City of Albuquerque

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Department of Finance and Administration
Fleet Management Division

Spill Prevention, Control, and Countermeasures (SPCC) Plan

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City of Albuquerque
Department of Finance and Administration
Fleet Management Division
5501 Pino Ave NE
Albuquerque, New Mexico 87109

December 11, 2014

CDM Smith Project No.: 0668-105002

CDM Smith

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Cross-Reference with SPCC Provisions

40 CFR 112.7

This SPCC Plan is not organized in precisely the same order as the requirements are presented in 40 CFR Part 112. Section headings identify, where appropriate, the relevant sections of the SPCC rule. The following table presents a cross-reference of Plan sections relative to applicable parts of 40 CFR Part 112.

Section of Regulation	Regulatory Requirement	Location in SPCC
112.3(d)	Professional Engineer certification	Section 1.2.2
112.3(e)	Location of SPCC Plan	Section 1.3
112.5(b)	Plan review	Section 1.4
112.7	Management approval	Section 1.2
112.7	Cross-Reference with SPCC Rule	This table
112.7(a)(3)	General facility information, site plan, and facility diagram	Section 2, Figure 1 Appendix C
112.7(a)(4)	Discharge notification	Section 5.2, Section 5.3
112.7(a)(5)	Discharge response	Section 5 Appendices G and H
112.7(b)	Potential discharge volumes and direction of flow	Section 3.2, Table 3-1, Appendix C
112.7(c)	Containment and diversionary structures	Section 3.1.2, Table 3-1
112.7(d)	Practicability of secondary containment	Section 3.1.3
112.7(e)	Inspections, tests and records	Section 4.1, Appendix D
112.7(f)	Personnel training, and discharge prevention procedures	Section 4.2, Appendix F
112.7(g)	Security	Section 4.3
112.7(j)	Conformance with applicable state and local requirements	Section 4.4
112.8(b)	Facility drainage	Section 2.1.2, Appendix C
112.8(c)(1-5)	Discharge prevention	Section 4
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112.8(c)(8)	Overfill prevention system	Section 3.3
112.8(c)(10)	Visible discharges	Section 4
112.8(c)(11)	Mobile and portable containers	Section 2.2.2
112.8(d)	Transfer operations, pumping, and in-plant processes	Section 3.4

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Section 1
Introduction

1.1 Purpose

This Spill Prevention, Control and Countermeasures Plan (SPCC Plan) has been developed for the City of Albuquerque (City) Department of Finance and Administration Fleet Management Division (Fleet Management) vehicle maintenance and fueling facility located at the Pino Yards Complex. The purpose of this SPCC Plan is to describe measures implemented at Fleet Management that together form a comprehensive spill prevention program minimizing the potential for oil discharges; to prepare Fleet Management personnel to respond in a safe, effective, and timely manner; and to mitigate the impacts of a discharge.

This SPCC Plan has been prepared to meet the requirements of Title 40, Code of Federal Regulations, Part 112 (*40 CFR Part 112*) – Oil Pollution Prevention.

In addition to fulfilling regulatory requirements, this SPCC Plan is used as a reference for oil and fuel storage information, as a tool to communicate with employees practices to prevent and respond to discharges, as a guide to facility inspections, and as a resource during emergency response.

The Fleet Management facility is subject to the SPCC rule because it meets the following two criteria:

- It has an aggregate aboveground oil storage capacity greater than 1,320 gallons.
- There is a reasonable expectation of a discharge into or upon navigable waters of the United States.

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1.2 Plan Administration

1.2.1 Management Approval *40 CFR 112.7*

This SPCC Plan establishes preparedness, prevention, planning, spill response, and spill notification procedures as set forth in applicable state and federal regulations. This Plan has been compiled by an agent of Fleet Management and reviewed and certified by a professional engineer, as specified in 40 CFR 112.

As specified in 40 CFR 112.3(e), a copy of this plan will be maintained at the Fleet Management facility office and made available for on-site review by the Regional Administrator of the U.S. EPA during normal business hours.

Management and staff of the Fleet Management are committed to preventing discharges of oil to navigable waters and the environment, and to maintaining the industry standards for spill prevention, control, and countermeasures through regular review, updating, and implementation of the SPCC Plan. This SPCC Plan has the full approval of management at a level of authority to commit the necessary resources to fully implement the Plan. Its implementation is a joint effort that requires the concerted effort of all Fleet Management employees.

_____ _____

[Director, Department of Finance and Administration] Date

_____ _____

[Supervisor, Fleet Management Division] Date

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1.2.2 Professional Engineer Certification *40 CFR 112.3(d)*

The undersigned Registered Professional Engineer (PE) is familiar with the requirements of Part 112 of Title 40 of the Code of Federal Regulations (*40 CFR Part 112*) Oil Pollution Prevention (**Appendix A**) and has visited and examined Fleet Management facilities, or has supervised examination of the facility by appropriately qualified personnel. The undersigned Registered Professional Engineer attests that this SPCC Plan has been prepared in accordance with good engineering practice, including consideration of applicable industry standards and the requirements of *40 CFR Part 112*; that procedures for required inspections and testing have been established; and that this Plan is adequate for the facility.

This certification in no way relieves the owner or operator of the facility of their duty to prepare and fully implement this SPCC Plan in accordance with the requirements of *40 CFR Part 112*. This Plan is valid only to the extent that the facility owner or operator maintains, tests, and inspects equipment, containment, and other devices as prescribed in this Plan.

_____ _____
Signature of Registered Professional Engineer Date

Sarah C. Tuite, P.E.
Printed Name of Registered Professional Engineer

CDM Smith Inc. (CDM Smith)
Company

19780
Professional Engineer Registration Number, State

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1.3 Location of SPCC Plan *40 CFR 112.3(e)*

A complete copy of this plan is maintained at the facility in the Fleet Management administration offices located on-site. The plan is available from 7:00 am to 3:30 pm, Monday through Friday.

1.4 Plan Review

1.4.1 Amendment by the Regional Administrator *40 CFR 112.4(a)*

In the event that this facility has discharged (i.e. spilled): (1) more than 1,000 gallons of oil in a single discharge, or (2) discharged more than 42 gallons of oil in each of two discharges, occurring within any 12 month period, a written report must be submitted to the Regional Administrator of the U.S. EPA within 60 days. Fleet Management supervisors will work to prepare a report that includes the following information:

1. Name of the facility;
2. Facility manager's name;
3. Location of the facility;
4. Maximum storage or handling capacity of the facility and normal daily throughput;
5. Corrective action and countermeasures you have taken, including a description of equipment repairs and replacements;
6. An adequate description of the facility, including maps, flow diagrams, and topographical maps, as necessary;
7. The cause of discharge including a failure analysis of the system or subsystem in which the failure occurred;
8. Additional preventive measures you have taken or contemplated to minimize the possibility of recurrence; and
9. Such other information as the Regional Administrator may reasonably require pertinent to the Plan or discharge.

The Administrator may require Fleet Management to amend this SPCC Plan if he/she finds that it does not meet the requirements or that the amendment is necessary to prevent and contain discharges.

1.4.2 Facility Changes *40 CFR 112.5(a)*

This SPCC Plan must be amended when there is a change in the facility design, construction, operation, or maintenance that materially affects the facility's potential for an oil discharge, including, but not limited to:

- Commissioning or decommissioning of containers.
- Replacement, reconstruction, or movement of containers.

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- Reconstruction, replacement, or installation of piping systems.
- Construction or demolition that might alter secondary containment structures.
- Changes of product or service.
- Revisions to standard operation, modification of testing/inspection procedures, and use of new or modified industry standards or maintenance procedures.

Amendments to the Plan made to address changes of this nature are referred to as technical amendments, and must be certified by a PE. Non-technical amendments can be completed by the City's Chief Engineer or designee. Non-technical amendments include, but are not limited to, the following:

- Change in the name or contact information of individuals responsible for the implementation of this Plan.
- Change in the name or contact information of spill response or cleanup contractors.

Fleet Management must make the needed revisions to the SPCC Plan as soon as possible, but no later than six months after the change occurs. The Plan must be implemented as soon as possible following any technical amendment, but no later than six months from the date of the amendment. The Fleet Management Supervisor is responsible for initiating and coordinating revisions to the SPCC Plan.

1.4.3 Scheduled Plan Reviews *40 CFR 112.5(b)*

Fleet Management will review the SPCC Plan at least once every five years. Revisions to the Plan, if needed, will be made within six months of the five-year review. In accordance with 40 CFR 112.3(d), a registered PE must certify any technical amendment to the Plan, as described above.

Scheduled reviews and Plan amendments are recorded in the SPCC Review and Evaluation Log in **Appendix B**.

1.5 Facilities, Procedures, Methods, or Equipment Not Yet Fully Operational *40 CFR 112.7*

Appendix B provides a summary of items that Fleet Management needs to address to improve compliance with the SPCC regulations. As required, these modifications must be made to be in compliance with the SPCC regulations no later than the SPCC implementation date.

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Section 2
General Facility Information

Name:	***Department of Finance and Administration*** ***Fleet Management Division***
Facility Address:	***5501 Pino St NE*** ***Albuquerque, New Mexico 87109***
Mailing Address:	***PO Box 1985*** ***Albuquerque, New Mexico 87103***
Type:	***General Automotive Repair Shops, SIC Code: 7538*** ***Petroleum Bulk Stations and Terminals, SIC Code: 5171***
Owner/Operator:	***City of Albuquerque, Department of Finance and Administration***
Primary Contact:	***Martin Raimondi, Fleet Management Supervisor*** ***Office: (505) 857-8013*** ***Cell: (505) 903-9383***
Secondary Contact:	***Randy Rodarte*** ***Office: (505) 857-8602*** ***Cell: (505) 903-9385***

2.1 Facility Description *40 CFR 112.7(a)(3)*

Fleet Management facilities are located at Pino Yards in Albuquerque, New Mexico (**Appendix C, Figure 1**). Within Bernalillo County, Fleet Management is located within the eastern Albuquerque metropolitan area. The area directly surrounding Fleet Management to the west is Interstate 25, north is the Vista Del Norte Shopping Center, to the south is manufacturing and processing industries and east is generally residential. The greater area includes residential, commercial, and light industrial.

The Fleet Management operates a large-scale vehicle maintenance facility responsible for routine maintenance of City fleet vehicles at the Pino Yards Complex. Additionally, Fleet Management operates a fueling facility for the City's fleet.

The site plan (**Appendix C, Figure 2**) presents facility layouts and identifies locations of storage containers and direction of surface water runoff. The site plans indicate the location and content of each oil/fuel storage container.

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2.1.1 Activities

Fleet Management occupies approximately 3.7 acres within the 34-acre Pino Yards Complex, which supports maintenance, washing, fueling, and parking activities described below and shown on **Appendix C, Figure 2**.

Maintenance Activities

Fleet Management performs maintenance activities on City vehicles requiring routine maintenance. The majority of the vehicles serviced at this location are passenger vehicles. Busses and transit vehicles are serviced at two Transit Department maintenance facilities. Fleet Management also prepares wrecked or out of service vehicles for salvage. Vehicles awaiting mechanical work are parked outside (west) of the facility until they are moved indoors for maintenance. At maximum, vehicles may wait up to four weeks for repair. City vehicles requiring body repair are taken off site and those that have been totaled are prepared for the City's salvage. Wrecked vehicles may be parked on site for up to 8 weeks. New bulk maintenance fluids are stored indoors and dispensed in an overhead piping system. Used oil is stored in an outdoor bulk tank. A parts room and welding area are located within the maintenance building.

Vehicle Washing

An indoor wash facility consisting of a single wash bay is located on the north end of the maintenance facility.

Vehicle Fueling

Fleet Management's Pino Yards fueling facility serves as a major fueling hub for the City's fleet. Diesel, unleaded, and E85 fuels are dispensed from underground storage tanks. Maintenance fluids are stored indoor at the fuel station and dispensed near the fuel pumps through an overhead piping system. Fueling is performed under cover.

Parking

An employee and maintenance vehicle parking lot is located on the east side of the facility. The fleet and salvaged vehicle parking area is located on the west side of the facility. Fleet vehicles awaiting maintenance include operational cars, vans, service trucks, and busses. Totaled fleet vehicles awaiting preparations for salvage are also stored in this parking lot. Non-operational vehicles are drained of all fluids prior to being parked in the lot. Salvaged vehicles are temporarily stored on-site until they are transferred to the City Surplus Auction facility located within Pino Yards just south of the Fleet Management facility. Visitor parking is provided in the east parking lot adjacent to the Maintenance Building.

2.1.2 Site Description

Terrain

Fleet Management lies in the Middle Rio Grande watershed between the Sandia Mountains and the Rio Grande.

All areas of the Fleet Management Facility including all areas where vehicle driving, parking and maintenance activities are performed are paved (refer to the aerial photograph in **Appendix C Figure 2**). All areas directly surrounding the Fleet Management facility are paved. The Fleet

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Management facility is graded to drain towards a detention pond in the northwest corner of the Pino Yards complex.

Climate

Precipitation, on average, ranges between 8 and 9 inches per year, with the greatest monthly precipitation occurring in the summer months (1 to 3 inches per month) and the least precipitation occurring during the winter months (usually less than 1 inch per month). The average yearly temperature for the Albuquerque area is 56°F. The average low and high temperatures for Albuquerque are 43°F and 70°F, respectively.

Wastewater System

Floor drains in the maintenance building, wash bays, and covered areas associated with the fuel station discharge to several oil water separators (OWS). Effluent from each oil water separator discharges to the site wastewater collection system. Wastewater from building restrooms, janitorial sinks, etc. also drain to the site wastewater collection system which discharges to the City sanitary sewer that discharges to the Southside Water Reclamation Facility in southwest Albuquerque. No on-site septic tanks or leachfields are present at Fleet Management. Site OWSs are maintained on a frequent basis as further described in Section 3.

Facility Drainage *40 CFR 112.8(b)*

Storm water drains from Fleet Management's paved surfaces towards a detention pond located on the northwest corner of the Pino Yards Complex. Storm water collected in the Pino Yards detention pond is conveyed through an OWS prior to discharge from the site. The detention pond outfalls into the Domingo Baca Channel that flows from east to west on the north side of Pino Yards. The Domingo Baca Channel is operated by the Albuquerque Metropolitan Arroyo Flood Control Authority's (AMAFCA) Municipal Separate Storm Sewer System (MS4). Storm water flowing through the Domingo Baca Channel drains into AMAFCA's North Diversion Channel and ultimately discharges into the Rio Grande.

Storm water generated off-site is directed around the perimeter of the facility via a combination of arroyos and paved curb and gutter system.

The facility's drainage is displayed on (**Appendix C, Figure 2**). The Pino Yards Complex is occupied by multiple City Divisions. Drainage from the entire Pino Yards complex is conveyed to the storm water detention pond and storm sewer inlets located along the northwest corner of the complex. The City monitors storm water at two manholes located near the City Streets Maintenance Division parking lot where site storm water is collected in storm water inlets. Monitoring is also performed at the detention pond; this will be the monitoring point most applicable to activities occurring at Fleet Management. Storm water monitoring is performed in accordance with the City's Pino Yards Storm Water Pollution Prevention Plan (SWPPP).

2.2 Facility Oil Storage Capacity

Facility oil storage at Fleet Management is covered under two separate programs. The underground storage tanks (USTs) are covered under the New Mexico Environment Department (NMED) Petroleum Storage Tank Bureau (PSTB) Regulations 20.5 NMAC and the aboveground storage tanks (ASTs) are covered under this SPCC Plan. SPCC Regulation *40 CFR Part 112.1(d)(4)*

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exempts tanks that are already covered under a State-approved program. The following tanks located at the site are not covered under this plan and are covered under the ***Operations and Maintenance Plan (O&M Plan) for the City of Albuquerque Pino Yards Fuel Yards (Fleet Management) (City of Albuquerque, [insert month and date])***. For clarity, these USTs are identified on the site maps, they include:

- Fueling Station – Three 20,000 gallon USTs (two 20,000 gallon unleaded fuel and one 20,000 gallon diesel).

The O&M Plan was developed by the City to meet the requirements of *20.5.5.9 NMAC Operations and Maintenance Plan*.

The following sections discuss the oil storage covered under this SPCC Plan which includes fixed bulk storage tanks and portable bulk storage containers. Storage tanks with capacity less than 55-gallons are not included and are exempt from this plan (*40 CFR Part 112.1(d)(5)*).

2.2.1 Fixed Bulk Storage Tanks

The following sections discuss the oil storage capacity of each fixed bulk storage tank covered under this SPCC Plan. A summary of oil storage is provided in **Table 2-1**.

Used Oil Storage

Used oil generated throughout the maintenance facility is pumped from inside the maintenance shop to a 500 gallon double-wall used oil AST located outside the doors on the west side of the maintenance shop. The 500 gallon AST is equipped with a level gauge to determine the amount of used oil in the tank. Leak monitoring is performed by [needs leak monitoring detection in interstitial space]. Each maintenance bay (13 bays) is equipped with a mobile 20-gallon used oil drum for transfer. Drums are pumped into the 500 gallon used oil AST at a pumping station located along the west wall inside of the maintenance building.

Two 250 gallon used oil tanks are stored in the center of the maintenance shop near the north and south walls. These tanks supply oil for multiple used oil space heaters suspended from the maintenance shop ceiling. [Need to describe if tanks are double walled.] Each tank is equipped with a level gauge to determine the amount of used oil in the tank.

The preventative maintenance shop located north of the wash bay contains a 500 gallon double-walled AST. The fuel management shop located north of the preventative maintenance shop has a new 100-gallon used oil AST. Both of these used oil storage tanks are equipped with interstitial leak, level, and overfill detection gauges.

Oil Storage

New oil used throughout the maintenance building is stored in the Lube Room located upstairs of the maintenance shop and is dispensed through pneumatically controlled overhead piping. Pumps used to transfer oil through overhead piping to various fill stations in the maintenance building employ runaway shut off valves which stops pumping if a leak and loss of pressure is detected in the piping. Additionally, building air supplied to the oil pumps is shut off at the end of the working day. Oil is stored in three 250 gallon single wall ASTs; Super Automatic Transmission Fluid (ATF), Super All Season Synthetic Blend SAE 5W-20 Motor Oil, and Guardol ECT® (Ti) SAE

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15W-40. Each AST is stored inside of a 275 gallon capacity containment sump, which provides secondary containment. Each 250 gallon AST has is equipped with a level gauge to determine the amount of liquid in the tank. Leaks from the single wall ASTs can be visually detected by the presence of liquid inside of the plastic containment sump.

