WVNSCO
West Valley Nuclear Services Company

Lori-Anne E. Kearney
Configuration/Document Control Lead
MS AOC-21
10282 Rock Springs Road
West Valley, New York USA 14171-9799
Phone: (716) 942-4500/Fax: (716) 942-4074

To : Off-Site Controlled Copy Holders

cc : P. J. Beiersdorf AOC-21
D. L. Horton AOC-21
G. M. Nidell AOC-21
C. M. Schiffhauer AOC-21

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Date : April 8, 2003

Subject : Changes in WVNSCO Document Control Program

Reference: DCIP-106, Rev. 0, "Controlled Document Distribution and Use."

Effective April 4, 2003, WVNSCO implemented new changes in our Document Control Program. One of the primary changes was to eliminate the use of receipt acknowledgments when controlled documents are transmitted to controlled copy holders.

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1) Determine if you still have a need to receive the controlled documents on your list.

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MANUAL ID: WVDP-043 WEST VALLEY DEMONSTRATION PROJECT SPILL PREVENTION CONTROL AND COUNTERMEASURE PLAN

TRANSMITTAL NUMBER: 20128

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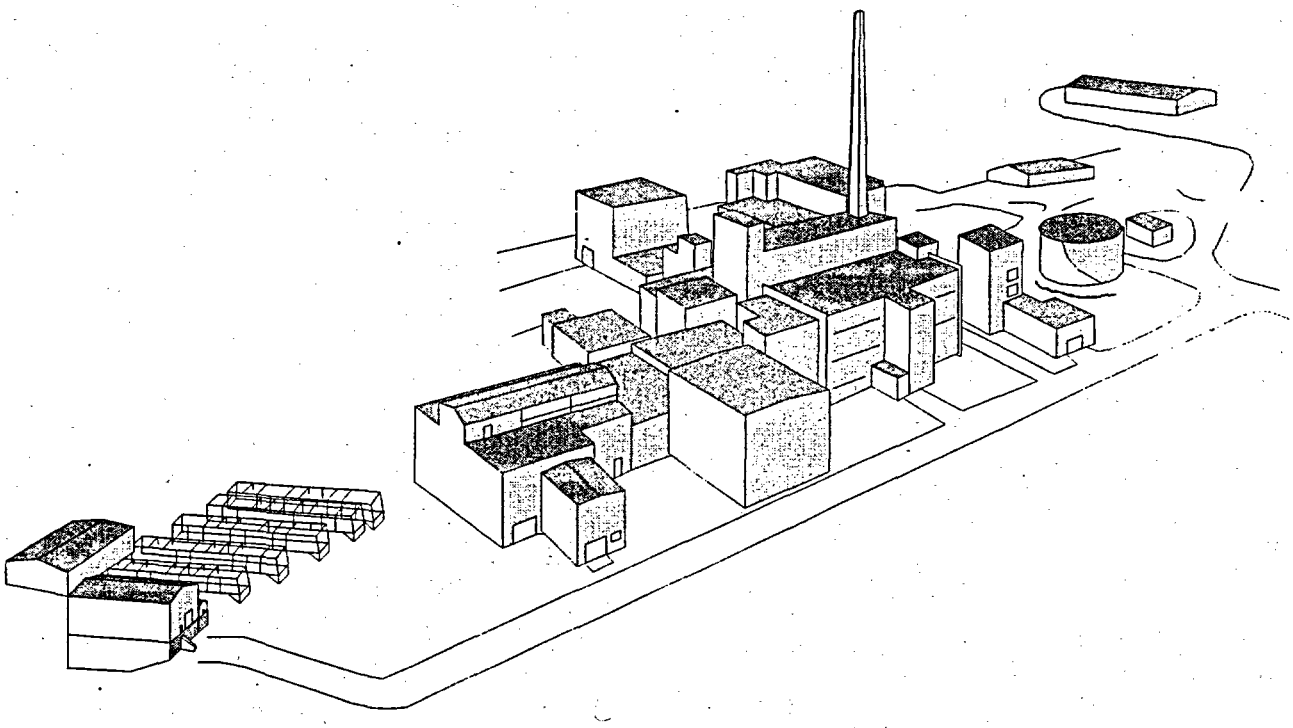
WEST VALLEY DEMONSTRATION PROJECT
SPILL PREVENTION CONTROL AND COUNTERMEASURE PLAN



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West Valley Demonstration Project

10282 Rock Springs Road
West Valley, New York USA 14171-9799

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WEST VALLEY DEMONSTRATION PROJECT
SPILL PREVENTION CONTROL AND COUNTERMEASURE PLAN

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Cognizant Author: Arvind Shukla, Senior Environmental Engineer
Environmental Affairs

Cognizant Manager: William M. Wierzbicki, Manager
Environmental Affairs

Approved By: John R. Gerber, Manager
Regulatory and Compliance Programs

NOTE *This plan is an adjunct to WVDP-022, the WVDP Emergency Plan. The Spill Prevention Control and Countermeasure Plan must be reviewed with five (5) years of date of issue and amended if necessary within six months of the date of review to include the changes in regulations and changes in the facility operations.*

WVNSCO
West Valley Nuclear Services Company

10282 Rock Springs Road
West Valley, New York USA 14171-9799

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PART I

SPILL PREVENTION CONTROL AND COUNTERMEASURE (SPCC) PLAN

Original issue - September 1991

Updated - May 2003

WEST VALLEY DEMONSTRATION PROJECT
10282 ROCK SPRINGS ROAD
WEST VALLEY, NY 14171-0191
EPA ID NUMBER - NYD 980779540

1.0 INTRODUCTION

1.1 Purpose - This Spill Prevention Control and Countermeasure (SPCC) Plan has been prepared in accordance with the requirements of Title 40 of the code of Federal Regulations (CFR) Part 112. The intent of this document is to establish a logical and methodical plan for preventing and controlling oil spills that will minimize the potential for discharge of oil into any navigable waters of the United States (e.g., Erdman Brook, Buttermilk Creek) from the WVDP.

This plan provides guidelines for prevention and control of oils, diesel fuel, and gasoline releases in storage and transfer areas throughout the WVDP site. This plan also describes the reporting and remedial actions that are necessary in the event of release of oil, diesel fuel, or gasoline. It will assure that the necessary personnel are informed and their duties and responsibilities as well as a definite chain of command, are defined.

1.2 Definitions - Technical terms used or referred to in the Spill Prevention, Control, and Countermeasures Plan are defined as follows:

1.2.1 Best Management Practices (BMPs) - Schedules of activities, maintenance procedures, prohibitions, and other management practices to prevent or reduce pollution of U.S. waters. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge and waste disposal, or drainage from raw materials storage.

1.2.2 Combustible Liquid - Any liquid having a flash point at or above 100°F (37.8°C).

1.2.3 Container - Any portable device in which a material is stored, transported, treated, disposed of, or otherwise handled.

1.2.4 Containment - An enclosure or entrapment that prevents further spread of a spilled material.

1.2.5 Containment Volume - The volume of a diked or curbed area minus the displacement volume of structures within the diked or curbed area.

1.2.6 Contingency Plan - A document setting out an organized, planned, and coordinated course of action to be followed in case of a fire, explosion, or release of oil or hazardous waste or hazardous waste constituents which could threaten human health or the environment.

1.2.7 Dike - An embankment or ridge of either natural or man-made materials used to prevent the movement of liquids, sludges, solids, or other materials.

1.2.8 Disposal and Transportation of the Spilled Substance - Cleanup of a material from a spill site and transportation of the spilled substance to approved disposal facilities.

1.2.9 Environmental Incident - Any accident or occurrence that involves uncontrolled release or has the potential for uncontrolled release of oil or hazardous materials to the environment. This includes violations of a discharge permit.

1.2.10 Flammable Liquid - Any liquid having a flash point below 100°F (37.8°C) except any mixture having components with flashpoints of 100°F or higher, the total of which make up 99% or more of the total volume of the mixture.

1.2.11 Harmful Oil Discharges - Defined in 40 CFR 110.3 [in compliance with Statute Section 311 (6)(3) of the Clean Water Act], as discharges that "(a) violate applicable water quality standards or (b) cause a film or sheen upon or discoloration of the surface of the water or adjoining shorelines or cause a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines."

1.2.12 Material Safety Data Sheet (MSDS) - a document describing the physical, chemical and hazardous properties of a substance, prepared in accordance with paragraph (9)(g) of 29 CFR 1910.1200, Occupational Safety and Health Administration (OSHA).

1.2.13 Navigable Waters - Defined in Section 502(7) of the Clean Water Act (CWA) to mean "waters of the United States, including the territorial seas," and including, but is not limited to: (1) All waters which are presently used, or were used in the past, or may be susceptible to use as a means to transport interstate or freight commerce, including all waters which are subject to the ebb and flow of the tide, and including adjacent wetlands. The term "wetlands" as used in this regulation shall include those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas. The term "adjacent" means bordering, contiguous, or neighboring. (2) Tributaries of navigable waters of the United States such as interstate lakes, rivers, streams, mudflats, sandflats and wetlands, the use, degradation or destruction of which affect interstate commerce including, but not limited to:

A. Interstate lakes, rivers, streams, and wetlands which are utilized by interstate travelers for recreational or other purposes;

B. Interstate lakes, rivers, streams, and wetlands from which fish or shellfish are or could be taken and sold in interstate commerce; and

C. Interstate lakes, rivers, streams, and wetlands which are utilized for industrial purposes by industries in interstate commerce.

1.2.14 Oil - Oil of any kind or in any form including but not limited to petroleum, fuel oil, sludge, oil refuse, and oil mixed with wastes other than dredged spoil. In complying with 40 CFR Part 112, the owner or operator shall read "oil (s)" as "PCB(s)" whenever it appears.

1.2.15 PCB-Contaminated Electrical Equipment - Any electrical equipment, including but not limited to transformers, capacitors, circuit breakers, reclosures, voltage regulators, switches, electromagnets, and cable that contain 50 ppm or greater PCBs but less than 500 ppm PCBs. Oil-filled electrical equipment other than circuit breakers, reclosures, and cable whose PCB concentration is unknown must be assumed to be PCB-contaminated electrical equipment.

1.2.16 PCB Transformer - Any transformer containing 500 ppm or greater of PCBs.

1.2.17 Primary Containment - The tank or container for holding hazardous materials, hazardous wastes, or oils.

1.2.18 Reportable Quantity (RQ) - Quantity of a substance that may be harmful as set forth in 40 CFR 117.3 and 40 CFR 302. The discharge of an RQ is a violation of the FWPCA and must be reported to EPA.

1.2.19 Reasonable Potential - Likelihood of occurrence at a probability that is less than 1:1,000,000.

1.2.20 Secondary Containment - A containment system which is capable of holding and collecting any spills, leaks, rainwater, and/or fire protection water (e.g., sprinkler system discharge) originating from primary containment vessels and other process equipment.

1.2.21 Sheen - An iridescent appearance on the surface of water.

1.2.22 Sludge - An aggregate of oil or oil and other matter of any kind, in any form other than dredged soil, having a combined specific gravity equivalent to or greater than that of water.

1.2.23 SPDES Permit - State Pollutant Discharge Elimination System Permit required by the Environmental Protection Agency (EPA) and the New York State Department of Environmental Conservation (DEC). This permit describes the limits of any material that may be contained in process water, groundwater, or storm water discharge associated with industrial activity. The SPDES permit specifies the required testing and analyses, the frequency of analyses and the parameters for which analyses must be performed.

1.2.24 Spill/Release - Any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping or otherwise disposing of substances from the ordinary containers (including piping or equipment) employed in the normal course of storage, transfer, processing or use. For the purpose of this plan, spill/release shall not include any discharge authorized by a permit issued pursuant to the Clean Air Act (CAA); Clean Water Act (CWA); Safe Drinking Water Act (SDWA); or any other state environmental permitting release program.

1.3 Acronyms

AEOC	Alternate Emergency Operations Center
BMPs	Best Management Practices
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CFR	Code of Federal Regulations
CHEMTREC	Chemical Transportation Emergency Center
CHRIS	Coast Guard Chemical Response Information System
CWA	Clean Water Act
DOE-OH/WVDP	United States Department of Energy - Ohio Field Office/West Valley Demonstration Project
DOT	United States Department of Transportation
EA	Environmental Affairs
EMT	Emergency Medical Technician
EOC	Emergency Operations Center
EPA	United States Environmental Protection Agency
ERO	Emergency Response Organization
FWPCA	Federal Water Pollution Control Act
HLW	High Level Radioactive Waste
IC	Incident Commander
IWSF	Interim Waste Storage Facility
MPO	Main Plant Operations
PSOSS	Plant Systems Operations Shift Supervisor
MSDS	Material Safety Data Sheet
NFPA	National Fire Protection Association
NFS	Nuclear Fuel System
NYCRR	New York Code of Rules and Regulations
NYSDEC	New York State Department of Environmental Conservation
NYSERDA	New York State Energy Research and Development Authority
OHMTADS	Oil and Hazardous Material Technical Assistance Data System
OSHA	Occupational Safety and Health Administration
OSC	Operations Support Group
PCB	Polychlorinated Biphenyl
PVS	Process Ventilation System
RHWF	Remote Handle Waste Facility
RQ	Reportable Quantity
SAA	Satellite Accumulation Area
SOP	Standard Operating Procedure
SPCC	Spill Prevention Control and Countermeasure
SPDES	State Pollutant Discharge Elimination System
STS	Supernatent Treatment System
TSC	Technical Support Center
UR	Utility Room
WNYNSC	Western New York Nuclear Service Center
WVDP	West Valley Demonstration Project
WVNSCO	West Valley Nuclear Services Company

2.0 RESPONSIBILITY/CERTIFICATION OF SPCC PLAN

2.1 Management Approval

Signature: _____ Date 5/9/03
Name/Title: J. R. Gerber, Manager
Department: Regulatory and Compliance Programs

Signature: _____ Date 5/9/03
Name/Title: W. M. Wierzbicki, Manager
Department: Environmental Affairs

2.2 Plan Certification

I hereby certify that I have examined the facility and being familiar with the provision of 40 CFR 112 attest that this SPCC Plan has been prepared in accordance with good engineering practice.

Signature: _____ Date 5/9/03
Name/Title: Arvind K. Shukla, Senior Environmental Engineer
Department: Environmental Affairs
Registration No.: 071334

STATE OF NEW YORK
ARVIND K. SHUKLA
LICENSED PROFESSIONAL ENGINEER
State: New York
No. 071334

2.3 Plan Modification

2.3.1 Under 40 CFR 112, the plan must be modified whenever there is a change in facility design, construction, operation, or maintenance which affects the potential for discharge of oil from the facility into navigable waterways. Amendments requiring additional pollution prevention measure shall be fully implemented as soon as possible and shall be certified by a professional engineer.

2.3.2 It is also recommended that the plan be amended if necessary, whenever:

A. Applicable regulations are revised in a manner which affects plan contents;

B. The plan fails in the event of an emergency;

C. Physical changes to site facilities occur, which increase the potential for environmental release incidents;

D. Changes to emergency coordinators; and

E. Changes to emergency response equipment

2.3.3 At a minimum, a review and evaluation of the SPCC plan for the WVDP site will be made at least once every five (5) years from the date of issue and amended, if necessary, within six months from the date of review completion to include impacting changes from the regulations and/or facility operation.

2.4 Plan Distribution

Copies of this plan shall be distributed as outlined below. Internal copies are assigned with the title position and the person receiving the copy shall assure proper maintenance.

2.4.1 Internal

A. Site Services Manager
B. Project Managers (HEC, PPC/XC-2, Spent Fuel, and FRS)
C. Waste Management Services Manager
D. Regulatory and Compliance Programs Manager
E. Human Resources Manager
F. Environmental Affairs Manager
G. Legal Counsel
H. Plant Systems Operations Shift Supervisor (1 copy)

2.4.2 External

A. Springville Fire Department
B. West Valley Hose Company
C. DOE-OH/WVDP Emergency Response Facility Representative
D. DOE-OH/WVDP Director

3.0 EXECUTIVE SUMMARY

The U.S. DOE specifically mandates SPCC Plans in DOE Order 5480.1B, which states that DOE sites must comply with regulations presented in the CFR 40 CFR 112.7 (EPA SPCC Plan Guidance), for owners and operators of facilities having a potential for discharge of harmful quantities of oils to navigable waters. Following the discovery of a discharge or potential discharge, the sequence of follow-up actions shall comply with 29 CFR 1910.120 (q) for emergency response operations. Similar provisions mandated by 40 CFR 761 apply to the discharge of materials contaminated with PCBs. This document addresses the requirements set forth in the above regulations. Regulations also mandate that this plan be reviewed and updated at least once every three (3) years. The Plan has been prepared in accordance with good engineering practices.

The plan includes sections for preventing unintentional discharges of oil and owner/operator response plans for such events.

Spill prevention and control is achieved through a comprehensive program of planning, design, operations, inspection, and training, all directed towards spill avoidance and quick response for containment, mitigation, and cleanup should a spill occur. The plan describes the engineered features and administrative controls used to preclude spills of oil, and response procedures developed to minimize deleterious effects of a spill.

The SPCC Plan also includes predicted flow paths and information on quantities of materials that could potentially be released.

4.0 GENERAL INFORMATION

This SPCC plan has been developed in accordance with 40 CFR 112, which has been defined as the applicable regulation by DOE Order 5480.1B. According to 40 CFR 112, spill containment can be provided by secondary containment systems including dikes, berms, retaining walls, or curbing (40 CFR 112.7[c][i]), or by culverting, gutters, or other drainage systems (40 CFR 112.7 [c][iii]). As outlined in this SPCC Plan and in response to the spill events that have occurred in the past at the WVDP, all oil and hazardous materials storage facilities at the WVDP are provided with secondary containment. This containment system also serves to control releases during material transportation or transfer.

The WVDP is an activity of the DOE and is being operated pursuant to the West Valley Demonstration Project Act (Public Law 96-368, "the Project"). The operating contractor for the DOE OH/WVDP is WVNSCO, a wholly owned subsidiary of Washington Group International Inc.

The primary objectives of the Project are to: solidify approximately 2.2 million liters (580,000 gallons) of high-level radioactive waste (HLW) stored at the WNYNSC; dispose of the low-level radioactive waste (LLW) and transuranic (TRU) waste generated in conjunction with the Project; and subsequently decontaminate and decommission the facilities used during the Project. HLW solidification has been completed.

4.1 Background Location and History

The WNYNSC is a 1,335-hectare (ha) (3,300 acre) reservation owned by the State of New York. The WVDP is located on a 88-ha (220 acre) parcel within the WNYNSC (see **Figure 4.2.1**). The WVDP includes the main process building and support facilities that were formerly operated by NFS for reprocessing fuel. These facilities have not been used for this purpose since 1972.

The facilities were maintained in a shut-down condition from 1972 to 1982, when DOE assumed operational control to decontaminate the facilities for preparation for their reuse in the Vitrification and Integrated Radioactive Waste Treatment processing of HLW. Other facilities at the WVDP were specifically constructed for storage and shipping of waste.

In February 1975, NFS prepared and submitted a SPCC Plan for the reprocessing facility. The 1975 plan was amended in April 1977 when two existing boiler steam condensate tanks were refitted for use as oil storage tanks. These two tanks were drained and removed from service in 1984. In June of 1985, an update and expansion of the NFS SPCC plan was issued by DOE and WVNSCO as WVDP-043. The WVDP plan covered hazardous materials (as identified in 40 CFR 116) in addition to oil and other petroleum products. The 1991 revision updated the 1985 plan (as revised in 1988 and 1990) to cover tanks added since that time and cover existing tanks that have been used or may be used for storage of materials covered in 40 CFR 112, and 116, 302.4, 355 and 6 NYCRR 597.2. The January 1994 update included identification of SAAs, the Interim Waste Storage Facility (IWSF), the Hazardous Waste Storage Lockers (HWSF), and the Lag Storage Areas (LSA). The July 1994 revision addressed control of potentially contaminated waste from fire fighting operations as required by DOE Order 5480.7A9B(10). On November 11, 1994, a NYSDEC inspection indicated that the facility is in compliance with Petroleum Bulk Storage regulations (6 NYCRR Parts 612-614). The May 1995 update added three (3) tanks to the SPCC and the Certification of the Applicability of the Substantial Harm Criteria form, as required by the 1990 Oil Pollution Act. The January 1997 update included the addition of two aboveground petroleum storage tanks

to replace three existing underground storage tanks and other minor changes. The December 2000 update included general update of facility, inclusion of used edible oil stored in WMSA, and deletion of all hazardous waste and hazardous material, facilities from this plan.

4.2 Site Topography and Drainage

Figure 4.2.1 shows major drainage pathways for the WNYNSC and the WVDP. The Project area is drained by three (3) creeks, namely, Erdman Brook, Quarry Creek, and Franks Creek. The WNYNSC is drained by these three (3) creeks, as well as Buttermilk Creek, and Cattaraugus Creek. Erdman Brook and Quarry Creek are tributaries to Franks Creek; Franks Creek is a tributary of Buttermilk Creek; Buttermilk Creek is a tributary of Cattaraugus Creek.

Buttermilk Creek originates south of the town of West Valley, New York, enters the WNYNSC at Riceville Station and flows through the site in a generally northwesterly direction until it joins Cattaraugus Creek eight (8) kilometers later. The WVDP facilities are at an elevation of slightly over 1330.99 ft above mean sea level (MSL). The elevation of Buttermilk Creek at its entrance to the site is about 1128.85 ft, and the elevation at the confluence with Cattaraugus Creek is slightly over 1034.73 ft. The total drainage area of Buttermilk Creek is estimated to be 48,215 ha, with an average flow rate of 46.5 ft^3/sec.

Cattaraugus Creek flows in a generally westerly direction from the site to Lake Erie some 39 miles away. The total drainage area of Cattaraugus Creek is estimated to be 877,350 ha. The drainage area of Cattaraugus Creek above the confluence with Buttermilk Creek is estimated to be 344,600 ha. Thus, the average flow in Buttermilk Creek past the site may be estimated to be fifty percent of the average flow rate in Cattaraugus Creek at the confluence, or 354 ft^3/sec.

No public water supplies use either Buttermilk Creek or Cattaraugus Creek as a source of potable water. A dam/hydroelectric generating station under the possession of Erie County is located Cattaraugus Creek approximately 2.5 miles below the confluence of Buttermilk and Cattaraugus Creeks.

Figure 4.2.2 shows site drainage details, and identifies major Project facilities involved in storage of oil. A new RHWF is under construction. RHWF construction is scheduled for completion in 2003.

Figure 4.2.3 depicts storm water drainage patterns on the site.

The ponded surface waters and surface water channels in the vicinity of the WVDP includes several small tributaries of Buttermilk Creek, the on-site Low Level Waste treatment lagoons, the two water supply reservoirs, tributaries of Franks Creek, Quarry Creek, Erdman Brook headwaters and isolated wetlands. The plateau on which the Project facilities are located is dissected by the steep-walled valleys of these streams. Surface runoff from plant areas is directed into these channels via drainage ditches and culverts.

The on-site low-level waste water treatment facility (LLWTF) includes four lagoons (numbers 2, 3, 4 and 5), the largest of which contains a controllable discharge pipe to Erdman Brook. Of these four lagoons, numbers 4 and 5 are small feed and effluent holding basins. The capacity of Lagoon 2 is approximately 12.2 million liters and Lagoon 3 capacity is approximately 13.4 million liters.

Two (2) on-site reservoirs, (see **Figure 4.2.3**), were created by damming branches of Buttermilk Creek to an elevation of 414.5 m above sea level (MLS) and constructing an interconnecting channel. Capacity of these reservoirs is approximately 824,100 m^3.

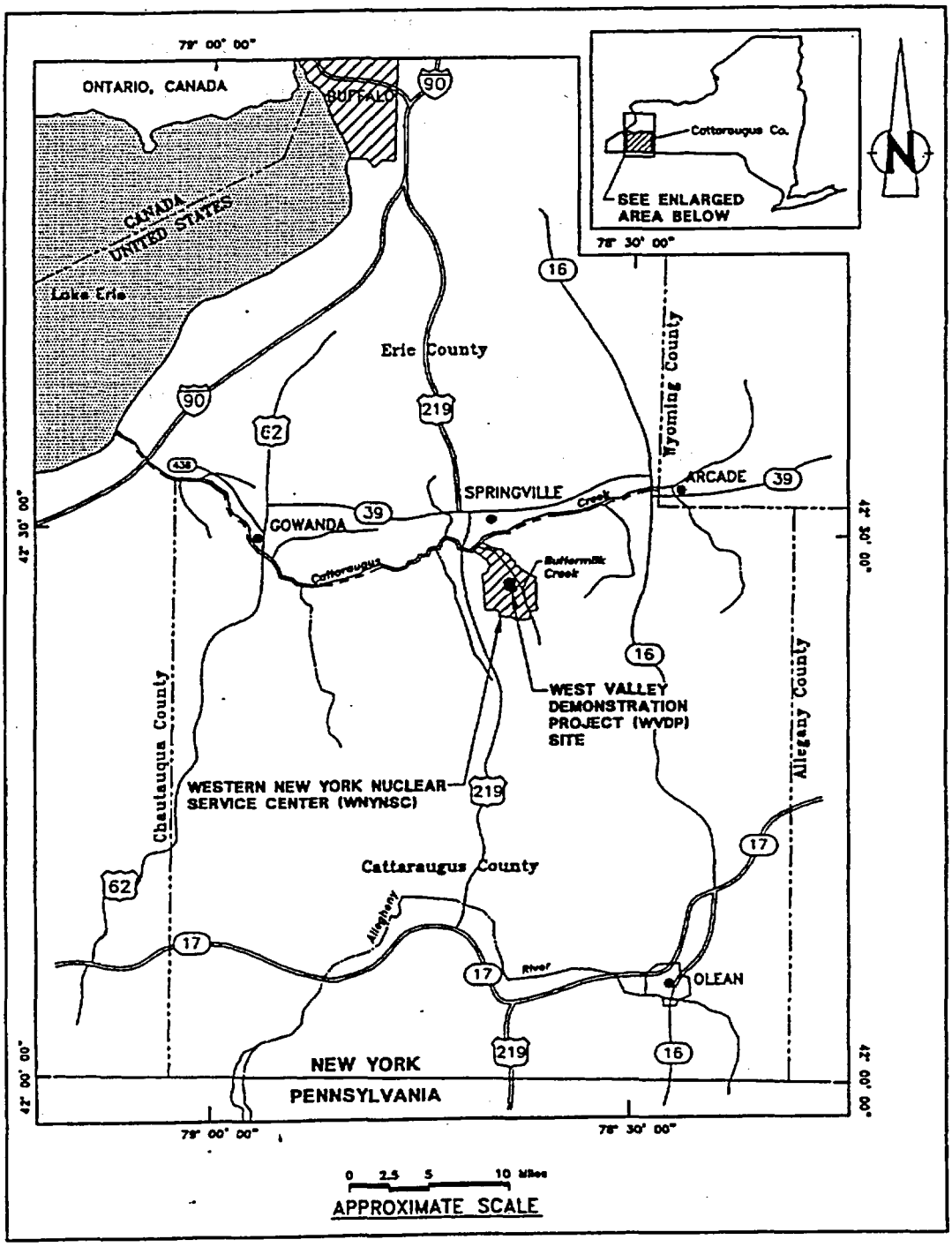


Figure 4.2.1 - WNYNSC and WVDP Locations

Figure 4.2.2 - WVDP Site Map - Spill Migration Pathways

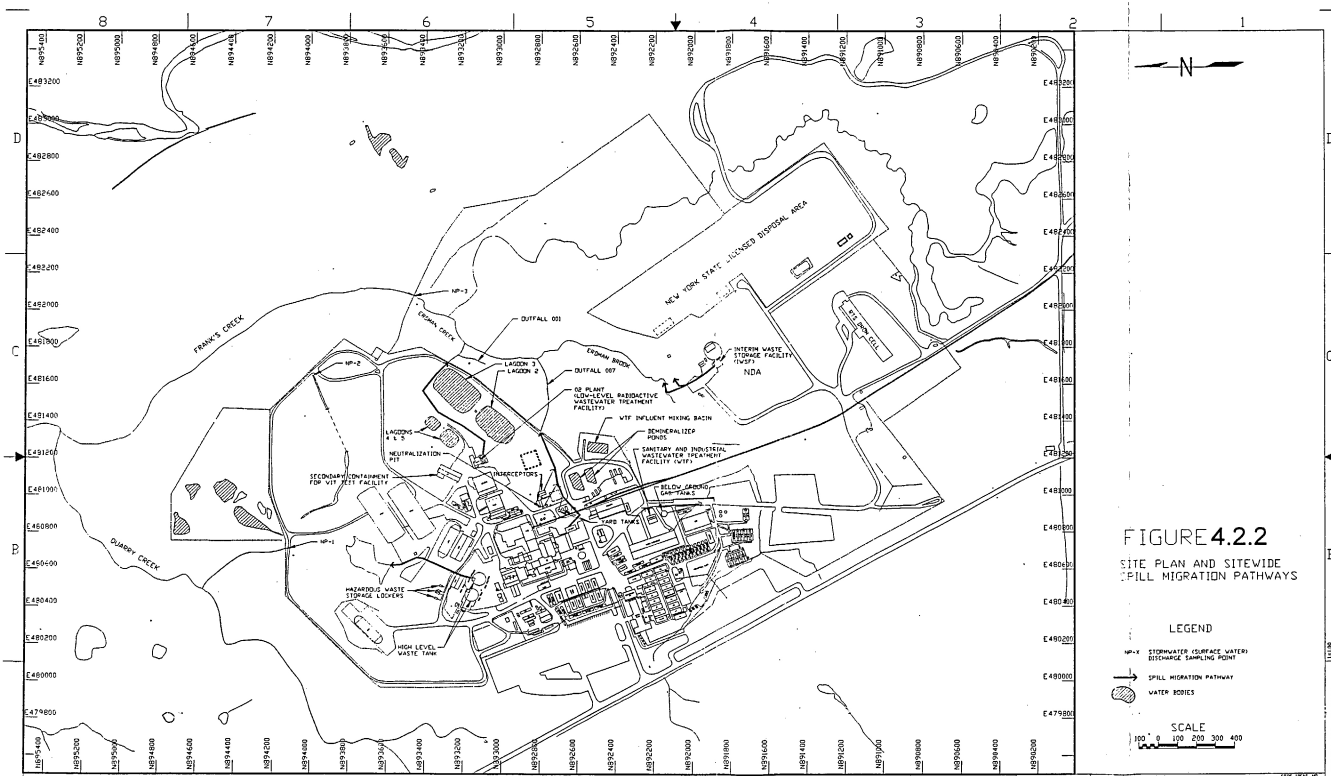
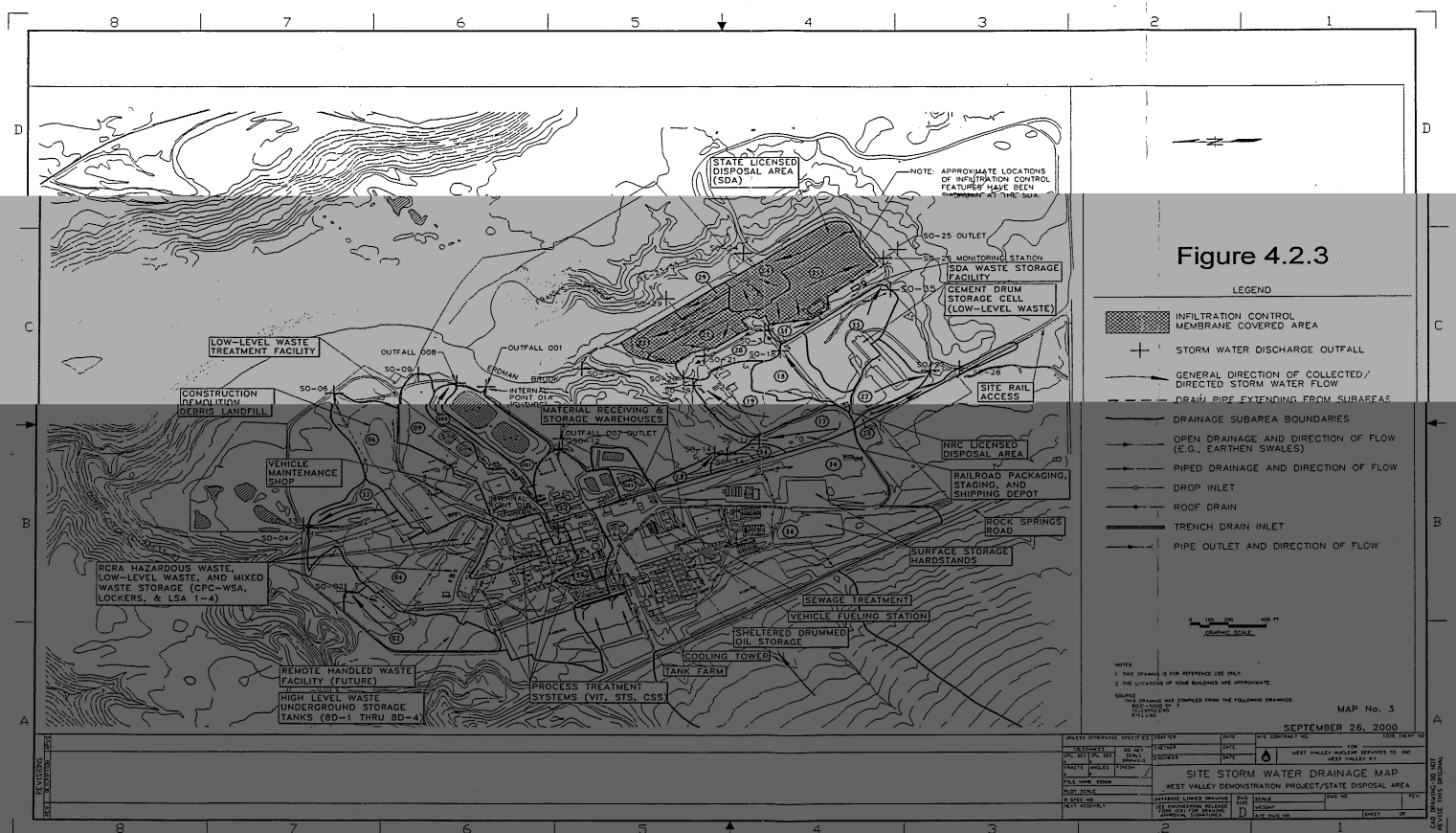


Figure 4.2.3 - WVDP/State Disposal Area - Site Storm Water Drainage Map



4.3 Storm Sewer System

The storm sewer system in the WVDP site consists of underground conduits for local accumulation control in combination with surface drainage ditches and culverts. The underground sewer piping, with the inlet and discharge locations, is shown (light dashed lines) in **Figure 4.2.3.** Water from the outfalls of the pipes flows in ditches which lead to the several surface drainageways. On-site surface drainageways flow into Erdman Brook, Franks Creek, or Quarry Creek through several drainageways. Flow at the north end flows into Frank and Quarry Creek and flow at south end (near NDA/SDA) flows into Franks Creek.

4.4 Storage Facility Description

The following sections describe the major outdoor storage tanks, temporary storage facilities for PCB's, underground tanks and other sources with a potential for environmental releases of oil. These installations are summarized in **Table 4.4.1.** The locations of these tanks (or buildings containing tanks) are shown on **Figure 4.4.3.** The shield windows containing mineral oil are shown in **Table 4.4.2.**

All of the tanks on site that are required to be registered with the NYSDEC are tested at the frequency required by the appropriate regulations.

Tanks are inspected on a routine basis by the cognizant WVNSCO operations group and recorded in the operating logs in accordance with their operating procedures. In addition, WVNSCO Quality Services or an independent contractor inspects aboveground petroleum storage tanks on a monthly basis.

