the possibility exists for either a major or medium spill event that could occur on any highway route traveled by System Transportation vehicles.

Highway spill events can be attributed to one or a combination of the following:

Packages not properly blocked and braced
Damaged packages
Vehicle accidents
Loading and unloading procedures
Improper packaging
Worn or leaking valves
Tankers not properly tested for leaks
Open manholes on tankers
Valves not fully seated
Worn out equipment

3.0 Definition of Spill Events

3.1 An oil Spill Event is any discharge of oil into the waters of the United States which:

- 3.1.1 Violates applicable water quality standards, or
- 3.1.2 Causes a film or sheen upon or discoloration of the surface of the water or adjoining shorelines or causes a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines, or
- 3.1.3 May present an imminent and substantial danger to the public health or welfare.
- 3.1.4 Size classes of oil discharge into inland waters:
 - 3.1.4.1 Minor discharge = less than 1,000 gallons
 - 3.1.4.2 Medium discharge = greater than 1,000, but less than 10,000 gallons
 - 3.1.4.3 Major discharge = Greater than 10,000 gallons

3.2 Hazardous substance spill events are defined as any discharge of hazardous substances into the environment.

4.0 Spill Prevention Measures

- 4.1 The below mentioned spill prevention measures should be followed to minimize the possibility of spill events:
 - 4.1.1 Prior to the transport of oil or PCB's in tank trailers, (1) inspect the trailer for leaks, (2) secure all valves, and (3) check all manhole covers.
 - 4.1.2 Upon the completion of loading and unloading tank trailers, (1) insure that all oil lines are empty before storage and (2) cap all outlet valves and wipe clean.
 - 4.1.3 Do not accept for shipment any improperly packaged materials, i.e. severely dented drums, leaking electrical equipment, batteries without plugs, etc.
 - 4.1.4 Properly block and brace all packages against relative motion prior to transport.
- 4.2 Conduct personnel training and awareness seminars addressing the System Transportation drivers. The seminars should key on regulations governing spills, driver response, containment techniques, and notification procedures.
- 4.3 The Vehicle Maintenance Coordinator will perform monthly inspections of all oil tankers and record any discrepancies on the Tanker Inspection Form (Appendix D). The inspection form will be forwarded to the Senior Hazardous Materials Specialist and a copy kept in the central file at OJRP.

5.0 Spill Contingency Plan and Emergency Response

5.1 Emergency Response Team (ERT)

5.1.1 The Virginia Power Transportation Department has organized an Emergency Response Team which has the capability for immediate response in the event of a transportation spill occurrence. The ERT is based in Richmond, Virginia, but has the capacity to respond anywhere in the system on a 24-hour basis. The ERT is equipped with an Emergency Response Vehicle (ERV) which will allow the ERT to control, contain and clean up most small hazardous substance and oil spills. The ERV will also serve as a command center for medium to large capacity spills in which contractors would be required for clean-up.

5.2 Notification and Emergency Response Procedures

5.2.1 Upon discovery of a spill event, the driver or person reporting the spill should notify the System Transportation Dispatcher (see Appendix A - Call Out List). The dispatcher will record all data received on the Spill Report Form (Appendix B).

5.2.2 Reporting - When reporting a spill, the following items must be covered:

- a. Name of the individual calling.
- b. How the individual can be reached, i.e. telephone number or radio frequency.
- c. Report any injuries.
- d. Fire hazards that may be present, i.e. fuel oil, gasoline, propane, etc.
- e. Report the type of pollutant and if the discharge has entered a waterway.

- f. Estimate the quantity of pollutant that was discharged.
- g. Pinpoint the exact location of the spill.
- h. Detail the source of the spill and report if the material is still flowing or the source is secured.
- i. Give a brief weather report, i.e. cloudy, windy, raining, etc.
- j. Miscellaneous information such as:
 - Obstacles restraining clean up
 - The best route to take
 - Local responders on scene
 - Type of terrain

5.2.3 The System Transportation Dispatcher will notify the designated Emergency Response Team Leader who will dispatch the Emergency Response Team. The Team Leader will then inform the Director-Transportation (Materials) of the situation and keep him apprised of the situation throughout the entire event via the communications network. The ERT Leader will also notify the DOC in the division in which the spill occurred so that an immediate response can be carried out by substation personnel (see Appendix A).