The fuel station also has an attached lube room that stores two 250 gallon double walled ASTs of ATF and motor oil. A 264 gallon double walled AST containing hydraulic oil is also located in the lube room. Each AST is equipped with interstitial leak, level, and overfill detection gauges. The lube room is bermed by a 4 inch containment curb. ATF, motor oil, and hydraulic oil is dispensed to an outdoor fill station equipped with a containment sump for nozzle drips.

Oil Filled Equipment

Hydraulic lifts are located at most of the maintenance bays within the maintenance building. There are 13 hydraulic lifts and each lift has approximately 2 to 3 gallons of hydraulic fluid in the lift's reservoir.

2.2.2 Mobile Storage Tanks

Fleet Management does not own or operate any mobile storage tanks.

2.2.3 Portable Bulk Storage Containers

Portable oil storage containers are defined as a closed AST having liquid capacity of 55 gallons or more and not intended for fixed installation. Portable oil storage containers located throughout the Fleet Management Facility include 55 gallon drums. Other containers found throughout the facility, but not meeting the definition of portable container include: 30-40 gallon drums, 20 gallon used oil collection carts, and small containers ranging from 1 quart to 5 gallons. As previously mentioned, all portable containers less than 55 gallons are exempt from the plan per section *40 CFR Part 112.1(d)(5)*. The inventory of portable storage containers is approximate because it can fluctuate on a monthly basis based on usage.

The preventative maintenance shop stores two 55-gallon drums of hydraulic fluid.

Two 55-gallon drums of 5W-30 motor oil are stored at the west side of the maintenance shop in front of a fenced enclosure.

2.2.4 Permanently Closed Tanks

Permanently closed tanks are exempt from this plan in accordance with *40 CFR 112.1(d)(2)(ii)*. A permanently closed tank means any container or facility which:

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

Currently there are no permanently closed tanks at Fleet Management.

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2.2.5 Total Estimated Petroleum Storage Capacity

Oil storage containers previously described are summarized in **Table 2-1**. **Table 2-1** presents the location, material stored, capacity and container type for each storage container. All containers with a capacity of 55-gallons or more are included. Containers less than 55-gallons are exempt from the requirements of this plan in accordance with *40 CFR 112.1(d)(5).* Additionally USTs registered by NMED are exempt from the requirements of this plan and are noted in **Table 2-1**.

Table 2-1 SPCC Storage Capacity *40 CFR 112.7(a)(3)(i)*

Container Location	Material	Container Size / Type	Comments
Maintenance Building Indoors	Used Oil	Two, single wall 250 gallon ASTs	Tanks supply used oil for used oil heaters.
	Used Oil	One, 55-gallon drum	At transfer pump.
	Oil	Two, 55-gallon drums	Near fenced enclosure
Maintenance Building Outdoor	Used Oil	Double wall 500 gallon AST	Used oil is pumped from oil transfer pump located within the maintenance building to the used oil tank.
Maintenance Building Lube Room	Oil	Two, single wall 250 gallon capacity ASTs.	Oil is pumped from the ASTs through overhead piping to various maintenance fluid fill stations within the maintenance building.
	ATF	Single wall 250 gallon capacity AST.	ATF is pumped from the AST through overhead piping to various maintenance fluid fill stations within the maintenance building.
	Oil	Two, 55-gallon drums	
Fueling Station Lube Room	Oil	Double wall 250-gallon AST	Oil is pumped through overhead piping to maintenance fluid fill station at the fueling station.
	Hydraulic Fluid	Double wall 264-gallon AST	Hydraulic fluid is pumped through overhead piping to maintenance fluid fill station at the fueling station
	ATF	Double wall 250-gallon AST	ATF is pumped through overhead piping to maintenance fluid fill station at the fueling station
Preventative Maintenance Shop	Used Oil	Three, 55-gallon drums	Will be replaced with new double walled 500-gallon AST.
	Used Oil	Double wall 500-gallon AST	
	Hydraulic Fluid	Two, 55-gallon drums	
Fuel Management Specialty Shop	Used Oil	Double wall 100-gallon AST	

2.2.6 Past Spill Occurrences

Over 100 gallons of an oil/water mixture was spilled from oil water separator located at fueling area. The event occurred on August 1, 2013 during reconstruction of the fueling station. The

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event was reported to the Surface Water Quality Bureau of the New Mexico Environment Department.

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Section 3
Discharge Prevention – Containment and Controls

The following sections discuss the secondary and general containment provisions and control devices utilized by Fleet Management to prevent discharge of petroleum products.

3.1 Containment for Bulk Storage Tanks and Containers *40 CFR 112.7(c) and 40 CFR 112.8(c)*

Methods of secondary containment at this facility utilized to prevent oil from reaching navigable waters include:

- Double-wall tanks
- Rigid plastic secondary containment pallets
- Plastic secondary containment sumps

The containment systems at the facility are capable of containing oil and are constructed so that any discharge from a primary containment system such as a tank, piping, or a drum will not escape the secondary containment system before cleanup occurs. Alarms and/or liquid level sensors for overfill protection are provided on the oil storage ASTs. Additionally leak detection monitoring is provided for ASTs. The following sections discuss the general requirements for secondary containment devices including materials of construction, capacity, and maintenance followed by a description of actual control measures in places were Fleet Management bulk storage containers are located.

3.1.1 General Secondary Guidelines

Materials of Construction

The material and construction of all bulk storage tanks and containers, both fixed and mobile at the facility are compatible with the material stored and conditions of storage such as temperature and pressure.

Secondary Containment Capacity

Both fixed and mobile bulk storage tanks and containers are either self-contained by double-wall design or have secondary containment systems engineered and constructed to be capable of containing oil so that any discharge from a primary tank will not escape the containment. Outdoor containment must allow for an additional storage volume (assumed 10 percent) accounting for precipitation. Additionally, secondary containment systems which contain multiple tanks are sized to hold the capacity of the single largest tank. Calculations of secondary containment capacities can be found in **Appendix D**.

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3.1.2 Secondary Containment and Control Devices

All fixed and portable bulk storage tanks and containers are required to have sized secondary containment. An inventory of all in-use fixed and portable bulk storage tanks and containers located at the facility along with the type of sized secondary containment is summarized in **Table 3-1** and discussed below.

Secondary Containment Provisions for ASTs

- The 500-gallon used oil tank located outdoors on the west side of the maintenance building is double-wall.
- The two 250-gallon used oil heater tanks located on the north and south ends of the maintenance building are double-wall.
- Multiple 55-gallon drums of oil and used oil located in the maintenance building are stored vertically on rigid plastic secondary containment pallets of adequate capacity to hold a minimum of 55-gallons.
- The two 250-gallon motor oil tanks located in the maintenance shop lube room are contained in 275-gallon plastic sumps.
- The 250-gallon ATF tank located in the maintenance shop lube room is contained in a 275-gallon plastic sump.
- The 500-gallon used oil tank located in the preventative maintenance shop is double-wall.
- Multiple 55-gallon drums of oil, waste oil, and hydraulic fluid located in the preventative maintenance shop are stored vertically on rigid plastic secondary containment pallets of adequate capacity to hold a minimum of 55-gallons.
- The 100-gallon used oil tank located on the west side of the fuel management special shop is double-wall.
- The 250-gallon motor oil tank located in the fueling station lube room is double-wall.
- The 250-gallon ATF tank located in the fueling station lube room is double-wall.
- The 264-gallon hydraulic fluid tank located in the fueling station lube room is double-wall.

3.1.3 Practicability of Sized Secondary Containment *40 CFR 112.7(d)*

CDM Smith has determined that Fleet Management is applying the use of containment and diversionary structures and the use of readily available spill prevention and cleanup equipment to prevent discharged oil from reaching navigable waters that is practicable and efficient once any items described in **Appendix B** have been addressed.

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3.2 Potential Discharge Volumes and Direction of Flow

40 CFR 112.7(b)

Table 3-1 describes potential spill/release scenarios, estimated release volume, probable flow direction of the spill, and the predicted spill rate for each oil storage container described in Section 3.1.2. The probable flow direction and storm drains locations are presented on **Appendix C**, **Figure 2.**

Table 3-1 Potential Spill/ Release Scenarios

Location/ Container	Spill Direction	Maximum Possible Spill Volume	Most Probable Spill Volume	Most Probable Spill Rate	Secondary Containment
Maintenance Building					
500-gallon used oil tank (outdoor)	Spills outside of building drain to the Pino Yards Detention Pond.	500 gallons	60 gallons	60 gpm (spill during transfer to bulk truck)	Tank is double-wall
250-gallon used oil tanks (used with oil heaters)	Spill contained inside building with drain to sanitary sewer with OWS.	250 gallons	60 gallons	60 gpm (spill during transfer to bulk truck)	Tanks are double-wall
55-gallon drums of oil and used oil	Spill contained inside building with drain to sanitary sewer with OWS. Spill outside of building drains to the Pino Yards Detention Pond.	55 gallons	5 gallons	23 gpm (drum overturned)	Minimum 55-gallon capacity rigid plastic secondary containment pallets
Maintenance Building Lube Room					
Two, 250-gallon oil tanks	Spill contained inside building with drain to sanitary sewer with OWS. Spill outside of building drains to Pino Yards Detention Pond.	250 gallons	60 gallons	60 gpm (spill during transfer from bulk truck)	275-gallon plastic sumps
250-gallon ATF tank.	Spill contained inside building with drain to sanitary sewer with OWS. Spill outside of building drains to Pino Yards Detention Pond.	250 gallons	60 gallons	60 gpm (spill during transfer from bulk truck)	275-gallon plastic sump
Fuel Station Lube Room					
Two 250-gallon oil tanks	Spill contained inside room with drain to sanitary sewer with OWS. Spill outside of building drains to Pino Yards Detention Pond.	250 gallons	60 gallons	60 gpm (spill during transfer from bulk truck)	Tanks are double-wall
264-gallon ATF tank	Spill contained inside room with drain to sanitary sewer with OWS. Spill outside of building drains to Pino Yards Detention	264 gallons	60 gallons	60 gpm (spill during transfer from bulk truck)	Tank is double-wall

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Table 3-1 Potential Spill/ Release Scenarios

Location/ Container	Spill Direction	Maximum Possible Spill Volume	Most Probable Spill Volume	Most Probable Spill Rate	Secondary Containment
	Pond.				
Preventative Maintenance Shop					
500-gallon used oil tank (outdoor)	Spill contained inside building with drain to sanitary sewer with OWS. Spill outside of building drains to the Pino Yards Detention Pond.	500 gallons	60 gallons	60 gpm (spill during transfer from bulk truck)	Tank is double-wall
55-gallon drums of used oil and hydraulic fluid	Spill contained inside building with drain to sanitary sewer with OWS.	55 gallons	5 gallons	23 gpm (drum overturned)	Minimum 55-gallon capacity rigid plastic secondary containment pallets
Fuel Management Specialty Shop					
100-gallon used oil tanks	Spill contained inside building with drain to sanitary sewer with OWS.	100 gallons	60 gallons	60 gpm (spill during transfer to bulk truck)	Tank is double-wall

3.3 Fueling Operations

Vehicle fueling is performed at the fueling station. The fueling station is covered and is sloped to drain to several inlets which discharge to an oil-water separator that outfalls to the sanitary sewer.

Only authorized City employees perform fueling of City vehicles at the fueling station. Before fueling, each driver is required to enter their personal identification code or card at the dispenser control panel. The control panel will only allow operation of the fuel pump for drivers with the appropriate identification.

3.4 Transfer Operations, Pumping and In-Plant Processes

40 CFR 112.8(d)

General containment is required for the most likely oil discharges from areas associated with all oil-filled operational and process equipment, transfer operations, pumping and in-plant processes.

All loading and unloading of petroleum products from tanker trucks will occur in designated areas. Contractors are responsible for the filling of and unloading of oil and ATF from the ASTs located in throughout the facility. Contractors are also responsible for the filling of USTs at the fueling station. Fleet Management personnel supervise the delivery of all oil, unleaded and diesel fuel products.

All oil filled equipment and above ground oil transfer piping is located inside the maintenance building and fuel station lube room. The building floors are sloped to floor drains that discharge

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to an oil-water separator and finally to the sanitary sewer. Additionally spill response materials are provided throughout the building to provide containment of any potential spills or leaks.

Refer to **Appendix I** and **Appendix C/Figure 2** for location of spill response equipment. In the event of a spill, on-site spill response equipment will be used to contain the spill to the extent possible and spill response procedures will be followed as outlined in **Section 5**. Integrity and leak testing of the bulk storage systems is conducted on a regular basis as further discussed in **Section 4**.

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Section 4
Discharge Prevention - Training, Inspection and Preventive Maintenance

4.1 Inspections, Tests and Records *40 CFR 112.7(e)*

Inspection and integrity testing of oil tanks are conducted in accordance with good engineering practices and in accordance with industry standards. Steel Tank Institute SP001 Standard for the Inspection of Aboveground Storage Tanks (September 2011) was used as the industry standard for developing tank inspection requirements in the SPCC Plan. Records related to inspections, testing, and training are contained in **Appendices E and F** of this SPCC Plan.

4.1.1 Inspections

Tank inspections and frequency will be assigned to each tank according to the Category that it falls under. This method of determining tank Categories is based on guidance in SP001. Categories 1 through 3 are defined as:

- Category 1 – ASTs with spill control and with continuous release detection method (CRDM).
- Category 2 – ASTs with spill control and without CRDM.
- Category 3 – ASTs without spill control and without CRDM.

Overfill prevention is defined as systems, procedures, or devices used to prevent liquid in ASTs from running over or spilling out of the AST during the filling process. A person who is physically present and in control of shutoff device during the entire tank filling process is an acceptable procedure to achieve overfill protection.

CRDM is defined as a means of detecting a release of liquid though inherent design. CRDM is passive, it does not require the use of power or sensors and typically includes release prevention barriers which divert leaks beneath a tank toward the perimeter of the AST so they can be easily seen or secondary containment tanks. Other methods of CRDM include double-wall or double-bottom ASTs.

Spill control is defined as a means of preventing a release of liquid to the environment, including adjoining properties and waterways. This plan refers to spill control as secondary containment.

Inspection frequency is dependent on the Category assigned to each tank.

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Table 4-1 Tank Category and Inspection Frequency

Container	Tank has Overfill Prevention?	Tank has CRDM?	Tank has Spill Control?	Assigned Category	Inspection Frequency
Maintenance Building					
500-gallon Used oil tank	Yes Fleet Management Personnel is present at all times during filling.	Yes Double-wall AST	Yes Tank has secondary containment.	1	Periodic AST Inspection
250-gallon Used oil tanks	Yes Fleet Management Personnel is present at all times during filling.	Yes Double-wall AST	Yes Tanks are located indoors and have secondary containment.	1	Periodic AST Inspection
Maintenance Building Lube Room					
250-gallon Oil tanks	Yes Fleet Management Personnel is present at all times during filling.	Yes 275-gallon sumps	Yes Tank is located indoors and has secondary containment.	1	Periodic AST Inspection
250-gallon ATF tank	Yes Fleet Management Personnel is present at all times during filling.	Yes 275-gallon sump	Yes Tank is located indoors and has secondary containment.	1	Periodic AST Inspection
Fueling Station Lube Room					
250-gallon Oil tank	Yes Fleet Management Personnel is present at all times during filling.	Yes Double-wall AST	Yes Tank is located indoors and has secondary containment.	1	Periodic AST Inspection
250-gallon ATF tank	Yes Fleet Management Personnel is present at all times during filling.	Yes Double-wall AST	Yes Tank is located indoors and has secondary containment.	1	Periodic AST Inspection
264-gallon Hydraulic fluid tank	Yes Fleet Management Personnel is present at all times during filling.	Yes Double-wall AST	Yes Tank is located indoors and has secondary containment.	1	Periodic AST Inspection
Preventative Maintenance Shop					
500-gallon Used oil tanks	Yes Fleet Management Personnel is present at all times during filling.	Yes Double-wall AST	Yes Tank is located indoors and has secondary containment.	1	Periodic AST Inspection
Fuel Management Specialty Shop					
100-gallon Used oil tanks	Yes Fleet Management Personnel is present at all times during filling.	Yes Double-wall AST	Yes Tank is located indoors and has secondary	1	Periodic AST Inspection

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Table 4-1 Tank Category and Inspection Frequency

Container	Tank has Overfill Prevention?	Tank has CRDM?	Tank has Spill Control?	Assigned Category	Inspection Frequency
			containment.		
Various Locations					
55-gallon drums (various)	-	-	-	N/A	Monthly Portable Container Inspection Checklist

At this facility, Portable Container Checklists and Periodic AST Inspections must be conducted **monthly**. An AST Record must be completed for each AST prior to the first inspection and the Annual Inspection Checklist must be completed **annually**.

Owners Inspector must be knowledgeable about storage facility operations, the type of AST and its associated components, and characteristics of the liquid stored. Owner's inspectors must also be familiar with pumping, piping, and valve operations of the AST system.

Required forms:

1. AST Record for each AST.
2. Monthly AST Inspection Checklist.
3. Annual AST Inspection Checklist.
4. Monthly Portable Container Inspection Checklist.

Inspection forms are located in **Appendix E**. Inspection records must be retained for a minimum of 36 months.

The Fleet Management Supervisor is a class A/B trained operator certified by the New Mexico Environment Department Petroleum Storage Tank Bureau, is familiar with tank operations and components, and meets the SP001 requirements for an Owner's Inspector.

Monthly AST Inspection Checklist requires inspection of the following areas:

- Tank containment: containment structure, primary tank, containment drain valves, and pathways and entry.
- Leak detection: tank, secondary containment, surrounding soil/floor, and interstice.
- Tank Equipment: valves, spill containment boxes on fill pipe, liquid level equipment, overfill equipment, and piping connections.
- Tank attachments and appurtenances: ladder and platform structure.
- Other conditions.

Annual AST Inspection Checklist should include all items listed above plus the following:

- Tank foundation and supports: foundation, concrete pad or ring wall, supports, water drainage, and tank grounding.
- Cathodic protection: galvanic cathodic protection system and impressed current system.

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- Tank Shell, Heads, and Roof: coating, steel condition, and roof slope.
- Tank equipment: vents, interstice leak detection equipment, strainers, filters, flame arrestors.
- Miscellaneous: insulation, electrical wiring, labels, and tags.

Portable Container Monthly Inspection Checklist includes the following:

- Containment storage area.
  - AST within designated storage area.
  - Debris, spills, or other fire hazards in containment or storage area.
  - Water in outdoor secondary containment.
  - Drain valves operable and in closed position.
  - Egress pathways clear and gates/doors operable.
- Leak detection.
  - Visible signs of leakage around the container or storage area.
- Container.
  - Noticeable container distortions, buckling, denting, or bulging.