Table 4.4.1 WVDP Oil Storage Facilities

Tank/Vessel	Construction	Nominal Capacity liters (gallons)	Location	Contents and/or Function	Spill Containment	Instrumentation Association with Spill Control
FO1 (31-D-2)	2.8 m diameter x 6.1 m long; elevated above basin by 2 reinforced concrete piers, steam coil heated, carbon steel, insulated	35,919 (9,490)	Yard East of UR	Fuel Oil No. 2	Spill basin, 84,700 L capacity	Sight glasses and level indicator
41-D-021 Petroleum Aboveground Storage Tank	Concrete vaulted steel aboveground tank	7,570 (2,000)	North of STP	Unleaded Gasoline	Concrete vault and overfill catch basin	Electronic interstitial, level, and inventory monitoring
41-D-022 Petroleum Aboveground Storage Tank	Concrete vaulted steel aboveground tank	3,785 (1,000)	North of STP	Diesel Fuel	Concrete vault and overfill catch basin	Electronic interstitial, level, and inventory monitoring
G04 (50D-09) STS Bulk Underground Fuel Oil Tank	Steel double-walled underground tank with bitumastic coating	1,893 (500)	Underground southeast of STS building	Diesel Fuel	Double-walled construction	Leak detection sensor with air, water, and hydrocarbon indicators in PVS. Alarm in PVS control room
Vitrification Facility Tanks						
FOD-11 Vit Diesel Tank	Carbon steel	21,500 (5,680)	Northwest of Vit Building	Diesel Fuel	Concrete berm and pad	High level alarm
FOD-12 Diesel Fuel Tank and Day Tank	Carbon Steel	758 (200)	In Vit diesel generator room	Diesel Fuel	Concrete berm	In Vit diesel generator room High level alarm
Miscellaneous Facilities						
Diesel fuel tank (portable)	Carbon steel	1,136 (300)	Portable (filled from underground tank; transported to area south of UR)	Diesel fuel, refuels air compressor and fire pump	Carbon steel pan constructed around tank	None
URE (31D-103)	Carbon steel, on concrete saddles	1,098 (290)	Utility room	Fuel oil No. 2	Double walled tank	Double Walled with interstitial monitoring and high level alarm
31-D-102 Utility Room Extension Day Tank	Double-walled Carbon Steel	1,514 (400)	Utility room extension	Fuel oil No. 2	Double walled tank	Double walled with interstitial monitoring and and high level alarm

Table 4.4.1 WVDP Oil Storage Facilities

Tank/Vessel	Construction	Nominal Capacity liters (gallons)	Location	Contents and/or Function	Spill Containment	Instrumentation Association with Spill Control
FPH (33D-1) Fire pump day tank	Carbon steel	1,098 (290)	Fire pump house	Fuel oil No. 2	Double walled tank	Double walled w/interstitial monitoring high level alarm
SDT STS day tank	Carbon steel	380 (100)	STS generator room	Diesel Fuel	Generator room floor	Float level indicator
Warehouse Bulk Oil Storage Unit (B-HAZ-08)	Metal, insulated walls; inside dim. 11 ft. x 23 ft. x 6 ft. 6 in.	55 gallon drums; maximum 55 containers	East of Main 2 warehouse	Contains combustibles (i.e., grease, oils, antifreeze, etc.)	6 inch catch basin with sump	Liquid level detector with alarm horn, audible heat sensor alarm
Maintenance Lubrication Storage Locker (O-HAZ-03)	Metal, insulated walls; inside dim. 11 ft. X 23 ft. x 6 ft. 6 in.	55 gallon drums; maximum 55 containers	South of maintenance building	Contains combustibles (i.e., grease, oils, antifreeze, etc.)	6 inch catch basin with sump	Liquid level detector with alarm horn, audible heat sensor alarm.
Miscellaneous Units						
Waste Management Staging Area (WMSA)	Approx. 100 x 80 ft. metal frame, pre-engineered building	N/A	South of Main 2 Warehouse	Stores 1-2 drums (55 gal.) of used vegetable oil (cooking oil) from site cafeteria prior to off-site shipment, used oil from forklift and oil from compressors.	Polyliners are used inside 55 gallon steel drums for secondary containment	None
Temporary Storage Facilities Storing PCB's	Bermed concrete floor sloped towards a sump	N/A	Interim Waste Storage Facility (IWSF)	PCB, PCB spill clean-up material wipes, etc.	Floor coated with epoxy material and spill containment pallets	None

Table 4.4.2 - Shield Windows Containing Mineral Oil

Location	Number of Panes (no. Leaded)	Glass Dimensions [Lead as (Pb), Lime (L), Non-browning as (NB), Tempered as (T), & Plate as (P)]	Approximate Volume (density in grams/c m^3)	Mineral Oil Volume Capacity	Vendor	WVNSCO Drawing Number	Notes
Analytical Labs (Hot Cells #5 15M-5E)	3(1)	C: 1"x25.75"x37.75" (T) S: 2.75"x23.5"x35.5" (Pb) H: 1"x29.75x29.75" (L, NB, T)	0.6ft3 (2.5) 1.3ft^3 (5.2) 0.5ft^3 (2.7)	100 gallons	Converions: Ray Proof to Hot Cells	[orig. see 4413-15-M-17-3-2] 74765-M-0001	Lead Wool, Lead Flow Block (170 lbs.), Originally Zinc Bromide Filled
Analytical Labs Sample Storage Cell (15M-23 A, East)	6(4)	C: 1"x23.5"x39.5" (T) S: 6"x21"x37" (Pb) S: 6"x21"x37" (Pb) S: 8.625"x21"x37" (Pb) S: 8.625"x21"x37" (Pb) H: 1"x23.5"x39.5" (NB,T)	0.5ft^3 (2.5) 2.7ft^3 (6.2) 2.7ft^3 (6.2) 3.9ft^3 (3.3) 3.9ft^3 (3.3) 0.5ft^3 (2.7)	20 gallons	Orig: Corning Mod: Hot Cells	Orig: 4413-15-M-8D-2-2 Mod: 747-M-0014	Lead Sheet, Lead Pad, Originally shuttered (Drawing 15A-T-51)
Analytical Labs Sample Storage Cell (15M-23 B, Center)	6(4)	C: 1"x23.5"x39.5" (T) S: 6"x21"x37" (Pb) S: 6"x21"x37" (Pb) S: 8.625"x21"x37" (Pb) S: 8.625"x21"x37" (Pb) H: 1"x23.5"x39.5" (NB,T)	0.5ft3 (2.5) 2.7ft^3 (6.2) 2.7ft^3 (6.2) 3.9ft^3 (3.3) 3.9ft^3 (3.3) 0.5ft^3 (2.7)	20 gallons	Orig: Corning Mod: Hot Cells	Orig: 4413-15-M-8D-2-2 Mod: 747-M-0014	Lead Sheet, Lead Pad, Originally shuttered (Drawing - 15A-T-51)
Analytical Labs Sample Storage (15M-23 C, West)	9(7)	C: 1"x23.5"x39.5" (T) S: 3"x21"x37" (Pb) S: 3"x21"x37" (Pb) S: 3"x21"x37" (Pb) S: 3"x21"x37" (Pb) S: 8.125"x21"x37" (Pb) S: 7.125"x21"x37" (Pb) S: 2.125"x21"x37" (Pb) H: 1"x23.5"x39.5" (T)	0.5ft^3 (2.5) 1.3ft^3 (6.2) 1.3ft^3 (6.2) 1.3ft^3 (6.2) 1.3ft^3 (4.0) 3.7ft^3 (3.3) 3.2ft^3 (3.3) 1.0ft^3 (3.3) 0.5ft^3 (2.7)	20 gallons	Hot Cells	9377-100	Lead Sheet
SRR (2M-5)	5(3)	C: 1"x30.75"x30.75" (T) S: 8.0"x25"x25" (Pb) S: 7.5"x25"x25" (Pb) S: 5.5"x25"x25" (Pb) H: 1"x29.75"x29.75" (L,NB,T)	0.6ft^3 (2.5) 2.9ft^3 (3.3) 2.7ft^3 (3.3) 2.0ft^3 (3.3) 0.5ft^3 (2.7)	70 gallons	Conversion: Ray Proof to Hot Cells	[orig. see 4413-15-M-17-3-2] 96191-100	Lead Sheet, Lead Wool, Originally Zinc Bromide Filled
PMC-A (2M-1A)	4(2)	C: 1"x50"x56" (NB,T) S: 10.5"x31"x32" (Pb) S: 10.5"x23"x30" (Pb) H: 1"x50"x56" (NB,T) Sh: 1"x65.5"x62.75" (NB,T)	1.6ft3 (2.5) 6.0ft^3 (3.3) 4.2ft^3 (3.3) 1.6ft^3 (2.7) 2.4ft^3 (2.7)	300 gallons	Orig: Corning Mod: Hot Cells	4412-15-M-8B-2-2	Lead Sheet, Lead Pad, Modified via PO#19-93791
PMC-B (2M-1B)	4(2)	C: 1"x50"x56" (NB,T) S: 10.5"x31"x32" (Pb) S: 10.5"x23"x30" (Pb) H: 1"x50"x56" (NB,T) Sh: 1"x65.5"x62.75" (NB,T)	1.6ft^3 (2.5) 6.0ft^3 (3.3) 4.2ft^3 (3.3) 1.6ft^3 (2.7) 2.4ft^3 (2.7)	300 gallons	Corning	4413-15-M-8B-2-2	Lead Sheet, Lead Pad, Modified via PO#19-93791
PMC-C (2M-1C)	4(2)	C: 1"x50"x56" (NB,T) S: 10.5"x31"x32" (Pb) S: 10.5"x23"x30" (Pb) H: 1"x50"x56" (NB,T) Sh: 1"x65.5"x62.75" (NB,T)	1.6ft^3 (2.5) 6.0ft^3 (3.3) 4.2ft^3 (3.3) 1.6ft^3 (2.7) 2.4ft^3 (2.7)	300 gallons	Orig: Corning Mod: Hot Cells	4413-15-M-8B-2-2	Lead Sheet, Lead Pad, Modified via PO#19-93791

Table 4.4.2 - Shield Windows Containing Mineral Oil

Location	Number of Panes (no. Leaded)	Glass Dimensions [Lead as (Pb), Lime (L), Non-browning as (NB), Tempered as (T), & Plate as (P)]	Approximate Volume (density in grams/c m^3)	Mineral Oil Volume Capacity	Vendor	WVNSCO Drawing Number	Notes
PMC-D (2M-1D)	4(2)	C: 1"x50"x56" (NB,T) S: 10.5"x31"x32" (Pb) S: 10.5"x23'x30" (Pb) H: 1"x50"x56" (NB,T) Sh: 1"x65.5"x32.75" (NB,T)	1.6ft^3 (2.5) 6.0ft^3 (3.3) 4.2ft^3 (3.3) 1.6ft^3 (2.7) 2.4ft^3 (2.7)	300 gallons	Orig: Corning Mod: Hot Cells	4413-15-M-8B-2-2	Lead Sheet, Lead Pad, Modified via PO#19-93791
PMC-E (2M-3A)	7(5)	C: 1"x36"x37" (T) S: 9.25"x31"x32.5" (Pb) S: 9.25"x25.5"x24" (Pb) S: 9.25"x27"x24" (Pb) S: 9.25"x29"x24" (Pb) S: 9.25"x33.25"x24" (Pb) H: 1"x40.5"x26.5" (NB,T) Sh: 1"x45"x30.5" (NB,T)	0.8ft^3 (2.5) 5.4ft^3 (3.3 3.3ft^3 (3.3) 3.5ft^3 (3.3) 3.7ft^3 (3.3) 4.3ft^3 (3.3) 0.6ft^3 (2.7) 0.8ft^3 (2.7)	31 gallons	corning	4413-15-M-8B-1-2	Lead Sheet Lead Pad
PMC-F (2M-3B)	7(5)	C: 1"x36"x37" (T) S: 9.25"x31"x32.5" (Pb) S: 9.25"x25.5"x24" (Pb) S: 9.25"x27"x24" (Pb) S: 9.25"x29"x24" (Pb) S: 9.25"x33.25"x24" (Pb) H: 1"x40.5"x26.5" (NB,T) Sh: 1"x45"x30.5"(NB,T)	0.8ft^3 (2.5) 5.4ft^3 (3.3) 3.3ft^3 (3.3) 3.5ft^3 (3.3) 3.7ft^3 (3.3) 4.3ft^3 (3.3) 0.6ft^3 (2.7) 0.8ft^3 (2.7)	31 gallons	Corning	4413-15-M-8B-1-2	Lead Sheet Lead Pad
PMCR	4.(2)	C: 1"x24"x36" (T) S: 5"x18.25"x30.25" (Pb) S: 5"x18.25"x30.25" (Pb) H: 1"x23"x36" (NB, T)	0.5 ft^3 (2.5) 1.6 ft^3 (3.3) 1.6 ft^3 (3.3) 0.5 ft^3 (2.7)	15 gallons	Conversion: NFS to Hot Cells	[orig. see 2B-T-1003] 98166-100	Lead Sheet, Lead wool, Originally contained Zinc Bromide
EDR (15M-3)	2 (0)	C: 1"x25.75"x25.75" (T) H: 1"x39.75"x39.75" (NB, T)	0.4 ft^3 (2.5) 0.9 ft^3 (2.7)	140 gallons	Conversion: Ray Proof to Hot Cells	[orig. see 4413-15-M-17-1-2] 74765-M-0008 & 0009	Lead wool, Originally contained Zinc Bromide
GPC (2M-6A)	7 (5)	C: 1"x5"x40.5" (T) S: 6.5"x24.5x31.5" (Pb) S: 6.5"x24.5"x31.5"x6.5" (Pb) S: 9.625"x28.375"x33.75" (Pb) S: 9.625"x32.25"x34.875" (Pb) S: 9.625"x36"x36" (Pb) H: 1"x38.5"x38.5" (NB, T)	0.7 ft^3 (2.5) 2.9 ft^3 (6.2) 2.9 ft^3 (6.2) 5.3 ft^3 (3.3) 6.3 ft^3 (3.3) 7.2 ft^3 (3.3) 0.9 ft^3 (2.7)	20 gallons	Corning	4413-15-M-8A-1-2	Lead Shot, Lead Sheet, Lead Pad, For window shutters see dwgs. 2A-T-48, -53
GPC (2M-6B)	7 (5)	C: 1"x5"x40.5" (T) S: 6.5"x24.5x31.5" (Pb) S: 6.5"x24.5"x31.5"x6.5" (Pb) S: 9.625"x28.375"x33.75" (Pb) S: 9.625"x32.25"x34.875" (Pb) S: 9.625"x36"x36" (Pb) H: 1"x38.5"x38.5" (NB, T)	0.7 ft^3 (2.5) 2.9 ft^3 (6.2) 2.9 ft^3 (6.2) 5.3 ft^3 (3.3) 6.3 ft^3 (3.3) 7.2 ft^3 (3.3) 0.9 ft^3 (2.7)	20 gallons	Corning	4413-15-M-8A-1-2	Lead Shot, Lead Sheet, Lead Pad, For window shutters see dwgs. 2A-T-48, -53

Table 4.4.2 - Shield Windows Containing Mineral Oil

Location	Number of Panes (no. Leaded)	Glass Dimensions [Lead as (Pb), Lime (L), Non-browning as (NB), Tempered as (T), & Plate as (P)]	Approximate Volume (density in grams/c m^3)	Mineral Oil Volume Capacity	Vendor	WVNSCO Drawing Number	Notes
GPC (2M-6C)	7 (5)	C: 1"x5"x40.5" (T) S: 6.5"x24.5x31.5" (Pb) S: 6.5"x24.5"x31.5"x6.5" (Pb) S: 9.625"x28.375"x33.75" (Pb) S: 9.625"x32.25"x34.875" (Pb) S: 9.625"x36"x36" (Pb) H: 1"x38.5"x38.5" (NB, T)	0.7 ft ^{3} (2.5) 2.9 ft ^{3} (6.2) 2.9 ft ^{3} (6.2) 5.3 ft ^{3} (3.3) 6.3 ft ^{3} (3.3) 7.2 ft ^{3} (3.3) 0.9 ft ^{3} (2.7)	20 gallons	Corning	4413-15-M-8A-1-2	Lead Shot, Lead Sheet, Lead Pad, For window shutters see dwgs. 2A-T-48, -53
Miniature Cell (11M-1)	6 (4)	C: 1"x21"x31" (T) S: 6.5"x18.5"x24.5" (Pb) S: 6.5"x24"x24.5" (Pb) S: 11"x30"x30" (Pb) S: 11"x36"x36" (Pb) H: 1"x38.5"x38.5" (NB, T)	0.4 ft ^{3} (2.5) 1.7 ft ^{3} (6.2) 2.2 ft ^{3} (6.2) 5.7 ft ^{3} (3.3) 8.3 ft ^{3} (3.3) 0.9 ft ^{3} (2.7)	Unknown gallons	Corning	4413-15-M-8A-3-2	Lead Shot, Lead Sheet, Lead Pad, For shutter information see Dwg. 11A-T-4
CCR	2 (0)	C: 1"x25.75"x37.75" (T) H: 1"x25.75"x37.75" (NB, T)	0.6 ft ^{3} (2.5) 0.6 ft ^{3} (2.7)	110 gallons	Conversion from NFS to Hot Cells	[orig. see NFS Dwg. # 3B-T-987] 74765-M-0007	Originally contained Zinc Bromide
CPC (3M-1A)	7 (5)	C: 1"x51.25"x49" (T) S: 8"x37"x37" (Pb) S: 10"x37"x30" (Pb) S: 10"x37"x30" (Pb) S: 10"x37"x30" (Pb) S: 10"x43"x42" (Pb) H: 1"x51.25"x52.5" (NB, T)	1.5 ft ^{3} (2.5) 6.3 ft ^{3} (3.3) 6.4 ft ^{3} (3.3) 6.4 ft ^{3} (3.3) 6.4 ft ^{3} (3.3) 10.5 ft ^{3} (3.3) 1.6 ft ^{3} (2.7)	132 gallons	Corning	4413-15-M-8C-3-1	Lead Pad, Lead Sheet, Shutter removed during D&D
CPC (3M-1B)	7 (5)	C: 1"x51.25"x49" (T) S: 8"x37"x37" (Pb) S: 10"x37"x30" (Pb) S: 10"x37"x30" (Pb) S: 10"x37"x30" (Pb) S: 10"x43"x42" (Pb) H: 1"x51.25"x52.5" (NB, T)	1.5 ft ^{3} (2.5) 6.3 ft ^{3} (3.3) 6.4 ft ^{3} (3.3) 6.4 ft ^{3} (3.3) 6.4 ft ^{3} (3.3) 10.5 ft ^{3} (3.3) 1.6 ft ^{3} (2.7)	132 gallons	Corning	4413-15-M-8C-3-1	Lead Pad, Lead Sheet, Shutter removed during D&D
CPC (3M-1C)	7 (5)	C: 1"x51.25"x49" (T) S: 8"x37"x37" (Pb) S: 10"x37"x30" (Pb) S: 10"x37"x30" (Pb) S: 10"x37"x30" (Pb) S: 10"x43"x42" (Pb) H: 1"x51.25"x52.5" (NB, T)	1.5 ft ^{3} (2.5) 6.3 ft ^{3} (3.3) 6.4 ft ^{3} (3.3) 6.4 ft ^{3} (3.3) 6.4 ft ^{3} (3.3) 10.5 ft ^{3} (3.3) 1.6 ft ^{3} (2.7)	132 gallons	Corning	4413-15-M-8C-3-1	Lead Pad, Lead Sheet, Shutter removed during D&D
CPC (3M-1D)	8 (6)	C: 1"x33.5"x23.5" (T) S: 4.625"x31"x21" (Pb) S: 4.625"x31"x21" (Pb) S: 4.625"x31"x21" (Pb) S: 9.1875"x31"x24.5" (Pb) S: 9.1875"x31"x24.5" (Pb) S: 9.185"x31"x24.5" (Pb) H: 1"x33.5"x27" (NB, T)	0.5 ft ^{3} (2.5) 1.7 ft ^{3} (6.2) 1.7 ft ^{3} (6.2) 1.7 ft ^{3} (6.2) 4.0 ft ^{3} (3.3) 4.0 ft ^{3} (3.3) 4.0 ft ^{3} (3.3) 0.5 ft ^{3} (2.7)	20 gallons	Corning	4413-15-M-8C-6-1	Lead Pad, Lead Sheet, Shutter removed during D&D

Table 4.4.2 - Shield Windows Containing Mineral Oil

Location	Number of Panes (no. Leaded)	Glass Dimensions [Lead as (Pb), Lime (L), Non-browning as (NB), Tempered as (T), & Plate as (P)]	Approximate Volume (density in grams/c m^3)	Mineral Oil Volume Capacity	Vendor	WVNSCO Drawing Number	Notes
Vit (1E01)	5 (3)	C: 0.75"x34.5"x53.25" (T) S: 6.375"x22"x40" (Pb) S: 6.375"x22"x40" (Pb) S: 7.5"x32"x50.5" (Pb, NB) H: 1"x37.5"x57.5" (NB)	0.8 ft ^{3} (2.5) 3.2 ft ^{3} (5.2) 3.2 ft ^{3} (5.2) 7.0 ft ^{3} (3.3) 1.3 ft ^{3} (2.5)	150 gallons	Hot Cells	9152-100	Lead Sheet Lead Wool
Vit (1G01)	5 (3)	C: 0.75"x34.5"x53.25" (T) S: 6.375"x22"x40" (Pb) S: 6.375"x22"x40" (Pb) S: 7.5"x32"x50.5" (Pb, NB) H: 1"x37.5"x57.5" (NB)	0.8 ft ^{3} (2.5) 3.2 ft ^{3} (5.2) 3.2 ft ^{3} (5.2) 7.0 ft ^{3} (3.3) 1.2 ft ^{3} (2.5)	150 gallons	Hot Cells	9152-200	Lead Sheet Lead Wool
Vit (5E01)	5 (3)	C: 0.75"x34.5"x53.25" (T) S: 6.375"x22"x40" (Pb) S: 6.375"x22"x40" (Pb) S: 7.5"x32"x50.5" (Pb, NB) H: 1"x37.5"x57.5" (NB)	0.8 ft ^{3} (2.5) 3.2 ft ^{3} (5.2) 3.2 ft ^{3} (5.2) 7.0 ft ^{3} (3.3) 1.3 ft ^{3} (2.5)	150 gallons	Hot Cells	9152-100	Lead Sheet Lead Wool
Vit (3E01)	5 (3)	C: 0.75"x34.5"x53.25" (T) S: 6.375"x22"x40" (Pb) S: 6.375"x22"x40" (Pb) S: 7.5"x32"x50.5" (Pb, NB) H: 1"x37.5"x57.5" (NB)	0.8 ft ^{3} (2.5) 3.2 ft ^{3} (5.2) 3.2 ft ^{3} (5.2) 7.0 ft ^{3} (3.3) 1.3 ft ^{3} (2.5)	150 gallons	Hot Cells	9152-100	Lead Sheet Lead Wool
Vit (9E01)	5 (3)	C: 0.75"x34.5"x53.25" (T) S: 6.375"x22"x40" (Pb) S: 6.375"x22"x40" (Pb) S: 7.5"x32"x50.5" (Pb, NB) H: 1"x37.5"x57.5" (NB)	0.8 ft ^{3} (2.5) 3.2 ft ^{3} (5.2) 3.2 ft ^{3} (5.2) 7.0 ft ^{3} (3.3) 1.3 ft ^{3} (2.5)	150 gallons	Hot Cells	9152-100	Lead Sheet Lead Wool
Vit (9E02)	5 (3)	C: 0.75"x34.5"x53.25" (T) S: 6.375"x22"x40" (Pb) S: 6.375"x22"x40" (Pb) S: 7.5"x32"x50.5" (Pb, NB) H: 1"x37.5"x57.5" (NB)	0.8 ft ^{3} (2.5) 3.2 ft ^{3} (5.2) 3.2 ft ^{3} (5.2) 7.0 ft ^{3} (3.3) 1.3 ft ^{3} (2.5)	150 gallons	Hot Cells	9152-100	Lead Sheet Lead Wool
Vit-Crane Maint. Rm. (11E01)	4 (2)	C: 0.75"x34.5"x53.25" (T) S: 4.125"x22"x40" (Pb) S: 7.5"x32"x50.5" (Pb, NB) H: 1"x37.5"x57.5" (NB)	0.8 ft ^{3} (2.5) 2.1 ft ^{3} (5.2) 7.0 ft ^{3} (3.3) 1.3 ft ^{3} (2.5)	60 gallons	Hot Cells	9152-300	Lead Sheet Lead Wool
Vit-VTF (68E01)	5 (3)	C: 0.75"x34.5"x53.25" (T) S: 6.375"x22"x40" (Pb) S: 6.375"x22"x40" (Pb) S: 7.5"x32"x50.5" (Pb, NB) H: 1"x37.5"x57.5" (NB)	0.8 ft ^{3} (2.5) 3.2 ft ^{3} (5.2) 3.2 ft ^{3} (5.2) 7.0 ft ^{3} (3.3) 1.3 ft ^{3} (2.5)	150 gallons	Hot Cells	9152-100	Lead Sheet Lead Wool
CSS	5 (3)	C: 0.75"x15.63"x13.63" (P) S: 6"x13"x13" (Pb) S: 6"x13"x13" (Pb) S: 6"x15.5"x15.5" (Pb) H: 0.75" x21.5"x21.5" (NB) Acrylic Scratch Shield	0.1 ft ^{3} (2.5) 0.6 ft ^{3} (3.3) 0.6 ft ^{3} (3.3) 0.8 ft ^{3} (3.3) 0.2 ft ^{3} (2.5)	17 gallons (MO)	Hot Cells	8436-100 through 104	Lead Wool (455 lbs)

Figure 4.4.3 - WVDP Site Map - Tank, Storage, and Process Area Locations

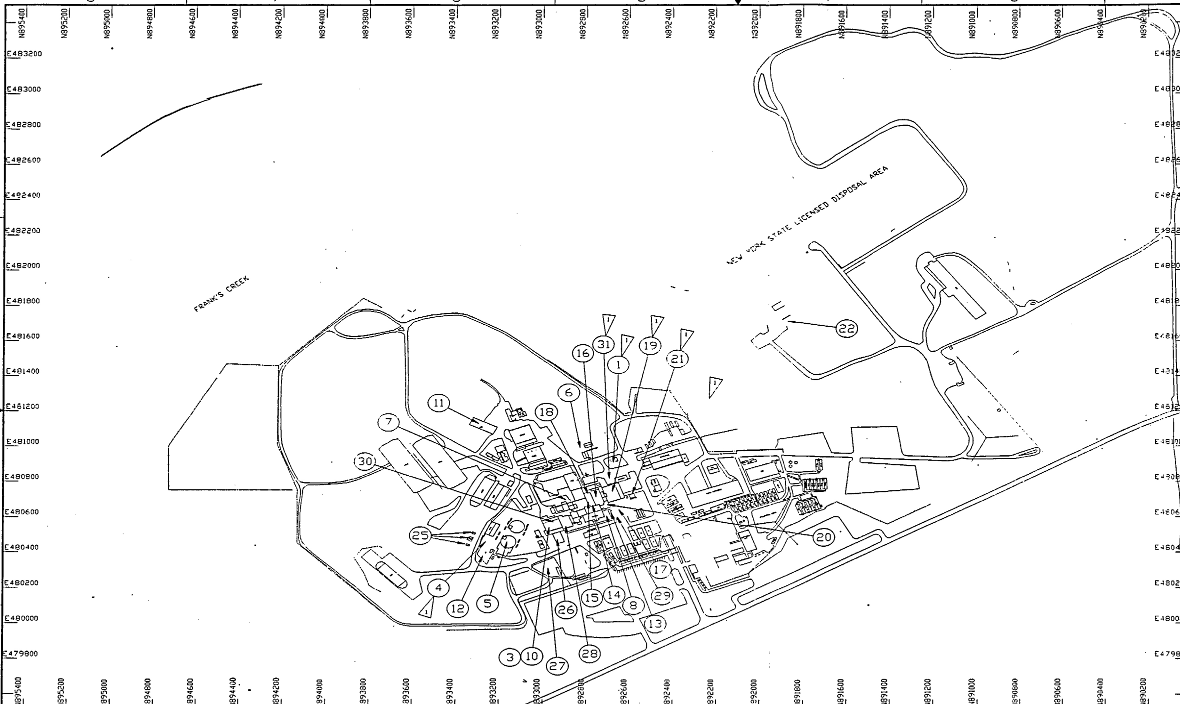


FIGURE 4.4.3

TANK, STORAGE AND PROCESS AREA LOCATIONS

AREA	DESCRIPTION
1	FUEL OIL TANK 31D-2 (F01)
2	USED COOKING OIL (55 GAL DRUM)
3	VIEWING WINDOWS CONTAINING MINERAL OIL
4	STS BULK UNDERGROUND FUEL OIL TANK 50D-039 (G04), DAY TANK SDT
5	HIGH LEVEL WASTE TANK FARM 8D-1, 8D-2, 8D-3, 8D-4, 8D-6, 8D-7, 8C-1
6	INTERCEPTORS AND NEUTRALIZATION PIT TANKS 82D-01 → 82D-05, 82C-01, 82C-02
7	MANIPULATOR REPAIR SHOP WASTE CATCH 15D-6
8	LOW LEVEL WASTE CATCH TANK 7D-13
9	ABOVE GROUND GASOLINE AND DIESEL TANKS (41D-021 & 41D-022)
10	VITRIFICATION FACILITY TANKS 63V-11, 63V-01, 63V-031, 63V-020
11	VITRIFICATION TEST BUILDING TANKS 61D-01, 61D-04, 61D-06, 61D-07, 61D-08
12	SUPERNATANT TREATMENT SYSTEM BUILDING (VALVE AISLE OPERATING AISLE, AND CONTROL ROOM) 50D-005, 50D-006, 50D-008, 50E-002
13	ANHYDROUS AMMONIA TANK 64D-004
14	LIQUID WASTE CELL (LWC), LOWER EXTRACTION AISLE (LXA) TANKS 3D-2, 4D-8, 4D-10, 4D-13, 7D-2, 7D-8, 7D-14, 13D-7, 13D-8
15	URANIUM PRODUCT CELL (UPC) TANKS 5D-15A1, 5D-15A2, 5D-15B, LOWER EXTRACTION AISLE (LXA) TANKS 14D-7, 14D-18
16	EXTRACTION CELL 3 (XC3) TANKS 71D-001, 71D-011 & 31017
17	WASTE DISPENSING VESSEL 70D-001
18	URANIUM LOADOUT CELL (ULC) TANK 5V-1
19	UTILITY ROOM TANK 31D-103 (URF)
20	VESSEL OFF-GAS CELL (OGC) TANK 6D-3, 6C-3
21	FIRE PUMP HOUSE DIESEL FUEL TANK 33D-1 (FPH)
22	INTERIM WASTE STORAGE FACILITY (IWSF) (FIG 2-4A)
23	RECEIVING WAREHOUSE
24	NEW WAREHOUSE
25	HAZARDOUS WASTE STORAGE LOCKERS
26	VIT COLD CHEMICAL BUILDING TANKS 65D-01 → 65D-10
27	VIT DIESEL GENERATOR TANK FOD-11
28	VIT DIESEL GENERATOR DAY TANK FOD-12
29	CSS CHANGE ROOM SODIUM SILICATE TANK
30	NITRIC ACID DECONTAMINATION TANKS 63D-047 & 63V-048
31	UTILITY ROOM EXTENSION DAY TANK 31D-102

SCALE
100 0 100 200 300 400

NOTE:
AREAS 1, 2, 3, 4, 9, 19, 21, 27, 28 & 31 ARE

UNLESS OTHERWISE SPECIFIED
ALL DIM IN INCHES
TOLERANCES-DO NOT SCALE

VERIFY ALL DOCUMENTS FOR CURRENT REVISION AND PENDING CHANGES PRIOR TO EACH USE
INIT ______ DATE ______

DRAFTER J. SCHELBLE DATE 7/13/94
CHECKER D. SHAFFER DATE 8/11/94
ENGR J. SIENER DATE 8/11/94
COG MGR APPVL J. JACKSON DATE 8/11/94
DFTG SUPR J. HORTON DATE 8/12/94

FOR WEST VALLEY NUCLEAR SERVICES CO INC
WEST VALLEY, NEW YORK

WVDP SITE MAP
FIGURE 4.4.3

DWG SIZE D SCALE SEE BAR SCALE DWG NO 900D-5995 REV 4
SHEET 1 OF 1
PLOT 1=1

CAD DRAWING-DO NOT REVISE THIS ORIGINAL

4.5 Fuel Oil Tank 31D-2 [NYS Registration No. F01]

4.5.1 Construction

Tank 31D-2 is a 38,000-liter carbon steel vessel, 2.8 m in diameter by 6.1 m long. It is used to store No. 2 fuel oil for emergency operation of the boilers and standby power generators and is steam-heated to allow the oil to flow freely upon demand. The tank is elevated above a diked, earthen spill containment basin by two reinforced concrete piers. The basin is equipped with a six-inch drain which is controlled by a manually operated gate valve.

4.5.2 Instrumentation

Tank 31D-2 is equipped with level indicator and temperature gauge. Sight glasses, which are on the east side of the vessel, allow visual readout of the level in the vessel. More accurate level indication is provided by an air-purged instrument mounted off the lower connection of the sight glasses. The temperature gauge displays the temperature inside the vessel.

4.5.3 Operation

The tank is filled using a hose from a tank truck to a pipe connection approximately three (3) feet above grade located outside the diked area. An isolation valve near the tank truck connection point is locked and tagged.

Instructions for receiving fuel in Tank 31D-2 are presented in Standard Operating Procedure (SOP) 31-09 "Operation of Boilers 31F-002A and 31F-002B." This procedure requires the operator to observe the level in the tank before and after material transfer and provides a detailed sequence of instructions to minimize the likelihood of spills or overflows during transfer. Tank filling is a manual operation requiring operator attendance throughout the entire procedure. Thus, any spills during the transfer should be immediately identified and corrective action implemented.

The fuel oil tank supplies fuel to the boilers in the Utility Room (UR) via underground pipes and the diesel driven standby power generators. (The boilers are normally fueled by natural gas.)

In normal operations, the spill basin collects rainwater and discharge from the internal steam heating system. The basin gate valve is closed except when collected water is being drained from the basin. Before the basin is drained, standing liquids are first examined for surface sheen to make sure they do not contain oil. The liquid (rainwater) is sampled and released per SOP 15-51, "Release of Waters From Diked Areas Around Tanks", allowing the collected water to drain into the Utility Room (UR) drainage ditch.

4.5.4 Spill Containment

The fuel oil tank is mounted on concrete pedestals within a diked, earthen spill containment basin. This basin is a depression in the ground surface capable of holding a volume of 84,740 liters. Upgrades to this basin, completed in fiscal year 1989 included excavating and berming to provide a containment capacity of approximately 110 percent of the tank capacity. The berm is constructed of mechanically compacted clay to achieve a continuous barrier to liquid passage.

4.6 Petroleum Aboveground Storage Tanks (41-D-021 and 41-D-022)

4.6.1 Construction

Two (2) double-contained aboveground petroleum storage tanks are located north of WWTF across from the warehouse area on a concrete pad. One of the tanks has a capacity of 2,000 gallons and stores unleaded gasoline. The second tank has a 1,000 gallon capacity and stores low sulfur diesel fuel. Each tank unit includes a Underwriters Laboratory (UL) listed rectangular steel tank enclosed in secondary containment and encased in six (6) inches of reinforced concrete, resulting in a two (2) hour firewall. The units rest four (4) inches above grade on unitized concrete support legs and contain leak detector tubes for manual monitoring for leaks.

4.6.2 Instrumentation

Each tank is equipped with: 1) an electronic sensor and a manual clock gage; 2) a high level alarm set at 95% of working capacity; 3) a seven (7) gallon UL-listed overfill containment with internal drain. Inventory records are maintained on an on-going basis.

4.6.3 Operation

Tank truck unloading of bulk quantities of petroleum products are fully attended by the truck driver and warehouse personnel during off-loading. Additionally, the inventory of all tanks are checked prior to beginning the unloading operation. The driver and warehouse personnel monitor all aspects of the unloading operation and take immediate action to stop the flow in the event of equipment failure. Drains and outlets are inspected for leakage prior to departure by the truck driver and warehouse personnel. Additionally, drains and outlets on tank trucks are checked for leakage before the start of unloading operations.

Fuel is pumped from the tanks through a metered dispensing pump with a standard hose and nozzle. The person performing the filling operation must be in attendance at all times since no latches are on the fill nozzles. Use of the pumps is limited by vehicle specific coded keys issued by the Warehouse Property/Vehicle Coordinator.

4.6.4 Spill Containment

In the event of a surface spill, warehouse personnel and the driver will take immediate action to stop the flow, contain the spill and notify supervision. Spill control supplies are located in the warehouse and at the dispensing pumps.

4.7 STS Bulk Underground Fuel Oil Tank (50D-09)[NYS Registration #G04]

4.7.1 Construction

The STS bulk fuel oil tank is a carbon steel, double walled underground tank with a bituminous coating. The tank is located to the northwest of the STS Ventilation Building. It has a capacity of 1,893 liters. The tank is used to store diesel fuel for emergency power.

4.7.2 Instrumentation

This tank is equipped with a leak detection conductivity probe in the annular space between the tank walls. The sensor indicators are located in the Permanent Ventilation System Building. An alarm annunciates in the PVS control room if the sensor detects hydrocarbons. These are checked each shift and recorded by the STS Operators. The monitoring system is checked annually by WVNSCO maintenance.

4.7.3 Operation

The diesel fuel is only needed in emergency conditions. The level is routinely checked by Operations personnel prior to use. The tank is supplied and refilled by an off-site vendor and sometimes also by WVNSCO using the portable tank. Fuel in the latter case is obtained from tank FOD-11. The filling operations are fully attended by the vendor and WVNSCO plant personnel.

4.7.4 Spill Control

The tank is stamped with the manufacturer's confirmation that it conforms with "6 NYCRR Part 614", thus indicating that the tank, welds, seams, and connecting fittings have been factory tested for tightness using standard engineering practices. It also requires that the tank is sufficiently protected against corrosion, and has some means of secondary containment (in this case the double-walled structure of the tank serves as secondary containment).

4.8 Generator Diesel Fuel Tank and Day Tank

A 28,200-liter fuel tank (FOD-11) is located aboveground northwest of the Vitrification Building. It supplies diesel fuel to the 758-liter day tank (FOD-12) within the diesel generator room of the Vitrification Building. The diesel fuel is used to operate the generator as a backup source of power to the Vitrification Building in the event of an electrical power outage. Tank FOD-11 is constructed of carbon steel and situated on a concrete pad within a concrete berm capable of containing greater than 110 percent of the volume of the tank. The tank is equipped with a high-level alarm to prevent overfilling.

Tank FOD-12 is constructed of carbon steel and located within a spill basin in the generator room. The generator room contains a sump to collect liquids in the event of a spill. The tank and the sump are equipped with high-level alarms that signal in the Vitrification Building control room.

4.9 Miscellaneous Facilities

4.9.1 Portable Diesel Fuel Tank

This tank has a capacity of 1,136 liters and is constructed of carbon steel. It is 1.8 m long and 0.9 m in diameter. This tank is not equipped with any instrumentation, and spill containment is provided by a carbon steel pan constructed around the tank.

The tank is filled from above ground diesel fuel tank 41-D-022, located to the east of the new warehouse. It is then transferred by forklift to the area south of the UR. A hand pump is used to pump out the fuel. The fuel is used to refuel the fire pump day tank (33D-1).

4.9.2 Utility Room Diesel Day Tank (31-D-103) [NYS Registration #URF)

The UR diesel tank is a 1,098-liter double-walled carbon steel tank located in the utility room. The tank contains No. 2 fuel oil and is equipped with a level indicator. The tank is visually inspected by WVNSCO Main Plant Operations on every shift for leaks. Additionally, there is an interstitial monitor which alarms at the tank site and in the utility room control room in the unlikely event of a leak.

4.9.3 Utility Room Extension Day Tank (31-D-102)

The Utility Room extension tank is a 1,514-liter double-walled steel tank located inside the Utility Room Extension. The tank contains No. 2 fuel oil and is equipped with a level indicator, high level alarm, and an automatic shut-off solenoid valve for the fuel oil supply. The tank is visually inspected daily for leaks. Additionally, there is an interstitial monitor which alarms at the tank site in the unlikely event of a leak.

4.9.4 Fire Pump Day Tank (33-D-1) [NYS Registration #FPH]

The fire pump day tank is a 1,098-liter double-walled carbon steel tank located inside the pump house south of the UR. The tank contains No. 2 fuel oil and is equipped with a level indicator. The tank is visually inspected every shift for leaks. Additionally, there is an interstitial monitor which alarms at the tank site and in the utility room control room in the unlikely event of a leak.

The tank is filled manually using a portable #2 fuel oil tank on the north side of the pump house. Inventory of the tank is visually checked before beginning filling operations. Additionally, Main Plant Operations personnel are in attendance during filling operations. The fire pump (using fuel from the day tank) is operated periodically to ensure that it would function properly in the event of a fire. For extended fire fighting operations, the portable tank would be staged near the tank fill point.

4.9.5 STS Day Tank (STD)

The STS day tank is a 380-liter carbon steel tank located in the generator room in the Permanent Ventilation System building. The tank contains diesel fuel and is equipped with a level indicator. The tank is filled from the STS bulk fuel oil G04 tank. A leak or spill from the day tank would be contained within the STS generator room.

4.9.6 Warehouse Bulk Oil Storage Unit (B-HAZ-08)

The Bulk Oil Storage Unit, located east of the Main 2 warehouse, is designated for the bulk storage of on-site combustibles (i.e., grease, oils, antifreeze, fire retardant) in segregated containers from 55 gallon drums to one (1) gallon containers. The locker is constructed of metal with a minimum inside dimension of 11 ft. x 23 ft. x 6 ft. 6 in. The walls are insulated with a 2 hr. fire rating and the doors have a 1.5 hr. fire rating. The floor is a removable fiberglass grating that is located 6 in. above a catch basin. The sump is monitored with a liquid level detector and audible explosion proof fixtures and an audible heat sensor alarm that is set at 140°F.

4.10 Mineral Oil Windows

There are a number of leaded glass shield windows that contain mineral oil. These include four (4) windows in the CPC, six (6) in the Process Mechanical Cell (PMC), four (4) in the General Operating Aisle (GOA), six (6) in the Equipment Decontamination Room (EDR), and one in the Chemical Crane Room (CCR). **(Table 4.4.2)**

4.11 Electrical Transformers

The site currently uses electrical transformers which contain insulating oils. The oils are totally enclosed in the steel casing of the transformers.

An inventory of the site transformer oil and secondary containment is summarized in **Table 4.11.1.**

Table 4.11.1 - Summary of inventory of Site Transformer Oil and Secondary Containment

NAME	RATING/ LOCATION	MATERIAL	QUANTITY	SPILL CONTAINMENT
UR Substation	2500 KVA/ East of Switchgear Rm	PCB- Contaminated Insulating Oil (Refined Mineral Oil)	2,218 Liters (586 gallons)	None (Gravel Pit)
UR Siemens	2500 KVA/ North of UR Expansion	Non-PCB Silicone Fluid (Less Flammable Dielectric Fluid)	2,476 Liters (654 gallons)	Yes (Pan)
VTF Siemens	2500 KVA/ West of VTF	Non-PCB Silicone Fluid	2,476 Liters (654 gallons)	Yes (Pan)
Vit Siemens-Allis Transformer A	2000 KVA/ East of Vit	Non-PCB Silicone Fluid	1,908 Liters (504 gallons)	Yes (Pan)
Vit Siemens-Allis Transformer B	2000 KVA/ East of Vit	Non-PCB Silicone Fluid	2,071 Liters (547 gallons)	None

4.12 Maintenance Lubrication Storage Locker (O-HAZ-03)

The Lube Storage Locker, located south of the maintenance building, is designated maintenance department storage of combustibles (i.e., grease, oils, antifreeze, fire retardant) in segregated containers from 55 gallon drums to 10 oz. cartridges. The locker is constructed of metal with a minimum inside dimension of 11 ft. x 23 ft. x 6 ft. 6 in. The walls are insulated with a 2 hr. fire rating and the doors have a 1.5 hr. fire rating. The floor is a removable fiberglass grating that is located 6 in. above a catch basin. The sump is monitored with a liquid level detector and audible explosion proof fixtures and an audible heat sensor alarm that is set at 140°F.

4.13 Waste Management Staging Area (WMSA)

The WMSA is the area designated for the storage of industrial waste and recyclable materials prior to off-site shipment. The storage area also functions as the storage area for used cooking oil from site cafeteria, used oil from forklifts, and water mixed with oil from compressors. Polyliners used in 55 gallon drums for spill control. About 1-2 fifty-five gallon drums are stored in WMSA on a pallet with built in containment for spillage at any given time. The storage area also functions as the non-radioactive lead bank. The building is approximately 100 x 80 ft. and is located south of the Main 2 warehouse. WM conducts weekly inspections of the waste containers.

4.14 Temporary Storage Facilities Storing PCB's

Temporary storage areas that may or may not contain PCB's (suspect) are established to store PCB's, PCB containing waste for 30 calender days as required.

5.0 OIL SPILL EVENT SPILL PREVIEW RELEASE SCENARIOS

5.1 Spill History

During the history of the WVDP, under NFS and DOE, there have been no documented occurrences of environmentally catastrophic spills causing significant harm to the environment. However, there have been several noteworthy on-site spills.