5.2.4 The Director of Transportation (Materials) will then notify Public Affairs and Corporate Technical Assessment Water Quality Department (CTAWQ) of the situation (see Appendix A - Call Out List).

5.2.5 CTAWQ should notify the appropriate local, state and federal agencies, but in the absence of CTAWQ personnel response, the Director of Transportation (Materials) or his designee must report the spill event to the following agencies:

	<u>Agency</u>	<u>Phone</u>
a.	National Response Center (for notification of EPA and/or U.S. Coast Guard)	(800) 424-8802
b.	Virginia Water Control Board (Southwest) <u>or</u> Pollution Response Program (PREP) for nights, weekends, or holidays	(703) 828-2595 (804) 257-0080

5.2.6 Immediate response - the driver or individual reporting the spill event should respond immediately on scene by controlling the source of the discharge. This can be done by plugging holes or pipes and closing appropriate valves. In addition, small earthen dams or dikes can be formed to contain the spill to keep it out of water drainage areas. Substation response personnel in the district in which the spill occurred will be dispatched to assist in control and containment of the spilled material prior to the arrival of the Transportation Department ERT.

5.2.7 Emergency Response Team (ERT) - When the ERT arrives on scene, an initial investigation will occur and the decision will be made whether or not spill contractors will be necessary to effect cleanup procedures (see Appendix A - Call Out List for phone numbers of spill contractors). If spill contractor assistance is required, the ERT Leader will inform the Director of Transportation (Materials). The Director will instruct the ERT Leader to dispatch the appropriate spill contractor to the scene. Immediate spill containment and cleanup procedures will be commenced by the ERT.

All control techniques, actions and significant events will be recorded in the Spill Event Log Book located in the Emergency Response Vehicle. The entire spill area will be roped off and secured to the public.

5.2.8 Spill containment and cleanup procedures - Spills should be contained by any or all of the following methods:

- a. Construct an earth dam to contain the spill.
- b. Dig a pit to collect the pollutant.
- c. Dam up any flow in ditches, etc.
- d. Apply sorbent material obtained from ERV.
- e. If the spill reaches a waterway containment should be effected by the use of floating booms in concert with sorbent pads and floating sorbent material. (See Appendix E.)
- f. Oil pumps should be used to remove oil from pits or dammed areas. Saturated sorbent material and contaminated earth should be removed for disposal and stored in DOT 17H or DOT 17C removable head salvage drums. The drums should be properly marked, labeled, and transported following 49 CFR Parts 100-177.
- g. See Appendix E for additional information.

5.2.9 Product Transfer - Should the need arise, oil transfer from a damaged or leaking tank trailer can be accomplished by the use of a portable transfer pump located on the ERV. A good tanker can be dispatched to the spill scene via the communications network, and the transfer of product can be carried out on scene.

6.0 Communication Procedures

6.1 Emergency Response Vehicle (ERV) - The ERV is equipped with both UHF and VHF radio communication equipment. This will enable the ERT to reach any District/Division office or power station in the Virginia Electric and Power Company network. A land line can be established at the nearest Company location to the spill and information relayed to the Director of Transportation (Materials).

6.2 Personal Communication to the Public

6.2.1 All on scene personnel will limit their comments to team members and authorized Virginia Power personnel only. In no situation should the public receive any information except via the Virginia Power Public Affairs Department (PAD). PAD will be kept informed via the Director-Transportation (Materials).

6.2.2 Corporate Technical Assessment Water Quality Department personnel, or in their absence, the Team Leader will communicate with local, state or federal on scene responders.