4.1.2 Periodic Integrity Testing

40 CFR 112.8.C(6) *Test or inspect each aboveground container for integrity on a regular schedule and whenever you make material repairs. You must determine, in accordance with industry standards, the appropriate qualifications for personnel performing tests and inspections, the frequency and type of testing and inspections,* ***which take into account container size, configuration, and design*** *(such as containers that are: shop-built, field-erected, skid-mounted, elevated, equipped with a liner, double-walled, or partially buried). Examples of these integrity tests include, but are not limited to:* ***visual inspection****, hydrostatic testing, radiographic testing, ultrasonic testing, acoustic emissions testing, or other systems of non-destructive testing. You must keep comparison records and you must also inspect the container's supports and foundations.* ***In addition, you must frequently inspect the outside of the container for signs of deterioration, discharges, or accumulation of oil inside diked areas.*** *Records of inspections and tests kept under usual and customary business practices satisfy the recordkeeping requirements of this paragraph.*

In accordance with SP001, leak testing must be conducted for tanks of specific size and category. The size and category of tanks installed at Fleet Management, Category 1 and portable tanks, do not require leak testing.

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4.2 Personnel, Training and Discharge Prevention Procedures *40 CFR 112.7(f)*

The Fleet Management Supervisor is the facility designee and is responsible for oil discharge prevention, control, and response preparedness activities.

Upon employment, oil handling personnel are instructed in the proper operation and maintenance of equipment to prevent discharges, discharge procedure protocols, applicable pollution control laws, rules and regulations, general facility operations, and the content of this SPCC Plan.

Annual spill training is held by Fleet Management for all oil handling personnel. The training is aimed at ensuring continued understanding and adherence to the discharge prevention procedures presented in the SPCC Plan and generally follows the agenda in **Appendix F**. The training also highlights and describes known discharge events or failures, malfunctioning components, and recently implemented precautionary measures and best practices. The training includes inspection methods, oil spill prevention, containment, and cleanup methods.

Records of initial and routine annual discharge prevention training for each applicable employee shall be documented and maintained with this SPCC Plan for a period of three years.

4.3 Security *40 CFR 112.7(g)*

As seen in Figure 2 Site Plan, a guard shack located at the entrance to the Pino Yards complex that includes the Fleet Management maintenance building, fueling station, and parking areas limits access into the complex. There are no areas open for public access. Security is present on site 24 hours a day.

The following specific security measures are taken at Fleet Management:

1. Dispensing of fuel requires City personnel to swipe their badge and enter a person-specific pin number.
2. Dispensing pumps associated with diesel fuel and gasoline tanks are secured in an upright hung position to prevent leakage.
3. All loading/unloading of oil and used oil is conducted in the presence of Fleet Management personnel. Oil and used oil tanks are loaded/unloaded indoors with access through a doorway.
4. All oil storage/ handling areas have lighting commensurate with this type of facility to assist in discovery of discharges occurring during hours of darkness and occurring through acts of vandalism.

4.4 Conformance with Applicable Standards *40 CFR 112.7(j)*

Upon EPA finalizing and publishing of the MSGP 2013, the City will submit a Notice of Intent (NOI) under the National Pollutant Discharge Elimination System (NPDES) Multi-Sector General

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Permit (MSGP) for Storm Water Discharges Associated with Industrial Activity upon completion of the facility's SWPPP.

The installation, registration, operation, and maintenance of Fleet Management's ASTs and USTs are in accordance with NMED petroleum storage tank regulations. Used oil management is consistent with applicable requirements of the Resource Conservation and Recovery Act (RCRA).

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Section 5
Discharge Response

5.1 Discharge Response and Countermeasure *40 CFR 112.7(a)(3)*

Discharge prevention measures at the facility include training of personnel that handle and manage oil and other petroleum products in facility operations and maintenance of equipment to prevent and contain spills. This training is conducted annually and includes periodic briefings to ensure these facility personnel have an understanding of the SPCC Plan and its implementation.

Discharge prevention measures also include regular inspections of tanks, drums, secondary containment structures, piping, valving, alarm systems, drainage controls and measures. These prevention measures are discussed in detail in this SPCC Plan.

5.1.1 Discharge and Drainage Controls *40 CFR 112.7(a)(3)(iii)*

Secondary containment shall be provided for all 55-gallon drums or greater capacity containers located at the facility. A majority of oil-filled equipment or oil-product handling, transfer and storage areas are engineered to maintain a discharge in the immediate area or are designed to drain to an area that is capable of capturing the spilled substance. Oil handling and transfer areas without engineered containment are provided with the appropriate spill response materials to contain spills within these areas. Additionally, spill response materials are maintained at the facility where bulk oil storage containers are located and where applicable to address spills from oil handling, transfer operations. Use of curbing, berms, drain covers and absorbent materials are implemented at the facility to prevent a release of oil to navigable waters.

5.1.2 Spill Response and Countermeasure *40 CFR 112.7(a)(3)(iv)*

Pursuant to *40 CFR 112.21*, the Fleet Management Supervisor or designee must develop a training program for site personnel tailored specifically for tasks and activities conducted at the site. A suggested training program agenda is included in **Appendix F**, along with the regulatory requirements for this program. Training records are also included in **Appendix F**. **Appendix G** contains spill response procedures for oil spills and flammables for the facility.

The training program may also include site-specific drills and exercises to familiarize site personnel with proper materials handling procedures and spill response.

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Upon discovery of an oil spill, employees are instructed to immediately notify the Emergency Response Coordinator. Any response equipment and trained Fleet Management staff be utilized to contain the spill and prevent oil from discharging offsite that leads to a navigable waterway. Management or designee will determine if outside spill response contractors are necessary to remediate the spill. If management determines that outside resources are necessary, contacts for spill response contractors are listed in **Appendix H** of this SPCC Plan.

Any discharge will be contained and cleaned up using appropriate spill response equipment, which may include shovels, berms, and absorbent materials. A list of spill response equipment for the facility is presented in **Appendix I** of this Plan. Response equipment locations are identified to all facility personnel upon employment and during SPCC training and shown on the spill response plan. The supply of response equipment is replenished as needed.

5.1.3 Spill Response Procedures *40 CFR 112.7(a)(5)*

Fleet Management will respond immediately to spills. The facility personnel trained to respond to spills will perform clean-up activities. Spill response contractors will be responsible for cleanup activities when Fleet Management personnel do not have the necessary training, equipment, or materials to clean up the spill.

The facility's standard approach towards spill response is as follows:

1. Assess hazards.
    a. Assess the quantity and source of the substance spilled.
    b. Identify the methods of containment available to contain the spill.
    c. Immediately call 911 in the event of injury, fire, or potential fire, or a spill of a hazardous substance that gives rise to an emergency situation.
2. Immediately notify the spill management team Emergency Response Coordinator.
3. For all spills.
    a. Isolate the area.
    b. If safe, stop and contain the source of the spill.
    c. Shut down all equipment and ignition sources in the area.
    d. Deploy booms, damming materials and absorbents to contain the spill.
    e. Clean up spill to prevent injury or damage.
    f. Properly characterize and dispose of clean up materials.
4. For large or reportable spills.
    a. Immediately contact spill response Contractor if spill is more than Fleet Management can handle.
    b. Utilizing Contractor or Fleet Management staff, clean up spill to prevent injury or damage.

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c. Properly characterize and dispose of clean up materials.

d. Report spill in accordance with spill reporting instructions in Section 5.2.

5. Use all necessary equipment and labor at the facility's disposal, with proper regard to personnel safety, to minimize the amount of oil or fuel discharged and prevent it from entering a storm drain or contacting soil.

6. Once the discharge is stopped and contained, for minor spills use sorbent materials to absorb the spilled oil or fuel. All non-disposable equipment and structures contacting the spilled oil or fuel will be decontaminated. Oil or fuel-saturated absorbent material, contaminated soil substrate, and collected decontamination media will be disposed according to Federal, State and local regulations.

7. For a major spill, the Emergency Response Coordinator will notify the appropriate emergency response entities to clean-up the spill.

8. The Emergency Response Coordinator will determine if a spill requires reporting to the EPA.

9. In the event a spill of any quantity leaves the property and/or reaches a storm drain:

   a. The Emergency Response Coordinator will immediately notify the National Response Center, New Mexico Environment Department, and local agencies listed on the Emergency Contact list **Appendix H** of this SPCC Plan.

   b. Notify the Spill Response Contractor if the Emergency Response Coordinator or designee considers it necessary.

   c. Complete all environmental cleanup of oil contaminated surfaces or soil and dispose of material appropriately.

   d. Restore impacted habitat as necessary.

10. The Emergency Response Coordinator shall notify the City of Albuquerque Storm Drainage Design manager in the event of a reportable spill.

5.2 Spill Reporting *40 CFR 112.7(a)(4)*

A spill or discharge includes, but is not limited to, any spilling, leaking, pouring, emitting, emptying, or dumping of oil in any quantity. All reportable spill events will be documented, which will facilitate the proper reporting of a discharge to applicable individuals and agencies. The Emergency Response Coordinator will determine if the spill meets reporting requirements described in this Plan.

Oil spill response information is presented in the Spill Response Plan located in **Appendix G** and appropriate sections of this SPCC Plan.

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5.2.1 Notification Procedures in Case of a Release

In case of **ANY** oil or hazardous material spill at the facility notify the Emergency Response Coordinator and/or emergency response immediately:

- **EMERGENCY: Call 911**
- **NON EMERGENCY: Call Martin Raimondi 505-903-9383**

In case of a spill and depending upon the situation, the following emergency persons and agencies can be contacted by the Emergency Response Coordinator, or designee:

- NMED Spill Report: Emergency (505) 827-9329 / Non-Emergency (866)428-6535.
- National Response Center: 1-800-424-8802.
- Cleanup Contractors: Refer to contractor listing in **Appendix H.**

Spills exceeding 25 gallons or that migrate outside the facility property must be reported as soon as possible, but not longer than 24 hours.

5.2.2 Federal Reporting Requirements

Any employee who witnesses a spill will immediately report the spill to the facility Emergency Response Coordinator. If the spill results in any oil or hazardous material entering a waterway, the Emergency Response Coordinator will then notify Federal agencies as required.

Reportable quantities of substances listed under the *Comprehensive Environmental Response, Compensation, and Liability Act (40 CFR 102)* is included in **Appendix A** (*Designation, Reportable Quantities, and Notification – 40 CFR 302*).

5.2.3 State Reporting Requirements

The Emergency Response Coordinator will report spills within 24 hours to New Mexico Environment Department. Any spill in a quantity and of a substance that may with reasonable probability injure or be detrimental to human health, animal or plant life, or property; or may unreasonable interfere with the public welfare or the use of property must be reported to the NMED Surface Water Quality Bureau. The following information must be reported to the NMED:

1. The name, address, and telephone number of the person or persons in charge of the facility, as well as of the owner and/or operator of the facility.
2. The name and address of the facility.
3. The date, time, location, and duration of the discharge.
4. The source and cause of discharge.
5. A description of the discharge, including its chemical composition.
6. The estimated volume of the discharge.

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7. Any actions taken to mitigate immediate damage from the discharge.

5.3 Discharge Notification

5.3.1 Written Reports *40 CFR 112.4*

A written report is required to be sent to the Regional Administrator of the U.S. EPA and appropriate state agency(s) in charge of oil pollution control activities within 60 days of any spill event when:

1. A discharge of over 1,000 gallons of oil occurs in a single discharge as described in *40 CFR Part 112.1(b)*.

2. It is the second discharge as described in *40 CFR Part 112.1 (b)* occurring within a twelve-month period of more than 42 gallons of oil.

5.3.2 Emergency Contact List *40 CFR 112.7(a)(3)*

All emergency contacts including emergency contact names and telephone numbers for facility response personnel, division environmental personnel, appropriate agencies, and oil spill response contractors are listed in **Appendix H** of this SPCC Plan.

5.3.3 Certification of the Applicability of the Substantial Harm Criteria Checklist *40 CFR 112.20(e)*

Section *112.20(e)* of the facility response plan regulation requires that all facilities regulated by *40 CFR Part 112* conduct an initial screening to determine whether they are required to develop a facility response plan. The criteria in this checklist can be found in *40 CFR 112.20(f)(1)*. Facilities should include this form with their SPCC Plan and is included in **Appendix J**.

5.4 Waste Disposal

5.4.1 Recovery and Disposal of Spilled Material *40 CFR 112.7(a)(3)*

The disposal of all recovered material, contaminated soil, used absorbent materials and other spill materials will be coordinated by the Emergency Response Coordinator according to state and federal regulations. If facility personnel contained the spill, immediate contact with the Emergency Response Coordinator must be made so that proper and timely disposal can occur. After spill response is complete, all spill equipment that can be reused will be decontaminated. Materials that cannot be reused and which have been contaminated will be managed for proper disposal. Small quantities of used adsorbent will be disposed of with normal solid waste disposal. Large quantities of adsorbent or petroleum contaminated soil (PCS) will be disposed of by an emergency cleanup contractor. PCS will be disposed of at the Cerro Colorado Landfill. The Emergency Response Coordinator, or designee, will ensure that the waste is labeled, manifested, transported, and disposed of properly.

5.5 Recordkeeping

As discussed in Section 1, the facility is required to update this SPCC plan if regulations change and within six months after modification occurs. Additionally, the SPCC plan should be reviewed

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every five years. A compliance inspection form is included in **Appendix B** for Fleet Management's use in scheduling reviews. For compliance and for ongoing evaluation and improvement of the SPCC plan the facility should maintain records related to SPCC activities.

Records kept as part of the SPCC plan include:

- Inspection/testing reports
- SPCC plan review dates/information
- Details of tank and secondary containment construction (including volumes)
- Documentation discussing changes or modifications implemented to improve the SPCC plan
- Training records
- Drainage of secondary containment areas
- Spill events
- Copies of records shall be kept in the appropriate appendix for a period of three years

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Appendix A
SPCC Plan Regulations 40 CFR 112; Reportable Quantities 40 CFR 302

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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.

[61 FR 7421, Feb. 28, 1996]

§ 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 control number 2050–0046)

[52 FR 10719, Apr. 2, 1987. Redesignated and amended at 61 FR 7421, Feb. 28, 1996; 61 FR 14032, Mar. 29, 1996]

PART 112—OIL POLLUTION PREVENTION

Sec.

Subpart A—Applicability, Definitions, and General Requirements For All Facilities and All Types of Oils

112.1 General applicability.
112.2 Definitions.
112.3 Requirement to prepare and implement a Spill Prevention, Control, and Countermeasure Plan.
112.4 Amendment of Spill Prevention, Control, and Countermeasure Plan by Regional Administrator.
112.5 Amendment of Spill Prevention, Control, and Countermeasure Plan by owners or operators.
112.6 [Reserved].
112.7 General requirements for Spill Prevention, Control, and Countermeasure Plans.

Subpart B—Requirements for Petroleum Oils and Non-Petroleum Oils, Except Animal Fats and Oils and Greases, and Fish and Marine Mammal Oils; and Vegetable Oils (Including Oils from Seeds, Nuts, Fruits, and Kernels)

112.8 Spill Prevention, Control, and Countermeasure Plan requirements for onshore facilities (excluding production facilities).
112.9 Spill Prevention, Control, and Countermeasure Plan requirements for onshore oil production facilities.
112.10 Spill Prevention, Control, and Countermeasure Plan requirements for onshore oil drilling and workover facilities.
112.11 Spill Prevention, Control, and Countermeasure Plan requirements for offshore oil drilling, production, or workover facilities.

Subpart C—Requirements for Animal Fats and Oils and Greases, and Fish and Marine Mammal Oils; and for Vegetable Oils, Including Oils from Seeds, Nuts, Fruits and Kernels

112.12 Spill Prevention, Control, and Countermeasure Plan requirements for onshore facilities (excluding production facilities).
112.13 Spill Prevention, Control, and Countermeasure Plan requirements for onshore oil production facilities.

112.14 Spill Prevention, Control, and Countermeasure Plan requirements for onshore oil drilling and workover facilities.
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APPENDIX F TO PART 112—FACILITY–SPECIFIC RESPONSE PLAN

AUTHORITY: 33 U.S.C. 1251 *et seq.*; 33 U.S.C. 2720; E.O. 12777 (October 18, 1991), 3 CFR, 1991 Comp., p. 351.

SOURCE: 38 FR 34165, Dec. 11, 1973, unless otherwise noted.

EDITORIAL NOTE: Nomenclature changes to part 112 appear at 65 FR 40798, June 30, 2000.

Subpart A—Applicability, Definitions, and General Requirements for All Facilities and All Types of Oils

SOURCE: 67 FR 47140, July 17, 2002, unless otherwise noted.

§ 112.1 General applicability.

(a)(1) This part establishes procedures, methods, equipment, and other requirements 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, or into or upon the waters of the contiguous zone, or in connection with activities under the Outer Continental Shelf Lands Act or the Deepwater Port Act of 1974, or that may affect natural resources belonging to, appertaining to, or under the exclusive management authority of the United States (including resources under the Magnuson Fishery Conservation and Management Act).

(2) As used in this part, words in the singular also include the plural and words in the masculine gender also include the feminine and vice versa, as the case may require.

(b) Except as provided in paragraph (d) of this section, this part applies to any owner or operator of a non-transportation-related onshore or offshore facility engaged in drilling, producing, gathering, storing, processing, refining, transferring, distributing, using, or consuming oil and oil products, which due to its location, could reasonably be expected to discharge oil in quantities that may be harmful, as described in part 110 of this chapter, into or upon the navigable waters of the United States or adjoining shorelines, or into or upon the waters of the contiguous zone, or in connection with activities under the Outer Continental Shelf Lands Act or the Deepwater Port Act of 1974, or that may affect natural resources belonging to, appertaining to, or under the exclusive management authority of the United States (including resources under the Magnuson Fishery Conservation and Management Act) that has oil in:

(1) Any aboveground container;

(2) Any completely buried tank as defined in § 112.2;

(3) Any container that is used for standby storage, for seasonal storage, or for temporary storage, or not otherwise ''permanently closed'' as defined in § 112.2;

(4) Any ''bunkered tank'' or ''partially buried tank'' as defined in § 112.2, or any container in a vault, each of which is considered an aboveground storage container for purposes of this part.

(c) As provided in section 313 of the Clean Water Act (CWA), departments, agencies, and instrumentalities of the Federal government are subject to this part to the same extent as any person.