In July 1986, a small spill of diesel fuel in a construction laydown area occurred approximately 30 meters northeast of the waste water treatment lagoons. This spill consisted of release of 30 to 50 gallons of fuel from a parked dump truck. The cause of the leak was a perforated fuel line on the truck. Corrective action consisted of collecting the spilled fuel in buckets and on clay absorbent and securing the leaking fuel line. This event was confined to the immediate area and resulted in no release to surface waters.

A former underground petroleum-storage tank, closed in place before the New York State underground storage tank program closure requirements were implemented in 1985, was removed in 1997. Testing of solids from the tank excavation had shown evidence of earlier petroleum leakage, and on March 19, 1999 the DOE and NYSDEC executed a Stipulation Agreement Pursuant to Section 17-0303 of the Environmental Conservation Law and Section 176 of the Navigation Law for mitigation of the petroleum contamination.

A soil bioventing system was installed in August 1999 to remediate localized petroleum-contaminated soils. The system stimulates natural in situ biodegradation of petroleum hydrocarbons in the soil by providing an abundant oxygen supply to existing soil microorganisms within the contaminated soil zone.

Soil and groundwater samples were collected in 2002 to evaluate whether an adequate level of remediation has been achieved. Sample results are being reviewed by NYSDEC.

There have been no reportable spills (as defined by 40 CFR 112) at the WVDP for the last five years. Monthly spill reporting requirements to the NYSDEC are detailed in WVDP-340, "Spill/Release Evaluation Management, and Reporting Program".

5.2 Credible Oil Spill Sources

Potential sources of releases of oil, including all the storage facilities listed in Section 4.0. However, no reasonable potential exists for releases to the environment from facilities inside buildings. Therefore, this section will only consider facilities not enclosed in buildings. Some of these outdoor facilities are provided with secondary containment mechanisms such as containment basins and berms. However, in the event of a release, all of the outdoor facilities would also be provided with containment by means of blockage of the spill migration pathway. The remainder of this section focuses on spill migration pathways (including available locations for blockage) in the event of a spill from one of the outdoor tanks.

The underground tank at the WVDP is maintained in compliance with state and federal underground storage tank regulations, which require leak prevention and detection by various means such as regular monitoring, cathodic protection, double containment, etc. However, this section will consider surface migration pathways due to spills resulting from transfer of oil or discharges of oil from these tanks.

5.3 Migration Pathways

Releases in the majority of the site area would flow east into surface depressions and eventually, if not blocked, to Erdman Brook or Franks Creek. These migration pathways and available blockage points, and the containment basin that would be formed in the event of blockage, are shown on **Figure 5.3.1.** A release in the northwest area of the site would flow northeast into a surface depression and eventually, if not blocked, into Quarry Creek.

Figure 5.3.1 also shows paths of underground storm sewers (dashed lines). Storm sewer outlets generally lead to surface ditches, through culverts, and to topographical depressions leading to creeks. The storm sewer system and continuing topographical drainageways, if blocked, represent a further containment system with storage capacity in the event of a release.

The containment basins which could be developed by culvert or ditch closure range from extremely large (e.g., 7.5 million gallons, by blocking a culvert located in the Erdman Brook) to several hundred gallons (e.g., some minor ditches).

The above ground gasoline and diesel fuel tanks are located west of the warehouse. A substantial surface spill of material from these tanks would flow south several meters to a drainage ditch, alongside a roadway, then flow in the ditch another 100 meters south to a culvert under the road. The flow could be blocked at the culvert entrance. Blocking the drainage path would allow cleanup before the spill material could migrate off-site. The transit time for material to flow from the area of the fuel pumps to Erdman Brook is on the order of minutes to hours, depending on conditions, such as quantity released and weather conditions.

Figure 5.3.1 - WVDP Site Map - Storm Water System Local Spill Migration Pathways and Diversion Basins

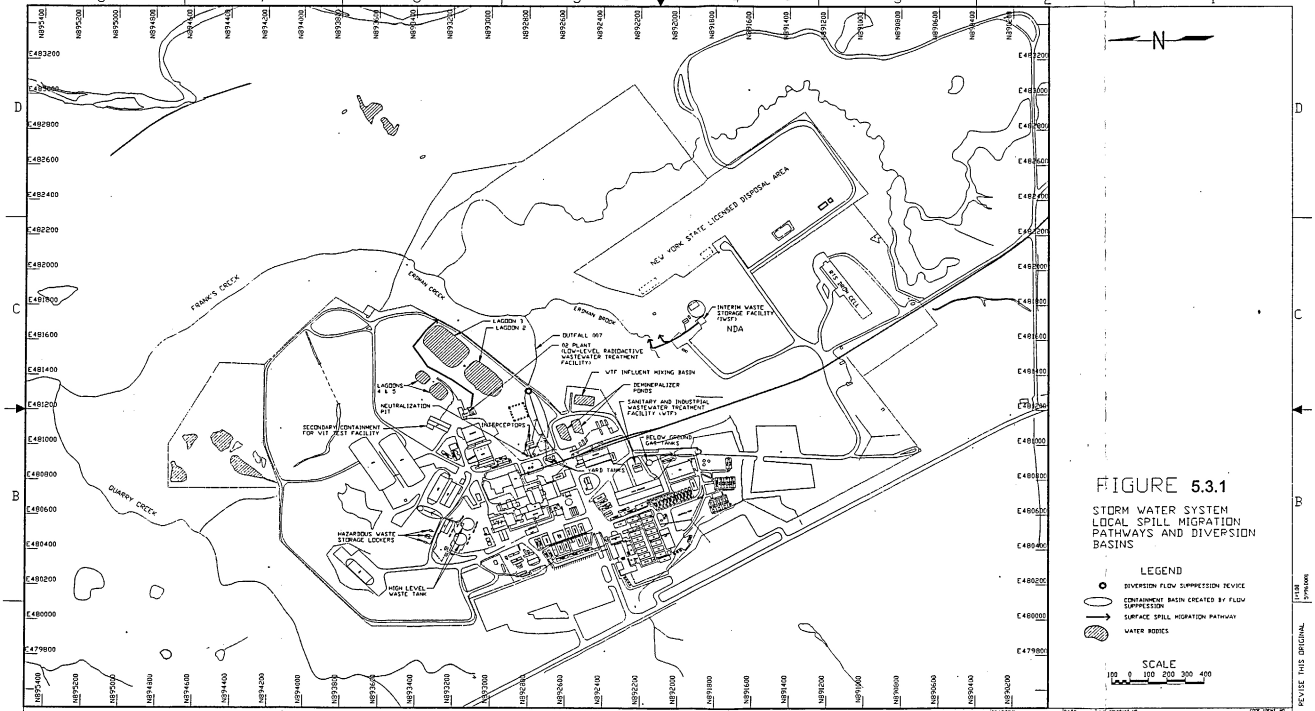


FIGURE 5.3.1

STORM WATER SYSTEM LOCAL SPILL MIGRATION PATHWAYS AND DIVERSION BASINS

LEGEND

- DIVERSION FLOW SUPPRESSION DEVICE
- CONTAINMENT BASIN CREATED BY FLOW SUPPRESSION
- SURFACE SPILL MIGRATION PATHWAY
- WATER BODIES

PRELIMINARY
NOT ENG. RELEASED
NOT FOR PROJECT USE

UNLESS OTHERWISE SPECIFIED
NOTFOUND
TOLERANCES-DO NOT SCALE
DRAWN J. SCHEIBLE 5/23/94
CHECKED NOTFOUND
ENG NOTFOUND
TOO MGR APPROVAL
SYS ENGR APPROVAL
QUALITY APPROVAL
PROJECT APPROVAL

FOR WEST VALLEY NUCLEAR SERVICES CO.INC WEST VALLEY, NEW YORK

WVDP SITE MAP FIGURE 5.3.1 SPILL MIGRATION PATHWAYS

SCALE SEE BAR SCALE DWG NO 9000-5996 REV 0
WEIGHT
SIZE D
A/E DWG NO
SHEET 1 OF 1

CAD DRAWING-DO NOT REVISE THIS ORIGINAL

PLOT 1=1

5.4 Spill Prevention and Emergency Preparedness

The WVNSCO Site Services Manager is responsible for all spill control and response. Individual engineering departments are responsible for the design and engineering of the storage and containment facilities described in this Plan. Individual organizations are responsible for developing and implementing oil spill prevention and control training programs.

If a spill of oil is identified at the WVDP, the initial response will be to ensure employee safety, contain the material on-site, identify the source, and isolate or eliminate the source. Notification of the spill will be provided to the DOE-OH/WVDP using the "Substance Release Evaluation Form" (see Section 7.1).

The permeabilities of the soils on the site, as well as those contained in the berms surrounding the tanks on site, can be found in the Geo-Hydro EID, WVDP-009. Calculations can be used to determine the rate of transport through the dikes and into the groundwater.

If containment around a given source were to fail, the spill can still be contained within the site boundaries by cutting off surface drainage from the area. This can be done by placing earthen dams across drainage ditches, inflatable "pigs" in culvert pipe outlets, or utilizing alternative spill containment devices.

Stopping the source of the spill may be accomplished by closing a valve on a transfer line or removing the material from the leaking tank. In some cases, material removed from a tank could be transferred into a suitably equipped spare tank. This would also be the method for recovering spilled material retained in a spill pad or containment basin.

Responsibility for recovery from non-emergency spills (i.e., where there is no potential for off-site release or a threat to the safety of on-site personnel) resides with the PSOSS. The PSOSS will call upon the expertise of other WVNSCO management and staff as necessary to remediate the situation, and will also notify WVNSCO EA, who will determine if subsequent off-site notifications are required.

The WVDP Emergency Plan (WVDP-022) will be implemented if an oil spill of significant quantity threatens the safety of on-site personnel or the environment. The petroleum product spill reporting procedures agreed to by the NYSDEC and the DOE-OH/WVDP as of June 25, 1996, include the following provisions:

1. Spills of petroleum products of less than five (5) gallons which are contained and under the control of the spiller, do not reach the State's water or any land, and are cleaned up within two (2) hours of discovery, need not be reported to NYSDEC. A spill report and evaluation will be maintained for at least one year from the date of the incident by WVDP for these spills.

2. Spills of petroleum products of less than five (5) gallons which contact any land, but do not reach the State's water must be entered into the monthly petroleum spill log. They need not be reported to the NYSDEC Spill Hotline.

3. Spills of petroleum products of any amount that reach the State's water or are greater than five (5) gallons must be reported immediately. Incidents are reported to the NYSDEC Region 9 Spill Response Unit (716-851-7220) during regular business hours, or the NYSDEC Spill Hotline (1-800-457-7362) at any hour, or 1-518-457-7362 if calling from outside New York State.

   Any person with knowledge of a spill, leak or discharge of petroleum must report the incident to MPO who will notify EA as required by WV-915 "Spill/Release Notification and Reporting." EA will evaluate the incident and make the appropriate report to the NYSDEC, as required. The results of any inventory record, test or inspection which show a facility is leaking must be reported to the NYSDEC within two (2) hours of the discovery. Notification must be made by calling the telephone hotline (800) 457-7362 or (518)457-7362.

   Oil spills that are sufficiently harmful to public health and welfare - that violate water quality standards or leave a film or sheen on the water or sludge on the adjoining shoreline - must be reported to the appropriate EPA regional office immediately. If the spill is greater than 1000 gallons of petroleum products or if two spill incidents are reported within twelve (12) months, a written report must be sent to EPA within sixty (60) days. The report must contain the following information:

   - Name of the facility.
   - Names of owners or operators.
   - Location.
   - Date when the facility began operation.
   - Maximum storage or handling capacity and output of the facility.

- A complete description of the facility including maps, diagrams, flow charts, and topographical details.
- What failures in the system caused the spill.
- What was done to stop the spill.
- What preventive measures have been taken to reduce the possibility of further spills.

A copy of the oil spill report is also sent to the state agency responsible for water pollution control, NYSDEC. After NYSDEC and the EPA regional office review the oil spill report, the owner or operator may be required to amend the SPCC plan to stricter requirements unless it can be shown that the proposed amendments are not feasible. These arguments must be set forth within thirty (30) days of notification by the EPA regional office.

The monthly log and accompanying report must be submitted to NYSDEC Region 9 by the 15th of the following month. The log must be available for inspection during normal business hours.

If a release is imminent, EA will evaluate and if necessary notify the DOE-OH/WVDP. The DOE-OH/WVDP will notify the DOE-OH. EA will notify Washington Group International, Inc. Energy and Environment Group, the EPA, NYSDEC, and local emergency response units if necessary.

The WVDP Emergency Plan (WVDP-022) provides an organized plan of action that identifies authorities and responsibilities of emergency response personnel and organizations and identifies the manpower and equipment resources available to cope with emergencies at the WVDP. WVDP-022 applies to emergency actions relative to radiological, hazardous, industrial, safeguards and security (theft of Special Nuclear Materials, threats or acts of violence, etc.), and natural phenomena emergencies at the WVDP. The primary purpose of WVDP-022 is to minimize the impact of any emergency upon the health and safety of plant personnel and the general public.

Whenever a WVDP emergency occurs, the Emergency Director may activate Emergency Response Organization personnel or their designated alternates. This group provides administrative and technical assistance to the Emergency Director, as needed, and consists of the WVDP EOC staff, Technical Support Center (TSC) staff, Operations Support Group (OSG) staff, and the IC. The composition and functions of these groups are described in WVDP-022 and WVDP-139.

On off-shifts, the responsibility for emergency direction for the WVDP rests with the PSOSS until relieved by higher authority. The PSOSS is the Emergency Director (who assumes the duties of IC) during emergency events where fire and health concerns are paramount.

The WVNSCO President has the ultimate responsibility for all WVNSCO activities. The WVNSCO President interacts with the DOE Project Director and off-site resources as appropriate for the mitigation of emergency conditions. The President and/or his alternates serve as Emergency Director. Emergency Response Organization Staffing Lists will be periodically updated and maintained in the WVDP Emergency Management Implementing Procedures Manual (WVDP-139). The WVNSCO President will retain responsibility and authority for assessment and mitigation of emergency conditions at WVDP unless relieved by higher authority.

With regard to emergencies when EOC is activated, the Emergency Director shall:

1. Maintain executive control of all emergency situations affecting WVDP operations;

2. Activate the WVDP Emergency Operations Center and WVDP Emergency Response Organization (WVDP-ERO) as needed;

3. Oversee emergency response actions utilizing personnel and resources to mitigate consequences of the emergency;

4. Authorize site-wide evacuation of personnel, if needed;

5. Activate WVNSCO personnel, as needed;

6. Maintain WVNSCO succession of authority;

7. Authorize obtaining assistance from off-site organizations such as hospitals, health departments, highway departments, law enforcement agencies, fire departments, ambulance services, etc., as needed;

8. Authorize mutual aid or other emergency assistance from off-site agencies or organizations, as needed; and

9. Recommend to the DOE Project Director notification of off-site local, county, and state officials in the event of releases of oil to the environment that may affect persons or property outside the site boundary. DOE-OH/WVDP will notify DOE-OH and DOE-HQ, and DOE-OH assistance will be requested, as needed. EA will determine if the situation warrants notification of the EPA or National Response Center for spills of oil.

Regardless of the size or severity of a spill, once the situation has been stabilized, recovery measures will be implemented. Equipment will be repaired or replaced and contaminated areas will be cleaned up. Contaminated wastes generated during these operations will be managed in accordance with SOP 300-07 "On-Site Waste Generation, Packaging, and Transportation."

6.0 EMERGENCY RESPONSE PROGRAM

6.1 Notifications

In the event of a spill or other release of oil the notifications listed below will be made. Procedures are detailed in WV-915, "Spill/Release Notification and Reporting" and WVDP-340, "Spill/Release Evaluation, Management, and Reporting Program."

- The individual discovering the release will notify the Shift Supervisor in charge of the affected area. The Shift Supervisor of the affected area will notify the PSOSS. The PSOSS will notify EA as soon as possible. If there is any question of personal safety, the individual should perform an "812-all page" to summon help immediately and keep others away from the area.

- For any spills resulting in a release to the environment, DOE-OH/WVDP will be notified as soon as possible by means of WV-3516, "WVNSCO/Environmental Affairs: Substance Spill/Release Report Form" and WV-3517, "Environmental Affairs: Notification Information Form"

- The PSOSS will initiate spill containment measures.

- The PSOSS will determine if the situation warrants activation of the EOC.

- In a non-emergency, EA will notify the respective DOE-OH/WVDP representatives and the Washington Group International representative as per WVDP-340.

- EA will notify EPA and appropriate New York State agencies if needed. Completion of Environmental Affairs Notification Form WV-3517 is required when outside agencies are contacted. The notifications will include, but not necessarily be limited to, the following:

Name/Title	Telephone Number
DOE - EOC	FTS-896-8100
EPA - NRC	800-424-8802
Region II EPA Emergency Response Team (ERT)	201-548-8730
NYSDEC Spill Response Hotline	1-800-457-7362 or 716-851-7220
State Emergency Management Organization	24 Hour Number: 1-800-457-7362 Emergency Coordinator Center: 518-457-2200 518-457-9930 (fax)
Local Emergency Planning Coordinator	Cattaraugus County: 716-938-9191 Erie County: 716-858-6262 or 716-898-3696
Washington Energy & Environment (WE&E) 24-Hour Emergency management Team Leader and Alternate: Steve Marchetti - Team Leader Senior Vice President Operations (WE&E) Greg Meyer - Alternate Team Leader (WG) Director - Environmental, Safety, Health & Quality Assurance (WE&E)	 Office: 803-502-9980 Home: 803-642-3878 Cell: 803-507-2178 Email: steve.marchetti@wgint.com Office: 803-952-9387 Home: 706-854-9313 Cell: 706-830-0743 Email: greg.meyer@srs.gov greg.meyer@wgint.com
Washington Energy & Environment 24-Hour Corporate Communicator Contact Bill Whiting - Primary Manager and Marketing Communications	 Office: 803-502-9963 Home: 803-643-8040 Cell: 803-507-8018 Email: william.whiting@wgint.com

6.2 Emergency Response Phone Numbers

Name	Telephone Number
Springville Fire Department	716-592-2825
West Valley Fire Department	716-942-6007
Erie County Sheriff Department	716-662-5444
Cattaraugus County Sheriff Department	800-443-3407
International Waste Removal Inc.	716-827-0824 or 716-873-7196
Bertrand Chaffee Hospital	716-592-2871
Erie County Medical Center	716-898-3000

6.3 Emergency Response Coordinators

In the event of a release of oil, the Emergency Director (ED) becomes the Emergency Response Coordinator.

Refer to WVDP-139, Volume 1 - EMIP-103 for the latest revision of Roster A and Roster B.

6.4 Emergency Response Organization (ERO)

The role of WVDP ERO is to assess any emergency on the WVDP site and coordinate, manage, monitor, and evaluate the associated response. Emergency response for WVDP is detailed in WVDP-022, "WVDP Emergency Plan".

6.4.1 Organization Structure

The overall organizational structure of the WVDP consists of the OH/WVDP, NYSERDA, and the WVDP site contractor and it's support contractors.

The WVDP ERO is depicted in **Figure 6.4.2.**

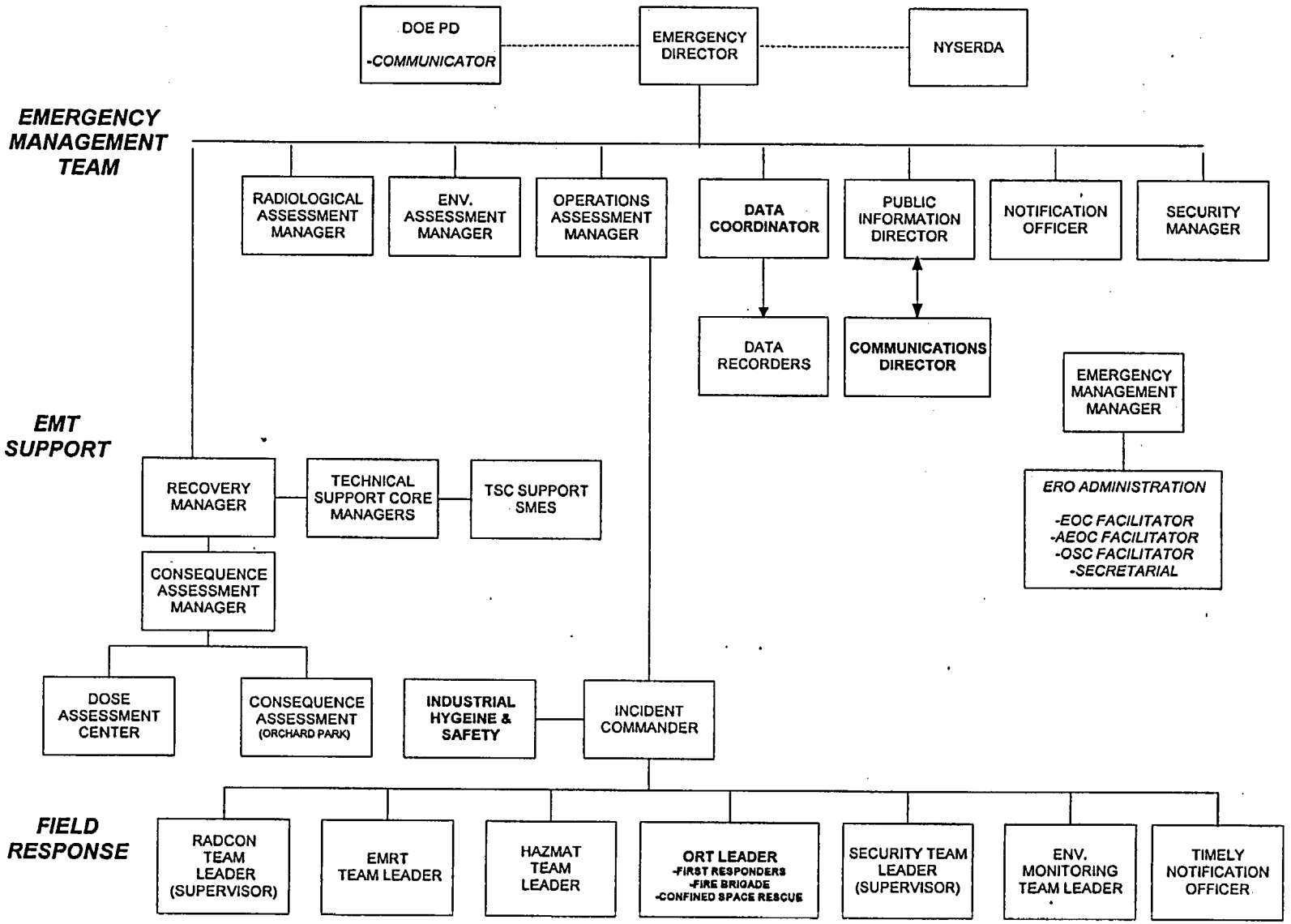
Emergency conditions are initially reported in accordance with WVDP-139, Volume I. Upon notification of the emergency, the Plant System Operations Shift Supervisor (PSOSS) assumes the position of the Incident Commander (IC).

The IC directs all activities at the scene of the emergency, ensures that all personnel safety actions are taken, and manages the emergency scene. The supervisor of the affected system and/or facility shall report to and assist the IC. The IC directs the entire emergency response until the Emergency Operations Center (EOC) is activated and the Emergency Director (ED) assumes overall emergency management responsibility.

The ED is responsible for the establishment of objectives and overall management strategies associated with mitigation of the incident.

SEE EMIP-103 FOR LATEST REVISION

Figure 6.4.2 - Emergency Response Organization



6.5 Emergency Equipment

The warehouse maintains several types of spill clean up and recovery equipment as well as an inventory of general supplies useful in recovering spilled material. Spill kits are maintained in all facilities on site where the potential for a spill exists. (TSB Hazmat team supplies stored in the Test and Storage Building (TSB) include rubber gloves, boots, and chemical-resistant disposable suits, as well as respiratory protection equipment, goggles, and other personnel protective equipment.) Lumber, plastic, sand, and Herculite are available to construct temporary berms. Specific spill response equipment which includes clay sorbent material (speedy dry) and absorbent socks and pillows are available for use by Cattaraugus County Hazmat team. Several sizes and types of overpack and salvage drums are also maintained in inventory.

In the event of a large spill or release to the environment, any on-site contractor with excavation equipment will be directed to deploy his earth moving equipment to cut off drainage ditches and culverts to contain spilled material. The contractor's personnel are all trained in accordance with site requirements and therefore can immediately commence preventative and/or corrective work.

The WVDP also has several different types of pumps and a variety of surplus tanks available for recovery of large quantity spills.

HAZMAT Response is provided by the Cattaraugus County HAZMAT Team through a Mutual Aid Agreement with Cattaraugus County Emergency Services.

6.6 Arrangements with Outside Agencies

Letters of agreement and Memoranda of Understanding (MOU) are on file for the following agencies (see WVDP-022):

6.6.1 West Valley Volunteer Hose Co.

A Letter of Agreement has been signed with the West Valley Volunteer Hose Co. to provide emergency assistance for fires and transportation of radiologically or chemically contaminated ill/injured personnel if needed. The fire department is located less than 5 miles from the site. Plant Security calls the fire department when assistance is needed. Terms of the Letter of Agreement (LOA) are defined in WVDP-022.

6.6.2 Bertrand-Chaffee Hospital

A Letter of Agreement has been signed with Bertrand-Chaffee Hospital (BCH). BCH has agreed to accept ill/injured or radiologically or chemically contaminated personnel.. The hospital is located in Springville, New York, approximately 4 miles from the plant. Terms of the LOA are defined in WVDP-022.

6.6.3 Other Outside Agencies

- West Valley Fire District 1
- Erie County Medical Center
- Mercy Flight Incorporated
- New York State Police
- Erie County Sheriff's Department
- Cattaraugus County Emergency Services
- Cattaraugus County Sheriff's Department
- Town of Ashford - Alternate Emergency Operations Center (AEOC)

SAMPLE - NOT FOR OFFICIAL USE SEE WVDP-340 FOR LATEST REVISION

Figure 6.6.4 - "Substance Spill/Release Report Form," WV-3516

WVNS / Environmental Affairs

Substance Spill / Release Report Form

Notification Date: **Time:**	**E.A. Personnel Notified:**
MPOSS Notified at time of spill/release:	
Spill/Release Discovery Date: **Time:**	**Spill/release ID#:**
Location of Site: West Valley Demonstration Project 10282 Rock Springs Road West Valley, New York 14171-9799	**Site Specific Location:**
Substance Spilled or Released: **Substance:** **CAS# (if applicable):** **Comments:**	**Cause:** **Comments:**
Additional Incident Information (i.e., injuries, weather conditions, etc.):	
Resources Affected: **If None Explain:**	**Reportable Quantity (RQ)** **Quantity Spilled:** **RQ for Material:** **RQ Exceeded*:** **Chemical Substance Reporting Required:** **Petroleum Reporting Required:** **Notification Form (WV-3517) Required:**
Clean-Up Measures Taken: **Waste directed to:** **SOP 300-07 initiated:**	**Clean-Up Completion** **Date:** **Time:**
DOE Notified: **Contact:** **Date:** **Time:**	**Reported Completed By:** **Date:** **Time:**

cc: MRC (original) MS-AOC-21
Facility Owner (with MS):

* See Attachment for Calculations if applicable

WV-3516, Rev. 5

Figure 6.6.5 - "Notification Information Form," WV-3517

Environmental Affairs

Notification Information Form

Spill#:	**Material Spilled:**	
Quantity Spilled:	**Reportable Quantity:**	
Location of Spill:		
Reported to Washington Group Risk Management:		
Vice President:	**Phone:**	**Date/Time:**
Security Manager:	**Phone:**	**Date/Time:**
Corporate Director ES&H:	**Phone:**	**Date/Time:**
Risk Management Attorney:	**Phone:**	**Date/Time:**
Reported to 24-Hour Washington Government Emergency Management Team:		
Report Given To:	**Phone:**	
Position:		
Date/Time:		
Reported to 24-Hour Corporate Communicator Contact:		
Report Given To:	**Phone:**	
Position:		
Date/Time:		
Reported to National Response Center (NRC) (800-424-8802):		
Report Given To:		
Date/Time:		
NRC Release #:		
Reported to New York State Department of Environmental Conservation (NYSDEC) (800-457-7362):		
Report Given To:		
Date/Time:		
NYSDEC Release #:		
Reported to Main Plant Operations Manager:		
Report Given To:		
Date/Time:		
Additional Reporting (if required):		
Attach additional sheets if needed.		
Reported Completed By:	**Date:**	

cc: MRC (original) MS-AOC-21
Operations Support Manager MS-WV-207

Attachment to WV-3516 Report No. _____

7.0 VIOLATIONS AND PENALTIES

7.1 Violations

Failure to do any of the following is considered a violation under the Oil Pollution Prevention regulations:

- Prepare a Spill Prevention Control and Countermeasure (SPCC) plan
- Have a SPCC plan certified by a registered professional engineer
- Use a SPCC plan as required
- Submit information after a reportable spill occurs
- Amend the SPCC plan, as necessary
- Amend the SPCC plan after changing the design of the facility
- Review the plan every three (3) years

7.2 Penalties

Owners or operators who fail to comply with regulations for the prevention of oil spills are subject to a civil penalty of not more than $5,000 for each day that the violation goes uncorrected.

8.0 CERTIFICATION OF THE APPLICATION OF THE SUBSTANTIAL HARM CRITERIA

The 1990 Oil Pollution Prevention Act (OPPA) requires facilities that store petroleum products to determine if they meet substantial harm criteria. The EPA considers facilities that meet substantial harm criteria as having the potential for significant releases into navigable waterways or public drinking water intakes. These facilities must submit a spill response plan to the EPA. The responses to the questions listed in **Figure 8.1** indicate that the WVDP does not meet substantial harm criteria. Therefore, the 1990 OPPA does not require the WVDP to prepare a spill response plan.

Figure 8.1
Attachment C-II

Certification of the Applicability of the Substantial Harm Criteria Under Oil Pollution Prevention Act of 1990

Facility Name: West Valley Demonstration Project

Facility Address: 10282 Rock Springs Road, P.O. Box 191

West Valley, New York 14171

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

   Yes _____ No X

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

   Yes _____ No X

3. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance (as calculated using the appropriate formula) such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments? For further description of fish and wildlife and sensitive environments, see Appendices I, II, and III to DOC/NOAA's "Guidance for Facility and Vessel Response Plans: Fish and Wildlife Sensitive Environments" (see Appendix E of the regulations, section 10, for availability) and the applicable Area Contingency Plan.

   Yes _____ No X

4. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance (as calculated using the appropriate formula in Attachment C-III under the regulations or a comparable formula) such that a discharge from the facility would shut down a public drinking water intake?

   Yes _____ No X

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

   Yes _____ No X

Certification

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

Signature: _____

Name: J. R. Gerber

Title: Manager, Regulatory and Compliance Programs

Date: 5/9/03

APPENDIX A
EMPLOYEE TRAINING PROGRAM AND REQUIREMENTS

1.0 TRAINING PROGRAM

Training at the WVDP site is a formally organized and continuing program of employee indoctrination and instruction to ensure that personnel receive a level of training consistent with work assignments and responsibilities. All training is conducted in accordance with the WVDP Performance-Based Training Manual, WVDP-126.

The qualification training programs for the various operations departments consist of:

- Formal classroom training;
- Site orientation;
- On-the-job training;
- Proficiency testing;
- Comprehensive oral and/or written examinations; and
- Continuing training.

1.1 Emergency Spill Response Training

All employees handling oil will receive awareness spill response training. The training material will be a required reading document which will include requirements listed in Section 1.2.

1.2 Content of Training

Training will include, at a minimum, the operation and maintenance of equipment to prevent the discharge of oil, discharge procedure protocols, applicable Pollution Control Laws, rules and regulations, general facility operations, and the contents of the Facility Plan.

1.3 Retraining Program

All general employees receive annual briefing on spill response and prevention of discharge of oil. Training will include the content of facility plan, operation and maintenance of equipment to prevent the discharge of oil.

1.4 Training Records Administration

The Records and Configuration/Document Department maintains Training Records in accordance with West Valley Procedure WV-730 and T-60 for all approved training material and a central documentation file for employee/ subcontractor records of implementation of training programs. The file is also used to schedule refresher or upgrading training for all WVDP personnel, such documentation must be maintained for three years. Also the records will be maintained.

APPENDIX B

DEPARTMENT PROCEDURES AND INSPECTION SHEETS

INSPECTION OF ABOVE GROUND TANKS
31D-2, 41D-021, 41D-022, FOD-11

DAILY: (By area operators)

- Visually inspect the area around the tanks for possible detection of leaks.
- Check tank foundations.
- Check pipeline inside diked area.

DURING UNLOADING: (By area operators)

- Examine piping and connections prior to filling or unloading tanks.
- Check level indicator reading before unloading and determine if there is adequate room to unload a truckload. Recheck level after unloading and maintain record of level in the tank. Never fill the tank to the top.
- Any oil spilled or dripped on ground during filling or unloading must be absorbed and cleaned up immediately.

MONTHLY:

- Inspect tank foundation for possible signs of deterioration.
- This task is performed by Quality Services (see attached sample) as required by 6NYCRR, Part 613.6(a).

INSPECTION INSTRUCTION AND DATA SHEET

Inspection Method Key:
1. Measure
2. Observe measurement
3. Review documentation
4. Compare
5. Observe or Witness
6. Previous Hold Point Issued
7. Other - Please document method

IIDS No. 00-257

Page 1 of 1

Item Inspected: FPH (33D-1) Inspection Date: 10/23/00

IIDS Prepared by: W:\STANDARDS\IIDS-IIDS-06tnk.wpd Date: 10/30/00

Facility/Location: 30d/Fire Pump House References: 6NYCRR 613.6 (a) & (c)

Method (See Key)	Characteristic Acceptance Criteria	Actual Inspection Results	Acc.	Rej.
5	1. Inspect exterior surface of tanks, pipes, valves, and other equipment for leaks and maintenance deficiencies.			
5	2. Inspect and identify cracks, areas of wear, corrosion and thinning, poor maintenance and operating practices, excessive settlement of structures, separation or swelling tank insulation, malfunctioning equipment and structural and foundation weaknesses.			
5	3. Inspect monitoring of all leak detection systems, cathodic protection monitoring equipment, other monitoring or warning systems which may be in place.			

Comments: Performance of the above listed Acceptance Criteria characteristics indicate certification that the inspection has been performed in a manner consistent with the above referenced requirement.

West Valley Demonstration Project, West Valley, New York Facility Registration No.: 9-008885.

IR Number (if Issued): N/A

Equipment Used: N/A M&TE Used: N/A Cal. Due Date: N/A

Inspector: J. B. Wildey Date: 10/30/00
Signature/Print

APPENDIX C

U.S. EPA REGULATION ON OIL POLLUTION PREVENTION 40 CFR PART 112

ism.

(10) *Personnel, training and spill prevention procedures.* (i) Owners or operators are responsible for properly instructing their personnel in the operation and maintenance of equipment to prevent the discharges of oil and applicable pollution control laws, rules and regulations.

(ii) Each applicable facility should have a designated person who is accountable for oil spill prevention and who reports to line management.

(iii) Owners or operators should schedule and conduct spill prevention briefings for their operating personnel at intervals frequent enough to assure adequate understanding of the SPCC Plan for that facility. Such briefings should highlight and describe known spill events or failures, malfunctioning components, and recently developed precautionary measures.

§112.20 Facility response plans.

(a) The owner or operator of any non-transportation-related onshore facility that, because of its location, could reasonably be expected to cause substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines shall prepare and submit a facility response plan to the Regional Administrator, according to the following provisions:

(1) For the owner or operator of a facility in operation on or before February 18, 1993 who is required to prepare and submit a response plan under 33 U.S.C. 1321(j)(5), the Oil Pollution Act of 1990 (Pub. L. 101-380, 33 U.S.C. 2701 *et seq.*) requires the submission of a response plan that satisfies the requirements of 33 U.S.C. 1321(j)(5) no later than February 18, 1993.

(i) The owner or operator of an existing facility that was in operation on or before February 18, 1993 who submitted a response plan by February 18, 1993 shall revise the response plan to satisfy the requirements of this section and resubmit the response plan or updated portions of the response plan to the Regional Administrator by February 18, 1995.

(ii) The owner or operator of an existing facility in operation on or before February 18, 1993 who failed to submit a response plan by February 18, 1993 shall prepare and submit a response plan that satisfies the requirements of this section to the Regional Administrator before August 30, 1994.

(2) The owner or operator of a facility in operation on or after August 30, 1994 that satisfies the criteria in paragraph (f)(1) of this section or that is notified by the Regional Administrator pursuant to paragraph (b) of this section shall prepare and submit a facility response plan that satisfies the requirements of this section to the Regional Administrator.

(i) For a facility that commenced operations after February 18, 1993 but prior to August 30, 1994, and is required to prepare and submit a response plan based on the criteria in paragraph (f)(1) of this section, the owner or operator shall submit the response plan or updated portions of the response plan, along with a completed version of the response plan cover sheet contained in Appendix F to this part, to the Regional Administrator prior to August 30, 1994.

(ii) For a newly constructed facility that commences operation after August 30, 1994, and is requires to prepare and submit a response plan based on the criteria in paragraph (f)(1) of this section, the owner or operator shall submit the response plan, along with a completed version of the response plan cover sheet contained in Appendix F to this part, to the Regional Administrator prior to the start of operations (adjustments to the response plan to reflect changes that occur at the facility during the star-up phase of operations must be submitted to the Regional Administrator after an operational trial period of 60 days).

(iii) For a facility required to prepare and submit a response plan after August 30, 1994, as a result of a planned change in design, construction, operation, or maintenance that renders the facility subject to the criteria in paragraph (f)(1) of this section, the owner or operator shall submit the response plan, along with a completed version of the cover sheet contained in Appendix F to this part, to the Regional Administrator before the portion of the facility undergoing change commences operations (adjustments to the response plan to reflect changes that occur at the facility during the start-up phase of operations must be submitted to the Regional Administrator after an operational trial period of 60 days).

(iv) For a facility required to prepare and submit a response plan after August 30, 1994, as a result of an unplanned event or change in facility characteristics that renders the facility subject to the criteria in paragraph (f)(1) of this section, the owner or operator shall submit the response plan, along with a completed version of the response plan cover sheet contained in Appendix F to this part, to the Regional Administrator within six months of the unplanned event or change.

(3) In the event the owner or operator of a facility is required to prepare and submit a response plan uses an alternative formula that is comparable to one in Appendix C to this part to evaluate the criterion in paragraph (f)(1)(ii)(B) or (f)(1)(ii)(C) of this section, the owner or operator shall attach documentation to the response plan cover sheet contained in Appendix F to this part that demonstrates the reliability and analytical soundness of the alternative formula.

(b)(1) The Regional Administrator may at any time require the owner or operator of any non-transportation-related onshore facility to prepare and submit a facility response plan under this section after considering the factors in paragraph (f)(2) of this section. If such a determination is made, the Regional Administrator shall notify the facility owner or operator in writing and shall provide a basis for the determination. If the Regional Administrator notifies the owner or operator in writing of the requirement to prepare and submit a response plan under this section, the owner or operator of the facility shall submit the response plan to the Regional Administrator within six months of receipt of such written notification.

(2) The Regional Administrator shall review plans submitted by such facilities to determine whether the facility could, because of its location, reasonably be expected to cause significant and substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shoreline.

(c) The Regional Administrator shall determine whether a facility could, because of its location, reasonably be expected to cause significant and substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines, based on the factors in paragraph (f)(3) of this section. If such a determination is made, the Regional Administrator shall notify the owner or operator of he facility in writing and:

(1) Promptly review the facility response plan;

(2) Require amendments to any response plan that does not meet the requirements of this section;

(3) Approve any response plan that meets the requirements of this section;

(4) Review each response plan periodically thereafter on a schedule established by the Regional Administrator provided that the period between plan reviews does not exceed five years.

(d)(1) The owner or operator of a facility for which a response plan is required under this part shall revise and resubmit revised portions of the response plan within 60 days of each facility change that materially may affect the response to a worst case discharge, including:

(i) A change in the facility's configuration that materially alters the information included in the response plan;

(ii) A change in the type of oil handled, stored or transferred that materially alters the required response resources;

(iii) A material change in capabilities of the oil spill removal organization(s) that provide equipment and personnel to respond to discharges described in paragraph (h)(5) of this section;

(iv) A material change in the facility's spill prevention and response equipment or emergency response procedures; and

(v) Any other changes that materially affect the implementation of the response plan.

(2) Except as provided in paragraph (d)(1) of this section, amendments to personnel and telephone number lists included in the response plan and a change in the oil spill removal organization(s) that does not result in a material change in support capabilities do not require approval by the Regional Administrator. Facility owners or operators shall provide a copy of such changes to the Regional Administrator as changes occur.