7.0 Notification to the U.S. Department of Transportation

7.1 The ERT Team Leader will fill out a DOT form F-5800.1 within 15 days of an unscheduled release of hazardous materials. This report will be sent to:

Information System Manager
Materials Transportation Bureau
Department of Transportation
Washington, D.C. 20590

8.0 Documentation

- 8.1 The ERV will be equipped with a desk and Spill Event Log (the Log) book. The Log will be initiated with the first call to the dispatcher and kept current so that a chronological chain of events can be documented, including clean up, communications, local, state and federal personnel on scene, dispatchers spill report, etc.
- 8.2 Spill Report Form - Appendix B includes a sample Spill Report Form to be completed by the dispatcher or the person who receives the initial phone call reporting a spill. This information will then become a part of the official log book documentation.

9.0 Disposal

- 9.1 Disposal of Oil and Cleanup Materials - It is necessary that the oil and materials used to clean up oil spills are properly disposed of. Proper disposal of the cleanup material is dependent upon whether the oil spilled needs to be classified as hazardous or non-hazardous.

- 9.1.1 Determination of Hazardousness - A waste oil will be considered to be a hazardous waste by the EPA if it fails any of the four tests for hazardous characteristics (corrosivity, reactivity, ignitability, and toxicity). A waste oil may also be considered a hazardous waste if another hazardous waste is mixed with the oil.

Waste oil may need to be tested to determine whether it is hazardous or non-hazardous. One possible exception to the testing requirement is the use of good objective knowledge that the oil is not hazardous. In many cases, this exception cannot be applied due to lack of sufficient supporting information.

The two tests that usually apply to oily wastes are ignitability and toxicity. Testing may not be required if the flash point of the oil is greater than 140°F and we have "good objective knowledge" that it does not contain any PCB's or additives or contamination that would cause it to fail the toxicity test. The use of "good objective knowledge" must be discussed with the Water Quality Department on a case by case basis.

9.1.2 Oil to be Burned as Fuel or Reclaimed - If used or spilled oil is to be recycled or burned as a fuel for the purpose of recovering usable energy, the oil is not a "hazardous waste" because EPA regulations do not consider it to be a "waste." Therefore, if used oil is going to be burned or reclaimed, it is not necessary to determine whether the oil is hazardous or non-hazardous "waste."

9.1.3 Non-hazardous Waste Oil - Non hazardous waste oil may be disposed of by acceptable disposal techniques for liquid wastes. Depending on the quantities involved, the waste oil may be incinerated or mixed with a solid and placed in an approved landfill.

9.1.4 Hazardous Waste Oil - Hazardous waste oil to be disposed of without burning as a fuel or reclaiming may be stored on the premises for up to 90 days. The oil must be stored in properly marked containers or tanks. The containers must be marked with the date the waste oil was first put in to accurately keep records of the 90 day storage period.

A hazardous waste oil must be taken to an EPA approved treatment, storage, or disposal facility (TSDF). The Company is responsible for assuring that the waste reaches the TSDF. This is done by following the manifest shipping procedures required by the EPA.

Hazardous waste oil cannot be loaded on Company vehicles. Virginia Power does not possess an EPA identification number necessary to transport hazardous waste. All hazardous waste must be handled by an approved disposal contractor.

- 9.1.5 Disposal of Waste Oil/Spill Clean Up Materials - During the clean up of waste oil and oil spills, solid wastes are generated consisting of oil snares, absorbant pads and pillows, damaged boom, sawdust, etc. The disposal of these materials should be treated the same as the waste oil.

If the waste oil is found to be non-hazardous, the cleanup materials may be disposed of in an approved landfill. The Water Quality Department can provide assistance in locating an acceptable landfill.

If the waste oil is found to be hazardous, the cleanup materials must be disposed of in the same manner as the oil. That is, the solid wastes must be taken with the oil to an approved EPA Treatment, Storage, or Disposal Facility (TSDF) using the manifest shipping procedure required by EPA.

- 9.1.6 Waste Disposal Contractors - Waste disposal contractors that can be contacted for disposal of non-hazardous solid wastes will be found in Appendix A, Spill Call Out List.