(d) Except as provided in paragraph (f) of this section, this part does not apply to:

(1) The owner or operator of any facility, equipment, or operation that is not subject to the jurisdiction of the Environmental Protection Agency (EPA) under section 311(j)(1)(C) of the CWA, as follows:

(i) Any onshore or offshore facility, that due to its location, could not reasonably be expected to have a discharge as described in paragraph (b) of this section. This determination must be based solely upon consideration of the geographical and location aspects of the facility (such as proximity to navigable waters or adjoining shorelines, land contour, drainage, etc.) and must exclude consideration of man-made features such as dikes, equipment or other structures, which may serve to restrain, hinder, contain, or otherwise prevent a discharge as described in paragraph (b) of this section.

(ii) Any equipment, or operation of a vessel or transportation-related onshore or offshore facility which is subject to the authority and control of the U.S. Department of Transportation, as defined in the Memorandum of Understanding between the Secretary of Transportation and the Administrator of EPA, dated November 24, 1971 (Appendix A of this part).

(iii) Any equipment, or operation of a vessel or onshore or offshore facility which is subject to the authority and control of the U.S. Department of Transportation or the U.S. Department of the Interior, as defined in the Memorandum of Understanding between the Secretary of Transportation, the Secretary of the Interior, and the Administrator of EPA, dated November 8, 1993 (Appendix B of this part).

(2) Any facility which, although otherwise subject to the jurisdiction of EPA, meets both of the following requirements:

(i) The completely buried storage capacity of the facility is 42,000 gallons or less of oil. For purposes of this exemption, the completely buried storage capacity of a facility excludes the capacity of a completely buried tank, as defined in § 112.2, and connected underground piping, underground ancillary equipment, and containment systems, that is currently subject to all of the technical requirements of part 280 of this chapter or all of the technical requirements of a State program approved under part 281 of this chapter. The completely buried storage capacity of a facility also excludes the capacity of a container that is ''permanently closed,'' as defined in § 112.2.

(ii) The aggregate aboveground storage capacity of the facility is 1,320 gallons or less of oil. For purposes of this exemption, only containers of oil with a capacity of 55 gallons or greater are counted. The aggregate aboveground storage capacity of a facility excludes the capacity of a container that is ''permanently closed,'' as defined in § 112.2.

(3) Any offshore oil drilling, production, or workover facility that is subject to the notices and regulations of the Minerals Management Service, as specified in the Memorandum of Understanding between the Secretary of Transportation, the Secretary of the Interior, and the Administrator of EPA, dated November 8, 1993 (Appendix B of this part).

(4) Any completely buried storage tank, as defined in § 112.2, and connected underground piping, underground ancillary equipment, and containment systems, at any facility, that is subject to all of the technical requirements of part 280 of this chapter or a State program approved under part 281 of this chapter, except that such a tank must be marked on the facility diagram as provided in § 112.7(a)(3), if the facility is otherwise subject to this part.

(5) Any container with a storage capacity of less than 55 gallons of oil.

(6) Any facility or part thereof used exclusively for wastewater treatment and not used to satisfy any requirement of this part. The production, recovery, or recycling of oil is not wastewater treatment for purposes of this paragraph.

(e) This part establishes requirements for the preparation and implementation of Spill Prevention, Control, and Countermeasure (SPCC) Plans. SPCC Plans are designed to complement existing laws, regulations, rules, standards, policies, and procedures pertaining to safety standards, fire prevention, and pollution prevention rules. The purpose of an SPCC

Plan is to form a comprehensive Federal/State spill prevention program that minimizes the potential for discharges. The SPCC Plan must address all relevant spill prevention, control, and countermeasures necessary at the specific facility. 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.

(f) Notwithstanding paragraph (d) of this section, the Regional Administrator may require that the owner or operator of any facility subject to the jurisdiction of EPA under section 311(j) of the CWA prepare and implement an SPCC Plan, or any applicable part, to carry out the purposes of the CWA.

(1) Following a preliminary determination, the Regional Administrator must provide a written notice to the owner or operator stating the reasons why he must prepare an SPCC Plan, or applicable part. The Regional Administrator must send such notice to the owner or operator by certified mail or by personal delivery. If the owner or operator is a corporation, the Regional Administrator must also mail a copy of such notice to the registered agent, if any and if known, of the corporation in the State where the facility is located.

(2) Within 30 days of receipt of such written notice, the owner or operator may provide information and data and may consult with the Agency about the need to prepare an SPCC Plan, or applicable part.

(3) Within 30 days following the time under paragraph (b)(2) of this section within which the owner or operator may provide information and data and consult with the Agency about the need to prepare an SPCC Plan, or applicable part, the Regional Administrator must make a final determination regarding whether the owner or operator is required to prepare and implement an SPCC Plan, or applicable part. The Regional Administrator must send the final determination to the owner or operator by certified mail or by personal delivery. If the owner or operator is a corporation, the Regional Administrator must also mail a copy of the final determination to the registered agent, if any and if known, of the corporation in the State where the facility is located.

(4) If the Regional Administrator makes a final determination that an SPCC Plan, or applicable part, is necessary, the owner or operator must prepare the Plan, or applicable part, within six months of that final determination and implement the Plan, or applicable part, as soon as possible, but not later than one year after the Regional Administrator has made a final determination.

(5) The owner or operator may appeal a final determination made by the Regional Administrator requiring preparation and implementation of an SPCC Plan, or applicable part, under this paragraph. The owner or operator must make the appeal to the Administrator of EPA within 30 days of receipt of the final determination under paragraph (b)(3) of this section from the Regional Administrator requiring preparation and/or implementation of an SPCC Plan, or applicable part. The owner or operator must send a complete copy of the appeal to the Regional Administrator at the time he makes the appeal to the Administrator. The appeal must contain a clear and concise statement of the issues and points of fact in the case. In the appeal, the owner or operator may also provide additional information. The additional information may be from any person. The Administrator may request additional information from the owner or operator. The Administrator must render a decision within 60 days of receiving the appeal or additional information submitted by the owner or operator and must serve the owner or operator with the decision made in the appeal in the manner described in paragraph (f)(1) of this section.

§ 112.2 Definitions.

For the purposes of this part:

Adverse weather means weather conditions that make it difficult for response equipment and personnel to clean up or remove spilled oil, and that must 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 is intended to function.

Alteration means any work on a container involving cutting, burning, welding, or heating operations that changes the physical dimensions or configuration of the container.

Animal fat means a non-petroleum oil, fat, or grease of animal, fish, or marine mammal origin.

Breakout tank means a container used to relieve surges in an oil pipeline system or to receive and store oil transported by a pipeline for reinjection and continued transportation by pipeline.

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

Bunkered tank means a container constructed or placed in the ground by cutting the earth and re-covering the container in a manner that breaks the surrounding natural grade, or that lies above grade, and is covered with earth, sand, gravel, asphalt, or other material. A bunkered tank is considered an aboveground storage container for purposes of this part.

Completely buried tank means any container completely below grade and covered with earth, sand, gravel, asphalt, or other material. Containers in vaults, bunkered tanks, or partially buried tanks are considered aboveground storage containers for purposes of this part.

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 CWA.

Contiguous zone means the zone established by the United States under Article 24 of the Convention of the Territorial Sea and Contiguous Zone, that is contiguous to the territorial sea and that extends nine miles seaward from the outer limit of the territorial area.

Contract or other approved means means:

(1) A written contractual agreement with an oil spill removal organization 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 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 area; and/or

(4) Any other specific arrangement 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 of oil, but excludes discharges in compliance with a permit under section 402 of the CWA; discharges resulting from circumstances identified, reviewed, and made a part of the public record with respect to a permit issued or modified under section 402 of the CWA, and subject to a condition in such permit; or continuous or anticipated intermittent discharges from a point source, identified in a permit or permit application under section 402 of the CWA, that are caused by events occurring within the scope of relevant operating or treatment systems. For purposes of this part, the term discharge shall not include any discharge of oil that is authorized by a permit issued under section 13 of the River and Harbor Act of 1899 (33 U.S.C. 407).

Facility means any mobile or fixed, onshore or offshore building, structure, installation, equipment, pipe, or pipeline (other than a vessel or a public vessel) used in oil well drilling operations, oil production, oil refining, oil storage, oil gathering, oil processing, oil transfer, oil distribution, and waste treatment, or in which oil is used, as

described in Appendix A to this part. The boundaries of a facility depend on several site-specific factors, including, but not limited to, the ownership or operation of buildings, structures, and equipment on the same site and the types of activity at the site.

Fish and wildlife and sensitive environments means areas that may be identified by 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 or threatened species, wilderness and natural resource areas, marine sanctuaries and estuarine reserves, conservation areas, preserves, wildlife areas, wildlife refuges, wild and scenic rivers, recreational areas, national forests, Federal and State lands that are research national areas, heritage program areas, land trust areas, and historical and archaeological sites and parks. These areas may also include unique habitats such as aquaculture 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, or exposure to a product of reactions resulting from a discharge.

Maximum extent practicable means within 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 includes 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.

Navigable waters means the waters of the United States, including the territorial seas.

(1) The term includes:

(i) All waters that are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters subject to the ebb and flow of the tide;

(ii) All interstate waters, including interstate wetlands;

(iii) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation, or destruction of which could affect interstate or foreign commerce including any such waters:

(A) That are or could be used by interstate or foreign travelers for recreational or other purposes; or

(B) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or,

(C) That are or could be used for industrial purposes by industries in interstate commerce;

(iv) All impoundments of waters otherwise defined as waters of the United States under this section;

(v) Tributaries of waters identified in paragraphs (1)(i) through (iv) of this definition;

(vi) The territorial sea; and

(vii) Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraph (1) of this definition.

(2) Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of the CWA (other than cooling ponds which also meet the criteria of this definition) are not waters of the United States. 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 CWA, the final authority regarding CWA jurisdiction remains with EPA.

Non-petroleum oil means oil of any kind that is not petroleum-based, including but not limited to: Fats, oils, and greases of animal, fish, or marine mammal origin; and vegetable oils, including oils from seeds, nuts, fruits, and kernels.

Offshore facility means any facility of any kind (other than a vessel or public

vessel) located in, on, or under any of the navigable waters of the United States, and any facility of any kind that is subject to the jurisdiction of the United States and is located in, on, or under any other waters.

Oil means oil of any kind or in any form, including, but not limited to: fats, oils, or greases of animal, fish, or marine mammal origin; vegetable oils, including oils from seeds, nuts, fruits, or kernels; and, other oils and greases, including petroleum, fuel oil, sludge, synthetic oils, mineral oils, oil refuse, or 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.

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 or maintained the facility immediately prior to such abandonment.

Partially buried tank means a storage container that is partially inserted or constructed in the ground, but not entirely below grade, and not completely covered with earth, sand, gravel, asphalt, or other material. A partially buried tank is considered an aboveground storage container for purposes of this part.

Permanently closed means any container or facility for which:

(1) All liquid and sludge has been removed from each container and connecting line; and

(2) All connecting lines and piping have been disconnected from the container and blanked off, all valves (except for ventilation valves) have been closed and locked, and conspicuous signs have been posted on each container stating that it is a permanently closed container and noting the date of closure.

Person includes an individual, firm, corporation, association, or partnership.

Petroleum oil means petroleum in any form, including but not limited to crude oil, fuel oil, mineral oil, sludge, oil refuse, and refined products.

Production facility means all structures (including but not limited to wells, platforms, or storage facilities), piping (including but not limited to flowlines or gathering lines), or equipment (including but not limited to workover equipment, separation equipment, or auxiliary non-transportation-related equipment) used in the production, extraction, recovery, lifting, stabilization, separation or treating of oil, or associated storage or measurement, and located in a single geographical oil or gas field operated by a single operator.

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

Repair means any work necessary to maintain or restore a container to a condition suitable for safe operation, other than that necessary for ordinary, day-to-day maintenance to maintain the functional integrity of the container and that does not weaken the container.

Spill Prevention, Control, and Countermeasure Plan; SPCC Plan, or Plan means the document required by § 112.3 that details the equipment, workforce, procedures, and steps to prevent, control, and provide adequate countermeasures to a discharge.

Storage capacity of a container means the shell capacity of the container.

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, (Appendix A of this part).

United States means the States, the District of Columbia, the Commonwealth of Puerto Rico, the Commonwealth of the Northern Mariana Islands, Guam, American Samoa, the

U.S. Virgin Islands, and the Pacific Island Governments.

Vegetable oil means a non-petroleum oil or fat of vegetable origin, including but not limited to oils and fats derived from plant seeds, nuts, fruits, and kernels.

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.

Wetlands means those areas that are inundated or saturated by surface or groundwater at a frequency or 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 playa lakes, swamps, marshes, bogs, and similar areas such as sloughs, prairie potholes, wet meadows, prairie river overflows, mudflats, and natural ponds.

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 Requirement to prepare and implement a Spill Prevention, Control, and Countermeasure Plan.

The owner or operator of an onshore or offshore facility subject to this section must prepare a Spill Prevention, Control, and Countermeasure Plan (hereafter ''SPCC Plan'' or ''Plan),'' in writing, and in accordance with § 112.7, and any other applicable section of this part.

(a) If your onshore or offshore facility was in operation on or before August 16, 2002, you must maintain your Plan, but must amend it, if necessary to ensure compliance with this part, on or before August 17, 2004, and must implement the amended Plan as soon as possible, but not later than February 18, 2005. If your onshore or offshore facility becomes operational after August 16, 2002, through February 18, 2005, and could reasonably be expected to have a discharge as described in § 112.1(b), you must prepare a Plan on or before February 18, 2005 , and fully implement it as soon as possible, but not later than February 18, 2005.

(b) If you are the owner or operator of an onshore or offshore facility that becomes operational after February 18, 2005, and could reasonably be expected to have a discharge as described in § 112.1(b), you must prepare and implement a Plan before you begin operations.

(c) If you are the owner or operator of an onshore or offshore mobile facility, such as an onshore drilling or workover rig, barge mounted offshore drilling or workover rig, or portable fueling facility, you must prepare, implement, and maintain a facility Plan as required by this section. This provision does not require that you prepare a new Plan each time you move the facility to a new site. The Plan may be a general plan. When you move the mobile or portable facility, you must locate and install it using the discharge prevention practices outlined in the Plan for the facility. You may not operate a mobile or portable facility subject to this part unless you have implemented the Plan. The Plan is applicable only while the facility is in a fixed (non-transportation) operating mode.

(d) A licensed Professional Engineer must review and certify a Plan for it to be effective to satisfy the requirements of this part.

(1) By means of this certification the Professional Engineer attests:

(i) That he is familiar with the requirements of this part ;

(ii) That he or his agent has visited and examined the facility;

(iii) That the Plan has been prepared in accordance with good engineering practice, including consideration of applicable industry standards, and with the requirements of this part;

(iv) That procedures for required inspections and testing have been established; and

(v) That the Plan is adequate for the facility.

(2) Such certification shall in no way relieve the owner or operator of a facility of his duty to prepare and fully implement such Plan in accordance with the requirements of this part.

(e) If you are the owner or operator of a facility for which a Plan is required under this section, you must:

(1) Maintain a complete copy of the Plan at the facility if the facility is

normally attended at least four hours per day, or at the nearest field office if the facility is not so attended, and

(2) Have the Plan available to the Regional Administrator for on-site review during normal working hours.

(f) *Extension of time.* (1) The Regional Administrator may authorize an extension of time for the preparation and full implementation of a Plan, or any amendment thereto, beyond the time permitted for the preparation, implementation, or amendment of a Plan under this part, when he finds that the owner or operator of a facility subject to this section, cannot fully comply with the requirements 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 his agents or employees.

(2) If you are an owner or operator seeking an extension of time under paragraph (f)(1) of this section, you may submit a written extension request to the Regional Administrator. Your request must include:

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

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

(iii) 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 you may present additional oral or written statements in support of your extension request.

(3) The submission of a written extension request under paragraph (f)(2) of this section does not relieve you of your obligation to comply with the requirements of this part. The Regional Administrator may request a copy of your Plan to evaluate the extension request. When the Regional Administrator authorizes an extension of time for particular equipment or other specific aspects of the Plan, such extension does not affect your obligation to comply with the requirements related to other equipment or other specific aspects of the Plan for which the Regional Administrator has not expressly authorized an extension.

[67 FR 47140, July 17, 2002, as amended at 68 FR 1351, Jan. 9, 2003; 68 FR 18894, Apr. 17, 2003]

§ 112.4 Amendment of Spill Prevention, Control, and Countermeasure Plan by Regional Administrator.

If you are the owner or operator of a facility subject to this part, you must:

(a) Notwithstanding compliance with § 112.3, whenever your facility has discharged more than 1,000 U.S. gallons of oil in a single discharge as described in § 112.1(b), or discharged more than 42 U.S. gallons of oil in each of two discharges as described in § 112.1(b), occurring within any twelve month period, submit the following information to the Regional Administrator within 60 days from the time the facility becomes subject to this section:

(1) Name of the facility;

(2) Your name;

(3) Location of the facility;

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

(5) Corrective action and countermeasures you have taken, including a description of equipment repairs and replacements;

(6) An adequate description of the facility, including maps, flow diagrams, and topographical maps, as necessary;

(7) The cause of such discharge as described in § 112.1(b), including a failure analysis of the system or subsystem in which the failure occurred;

(8) Additional preventive measures you have taken or contemplated to minimize the possibility of recurrence; and

(9) Such other information as the Regional Administrator may reasonably require pertinent to the Plan or discharge.

(b) Take no action under this section until it applies to your facility. This section does not apply until the expiration of the time permitted for the initial preparation and implementation of the Plan under § 112.3, but not including any amendments to the Plan.

(c) Send to the appropriate agency or agencies in charge of oil pollution control activities in the State in which the facility is located a complete copy of

all information you provided to the Regional Administrator under paragraph (a) of this section. Upon receipt of the information such State agency or agencies may conduct a review and make recommendations to the Regional Administrator as to further procedures, methods, equipment, and other requirements necessary to prevent and to contain discharges from your facility.

(d) Amend your Plan, if after review by the Regional Administrator of the information you submit under paragraph (a) of this section, or submission of information to EPA by the State agency under paragraph (c) of this section, or after on-site review of your Plan, the Regional Administrator requires that you do so. The Regional Administrator may require you to amend your Plan if he finds that it does not meet the requirements of this part or that amendment is necessary to prevent and contain discharges from your facility.

(e) Act in accordance with this paragraph when the Regional Administrator proposes by certified mail or by personal delivery that you amend your SPCC Plan. If the owner or operator is a corporation, he must also notify by mail the registered agent of such corporation, if any and if known, in the State in which the facility is located. The Regional Administrator must specify the terms of such proposed amendment. Within 30 days from receipt of such notice, you may submit written information, views, and arguments on the proposed amendment. After considering all relevant material presented, the Regional Administrator must either notify you of any amendment required or rescind the notice. You must amend your Plan as required within 30 days after such notice, unless the Regional Administrator, for good cause, specifies another effective date. You must implement the amended Plan as soon as possible, but not later than six months after you amend your Plan, unless the Regional Administrator specifies another date.