(3) The owner or operator of a facility that submits changes to a response plan as provided in paragraph (d)(1) or (d)(2) of this section shall provide the EPA-issued facility identification number (where one has been assigned) with the changes.

(4) The Regional Administrator shall review for approval changes to a response plan submitted pursuant to paragraph (d)(1) of this section for a facility determined pursuant to paragraph (f)(3) of this section to have the potential to cause significant and substantial harm to the environment.

(e) If the owner or operator of a facility determines pursuant to paragraph (a)(2) of this section that a facility could not, because of its location, reasonably be expected to cause substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines, the owner or operator shall complete and maintain at the facility the certification form contained in Appendix C to this part and, in the event an alternative formula that is comparable to the one contained in Appendix C to this part is used to evaluate the criterion in paragraph (f)(1)(ii)(B) or (f)(1)(ii)(C) of this section, the owner or operator shall attach documentation to the certification form that demonstrates the reliability and analytical soundness of the comparable formula and shall notify the Regional Administrator in writing that an alternative formula was used.

(f)(1) A facility could, because of its location, reasonably be expected to cause substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines pursuant to paragraph (a)(2) of this section, if it meets any of the following criteria applied in accordance with the flowchart contained in Attachment C-1 to Appendix C to this part:

(i) The facility transfers oil over water to or from vessels and has a total oil storage capacity greater than or equal to 42,000 gallons; or

(ii) The facility's total oil storage capacity is greater than or equal to 1 million gallons, and one of the following is true:

(A) The facility does not have secondary containment for each aboveground storage area sufficiently large to contain the capacity of the largest aboveground oil storage tank within each storage area plus sufficient freeboard to allow for precipitation;

(B) The facility is located at a distance (as calculated using the appropriate formula in Appendix C to this part or a comparable formula) such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments. For further description of fish and wildlife and sensitive environments, see Appendices I, II and III of the "Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments" (see Appendix E to this part, section 10, for availability) and the applicable Area Contingency Plan prepared pursuant to section 311(j)(4) of the Clean Water Act;

(C) The facility is located at a distance (as calculated using the appropriate formula in Appendix C to this part or a comparable formula) such that a discharge from the facility would shut down a public drinking water intake; or

(D) The facility has had a reportable oil spill in an amount greater than or equal to 10,000 gallons within the last 5 years.

(2)(i) To determine wether a facility could, because of its location, reasonably be expected to cause substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines pursuant to paragraph (b) of this section, the REgional Administrator shall consider the following:

(A) Type of transfer operation;

(B) Oil storage capacity;

(C) Lack of secondary containment;

(D) Proximity to fish and wildlife and sensitive environments and other areas determined by the Regional Administrator to possess ecological value;

(E) Proximity to drinking water intakes;

(F) Spill history; and

(G) Other site-specific characteristics and environmental factors that the Regional Administrator determines to be relevant to protecting the environment from harm by discharges of oil into or on navigable waters or adjoining shorelines.

(ii) Any person, including a member of the public or any representative from a Federal, State, or local agency who believes that a facility subject to this section could, because of its location, reasonably be expected to cause substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines may petition the Regional Administrator to determine whether the facility meets the criteria in paragraph (f)(2)(i) of this section. Such petition shall include a discussion of how the factors in paragraph (f)(2)(i) of this section apply to the facility in question. The RA shall consider such petitions and respond in an appropriate amount of time.

(3) To determine whether a facility could, because of its location, reasonably be expected to cause significant and substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines, the Regional Administrator may consider the factors in paragraph (f)(2) of this section as well as the following:

(i) Frequency of past spills;

(ii) Proximity to navigable waters;

(iii) Age of oil storage tanks; and

(iv) Other facility-specific and Region-specific information, including local impacts on public health.

(g)(1) All facility response plans shall be consistent with the requirements of the National Oil and Hazardous Substance Pollution Contingency Plan (CFR part 300) and applicable Area Contingency Plans prepared pursuant to section 311(j)(4) of the Clean Water Act. The facility response plan should be coordinated with the local emergency response plan developed by the local emergency planning committee under section 303 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (42 U.S.C. 11001 et seq.). Upon request, the owner or operator should provide a copy of the facility response plan to the local emergency response committee or State emergency response commission.

(2) The owner or operator shall review relevant portions of he National Oil and Hazardous Substances Pollution Contingency Plan and applicable Area Contingency Plan annually and, if necessary, revise the facility response plan to ensure consistency with these plans.

(3) The owner or operator shall review and update the facility response plan periodically to reflect changes at the facility.

(h) A response plan shall follow the format of the model facility-specific response plan included in Appendix F to this part, unless an equivalent response plan has been prepared to meet State or other Federal requirements. A response plan that does not follow the specified format in Appendix F to this part shall have an emergency response action plan as specified in paragraphs (h)(1) of this section and be supplemented with a cross-reference section to identify the location of the elements listed in paragraphs (h)(2) through (h)(10) of this section. To meet the requirements of this part, a response

plan shall address the following elements, as further described in Appendix F to this part:

(1) *Emergency response action plan.* The response plan shall include an emergency response action plan in the format specified in paragraphs (h)(1)(i) through (viii) of this section that is maintained in the front of the response plan, or as a separate document accompanying the response plan, and that includes the following information:

(i) The identity and telephone number of a qualified individual having full authority, including contracting authority, to implement removal actions;

(ii) The identity of individuals or organizations to be contacted in the event of a discharge so that immediate communications between the qualified individual identified in paragraph (h)(1) of this section and the appropriate Federal officials and the persons providing response personnel and equipment can be ensured;

(iii) A description of information to pass to response personnel in the event of a reportable spill;

(iv) A description of the facility's response equipment and its location;

(v) A description of response personnel capabilities, including the duties of persons at the facility during a response action and their response times and qualifications;

(vi) Plans for evacuation of the facility and a reference to community evacuation plans, as appropriate;

(vii) A description of immediate measures to secure the source of the discharge, and to provide adequate containment and drainage of spilled oil; and

(viii) A diagram of the facility.

(2) *Facility information.* The response plan shall identify and discuss the location and type of the facility, the identity and tenure of the present owner and operator, and the identity of the qualified individual identified paragraph (h)(1) of this section.

(3) *Information about necessary emergency response.* The response plan shall include:

(i) The identity of private personnel and equipment necessary to remove to the maximum extent practicable a worst case discharge and other discharges of oil described in paragraph (h)(5) of this section, and to mitigate or prevent a substantial threat of a worst case discharge (To identify response resources to meet the facility response plan requirements of this section, owners or operators shall follow Appendix E to this part or, where not appropriate, shall clearly demonstrate in the response plan why use of Appendix E of this part is not appropriate at the facility and make comparable arrangements for response resources);

(ii) Evidence of contracts or other approved means for ensuring the availability of such personnel and equipment;

(iii) The identity and the telephone number of individuals or organizations to be contacted in the event of a discharge so that immediate communications between the qualified individual in paragraph (h)(1) of this section and the appropriate Federal official and the persons providing response personnel and equipment can be ensured;

(iv) A description of information to pass to response personnel in the event of a reportable spill;

(v) A description of response personnel capabilities, including the duties of persons at the facility during a response action and their response times and qualifications;

(vi) A description of the facility's response equipment, the location of the equipment, and equipment testing;

(vii) Plans for evacuation of the facility and a reference to community evacuation plans, as appropriate;

(viii) A diagram of evacuation routes; and

(ix) A description of the duties of the qualified individual identified in paragraph (h)(1) of this section, that include:

(A) Activate internal alarms and hazard communication systems to notify all facility personnel;

(B) Notify all response personnel, as needed;

(C) Identify the character, exact source, amount, and extent of the release, as well as the other items needed for notification;

(D) Notify and provide necessary information to the appropriate Federal, State, and local authorities with designated response roles, including the National Response Center, State Emergency Response Commission, and Local Emergency Planning Committee;

(E) Assess the interaction of the spilled substance with water and/or other substances stored at the facility and notify response personnel at the scene of that assessment;

(F) Assess the possible hazards to human health and the environment due to the release. This assessment must consider both the direct and indirect effects of the release (i.e., the effects of any toxic, irritating, or asphyxiating gasses that may be generated, or the effects of any hazardous surface water runoffs from water or chemical agents used to control fire and heat-induced explosion);

(G) Assess and implement prompt removal actions to contain and remove the substance released;

(H) Coordinate rescue and response actions as previously arranged with all response personnel;

(I) Use authority to immediately access company funding to initiate cleanup activities; and

(J) Direct cleanup activities until properly relieved of this responsibility.

(4) *Hazard evaluation.* The response plan shall discuss the facility's known or reasonably identifiable history of discharges reportable under 40 CFR part 110 for the entire life of the facility and shall identify areas within the facility where discharges could occur and what the potential affects of the discharges would be on the affected environment. To assess the range of areas potentially affected, owners or operators shall, where appropriate, consider the distance calculated in paragraph (f)(1)(ii) of this section to determine whether a facility could, because of its location, reasonably be expected to cause substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines.

(5) *Response planning levels.* The response plan shall include discussion of specific planning scenarios for:

(i) A worst case discharge, as calculated using the appropriate worksheet in Appendix D to this part. In cases where the Regional Administrator determines that the worst case discharge volume calculated by the facility is not appropriate, the Regional Administrator may specify the worst case discharge amount to be use for response planning at the facility. For complexes, the worst case planning quantity shall be the larger of the amounts calculated for each component of the facility;

(ii) A discharge of 2,100 gallons or less, provided this amount is less than the worst case discharge amount. For complexes, this planning quantity shall be the larger of the amounts calculated for each component of the facility; and

(iii) A discharge greater than 2,100 gallons and less than or equal to 36,000 gallons or 10 percent of the capacity of the largest tank at the facility, whichever is less, provided that this amount is less than the worst case discharge amount. For complexes, this planning quantity shall be the larger of the amounts calculated for each component of the facility.

(6) *Discharge detection systems.* The response plan shall describe the procedures and equipment used to detect discharges.

(7) *Plan implementation.* The response plan shall describe:

(i) Response actions to be carried out by facility personnel or contracted personnel under the response plan to ensure the safety of the facility and to mitigate or prevent discharges described in paragraph (h)(5) of this section or the substantial threat of such discharges;

(ii) A description of the equipment to be used for each scenario;

(iii) Plans to dispose of contaminated cleanup materials; and

(iv) Measures to provide adequate containment and drainage of spilled oil.

(8) *Self-inspection, drills/exercises, and response training.* The response plan shall include:

(i) A checklist and record of inspections for tanks, secondary containment, and response equipment;

(ii) A description of the drill/exercise program to be carried out under the response plan as described in §112.21;

(iii) A description of the training program to be carried out under the response plan as described in §112.21; and

(iv) Logs of discharge prevention meetings, training sessions, and drills/exercises. These logs may be maintained as an annex to the response plan.

(9) *Diagrams.* The response plan shall include site plan and drainage plan diagrams.

(10) *Security systems.* The response plan shall include a description of facility security systems.

(11) *Response plan cover sheet.* The response plan shall include a completed response plan cover sheet provided in Section 2.0 of Appendix F to this part.

(i)(1) In the event the owner or operator of a facility does not agree with the Regional Administrator's determination that the facility could, because of its location, reasonably be expected to cause substantial harm or significant and substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines, or that amendments to the facility response plan are necessary prior to approval, such as changes to the worst case discharge planning volume, the owner or operator may submit a request for reconsideration to the Regional Administrator and provide additional information and data in writing to support the request. The request and accompanying information must be submitted to the Regional Administrator within 60 days of receipt of notice of the Regional Administrator's original decision. The Regional Administrator shall consider the request and render a decision as rapidly as practicable.

(2) In the event the owner or operator of a facility believes a change in the facility's classification status is warranted because of an unplanned event or change in the facility's characteristics (i.e. substantial harm or significant and substantial harm), the owner or operator may submit a request for reconsideration to the Regional Administrator and provide additional information and data in writing to support the request. The Regional Administrator shall consider the request and render a decision as rapidly as practicable.

(3) After a request for reconsideration under paragraph (i)(1) or (i)(2) of this section has been denied by the Regional Administrator, an owner or operator may appeal a determination made by the Regional Administrator. The appeal shall be made to the EPA Administrator and shall be made in writing within 60 days of receipt of the decision from the Regional Administrator that the request for reconsideration was denied. A complete copy of the appeal must be sent to the Regional

Administrator at the time the appeal is made. The appeal shall contain a clear and concise statement of the issues and points of fact in the case. It may also contain additional information from the owner or operator, or from any other person. The EPA Administrator may request additional information from the owner or operator, or from any other person. The EPA Administrator shall render a decision as rapidly as practicable and shall notify the owner or operator of the decision.

§112.21 Facility response training and drills/exercises.

(a) The owner or operator of any facility required to prepare a facility response plan under §112.20 shall develop and implement a facility response training program and a drill/exercise program that satisfy the requirements of this section. The owner or operator shall describe the programs in the response plan as provided in §112.20(h)(8).

(b) The facility owner or operator shall develop a facility response training program to train those personnel involved in oil spill response activities. It is recommended that the training program be based on the USCG's Training Elements for Oil Spill Response, as applicable to facility operations. An alternative program can also be acceptable subject to approval by the Regional Administrator.

(1) The owner or operator shall be responsible for the proper instruction of facility personnel in the procedures to respond to discharges of oil and in applicable oil spill response laws, rules, and regulations.

(2) Training shall be functional in nature according to job tasks for both supervisory and non-supervisory operational personnel.

(3) Trainers shall develop specific lesson plans on subject areas relevant to facility personnel involved in oil spill response and cleanup.

(c) The facility owner or operator shall develop a program of facility response drills/exercises, including evaluation procedures. A program that follows the National Preparedness for Response Exercise Program (PREP) (see Appendix E to this part, section 10, for availability) will be deemed satsfactory for purposes of this section. An alternative program can also be acceptable subject to approval by the Regional Administrator.

APPENDIX A TO PART 112—MEMORANDUM OF UNDERSTANDING BETWEEN THE SECRETARY OF TRANSPORTATION AND THE ADMINISTRATOR OR THE ENVIRONMENTAL PROTECTION AGENCY

SECTION II—DEFINITIONS

The Environmental Protection Agency and the Department of Transportation agree that for the purposes of Executive Order 11548, the term:

(1) *Non-transportation-related onshore and offshore facilities* means:

(A) Fixed onshore and offshore oil well drilling facilities including all equipment and appurtenances related thereto used in drilling operations for exploratory or development wells, but excluding any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

(B) Mobile onshore and offshore oil well drilling platforms, barges, trucks, or other mobile facilities including all equipment and appurtenances related thereto when such mobile facilities are fixed in position for the purpose of drilling operations for exploratory or development wells, but excluding any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

(C) Fixed onshore and offshore oil production structures, platforms, derricks, and rigs including all equipment and appurtenances related thereto, as well as completed wells and the wellhead separators, oil separators, and storage facilities used in the production of oil, but excluding any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

(D) Mobile onshore and offshore oil production facilities including all equipment and appurtenances related thereto as well as completed wells and wellhead equipment, piping from wellheads to oil separators, oil separators, and storage facilities used in the production of oil when such mobile facilities are fixed in position for the purpose of oil production operations, but excluding any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

(E) Oil refining facilities including all equipment and appurtenances related thereto as well as in-plant processing units, storage units, piping, drainage systems and waste treatment units used in the refining of oil, but excluding any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

(F) Oil storage facilities including all equipment and appurtenances related thereto as well as fixed bulk plant storage, terminal oil storage facilities, consumer storage, pumps and drainage systems used in the storage of oil, but excluding inline or breakout storage tanks needed for the continuous operation of a pipeline system and any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

(G) Industrial, commercial, agricultural or public facilities which use and store oil, but excluding any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

(H) Waste treatment facilities including in-plant pipelines, effluent discharge lines, and storage tanks, but excluding waste treatment facilities located on vessels and terminal storage tanks and appurtenances for the reception of oily ballast water or tank washings from vessels and associated systems used for off- loading vessels.

(I) Loading racks, transfer hoses, loading arms and other equipment which are appurtenant to a nontransportation-related facility or terminal facility and which are used to transfer oil in bulk to or from highway vehicles or railroad cars.

(J) Highway vehicles and railroad cars which are used for the transport of oil exclusively within the confines of a nontransportation-related facil-

§110.3 Discharge of oil in such quantities as "may be harmful" pursuant to section 311(b)(4) of the Act.

For purposes of section 311(b)(4) of the Act, discharges of oil in such quantities that the Administrator has determined may be harmful to the public health or welfare or the environment of the United States include discharges of oil that:

(a) Violate applicable water quality standards; or

(b) Cause a film or sheen upon or discoloration of the surface of the water or adjoining shorelines or cause a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines.

§110.4 Dispersants.

Addition of dispersants or emulsifiers to oil to be discharged that would circumvent the provisions of this part is prohibited.

§110.5 Discharges of oil not determined "as may be harmful" pursuant to Section 311(b)(3) of the Act.

Notwithstanding any other provisions of this part, the Administrator has not determined the following discharges of oil "as may be harmful" for purposes of section 311(b) of the Act:

(a) Discharges of oil from a properly functioning vessel engine (including an engine on a public vessel) and any discharges of such oil accumulated in the bilges of a vessel discharged in compliance with MARPOL 73/78, Annex I, as provided in 33 CFR part 151, subpart A;

(b) Other discharges of oil permitted under MARPOL 73/78, Annex I, as provided in 33 CFR part 151, subpart A; and

(c) Any discharge of oil explicitly permitted by the Administrator in connection with research, demonstration projects, or studies relating to the prevention, control, or abatement of oil pollution.

§110.6 Notice.

Any person in charge of a vessel or of an onshore or offshore facility shall, as soon as he or she has knowledge of any discharge of oil from such vessel or facility in violation of section 311(b)(3) of the Act, immediately notify the National Response Center (NRC) (800–424–8802; in the Washington, DC metropolitan area, 202–426–2675). If direct reporting to the NRC is not practicable, reports may be made to the Coast Guard or EPA predesignated On-Scene Coordinator (OSC) for the geographic area where the discharge occurs. All such reports shall be promptly relayed to the NRC. If it is not possible to notify the NRC or the predesignated OCS immediately, reports may be made immediately to the nearest Coast Guard unit, provided that the person in charge of the vessel or onshore or offshore facility notifies the NRC as soon as possible. The reports shall be made in accordance with such procedures as the Secretary of Transportation may prescribe. The procedures for such notice are set forth in U.S. Coast Guard regulations, 33 CFR part 153, subpart B and in the National Oil and Hazardous Substances Pollution Contingency Plan, 40 CFR part 300, subpart E. (Approved by the Office of Management and Budget under the control number 2050–0046)

PART 112—OIL POLLUTION PREVENTION

Sec.

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§112.1 General applicability.

(a) This part establishes procedures, methods and equipment and other requirements for equipment to prevent the discharge of oil from non- transportation-related onshore and offshore facilities into or upon the navigable waters of the United States or adjoining shorelines.

(b) Except as provided in paragraph (d) of this section, this part applies to owners or operators of non- transportation-related onshore and offshore facilities engaged in drilling, producing, gathering, storing, processing, refining, transferring, distributing or consuming oil and oil products, and which, due to their location, could reasonably be expected to discharge oil in harmful quantities, as defined in part 110 of this chapter, into or upon the navigable waters of the United States or adjoining shorelines.

(c) As provided in section 313 (86 Stat. 875) departments, agencies, and instrumentalities of the Federal government are subject to these regulations to the same extent as any person, except for the provisions of §112.6.

(d) This part does not apply to:

(1) Facilities, equipment or operations which are not subject to the jurisdiction of the Environmental Protection Agency, as follows:

(i) Onshore and offshore facilities, which, due to their location, could not reasonably be expected to discharge oil into or upon the navigable waters of the United States or adjoining shorelines. This determination shall be based solely upon a consideration of the geographical, locational aspects of the facility (such as proximity to navigable waters or adjoining shorelines, land contour, drainage, etc.) and shall exclude consideration of manmade features such as dikes, equipment or other structures which may serve to restrain, hinder, contain, or otherwise prevent a discharge of oil from reaching navigable waters of the United States or adjoining shorelines; and

(ii) Equipment or operations of vessels or transportation-related onshore and offshore facilities which are subject to authority and control of the Department of Transportation, as defined in the Memorandum of Understanding between the Secretary of Transportation and the Administrator of the Environmental Protection Agency, dated November 24, 1971, 36 FR 24000.

(2) Those facilities which, although otherwise subject to the jurisdiction of the Environmental Protection Agency, meet both of the following requirements:

(i) The underground buried storage capacity of the facility is 42,000 gallons or less of oil, and

(ii) The storage capacity, which is not buried, of the facility is 1,320 gallons or less of oil, provided no single container has a capacity in excess of 660 gallons.

(e) This part provides for the preparation and implementation of Spill Prevention Control and Countermeasure Plans prepared in accordance with §112.7, designed to complement existing laws, regulations, rules, standards, policies and procedures pertaining to safety standards, fire prevention and pollution prevention rules, so as to form a comprehensive balanced Federal/State spill prevention program to minimize the potential for oil discharges. Compliance with this part does not in any way relieve the owner or operator of an onshore or an offshore facility from compliance with other Federal, State or local laws.

§112.2 Definitions.

For the purposes of this part:

Adverse weather means the weather conditions that make it difficult for response equipment and personnel to clean up or remove spilled oil, and that will be considered when identifying response systems and equipment in a response plan for the applicable operating environment. Factors to consider include significant wave height as specified in Appendix E to this part, as appropriate, ice conditions, temperatures, weather-related visibility, and currents within the area in which the systems or equipment are intended to function.

Complex means a facility possessing a combination of transportation-related and non-transportation-related components that is subject to the jurisdiction of more than one Federal agency under section 311(j) of the Clean Water Act.

Contract or other approved means: (1) A written contractual agreement with an oil spill removal organization(s) that identifies and ensures the availability of the necessary personnel and equipment within appropriate response times; and/or

(2) A written certification by the owner or operator that the necessary personnel and equipment resources, owned or operated by the facility owner or operator, are available to respond to a discharge within appropriate response times; and/or

(3) Active membership in a local or regional oil spill removal organization(s) that has identified and ensures adequate access through such membership to necessary personnel and equipment to respond to a discharge within appropriate response times in the specified geographic areas; and/or

(4) Other specific arrangements approved by the Regional Administrator upon request of the owner or operator.

Discharge includes but is not limited to, any spilling, leaking, pumping, pouring, emitting, emptying or dumping. For purposes of this part, the term *discharge* shall not include any discharge of oil which is authorized by a permit issued pursuant to section 13 of the River and Harbor Act of 1899 (30 Stat. 1121, 33 U.S.C. 407), or sections 402 or 405 of the FWPCA Amendments of 1972 (86 Stat. 816 *et seq.*, 33 U.S.C. 1251 *et seq.*).

Fish and wildlife and sensitive environments means areas that may be identified by either their legal designation or by evaluations of Area Committees (for planning) or members of the Federal On-Scene Coordinator's spill response structure (during responses). These areas may include wetlands, National and State parks, critical habitats for endangered/threatened species, wilderness and natural resource areas, marine sanctuaries and estuarine reserves, conservation areas, preserves, wildlife areas, wildlife refuges, wild and scenic rivers, recreational areas, national forests, Federal and State lands that are research national areas, heritage program areas, land trust areas, and historical and archaeological sites and parks. These areas may also include unique habitats such as: aquacultural sites and agricultural surface water intakes, bird nesting areas, critical biological resource areas, designated migratory routes, and designated seasonal habitats.

Injury means a measurable adverse change, either long- or short-term, in the chemical or physical quality or the viability of a natural resource resulting either directly or indirectly from exposure to a discharge of oil, or exposure to a product of reactions resulting from a discharge of oil.

Maximum extent practicable means the limitations used to determine oil spill planning resources and response times for on-water recovery, shoreline protection, and cleanup for worst case discharges from onshore non-transportation-related facilities in adverse weather. It considers the planned capability to respond to a worst case discharge in adverse weather, as contained in a response plan that meets the requirements in §112.20 or in a specific plan approved by the Regional Administrator.

The term *navigable waters* of the United States means *navigable waters* as defined in section 502(7) of the FWPCA, and includes:

(1) All navigable waters of the United States, as defined in judicial decisions prior to passage of the 1972 Amendments to the FWPCA (Pub. L. 92–500), and tributaries of such waters;

(2) Interstate waters;

(3) Intrastate lakes, rivers, and streams which are utilized by interstate travelers for recreational or other purposes; and

(4) Intrastate lakes, rivers, and streams from which fish or shellfish are taken and sold in interstate commerce.

Navigable waters do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with EPA.

Offshore facility means any facility of any kind located in, on, or under any of the navigable waters of the United States, which is not a transportation- related facility.

Oil means oil of any kind or in any form, including, but not limited to petroleum, fuel oil, sludge, oil refuse and oil mixed with wastes other than dredged spoil.

Oil Spill Removal Organization means an entity that provides oil spill response resources, and includes any for-profit or not-for-profit contractor, cooperative, or in-house response resources that have been established in a geographic area to provide required response resources.

Onshore facility means any facility of any kind located in, on, or under any land within the United States, other than submerged lands, which is not a transportation-related facility.

Owner or operator means any person owning or operating an onshore facility or an offshore facility, and in the case of any abandoned offshore facility, the person who owned or operated such facility immediately prior to such abandonment.

Person includes an individual, firm, corporation, association, and a partnership.

Regional Administrator, means the Regional Administrator of the Environmental Protection Agency, or his designee, in and for the Region in which the facility is located.

Spill event means a discharge of oil into or upon the navigable waters of the United States or adjoining shorelines in harmful quantities, as defined at 40 CFR part 110.

Transportation-related and *non- transportation-related* as applied to an onshore or offshore facility, are defined in the Memorandum of Understanding between the Secretary of Transportation and the Administrator of the Environmental Protection Agency, dated November 24, 1971, 36 FR 24080.

United States means the States, the District of Columbia, the Commonwealth of Puerto Rico, the Canal Zone, Guam, American Samoa, the Virgin Islands, and the Trust Territory of the Pacific Islands.

Vessel means every description of watercraft or other artificial contrivance used, or capable of being used as a means of transportation on water, other than a public vessel.

Worst case discharge for an onshore non-transportation-related facility means the largest foreseeable discharge in adverse weather conditions as determined using the worksheets in Appendix D to this part.

§112.3 Requirements for preparation and implementation of Spill Prevention Control and Countermeasure Plans.

(a) Owners or operators of onshore and offshore facilities in operation on or before the effective date of this part that have discharged or, due to their location, could reasonably be expected to discharge oil in harmful quantities, as defined in 40 CFR part 110, into or upon the navigable waters of the United States or adjoining shorelines, shall prepare a Spill Prevention Control and Countermeasure Plan (hereinafter "SPCC Plan"), in writing and in accordance with §112.7. Except as provided for in paragraph (f) of this section, such SPCC Plan shall be prepared within six months after the effective date of this part and shall be fully implemented as soon as possible, but not later than one year after the effective date of this part.

(b) Owners or operators of onshore and offshore facilities that become operational after the effective date of this part, and that have discharged or could reasonably be expected to discharge oil in harmful quantities, as defined in 40 CFR part 110, into or upon the navigable waters of the United States or adjoining shorelines, shall prepare an SPCC Plan in accordance with §112.7. Except as provided for in paragraph (f) of this section, such SPCC Plan shall be prepared within six months after the date such facility begins operations and shall be fully implemented as soon as possible, but not later than one year after such facility begins operations.

(c) Owners or operators of onshore and offshore mobile or portable facilities, such as onshore drilling or workover rigs, barge mounted offshore drilling or workover rigs, and portable fueling facilities shall prepare and implement an SPCC Plan as required by paragraphs (a), (b) and (d) of this section. The owners or operators of such facility need not prepare a new SPCC Plan each time the facility is moved to a new site. The SPCC Plan may be a general plan, prepared in accordance with §112.7, using good engineering practice. When the mobile or portable facility is moved, it must be located and installed using the spill prevention practices outlined in the SPCC Plan for the facility. No mobile or portable facility subject to this regulation shall operate unless the SPCC Plan has been implemented. The SPCC Plan shall only apply while the facility is in a fixed (non- transportation) operating mode.

(d) No SPCC Plan shall be effective to satisfy the requirements of this part unless it has been reviewed by a Registered Professional Engineer and certified to by such Professional Engineer. By means of this certification the engineer, having examined the facility and being familiar with the provisions of this part, shall attest that the SPCC Plan has been prepared in accordance with good engineering practices. Such certification shall in no way relieve the owner or operator of an onshore or offshore facility of his duty to prepare and fully implement such Plan in accordance with §112.7, as required by paragraphs (a), (b) and (c) of this section.

(e) Owners or operators of a facility for which an SPCC Plan is required pursuant to paragraph (a), (b) or (c) of this section shall maintain a complete copy of the Plan at such facility if the facility is normally attended at least 8 hours per day, or at the nearest field office if the facility is not so attended, and shall make such Plan available to the Regional Administrator for on-site review during normal working hours.

(f) *Extensions of time.* (1) The Regional Administrator may authorize an extension of time for the preparation and full implementation of an SPCC Plan beyond the time permitted for the preparation and implementation of an SPCC Plan pursuant to paragraph (a), (b) or (c) of this section where he finds that the owner or operator of a facility subject to paragraphs (a), (b) or (c) of this section cannot fully comply with the requirements of this part as a result of either nonavailability of qualified personnel, or delays in construction or equipment delivery beyond the control and without the fault of such owner or operator or their respective agents or employees.

(2) Any owner or operator seeking an extension of time pursuant to paragraph (f)(1) of this section may submit a letter of request to the Regional Administrator. Such letter shall include:

(i) A complete copy of the SPCC Plan, if completed;

(ii) A full explanation of the cause for any such delay and the specific aspects of the SPCC Plan affected by the delay;

(iii) A full discussion of actions being taken or contemplated to minimize or mitigate such delay;

(iv) A proposed time schedule for the implementation of any corrective actions being taken or contemplated, including interim dates for completion of tests or studies, installation and operation of any necessary equipment or other preventive measures.

In addition, such owner or operator may present additional oral or written statements in support of his letter of request.

(3) The submission of a letter of request for extension of time pursuant to paragraph (f)(2) of this section shall in no way relieve the owner or operator from his obligation to comply with the requirements of §112.3 (a), (b) or (c). Where an extension of time is authorized by the Regional Administrator for particular equipment or other specific aspects of the SPCC Plan, such extension shall in no way affect the owner's or operator's obligation to comply with the requirements of §112.3 (a), (b) or (c) with respect to other equipment or other specific aspects of the SPCC Plan for which an extension of time has not been expressly authorized.

§112.4 Amendment of SPCC Plans by Regional Administrator.

(a) Notwithstanding compliance with §112.3, whenever a facility subject to §112.3 (a), (b) or (c) has: Discharged more than 1,000 U.S. gallons of oil into or upon the navigable waters of the United States or adjoining shorelines in a single spill event, or discharged oil in harmful quantities, as defined in 40 CFR part 110, into or upon the navigable waters of the United States or adjoining shorelines in two spill events, reportable under section 311(b)(5) of the FWPCA, occurring within any twelve month period, the owner or operator of such facility shall submit to the Regional Administrator, within 60 days from the time such facility becomes subject to this section, the following:

(1) Name of the facility;

(2) Name(s) of the owner or operator of the facility;

(3) Location of the facility;

(4) Date and year of initial facility operation;

(5) Maximum storage or handling capacity of the facility and normal daily throughput;

(6) Description of the facility, including maps, flow diagrams, and topographical maps;

(7) A complete copy of the SPCC Plan with any amendments;

(8) The cause(s) of such spill, including a failure analysis of system or subsystem in which the failure occurred;

(9) The corrective actions and/or countermeasures taken, including an adequate description of equipment repairs and/or replacements;

(10) Additional preventive measures taken or contemplated to minimize the possibility of recurrence;

(11) Such other information as the Regional Administrator may reasonably require pertinent to the Plan or spill event.

(b) Section 112.4 shall not apply until the expiration of the time permitted for the preparation and implementation of an SPCC Plan pursuant to §112.3 (a), (b), (c) and (f).

(c) A complete copy of all information provided to the Regional Administrator pursuant to paragraph (a) of this section shall be sent at the same time to the State agency in charge of water pollution control activities in and for the State in which the facility is located. Upon receipt of such information such State agency may conduct a review and make recommendations to the Regional Administrator as to further procedures, methods, equipment and other requirements for equipment necessary to prevent and to contain discharges of oil from such facility.

(d) After review of the SPCC Plan for a facility subject to paragraph (a) of this section, together with all other information submitted by the owner or operator of such facility, and by the State agency under paragraph (c) of this section, the Regional Administrator may require the owner or operator of such facility to amend the SPCC Plan if he finds that the Plan does not meet the requirements of this part or that the amendment of the Plan is necessary to prevent and to contain discharges of oil from such facility.

(e) When the Regional Administrator proposes to require an amendment to the SPCC Plan, he shall notify the facility operator by certified mail addressed to, or by personal delivery to, the facility owner or operator, that he proposes to require an amendment to the Plan, and shall specify the terms of such amendment. If the facility owner or operator is a corporation, a copy of such notice shall also be mailed to the registered agent, if any, of such corporation in the State where such facility is located. Within 30 days from receipt of such notice, the facility owner or operator may submit written information, views, and arguments on the amendment. After considering all relevant material presented, the Regional Administrator shall notify the facility owner or operator of any amendment required or shall rescind the notice. The amendment required by the Regional Administrator shall become part of the Plan 30 days after such notice, unless the Regional Administrator, for good cause, shall specify another effective date. The owner or operator of the facility shall implement the amendment of the Plan as soon as possible, but not later than six months after the amendment becomes part of the Plan, unless the Regional Administrator specifies another date.

(f) An owner or operator may appeal a decision made by the Regional Administrator requiring an amendment to an SPCC Plan. The appeal shall be made to the Administrator of the United States Environmental Protection Agency and

must be made in writing within 30 days of receipt of the notice from the Regional Administrator requiring the amendment. A complete copy of the appeal must be sent to the Regional Administrator at the time the appeal is made. The appeal shall contain a clear and concise statement of the issues and points of fact in the case. It may also contain additional information from the owner or operator, or from any other person. The Administrator or his designee may request additional information from the owner or operator, or from any other person. The Administrator or his designee shall render a decision within 60 days of receiving the appeal and shall notify the owner or operator of his decision.

§112.5 Amendment of Spill Prevention Control and Countermeasure Plans by owners or operators.

(a) Owners or operators of facilities subject to §112.3 (a), (b) or (c) shall amend the SPCC Plan for such facility in accordance with §112.7 whenever there is a change in facility design, construction, operation or maintenance which materially affects the facility's potential for the discharge of oil into or upon the navigable waters of the United States or adjoining shore lines. Such amendments shall be fully implemented as soon as possible, but not later than six months after such change occurs.

(b) Notwithstanding compliance with paragraph (a) of this section, owners and operators of facilities subject to §112.3 (a), (b) or (c) shall complete a review and evaluation of the SPCC Plan at least once every three years from the date such facility becomes subject to this part. As a result of this review and evaluation, the owner or operator shall amend the SPCC Plan within six 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 from the facility, and (2) if such technology has been field-proven at the time of the review.

(c) No amendment to an SPCC Plan shall be effective to satisfy the requirements of this section unless it has been certified by a Professional Engineer in accordance with §112.3(d).

§112.7 Guidelines for the preparation and implementation of a Spill Prevention Control and Countermeasure Plan.

The SPCC Plan shall be a carefully thought-out plan, prepared in accordance with good engineering practices, and which has the full approval of management at a level with authority to commit the necessary resources. If the plan calls for additional facilities or procedures, methods, or equipment not yet fully operational, these items should be discussed in separate paragraphs, and the details of installation and operational start-up should be explained separately. The complete SPCC Plan shall follow the sequence outlined below, and include a discussion of the facility's conformance with the appropriate guidelines listed:

(a) A facility which has experienced one or more spill events within twelve months prior to the effective date of this part should include a written description of each such spill, corrective action taken and plans for preventing recurrence.

(b) Where experience indicates a reasonable potential for equipment failure (such as tank overflow, rupture, or leakage), the plan should include a prediction of the direction, rate of flow, and total quantity of oil which could be discharged from the facility as a result of each major type of failure.

(c) Appropriate containment and/or diversionary structures or equipment to prevent discharged oil from reaching a navigable water course should be provided. One of the following preventive systems or its equivalent should be used as a minimum:

(1) Onshore facilities:

(i) Dikes, berms or retaining walls sufficiently impervious to contain spilled oil;

(ii) Curbing;

(iii) Culverting, gutters or other drainage systems;

(iv) Weirs, booms or other barriers;

(v) Spill diversion ponds;

(vi) Retention ponds;

(vii) Sorbent materials.

(2) Offshore facilities:

(i) Curbing, drip pans;

(ii) Sumps and collection systems.

(d) When it is determined that the installation of structures or equipment listed in §112.7(c) to prevent discharged oil from reaching the navigable waters is not practicable from any onshore or offshore facility, the owner or operator should clearly demonstrate such impracticability and provide the following:

(1) A strong oil spill contingency plan following the provision of 40 CFR part 109.

(2) A written commitment of manpower, equipment and materials required to expeditiously control and remove any harmful quantity of oil discharged.

(e) In addition to the minimal prevention standards listed under §112.7(c), sections of the Plan should include a complete discussion of conformance with the following applicable guidelines, other effective spill prevention and containment procedures (or, if more stringent, with State rules, regulations and guidelines):

(1) *Facility drainage (onshore); (excluding production facilities).* (i) Drainage from diked storage areas should be restrained by valves or other positive means to prevent a spill or other excessive leakage of oil into the drainage system or inplant effluent treatment system, except where plan systems are designed to handle such leakage. Diked areas may be emptied by pumps or ejectors; however, these should be manually activated and the condition of the accumulation should be examined before starting to be sure no oil will be discharged into the water.

(ii) Flapper-type drain valves should not be used to drain diked areas. Valves used for the drainage of diked areas should, as far as practical, be of manual, open-and-closed design. When plant drainage drains directly into water courses and not into wastewater treatment plants, retained storm water should be inspected as provided in paragraphs (e)(2)(iii)(B), (C) and (D) of this section before drainage.

(iii) Plant drainage systems from undiked areas should, if possible, flow into ponds, lagoons or catchment basins, designed to retain oil or return it to the facility. Catchment basins should not be located in areas subject to periodic flooding.

(iv) If plant drainage is not engineered as above, the final discharge of all in-plant ditches should be equipped with a diversion system that could, in the event of an uncontrolled spill, return the oil to the plant.

(v) Where drainage waters are treated in more than one treatment unit, natural hydraulic flow should be used. If pump transfer is needed, two "lift" pumps should be provided, and at least one of the pumps should be permanently installed when such treatment is continuous. In any event, whatever techniques are used facility drainage systems should be adequately engineered to prevent oil from reaching navigable waters in the event of equipment failure or human error at the facility.

(2) *Bulk storage tanks (onshore); (excluding production facilities).* (i) No tank should be used for the storage of oil unless its material and construction are compatible with the material stored and conditions of storage such as pressure and temperature, etc.

(ii) All bulk storage tank installations should be constructed so that a secondary means of containment is provided for the entire contents of the largest single tank plus sufficient freeboard to allow for precipitation. Diked areas should be sufficiently impervious to contain spilled oil. Dikes, containment curbs, and pits are commonly employed for this purpose, but they may not always be appropriate. An alternative system could consist of a complete drainage trench enclosure arranged so that a spill could terminate and be safely confined in an in-plant catchment basin or holding pond.

(iii) Drainage of rainwater from the diked area into a storm drain or an effluent discharge that empties into an open water course, lake, or pond, and bypassing the in-plant treatment system may be acceptable if:

(A) The bypass valve is normally sealed closed.

(B) Inspection of the run-off rain water ensures compliance with applicable water quality standards and will not cause a harmful discharge as defined in 40 CFR part 110.

(C) The bypass valve is opened, and resealed following drainage under responsible supervision.

(D) Adequate records are kept of such events.

(iv) Buried metallic storage tanks represent a potential for undetected spills. A new buried installation should be protected from corrosion by coatings, cathodic protection or other effective methods compatible with local soil conditions. Such buried tanks should at least be subjected to regular pressure testing.

(v) Partially buried metallic tanks for the storage of oil should be avoided, unless the buried section of the shell is adequately coated, since partial burial in damp earth can cause rapid corrosion of metallic surfaces, especially at the earth/air interface.

(vi) Aboveground tanks should be subject to periodic integrity testing, taking into account tank design (floating roof, etc.) and using such techniques as hydrostatic testing, visual inspection or a system of non-destructive shell thickness testing. Comparison records should be kept where appropriate, and tank supports and foundations should be included in these inspections. In addition, the outside of the tank should frequently be observed by operating personnel for signs of deterioration, leaks which might cause a spill, or accumulation of oil inside diked areas.