9.2 Hazardous Materials

- 9.2.1 All hazardous materials spills will be considered hazardous waste when disposing of the spoils. Hazardous waste cannot be transported on Company vehicles because Virginia Power does not have the EPA

identification number necessary to transport hazardous waste.

The spoils will be drummed and stored at the spill site in DOT 17C or 17H drums until an appropriate disposal contractor can be acquired to haul the waste to an EPA approved landfill. Water Quality Department will be contacted for advice concerning disposal.

10.0 Emergency Response Vehicle

10.1 In the event spill contractors are called in to clean up a spill, the Emergency Response Vehicle (ERV) will remain on scene with a Team Leader and a log/communications person. This will be necessary to direct clean up activities and record significant events in the Spill Log Book. The ERV will also act as a communications base so that information may be relayed to the appropriate personnel.

11.0 Training

11.1 Training classes for Emergency Response Team and Transportation (Materials) personnel will be held on a quarterly basis to include oil spill control and clean-up techniques, hazardous materials handling, first aid, hazardous materials spill control and clean-up techniques, as well as emergency repair to damaged packages and equipment.

APPENDIX B
Spill Report Form

Time: _____ Date: _____

Name: _____ SSN: _____

Name of Caller: _____

Phone where Caller can be Reached: _____

Reported Injuries: _____

If so, was ambulance dispatched? _____ Yes _____ No

Fire Hazards: _____

If so, was fire department dispatched? _____ Yes _____ No

Type of Pollutant Discharged? _____

Quantity Spilled: _____ gallons

Exact Location of Spill: _____

Source: _____ Flowing _____ Secured _____

Weather Condition: _____

Miscellaneous Information: _____

Signed: _____ Date: _____

APPENDIX E

INSPECTION CHECKLIST
(From Chapter 6732 of the EH&S Manual)



6732-T4

Appendix 6732-T4 SPCC Inspection Checklist-Single Container

1. Description of Oil Container (tank, drum, piece of equipment, etc.)
(include building and location):

Monthly _____ Annual _____

2. Comments: _____
3. Oil Capacity: _____

	YES	NO
4. Is the container leaking?	<input type="checkbox"/>	<input type="checkbox"/>
5. Are any pipes, valves, or pumps leaking?	<input type="checkbox"/>	<input type="checkbox"/>
6. Are any hydraulic hoses leaking?	<input type="checkbox"/>	<input type="checkbox"/>
7. Are there any oil stains on the exterior tank walls?	<input type="checkbox"/>	<input type="checkbox"/>
8. Are there any oil or petroleum products on the ground around the tank or machinery or in the secondary containment area?	<input type="checkbox"/>	<input type="checkbox"/>
9. Are there any indications of corrosion at fitting joints or seals?	<input type="checkbox"/>	<input type="checkbox"/>
10. Are there any raised spots or dents on the tank surface?	<input type="checkbox"/>	<input type="checkbox"/>
11. Does it appear that the foundation has shifted or settled?	<input type="checkbox"/>	<input type="checkbox"/>
12. Are there cracks in the equipment supports?	<input type="checkbox"/>	<input type="checkbox"/>
13. Are any of the oil-related labels or signs illegible or missing?	<input type="checkbox"/>	<input type="checkbox"/>
14. Is oil-containing equipment or container susceptible to physical damage (i.e., motor vehicles, falling objects, etc.)	<input type="checkbox"/>	<input type="checkbox"/>
15. If rainwater is present in the secondary containment area, does sufficient volume remain for spill control?	<input type="checkbox"/>	<input type="checkbox"/>



Thomas Jefferson National Accelerator Facility

EH&S Manual
6732-T4 SPCC Inspection Chklist

General Comments/Observations, Procedure Deficiencies:

If a "yes" answer was recorded for any of the Items 4 through 14, or a "no" answer was recorded for Item 15, corrective action is required. Describe action taken and the date below:

Signature

Date

Send completed copy to: SPCC Coordinator MS 28H