(f) If you appeal a decision made by the Regional Administrator requiring an amendment to an SPCC Plan, send the appeal to the EPA Administrator in writing within 30 days of receipt of the notice from the Regional Administrator requiring the amendment under paragraph (e) of this section. You must send a complete copy of the appeal to the Regional Administrator at the time you make the appeal. The appeal must contain a clear and concise statement of the issues and points of fact in the case. It may also contain additional information from you, or from any other person. The EPA Administrator may request additional information from you, or from any other person. The EPA Administrator must render a decision within 60 days of receiving the appeal and must notify you of his decision.

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

If you are the owner or operator of a facility subject to this part, you must:

(a) Amend the SPCC Plan for your facility in accordance with the general requirements in § 112.7, and with any specific section of this part applicable to your facility, when there is a change in the facility design, construction, operation, or maintenance that materially affects its potential for a discharge as described in § 112.1(b). Examples of changes that may require amendment of the Plan include, but are not limited to: commissioning or decommissioning containers; replacement, reconstruction, or movement of containers; reconstruction, replacement, or installation of piping systems; construction or demolition that might alter secondary containment structures; changes of product or service; or revision of standard operation or maintenance procedures at a facility. An amendment made under this section must be prepared within six months, and implemented as soon as possible, but not later than six months following preparation of the amendment.

(b) Notwithstanding compliance with paragraph (a) of this section, complete a review and evaluation of the SPCC Plan at least once every five years from the date your facility becomes subject to this part; or, if your facility was in operation on or before August 16, 2002, five years from the date your last review was required under this part. As a result of this review and evaluation, you must amend your

SPCC Plan within six months of the review to include more effective prevention and control technology if the technology has been field-proven at the time of the review and will significantly reduce the likelihood of a discharge as described in § 112.1(b) from the facility. You must implement any amendment as soon as possible, but not later than six months following preparation of any amendment. You must document your completion of the review and evaluation, and must sign a statement as to whether you will amend the Plan, either at the beginning or end of the Plan or in a log or an appendix to the Plan. The following words will suffice, ''I have completed review and evaluation of the SPCC Plan for (name of facility) on (date), and will (will not) amend the Plan as a result.''

(c) Have a Professional Engineer certify any technical amendment to your Plan in accordance with § 112.3(d).

§ 112.6 [Reserved]

§ 112.7 General requirements for Spill Prevention, Control, and Countermeasure Plans.

If you are the owner or operator of a facility subject to this part you must prepare a Plan in accordance with good engineering practices. The Plan must have the full approval of management at a level of authority to commit the necessary resources to fully implement the Plan. You must prepare the Plan in writing. If you do not follow the sequence specified in this section for the Plan, you must prepare an equivalent Plan acceptable to the Regional Administrator that meets all of the applicable requirements listed in this part, and you must supplement it with a section cross-referencing the location of requirements listed in this part and the equivalent requirements in the other prevention plan. If the Plan calls for additional facilities or procedures, methods, or equipment not yet fully operational, you must discuss these items in separate paragraphs, and must explain separately the details of installation and operational start-up. As detailed elsewhere in this section, you must also:

(a)(1) Include a discussion of your facility's conformance with the requirements listed in this part.

(2) Comply with all applicable requirements listed in this part. Your Plan may deviate from the requirements in paragraphs (g), (h)(2) and (3), and (i) of this section and the requirements in subparts B and C of this part, except the secondary containment requirements in paragraphs (c) and (h)(1) of this section, and §§ 112.8(c)(2),112.8(c)(11), 112.9(c)(2), 112.10(c), 112.12(c)(2), 112.12(c)(11),112.13(c)(2), and 112.14(c), where applicable to a specific facility, if you provide equivalent environmental protection by some other means of spill prevention, control, or countermeasure. Where your Plan does not conform to the applicable requirements in paragraphs (g), (h)(2) and (3), and (i) of this section, or the requirements of subparts B and C of this part, except the secondary containment requirements in paragraphs (c) and (h)(1) of this section, and §§ 112.8(c)(2), 112.8(c)(11), 112.9(c)(2), 112.10(c), 112.12(c)(2), 112.12(c)(11), 112.13(c)(2), and 112.14(c), you must state the reasons for nonconformance in your Plan and describe in detail alternate methods and how you will achieve equivalent environmental protection. If the Regional Administrator determines that the measures described in your Plan do not provide equivalent environmental protection, he may require that you amend your Plan, following the procedures in § 112.4(d) and (e).

(3) Describe in your Plan the physical layout of the facility and include a facility diagram, which must mark the location and contents of each container. The facility diagram must include completely buried tanks that are otherwise exempted from the requirements of this part under § 112.1(d)(4). The facility diagram must also include all transfer stations and connecting pipes. You must also address in your Plan:

(i) The type of oil in each container and its storage capacity;

(ii) Discharge prevention measures including procedures for routine handling of products (loading, unloading, and facility transfers, *etc.*);

(iii) Discharge or drainage controls such as secondary containment around containers and other structures, equipment, and procedures for the control of a discharge;

(iv) Countermeasures for discharge discovery, response, and cleanup (both the facility's capability and those that might be required of a contractor);

(v) Methods of disposal of recovered materials in accordance with applicable legal requirements; and

(vi) Contact list and phone numbers for the facility response coordinator, National Response Center, cleanup contractors with whom you have an agreement for response, and all appropriate Federal, State, and local agencies who must be contacted in case of a discharge as described in § 112.1(b).

(4) Unless you have submitted a response plan under § 112.20, provide information and procedures in your Plan to enable a person reporting a discharge as described in § 112.1(b) to relate information on the exact address or location and phone number of the facility; the date and time of the discharge, the type of material discharged; estimates of the total quantity discharged; estimates of the quantity discharged as described in § 112.1(b); the source of the discharge; a description of all affected media; the cause of the discharge; any damages or injuries caused by the discharge; actions being used to stop, remove, and mitigate the effects of the discharge; whether an evacuation may be needed; and, the names of individuals and/or organizations who have also been contacted.

(5) Unless you have submitted a response plan under § 112.20, organize portions of the Plan describing procedures you will use when a discharge occurs in a way that will make them readily usable in an emergency, and include appropriate supporting material as appendices.

(b) Where experience indicates a reasonable potential for equipment failure (such as loading or unloading equipment, tank overflow, rupture, or leakage, or any other equipment known to be a source of a discharge), include in your Plan 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 type of major equipment failure.

(c) Provide appropriate containment and/or diversionary structures or equipment to prevent a discharge as described in § 112.1(b). The entire containment system, including walls and floor, must be capable of containing oil and must be constructed so that any discharge from a primary containment system, such as a tank or pipe, will not escape the containment system before cleanup occurs. At a minimum, you must use one of the following prevention systems or its equivalent:

(1) For onshore facilities:

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

(ii) Curbing;

(iii) Culverting, gutters, or other drainage systems;

(iv) Weirs, booms, or other barriers;

(v) Spill diversion ponds;

(vi) Retention ponds; or

(vii) Sorbent materials.

(2) For offshore facilities:

(i) Curbing or drip pans; or

(ii) Sumps and collection systems.

(d) If you determine that the installation of any of the structures or pieces of equipment listed in paragraphs (c) and (h)(1) of this section, and §§ 112.8(c)(2), 112.8(c)(11), 112.9(c)(2), 112.10(c), 112.12(c)(2), 112.12(c)(11), 112.13(c)(2), and 112.14(c) to prevent a discharge as described in § 112.1(b) from any onshore or offshore facility is not practicable, you must clearly explain in your Plan why such measures are not practicable; for bulk storage containers, conduct both periodic integrity testing of the containers and periodic integrity and leak testing of the valves and piping; and, unless you have submitted a response plan under § 112.20, provide in your Plan the following:

(1) An oil spill contingency plan following the provisions of part 109 of this chapter.

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

(e) *Inspections, tests, and records.* Conduct inspections and tests required by this part in accordance with written procedures that you or the certifying

engineer develop for the facility. You must keep these written procedures and a record of the inspections and tests, signed by the appropriate supervisor or inspector, with the SPCC Plan for a period of three years. Records of inspections and tests kept under usual and customary business practices will suffice for purposes of this paragraph.

(f) *Personnel, training, and discharge prevention procedures.* (1) At a minimum, train your oil-handling personnel in the operation and maintenance of equipment to prevent discharges; discharge procedure protocols; applicable pollution control laws, rules, and regulations; general facility operations; and, the contents of the facility SPCC Plan.

(2) Designate a person at each applicable facility who is accountable for discharge prevention and who reports to facility management.

(3) Schedule and conduct discharge prevention briefings for your oil-handling personnel at least once a year to assure adequate understanding of the SPCC Plan for that facility. Such briefings must highlight and describe known discharges as described in § 112.1(b) or failures, malfunctioning components, and any recently developed precautionary measures.

(g) *Security (excluding oil production facilities).* (1) Fully fence each facility handling, processing, or storing oil, and lock and/or guard entrance gates when the facility is not in production or is unattended.

(2) Ensure that the master flow and drain valves and any other valves permitting direct outward flow of the container's contents to the surface have adequate security measures so that they remain in the closed position when in non-operating or non-standby status.

(3) Lock the starter control on each oil pump in the ''off'' position and locate it at a site accessible only to authorized personnel when the pump is in a non-operating or non-standby status.

(4) Securely cap or blank-flange the loading/unloading connections of oil pipelines or facility piping when not in service or when in standby service for an extended time. This security practice also applies to piping that is emptied of liquid content either by draining or by inert gas pressure.

(5) Provide facility lighting commensurate with the type and location of the facility that will assist in the:

(i) Discovery of discharges occurring during hours of darkness, both by operating personnel, if present, and by non-operating personnel (the general public, local police, etc.); and

(ii) Prevention of discharges occurring through acts of vandalism.

(h) *Facility tank car and tank truck loading/unloading rack (excluding offshore facilities).* (1) Where loading/unloading area drainage does not flow into a catchment basin or treatment facility designed to handle discharges, use a quick drainage system for tank car or tank truck loading and unloading areas. You must design any containment system to hold at least the maximum capacity of any single compartment of a tank car or tank truck loaded or unloaded at the facility.

(2) Provide an interlocked warning light or physical barrier system, warning signs, wheel chocks, or vehicle break interlock system in loading/unloading areas to prevent vehicles from departing before complete disconnection of flexible or fixed oil transfer lines.

(3) Prior to filling and departure of any tank car or tank truck, closely inspect for discharges the lowermost drain and all outlets of such vehicles, and if necessary, ensure that they are tightened, adjusted, or replaced to prevent liquid discharge while in transit.

(i) If a field-constructed aboveground container undergoes a repair, alteration, reconstruction, or a change in service that might affect the risk of a discharge or failure due to brittle fracture or other catastrophe, or has discharged oil or failed due to brittle fracture failure or other catastrophe, evaluate the container for risk of discharge or failure due to brittle fracture or other catastrophe, and as necessary, take appropriate action.

(j) In addition to the minimal prevention standards listed under this section, include in your Plan a complete discussion of conformance with the applicable requirements and other effective discharge prevention and containment procedures listed in this part or

any applicable more stringent State rules, regulations, and guidelines.

Subpart B—Requirements for Petroleum Oils and Non-Petroleum Oils, Except Animal Fats and Oils and Greases, and Fish and Marine Mammal Oils; and Vegetable Oils (Including Oils from Seeds, Nuts, Fruits, and Kernels)

SOURCE: 67 FR 47146, July 17, 2002, unless otherwise noted.

§ 112.8 Spill Prevention, Control, and Countermeasure Plan requirements for onshore facilities (excluding production facilities).

If you are the owner or operator of an onshore facility (excluding a production facility), you must:

(a) Meet the general requirements for the Plan listed under § 112.7, and the specific discharge prevention and containment procedures listed in this section.

(b) *Facility drainage.* (1) Restrain drainage from diked storage areas by valves to prevent a discharge into the drainage system or facility effluent treatment system, except where facility systems are designed to control such discharge. You may empty diked areas by pumps or ejectors; however, you must manually activate these pumps or ejectors and must inspect the condition of the accumulation before starting, to ensure no oil will be discharged.

(2) Use valves of manual, open-and-closed design, for the drainage of diked areas. You may not use flapper-type drain valves to drain diked areas. If your facility drainage drains directly into a watercourse and not into an on-site wastewater treatment plant, you must inspect and may drain uncontaminated retained stormwater, as provided in paragraphs (c)(3)(ii), (iii), and (iv) of this section.

(3) Design facility drainage systems from undiked areas with a potential for a discharge (such as where piping is located outside containment walls or where tank truck discharges may occur outside the loading area) to flow into ponds, lagoons, or catchment basins designed to retain oil or return it to the facility. You must not locate catchment basins in areas subject to periodic flooding.

(4) If facility drainage is not engineered as in paragraph (b)(3) of this section, equip the final discharge of all ditches inside the facility with a diversion system that would, in the event of an uncontrolled discharge, retain oil in the facility.

(5) Where drainage waters are treated in more than one treatment unit and such treatment is continuous, and pump transfer is needed, provide two ''lift'' pumps and permanently install at least one of the pumps. Whatever techniques you use, you must engineer facility drainage systems to prevent a discharge as described in § 112.1(b) in case there is an equipment failure or human error at the facility.

(c) *Bulk storage containers.* (1) Not use a container 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.

(2) Construct all bulk storage container installations so that you provide a secondary means of containment for the entire capacity of the largest single container and sufficient freeboard to contain precipitation. You must ensure that diked areas are sufficiently impervious to contain discharged oil. Dikes, containment curbs, and pits are commonly employed for this purpose. You may also use an alternative system consisting of a drainage trench enclosure that must be arranged so that any discharge will terminate and be safely confined in a facility catchment basin or holding pond.

(3) Not allow drainage of uncontaminated rainwater from the diked area into a storm drain or discharge of an effluent into an open watercourse, lake, or pond, bypassing the facility treatment system unless you:

(i) Normally keep the bypass valve sealed closed.

(ii) Inspect the retained rainwater to ensure that its presence will not cause a discharge as described in § 112.1(b).

(iii) Open the bypass valve and reseal it following drainage under responsible supervision; and

(iv) Keep adequate records of such events, for example, any records required under permits issued in accordance with §§122.41(j)(2) and 122.41(m)(3) of this chapter.

(4) Protect any completely buried metallic storage tank installed on or after January 10, 1974 from corrosion by coatings or cathodic protection compatible with local soil conditions. You must regularly leak test such completely buried metallic storage tanks.

(5) Not use partially buried or bunkered metallic tanks for the storage of oil, unless you protect the buried section of the tank from corrosion. You must protect partially buried and bunkered tanks from corrosion by coatings or cathodic protection compatible with local soil conditions.

(6) Test each aboveground container for integrity on a regular schedule, and whenever you make material repairs. The frequency of and type of testing must take into account container size and design (such as floating roof, skid-mounted, elevated, or partially buried). You must combine visual inspection with another testing technique such as hydrostatic testing, radiographic testing, ultrasonic testing, acoustic emissions testing, or another system of non-destructive shell testing. You must keep comparison records and you must also inspect the container's supports and foundations. In addition, you must frequently inspect the outside of the container for signs of deterioration, discharges, or accumulation of oil inside diked areas. Records of inspections and tests kept under usual and customary business practices will suffice for purposes of this paragraph.

(7) Control leakage through defective internal heating coils by monitoring the steam return and exhaust lines for contamination from internal heating coils that discharge into an open watercourse, or pass the steam return or exhaust lines through a settling tank, skimmer, or other separation or retention system.

(8) Engineer or update each container installation in accordance with good engineering practice to avoid discharges. You must provide at least one of the following devices:

(i) High liquid level alarms with an audible or visual signal at a constantly attended operation or surveillance station. In smaller facilities an audible air vent may suffice.

(ii) High liquid level pump cutoff devices set to stop flow at a predetermined container content level.

(iii) Direct audible or code signal communication between the container gauger and the pumping station.

(iv) A fast response system for determining the liquid level of each bulk storage container such as digital computers, telepulse, or direct vision gauges. If you use this alternative, a person must be present to monitor gauges and the overall filling of bulk storage containers.

(v) You must regularly test liquid level sensing devices to ensure proper operation.

(9) Observe effluent treatment facilities frequently enough to detect possible system upsets that could cause a discharge as described in §112.1(b).

(10) Promptly correct visible discharges which result in a loss of oil from the container, including but not limited to seams, gaskets, piping, pumps, valves, rivets, and bolts. You must promptly remove any accumulations of oil in diked areas.

(11) Position or locate mobile or portable oil storage containers to prevent a discharge as described in §112.1(b). You must furnish a secondary means of containment, such as a dike or catchment basin, sufficient to contain the capacity of the largest single compartment or container with sufficient freeboard to contain precipitation.

(d) *Facility transfer operations, pumping, and facility process.* (1) Provide buried piping that is installed or replaced on or after August 16, 2002, with a protective wrapping and coating. You must also cathodically protect such buried piping installations or otherwise satisfy the corrosion protection standards for piping in part 280 of this chapter or a State program approved under part 281 of this chapter. If a section of buried line is exposed for any reason, you must carefully inspect it for deterioration. If you find corrosion damage, you must undertake additional examination and corrective action as indicated by the magnitude of the damage.

(2) Cap or blank-flange the terminal connection at the transfer point and mark it as to origin when piping is not in service or is in standby service for an extended time.

(3) Properly design pipe supports to minimize abrasion and corrosion and allow for expansion and contraction.

(4) Regularly inspect all aboveground valves, piping, and appurtenances. During the inspection you must assess 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. You must also conduct integrity and leak testing of buried piping at the time of installation, modification, construction, relocation, or replacement.

(5) Warn all vehicles entering the facility to be sure that no vehicle will endanger aboveground piping or other oil transfer operations.

§ 112.9 Spill Prevention, Control, and Countermeasure Plan requirements for onshore oil production facilities.

If you are the owner or operator of an onshore production facility, you must:

(a) Meet the general requirements for the Plan listed under § 112.7, and the specific discharge prevention and containment procedures listed under this section.

(b) *Oil production facility drainage.* (1) At tank batteries and separation and treating areas where there is a reasonable possibility of a discharge as described in § 112.1(b), close and seal at all times drains of dikes or drains of equivalent measures required under § 112.7(c)(1), except when draining uncontaminated rainwater. Prior to drainage, you must inspect the diked area and take action as provided in § 112.8(c)(3)(ii), (iii), and (iv). You must remove accumulated oil on the rainwater and return it to storage or dispose of it in accordance with legally approved methods.