(vii) To control leakage through defective internal heating coils, the following factors should be considered and applied, as appropriate.

(A) The steam return or exhaust lines from internal heating coils which discharge into an open water course should be monitored for contamination, or passed through a settling tank, skimmer, or other separation or retention system.

(B) The feasibility of installing an external heating system should also be considered.

(viii) New and old tank installations should, as far as practical, be fail-safe engineered or updated into a fail-safe engineered installation to avoid spills. Consideration should be given to providing one or more of the following devices:

(A) High liquid level alarms with an audible or visual signal at a constantly manned operation or surveillance station; in smaller plants an audible air vent may suffice.

(B) Considering size and complexity of the facility, high liquid level pump cutoff devices set to stop flow at a predetermined tank content level.

(C) Direct audible or code signal communication between the tank gauger and the pumping station.

(D) A fast response system for determining the liquid level of each bulk storage tank such as digital computers, telepulse, or direct vision gauges or their equivalent.

(E) Liquid level sensing devices should be regularly tested to insure proper operation.

(ix) Plant effluents which are discharged into navigable waters should have disposal facilities observed frequently enough to detect possible system upsets that could cause an oil spill event.

(x) Visible oil leaks which result in a loss of oil from tank seams, gaskets, rivets and bolts sufficiently large to cause the accumulation of oil in diked areas should be promptly corrected.

(xi) Mobile or portable oil storage tanks (onshore) should be positioned or located so as to prevent spilled oil from reaching navigable waters. A secondary means of containment, such as dikes or catchment basins, should be furnished for the largest single compartment or tank. These facilities should be located where they will not be subject to periodic flooding or washout.

(3) *Facility transfer operations, pumping, and in-plant process (onshore) ; (excluding production facilities)*. (i) Buried piping installations should have a protective wrapping and coating and should be cathodically protected if soil conditions warrant. If a section of buried line is exposed for any reason, it should be carefully examined for deterioration. If corrosion damage is found, additional examination and corrective action should be taken as indicated by the magnitude of the damage. An alternative would be the more frequent use of exposed pipe corridors or galleries.

(ii) When a pipeline is not in service, or in standby service for an extended time the terminal connection at the transfer point should be capped or blank- flanged, and marked as to origin.

(iii) Pipe supports should be properly designed to minimize abrasion and corrosion and allow for expansion and contraction.

(iv) All aboveground valves and pipelines should be subjected to regular examinations by operating personnel at which time the general condition of items, such as flange joints, expansion joints, valve glands and bodies, catch pans, pipeline supports, locking of valves, and metal surfaces should be assessed. In addition, periodic pressure testing may be warranted for piping in areas where facility drainage is such that a failure might lead to a spill event.

(v) Vehicular traffic granted entry into the facility should be warned verbally or by appropriate signs to be sure that the vehicle, because of its size, will not endanger above ground piping.

(4) *Facility tank car and tank truck loading/ unloading rack (onshore)*. (i) Tank car and tank truck loading/unloading procedures should meet the minimum requirements and regulation established by the Department of Transportation.

(ii) Where rack area drainage does not flow into a catchment basin or treatment facility designed to handle spills, a quick drainage system should be used for tank truck loading and unloading areas. The containment system should be designed to hold at least maximum capacity of any single compartment of a tank car or tank truck loaded or unloaded in the plant.

(iii) An interlocked warning light or physical barrier system, or warning signs, should be provided in loading/ unloading areas to prevent vehicular departure before complete disconnect of flexible or fixed transfer lines.

(iv) Prior to filling and departure of any tank car or tank truck, the lowermost drain and all outlets of such vehicles should be closely examined for leakage, and if necessary, tightened, adjusted, or replaced to prevent liquid leakage while in transit.

(5) *Oil production facilities (onshore)*—(i) *Definition.* An onshore production facility may include all wells, flowlines, separation equipment, storage facilities, gathering lines, and auxiliary non- transportation-related equipment and facilities in a single geographical oil or gas field operated by a single operator.

(ii) *Oil production facility (onshore) drainage.* (A) At tank batteries and central treating stations where an accidental discharge of oil would have a reasonable possibility of reaching navigable waters, the dikes or equivalent required under §112.7(c)(1) should have drains closed and sealed at all times except when rainwater is being drained. Prior to drainage, the diked area should be inspected as provided in paragraphs (e)(2)(iii) (B), (C), and (D) of this section. Accumulated oil on the rainwater should be picked up and returned to storage or disposed of in accordance with approved methods.

(B) Field drainage ditches, road ditches, and oil traps, sumps or skimmers, if such exist, should be inspected at regularly scheduled intervals for accumulation of oil that may have escaped from small leaks. Any such accumulations should be removed.

(iii) *Oil production facility (onshore) bulk storage tanks.* (A) No tank should be used for the storage of oil unless its material and construction are compatible with the material stored and the conditions of storage.

(B) All tank battery and central treating plant installations should be provided with a secondary means of containment for the entire contents of the largest single tank if feasible, or alternate systems such as those outlined in §112.7(c)(1). Drainage from undiked areas should be safely confined in a catchment basin or holding pond.

(C) All tanks containing oil should be visually examined by a competent person for condition and need for maintenance on a scheduled periodic basis. Such examination should include the foundation and supports of tanks that are above the surface of the ground.

(D) New and old tank battery installations should, as far as practical, be fail-safe engineered or updated into a fail-safe engineered installation to prevent spills. Consideration should be given to one or more of the following:

(*1*) Adequate tank capacity to assure that a tank will not overfill should a pumper/gauger be delayed in making his regular rounds.

(*2*) Overflow equalizing lines between tanks so that a full tank can overflow to an adjacent tank.

(*3*) Adequate vacuum protection to prevent tank collapse during a pipeline run.

(*4*) High level sensors to generate and transmit an alarm signal to the computer where facilities are a part of a computer production control system.

(iv) *Facility transfer operations, oil production facility (onshore).* (A) All above ground valves and pipelines should be examined periodically on a scheduled basis for general condition of items such as flange joints, valve glands and bodies, drip pans, pipeline supports, pumping well polish rod stuffing boxes, bleeder and gauge valves.

(B) Salt water (oil field brine) disposal facilities should be examined often, particularly following a sudden change in atmospheric temperature to detect possible system upsets that could cause an oil discharge.

(C) Production facilities should have a program of flowline maintenance to prevent spills from this source. The program should include periodic examinations, corrosion protection, flowline replacement, and adequate records, as appropriate, for the individual facility.

(6) *Oil drilling and workover facilities (onshore).* (i) Mobile drilling or workover equipment should be positioned or located so as to prevent spilled oil from reaching navigable waters.

(ii) Depending on the location, catchment basins or diversion structures may be necessary to intercept and contain spills of fuel, crude oil, or oily drilling fluids.

(iii) Before drilling below any casing string or during workover operations, a blowout prevention (BOP) assembly and well control system should be installed that is capable of controlling any well head pressure that is expected to be encountered while that BOP assembly is on the well. Casing and BOP installations should be in accordance with State regulatory agency requirements.

(7) *Oil drilling, production, or workover facilities (offshore).* (i) Definition: "An oil drilling, production or workover facility (offshore)" may include all drilling or workover equipment, wells, flowlines, gathering lines, platforms, and auxiliary nontransportation-related equipment and facilities in a single geographical oil or gas field operated by a single operator.

(ii) Oil drainage collection equipment should be used to prevent and control small oil spillage around pumps, glands, valves, flanges, expansion joints, hoses, drain lines, separators, treaters, tanks, and allied equipment. Drains on the facility should be controlled and directed toward a central collection sump or equivalent collection system sufficient to prevent discharges of oil into the navigable waters of the United States. Where drains and sumps are not practicable oil contained in collection equipment should be removed as often as necessary to prevent overflow.

(iii) For facilities employing a sump system, sump and drains should be adequately sized and a spare pump or equivalent method should be available to remove liquid from the sump and assure that oil does not escape. A regular scheduled preventive maintenance inspection and testing program should be employed to assure reliable operation of the liquid removal system and pump start-up device. Redundant automatic sump pumps and control devices may be required on some installations.

(iv) In areas where separators and treaters are equipped with dump valves whose predominant mode of failure is in the closed position and pollution risk is high, the facility should be specially equipped to prevent the escape of oil. This could be accomplished by extending the flare line to a diked area if the separator is near shore, equipping it with a high liquid level sensor that will automatically shut-in wells producing to the separator, parallel redundant dump valves, or other feasible alternatives to prevent oil discharges.

(v) Atmospheric storage or surge tanks should be equipped with high liquid level sensing devices or other acceptable alternatives to prevent oil discharges.

(vi) Pressure tanks should be equipped with high and low pressure sensing devices to activate an alarm and/or control the flow or other acceptable alternatives to prevent oil discharges.

(vii) Tanks should be equipped with suitable corrosion protection.

(viii) A written procedure for inspecting and testing pollution prevention equipment and systems should be prepared and maintained at the facility. Such procedures should be included as part of the SPCC Plan.

(ix) Testing and inspection of the pollution prevention equipment and systems at the facility should be conducted by the owner or operator on a scheduled periodic basis commensurate with the complexity, conditions and circumstances of the facility or other appropriate regulations.

(x) Surface and subsurface well shut-in valves and devices in use at the facility should be sufficiently described to determine method of activation or control, e.g., pressure differential, change in fluid or flow conditions, combination of pressure and flow, manual or remote control mechanisms. Detailed records for each well, while not necessarily part of the plan should be kept by the owner or operator.

(xi) Before drilling below any casing string, and during workover operations a blowout preventer (BOP) assembly and well control system should be installed that is capable of controlling any well-head pressure that is expected to be encountered while that BOP assembly is on the well. Casing and BOP installations should be in accordance with State regulatory agency requirements.

(xii) Extraordinary well control measures should be provided should emergency conditions, including fire, loss of control and other abnormal conditions, occur. The degree of control system redundancy should vary with hazard exposure and probable consequences of failure. It is recommended that surface shut-in systems have redundant or "fail close" valving. Subsurface safety valves may not be needed in producing wells that will not flow but should be installed as required by applicable State regulations.

(xiii) In order that there will be no misunderstanding of joint and separate duties and obligations to perform work in a safe and pollution free manner, written instructions should be prepared by the owner or operator for contractors and subcontractors to follow whenever contract activities include servicing a well or systems appurtenant to a well or pressure vessel. Such instructions and procedures should be maintained at the offshore production facility. Under certain circumstances and conditions such contractor activities may require the presence at the facility of an authorized representative of the owner or operator who would intervene when necessary to prevent a spill event.

(xiv) All manifolds (headers) should be equipped with check valves on individual flowlines.

(xv) If the shut-in well pressure is greater than the working pressure of the flowline and manifold valves up to and including the header valves associated with that individual flowline, the flowline should be equipped with a high pressure sensing device and shut-in valve at the wellhead unless provided with a pressure relief system to prevent over-pressuring.

(xvi) All pipelines appurtenant to the facility should be protected from corrosion. Methods used, such as protective coatings or cathodic protection, should be discussed.

(xvii) Sub-marine pipelines appurtenant to the facility should be adequately protected against environmental stresses and other activities such as fishing operations.

(xviii) Sub-marine pipelines appurtenant to the facility should be in good operating condition at all times and inspected on a scheduled periodic basis for failures. Such inspections should be documented and maintained at the facility.

(8) *Inspections and records.* Inspections required by this part should be in accordance with written procedures developed for the facility by the owner or operator. These written procedures and a record of the inspections, signed by the appropriate supervisor or inspector, should be made part of the SPCC Plan and maintained for a period of three years.

(9) *Security (excluding oil production facilities).* (i) All plants handling, processing, and storing oil should be fully fenced, and entrance gates should be locked and/or guarded when the plant is not in production or is unattended.

(ii) The master flow and drain valves and any other valves that will permit direct outward flow of the tank's content to the surface should be securely locked in the closed position when in non-operating or non-standby status.

(iii) The starter control on all oil pumps should be locked in the "off" position or located at a site accessible only to authorized personnel when the pumps are in a non-operating or non-standby status.

(iv) The loading/unloading connections of oil pipelines should be securely capped or blank-flanged when not in service or standby service for an extended time. This security practice should also apply to pipelines that are emptied of liquid content either by draining or by inert gas pressure.

(v) Facility lighting should be commensurate with the type and location of the facility. Consideration should be given to: (A) Discovery of spills occurring during hours of darkness, both by operating personnel, if present, and by non-operating personnel (the general public, local police, etc.) and (B) prevention of spills occurring through acts of vandal-

APPENDIX D

SITE SECURITY

SITE SECURITY

The entire 1,335-hectare WNYNSC is fenced, posted, and subject to routine patrols by the WVDP security force. In addition, the 88-hectare project site is a controlled-access facility surrounded by an 8 ft high chainlink fence topped with three strands of barbed wire. These areas are routinely patrolled by officers on foot and in vehicles.

The controls and valves for the tank (31D-2) are operated under authorization of the Plant System Operations Shift Supervisor in accordance with SOPs or run plans.

The operations files, tickle cards, and warehouse inventory logs are Project records that are archived in the Project's Master Record Center in accordance with DOE orders.

Control switches for the gasoline and diesel fuel pumps are located in the Warehouse and are locked except during fuel pumping. The keys are maintained by Warehouse personnel. The security force is authorized to dispense fuel on off-shifts. Valves which could permit outflow of petroleum tank contents are locked closed when in non-operating or non-standby status. Unloading connections are capped when not in service or on standby status for extended periods of time.

APPENDIX E

OIL SPILL CONTAINMENT PROCEDURE AND SPILL PREVENTION MEASURES

OIL SPILL CONTAINMENT PROCEDURES

Situation:

Dry Ditch: Construct an earth dam if the distance between the point of discharge and a point where it will meet a flowing stream has sufficient capacity to hold the volume of the spill and any water used to flush.

Ideal situation - Use a back-hoe or bulldozer, if handy, to construct a pond for containment. Possibly, a hand constructed earth dam can be shoveled into place to allow time for equipment to be brought to the scene. The person or company causing the spill is responsible for restriction of any charges.

Examples; A roadside ditch 1000 feet long, 1 foot wide, and 1 foot deep will hold 7500 gallons of liquid. A constructed pond 10 foot square by 1 foot deep or a 5 foot square by 4 foot deep will also hold 750 gallons of liquid.

Reference **Figure 1**

Flow in Ditch, Creek or Small Stream:

A flowing stream calls for a three pronged attack:

1) Roughly calculate (using the above method) the distance required to hold the additional oil on board the source of the spill in the roadside ditch and construct a dam using bales of straw. Open one or two bales and spread some straw on the surface of the forming slick. Straw will act as a collector since oil sticks to the straw. The straw dam will then catch the oil by acting as an oil separator.

2) Proceed downstream to a point where the oil has not reached. Construct another straw dam using the same method as before. This will catch any oil that has already passed the point of the first dam and any oil that may get through the first dam. Always try to construct a dam at an accessible point to facilitate cleanup. The best places are at road culverts and bridges.

3) While some personnel are doing the first two steps, some personnel should try to determine if it is possible to stop the flow of material from the source by plugging holes, shutting off emergency valves, or closing fill hatches. In some cases it was possible to place open topped 55 gallon drums under hatch covers and catch oil flowing from a hatch cover. Septic tank pumpers with a vacuum line on their truck are generally available to pump oil from any catch basin, containment area, or from the truck itself if a flow cannot be stopped.

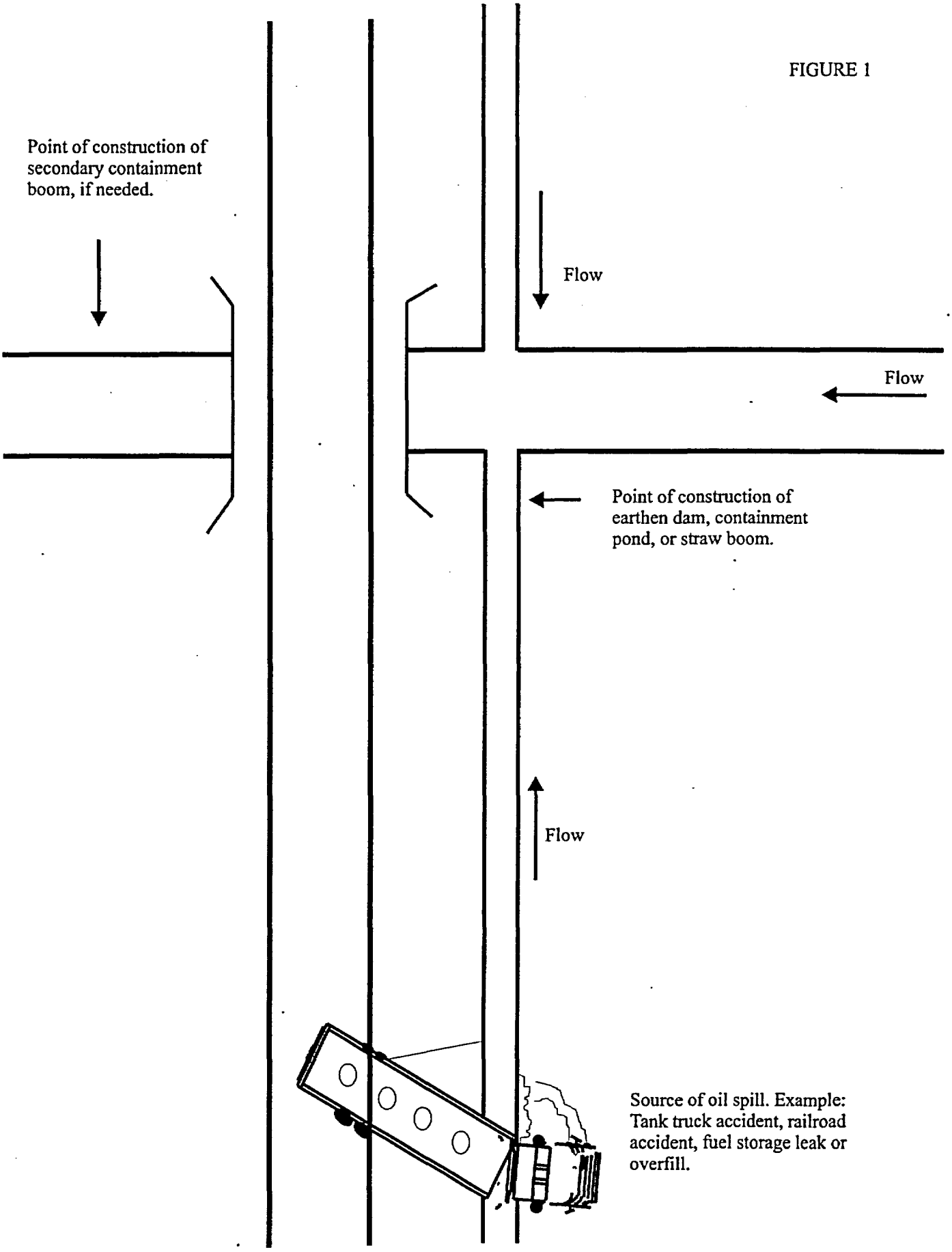
Reference **Figures 2 & 3**

Oil in a Flowing Stream:

Emergency oil containment booms can be constructed from materials available to most fire companies. The following figures show how to construct an emergency boom that can be used until a boom can be brought to the scene.

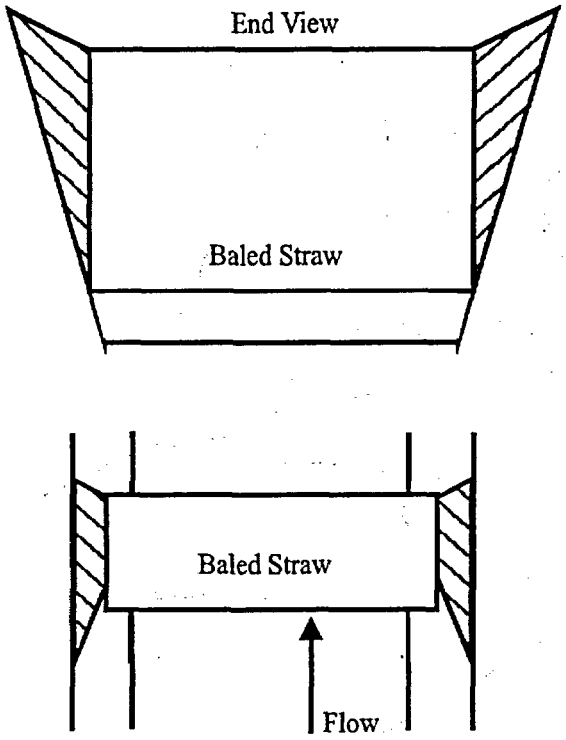
Construction - Chicken wire (most commonly used) or any suitable fencing material is threaded with rope at the bottom and at least 6 inches from the water surface on the top and anchored to any available tree, post, or driven anchor stake. The screening is then placed in the stream and allowed to deflect in an amount determined by the velocity of the current. Additional guide stakes can then be driven into the creek bottom if shallow enough to lend extra support. Straw bales are then broken and spread in front of the screening to form a barrier. Oil, which has an affinity for straw, will stick to the straw and float, eventually being caught behind and constructed dam. The unit constructed will act as an oil separator. Always make the current work for you. Deflect the oil and straw combination to the slow side on curves and into any inlets or coves available eventual cleanup. Again, always try to construct the boom in an area where cleanup can readily occur.

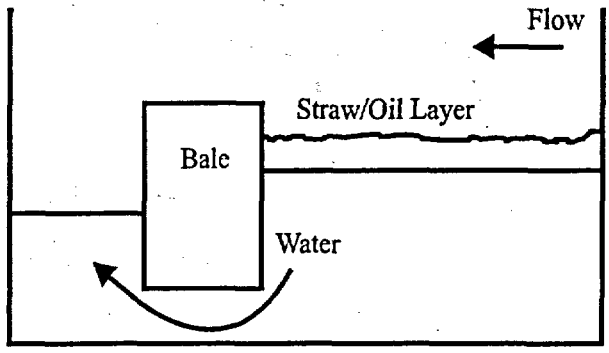
FIGURE 1


Point of construction of secondary containment boom, if needed.
Flow
Flow
Point of construction of earthen dam, containment pond, or straw boom.
Flow
Source of oil spill. Example: Tank truck accident, railroad accident, fuel storage leak or overfill.

Straw Dam for *Narrow* Ditch or Stream

FIGURE 2



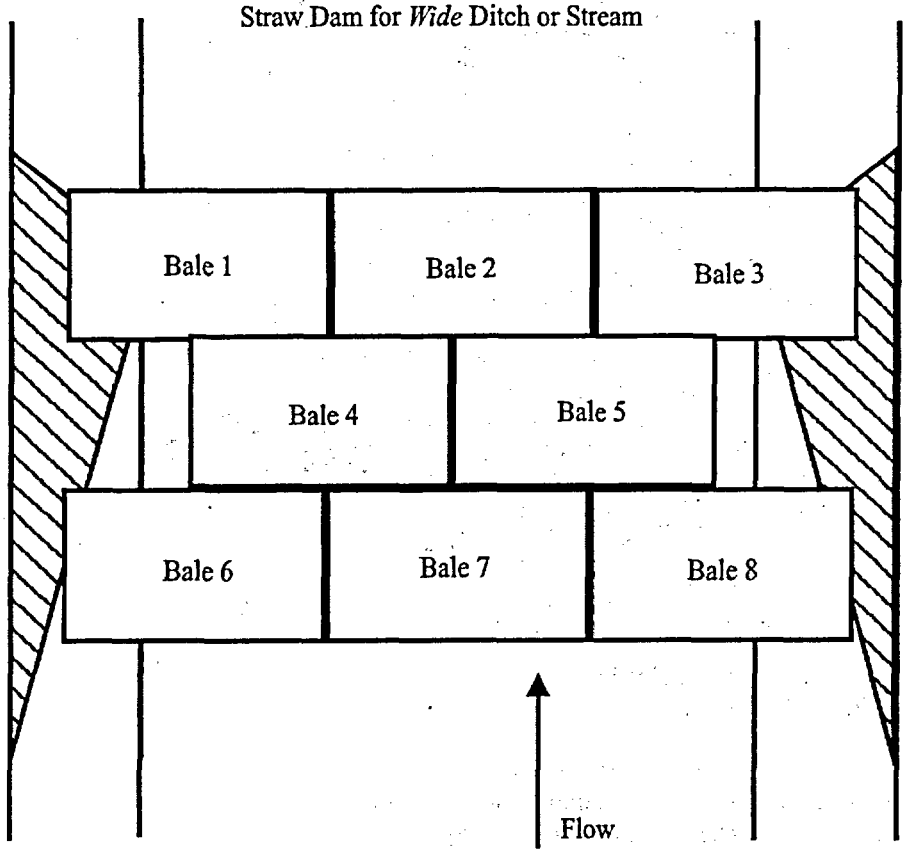


Hand placed straw to prevent flow around ends of bale.

Loose straw hand placed on the surface of the slick will float and collect behind the dam. The approach is that of an oil separator.

Straw Dam for *Wide* Ditch or Stream

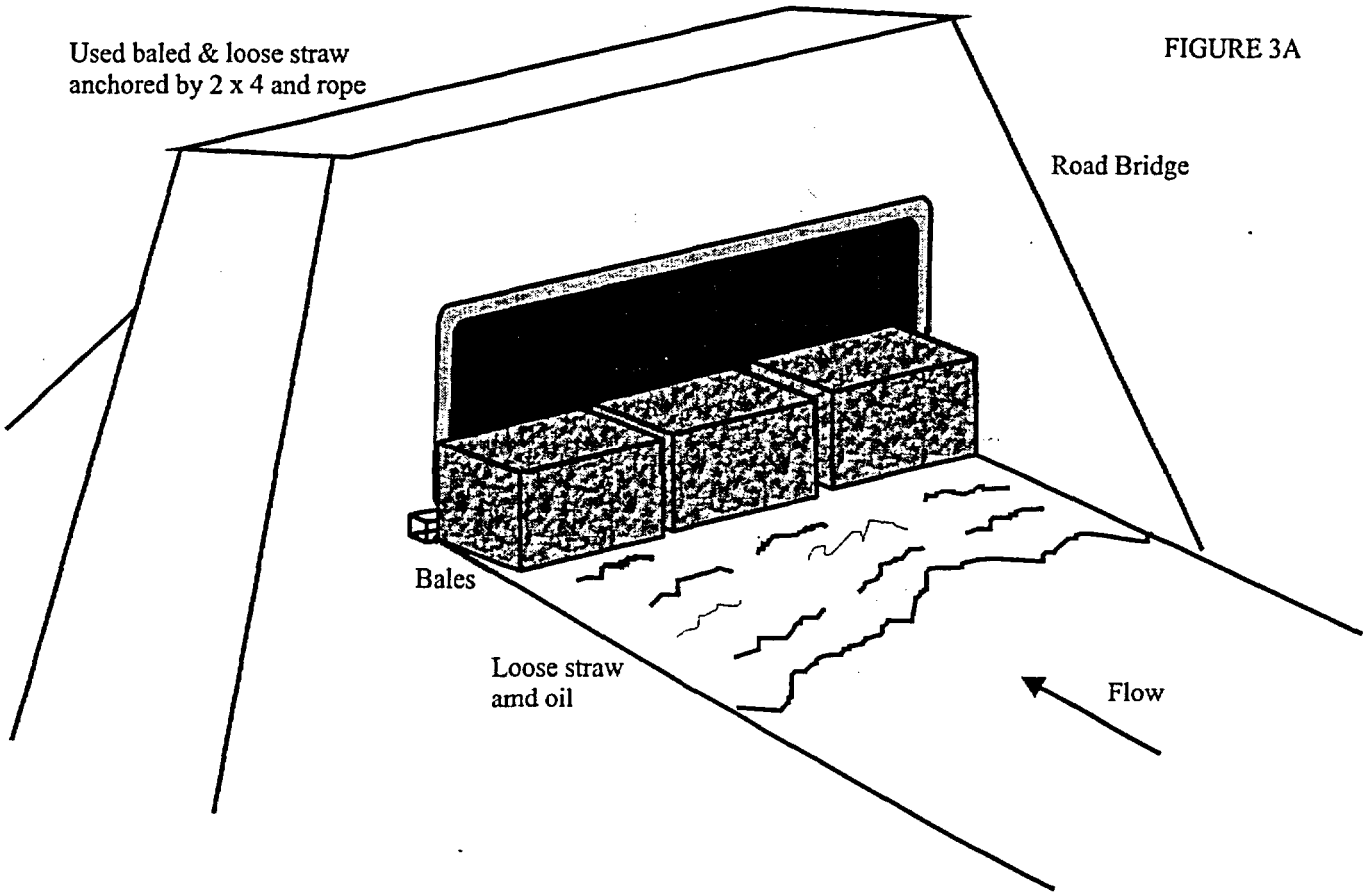
FIGURE 3

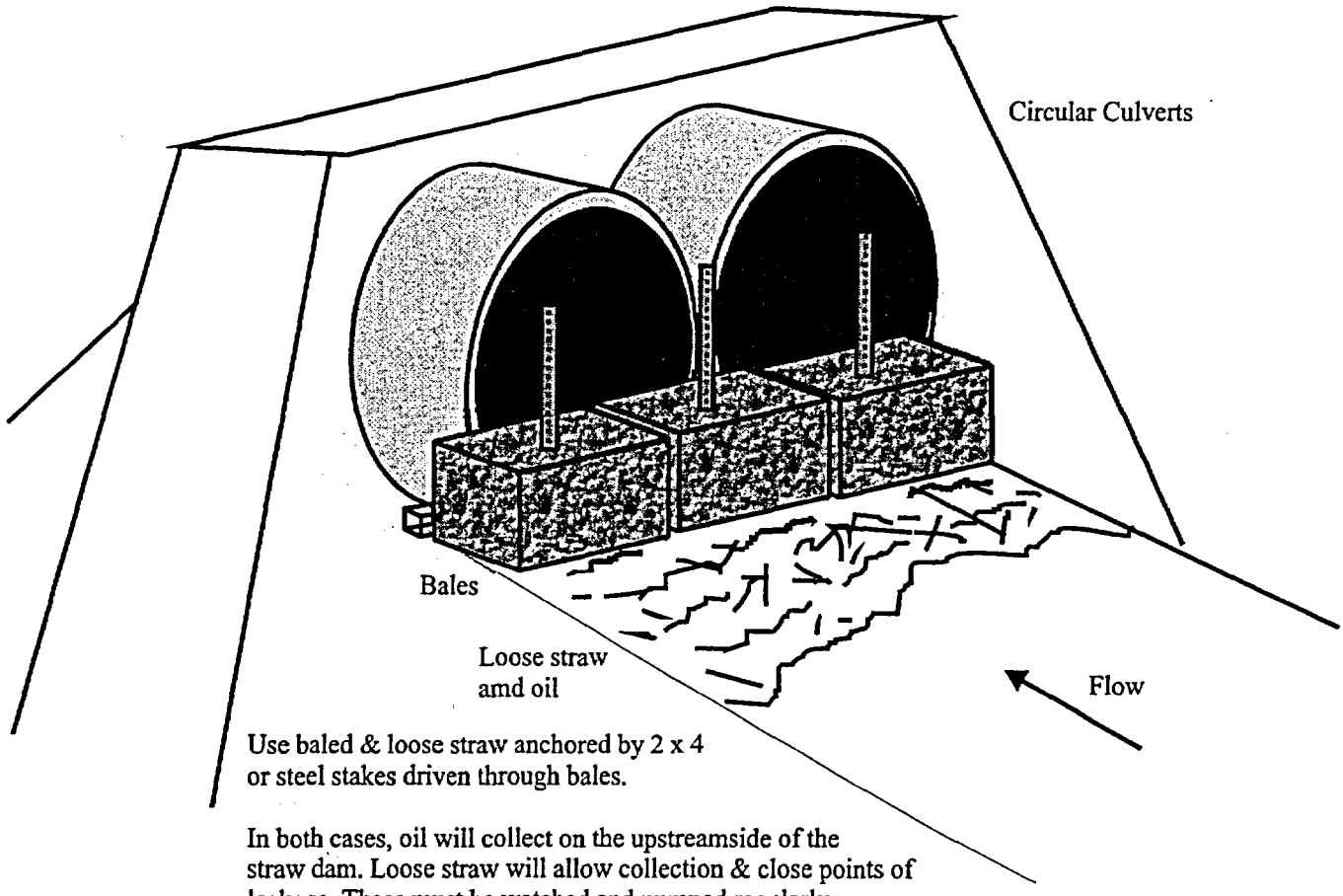


Hand placed straw to prevent flow around ends of dam

Oil and loose straw will collect behind barrier

FIGURE 3A

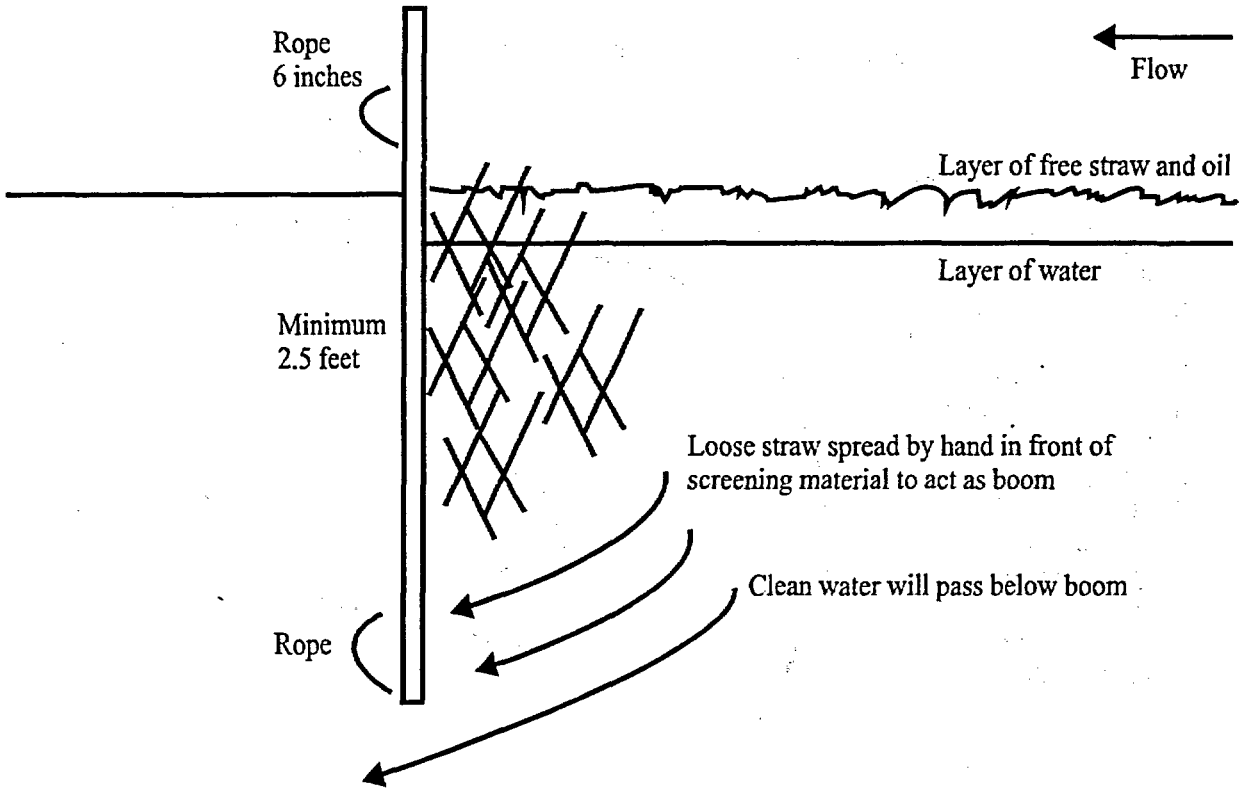




Use baled & loose straw anchored by 2 x 4 or steel stakes driven through bales.

In both cases, oil will collect on the upstreamside of the straw dam. Loose straw will allow collection & close points of leakage. These must be watched and pumped regularly.

FIGURE 4



The ropes must be anchored to either trees or stakes driven into the ground. Current will dictate the length of boom required, and the amount of straw to be used. This is an interim measure.

FIGURE 5

Top View of Containment Room

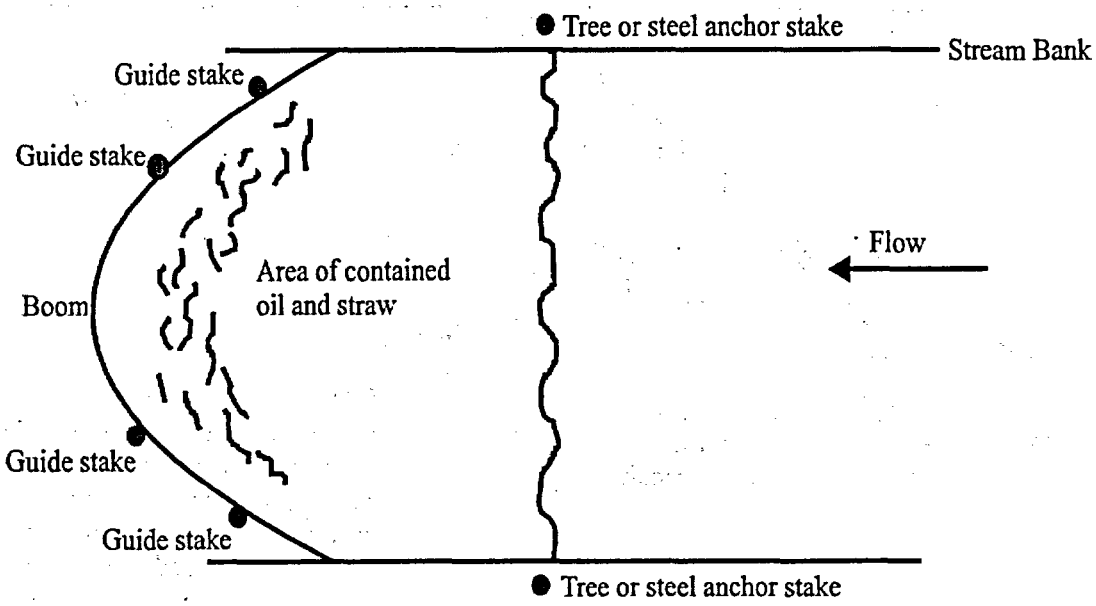


Figure 6

Top View of Containment Boom in Curve in River

The guide to success of a containment boom on a curve is to let the current work for you. The velocity will be less on the inside of the curve. Try to contain and direct the oil and straw to that point. Again, try to pick a spot before two streams merge and whre cleaup can be effected without much difficulty.

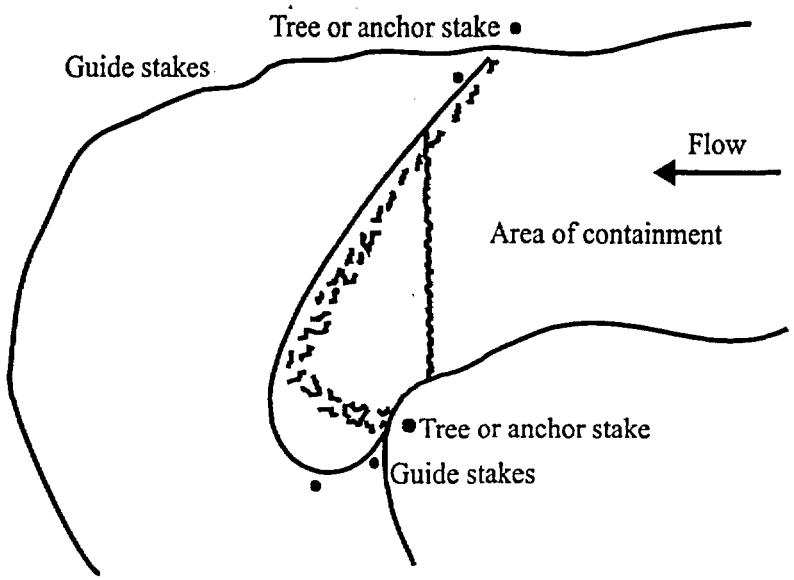
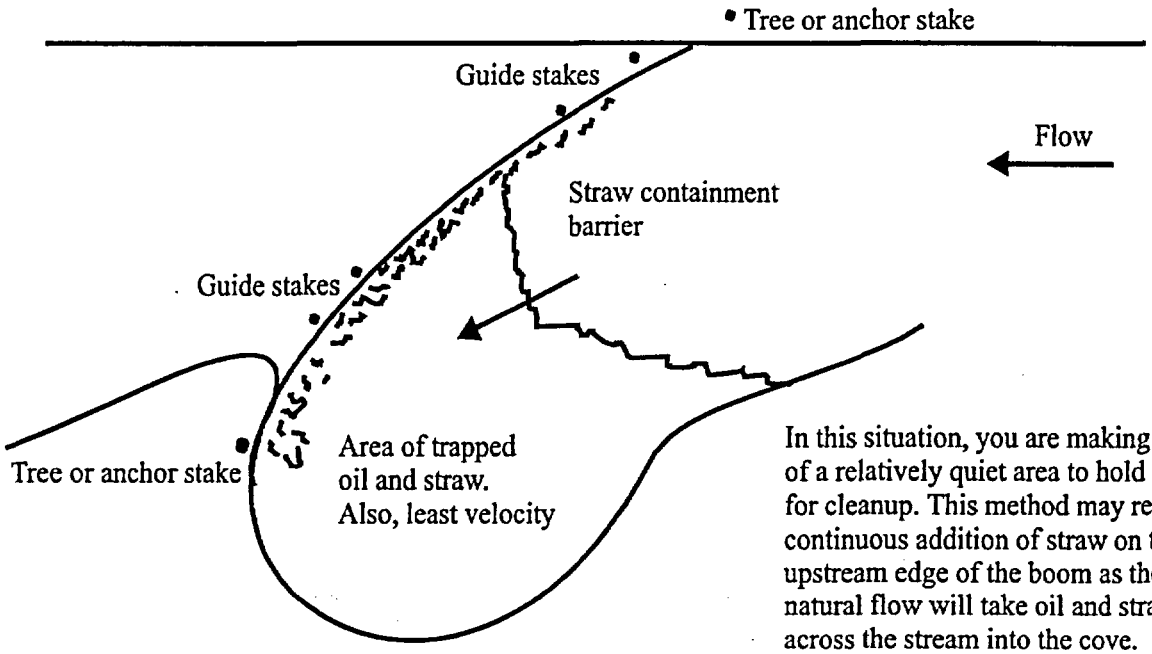


Figure 7

Top View of Containment Boom in an Inlet or Cove



In this situation, you are making use of a relatively quiet area to hold oil for cleanup. This method may require continuous addition of straw on the upstream edge of the boom as the natural flow will take oil and straw across the stream into the cove.

PART II

HAZARDOUS WASTE

CONTINGENCY PLAN & EMERGENCY PROCEDURES

Original issue - September 1991

Updated - March 2003

WEST VALLEY DEMONSTRATION PROJECT
10282 ROCK SPRINGS ROAD
WEST VALLEY, NY 14171-0191
EPA ID NUMBER - NYD 980779540

1.0 PURPOSE (40 CFR 265.51)

In accordance with the State of New York interim status standards for owners and operators of Hazardous Waste Facilities, the following Hazardous Waste Contingency Plan and Emergency Procedures has been prepared for use in the event of a spill, fire or explosion involving hazardous wastes at the West Valley Demonstration Project site (hereafter WVDP) (6NYCRR 373-3.4). Said plan will be maintained at WVDP and distributed to all police departments, fire departments, hospitals, and state and local emergency response teams that may be called upon to provide emergency services (6NYCRR 373-303(d)).

This plan will be immediately implemented whenever there is a fire, explosion, or release of hazardous waste or hazardous waste constituents and is intended to:

1.1 Protect to the greatest extent possible, employees, private citizens, company property and the environment from fires, explosions, or unplanned sudden or non sudden release.

1.2 Act as a guide during actual emergency situations.

1.3 Familiarize local emergency response personnel (i.e, police, and fire departments) with the types of hazardous wastes managed at WVDP, access routes to the plant storage areas, and internal emergency response procedures.

1.4 Ensure WVDP facilities are properly maintained and operated in an effort to minimize the possibility of a fire, explosion, or any unplanned releases of hazardous waste to environment.

2.0 PLAN DISTRIBUTION (40 CFR 265.53)

2.1 External

Copies of this plan shall be distributed as outlined below. The person receiving the copy shall assure proper maintenance.

Agency	**Name of Recipients**
State Emergency Management Organization Albany, NY	Director
Local Emergency Planning Commission	Chairperson
West Valley Police & Fire Department West Valley, NY 14171	Fire Chief Police Chief
Springville Fire Department Springville, NY	Fire Chief
Bertrand Chaffee Hospital Springville, NY	Administrator
International Waste Removal Inc. (IWR) Niagra Falls, NY	Hazardous Waste Manager

2.2 Internal

- Site Operations Manager
- Process Plant Decontamination Project Manager

- D&D/WM Operations Manager
- Maintenance Manager
- Head End Cell Project Manager
- PPC/XC-2 Project Manager
- Environmental Affairs Manager
- Waste Management Services Manager
- R&CP Manager

2.3 Plan Modification (40 CFR 265.54)

- The contingency Plan must be reviewed and updated as required by 40 CFR 265.54 (6 NYCRR 373-3.4(e)), if necessary, whenever the facility permit is revised.
- The plan fails in an emergency.
- Applicable regulations are revised.
- WVDP makes changes in its design, construction, operations, maintenance, or in other areas which might change the response necessary in an emergency.
- There are changes in Emergency Coordinators.
- There are significant changes in the amount or type of emergency equipment.

3.0 GENERAL INFORMATION

3.1 Site Location

The WVDP site is located at the following address:

West Valley Demonstration Project
10282 Rock Springs Road
West Valley, NY 14171

The WVDP, the site of a U.S. Department of Energy (DOE) environmental cleanup activity operated by West Valley Nuclear Services Co. LLC (WVNSCO), is in the process of stabilizing liquid high-level radioactive waste that remained at the site after commercial nuclear fuel reprocessing had been discontinued. The project is located in Western New York State, about 30 miles south of Buffalo, NY. The WNYNSC is a 1,335- hectare (3,300 acres) reservation owned by the State of New York. The WVDP is located on a 220 acre parcel within the WNYNSC (see Figure 2-1). The WVDP is currently focusing on several goals that will lead to eventual site closure: 1) cleaning up facilities not currently used; 2) preparing for the shipment of Spent Nuclear Fuel; and 3) shipping low-level waste.

The Security Center (guard house) is staffed around the clock and seven days a week. In addition to controlling traffic, the Security Center houses the alarm system that monitors plant conditions.

3.2 Site Topography and Drainage

See SPCC Plan - Section 4.2

3.3 Storm Sewer System

See SPCC Plan - Section 4.3

3.4 Spill History

During the history of the WVDP under both NFS and DOE, there have been no documented occurrences of environmentally catastrophic spills causing significant harm to the environment. However, there have been several on-site spills which have been documented. Examples are as follows: A hazardous material leak occurred in June 1984, when the underground caustic transfer pipe between caustic storage Tank 14D-2 and the LLWTF released up to 3,800 liters of a 50 percent sodium hydroxide solution. This spilled material was routed into the LLWTF lagoon system, where it was neutralized prior to discharge via SPDES Outfall 001. The leaking pipe was excavated, repaired, and pressure-tested prior to being returned to service.

A spill of radioactive wastewater occurred on March 15, 1985. This incident involved the release of approximately 500 gallons of radioactive condensate. The spill occurred during the transfer of HLW tank farm off-gas condensate from Tank 8D-1 to HLW storage tank 8D-2. It resulted from a corroded flange in the transfer line. The release was largely contained within the waste tank farm by erecting dams over drainage culverts to contain runoff and divert run-on. The affected area was decontaminated and the lines repaired and tested.

There have been no reportable spills at the WVDP within the past five (5) years. Spills of hazardous material/hazardous waste are reported to NYSDEC if the amount of spill exceed reportable quantity.

3.5 Hazardous Waste Status

WVDP, by state and federal definition, is a hazardous waste generator (USEPA ID# NYD980779540). The following hazardous wastes have been generated in the past (but not limited to):

- F001, F003, F005
- D001, D002, D003, D005, D006, D007, D008, D009, D010, D011, D018, D022, D035
- U154, U159, U226
- PCB's (NYS Code B001 - B007)

Wastes are accumulated in designated SAA's and in authorized 90 day storage or in the IWSF. Radiological mixed wastes are stored within specific facilities i.e., LSA's, etc. Wastes are stored in authorized 90 day storage area or, i.e., HWSL, LSA's, and IWSF where mixed waste is stored.

Wastes stored in 90 day storage area are shipped to an approved off-site Treatment, Storage, Disposal Facility (TSDF) within 90 days of collection.

WVDP has applied for the latest amendment to RCRA Part A permit application on March 6, 2001. The approval was granted by NYSDEC on November 13, 2001.

3.6 Acronyms

BMPs	Best Management Practices
CB	Catch basin
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CHEMTREC	Chemical Transportation Emergency Center
CHRIS	Coast Guard Chemical Response Information System
CSS	Cement Solidification System
CWA	Clean Water Act
DOE	United States Department of Energy
EMT	Emergency Medical Technician
EOC	Emergency Operations Center
EPA	United States Environmental Protection Agency
HLW	High-Level Waste
HWSF	Hazardous Waste Storage Facility
IWSF	Interim Waste Storage Facility
MH	Manhole
MSDS	Material Safety Data Sheet
NDA	Nuclear Regulatory Commission Licensed Disposal Area
NFPA	National Fire Protection Association
NFS	Nuclear Fuel Services Company, Inc. (original site operator)
NYCRR	New York Code of Rules and Regulations
NYSDEC	New York State Department of Environmental Conservation
NYSERDA	New York State Energy Research and Development Authority
OSHA	Occupational Safety and Health Administration
PCB	Polychlorinated Biphenyl
PVS	Permanent Ventilation System
RCRA	Resource Conservation and Recovery Act
RQ	Reportable Quantity
SAA	Satellite Accumulation Area
SOP	Standard Operating Procedure
SPDES	State Pollutant Discharge Elimination System
STS	Supernatant Treatment System
TSCA	Toxic Substance Control Act

TSDF	Treatment, Storage and Disposal Facility
UR	Utility Room
VF	Vitrification Facility
WM	Waste Management
WTF	Waste Tank Farm
WVDP	West Valley Demonstration Project
WVNSCO	West Valley Nuclear Services Company Incorporated

3.7 Definitions

Technical terms used or referred to in the Spill Prevention, Control, and Countermeasures Plan are defined as follows:

3.7.1 Best Management Practices (BMPs) - Schedules of activities, maintenance procedures, prohibitions, and other management practices to prevent or reduce pollution of U.S. waters and other environmental medias. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge and waste disposal, or drainage from raw materials storage.

3.7.2 Combustible Liquid - Any liquid having a flash point at or above 100°F (37.8°C).

3.7.3 Container - Any portable device in which a material is stored, transported, treated, disposed of, or otherwise handled.

3.7.4 Containment - An enclosure or entrapment that prevents further spread of a spilled material.

3.7.5 Containment Volume - The volume of a diked or curbed area minus the displacement volume of structures within the diked or curbed area.

3.7.6 Contingency Plan - A document setting out an organized, planned, and coordinated course of action to be followed in case of a fire, explosion, or release of oil or hazardous waste or hazardous waste constituents which could threaten human health or the environment.

3.7.7 Dike - An embankment or ridge of either natural or man-made materials used to prevent the movement of liquids, sludges, solids, or other materials.

3.7.8 Disposal and Transportation of the Spilled Substance - Cleanup of a material from a spill site and transportation of the spilled substance to approved disposal facilities.

3.7.9 Environmental Incident - Any accident or occurrence that involves uncontrolled release or has the potential for uncontrolled release of oil or hazardous materials to the environment. This includes violations of a discharge permit.

3.7.10 Flammable Liquid - Any liquid having a flash point below 100°F (37.8°C) except any mixture having components with flashpoints of 100°F or higher, the total of which make up 99% or more of the total volume of the mixture.

3.7.11 Hazard Label - A visual indicator consisting of easily recognized and understood markings which identify tank and process equipment contents and indicate the degree of hazard.

3.7.12 Hazardous Material or Substance - 1) Any substance that may pose a threat to safety, health, environment, or property; 2) any substance designated pursuant to Statute Sect. 311(b)(2)(a) of the Federal Water Pollution Control Act (FWPCA); 3) any hazardous waste having the characteristics under or listed pursuant to Statute Sect. 3001 of the Solid Waste Disposal Act (SWDA); 4) any toxic pollutant listed under Statute Sect. 307(a) of the FWPCA; and 5) any imminently hazardous chemical substance or mixture of substances set forth in the Toxic Substances Control Act (TSCA).

3.7.13 Hazardous Waste (HW) - A solid waste that meets the criteria listed in 40 CFR 261.3.

3.7.14 Hazardous Waste Storage Facility (HWSF) - an authorized facility designated for the interim storage of hazardous wastes prior to off-site shipment to a permitted Treatment, Storage, or Disposal Facility (TSDF).

3.7.15 Material Safety Data Sheet (MSDS) - a document describing the physical, chemical and hazardous properties of a substance, prepared in accordance with paragraph (9)(g) of 29 CFR 1910.1200, Occupational Safety and Health Administration (OSHA).

3.7.16 Mixture - Any combination of two or more elements and/or compounds in solid, liquid, or gaseous form, except where such substances have undergone a chemical reaction so as to become inseparable by physical means.

3.7.17 Primary Containment - The tank or container for holding hazardous materials, hazardous wastes, or oils.

3.7.18 Reportable Quantity (RQ) - Quantity of a substance that may be harmful as set forth in 40 CFR 117.3 and 40 CFR 302. The discharge of an RQ is a violation of the FWPCA and must be reported to EPA.

3.7.19 Satellite Accumulation Area (SAA) - An authorized area where hazardous waste is accumulated, located at the point of initial generation of the hazardous waste.

3.7.20 Secondary Containment - A containment system which is capable of holding and collecting any spills, leaks, rainwater, and/or fire protection water (e.g., sprinkler system discharge) originating from primary containment vessels and other process equipment.

3.7.21 Sludge - An aggregate of oil or oil and other matter of any kind, in any form other than dredged soil, having a combined specific gravity equivalent to or greater than that of water.

3.7.22 SPDES Permit - State Pollutant Discharge Elimination System Permit required by the Environmental Protection Agency (EPA) and the New York State Department of Environmental Conservation (DEC), that describes the limits of any material that may be contained in a wastewater discharge to the waters of the state, and specifies the required testing and analyses, the frequency of analyses and the parameters for which analyses must be performed.

3.7.23 Transfer Station - Location or facility where hazardous materials/wastes are transferred to and from portable containers or tankers into tanks and/or process equipment.

NOTE *Additional definitions can be located in SPCC Plan.*

4.0 STORAGE FACILITY CONSTRUCTION, INSTRUMENTATION, AND SPILL CONTAINMENT

The following sections describe the major outdoor storage tanks, underground tanks and other sources with a potential for environmental releases of hazardous substances or hazardous wastes. These installations are summarized in Table 4-1. The locations of these tanks (or buildings containing tanks) are shown on Figure 4.4.3 (SPCC Plan). All of the tanks are not RCRA tanks. RCRA tanks are shaded for differentiation with other operational tanks which are listed here for reference.

All of the tanks on site that are required to be registered with the NYSDEC are tested at the frequency required by the appropriate regulations.

Tanks are inspected on a routine basis by the cognizant group and recorded in the operating logs in accordance with their operating procedures.

Table 4.1 - WVDP Hazardous Substance, and Hazardous Waste Storage Facilities

Tank/Vessel	Construction	Nominal Capacity (liters) (gallons)	Location	Contents and/or Function	Spill Containment	Instrumentation Association with Spill Control
8D-1	Carbon steel tank	2.8 million 740,000	Waste tank farm	Houses STS process tanks and cesium loaded spent zeolite	Carbon steel pan; concrete vault; silty till	Pan and vault have moisture sump and level indicator; tank has level and pressure indicators and alarms
8D-2	Carbon steel tank	2.8 million 740,000	Waste tank farm	Mixed high level radioactive waste see Tables 3-2 and 3-3	Carbon steel pan; concrete vault; silty till	Pan and vault have moisture sump and level indicator; tank has level and pressure indicators and alarms
8D-3	Stainless steel tank	57,000 15,000	Waste tank farm	To collect Vit and STS process condensate	Stainless steel lined concrete vault (shared with 8D-4); silty till	Vault is equipped with an alarmed sump; tank has level and pressure indicators and alarms
8D-4	Stainless steel tank	57,000 15,000	Waste tank farm	To collect Vit process waste header streams	Stainless steel lined concrete vault (shared with 8D-3); silty till	Vault is equipped with an alarmed sump; tank has level and pressure indicators and alarms
North Interceptor	Concrete, lined w/SS	87,000 23,000	East of main process building	Collects liquid from plant drains and sumps (radioactive wastewater)	Silty till, overflow to south interceptor	High level alarm
South Interceptor	Concrete, lined w/SS	87,000 23,000	East of main process building	Collects liquid from plant drains and sumps (radioactive wastewater)	Silty till, overflow to north interceptor	High level alarms
Neutralization Pit	Concrete, lined w/SS	1,900 500	East of main process building	Adjusts pH of incoming non-hazardous wastes (radioactive wastewater)	Silty till	Flow - through pit with normally open inlet and outlet valves
Old Interceptor	Concrete	56,850 15,000	East of main process building	Temporary storage of off-spec plant effluent	Silty till	High level alarm located locally and at UR

Table 4.1 - WVDP Hazardous Substance, and Hazardous Waste Storage Facilities

Tank/Vessel	Construction	Nominal Capacity (liters) (gallons)	Location	Contents and/or Function	Spill Containment	Instrumentation Association with Spill Control
15-D-6	1.8 m diameter 2.4 m high stainless steel	5,700 1,500	Underground adjacent to east side of contact size reduction facility	HEV and decon shop waste catch tank (radioactive wastewater)	None	Monitoring well, level recorder, high level alarm
7-D-13	SA 240/307 L SS 1.4 m diameter x 4.1 m long	7,500 2,000	Underground southwest of the process building	Low level waste catch tank from lab drains Inactive due to settled solid accumulation.	None	Level recorder, high level alarm, low level alarm
Vitrification Facility Tanks - Additional Vit System Tanks and Vit Cell Tanks (RCRA High-level mixed waste treatment units)						
63-V-11	304 SS	22,237 6,000	VF "Cell"	Melter Feed Hold Tank	Vit "Cell"	Level and density indicators and high, low alarms
63-V-01	Hastelloy	32,930 9,000	VF "Cell"	Concentrator Feed Makeup Tank	Vit "Cell"	Level and density indicators and high, low alarms
63-V-020	304 SS	860 227	VF "Cell"	Slurry-fed Ceramic Melter	Vit "Cell"	Level probe and high level alarm
63-V-031	304 SS	5,488 1,500	VF "Cell"	Melter Off-gas Scrub Solution	Vit "Cell"	Level and density indicators and high, low alarms
63-V-044	Titanium	1,550 420	VF "Cell"	Canister Decontamination Tank containing nitric acid and cerium nitrate solution	Vit "Cell"	Level probe
63-V-046	Titanium	1,460 385	VF "Cell"	Canister Decontamination Tank containing nitric acid and cerium nitrate solution	Vit "Cell"	Level probe
63-D-048 Nitric Acid Holding Tank	Stainless Steel	600 158	UEOA - Vitrification Facility	Nitric Acid	Concrete Dike	Level indicators, high level alarm

Table 4.1 - WVDP Hazardous Substance, and Hazardous Waste Storage Facilities

Tank/Vessel	Construction	Nominal Capacity (liters) (gallons)	Location	Contents and/or Function	Spill Containment	Instrumentation Association with Spill Control
Scaled Vitrification System (SVS) III Tanks (All tanks are currently inactive)						
61-D-01	304 SS	1,779 470	Vit Test Facility	Slurry/Mix Tank	In Vit Test Facility	High level alarm indicators, alarms
61-D-04	304L SS	2,271 600	Vit Test Facility	Slurry/Feed Hold Tank and Boil Down	In Vit Test Facility	High level indicators, alarm
61-D-06	304L SS	265 70	Vit Test Facility	Slurry/Melter Feed Tank	In Vit Test Facility	Level indicator
61-D-07	304 SS	18,972 5,000	Outside of Vit Test Facility	Nitric Acid (Dilute)/ Collection Tank	Concrete berm and pad	Level gauge Cold Chemical Systems Tanks (See Section 3.14.7)
61-D-08	304 SS	1,041 275	Vit Test Facility	Dilute Nitric Acid/Condensate	Vit Building Floor	High and Low Level Alarm
Cold Chemical Systems Tanks						
65-D-01	304L SS	41,635 11,000	Cold Chem Building	Off-spec chemical hold tank/elementary neutralization unit	Pump Room Sump, Cold Chem Building	Sump alarm, level indication with alarm
65-D-02	304L SS	17,740 4,687	Cold Chem Building	Slurry Hold Tank	Pump Room Sump, Cold Chem Building	High level alarm, sump alarm
65-D-03	304L SS	17,680 4,671	Cold Chem Building	Main Mix Tank	Pump Room Sump, Cold Chem Building	High level alarm, sump alarm
65-D-04	304L SS	1,970 520	Cold Chem Building	Shim Mix Tank	Pump Room Sump, Cold Chem Building	High level alarm, sump alarm
65-D-05	304L SS	4,543 1,200	Cold Chem Building	Nitric Acid Hold Tank	Individual Tank Berm Plus Cold Chem Building	High level alarm, visual, alarmed sump in berm
65-D-06	316 SS	1,900 500	Cold Chem Building	Caustic Hold Tank	Individual Tank Berm Plus Cold Chem Building	High level alarm, visual, alarmed sump in berm
65-D-07	304L SS	3,650 964	Cold Chem Building	Demineralized Water Service Decon Tank	Pump Room Sump, Cold Chem Building	High level alarm, visual, alarmed sump

Table 4.1 - WVDP Hazardous Substance, and Hazardous Waste Storage Facilities

Tank/Vessel	Construction	Nominal Capacity (liters) (gallons)	Location	Contents and/or Function	Spill Containment	Instrumentation Association with Spill Control
65-D-08	304L SS	1,000 264	Cold Chem Building	Nitric Acid Service Decon Tank	Pump Room Sump, Cold Chem Building	High level alarm, visual, alarmed sump
65-D-09	304L SS	1,000 264	Cold Chem Building	Misc. Service Decon Tank	Pump Room Sump, Cold Chem Building	High level alarm, alarmed sump
65-D-10	304L SS	380 100	Cold Chem Building	Scrub Solution Tank	Pump Room Sump, Cold Chem Building	High level alarm, visual, audio, alarmed sump
Ex-Cell Off-Gas System						
64-D-004 (see Section 3.13.6)	Carbon Steel	3,785 1,000	Outside, north of 01-14 Building	Anhydrous Ammonia Storage Tank	None; Gaseous Discharge	High & low level alarms, level indicators, automatic deluge system, remote ammonia sensors
Supernatant Treatment System (RCRA Treatment)						
50-C-001 50-C-002 50-C-003 50-C-004	Stainless steel		8D-1	Zeolite IX columns	8D-1, carbon steel pan concrete vault	Temperature, pressure indicators low, high level alarms
50-F-001	316 L and 300 stainless steel		8D-1	Prefilter	8D-1, carbon steel pan concrete vault	Pressure indicators, high level alarm
50-F-002	Stainless steel		8D-1	Sand postfilter	8D-1, carbon steel pan concrete vault	Pressure indicators, high alarm
50-E-001	Stainless steel		8D-1	Supernatant cooler	8D-1, carbon steel pan concrete vault	High alarm
50-D-001	Stainless steel	6,435 1,700	8D-1	Supernatant feed tank	8D-1, carbon steel pan concrete vault	Level, density, pressure indicators, high level alarm, low level alarm
50-D-004	Stainless steel	8,110 2,150	8D-1	Supernatant sluice lift tank	8D-1, carbon steel pan concrete vault	High and low level alarms
50-D-005	Stainless steel		STS Valve Aisle	Process upset safeguard tank	STS Valve Aisle sump; pumped to 8D-2	High and low level alarms
50-D-006	Stainless steel		STS Valve Aisle	Process upset safeguard tank	STS Valve Aisle sump; pumped to 8D-2	Sight gauge
50-D-008	Stainless steel	57 15	STS Operating Aisle	Brine solution of Sodium Nitrate	Concrete berm, operating aisle sump; pumped to 8D-1	Sight gauge

Table 4.1 - WVDP Hazardous Substance, and Hazardous Waste Storage Facilities

Tank/Vessel	Construction	Nominal Capacity (liters) (gallons)	Location	Contents and/or Function	Spill Containment	Instrumentation Association with Spill Control
50-E-002	Stainless steel	220 58	STS Operating Aisle	Brine solution of Sodium Nitrate	Concrete berm; operating aisle sump; pumped to tank 8D-1	Pressure gauges
Liquid Waste Treatment System (RCRA Treatment)						
35104	SA 240/304 L SS	20,650 5,400	GCR extension	Low level waste collection tank	GCR; sump	Level recorder, high and low level alarms, sump has high level alarm
7D-2	SA 240/304 L SS	32,220 8,500	LWC	Low level waste collection tank	LWC; sump	Level recorder, high and low level alarms, sump has high level alarm
13-D-8	SA 240/304 L SS	2,500 660	LWC	Cell sump receiver	LWC; sump	Level recorder, indicator and high level alarm, alarmed sump
3-D-2	304 L SS	4,780 1,000	LWC	Sample collection tank	LWC; sump	Level recorder, high and low level alarms, alarmed sump
4-D-8	304 L SS	2,292 600	LWC	Rad. waste catch tank	LWC; sump	Level recorder, alarmed sump
4-D-10	304 L SS	10,420 3,000	LWC	PMC, LWC, and GPC sump collector	LWC; sump	Level recorder, alarmed sump
4-D-13	304 L SS	10,460 2,750	LWC	Rad. waste catch tank	LWC; sump	Level recorder, alarmed sump
7-D-8	304 L SS	11,580 3,000	LWC	Inactive evaporator feed tank	LWC; sump	Level recorder, alarmed sump
7-D-14	304 L SS	1,979 500	LWC	Hot analytical drain tank	LWC; sump	Level recorder, high and low level alarms, alarmed sump
13-D-7	304 L SS	2,599 700	LWC	Rad. waste catch tank	LWC; sump	Level recorder, alarmed sump

Table 4.1 - WVDP Hazardous Substance, and Hazardous Waste Storage Facilities

Tank/Vessel	Construction	Nominal Capacity (liters) (gallons)	Location	Contents and/or Function	Spill Containment	Instrumentation Association with Spill Control
Tanks within the Vessel Off Gas Cell						
6D-3	304 L SS	858 225	OGC	VOG condensate catch tank	Leak to OGC sump; overflows to 7D-8	Level Recorder, alarmed sump
6C-3	304 L SS	1577 400	OGC	VOG scrubber tank	Leaks to OGC sump; overflows to 7D-8	Level indicator, alarmed sump
Sodium Silicate Bulk Storage and Day Tank	Polyethylene Carbon Steel	5,685 1,500 1,043 275	01-14 Building 01-14 Building	Sodium Silicate, currently empty and inactive	berm None	Level indicator Low level alarm on day tank
Liquid Waste Treatment System Tanks within the Uranium Process Cell (UPC)						
5-D-15A1	SA 240/304 L SS	38,150 10,000	UPC	Evaporator Concentrates Receiver, alternate evaporator feed hold tank	UPC, sump	Level recorder, indicator, low and high alarms, UPC sump high level alarm
5-D-15A2	SA 240/304 L SS	18,990 5,000	UPC	Evaporator Concentrates Receiver	UPC, sump	Level recorder, indicator, low and high alarms, UPC sump high level alarm
5-D-15B	SA 240/304 L SS	56,950 15,000	UPC	Evaporator Feed Tank	UPC, sump	Level recorder, indicator, low and high alarms, UPC sump high level alarm
Tanks and Vessels within Extraction Cell (XC3)						
71-D-001 (inactive)	SA 240/304 L SS		XC3	Organic IX (low TDS)	XC3; sump	Sump high level alarm
71-D-002 (inactive)	SA 240/304 L SS		XC3	Zeolite IX (low TDS)	XC3; sump	Sump high level alarm
71-D-003	SA 240/304 L SS		XC3	Zeolite IX (high TDS)	XC3; sump	Sump high level alarm
71-D-005 (inactive)	SA 240/304 L SS	3,785 1,000	XC3	Distillate surge	XC3; sump	Sump high level alarm, level indicators

Table 4.1 - WVDP Hazardous Substance, and Hazardous Waste Storage Facilities

Tank/Vessel	Construction	Nominal Capacity (liters) (gallons)	Location	Contents and/or Function	Spill Containment	Instrumentation Association with Spill Control
71-D-006 (inactive)	SA 240/304 L SS	4,650 1,200	XC3	Spent resin receiver	XC3; sump	Level indicator, sump high level alarm
71-D-007 (inactive)	SA 240/304 L SS	4,650 1,200	XC3	Spent zeolite receiver	XC3; sump	Level indicator, sump high level alarm
71-D-008 (inactive)	SA 240/304 L SS	2,950 800	XC3	Filter back wash receiver	XC3; sump	Level indicator, high level alarm, sump high level alarm
71-D-009 (inactive)	SA 240/304 L SS	380 100	XC3	Feed sample tank	XC3; sump	Level indicator, high level alarm, sump high level alarm
71-D-010 (inactive)	SA 240/304 L SS	400 100	XC3	Low TDS filter	XC3; sump	Sump high level alarm
71-D-011 (inactive)	SA 240/304 L SS	380 100	XC3	Low TDS feed tank	XC3; sump	Level indicator high/low alarms, sump high level alarm
31017	SA 240/304 L SS	5,246 1,386	XC3	High TDS evaporator	XC3; sump	Level recorder, indicating controller, high/low alarms, sump high level alarm
Tanks Located Within the Lower Extraction Aisle (LXA)						
14-D-7	SA 240/304 L SS	375 100	LXA	Acid Hold tank - unused to date	Bermed area in LXA	Level indicator, high level alarm
14-D-18	SA 240/304 L SS	375 100	LXA	Caustic Hold Tank - unused to date	Bermed area in LXA	Level indicator, high level alarm
Miscellaneous Main Process Building Tanks						
70-D-001	304 stainless steel	1,900 (usable) 500	Waste Disposing Cell of 01-14 Building	Waste dispensing vessel	WDC; sump	Level indicator, low, high level alarms, sump has high level alarm
31008	SA 240/304 L SS	510 130	PCR	Roof top evaporator	Drains to 7D-8	Level recorder, indicating controller, high/low alarms
5V-1 (inactive)	Stainless steel	19,000 5,000	ULO	Empty	ULO floor	Liquid level detection in ULO floor

Table 4.1 - WVDP Hazardous Substance, and Hazardous Waste Storage Facilities

Tank/Vessel	Construction	Nominal Capacity (liters) (gallons)	Location	Contents and/or Function	Spill Containment	Instrumentation Association with Spill Control
Low Level Waste Treatment Facility						
Ion Exchange Columns 104, 105, 106 and 204, 205, 206	Carbon steel fiberglass lined	1420 each 375	In LLWTF Building	Ion exchange columns for process wastewater	LLWTF; Building sump	Pressure gauges
Trench Interceptor Project (TIP) Pretreatment Tanks (currently all these tanks are inactive)						
82-D-01	Carbon steel	3,790 1,000	TIP Bldg.	Physical separation tanks of recovered groundwater	Containment basin alarms	Low and high level indicators, (remote and local, visual and audio) automatic shutoff switches
82-D-02	Carbon steel	3,790 1,000	TIP Bldg.	Physical separation tanks of recovered groundwater	Containment basin alarms	Low and high level indicators, (remote and local, visual and audio) automatic shutoff switches
82-D-03	Carbon steel	18,950 5,000	TIP Bldg.	Pretreatment Feed Tank	Containment basin alarms	Low and high level indicators, (remote and local, visual and audio) automatic shutoff switches
82-D-04	Carbon steel	3,790 1,000	TIP Bldg.	Post Treatment Hold Tank	Containment basin alarms	Low and high level indicators, (remote and local, visual and audio) automatic shutoff switches
82-C-01	Carbon steel	2,653 700	TIP Bldg.	GAC Filter	Containment basin alarms	Pressure gauge
82-C-02 6-D-3	Carbon steel	3,790 1,000	TIP Bldg.	GAC Filter	Containment basin	Pressure gauge
Miscellaneous Facilities						
Transfer tanks (3)	(2) poly-ethylene (1) 304 stainless steel	757 200 (each) 1900 500	Portable	Temporary transfer of miscellaneous liquids	None, used only for transfers	Visual level indicator

Table 4.1 - WVDP Hazardous Substance, and Hazardous Waste Storage Facilities

Tank/Vessel	Construction	Nominal Capacity (liters) (gallons)	Location	Contents and/or Function	Spill Containment	Instrumentation Association with Spill Control
8C-1	Carbon Steel	2,650 700	WTF shelter	Con. Ed. off-gas caustic scrubber	WTF shelter, shielded cell, overflow to Tank 8D-6	High, low level alarms
8D-6	Carbon Steel	1,893 500	WTF shelter	Off-gas KO pot	WTF shelter, shielded cell, overflow to Tanks 8D-1 or 8D-2	High level alarm
8D-7	Carbon Steel	950 250	WTF shelter	Off-gas relief tank	WTF shelter, shielded cell, overflow to Tanks 8D-2 or 8D-1	Level indicator
Main 2 Warehouse	Concrete	6537 1800 ea. room's spill containment volume	West of Receiving Warehouse	5 segregated rooms for oxidizers, flammables, corrosives, acids and health hazards	Containment basins beneath steel grate floors	None
Miscellaneous Units						
Hazardous Waste Satellite Accumulation Areas	Various	Various	Various locations	Temporary storage of hazardous wastes at or near the point of generation	Double containment in vessels of approved compatibility	None
Interim Waste Storage Facility (IWSF)	Pre-engineered metal bldg: 34' x 34'	21,650 5,700 of bermed, secondary containment capacity	at the NDA, southeast of the Main Plant	Temporary storage of wastes prior to chemical, radiological characterization	Bermed concrete floor	None
Hazardous Waste Lockers 2-Non-flammable 2-Flammable	Pre-engineered building 8' x 15'	4758 1265 each locker containment	East of STS Building	4 separate lockers containing identified hazardous and non-hazardous solid and liquid wastes	Built-in spill basin 10% of total volume	Audio, visual alarms
Portable Holding Tanks	Carbon steel	3790 1,000	Various locations	Temporary storage	Contained in steel boxes when necessary	None

Table 4.1 - WVDP Hazardous Substance, and Hazardous Waste Storage Facilities

Tank/Vessel	Construction	Nominal Capacity (liters) (gallons)	Location	Contents and/or Function	Spill Containment	Instrumentation Association with Spill Control
LSB	Preengineered Metal Structure with a concrete slab foundation	46,800 cu ft for storage	400 foot north of process building	Waste storage of low level, mixed, transuranic, and suspect transuranic wastes	4" high curbing minimum of 2-spill kits and fire detection systems	N/A
LSA#1	Preengineered metal structure with a compacted gravel floor	40,500 cu ft for storage	North end of the facility	Waste storage (same as LSB with the exception of transuranic and suspect transuranic wastes)	None (building does not house containers with free liquids)	N/A
LSA#3	Preengineered metal and fabric enclosure with a concrete slab floor bordered by a 6" x 8" concrete berm	160,920 cu ft for storage	North end of facility	Low level and mixed waste storage facility	Concrete berm-containers with free liquids are also overpacked providing additional secondary containment	N/A
LSA#4	Preengineered metal and fabric enclosure with a concrete slab floor bordered by a 6" x 8" concrete berm	165,600 cu ft for storage	North end of facility	Low level and mixed waste storage facility	Concrete berm-containers with free liquids are also overpacked providing additional secondary containment	N/A
LSA#2	Hard Stand 200' x 65'		North end of facility	Empty container & LLW s...hard stand	Concrete berm	N/A
CPC-WSA	Gravel pad covered with a metal tent structure	Facility measurements 50"x188'x24'	North end of facility	22 separate sealed boxes containing highly radioactive items removed from the Chemical Process Cell and shield modules with radioactive waste	Routine inspections are conducted to survey the array	N/A

Table 4.1 - WVDP Hazardous Substance, and Hazardous Waste Storage Facilities

Tank/Vessel	Construction	Nominal Capacity (liters) (gallons)	Location	Contents and/or Function	Spill Containment	Instrumentation Association with Spill Control
HIC Storage Area (S01)	High density, cross-linked polyethylene RADOLK	125 cubic feet	50 ft. north of the Fuel Receiving and Storage building and approximately 100 ft. east of VIT	Radioactive and mixed spent filter media	9 ft. x 9 ft. 6,000 psi concrete container reinforced with fabric and reinforcing steel	None
Waste Management Staging Area (WMSA)	Approx. 100 x 80 ft. metal frame, pre-engineered building	N/A	South of Main 2 Warehouse	Stores industrial waste and recyclable materials 55 gallon drums and smaller containers prior to off-site shipment	Sealed, reinforced concrete foundation.	None

Table 4.2 - Shield Window Containing Zinc Bromide

Location (Location)	Number of Panes (No. Leaded)	Glass Dimensions [Lead as (Pb), Lime (L), Non-browning as (NB), Tempered as (T), & Plate (P)]	Approx. Volume (density in grams/cm³)	Liquid Volume Capacity [Zinc Bromide (ZB)]	Vendor	Drawing Number	Notes
Analytical Labs (Hot Cells #1 15M-5A)	2(0)	C*: 1"x25.75"x37.75" (T) H:1"x1.75"x49.75" (L,NB,T)	0.6 ft3 (2.5) 0.9 ft3 (2.7)	165 gallons (ZB)	Ray Proof	4413-15-M-17-2-3	Lead wool in frame possible
Analytical Labs (Hot Cell #2 15M-5B)	2(0)	C: 1"x25.75"x37.75" (T) H: 1"31.75"x49.75" (L, NB, T)	0.6 ft3 (2.5) 0.9 ft3 (2.7)	165 gallons (ZB)	Ray Proof	4413-15-M-17-2-3	Lead wool in frame possible
Analytical Labs (Hot Cells #3 15M-5C)	2 (0)	C: 1"x25.75"x37.75" (T) H: 1"31.75"x49.75" (L, NB, T)	0.6 ft3 (2.5) 0.9 ft3 (2.7)	165 gallons (ZB)	Ray Proof	4413-15-M-17-2-3	Lead wool in frame possible
Analytical Labs (Hot Cells #4 15M-5D)	2 (0)	C: 1"x25.75"x37.75" (T) H: 1"31.75"x49.75" (L, NB, T)	0.6 ft3 (2.5) 0.9 ft3 (2.7)	165 gallons (ZB)	Ray Proof	4413-15-M-17-2-3	Lead wool in frame possible
Analytical Labs (Sample Cell #2 15M-25)	2 (0)	C: 1"x21.75"x19.75" (T) H: 1"28.75"x25.75" (L, NB, T)	0.2 ft3 (2.5) 0.4 ft3 (2.7)	75 gallons (ZB)	Ray Proof	4413-15-M-17-4-3	Lead wool in frame possible
PMCR Enclosure (2-M-002, Kiosk East)	3 (1)	C: 1"x25.5"x37.5" (TBD) S: 2.75"x23.5"x35.5" (Pb) H: 1"x25.5"x37.5" (TBD)	0.6 ft3 (2.5) 1.3 ft3 (5.2) 0.6 ft3 (2.5)	Dry	Hot Cells	99142-100	Lead Sheet Lead Wool
PMCR Enclosure (2-M-003, West)	3 (1)	C: 1"x25.5"x37.5" (TBD) S: 2.75"x23.5"x35.5" (Pb) H: 1"x25.5"x37.5" (TBD)	0.6 ft3 (2.5) 1.3 ft3 (5.2) 0.6 ft3 (2.5)	Dry	Hot Cells	99142-100	Lead Sheet Lead Wool
1 C Sample Cell	6 (4)	C: 0.25"x8.875"x13.375" (T) S: 5.25"x7.5"x12" (Pb) S: 5.25"x7.5"x12" (Pb) S: 5.25"x7.5"x12" (Pb) S: 6"x7.5"x12" (Pb) H: 0.25"x7.8"x12.3" (NB,T)	0.02 ft3 (2.5) 0.3 ft3 (6.2) 0.3 ft3 (6.2) 0.3 ft3 (6.2) 0.3 ft3 (3.3) 0.01 ft3 (2.7)	Est. Dry	Corning	4413-15-V-119-4 9, -53	Approx. 1000 lbs. Of lead shielding
OGBR	1 (1)	C: Plexiglass Scratch Shield S: 12"X22"X22" (Pb) H: Plexiglass Scratch Shield	3.4 ft3 (3.3)	Est. Dry	NFS	6B-T-715	Lead Wool, Shield Glass from Corning
Counting Room Shield Door	1 (1)	S: 1.75"x12"x16" (Pb)	0.2 ft3 (est.3.3)	Dry	Ray Proof	4413-41-R-19-1-0	Each door contains approx. 500 lbs. Of lead shielding, lead also in hinge supports and door jambs

Table 4.2 - Shield Window Containing Zinc Bromide

Location (Location)	Number of Panes (No. Leaded)	Glass Dimensions [Lead as (Pb), Lime (L), Non-browning as (NB), Tempered as (T), & Plate (P)]	Approx. Volume (density in grams/cm³)	Liquid Volume Capacity [Zinc Bromide (ZB)]	Vendor	Drawing Number	Notes
MRR	1 (1)	S: Approx. 3"(est.)x10"x6" (Pb)	0.10 ft3 (unknown)	Dry	NFS-design Ray Proof-glass	None located	[Data unavailable]
Vit Sample Cell (11E02)	2 (1)	C: 0.25"x22.25"x28.25" (T) S: 4.75"x22.25"x28.25" (Pb)	0.1 ft3 (2.5) 1.7 ft3 (5.2)	Dry	Hot Cells	9152-1100	Lead Wool
STS (50M-001A)	4 (2)	C: 0.50"x23.25"x39.25" (P) S: 6"x23.25"x39.25" (Pb) S: 5"x23.25"x39.25" (Pb) H: 1.5"x23.25"x39.25" (NB)	0.3 ft3 (N/A) 3.2 ft3 (5.6) 2.6 ft3 (5.6) 0.5 ft3 (2.5)	Dry	Viox (Formally Nuclear Pacific, Inc.)	W-2-178	Lead Wool Lead Foil
STS (50M-002B)	4(2)	C: 0.50"x23.25"x39.25" (P) S: 6"x23.25"x39.25" (Pb) S: 5"x23.25"x39.25" (Pb) H: 1.5"x23.25"x39.25" (NB)	0.3 ft3 (N/A) 3.2 ft3 (5.6) 2.6 ft3 (5.6) 0.5 ft3 (2.5)	Dry	Viox	W-2-178	Lead Wool Lead Foil
STS (50M-003B)	4 (2)	C: 0.50"x23.25"x39.25" (P) S: 6"x23.25"x39.25" (Pb) S: 5"x23.25"x39.25" (Pb) H: 1.5"x23.25"x39.25" (NB)	0.3 ft3 (N/A) 3.2 ft3 (5.6) 2.6 ft3 (5.6) 0.5 ft3 (2.5)	Dry	Viox	W-2-178	Lead Wool Lead Foil
STS (50M-004D)	4 (2)	C: 0.50"x23.25"x39.25" (P) S: 6"x23.25"x39.25" (Pb) S: 5"x23.25"x39.25" (Pb) H: 1.5"x23.25"x39.25" (NB)	0.3 ft3 (N/A) 3.2 ft3 (5.6) 2.6 ft3 (5.6) 0.5 ft3 (2.5)	Dry	Viox	W-2-178	Lead Wool Lead Foil

4.3 High Level Waste Tanks 8D-1 and 8D-2

4.3.1 Construction

High level waste (HLW) tanks 8D-1 and 8D-2 are carbon steel and located in adjacent waterproofed, reinforced, underground concrete vaults (the tops of the vaults are 2.4 m underground) in the highly impermeable silty till characteristic of the area. Each tank has a capacity of 2.8 million liters and rests on a 30 cm layer of perlite blocks, which is on 7.6 cm layer of pea gravel in a carbon steel pan 23 m in diameter and 1.6 m in height, within the concrete vault. The pan rests on a second 7.6 cm layer of pea gravel on the vault floor. The vault pad is 69 cm thick, with a thicker ring under the columns that support the vault roof. The vault pad rests on a 10 cm leveling slab.