(2) Inspect at regularly scheduled intervals field drainage systems (such as drainage ditches or road ditches), and oil traps, sumps, or skimmers, for an accumulation of oil that may have resulted from any small discharge. You must promptly remove any accumulations of oil.

(c) *Oil production facility bulk storage containers.* (1) Not use a container for the storage of oil unless its material and construction are compatible with the material stored and the conditions of storage.

(2) Provide all tank battery, separation, and treating facility installations with a secondary means of containment for the entire capacity of the largest single container and sufficient freeboard to contain precipitation. You must safely confine drainage from undiked areas in a catchment basin or holding pond.

(3) Periodically and upon a regular schedule visually inspect each container of oil for deterioration and maintenance needs, including the foundation and support of each container that is on or above the surface of the ground.

(4) Engineer or update new and old tank battery installations in accordance with good engineering practice to prevent discharges. You must provide at least one of the following:

(i) Container capacity adequate to assure that a container will not overfill if a pumper/gauger is delayed in making regularly scheduled rounds.

(ii) Overflow equalizing lines between containers so that a full container can overflow to an adjacent container.

(iii) Vacuum protection adequate to prevent container collapse during a pipeline run or other transfer of oil from the container.

(iv) High level sensors to generate and transmit an alarm signal to the computer where the facility is subject to a computer production control system.

(d) *Facility transfer operations, oil production facility.* (1) Periodically and upon a regular schedule inspect all aboveground valves and piping associated with transfer operations for the general condition of flange joints, valve glands and bodies, drip pans, pipe supports, pumping well polish rod stuffing boxes, bleeder and gauge valves, and other such items.

(2) Inspect saltwater (oil field brine) disposal facilities often, particularly following a sudden change in atmospheric temperature, to detect possible system upsets capable of causing a discharge.

(3) Have a program of flowline maintenance to prevent discharges from each flowline.

§ 112.10 Spill Prevention, Control, and Countermeasure Plan requirements for onshore oil drilling and workover facilities.

If you are the owner or operator of an onshore oil drilling and workover facility, you must:

(a) Meet the general requirements listed under § 112.7, and also meet the specific discharge prevention and containment procedures listed under this section.

(b) Position or locate mobile drilling or workover equipment so as to prevent a discharge as described in § 112.1(b).

(c) Provide catchment basins or diversion structures to intercept and contain discharges of fuel, crude oil, or oily drilling fluids.

(d) Install a blowout prevention (BOP) assembly and well control system before drilling below any casing string or during workover operations. The BOP assembly and well control system must be capable of controlling any well-head pressure that may be encountered while that BOP assembly and well control system are on the well.

§ 112.11 Spill Prevention, Control, and Countermeasure Plan requirements for offshore oil drilling, production, or workover facilities.

If you are the owner or operator of an offshore oil drilling, production, or workover facility, you must:

(a) Meet the general requirements listed under § 112.7, and also meet the specific discharge prevention and containment procedures listed under this section.

(b) Use oil drainage collection equipment to prevent and control small oil discharges around pumps, glands, valves, flanges, expansion joints, hoses, drain lines, separators, treaters, tanks, and associated equipment. You must control and direct facility drains toward a central collection sump to prevent the facility from having a discharge as described in § 112.1(b). Where drains and sumps are not practicable, you must remove oil contained in collection equipment as often as necessary to prevent overflow.

(c) For facilities employing a sump system, provide adequately sized sump and drains and make available a spare pump to remove liquid from the sump and assure that oil does not escape. You must employ a regularly scheduled preventive maintenance inspection and testing program 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.

(d) At facilities with areas where separators and treaters are equipped with dump valves which predominantly fail in the closed position and where pollution risk is high, specially equip the facility to prevent the discharge of oil. You must prevent the discharge of oil by:

(1) Extending the flare line to a diked area if the separator is near shore;

(2) Equipping the separator with a high liquid level sensor that will automatically shut in wells producing to the separator; or

(3) Installing parallel redundant dump valves.

(e) Equip atmospheric storage or surge containers with high liquid level sensing devices that activate an alarm or control the flow, or otherwise prevent discharges.

(f) Equip pressure containers with high and low pressure sensing devices that activate an alarm or control the flow.

(g) Equip containers with suitable corrosion protection.

(h) Prepare and maintain at the facility a written procedure within the Plan for inspecting and testing pollution prevention equipment and systems.

(i) Conduct testing and inspection of the pollution prevention equipment and systems at the facility on a scheduled periodic basis, commensurate with the complexity, conditions, and circumstances of the facility and any other appropriate regulations. You must use simulated discharges for testing and inspecting human and equipment pollution control and countermeasure systems.

(j) Describe in detailed records surface and subsurface well shut-in valves

and devices in use at the facility for each well sufficiently to determine their method of activation or control, such as pressure differential, change in fluid or flow conditions, combination of pressure and flow, manual or remote control mechanisms.

(k) Install a BOP assembly and well control system during workover operations and before drilling below any casing string. The BOP assembly and well control system must be capable of controlling any well-head pressure that may be encountered while the BOP assembly and well control system are on the well.

(l) Equip all manifolds (headers) with check valves on individual flowlines.

(m) Equip the flowline with a high pressure sensing device and shut-in valve at the wellhead 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. Alternatively you may provide a pressure relief system for flowlines.

(n) Protect all piping appurtenant to the facility from corrosion, such as with protective coatings or cathodic protection.

(o) Adequately protect sub-marine piping appurtenant to the facility against environmental stresses and other activities such as fishing operations.

(p) Maintain sub-marine piping appurtenant to the facility in good operating condition at all times. You must periodically and according to a schedule inspect or test such piping for failures. You must document and keep a record of such inspections or tests at the facility.

Subpart C—Requirements for Animal Fats and Oils and Greases, and Fish and Marine Mammal Oils; and for Vegetable Oils, including Oils from Seeds, Nuts, Fruits, and Kernels.

SOURCE: 67 FR 57149, July 17, 2002, unless otherwise noted.

§ 112.12 Spill Prevention, Control, and Countermeasure Plan requirements for onshore facilities (excluding production facilities)

If you are the owner or operator of an onshore facility (excluding a production facility), you must:

(a) Meet the general requirements for the Plan listed under § 112.7, and the specific discharge prevention and containment procedures listed in this section.

(b) *Facility drainage.* (1) Restrain drainage from diked storage areas by valves to prevent a discharge into the drainage system or facility effluent treatment system, except where facility systems are designed to control such discharge. You may empty diked areas by pumps or ejectors; however, you must manually activate these pumps or ejectors and must inspect the condition of the accumulation before starting, to ensure no oil will be discharged.

(2) Use valves of manual, open-and-closed design, for the drainage of diked areas. You may not use flapper-type drain valves to drain diked areas. If your facility drainage drains directly into a watercourse and not into an on-site wastewater treatment plant, you must inspect and may drain uncontaminated retained stormwater, subject to the requirements of paragraphs (c)(3)(ii), (iii), and (iv) of this section.

(3) Design facility drainage systems from undiked areas with a potential for a discharge (such as where piping is located outside containment walls or where tank truck discharges may occur outside the loading area) to flow into ponds, lagoons, or catchment basins designed to retain oil or return it to the facility. You must not locate catchment basins in areas subject to periodic flooding.

(4) If facility drainage is not engineered as in paragraph (b)(3) of this section, equip the final discharge of all ditches inside the facility with a diversion system that would, in the event of an uncontrolled discharge, retain oil in the facility.

(5) Where drainage waters are treated in more than one treatment unit and such treatment is continuous, and pump transfer is needed, provide two

''lift'' pumps and permanently install at least one of the pumps. Whatever techniques you use, you must engineer facility drainage systems to prevent a discharge as described in § 112.1(b) in case there is an equipment failure or human error at the facility.

(c) *Bulk storage containers.* (1) Not use a container 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.

(2) Construct all bulk storage container installations so that you provide a secondary means of containment for the entire capacity of the largest single container and sufficient freeboard to contain precipitation. You must ensure that diked areas are sufficiently impervious to contain discharged oil. Dikes, containment curbs, and pits are commonly employed for this purpose. You may also use an alternative system consisting of a drainage trench enclosure that must be arranged so that any discharge will terminate and be safely confined in a facility catchment basin or holding pond.

(3) Not allow drainage of uncontaminated rainwater from the diked area into a storm drain or discharge of an effluent into an open watercourse, lake, or pond, bypassing the facility treatment system unless you:

(i) Normally keep the bypass valve sealed closed.

(ii) Inspect the retained rainwater to ensure that its presence will not cause a discharge as described in § 112.1(b).

(iii) Open the bypass valve and reseal it following drainage under responsible supervision; and

(iv) Keep adequate records of such events, for example, any records required under permits issued in accordance with §§ 122.41(j)(2) and 122.41(m)(3) of this chapter.

(4) Protect any completely buried metallic storage tank installed on or after January 10, 1974 from corrosion by coatings or cathodic protection compatible with local soil conditions. You must regularly leak test such completely buried metallic storage tanks.

(5) Not use partially buried or bunkered metallic tanks for the storage of oil, unless you protect the buried section of the tank from corrosion. You must protect partially buried and bunkered tanks from corrosion by coatings or cathodic protection compatible with local soil conditions.

(6) Test each aboveground container for integrity on a regular schedule, and whenever you make material repairs. The frequency of and type of testing must take into account container size and design (such as floating roof, skid-mounted, elevated, or partially buried). You must combine visual inspection with another testing technique such as hydrostatic testing, radiographic testing, ultrasonic testing, acoustic emissions testing, or another system of non-destructive shell testing. You must keep comparison records and you must also inspect the container's supports and foundations. In addition, you must frequently inspect the outside of the container for signs of deterioration, discharges, or accumulation of oil inside diked areas. Records of inspections and tests kept under usual and customary business practices will suffice for purposes of this paragraph.

(7) Control leakage through defective internal heating coils by monitoring the steam return and exhaust lines for contamination from internal heating coils that discharge into an open watercourse, or pass the steam return or exhaust lines through a settling tank, skimmer, or other separation or retention system.

(8) Engineer or update each container installation in accordance with good engineering practice to avoid discharges. You must provide at least one of the following devices:

(i) High liquid level alarms with an audible or visual signal at a constantly attended operation or surveillance station. In smaller facilities an audible air vent may suffice.

(ii) High liquid level pump cutoff devices set to stop flow at a predetermined container content level.

(iii) Direct audible or code signal communication between the container gauger and the pumping station.

(iv) A fast response system for determining the liquid level of each bulk storage container such as digital computers, telepulse, or direct vision gauges. If you use this alternative, a person must be present to monitor

gauges and the overall filling of bulk storage containers.

(v) You must regularly test liquid level sensing devices to ensure proper operation.

(9) Observe effluent treatment facilities frequently enough to detect possible system upsets that could cause a discharge as described in § 112.1(b).

(10) Promptly correct visible discharges which result in a loss of oil from the container, including but not limited to seams, gaskets, piping, pumps, valves, rivets, and bolts. You must promptly remove any accumulations of oil in diked areas.

(11) Position or locate mobile or portable oil storage containers to prevent a discharge as described in § 112.1(b). You must furnish a secondary means of containment, such as a dike or catchment basin, sufficient to contain the capacity of the largest single compartment or container with sufficient freeboard to contain precipitation.

(d) *Facility transfer operations, pumping, and facility process.* (1) Provide buried piping that is installed or replaced on or after August 16, 2002, with a protective wrapping and coating. You must also cathodically protect such buried piping installations or otherwise satisfy the corrosion protection standards for piping in part 280 of this chapter or a State program approved under part 281 of this chapter. If a section of buried line is exposed for any reason, you must carefully inspect it for deterioration. If you find corrosion damage, you must undertake additional examination and corrective action as indicated by the magnitude of the damage.

(2) Cap or blank-flange the terminal connection at the transfer point and mark it as to origin when piping is not in service or is in standby service for an extended time.

(3) Properly design pipe supports to minimize abrasion and corrosion and allow for expansion and contraction.

(4) Regularly inspect all aboveground valves, piping, and appurtenances. During the inspection you must assess 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. You must also conduct integrity and leak testing of buried piping at the time of installation, modification, construction, relocation, or replacement.

(5) Warn all vehicles entering the facility to be sure that no vehicle will endanger aboveground piping or other oil transfer operations.

§ 112.13 Spill Prevention, Control, and Countermeasure Plan requirements for onshore oil production facilities.

If you are the owner or operator of an onshore production facility, you must:

(a) Meet the general requirements for the Plan listed under § 112.7, and the specific discharge prevention and containment procedures listed under this section.

(b) *Oil production facility drainage.* (1) At tank batteries and separation and treating areas where there is a reasonable possibility of a discharge as described in § 112.1(b), close and seal at all times drains of dikes or drains of equivalent measures required under § 112.7(c)(1), except when draining uncontaminated rainwater. Prior to drainage, you must inspect the diked area and take action as provided in § 112.12(c)(3)(ii), (iii), and (iv). You must remove accumulated oil on the rainwater and return it to storage or dispose of it in accordance with legally approved methods.

(2) Inspect at regularly scheduled intervals field drainage systems (such as drainage ditches or road ditches), and oil traps, sumps, or skimmers, for an accumulation of oil that may have resulted from any small discharge. You must promptly remove any accumulations of oil.

(c) *Oil production facility bulk storage containers.* (1) Not use a container for the storage of oil unless its material and construction are compatible with the material stored and the conditions of storage.

(2) Provide all tank battery, separation, and treating facility installations with a secondary means of containment for the entire capacity of the largest single container and sufficient freeboard to contain precipitation. You must safely confine drainage from undiked areas in a catchment basin or holding pond.

(3) Periodically and upon a regular schedule visually inspect each container of oil for deterioration and maintenance needs, including the foundation and support of each container that is on or above the surface of the ground.

(4) Engineer or update new and old tank battery installations in accordance with good engineering practice to prevent discharges. You must provide at least one of the following:

(i) Container capacity adequate to assure that a container will not overfill if a pumper/gauger is delayed in making regularly scheduled rounds.

(ii) Overflow equalizing lines between containers so that a full container can overflow to an adjacent container.

(iii) Vacuum protection adequate to prevent container collapse during a pipeline run or other transfer of oil from the container.

(iv) High level sensors to generate and transmit an alarm signal to the computer where the facility is subject to a computer production control system.

(d) *Facility transfer operations, oil production facility.* (1) Periodically and upon a regular schedule inspect all aboveground valves and piping associated with transfer operations for the general condition of flange joints, valve glands and bodies, drip pans, pipe supports, pumping well polish rod stuffing boxes, bleeder and gauge valves, and other such items.

(2) Inspect saltwater (oil field brine) disposal facilities often, particularly following a sudden change in atmospheric temperature, to detect possible system upsets capable of causing a discharge.

(3) Have a program of flowline maintenance to prevent discharges from each flowline.

§ 112.14 Spill Prevention, Control, and Countermeasure Plan requirements for onshore oil drilling and workover facilities.

If you are the owner or operator of an onshore oil drilling and workover facility, you must:

(a) Meet the general requirements listed under § 112.7, and also meet the specific discharge prevention and containment procedures listed under this section.

(b) Position or locate mobile drilling or workover equipment so as to prevent a discharge as described in § 112.1(b).

(c) Provide catchment basins or diversion structures to intercept and contain discharges of fuel, crude oil, or oily drilling fluids.

(d) Install a blowout prevention (BOP) assembly and well control system before drilling below any casing string or during workover operations. The BOP assembly and well control system must be capable of controlling any well-head pressure that may be encountered while that BOP assembly and well control system are on the well.

§ 112.15 Spill Prevention, Control, and Countermeasure Plan requirements for offshore oil drilling, production, or workover facilities.

If you are the owner or operator of an offshore oil drilling, production, or workover facility, you must:

(a) Meet the general requirements listed under § 112.7, and also meet the specific discharge prevention and containment procedures listed under this section.

(b) Use oil drainage collection equipment to prevent and control small oil discharges around pumps, glands, valves, flanges, expansion joints, hoses, drain lines, separators, treaters, tanks, and associated equipment. You must control and direct facility drains toward a central collection sump to prevent the facility from having a discharge as described in § 112.1(b). Where drains and sumps are not practicable, you must remove oil contained in collection equipment as often as necessary to prevent overflow.

(c) For facilities employing a sump system, provide adequately sized sump and drains and make available a spare pump to remove liquid from the sump and assure that oil does not escape. You must employ a regularly scheduled preventive maintenance inspection and testing program 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.

(d) At facilities with areas where separators and treaters are equipped with dump valves which predominantly fail in the closed position and where pollution risk is high, specially equip the facility to prevent the discharge of oil. You must prevent the discharge of oil by:

(1) Extending the flare line to a diked area if the separator is near shore;

(2) Equipping the separator with a high liquid level sensor that will automatically shut in wells producing to the separator; or

(3) Installing parallel redundant dump valves.

(e) Equip atmospheric storage or surge containers with high liquid level sensing devices that activate an alarm or control the flow, or otherwise prevent discharges.

(f) Equip pressure containers with high and low pressure sensing devices that activate an alarm or control the flow.

(g) Equip containers with suitable corrosion protection.

(h) Prepare and maintain at the facility a written procedure within the Plan for inspecting and testing pollution prevention equipment and systems.

(i) Conduct testing and inspection of the pollution prevention equipment and systems at the facility on a scheduled periodic basis, commensurate with the complexity, conditions, and circumstances of the facility and any other appropriate regulations. You must use simulated discharges for testing and inspecting human and equipment pollution control and countermeasure systems.

(j) Describe in detailed records surface and subsurface well shut-in valves and devices in use at the facility for each well sufficiently to determine their method of activation or control, such as pressure differential, change in fluid or flow conditions, combination of pressure and flow, manual or remote control mechanisms.

(k) Install a BOP assembly and well control system during workover operations and before drilling below any casing string. The BOP assembly and well control system must be capable of controlling any well-head pressure that may be encountered while that BOP assembly and well control system are on the well.

(l) Equip all manifolds (headers) with check valves on individual flowlines.

(m) Equip the flowline with a high pressure sensing device and shut-in valve at the wellhead 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. Alternatively you may provide a pressure relief system for flowlines.

(n) Protect all piping appurtenant to the facility from corrosion, such as with protective coatings or cathodic protection.

(o) Adequately protect sub-marine piping appurtenant to the facility against environmental stresses and other activities such as fishing operations.