Under the concrete vault is a 1.2 m layer of pea gravel that is kept saturated with water to prevent effects of distortion of the silty till.

4.3.2 Instrumentation

Tanks 8D-1 and 8D-2 are equipped with level, pressure, and temperature indicators. Level indicators and alarms are in the pans and vaults.

4.3.3 Operation

Tank 8D-1 and 8D-2 are not operational as of February 2003. Tanks are almost empty. A heel of about 8,000-10,000 gallons of wastewater is in the tanks. Previously operation of the HLW tanks system was governed by SOP 08-01, Waste Tank Operation. Various other SOPs govern the operation of waste tank farm support systems. Tank 8D-2 contained mixed HLW Sludge (PUREX and THOREX). The composition of the PUREX sludge is provided in Table 4.3.5 and the composition of THOREX waste is in Table 4.4.5. Measured variables are monitored and recorded once per shift. Monitoring will be curtailed to once a week in the near future. Tank 8D-1 contains zeolite columns used in stripping radioactive cesium from the supernatant and spent cesium-loaded zeolite. All interconnecting pipes and support systems are double contained.

High-level waste (neutralized) was stored in a carbon steel tank, 8D-2 (the maximum total, volume of tanks 8D-1 and 8D-2 is administratively controlled at 720,000 gallons to ensure the contents can be fully stored in one tank). The tank sits in a carbon steel pan. Both the tank and pan are enclosed in a concrete vault and have instrumentation to monitor the level in the tank and detect any leaks into the pan or vault.

Tank 8D-1 was used for temporary storage of spent zeolite from STS processing operations. The spent zeolite was transferred in batches to tank 8D-2 for further treatment. The combined purex, thorex, and zeolite wastes were transferred from 8D-2 to the Vitrification Facility. The Vitrification Facility was shutdown on September 5, 2002.

4.3.4 Spill Containment

The HLW tanks are provided with secondary containment consisting of a carbon steel pan below each tank, a reinforced concrete vault surrounding each tank and pan, and highly impermeable, saturated silty till surrounding the vaults. The pan under each tank contains a level indicator and high-level alarm that detects leakage from groundwater, the storage tank, or the transfer piping.

4.3.5 Table 4.3.5 - Estimated PUREX Insoluble Solids (Tank 8D-2) Chemical Composition

Component	Mass (Kg)
$Fe(OH)_3$	66,040
$FePO_4$	6,351
$Al(OH)_3$	5,916
AlF_3	582
MnO_2	2,700
$CaCO_3$	3,358
$UO_2(OH)_2$	3,087
$Ni(OH)_2$	938
SiO_2	7,100
$Zr(OH)_4$*	159
$MgCO_3$	511
$Cu(OH)_2$	376
$Zn(OH)_2$	187
$Cr(OH)_3$	146
$Hg(OH)_2$	23
Fission Products**	
Rare Earth Hydroxides	1,504
Other Hydroxides	1,488
Sulfates	478
Transuranics	
NpO_2	35
PuO_2	37
Am_2O_3	27
Cm_2O_3	0.4
TOTAL	**101,043.4**

* *Excludes fission product zirconium.*
** *See Table 6 for breakdown.*

4.4 Tanks 8D-3 and 8D-4

4.4.1 Construction

Tanks 8D-3 and 8D-4 are located in a single reinforced underground concrete vault with outside dimensions of 9.8 m by 5.8 m by 7.7 m high. The vault is surrounded by silty till and covered with an earth layer approximately 2.4 m thick. The vault is lined to a height of 46 cm with stainless steel, which forms a pan, which is equipped with a sump. The storage tank (8D-4) and its spare (8D-3) are similar in construction and instrumentation. The tanks are composed of 304 and 304L stainless steel and have a nominal capacity of 57,000 liters. They were designed for a working volume of 51,000 liters (90 percent of nominal capacity). Tank 8D-4 originally contained about 45,000 liters of acidic thorium-bearing waste called THOREX. The composition of the THOREX waste is provided in Table 4.4.5. The THOREX waste was transferred to tank 8D-2 in 1995. Tank 8D-4 is used to collect off-spec material and wastes from vitrification during melter operations.

4.4.2 Instrumentation

Each tank is equipped with pressure and level indicators with remote read out and alarms. Additionally, the stainless steel pan in which both tanks are situated is equipped with an alarmed sump.

4.4.3 Operation

Tank 8D-3 is used as a holding tank for supernatant that has been processed through the zeolite system located in Tank 8D-1, prior to being transferred to Tank 5D-15B for volume reduction. The transfers are performed by Operations personnel according to SOPs. Measured variables are monitored and recorded once each shift. Tank 8D-3 is also used to collect condensate from the vitrification process off-gas.

4.4.4 Spill Containment

If a spill or leak were to occur in either tank, the contents would enter the stainless steel pan, which is equipped with a sump alarm. In addition, the concrete vault provides tertiary containment of the pan and tank. The sump is equipped with a steam transfer jet that can be valved to discharge to either tank. In addition, the vault is surrounded by highly impermeable saturated silty till, which would prevent leakage out of the vault.

4.4.5 Table 4.4.5 - Estimated THOREX Waste (Tank 8D-4) Chemical Composition

Compound	Mass (Kg)	Compound	Mass (Kg)
$Th(NO_3)_4$	31,054	$Zr(NO_3)_4$	12
$Fe(NO_3)_3$	8,462	Na_3PO_4	12
$Al(NO_3)_3$	4,175	$NaTcO_4$	11
HNO_3	2,805	$Y(NO_3)_4$	14
$Cr(NO_3)_3$	1,918	$RH(NO_3)_4$	11
$Ni(NO_3)_2$	791	$Zn(NO_3)_4$	10
H_3BO_3	480	$Pd(NO_3)_4$	8
$NaNO_3$	227	$UO_2(NO_3)_2$	6
Na_2SO_4	180	$RbNO_3$	6
KNO_3	191	Na_2TeO_4	5
Na_2SiO_3	126	$Co(NO_3)_2$	3
K_2MnO_4	98	Na_2SeO_4	1
$Mg(NO_3)_2$	57	NaF	1
Na_2MoO_4	54	$Eu(NO_3)_3$	1
NaCl	50	$Np(NO_3)_4$	0.9
$Nd(NO_3)_3$	73	$Sn(NO_3)_3$	0.7
$Ce(NO_3)_3$	43	$Cu(NO_3)_2$	0.8
$Ru(No_3)_4$	42	$Pa(NO_3)_4$	0.7
ZrO_2*	35	$Pu(NO_3)_4$	0.7
$Ca(NO_3)_2$	30	$Gd(NO_3)_3$	0.4
$CsNO_3$	28	$Cd(NO_3)_2$	0.3
$Ba(NO_3)_2$	27	$X(NO_3)_4$**	0.2
$La(NO_3)_3$	22	$Sb(NO_3)_3$	0.1
$Pr(NO_3)_3$	21	$AgNO_3$	0.08
$Sr(NO_3)_2$	16	$In(NO_3)_3$	0.04
$Sm(NO_3)_3$	14	$Pm(NO_3)_2$	0.01
		H_2O	34,148.00
		TOTAL	**85,273.00**

* *Insolubles assumed to be ZrO_2*
** *Am, Cm, and Miscellaneous Actinides*

4.5 Interceptors and Neutralization Pit

4.5.1 Construction

The new interceptors and the neutralization pit are constructed of reinforced concrete lined with stainless steel. The neutralization pit has a capacity of 1,900 liters; the north and south interceptors each have a capacity of 87,000 liters.

In addition, the old interceptor is constructed of reinforced concrete. It has a capacity of 56,850 liters.

All these facilities are located to the east of the process building.

4.5.2 Instrumentation

All interceptors are equipped with high-level alarms that signal in the UR and sound locally.

4.5.3 Operation

The neutralization pit is used to collect and measure the pH of low level waste from plant drains, sumps, etc., before overflowing to one of the two new interceptors, where it is held for sampling. From the interceptors, the waste is transferred to Lagoon 2. From Lagoon 2 it is pumped to the Low Level Waste Treatment (LLWT) plant, where it is treated. SOP 15-1 and 15-13, "Management of Plant Liquid Releases", and" Interceptor Operation", respectively, contain the procedures for the operation of this system.

Waste streams which may be over the specified limit for release from the interceptor are diverted directly to the old interceptor. From there they are sampled and transferred, in batches, to one of the new interceptors.

Interceptor effluent volume is normally checked twice a day. Records of volume measurements are maintained by Main Plant Operations.

4.5.4 Spill Containment

There is an overflow connection between the north and south interceptors. Should one interceptor become too full, it would overflow into the other. In addition, if one of the interceptors became full, the high-level alarm would sound in the UR.

4.6 Manipulator Repair Shop Waste Catch Tank 15D-6 (For reference only)

4.6.1 Construction

Tank 15D-6, the waste catch tank for the manipulator repair shop, is a 5,700-liter underground stainless steel tank. It measures 1.8 m in diameter by 2.4 m high. It is located directly to the east of the contact size reduction facility.

4.6.2 Instrumentation

Tank 15D-6 is equipped with a level recorder and a high-level alarm, located in the East Mechanical Operating Aisle (EMOA) alarm panel. A stainless steel monitoring well is installed adjacent to the tank.

4.6.3 Operation

Tank 15D-6 receives radioactive waste waters and associated decontamination solutions from the manipulator repair shop, contact size reduction facility, and head end ventilation system. Wastewater collected in this tank is not sampled. The earthen and gravel vault in which this tank is located is sampled once per month for radioactive constituents only.

Main Plant Operations is responsible for monitoring and operation of this tank. Operations are controlled by SOP 07-08, "Process Building Liquid Waste Handling". This tank is currently not used but contains approximately 1000 gallons of solution.

4.6.4 Spill Containment

This is a single walled underground tank and has no associated spill containment provisions.

4.7 Low-Level Waste Catch Tank 7D-13 (For reference only)

4.7.1 Construction

Tank 7D-13 is an underground tank located southwest of the process building. The tank is constructed of 304L stainless steel and has a 7,500-liter capacity. It measures 1.4 m in diameter by 4.1 m long.

4.7.2 Instrumentation

Tank 7D-13 is equipped with a level recorder and high and low- level alarms.

4.7.3 Operation

Between 1982 and 1995, tank 7D-13 primarily received waste from the cement solidification system. This waste stream has not been utilized since pre-treatment operations ended. Tank 7D-13 receives small volumes of neutralized wastes from the A&PC lab drains. In early 2000, a video inspection revealed significant solids accumulation (settled cement) in the tank bottom. The tank has been taken out of normal service until a further evaluation, and/or tank clean-out is performed.

4.7.4 Spill Containment

Tank 7D-13 has no associated spill containment provisions. However, it is located within a confined area bounded on two sides by the process building, on the third by the 01-14 Building, and on the fourth by the off-gas trench.

4.8 Vitrification Facility Tanks

4.8.1 Tanks Located Within the Vitrification Facility Cell

Located In-Cell is the Vitrification Facility (VF) pit which measures 15.2m x 11.6m x 4.3m deep. It is constructed of concrete, lined with stainless steel, and is equipped with a sump with level indication. The sump level indication is a bubbler system with its components located on Instrument Rack 2N7 in the MNOA of the Vitrification Facility. This level is monitored by operations personnel via the Distribution Control System (DCS) in the Vitrification Process control Room (VPCR). In the event of high level in the sump, an alarm will sound in the VPCR.

Tanks located within the VF pit include:

- Melter Feed Hold Tank (63-V-011)
- Concentrator Feed Makeup Tank (63-V-01)
- Submerged Bed Scrubber/Receiver (63-V-031)

Other tanks located In-Cell include:

- Canister Decontamination Tank (63-V-044)
- Neutralization Tank (63-V-046)

NOTE *All tanks listed above have been flushed with Nitric Acid and deionized water. There is a heel in all the tanks.*

Tanks 63-V-11 and 63-V-01 held HLW and various glass formers of the general composition identified in Table 4.8.2. Tank 63-V-031 is a tank with a tank configuration and is used for quenching and scrubbing off gas from the Slurry Fed Ceramic Melter. Tanks 63-V-044 and 63-V-046 are utilized as part of the canister decontamination system. The tanks have been emptied.

4.8.2 Table 4.8.2 - Typical Glass Former Ingredients Utilized by the Cold Chemical Facility

CHEMICAL NAME	
Demineralized Water	Boron Oxide
Nitric Acid	Aluminum Hydroxide
Sodium Hydroxide (caustic)	Silicon Dioxide
Potassium Hydroxide	Hydro Sodium Tetraborate (BORAX)
Lithium Hydroxide Monohydrate	Zirconyl Nitrate
Sodium Phosphate Monobasic	Titanium Dioxide
Magnesium Hydroxide	Calcium Carbonate
Manganese Dioxide	P-1200 Antifoam

4.8.3 Nitric Acid Holding Tank (63-V-048)

The Nitric Acid Holding Tank (63-D-048) is located in the Vitrification Facility, outside the Vitrification Cell. It

has a nominal capacity of 600 liters of Nitric Acid. Construction is of stainless steel surrounded by a concrete dike. This tank functions as a decontamination solution tank for the vitrification operations. Tank has been emptied.

4.8.4 Scaled Vitrification System Tanks

The Vitrification Test Facility (non-radioactive facility) which contains the Scale Vitrification System (SVS) has a concrete floor with a 1"-3" high berm, and the floor is sloped toward the north wall, providing a temporary storage capacity of approximately 29,000 liters. The following tanks are in the SVS:

- Melter Feed Tank (61-D-06). Tank has been emptied and cleaned.
- Scrubber Water Collection Tank (61-D-07). Tank has been emptied and cleaned.
- Slurry Mix Tank (61-D-01). Tank has been emptied, cleaned, and converted to nonregulated use.
- Feed Hold Tank (61-D-04). Tank has been emptied, cleaned, and converted to nonregulated use.
- Condensate Hold Tank (61-D-08). This tank is currently temporarily closed.

The SVS and all the above tanks except the Scrubber Water Collection Tank are contained in the Vitrification Test Facility. The SVS has been non-operational since 1996.

4.8.5 Cold Chemical System Tanks

The Cold Chemical Building is 37.6 ft x 36 ft with a concrete foundation and concrete walls extending to an average height of two feet. Above the construction is steel frame and aluminum siding. The floor is coated with a chemical-resistant covering.

The following tanks are in the Cold Chemical Building:

These tanks were emptied.

- Waste Drain Tank (65-D-01)
- Slurry Hold Tank (65-D-02)
- Main Mix Tank (65-D-03)
- Shim Mix Tank (65-D-04)
- Nitric Acid Hold Tank (65-D-05)
- Caustic Hold Tank (65-D-06)
- Demineralized Water Service Decon Tank (65-D-07)
- Nitric Acid Service Decon Tank (65-D-08)
- Misc. Service Decon Tank (65-D-09)
- Scrub Solution Tank (65-D-10)

The two-foot concrete walls provide a berm capacity of approximately 62,000 liters, exceeding the capacity of the largest single tank of 41,635 liters (additional tank capacities are provided in Table 4-1). In addition, the Caustic Hold Tank (65-D-06) is sufficiently bermed to prevent mixing of incompatible substances. The Nitric Acid Hold Tank (65-D-05) has a separate berm with a capacity of less than the total volume of the tank. However, in the event of a total loss of the tank contents the excess nitric acid would remain isolated from the caustic tank by overflowing into the bermed area of the Cold Chemical Building, and therefore would remain contained. The building floor is sloped so that any liquid would flow to a central catch drain, and then would flow to a sump that is equipped with an alarm. Liquids accumulated in the sump would be logged and pumped to Tank 65-D-01.

4.8.6 Anhydrous Ammonia Storage Tank (64-D-004)

This tank has been emptied and residual ammonia evacuated after the shutdown of the melter. The anhydrous ammonia storage tank is a 3,785-liter steel, upright cylinder located outside of the 01-14 building on the north side. The ammonia was utilized in the Ex-cell Off-Gas System to reduce NOx emissions. The tank is equipped with level indicators, high and low level alarms, pressure relief, pressure gauge, pressure relief, and a fire suppression system. A solenoid operated shut-off valve is located in the ammonia feed line so ammonia feed can be abruptly suspended if required.

Ammonia vapor sensors were placed at multiple locations to determine the migration of ammonia vapors from the tank's location in the event of a tank or piping failure. The sensors were located at the ammonia tank and at other strategic locations. These area sensors have been removed.

4.9 Supernatant Treatment System Tanks

4.9.1 Tanks and Vessels in Tank 8D-1

The following Supernatant Treatment System (STS) tanks and vessels are located in Tank 8D-1:

- Ion exchange columns (50-C-001, 50-C-002, 50-C-003, and 50-C-004)
- Prefilter (50-F-001)
- Postfilter (50-F-002)
- Supernatant Cooler (50-E-001)
- Supernatant Feed Tank (5O-D-001)
- Sluice Lift Tank (5O-D-004)

STS operations are closely controlled by a series of SOPs prepared specifically for STS operations (SOPs in the 50-xxx series), and STS systems are monitored by a programmable logic controller. The contents of these vessels are filter media and zeolite ion exchange media that were used to remove Cesium from the PUREX supernatant, two sludge wash solutions and the PUREX/THOREX wash solutions. The containment for these vessels is Tank 8D-1 and its previously described layers of containment.

4.9.2 Tanks and Vessels in the Valve Aisle

Tanks 50-D-OO5 and 50-D-006, which are stainless steel, are located in the STS Valve Aisle. They function as backflow prevention vessels in the event of process upsets. In the event of a spill, any liquid would drain to the valve aisle sump, which in turn is pumped to Tank 8D-2.

4.9.3 Tanks and Vessels in the Operating Aisle

The Brine Chiller Expansion Tank (50-D-008) and the Brine/Heat Exchanger (5O-E-002) are stainless steel tanks located in the STS Operating Aisle within a 2,250-liter capacity concrete berm. The berm is equipped with a sump that is manually pumped to the Operating Aisle sump, then to 8D-1.

4.10 Liquid Waste Treatment System

The LWTS consists of a water treatment system utilizing ion exchange and evaporation. LWTS operated to volume reduce decontaminated PUREX supernatant, two sludge wash solutions and the PUREX/THOREX wash solutions and supported vitrification processing which was concluded in September 2002. The LWTS includes the tanks and vessels listed below:

4.10.1 Tank 35104

Tank 35104 is a 22,000-liter tank made of 304 L stainless steel in a vault attached to the General Crane Room (GCR) in the process building. It can also receive liquid waste which has been processed through the STS (constituents listed in Table 4.3.5, minus cesium). Tank 35104 receives liquid from the HEV drain system (i.e., shield door drains). A spill or leak in the tank would be revealed by the tank level indicator and cell sump level indicator and alarm. Released materials would be contained within the GCR sump. Tank level is indicated and recorded on the LWTS control panel. A tank high level or low level would signal in the LWTS control room. A high level in the pump pit would activate an alarm in the LWTS control room.

4.10.2 Tanks Located Within the Liquid Waste Cell

The following tanks are located within the Liquid Waste Cell (LWC):

- Sample Collection Tank (3D-2)
- Rework Evaporator Feed Tank (7D-8)
- PMC and GPC Sump Collector (4D-10)
- Radioactive Waste Catch Tank (4D-13)
- Low Level Waste Collection Tank (7D-2)
- Radioactive Waste Catch Tank (4D-8)
- Hot Analytical Drain Tank (7D-14)
- Radioactive Waste Catch Tank (13D-7)
- Cell Sump Receiver (13D-8)

All these tanks are equipped with level indicators and alarms. Any tank overflow would discharge via the vent line into Tank 6D-3 in the Off-Gas Cell (OGC). If a release should occur from Tank 6D-3, it would be contained within the OGC, which is equipped with a sump. Any tank leak from the above tanks would be contained in the LWC sump. An eductor is used to transfer the sump contents to Tank 4D-10. The contents of Tank 4D-10 could then be transferred to Tank 7D-2.

4.10.3 Tanks Located in the Vessel Off-Gas Cell

Condensate Catch Tank 6D-3 and Scrubber Tank 6C-3 are located in the Off-Gas Cell (OGC). Tank 6D-3 is constructed of stainless steel and has a capacity of 858 liters. It functions as a condensate collection tank. Tank 6C-3 is constructed of stainless steel and has a capacity of 1,577 liters. It is used as a neutralizing scrubber tank for acid vapors, when present in the process off-gas stream.

Any leak from these tanks would be collected in the OGC sump. This sump can be jetted to Tank 13D-8 in the LWC. The contents of Tank 13D-8 can be transferred to Tank 7D-2 in the LWC.

4.10.4 Sodium Silicate Bulk Storage and Day Tank

The Sodium Silicate Bulk Storage Tank (5,685 liters) and Day Tank (1,043 liters) are part of the Cement Solidification System (CSS) and are located in the CSS change room in the 01-14 Building. The Bulk Storage Tank is constructed of polypropalene, and the Day Tank is constructed of carbon steel and contain sodium silicate, a cement process enhancer utilized to maintain the cement recipe in a liquid state. In case of a release, the bulk storage tank is surrounded by a spill containment barrier sufficient to hold its entire contents. These tanks are currently empty and gave not been utilized since CSS operations were discontinued in 1995.

4.10.5 Tanks Located in the Uranium Process Cell (UPC)

- Evaporator Concentrates Receiver (5D-15A1)
- Evaporator Concentrates Receiver (5D-15A2)
- Evaporator Feed Tank (5D-15B)

These tanks are constructed of stainless steel. Tank 5D-15A1 has a capacity of 38,150 liters; 5D-15A2 has a capacity of 18,990 liters, and 5D-15B has a capacity of 56,950 liters. The tanks are equipped with level indicators and recorders and low and high level alarms. The instrumentation is located on the LWTS control panel.

The UPC has a sump equipped with an alarm. By design the sump drains to the interceptor but is currently closed and the valve handle to remotely open the drain is not installed.

4.10.6 Tanks and Vessels Located Within Extraction Cell 3

- Organic Ion Exchange (Low TDS) (71D-001)
- Zeolite Ion Exchange (Low TDS) (71D-002)
- Zeolite Ion Exchange (High TDS) (71D-003)
- Distillate Surge (71D-005)

- Spent Resin Receiver (71D-006)
- Spent Zeolite Receiver (71D-007)
- Filter Back Wash Receiver (71D-008)
- Feed Sample Tank (71D-009)
- Low TDS Filter (71D-010)
- Low TDS Feed Tank (71D-011)
- High TDS Evaporator (31017)

If a spill occurred from any of these tanks, the contents would be contained within Extraction Cell 3 (XC3). XC3 is equipped with an alarmed sump. When the sump is full, the contents are jetted to Tank 13D-8 in the LWC. The XC3 sump high level alarm signals in the LWTS and Main Plant control rooms. From Tank 13D-8, the contents can be transferred to Tank 7D-2.

Tanks associated with the Low TDS System have never contained hazardous product. The system was assembled and post checkout and testing was conducted. However, the system has not been operated and is not scheduled for operation.

4.10.7 Tanks Located Within the Lower Extraction Aisle

- Nitric Acid Day Tank (14D-7)
- Caustic Day Tank (14D-18)

Each of these tanks is constructed of 304 L stainless steel and has a capacity of 375 liters. The tanks are equipped with level indicators and alarms. If a spill or leak occurred from one of the tanks, the released material initially would be contained within a concrete bermed area (one for each tank) in the Lower Extraction Aisle (LXA). If the spilled material overflowed the bermed area, it would flow to the floor of the LXA, which is drained to the interceptors.

The tanks rest on carbon steel supports, however, which could corrode over time if the tanks were to leak.

Neither of these tanks has ever been used, but could have future application during waste residual processing and/or facility D&D Operations.

4.10.8 Miscellaneous Main Process Building Tanks

A. Waste Dispensing Vessel (70D-001)

Tank 70D-001 is located in the Waste Dispensing Cell (WDC) located in the 01-14 Building. It is constructed of 304L stainless steel, and has a capacity of 1,900 liters. Any spill or leakage would flow to the cell sump. The sump is equipped with a high-level alarm. Due to current restriction on the use of Tank 7D-13, the waste would be held in the sump pending an engineering evaluation for disposition. The tank has not been used since 1995, when it was flushed and emptied.

B. Roof Top Evaporator (31008)

Evaporator 31008 is located outside on the roof of the process building, near the Process Chemical Room (PCR). It is constructed of 304L stainless steel, and has a capacity of 510 liters. This unit is not in operation. It is part of the LWTS Low TDS system, which has never been operated except for checkout and testing.

C. Tank 5V-1

Tank 5V-1 is a 1,900-liter stainless steel vessel located in the uranium loadout (ULO) area of the process building. The vessel previously contained uranyl nitrate, but was emptied and flushed several times. A spill of residual material would flow to the ULO floor and then towards the entrance/exit doorway, where it would be detected by a liquid detection instrument that alarms in the LWTS control room. The tank has been inactive since 1988.

4.11 Tanks Located Within the Low-Level Waste Treatment Facility

4.11.1 Ion Exchange Columns 104, 105, 106 and 204, 205, 206

The ion exchange columns within the LLWTF Building are carbon steel fiberglass lined vessels of 1,420-liter capacity each. They contain the ion exchange resins used to remove the radioactive components of the process waste stream. They are equipped with individual pressure gauges.

Any spills or leaks from these tanks would drain to and be contained in the building's sump. When the process is running, the sump contents are recirculated back into the process. When the process is not running, the sump overflows to Lagoon 2.

4.12 Trench Interceptor Project Pretreatment Tanks

Tanks associated with the Trench Interceptor Project (TIP) Groundwater Treatment System include:

- Separation Tank (82-D-01)
- Separation Tank (82-D-02)
- Pretreatment Feed Tank (82-D-03)
- Post Treatment Hold Tank (82-D-04)
- Post Treatment Hold Tank (82-D-05)
- Granulated Activated Charcoal (GAC) Filter (82-C-01)
- Granulated Activated Charcoal (GAC) Filter (82-C-02)

The TIP is an engineered system to recover and pretreat groundwater from the NDA. This system is designed to remove (through physical separation and GAC filtration) tributyl phosphate (TBP), n-dodecane (a kerosene-type petroleum product), and radioactive contaminants from groundwater, prior to treatment at the LLWTF. It has not been necessary to activate this system as of this revision.

Tanks 82-D-01 and 82-D-02 receive groundwater from a trench via a sump and function as physical separation tanks, separating the n-dodecane from the water. They have a capacity of 3,790 liters each and are constructed of carbon steel.

Tank 82-D-03 is a carbon steel 18,950-liter feed tank that holds liquids prior to GAC filtration.

Tanks 82-C-01 and 82-C-02 are carbon steel 2,653-liter GAC filters. Wastewater is processed through the filters and then passed to tanks 82-D-04 and 82-D-05, which hold the treated water for sampling prior to discharge to the LLWTF. Tanks 82-D-04 and 82-D-05 have a capacity of 3,790 liters each and are constructed of carbon steel.

Two (2) separate berms exist to contain spills from these tanks. Each berm is 24 feet x 24 feet x 1.5 feet high, providing approximately 24,635 liters of spill containment capacity. Tanks 82-C-01, 82-C-02, 82-D-04, and 82-D-05 are contained within one of the berms, and tanks 82-D-01, 82-D-02, and 82-D-03 are in the other.

Tanks 82-D-01, 82-D-02, 82-D-03, 82-D-04, and 82-D-05 are all equipped with low level indicators, local and remote audio and visual alarms, and automatic shutoff switches.

Tanks 82-C-01 and 82-C-02 are equipped with local pressure gauges.

4.13 Miscellaneous Facilities

4.13.1 Portable Diesel Fuel Tank

The 300 gallon carbon steel tank is filled from the underground diesel fuel tank, located to the southeast of the new warehouse. It is then transferred by forklift to the area south of the UR. A hand pump is used to pump out the fuel. The fuel is used to refuel the air compressor and fire pump.

4.13.2 Tanks Located Within the Waste Tank Farm Shelter

The following tanks are located within the Waste Tank Farm Shelter:

- Con. Ed. Off-Gas Scrubber (8C-1)
- Off-Gas Knock Out Pot (8D-6)
- Off-Gas Relief Tank (8D-7)

These tanks are located in the waste tank farm shelter and collect mildly radioactive condensate and scrub solutions from the HLW tank farm off-gas system. The drain on 8D-6 is normally open and drains to HLW Tank 8D-2. If the drain were to be closed and there were an overflow, the material would go to Tank 8D-1. Tank 8C-1 overflows to Tank 8D-6.

4.13.3 Zinc Bromide Shield Windows

Shield windows in Analytical Lab (Hot Cell 1 - 4 and Sample Cell #2) various cells in the process building consist of two thick layers of glass which contains zinc bromide, which is a clear, dense, extremely corrosive liquid. The window includes an epoxy coated carbon steel frame. Gaskets are used to seal the frame.

The level of zinc bromide in the windows is readily apparent. Any leaks would also be apparent along the frame. Any spill or leaked material would be contained in process aisles or inside the cell where the window is installed.

A summary of the locations of these windows and the volumes of zinc bromide contained in them is provided in Table 4.2.

4.13.4 Main 2 Warehouse

The Main 2 Warehouse contains five (5) engineered segregated storage areas for corrosives, acids, oxidizers, flammables, and health hazards (poisons). Each storage area is equipped with a 6-inch deep basin below a steel grate floor to contain spills. Each area also has a separate ventilation system and fire suppression system and alarm. The flammable storage area also contains explosion-proof doors and blowout panels built into the walls. Materials stored in these areas will be in their original shipping containers, and no container larger than 5 gallons in capacity will be stored in the Flammable Storage Room.

4.14 Hazardous Waste Satellite Accumulation Areas

As part of the WVDP Hazardous Waste Management Program, Satellite Accumulation Areas (SAA)s have been established at or near the point of generation of identified hazardous and mixed wastes.

Spills or leaks from containers in the SAAs will be confined to the immediate area of the containers. Each of these SAAs is located within or adjacent to an active work area and is subject to frequent observation by workers in the area. Moreover, all of the SAAs incorporate secondary containment measures. Such measures include encloser within a cabinet, tray or box, or building curbing with the associated building drainage control system. The most current list of SAAs is retained by Waste Management Services (WMS).

4.15 Interim Waste Storage Facility (IWSF)

The Interim Waste Storage Facility (IWSF) functions as a temporary storage facility for wastes. The IWSF is a pre-engineered metal structure measuring approximately 34 feet x 34 feet. It is supported by a clear span frame and anchored to a bermed, concrete slab foundation. An 8 inch high concrete curb encloses the inner perimeter, providing approximately 21,630 liters of secondary containment capacity in the event of a spill or leak. Fifty-five-gallon drums and smaller containers of wastes are stored within the building temporarily. There is a refrigerator to preserve samples within the structure. A complete inventory and floor plan of wastes contained within the building is maintained and updated routinely by the Waste Management Services Department. The building is provided with a fire suppression system that automatically activates in the event of a fire. Inspections are completed weekly and monthly.

4.16 Four (4) Hazardous Waste Lockers

The Hazardous Waste Lockers are pre-engineered lockers containing segregated containers up to and including 55 gallon drums of hazardous and non-hazardous wastes. Each locker is identical in size, with dimensions of 8 ft x 15 ft x 8 ft. Each contains a spill basin beneath a steel grate floor with a capacity of 125 gallons or 10% of the volume of material stored in the locker. The lockers are designed to contain flammable materials. All four lockers are equipped with fire suppression devices, remote and local fire alarm systems, explosion-proof electrical components, and explosion-proof vents. Acids, solvents and other industrial (nonhazardous) and hazardous wastes are stored in appropriate lockers. All lockers are inspected weekly and monthly.

4.17 Portable Holding Tanks

Twenty-five skid-mounted carbon steel temporary holding tanks are found at various locations throughout the site and are frequently relocated depending on site requirements. These tanks have a capacity of 3,790 liters each. They are used on an as-needed basis, typically to contain accumulated water during construction activities. The contents of the tanks are sampled prior to discharge. If secondary containment is required in a particular application, the tanks are placed in yellow carbon steel boxes. NOTE: Some newly purchased tanks have double wall containment and are not required to be placed in yellow carbon steel boxes.

4.18 Lag Storage

Lag Storage consists of the following:

- Lag Storage Building (LSB)
- LSA Storage Addition (LSA) # 1 - Protectively Filed in RCRA Part A Permit Application
- LSA Storage Addition (LSA) # 2 - Protectively Filed in RCRA Part A Permit Application
- LSA Storage Addition (LSA) # 3
- LSA Storage Addition (LSA) # 4
- CPC - WSA
- Lag Hardstand, Lag Storage Hardstand, and CPCWSA Hardstand (no liquid storage)

All containers in the Lag Facilities are placed on pallets or are constructed with integral pallets to permit movement with forklift trucks.

The physical description of the facilities is as follows:

4.18.1 Lag Storage Building (LSB)

LSB is a pre-engineered metal structure (a "Butler"-style building) located approximately 400 feet northeast of the Process Building. The building is supported by a clear span frame and anchored to a 140-foot-long x 60 foot-wide concrete slab foundation. A 4-inch-high curb, poured monolithically with the floor, extends around the outer edge of the floor, providing 2,800 cu ft of containment for spills.

A. Storage Capacity

The LSB itself provides approximately 46,800 cu ft of storage and operations. This does not include the volume taken up by areas in the building not available for storage of wastes.

The inventory of wastes for shipout or storage varies extensively, due to waste being placed for temporary storage (pending volume reduction, processing, treatment or evaluation) as well as for longer term storage (pending determination of a final disposal/long term storage location). Lag also houses Low-Level Waste and Mixed Waste as well as Transuranic and Suspect Transuranic Wastes.

B. Spill Containment

There is approximately 2,800 cu ft of storage available within the containment berm. Discounting the volume of containers and supports within the bermed area there is approximately 2,100± cu ft available for the containment of leakage or spills from the containers.

4.18.2 Lag Storage Addition #1 (LSA #1)

LSA #1 is a pre-engineered metal frame and fabric structure used to store containerized waste. The wastes stored in this facility are essentially the same as those stored in the LSB, with the exception that no transuranic (TRU) wastes will be stored in here.

LSA #1 measures 50 feet x 191 feet x 23 feet. It provides a total of 40,500 cu ft of storage capacity. The volume in this facility fluctuates due to the dual function of the storage facility. Some wastes are held temporarily, pending volume reduction, processing, treatment, or evaluation. The majority of the wastes have been subject to the above processes and will remain in the facility until closure.

4.18.3 Lag Storage Additions #3 and #4

LSA #3 is a pre-engineered metal structure and LSA #4 is a pre-engineered metal frame and enclosure. The two structures are of identical size, 88 feet x 291 feet. They function as low level, mixed waste storage facilities. They are located at the north end or the site, near the LSB and LSA #1.

A. Storage Capacity

LSA #3 provides approximately 161,000 cu ft of storage volume while LSA #4 provides approximately 133,000 cu ft of storage volume. The volume of storage in the two buildings will also fluctuate mildly due to addition and removal for processing.

B. Secondary Containment Design

LSA #3 & #4 are both equipped with a concrete slab floor, bordered by a six (6) inch high x eight (8) inch thick berm. providing approximately 12,804 cu ft of containment. Utilizing a conservative assumption that containers with free liquids make up only twenty percent (20%) of the storage volume, and that the volume of free liquids in these containers is only twenty percent (20%), there would only be 643.4 cu ft of free liquids within LSA #3, and 662.4 cu ft in LSA #4. 6NYCRR 373-2.9(f)(1)(iii) [40 CFR 264.175(B)(3)] requires that storage areas provide "sufficient capacity to contain ten percent (10%) of the volume of containers or the volume of the largest container, whichever is greater. Containers that do not contain free liquids need not be considered in this determination." The 12,804 cu ft that is provided in each instance is greater than the 643.68 cu ft for LAS #3 or 662.4 cu ft for LSA #4 that are required by the regulation. Any containers that will contain essentially all free liquids will be overpacked or double contained, and consequently will require no additional secondary containment.

C. Spill Collection and Removal and Fire Protection

Each of the facilities, LSB, LSA #1, LSA #3, and LSA #4 are provided with at least two (2) spill kits to contain, collect and remove, for appropriate disposal, any liquid that may leak or be spilled in the contained areas.

Lag storage facilities are equipped with a fire detection system consisting of both heat detectors and smoke detectors. Fire extinguishers are also provided in all of the areas.

D. Lag Inspections

All Lag storage facilities and Hardstands are inspected at least weekly (RCRA requirement), looking for leakage, corrosion, punctures and any other conditions that might adversely affect the storage area(s). The procedure for inspection of the Lag Storage Facilities is detailed in SOP 09-24, "Lag Storage Inspection." In essence, the procedure requires monthly inspections of LLW and TRU waste containers as well as a monthly structural inspection of the Lag facilities. A weekly inspection of mixed waste is also performed. In the event that any of the conditions noted above are found, the operator conducting the inspection is to notify the Radiation Protection Operations Department Manager and his/her supervisor for further instructions.