(p) Maintain sub-marine piping appurtenant to the facility in good operating condition at all times. You must periodically and according to a schedule inspect or test such piping for failures. You must document and keep a record of such inspections or tests at the facility.

Subpart D—Response Requirements

§ 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 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, 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 start-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 response plan 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 that is required to prepare and submit a response plan uses an alternative formula that is comparable to one contained 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.

(4) *Preparation and submission of response plans—Animal fat and vegetable oil facilities.* The owner or operator of any non-transportation-related facility that handles, stores, or transports animal fats and vegetable oils must prepare and submit a facility response plan as follows:

(i) *Facilities with approved plans.* The owner or operator of a facility with a

facility response plan that has been approved under paragraph (c) of this section by July 31, 2000 need not prepare or submit a revised plan except as otherwise required by paragraphs (b), (c), or (d) of this section.

(ii) *Facilities with plans that have been submitted to the Regional Administrator.* Except for facilities with approved plans as provided in paragraph (a)(4)(i) of this section, the owner or operator of a facility that has submitted a response plan to the Regional Administrator prior to July 31, 2000 must review the plan to determine if it meets or exceeds the applicable provisions of this part. An owner or operator need not prepare or submit a new plan if the existing plan meets or exceeds the applicable provisions of this part. If the plan does not meet or exceed the applicable provisions of this part, the owner or operator must prepare and submit a new plan by September 28, 2000.

(iii) *Newly regulated facilities.* The owner or operator of a newly constructed facility that commences operation after July 31, 2000 must prepare and submit a plan to the Regional Administrator in accordance with paragraph (a)(2)(ii) of this section. The plan must meet or exceed the applicable provisions of this part. The owner or operator of an existing facility that must prepare and submit a plan after July 31, 2000 as a result of a planned or unplanned change in facility characteristics that causes the facility to become regulated under paragraph (f)(1) of this section, must prepare and submit a plan to the Regional Administrator in accordance with paragraph (a)(2)(iii) or (iv) of this section, as appropriate. The plan must meet or exceed the applicable provisions of this part.

(iv) *Facilities amending existing plans.* The owner or operator of a facility submitting an amended plan in accordance with paragraph (d) of this section after July 31, 2000, including plans that had been previously approved, must also review the plan to determine if it meets or exceeds the applicable provisions of this part. If the plan does not meet or exceed the applicable provisions of this part, the owner or operator must revise and resubmit revised portions of an amended plan to the Regional Administrator in accordance with paragraph (d) of this section, as appropriate. The plan must meet or exceed the applicable provisions of this part.

(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 shorelines.

(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 the 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; and

(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 of oil 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 the revisions 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 the 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 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-I 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 13,

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 discharge in an amount greater than or equal to 10,000 gallons within the last 5 years.

(2)(i) 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 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 discharges;

(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 (40 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 planning committee or State emergency response commission.

(2) The owner or operator shall review relevant portions of the 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 you have prepared an equivalent response plan acceptable to the Regional Administrator 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 discharge;

(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 discharged 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 in paragraph (h)(1) of this section.

(3) *Information about 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 identified 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 discharge;

(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 discharged 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 gases 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 effects 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 used 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 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; 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 discharged 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 also may 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.

[59 FR 34098, July 1, 1994, as amended at 65 FR 40798, June 30, 2000; 66 FR 34560, June 29, 2001; 67 FR 47151, July 17, 2002]

§ 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 13, for availability) will be deemed satisfactory for purposes of this section. An alternative program can also be acceptable subject to approval by the Regional Administrator.

[59 FR 34101, July 1, 1994, as amended at 65 FR 40798, June 30, 2000]

APPENDIX A TO PART 112—MEMORANDUM OF UNDERSTANDING BETWEEN THE SECRETARY OF TRANSPORTATION AND THE ADMINISTRATOR OF 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 facility and which are not intended to transport oil in interstate or intrastate commerce.

(K) Pipeline systems which are used for the transport of oil exclusively within the confines of a nontransportation-related facility or terminal facility and which are not intended to transport oil in interstate or intrastate commerce, but excluding pipeline systems used to transfer oil in bulk to or from a vessel.

(2) *Transportation-related onshore and offshore facilities* means:

(A) Onshore and offshore terminal facilities including transfer hoses, loading arms and other equipment and appurtenances used for the purpose of handling or transferring oil in bulk to or from a vessel as well as storage tanks and appurtenances for the reception of oily ballast water or tank washings from vessels, but excluding terminal waste treatment facilities and terminal oil storage facilities.

(B) Transfer hoses, loading arms and other equipment appurtenant to a non-transportation-related facility which is used to transfer oil in bulk to or from a vessel.

(C) Interstate and intrastate onshore and offshore pipeline systems including pumps and appurtenances related thereto as well as in-line or breakout storage tanks needed for the continuous operation of a pipeline system, and pipelines from onshore and offshore oil production facilities, but excluding onshore and offshore piping from wellheads to oil separators and pipelines which are used for the transport of oil exclusively within the confines of a nontransportation-related facility or terminal facility and which are not intended to transport oil in interstate or intrastate commerce or to transfer oil in bulk to or from a vessel.

(D) Highway vehicles and railroad cars which are used for the transport of oil in interstate or intrastate commerce and the equipment and appurtenances related thereto, and equipment used for the fueling of locomotive units, as well as the rights-of-way on which they operate. Excluded are highway vehicles and railroad cars and motive power used exclusively within the confines of a nontransportation-related facility or terminal facility and which are not intended for use in interstate or intrastate commerce.

APPENDIX B TO PART 112—MEMORANDUM OF UNDERSTANDING AMONG THE SECRETARY OF THE INTERIOR, SECRETARY OF TRANSPORTATION, AND ADMINISTRATOR OF THE ENVIRONMENTAL PROTECTION AGENCY

PURPOSE

This Memorandum of Understanding (MOU) establishes the jurisdictional responsibilities for offshore facilities, including pipelines, pursuant to section 311 (j)(1)(c), (j)(5), and (j)(6)(A) of the Clean Water Act (CWA), as amended by the Oil Pollution Act of 1990 (Public Law 101–380). The Secretary of the Department of the Interior (DOI), Secretary of the Department of Transportation (DOT), and Administrator of the Environmental Protection Agency (EPA) agree to the division of responsibilities set forth below for spill prevention and control, response planning, and equipment inspection activities pursuant to those provisions.

BACKGROUND

Executive Order (E.O.) 12777 (56 FR 54757) delegates to DOI, DOT, and EPA various responsibilities identified in section 311(j) of the CWA. Sections 2(b)(3), 2(d)(3), and 2(e)(3) of E.O. 12777 assigned to DOI spill prevention and control, contingency planning, and equipment inspection activities associated with offshore facilities. Section 311(a)(11) defines the term ''offshore facility'' to include facilities of any kind located in, on, or under navigable waters of the United States. By using this definition, the traditional DOI role of regulating facilities on the Outer Continental Shelf is expanded by E.O. 12777 to include inland lakes, rivers, streams, and any other inland waters.

RESPONSIBILITIES

Pursuant to section 2(i) of E.O. 12777, DOI redelegates, and EPA and DOT agree to assume, the functions vested in DOI by sections 2(b)(3), 2(d)(3), and 2(e)(3) of E.O. 12777 as set forth below. For purposes of this MOU, the term ''coast line'' shall be defined as in the Submerged Lands Act (43 U.S.C. 1301(c)) to mean ''the line of ordinary low water along that portion of the coast which is in direct contact with the open sea and the line marking the seaward limit of inland waters.''

1. To EPA, DOI redelegates responsibility for non-transportation-related offshore facilities located landward of the coast line.

2. To DOT, DOI redelegates responsibility for transportation-related facilities, including pipelines, located landward of the coast line. The DOT retains jurisdiction for deepwater ports and their associated seaward pipelines, as delegated by E.O. 12777.

3. The DOI retains jurisdiction over facilities, including pipelines, located seaward of the coast line, except for deepwater ports and associated seaward pipelines delegated by E.O. 12777 to DOT.

EFFECTIVE DATE

This MOU is effective on the date of the final execution by the indicated signatories.

LIMITATIONS

1. The DOI, DOT, and EPA may agree in writing to exceptions to this MOU on a facility-specific basis. Affected parties will receive notification of the exceptions.

2. Nothing in this MOU is intended to replace, supersede, or modify any existing agreements between or among DOI, DOT, or EPA.

MODIFICATION AND TERMINATION

Any party to this agreement may propose modifications by submitting them in writing to the heads of the other agency/department. No modification may be adopted except with the consent of all parties. All parties shall indicate their consent to or disagreement with any proposed modification within 60 days of receipt. Upon the request of any party, representatives of all parties shall meet for the purpose of considering exceptions or modifications to this agreement. This MOU may be terminated only with the mutual consent of all parties.

Dated: November 8, 1993.
Bruce Babbitt,
Secretary of the Interior.
Dated: December 14, 1993.
Federico Peña,
Secretary of Transportation.
Dated: February 3, 1994.
Carol M. Browner,
Administrator, Environmental Protection Agency.

[59 FR 34102, July 1, 1994]

APPENDIX C TO PART 112—SUBSTANTIAL HARM CRITERIA

1.0 Introduction

The flowchart provided in Attachment C–I to this appendix shows the decision tree with the criteria to identify whether a facility ''could reasonably be expected to cause substantial harm to the environment by discharging into or on the navigable waters or adjoining shorelines.'' In addition, the Regional Administrator has the discretion to identify facilities that must prepare and submit facility-specific response plans to EPA.

1.1 Definitions

1.1.1 *Great Lakes* means Lakes Superior, Michigan, Huron, Erie, and Ontario, their connecting and tributary waters, the Saint Lawrence River as far as Saint Regis, and adjacent port areas.

1.1.2 Higher Volume Port Areas include

(1) Boston, MA;
(2) New York, NY;
(3) Delaware Bay and River to Philadelphia, PA;
(4) St. Croix, VI;
(5) Pascagoula, MS;
(6) Mississippi River from Southwest Pass, LA to Baton Rouge, LA;
(7) Louisiana Offshore Oil Port (LOOP), LA;
(8) Lake Charles, LA;
(9) Sabine-Neches River, TX;
(10) Galveston Bay and Houston Ship Channel, TX;
(11) Corpus Christi, TX;
(12) Los Angeles/Long Beach Harbor, CA;
(13) San Francisco Bay, San Pablo Bay, Carquinez Strait, and Suisun Bay to Antioch, CA;
(14) Straits of Juan de Fuca from Port Angeles, WA to and including Puget Sound, WA;
(15) Prince William Sound, AK; and
(16) Others as specified by the Regional Administrator for any EPA Region.

1.1.3 *Inland Area* means the area shoreward of the boundary lines defined in 46 CFR part 7, except in the Gulf of Mexico. In the Gulf of Mexico, it means the area shoreward of the lines of demarcation (COLREG lines as defined in 33 CFR 80.740—80.850). The inland area does not include the Great Lakes.

1.1.4 *Rivers and Canals* means a body of water confined within the inland area, including the Intracoastal Waterways and other waterways artificially created for navigating that have project depths of 12 feet or less.

2.0 Description of Screening Criteria for the Substantial Harm Flowchart

A facility that has the potential to cause substantial harm to the environment in the event of a discharge must prepare and submit a facility-specific response plan to EPA in accordance with Appendix F to this part. A description of the screening criteria for the substantial harm flowchart is provided below:

2.1 *Non-Transportation-Related Facilities With a Total Oil Storage Capacity Greater Than or Equal to 42,000 Gallons Where Operations Include Over-Water Transfers of Oil.* A non-transportation-related facility with a total oil storage capacity greater than or equal to 42,000 gallons that transfers oil over water to or from vessels must submit a response plan to EPA. Daily oil transfer operations at these types of facilities occur between barges and vessels and onshore bulk storage tanks over open water. These facilities are located adjacent to navigable water.

2.2 *Lack of Adequate Secondary Containment at Facilities With a Total Oil Storage Capacity Greater Than or Equal to 1 Million Gallons.* Any facility with a total oil storage capacity greater than or equal to 1 million gallons without secondary containment sufficiently large to contain the capacity of the largest aboveground oil storage tank within each area plus sufficient freeboard to allow for precipitation must submit a response plan to EPA. Secondary containment structures that meet the standard of good engineering practice for the purposes of this part include berms, dikes, retaining walls, curbing, culverts, gutters, or other drainage systems.

2.3 *Proximity to Fish and Wildlife and Sensitive Environments at Facilities With a Total Oil Storage Capacity Greater Than or Equal to 1 Million Gallons.* A facility with a total oil storage capacity greater than or equal to 1 million gallons must submit its response plan if it is located at a distance such that a discharge from the facility could cause injury (as defined at 40 CFR 112.2) 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 and Sensitive Environments'' (see Appendix E to this part, section 13, for availability) and the applicable Area Contingency Plan. Facility owners or operators must determine the distance at which an oil discharge could cause injury to fish and wildlife and sensitive environments using the appropriate formula presented in Attachment C–III to this appendix or a comparable formula.

2.4 *Proximity to Public Drinking Water Intakes at Facilities with a Total Oil Storage Capacity Greater than or Equal to 1 Million Gallons* A facility with a total oil storage capacity greater than or equal to 1 million gallons must submit its response plan if it is located at a distance such that a discharge from the facility would shut down a public drinking water intake, which is analogous to a public water system as described at 40 CFR 143.2(c). The distance at which an oil discharge from an SPCC-regulated facility would shut down a public drinking water intake shall be calculated using the appropriate formula presented in Attachment C–III to this appendix or a comparable formula.

2.5 *Facilities That Have Experienced Reportable Oil Discharges in an Amount Greater Than or Equal to 10,000 Gallons Within the Past 5 Years and That Have a Total Oil Storage Capacity Greater Than or Equal to 1 Million Gallons.* A facility's oil spill history within the past 5 years shall be considered in the evaluation for substantial harm. Any facility with a total oil storage capacity greater than or equal to 1 million gallons that has experienced a reportable oil discharge in an amount greater than or equal to 10,000 gallons within the past 5 years must submit a response plan to EPA.

3.0 Certification for Facilities That Do Not Pose Substantial Harm

If the facility does not meet the substantial harm criteria listed in Attachment C–I to this appendix, the owner or operator shall complete and maintain at the facility the certification form contained in Attachment C–II to this appendix. In the event an alternative formula that is comparable to the one in this appendix is used to evaluate the substantial harm criteria, 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.

4.0 References

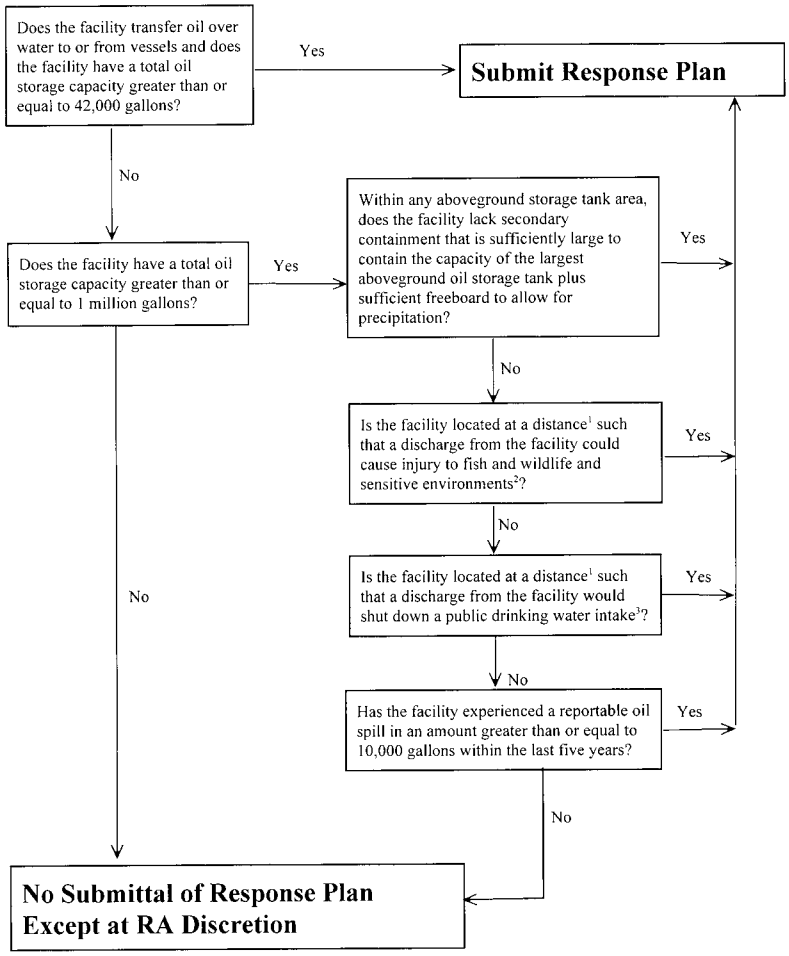
Chow, V.T. 1959. Open Channel Hydraulics. McGraw Hill.

USCG IFR (58 FR 7353, February 5, 1993). This document is available through EPA's rulemaking docket as noted in Appendix E to this part, section 13.

ATTACHMENTS TO APPENDIX C

Attachment C-I

Flowchart of Criteria for Substantial Harm



[1] Calculated using the appropriate formula in Attachment C-III to this appendix or a comparable formula.

[2] 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 and Sensitive Environments" (59 FR 14713, March 29, 1994) and the applicable Area Contingency Plan.

[3] Public drinking water intakes are analogous to public water systems as described at CFR 143.2(c).

ATTACHMENT C–II—CERTIFICATION OF THE APPLICABILITY OF THE SUBSTANTIAL HARM CRITERIA

Facility Name: _____
Facility Address: _____

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 _____

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 _____

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 in Attachment C–III to this appendix or a comparable formula[1]) such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments? For further description of fish and wildlife and sensitive environments, see Appendices I, II, and III to DOC/NOAA's ''Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments'' (see Appendix E to this part, section 13, for availability) and the applicable Area Contingency Plan.

Yes _____ No _____

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 to this appendix or a comparable formula[1]) such that a discharge from the facility would shut down a public drinking water intake[2]?

Yes _____ No _____

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 discharge in an amount greater than or equal to 10,000 gallons within the last 5 years?