4.18.4 Chemical Process Cell Waste Storage Area (CPC-WSA)

The CPC-WSA is a graveled pad covered with a metal structure. The storage area inside this structure measures 50 x 188 x 24 feet. The CPC-WSA wastes are contained in 22 separate sealed boxes. The storage array is surrounded by 46 concrete hexagons measuring approximately 6 feet across the flats by 10 feet high. The boxes stored in the CPC-WSA contain process vessels, pipes, jumpers and debris removed from the Chemical Process Cell during decontamination operations. (8 of these boxes contain mixed wastes. There are also 35 containers of mixed waste in 10 of the 46 concrete hexagonal sure packs. In addition there are 13 large Size Reduction (SR) and Special Design (SP) waste boxes stored inside at the east and west ends of the building.

4.18.5 Drum Cell

The Drum Cell is an at-grade shielded storage facility for cement-stabilized, decontaminated supernatant. The drum cell is located south east of the Process Building.

The drum cell consists of 20-inch thick concrete shield walls that extend 15 ft above a gravel pad. The shield walls and the pad are founded on a 5-foot thick compacted clay base separated from the gravel by geotextiles. The drum cell is covered by a heated, steel-sided, steel-framed building. The waste is packaged in 71-gallon square steel drums that are specially designed to minimize free air space.

Due to the stabilized, nonhazardous characteristic of the waste, the drum integrity, and the containment procedures, this unit does not required a RCRA evaluation for the release of hazardous waste or hazardous constituents.

4.18.6 HIC Storage Area

The High Integrity Container (HIC) storage area is located approximately 50 ft. north of the Fuel Receiving and Storage (FRS) building and approximately 100 ft. east of the Vitrification Treatment Facility. Five HICs containing radioactive spent filter media from the FRS pool waste water recirculation unit, rest on a limestone pad. Each RADLOK™ HIC is constructed of high density, cross-linked polyethylene, with an approximate capacity of 125 cubic ft. The HICs are individually overpacked in 9 ft. x 9 ft. 6,000 psi concrete containers reinforced with fabric and reinforcing steel called SUPERPACKS™ One of the 8 HIC's currently in storage contains mixed waste.

4.18.7 Contact Size-Reduction Facility

The Contact Size-Reduction Facility (CSRF) is primarily used for volume-reduction of large low-dose rate (<100 mR/hr) equipment resulting from WVDP decontamination activities in the main plant. The CSRF is an approximately 25-feet long by 23-feet wide room in the Master Slave Manipulator (MSM) repair shop. Large pipes and vessels are reduced by a variety of methods, including plasma-arc cutting, portable band saws, and abrasive cutting. Metal decontamination is performed by either high-pressure water spray or by liquid abrasive decontamination spray.

Low Level Radioactive Waste packages to be processed in CSRF are staged in the north airlock pending a preliminary radiation survey to verify the dose rate is within established limits. Wastes that are determined to be acceptable for processing are then transferred to the cutting room. Following safe storage or removal of flammable material from the cutting room, equipment is size-reduced through the use of a plasma arc torch, band saw, or abrasive cutting and is then decontaminated, if necessary. Following decontamination, material is air-dried and transferred to an airlock for final survey before it is packed and returned to the Lag Storage Facility for storage pending final disposition off-site.

Ventilation for the CSRF is provided by a room ventilation system and backed up by the Head End Ventilation (HEV) of the main plant. Room ventilation is provided by a system mounted on the roof of the cutting room. Room ventilation system air flows at a nominal rate of 2.8 cubic meters per second (6000 cubic feet per minute) from the south MSM repair shop, vestibules, and decontamination room into the cutting room, where it is exhausted through an in-cell spark arrestor and roughing filter and a roof mounted filter train consisting of a roughing filter and two HEPA filters in series prior to discharge to a locally mounted stack. Ventilation for the MSM decontamination shower booth and liquid abrasive decontamination system decon booth/survey glove box is provided by the HEV system. (The HEV also provides backup ventilation for the various rooms when the cutting room ventilation discharges to the room ventilation system.)

The CSRF is also used for staging, sampling, sorting, consolidating and repackaging mixed waste containers, as required to meet the commitment and milestones under the WVDP Site Treatment Plan. Containers of mixed wasted may be

stored at the CSRF while awaiting sampling and/or repackaging.

4.18.8 Waste Management Staging Area (WMSA)

The WMSA is the area designated for the storage of industrial waste and recyclable materials prior to off-site shipment. The storage area also functions as the non-radioactive lead bank, and as a supply area for Waste Management Operations (WMO). The building is approximately 100 x 80 ft. and is located south of the Main 2 warehouse. WMO conducts weekly inspections of the waste containers. The WMSA may also be used for 90 day storage of hazardous waste and/or mixed waste pending disposition to an on-site storage area or shipment to off-site TSDF.

4.18.9 Remote-Handled Waste Facility (RHWF)

The RHWF is located in the northwest corner of the WVDP site, northwest of the STS Building and southwest of the CPC WSA. The RHWF is a free-standing structure with no structural reliance on other buildings or facilities at the WVDP site. The RHWF is approximately 58.2 m (191 ft) long and 28.3 m (93 ft) wide. The RHWF is being constructed to physically accommodate the outer dimensions and weight of containers and waste items for 13 RHWF waste streams.

The RHWF will have nine major process features or areas as follows:

- Receiving Area
- Buffer Cell
- Work Cell
- Contact Maintenance Area
- Sample Packaging and Screening Room
- Radiation Protection Operations Area
- Waste Packaging and Survey Area
- Operating Aisle
- Load Out/Truck Bay

The four support system features or areas that are listed below are designed to support the operations of RHWF:

- Exhaust Ventilation Filter Room
- Exhaust Ventilation Blower Room
- Mechanical Equipment Area and Stack Monitor Room
- Office Area

RHWF will have following utility systems in place:

- Electrical
- Natural gas
- Utility air
- Steam
- Potable water supply
- Demineralized water supply
- Cooling water
- Sanitary sewer

5.0 POTENTIAL HAZARDOUS SUBSTANCE, OR HAZARDOUS WASTE RELEASE SCENARIOS

5.1 Sources

Potential sources of releases of hazardous substances, or hazardous waste include all the interim status storage facilities listed in Section 4.0. However, no realistic potential exists for releases to the environment from facilities inside buildings. Therefore, this section will only consider facilities not enclosed in buildings. Some of these outdoor facilities are provided with secondary containment mechanisms such as containment basins and berms. However, in the event of a release, all of the outdoor facilities would also be provided with containment by means of blockage of the spill migration pathway. The remainder of this section focuses on spill migration pathways (including available locations for blockage) in the event of a spill from one of the outdoor tanks.

Underground tanks at the WVDP are maintained in compliance with state and federal underground storage tank requirements, which require leak prevention and detection by various means such as regular monitoring, cathodic protection, double containment, etc. However, this section will consider surface migration pathways due to spills as the result of over filling or discharging from these tanks.

In addition, the WVDP comprehensive groundwater monitoring program would also serve to identify any subsurface spill migration. The monitoring includes collection of samples at regular intervals from areas that would likely be impacted by site activities. Samples are analyzed for parameters that are based on process knowledge and extensive site characterization. Parameters include radiological indicators and selected chemical analytes.

5.2 Migration Pathways

See SPCC Plan - Section 5.3

6.0 SPILL CONTINGENCY PLAN (40 CFR 265.52) (6NYCRR 373 - 3.3 and 3.4)

6.1 Spill Response Equipment

The warehouse maintains several types of spill recovery equipment as well as an inventory of general supplies useful in recovering spilled material. Spill kits are maintained in all facilities on site where the potential for a spill exists. General supplies stored in the Test and Storage Building include rubber gloves, boots, and chemical-resistant disposable suits, as well as respiratory protection equipment, goggles, and other personnel protective equipment. Lumber, plastic, sand, and Herculite are available to construct temporary berms. Specific spill response equipment which includes clay sorbent material (speedy dry) and absorbent socks and pillows are available for use by Cattaraugus County Hazmat team. Several sizes and types of overpack and salvage drums are also maintained in inventory.

In the event of a large spill or release to the environment, any on-site contractor with excavation equipment will be directed to deploy his earth moving equipment to cut off drainage ditches and culverts to contain spilled material. The contractor's personnel are all trained in accordance with site requirements and therefore can immediately commence preventative and/or corrective work.

The Project also has several different types of pumps and a variety of surplus tanks available for recovery of large quantity spills.

HazMat response is provided by the Cattaraugus County HazMat Team through a mutual aid agreement with Cattaraugus County Emergency Services.

Spill response equipment are located at various locations on site (Appendix A). For complete list of spill equipment refer to latest revision of WVDP-139, Volume II, *Emergency Management Administrative Procedures*, EMAP-204.

6.2 On-Site Relocation/Evacuation

6.2.1 All personnel during an on-site relocation, shall:

A. Leave the affected area immediately, but carefully. Direct others in the area to leave immediately and report to the appropriate assembly area.

B. Assist any personnel present in the affected area who may be unfamiliar with the area alarms or the relocation process to heed all alarms and evacuate without delay to the appropriate assembly area. Accompany escorted visitors to the proper assembly area.

C. Form groups in the assembly area according to work organization to ease accounting for personnel. Inform your manager of supervisor of your presence in the assembly area. If your manager is not present, inform any manager, supervisor, or security personnel present of any know missing or unaccounted personnel.

D. Listen to the "812" All Page announcements for additional information. Conditions may require a change in assembly area location.

E. All personnel in contaminated areas should:

- o Attempt to minimize the spread of contamination, but not at personal risk to themselves.
- o If time and conditions permit, remove the outer layer of protective clothing such as gloves, shoe covers, Anti-C's and respirators.
- o Report to the designated assembly area but stay separate from the others in the area. Inform the manager or supervisor present of any possible personal contamination so the IC can request the assistance of Radiation Controls Operation (RCO).

6.2.2 During an On-Site Relocation:

A. If your assigned work area is being evacuated and you are at another location:

- o If the area where you are is not being relocated, stay where you are.
- o Do not attempt to return to your work station or assigned assembly area. You could put yourself at risk by passing through a hazard.
- o Notify your manager or supervisor of your location as soon as possible. If you are unable to contact your manager or supervisor, contact Security at Extension 4330 or 4288 and provide your name and location.
- o Remain in that location until directed to evacuate/relocate or the all clear is given and you can safely return to work.

B. If the area your are in is being evacuated but it is not your normal work area:

- o Evacuate/relocate with the others in the area to the assembly area designated for the occupants of that area. For example, your are at a meeting in OB-1 when it is evacuated, you go with the other OB-1 evacuees to the RED (R) assembly area.

- Ensure the manager or supervisor present (or Security) is aware you are not normally assigned to that assembly area and that your manager or supervisor will need to know your location as soon as possible.

C. For on-site relocation only, personnel from the Administrative Annex exiting through the Main Lobby Security Gate should:

- NOT swipe their badges through the card reader.
- Walk down the sidewalk from lobby egress point and enter the Security Main Gatehouse. Due to the possibility of numerous emergency vehicles in the area, personnel should stay as far to the right out of the traffic flow as possible. Upon entering, evacuees should NOT swipe their cards in the card reader or pass through the portal monitor.
- Pass through the Security Main Gatehouse, report to and remain in the BLUE (B) assembly area unless directed elsewhere by the IC or "812" All Page.

NOTE *Hazard assessments conducted at the WVDP identified that no credible event would warrant or require a time urgent response to conduct an off-site evacuation. If it became necessary to have personnel leave the site, the Incident Commander or the Emergency Director would do so by performing an "812" All Page directing personnel response.*

6.2.3 Instructions for Sheltering

A. When your hear a Sheltering Alarm you should:

- If outside, seek the nearest shelter immediately.
- If indoors, remain indoors.
- Shut down heat, air-conditioning, or other sources of air intake if possible.
- Close doors and windows.
- Remain indoors and listen to the "812" All Page for follow-up instructions.
- Security secures the 222 paging system when an "812" All Page has been performed.
- If you are in the parking lot during a sheltering order, and the Lobby or Main Gatehouse entrances are close, seek shelter inside of either locations. If the entrances are too far, stay in your vehicle, close the windows, doors, and shut off the heater and the air conditioner.

6.2.4 Accountability - Special Precautions

All personnel must be accounted for during an evacuation. It is essential that all personnel deposit ID and dosimetry badges for accountability.

A. Emergency Response Organization (ERO)

- Upon activation of the Emergency Operations Center (EOC), all EOC, Technical Support Center (TSC) Managers, and the OSC ERO Response Team members are activated. Upon EOC/TSC personnel arrival, if members arrive and their position is filled, they are to report to the OSC and standby.
- The ERO Teams are to report to the scene if directed their staging area or to the Operations Support Center (OSC).
- Personnel identified by their cognizant managers as being essential to operations, should also standby in either the OSC or their pre-assigned locations.

6.3 On-Site Relocation/Evacuation Assembly Areas

6.3.1 Assembly Area Locations and Assignments (See Figure 6.3.2) [See WVDP-139, Volume I, *Emergency Management Implementing Procedures,* EMIP-101 for current revision.]

BLUE (B): Between OLD and NEW WAREHOUSES in the wide section of the roadway.

RED (R): East side of OFFICE BUILDING ONE (OB-1) by the parking lot.

GREEN (G): West side of the STS BUILDING on the roadway between the storage areas for subconstractors.

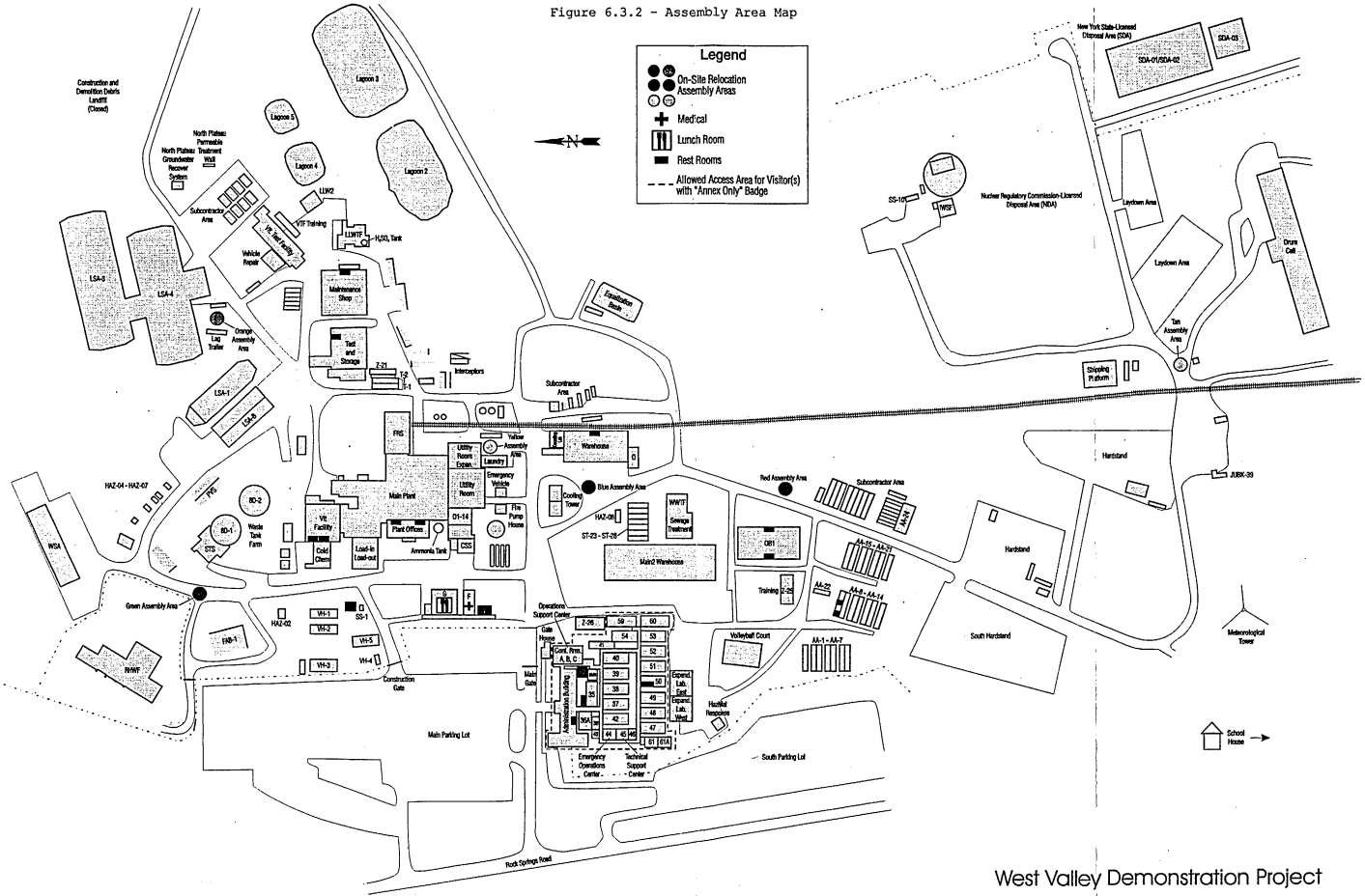
ORANGE (O): South side of LAG STORAGE FOUR (LSA4).

YELLOW (Y): East of the UTILITY ROOM and LAUNDRY FACILITY.

TAN (T): The road intersection North of the DRUM CELL.

NOTE *WVDP employee assembly areas are maintained through the use of the GOALS system. The Site phone listing reports lists the employees assigned work locations along with the assembly area designator code.*

Figure 6.3.2 - Assembly Area Map



West Valley Demonstration Project

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6.4 Spill Prevention and Emergency Procedure (40 CFR 265.56) (6NYCRR 373 - 3.3 (g))[See Appendix A for Emergency Equipment on site)

The WVNSCO Site Services Manager is responsible for all spill prevention and for operation and maintenance of storage tanks under their cognizance. Individual engineering departments are responsible for the design and engineering of the storage and containment facilities described in this Plan. Individual Organizations are responsible for developing and implementing spill prevention and control training programs.

If a spill of hazardous substance or waste is identified at the WVDP, the initial response will be to ensure employee safety, contain the material on-site, identify the source, and isolate or eliminate the source and clean-up the release material. Notification of the spill will be provided to the DOE-WV using the "Substance Spill Release Report Form", WV-3516.

If the source of a spill is from a vendor tank truck, the DOT label will identify the material. Additionally, DOT emergency response guidebooks are available for reference. Multiple sources of information regarding chemical substances should be utilized in the event of a spill.

If containment around a given source were to fail, the spill can still be contained within the site boundaries by cutting off surface drainage from the area. This can be done by placing earthen dams across drainage ditches or utilizing alternative spill containment devices.

Stopping the source of the spill may be performed by closing a valve on a transfer line or removing the material from the leaking tank. In some cases, material removed from a tank could be transferred into a suitably equipped spare tank. This would also be the method for recovering spilled material retained in a spill pad or containment basin.

Responsibility for recovery from non-emergency spills (i.e., where there is no potential for off-site release or a threat to the safety of on-site personnel) resides with the WVNSCO Site Services Manager. The manager will call upon the expertise of other WVNSCO management and staff as necessary to remediate the situation, and will also notify Environmental Affairs (EA), who will determine if subsequent off-site notifications are required.

The WVDP Emergency Plan (WVDP-022) will be implemented if a spill or hazardous material is of sufficient magnitude to threaten the safety of on-site personnel; or an off-site release of reportable quantities of hazardous materials (per 40 CFR 117).

If a release is imminent, EA will evaluate and if necessary notify the DOE-OH/WVDP, who in turn will notify the DOE-OH. EA will notify Washington Group International Risk Management and the EPA, state, and local emergency response units as necessary.

The WVDP Emergency Plan (WVDP-022) provides an organized plan of action that identifies authorities and responsibilities of emergency response personnel and organizations and identifies the manpower and equipment resources available to cope with emergencies at the WVDP. WVDP-022 applies to emergency actions relative to radiological, hazardous, industrial, safeguards and security (theft of Special Nuclear Materials, threats or acts of violence, etc.), and natural phenomena emergencies at the WVDP. The primary purpose of WVDP-022 is to minimize the impact of any emergency upon the health and safety of plant personnel and the general public.

The WVNSCO President has the ultimate responsibility for all WVNSCO activities. The WVNSCO President interacts with the DOE Project Director and off-site resources as appropriate for the mitigation of emergency conditions. The President and/or his alternates serve as Emergency Director. Emergency Response Organization Staffing Lists will be periodically updated and maintained in the WVDP Emergency Management Implementing Procedures Manual (WVDP-139). The WVNSCO President will retain responsibility and authority for assessment and mitigation of emergency conditions at WVDP unless relieved by higher authority.

With regard to emergencies, the Emergency Director shall:

1. Maintain executive control of all emergency situations affecting WVDP operations;

2. Activate the WVDP Emergency Operations Center and WVDP Emergency Response Organization (WVDP-ERO) as needed;

3. Oversee emergency response actions utilizing personnel and resources to mitigate consequences of the emergency;

4. Authorize site-wide evacuation of personnel, if needed;

5. Activate WVNSCO personnel, as needed;

6. Maintain WVNSCO succession of authority;

7. Authorize obtaining assistance from off-site organizations such as hospitals, health departments, highway departments, law enforcement agencies, fire departments, ambulance services, etc., as needed;

8. Authorize mutual aid or other emergency assistance from off-site agencies or organizations, as needed; and

9. Recommend to the DOE Project Director notification of off-site local, county, and state officials in the event of releases of hazardous material to the environment that may affect persons or property outside the site boundary. DOE-OH/WVDP will notify DOE-OH and DOE-HQ, and DOE-OH assistance will be requested, as needed. EA will determine if the situation warrants notification of the EPA or National Response Center for spills of oil, hazardous materials or hazardous wastes.

* For the purpose of RCRA Contingency planning, the WVDP ERO does not have one specific individual who fulfills the duties and responsibilities of the Emergency Coordinator as defined in 40 CFR 265 Subpart D and 6 NYCRR Part 373-3.4; the position is vested in several members of the ERO. The functions of the Emergency Coordinator are carried out by the Emergency Director (ED), the Notification Officer (NO), the DOE Project Director (DOE-PD), NYSERDA, the DOE Communicator, the Radiological Assessment Manager (RAM), the Environmental Assessment Manager (EAM), and the Incident Commander (IC). In accordance with RCRA Contingency Plan requirements, the emergency Coordinator ensures that monitoring occurs for leaks, pressure build-up, gas generation or ruptures in valves, pipes or personnel capable of performing decontamination activities in addition to medical care.

Whenever a WVDP emergency occurs, the Emergency Director may activate Emergency Response Organization personnel or their designated alternates. This group provides administrative and technical assistance to the Emergency Director, as needed, and consists of the Emergency Operations Center (EOC) staff, Technical Support Center (TSC) staff, Operational Support Group, and Incident Commander Group. The composition and functions of these groups are described in WVDP-022 and WVDP-139.

On off-shifts, the responsibility for emergency direction for the WVDP rests with the Plant System Operations Shift Supervisor (PSOSS) until relieved by higher authority. The PSOSS is the Incident Commander during emergency events where fire and health concerns are paramount, i.e., radiological, chemical, toxic releases, etc.; when natural emergencies, e.g., high winds, blizzards, flooding, earthquakes, tornados, etc., present actual or imminent threats; or during security emergencies.

Regardless of the size or severity of a spill, once the situation has been stabilized, recovery measures will be implemented. Equipment will be repaired or replaced and contaminated areas will be cleaned up. Contaminated wastes generated during these operations will be managed in accordance with SOP 300-07 "On-Site Waste Generation Packaging and Transportation."

6.5 Notifications

In the event of a spill or other release hazardous substances, or hazardous wastes, the notifications listed below will be made. Procedures are detailed in WV-915, "Spill/Release Notification and Reporting".

o The individual discovering the release will notify the Shift Supervisor in charge of the affected area. The Shift Supervisor of the affected area will notify the PSOSS. The PSOSS will notify EA as soon as possible. If there is any question of personal safety, the individual should perform an "812-all page" to summon help immediately and keep others away from the area.

- For any spills resulting in a release to the environment, DOE-OH/WVDP will be notified as soon as possible by means of the Substance Spill Release Report Form, WV-3516, shown in Section 6.1 of the SPCC Plan.
- The PSOSS will initiate spill containment measures.
- The PSOSS will determine if the situation warrants activation of the Emergency Operations Center.
- In a non-emergency, EA will notify the respective DOE-OH/WVDP representatives and Washington Group International Risk Management (208)386-7899 or (208)286-5181 as needed.
- EA will notify EPA and appropriate New York State agencies if needed. Completion of Environmental Affairs Notification Form WV-3517 (Section 6.0 or SPCC plan) is required when outside agencies are contacted. The notifications will include, but not necessarily be limited to, the following:

Name/Title	Telephone Number
DOE - EOC	FTS-896-8100
EPA - NRC	800-424-8802
Region II EPA Emergency Response Team (ERT)	201-548-8730
NYSDEC Spill Response Hotline	1-800-457-7362 or 716-851-7220
State Emergency Management Organization	24 Hour Number: 1-800-457-7362 Emergency Coordinator Center: 518-457-2200 518-457-9930 (fax)
Local Emergency Planning Coordinator	Cattaraugus County: 716-938-9191 Erie County: 716-858-6262 or 716-898-3696

Name/Title	Telephone Number
Washington Energy & Environment (WE&E) 24-Hour Emergency management Team Leader and Alternate: Steve Marchetti - Team Leader Senior Vice President Operations (WE&E) Greg Meyer - Alternate Team Leader (WG) Director - Environmental, Safety, Health & Quality Assurance (WE&E)	 Office: 803-502-9980 Home: 803-642-3878 Cell: 803-507-2178 Email: steve.marchetti@wgint.com Office: 803-952-9387 Home: 706-854-9313 Cell: 706-830-0743 Email: greg.meyer@srs.gov greg.meyer@wgint.com
Washington Energy & Environment 24-Hour Corporate Communicator Contact Bill Whiting - Primary Manager and Marketing Communications	 Office: 803-502-9963 Home: 803-643-8040 Cell: 803-507-8018 Email: william.whiting@wgint.com

6.5.1 Emergency Response Numbers

Name	Telephone Number
Springville Fire Department	716-592-2825
West Valley Fire Department	716-942-6007
Erie County Sheriff Department	716-662-5444
Cattaraugus County Sheriff Department	800-443-3407
Buffalo Fuel Corporation	716-827-0824 or 716-873-7196
Bertrand Chaffee Hospital	716-592-2871
Erie County Medical Center	716-898-3000

6.5.2 Emergency Response Coordinators

In the event of a release of oil, the Emergency Director (ED) becomes the Emergency Response Coordinator.

Refer to WVDP-139, Volume 1 - EMIP-103 for the latest revision of Roster A and Roster B.

6.6 Storage and Handling

The report must include:

- Name and telephone number;
- Name and address of facility;
- Time and type of incident (e.g., release, fire);
- Name and quantity of material(s) involved, to the extent known;
- The extent of injuries, if any; and
- The possible hazards to human health, or the environment, outside the facility.

6.6.1 During an emergency, the Emergency Director (ED)must take all reasonable measures necessary to to ensure the fires, explosions, and releases do not occur, recur, or spread to other hazardous waste at the facility. These measures must include, where applicable, stopping processes and operations, collecting and containing release waste, and removing or isolating containers.

6.6.2 If the facility stops operations in response to a fire, explosion or release, the Emergency Director must monitor for leads, pressure buildup, gas generation, or ruptures in valves, pipes, or other equipment, wherever this is appropriate.

6.6.3 Immediately after an emergency director must provide for treating, storing, or disposing of recovered waste, contaminated soil or surface soil or surface water, or any other material that results from release, fire, or explosion at the facility.

6.6.4 The Emergency Director (ED) must ensure that, in the affected area(s) of the facility:

A. No waste that may be incompatible with the released material is treated, stored, or disposed of until cleanup procedures are completed; and

B. All emergency equipment listed in the contingency plan is cleaned and fit for its intended use before operations are resumed.

6.6.5 The owner or operator must notify the Regional Administrator, and appropriate State and local authorities, that the facility is in compliance with paragraph 6.6.4 of this section before operations are resumed in the affected area(s) of the facility.

6.6.6 The owner or operator must note in the operating record the time, date, and details of any incident that requires implementing the contingency plan. Within 15 days after the incident, he must submit a written report on the incident to the Regional Administrator. The report must include:

A. Name, address, and telephone number of the owner or operator;

B. Name, address, and telephone number of the facility;

C. Date, time, and type of incident (e.g., fire, explosion);

D. Name and quantity of materials(s) involved;

E. The extent of injuries, if any;

F. An assessment of actual or potential hazards to human health of the environment, where this is applicable; and

G. Estimated quantity and disposition of recovered material that resulted from the incident.

In addition to the hazardous material or hazardous waste storage tanks or containers discussed in the previous sections, a large number of containers and large amount of these materials are stored in various locations at the project.

Storage in these cases will be according to the following guidelines and specifications:

Materials shall be stored in such a manner as to prevent the occurrence of an extremely hazardous situation (fire, explosion, release of toxic fumes, etc.) in the event of a spill or a leak. Storage of hazardous materials must be in a designated area which meets requirements specified by the Regulatory and Compliance Program Manager. These requirements will be determined based on the magnitude and severity of the chemical hazards for the proposed facility. The following general requirements will also apply for separation of incompatible chemicals.

6.6.7 Flammables - Highly flammable materials must be kept separated from explosives, powerful oxidizing agents, materials susceptible to spontaneous heating, or materials that react with moisture to evolve heat.

6.6.8 Oxidizing Agents - The following classes of chemicals are known for their ability to supply oxygen, or in other words are strong oxidizing agents: organic and inorganic peroxides, permanganates, perrhenates, chlorates, perchlorates, persulfates, organic and inorganic nitrites, organic and inorganic nitrates, iodates, periodates, bromates, perselenates, perbromates, chromates, dichromates, ozone, and perborates. In addition to storing these materials separate from flammable/combustible materials, they should be kept separate from strong reducing agents.

6.6.9 Water Sensitive Materials - Some materials react with water, water solutions, or steam to evolve heat or flammable/ explosive gases. Examples include lithium, sodium, potassium, calcium, rubidium, cesium, alloys and amalgams of the above, hydrides, nitrides, sulfides, carbides, borides, silicides, and concentrated acids and alkalies. This should be taken into consideration in fighting fires involving these chemicals.

6.6.10 Acid Sensitive Materials - Fire and explosive hazards exist from materials which react with acids and acid fumes to evolve heat, hydrogen, and flammable or explosive gases. These include lithium, sodium, potassium, calcium, rubidium, cesium, alloys and amalgams of the above, hydrides, nitrides, sulfides, carbides, borides, silicides, tellurides, selenides, arsenides, phosphides, concentrated alkalies, cyanides, and metals.

6.6.11 Corrosives - Corrosive materials include acids, acid anhydrides, and alkalies. These have the ability to destroy their containers (if inappropriate containment vessels are used) and escape to the atmosphere. Some of these materials are volatile. Others may react violently with moisture. Corrosives should be isolated from sulfides, sulfites, cyanides, arsenides, tellurides, phosphides, borides, silicides, carbides, fluorides, and selenides. Reactions with these chemicals can produce toxic fumes.

In addition to storing incompatible chemicals separately, other general safety practices are to be followed. For example, adequate ventilation shall exist in all areas where chemicals are stored in appreciable quantities. Smoking shall be prohibited in areas where flammable and/or combustible materials are stored. In addition, storage areas should be equipped with adequate firefighting and spill response equipment. In all instances, storage of hazardous materials will be in accordance with procedure WV-993, Storage and Usage of Chemicals.

6.7 Arrangements with Outside Agencies

6.7.1 West Valley Volunteer Hose Co.

A Letter of Agreement (LOA) has been made with the West Valley Volunteer Hose Co. to provide emergency assistance for fires and transportation of ill/injured personnel if needed. The fire department is located less than 5 miles from the site. Plant Security calls the fire department when assistance is needed. Terms of the LOA are defined in WVDP-022.

6.7.2 Bertrand-Chaffee Hospital

A LOA has been made with Bertrand-Chaffee Hospital (BCH). BCH has agreed to accept plant medical emergencies on a priority basis. The hospital is located in Springville, New York, approximately 4 miles from the plant. Terms of the LOA are defined in WVDP-022.

APPENDIX A

List of Emergency Equipment

Emergency equipment is located at various locations on-site and off-site. Following is the partial listing of equipments stored on-site and for complete listing of equipment see *Emergency Management Administrative Procedures*, EMAP-204 for latest revision.

1.0 RESPONSE TEAM EQUIPMENT

- 1.1 Personnel protective equipment
- 1.2 Spill kits
- 1.3 Portable fire extinguishers
- 1.4 Fire hoses and hose stations

2.0 EMERGENCY MEDICAL EQUIPMENT

- 2.1 Defibrillator, OLAMBV Bag
- 2.2 Orange plastic stretcher
- 2.3 Back board/cervical collar
- 2.4 EMT kit
- 2.5 Wheel chair
- 2.6 Oxygen

3.0 ENVIRONMENTAL LABORATORY

- 3.1 Bicron Micro Rem Survey meter
- 3.2 Eberline mini scaler
- 3.3 Ph meter, survey meter, No_x gas meter/ammonia
- 3.4 Miscellaneous sampling equipment
- 3.5 Tapes, extension cord, ropes, etc.

4.0 EMERGENCY OPERATIONS CENTER (EOC)

- 4.1 Fax machines, computers, telephones, hand held radios

5.0 OFF-SITE FACILITIES WHERE EQUIPMENTS ARE STORED:

- 5.1 Bertrand Chaffee Hospital (BCH)
- 5.2 Erie County Medical Center (ECMC)
- 5.3 Alternate Emergency Operations Center (AEOC)

APPENDIX B

Site Security

SITE SECURITY

The entire 1,335-hectare WNYNSC is fenced, posted, and subject to routine patrols by the WVDP security force. In addition, the 88-hectare site is a controlled-access facility surrounded by an 8 ft high chainlink fence topped with three strands of barbed wire. The HLW, STS, PVS areas, where most of the tanks discussed in this plan are located, are well-lighted, surrounded by an interior chainlink fence and access authorization is required for entry. These areas are routinely patrolled by officers on foot and in vehicles.

APPENDIX C

Employee Training Program and Requirements

1.0 HAZARDOUS WASTE OPERATIONS TRAINING (HAZWOPER)

Specific training programs are provided on procedures for the management of hazardous waste. Topics included are identification of hazardous wastes, proper labeling and marking of containers, safety concerns, recordkeeping, use of manifest documents, and overall management of the wastes. Minimum of initial 24 hour hazardous waste operations training is required for entry into a hazardous waste exclusion zone.

1.1 Personnel which handle hazardous waste will not work in an unsupervised position until they have been trained in hazardous waste management (40 CFR 265.16(a)(1) or 6NYCRR 373-3.2(g)(1))

1.2 Workers who will handle hazardous waste shall receive training within six months of their employment (40CFR 265.16(b) or 6NYCRR 373-3.2(g)(2))

1.3 WVDP hazardous waste program is under the direct supervision of a trained professional in the hazardous waste area (40 CFR 265.16(a)(2) or 6NYCRR 373-3.2(g)(1)(ii))

1.4 Content of the annual training program will follow guidelines under 40 CFR 265.16(c) or 6NYCRR 373-3.3(g)(3)

1.5 Job titles, job description, type of training, records of training records be maintained at the facility (40 CFR 265.16(d) or 6NYCRR 373-3.2)

2.0 OTHER TRAINING:

2.1 Emergency Spill Response Training

All general employees receive awareness spill response training. The Hazardous Materials team has been trained to respond to all types of on-site emergency spills.

Specific training is also provided to the WVDP Fire Brigade on emergency response. This includes the use of videotaped training modules on spill response. General training for spill response is included in the Radiation Worker Training Program(s).

2.2 Safety Training

The Training Department provides ongoing safety awareness training, worker right-to-know training, and selected safety equipment training. In addition, training programs are developed and conducted as new equipment is identified as requiring specific safety training. Only individuals who have received appropriate training and demonstrated the ability (by written test or otherwise) to operate equipment are allowed to do so.

2.3 Operator Training

For staffing and training, all plant operations at WVDP are divided into organizational areas, including MPO, WTF, STS, WM, VO, and others. These operational areas and the scope of training within each are revised as the scope of operations change.

To operate in one of these areas, an operator must be trained and qualified. This qualification requires completion of a comprehensive written examination (and attainment of a grade of at least 80 percent) on each relevant process or operation. In addition, operators must complete hand-on testing performance demonstration. Hazardous Waste Operations training is required for persons entering hazardous waste exclusion zones.

2.4 Retraining Program

All general employees receive bi-annual refresher training on safety and security topics, emergency signal response, spill response, and Project organizational responsibilities.

Any personnel required to maintain HAZWOPER Training will be required to complete the annual 8-hour refresher.

All systems operators are required to participate in an continuing training programs consisting of required reading (procedures, changes, facility modifications, Incident Reports, etc.). Completion of a comprehensive written examination, walkthrough, and/or oral examination, is required every two years to maintain system qualification.

2.5 Training Records Administration

The Records and Configuration/Document Department maintains Training Records in accordance with West Valley Procedure WV-730 and T-60 for all approved training material and a central documentation file for employee/subcontractor records of implementation of training programs. The file is also used to schedule refresher or upgrading training for all WVDP personnel.

Before releasing training materials for use, the training material is reviewed for content to assure that it satisfies established training objectives. The material is then reviewed for technical accuracy and approved by the cognizant operations manager(s).

APPENDIX D

Inspection and Record Keeping

INSPECTIONS AND RECORDKEEPING

All outdoor aboveground tanks and their associated spill containments are in frequented areas where leaks would be obvious to the normal traffic of operators. Inspection of above ground tanks are checked each shift and findings are recorded on standard operating procedure data sheets. These sheets are signed and dated by the operator taking the readings and is reviewed and initialed by the shift supervisor. These data sheets are placed in the operations file by the shift supervisor.

Most on-site tanks and vessels are contained within buildings or other structures. Many of these vessels are equipped with level indicators. The operation of these vessels is covered in SOPs, run plans, etc. Monitoring and inspection of this equipment is part of the procedures.

Monitoring and inspection of the SAAs, Hazardous Waste Storage Lockers (HWSLs), and the IWSF are covered in SOPs addressing these specific matters. In addition, weekly inventory logs and inspection logs are maintained for areas served by the 90-day areas. These logs allow for a continuous monitoring of the types and quantities of hazardous wastes generated and stored on-site and provide documentation of the physical integrity of containers in the 90-day areas.

Also, the site security force performs routine inspections of all areas of the site. These personnel are directed to report any unusual occurrences such as strange odors, leaking tanks or containers, etc., to the shift supervisors for follow-up investigation.

RCRA records are stored on-site in accordance with WVDP-257 and WV-733.

INSPECTION INSTRUCTION AND DATA SHEET

IIDS No._____

Page 1 of 1

Inspection Method Key:
1. Measure
2. Observe measurement
3. Review documentation
4. Compare
5. Observe or Witness
6. Previous Hold Point issued
7. Other - Please document method

Item Inspected: _____ Inspection Date:_____

IIDS Prepared by: _____ Date:_____

Facility/Location: _____ References:_____

Method (See Key)	Characteristic Acceptance Criteria	Actual Inspection Results	Acc.	Rej.
Comments:				

IR Number (if issued): _____

Equipment Used: _____ M&TE Used: _____ Cal. Due Date: _____

Inspector: _____ Date: _____
Signature/Print

APPENDIX E

References

1.0 WVDP'S HAZARDOUS WASTE CONTINGENCY PLAN AND EMERGENCY PROCEDURES HAS BEEN PREPARED WITH REFERENCES TO THE FOLLOWING SOURCES:

1.1 Code of Federal Regulations - 40 CFR 265.30 - 265.56

1.2 Official Compilation Codes Rules and Regulation of the State of New York- 6 NYCRR373-3.4

1.3 Emergency Response Guide Book. 2000. U. S Department of Transportation. Research and special programs Administration Materials Transportation Bureau.

1.4 Chemical Emergency Preparedness Program - Interim Guidance - U.S. EPA November 1985

1.5 Following WVDP manuals:

1.5.1 WVDP- 099, " Environmental Compliance Manual" - (ECS 520-RCRA Contingency Plan Requirements and ECS-322 - RCRA Operating Records)

1.5.2 WVDP- 022, "WVDP Emergency Plan"

1.5.3 WVDP-139, "Emergency Implementing Procedures"

1.5.4 WVDP-080, "PCB & PCB-Contaminated Materials Management Plan"

WVNSCO RECORD OF REVISION

Rev. No.	Description of Changes	Revision On Page(s)	Dated
10	General Revision Changed "WVNS" to "WVNSCO" throughout document Changed "Records and Information" to "Records and Configuration/Document Control" throughout document. SPCC Plan has been reviewed and updated to meet final oil pollution prevention and response regulation, 40 CFR Part 112, dated July 17, 2002. The Plan includes the following changes: The addition of reference to used cooking oil drums stored in WMSA and the spill control for the drums has been incorporated. Waste Management is affected by these changes.	All	05/19/03