Yes _____ No _____

Certification

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

_____
Signature

_____
Name (please type or print)

_____
Title

_____
Date

ATTACHMENT C-III—CALCULATION OF THE PLANNING DISTANCE

1.0 Introduction

1.1 The facility owner or operator must evaluate whether the facility is located at a distance such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments or disrupt operations at a public drinking water intake. To quantify that distance, EPA considered oil transport mechanisms over land and on still, tidal influence, and moving navigable waters. EPA has determined that the primary concern for calculation of a planning distance is the transport of oil in navigable waters during adverse weather conditions. Therefore, two formulas have been developed to determine distances for planning purposes from the point of discharge at the facility to the potential site of impact on moving and still waters, respectively. The formula for oil transport on moving navigable water is based on the velocity of the water body and the time interval for arrival of response resources. The still water formula accounts for the spread of discharged oil over the surface of the water. The method to determine oil transport on tidal influence areas is based on the type of oil discharged and the distance down current during ebb tide and up current during flood tide to the point of maximum tidal influence.

1.2 EPA's formulas were designed to be simple to use. However, facility owners or operators may calculate planning distances using more sophisticated formulas, which take into account broader scientific or engineering principles, or local conditions. Such comparable formulas may result in different planning distances than EPA's formulas. In the event that an alternative formula that is comparable to one contained in this appendix is used to evaluate the criterion in 40 CFR 112.20(f)(1)(ii)(B) or (f)(1)(ii)(C), 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 and shall notify the Regional Administrator in

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

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

writing that an alternative formula was used.[1]

1.3 A regulated facility may meet the criteria for the potential to cause substantial harm to the environment without having to perform a planning distance calculation. For facilities that meet the substantial harm criteria because of inadequate secondary containment or oil spill history, as listed in the flowchart in Attachment C–I to this appendix, calculation of the planning distance is unnecessary. For facilities that do not meet the substantial harm criteria for secondary containment or oil spill history as listed in the flowchart, calculation of a planning distance for proximity to fish and wildlife and sensitive environments and public drinking water intakes is required, unless it is clear without performing the calculation (e.g., the facility is located in a wetland) that these areas would be impacted.

1.4 A facility owner or operator who must perform a planning distance calculation on navigable water is only required to do so for the type of navigable water conditions (i.e., moving water, still water, or tidal- influenced water) applicable to the facility. If a facility owner or operator determines that more than one type of navigable water condition applies, then the facility owner or operator is required to perform a planning distance calculation for each navigable water type to determine the greatest single distance that oil may be transported. As a result, the final planning distance for oil transport on water shall be the greatest individual distance rather than a summation of each calculated planning distance.

1.5 The planning distance formula for transport on moving waterways contains three variables: the velocity of the navigable water (v), the response time interval (t), and a conversion factor (c). The velocity, v, is determined by using the Chezy-Manning equation, which, in this case, models the flood flow rate of water in open channels. The Chezy-Manning equation contains three variables which must be determined by facility owners or operators. Manning's Roughness Coefficient (for flood flow rates), n, can be determined from Table 1 of this attachment. The hydraulic radius, r, can be estimated using the average mid-channel depth from charts provided by the sources listed in Table 2 of this attachment. The average slope of the river, s, can be determined using topographic maps that can be ordered from the U.S. Geological Survey, as listed in Table 2 of this attachment.

1.6 Table 3 of this attachment contains specified time intervals for estimating the arrival of response resources at the scene of a discharge. Assuming no prior planning, response resources should be able to arrive at the discharge site within 12 hours of the discovery of any oil discharge in Higher Volume Port Areas and within 24 hours in Great Lakes and all other river, canal, inland, and nearshore areas. The specified time intervals in Table 3 of Appendix C are to be used only to aid in the identification of whether a facility could cause substantial harm to the environment. Once it is determined that a plan must be developed for the facility, the owner or operator shall reference Appendix E to this part to determine appropriate resource levels and response times. The specified time intervals of this appendix include a 3-hour time period for deployment of boom and other response equipment. The Regional Administrator may identify additional areas as appropriate.

2.0 Oil Transport on Moving Navigable Waters

2.1 The facility owner or operator must use the following formula or a comparable formula as described in §112.20(a)(3) to calculate the planning distance for oil transport on moving navigable water:

$d=v\times t\times c$; where

d: the distance downstream from a facility within which fish and wildlife and sensitive environments could be injured or a public drinking water intake would be shut down in the event of an oil discharge (in miles);

v: the velocity of the river/navigable water of concern (in ft/sec) as determined by Chezy-Manning's equation (see below and Tables 1 and 2 of this attachment);

t: the time interval specified in Table 3 based upon the type of water body and location (in hours); and

c: constant conversion factor 0.68 secω mile/hrω ft (3600 sec/hr ÷ 5280 ft/mile).

2.2 Chezy-Manning's equation is used to determine velocity:

$v=1.5/n\times r^{2/3}\times s^{1/2}$; where

v=the velocity of the river of concern (in ft/sec);

n=Manning's Roughness Coefficient from Table 1 of this attachment;

r=the hydraulic radius; the hydraulic radius can be approximated for parabolic channels by multiplying the average mid-channel depth of the river (in feet) by 0.667

[1] For persistent oils or non-persistent oils, a worst case trajectory model (i.e., an alternative formula) may be substituted for the distance formulas described in still, moving, and tidal waters, subject to Regional Administrator's review of the model. An example of an alternative formula that is comparable to the one contained in this appendix would be a worst case trajectory calculation based on credible adverse winds, currents, and/or river stages, over a range of seasons, weather conditions, and river stages. Based on historical information or a spill trajectory model, the Agency may require that additional fish and wildlife and sensitive environments or public drinking water intakes also be protected.

(sources for obtaining the mid-channel depth are listed in Table 2 of this attachment); and

s=the average slope of the river (unitless) obtained from U.S. Geological Survey topographic maps at the address listed in Table 2 of this attachment.

TABLE 1—MANNING'S ROUGHNESS COEFFICIENT FOR NATURAL STREAMS

[NOTE: Coefficients are presented for high flow rates at or near flood stage.]

Stream description	Roughness coefficient (n)
Minor Streams (Top Width <100 ft.)	
Clean:	
Straight	0.03
Winding	0.04
Sluggish (Weedy, deep pools):	
No trees or brush	0.06
Trees and/or brush	0.10
Major Streams (Top Width >100 ft.)	
Regular section:	
(No boulders/brush)	0.035
Irregular section:	
(Brush)	0.05

TABLE 2—SOURCES OF R AND S FOR THE CHEZY-MANNING EQUATION

All of the charts and related publications for navigational waters may be ordered from:
Distribution Branch
(N/CG33)
National Ocean Service
Riverdale, Maryland 20737–1199
Phone: (301) 436–6990
There will be a charge for materials ordered and a VISA or Mastercard will be accepted.
The mid-channel depth to be used in the calculation of the hydraulic radius (r) can be obtained directly from the following sources:
Charts of Canadian Coastal and Great Lakes Waters:
Canadian Hydrographic Service
Department of Fisheries and Oceans Institute
P.O. Box 8080
1675 Russell Road
Ottawa, Ontario KIG 3H6
Canada
Phone: (613) 998–4931
Charts and Maps of Lower Mississippi River (Gulf of Mexico to Ohio River and St. Francis, White, Big Sunflower, Atchafalaya, and other rivers):
U.S. Army Corps of Engineers
Vicksburg District
P.O. Box 60
Vicksburg, Mississippi 39180
Phone: (601) 634–5000
Charts of Upper Mississippi River and Illinois Waterway to Lake Michigan:
U.S. Army Corps of Engineers
Rock Island District
P.O. Box 2004
Rock Island, Illinois 61204
Phone: (309) 794–5552
Charts of Missouri River:
U.S. Army Corps of Engineers
Omaha District
6014 U.S. Post Office and Courthouse
Omaha, Nebraska 68102
Phone: (402) 221–3900
Charts of Ohio River:
U.S. Army Corps of Engineers
Ohio River Division
P.O. Box 1159
Cincinnati, Ohio 45201
Phone: (513) 684–3002
Charts of Tennessee Valley Authority Reservoirs, Tennessee River and Tributaries:
Tennessee Valley Authority
Maps and Engineering Section
416 Union Avenue
Knoxville, Tennessee 37902
Phone: (615) 632–2921
Charts of Black Warrior River, Alabama River, Tombigbee River, Apalachicola River and Pearl River:
U.S. Army Corps of Engineers
Mobile District
P.O. Box 2288
Mobile, Alabama 36628–0001
Phone: (205) 690–2511
The average slope of the river (s) may be obtained from topographic maps:
U.S. Geological Survey
Map Distribution
Federal Center
Bldg. 41
Box 25286
Denver, Colorado 80225
Additional information can be obtained from the following sources:

1. The State's Department of Natural Resources (DNR) or the State's Aids to Navigation office;
2. A knowledgeable local marina operator; or
3. A knowledgeable local water authority (e.g., State water commission)

2.3 The average slope of the river (s) can be determined from the topographic maps using the following steps:

(1) Locate the facility on the map.

(2) Find the Normal Pool Elevation at the point of discharge from the facility into the water (A).

(3) Find the Normal Pool Elevation of the public drinking water intake or fish and wildlife and sensitive environment located downstream (B) (Note: The owner or operator should use a minimum of 20 miles downstream as a cutoff to obtain the average slope if the location of a specific public drinking water intake or fish and wildlife and sensitive environment is unknown).

(4) If the Normal Pool Elevation is not available, the elevation contours can be used to find the slope. Determine elevation of the water at the point of discharge from the facility (A). Determine the elevation of the

water at the appropriate distance downstream (B). The formula presented below can be used to calculate the slope.

(5) Determine the distance (in miles) between the facility and the public drinking water intake or fish and wildlife and sensitive environments (C).

(6) Use the following formula to find the slope, which will be a unitless value: Average Slope=[(A−B) (ft)/C (miles)] × [1 mile/5280 feet]

2.4 If it is not feasible to determine the slope and mid-channel depth by the Chezy-Manning equation, then the river velocity can be approximated on- site. A specific length, such as 100 feet, can be marked off along the shoreline. A float can be dropped into the stream above the mark, and the time required for the float to travel the distance can be used to determine the velocity in feet per second. However, this method will not yield an average velocity for the length of the stream, but a velocity only for the specific location of measurement. In addition, the flow rate will vary depending on weather conditions such as wind and rainfall. It is recommended that facility owners or operators repeat the measurement under a variety of conditions to obtain the most accurate estimate of the surface water velocity under adverse weather conditions.

2.5 The planning distance calculations for moving and still navigable waters are based on worst case discharges of persistent oils. Persistent oils are of concern because they can remain in the water for significant periods of time and can potentially exist in large quantities downstream. Owners or operators of facilities that store persistent as well as non-persistent oils may use a comparable formula. The volume of oil discharged is not included as part of the planning distance calculation for moving navigable waters. Facilities that will meet this substantial harm criterion are those with facility capacities greater than or equal to 1 million gallons. It is assumed that these facilities are capable of having an oil discharge of sufficient quantity to cause injury to fish and wildlife and sensitive environments or shut down a public drinking water intake. While owners or operators of transfer facilities that store greater than or equal to 42,000 gallons are not required to use a planning distance formula for purposes of the substantial harm criteria, they should use a planning distance calculation in the development of facility-specific response plans.

TABLE 3—SPECIFIED TIME INTERVALS

Operating areas	Substantial harm planning time (hrs)
Higher volume port area.	12 hour arrival+3 hour deployment=15 hours.
Great Lakes ...	24 hour arrival+3 hour deployment=27 hours.
All other rivers and canals, inland, and nearshore areas.	24 hour arrival+3 hour deployment=27 hours.

2.6 *Example of the Planning Distance Calculation for Oil Transport on Moving Navigable Waters.* The following example provides a sample calculation using the planning distance formula for a facility discharging oil into the Monongahela River:

(1) Solve for v by evaluating n, r, and s for the Chezy-Manning equation:

Find the roughness coefficient, n, on Table 1 of this attachment for a regular section of a major stream with a top width greater than 100 feet. The top width of the river can be found from the topographic map.

n=0.035.

Find slope, s, where A=727 feet, B=710 feet, and C=25 miles.

Solving:

$s=[(727\ ft-1710\ ft)/25\ miles]\times[1\ mile/5280\ feet]=1.3\times10^{-4}$

The average mid-channel depth is found by averaging the mid-channel depth for each mile along the length of the river between the facility and the public drinking water intake or the fish or wildlife or sensitive environment (or 20 miles downstream if applicable). This value is multiplied by 0.667 to obtain the hydraulic radius. The mid-channel depth is found by obtaining values for r and s from the sources shown in Table 2 for the Monongahela River.

Solving:

$r=0.667\times20\ feet=13.33\ feet$

Solve for v using:

$v=1.5/n\times r^{2/3}\times s^{1/2}$:

$v=[1.5/0.035]\times(13.33)^{2/3}\times(1.3\times10^{-4})^{1/2}$

$v=2.73\ feet/second$

(2) Find t from Table 3 of this attachment. The Monongahela River's resource response time is 27 hours.

(3) Solve for planning distance, d:

$d=v\times t\times c$

$d=(2.73\ ft/sec)\times(27\ hours)\times(0.68\ sec\omega\ mile/hr\omega\ ft)$

$d=50\ miles$

Therefore, 50 miles downstream is the appropriate planning distance for this facility.

3.0 Oil Transport on Still Water

3.1 For bodies of water including lakes or ponds that do not have a measurable velocity, the spreading of the oil over the surface must be considered. Owners or operators of facilities located next to still water bodies may use a comparable means of calculating

the planning distance. If a comparable formula is used, documentation of the reliability and analytical soundness of the comparable calculation must be attached to the response plan cover sheet.

3.2 *Example of the Planning Distance Calculation for Oil Transport on Still Water.* To assist those facilities which could potentially discharge into a still body of water, the following analysis was performed to provide an example of the type of formula that may be used to calculate the planning distance. For this example, a worst case discharge of 2,000,000 gallons is used.

(1) The surface area in square feet covered by an oil discharge on still water, A1, can be determined by the following formula,[2] where V is the volume of the discharge in gallons and C is a constant conversion factor:

$A_1=10^5\times V^{3/4}\times C$

$C=0.1643$

$A_1=10^5\times(2{,}000{,}000 \text{ gallons})^{3/4}\times(0.1643)$

$A_1=8.74\times10^8 \text{ ft}^2$

(2) The spreading formula is based on the theoretical condition that the oil will spread uniformly in all directions forming a circle. In reality, the outfall of the discharge will direct the oil to the surface of the water where it intersects the shoreline. Although the oil will not spread uniformly in all directions, it is assumed that the discharge will spread from the shoreline into a semi-circle (this assumption does not account for winds or wave action).

(3) The area of a circle=† r^2

(4) To account for the assumption that oil will spread in a semi-circular shape, the area of a circle is divided by 2 and is designated as A_2.

$A_2=(\dagger\ r^2)/2$

Solving for the radius, r, using the relationship $A_1=A_2\leq 8.74\times10^8 \text{ ft}^2=(\dagger^2)/2$

Therefore, r=23,586 ft

r=23,586 ft÷5,280 ft/mile=4.5 miles

Assuming a 20 knot wind under storm conditions:

1 knot=1.15 miles/hour

20 knots×1.15 miles/hour/knot=23 miles/hr

Assuming that the oil slick moves at 3 percent of the wind's speed:[3]

23 miles/hour×0.03=0.69 miles/hour

(5) To estimate the distance that the oil will travel, use the times required for response resources to arrive at different geographic locations as shown in Table 3 of this attachment.

For example:

For Higher Volume Port Areas: 15 hrs×0.69 miles/hr=10.4 miles

For Great Lakes and all other areas: 27 hrs×0.69 miles/hr=18.6 miles

(6) The total distance that the oil will travel from the point of discharge, including the distance due to spreading, is calculated as follows:

Higher Volume Port Areas: d=10.4+4.5 miles or approximately 15 miles

Great Lakes and all other areas: d=18.6+4.5 miles or approximately 23 miles

4.0 Oil Transport on Tidal-Influence Areas

4.1 The planning distance method for tidal influence navigable water is based on worst case discharges of persistent and non-persistent oils. Persistent oils are of primary concern because they can potentially cause harm over a greater distance. For persistent oils discharged into tidal waters, the planning distance is 15 miles from the facility down current during ebb tide and to the point of maximum tidal influence or 15 miles, whichever is less, during flood tide.

4.2 For non-persistent oils discharged into tidal waters, the planning distance is 5 miles from the facility down current during ebb tide and to the point of maximum tidal influence or 5 miles, whichever is less, during flood tide.

4.3 *Example of Determining the Planning Distance for Two Types of Navigable Water Conditions.* Below is an example of how to determine the proper planning distance when a facility could impact two types of navigable water conditions: moving water and tidal water.

(1) Facility X stores persistent oil and is located downstream from locks along a slow moving river which is affected by tides. The river velocity, v, is determined to be 0.5 feet/second from the Chezy-Manning equation used to calculate oil transport on moving navigable waters. The specified time interval, t, obtained from Table 3 of this attachment for river areas is 27 hours. Therefore, solving for the planning distance, d:

$d=v\times t\times c$

$d=(0.5 \text{ ft/sec})\times(27 \text{ hours})\times(0.68 \text{ secmile/hrft})$

$d=9.18$ miles.

(2) However, the planning distance for maximum tidal influence down current during ebb tide is 15 miles, which is greater than the calculated 9.18 miles. Therefore, 15 miles downstream is the appropriate planning distance for this facility.

5.0 Oil Transport Over Land

5.1 Facility owners or operators must evaluate the potential for oil to be transported over land to navigable waters of the United States. The owner or operator must evaluate the likelihood that portions of a worst case discharge would reach navigable

[2] Huang, J.C. and Monastero, F.C., 1982. *Review of the State-of-the-Art of Oil Pollution Models.* Final report submitted to the American Petroleum Institute by Raytheon Ocean Systems, Co., East Providence, Rhode Island.

[3] *Oil Spill Prevention & Control.* National Spill Control School, Corpus Christi State University, Thirteenth Edition, May 1990.

waters via open channel flow or from sheet flow across the land, or be prevented from reaching navigable waters when trapped in natural or man-made depressions excluding secondary containment structures.

5.2 As discharged oil travels over land, it may enter a storm drain or open concrete channel intended for drainage. It is assumed that once oil reaches such an inlet, it will flow into the receiving navigable water. During a storm event, it is highly probable that the oil will either flow into the drainage structures or follow the natural contours of the land and flow into the navigable water. Expected minimum and maximum velocities are provided as examples of open concrete channel and pipe flow. The ranges listed below reflect minimum and maximum velocities used as design criteria.[4] The calculation below demonstrates that the time required for oil to travel through a storm drain or open concrete channel to navigable water is negligible and can be considered instantaneous. The velocities are:

For open concrete channels:
maximum velocity=25 feet per second
minimum velocity=3 feet per second
For storm drains:
maximum velocity=25 feet per second
minimum velocity=2 feet per second

5.3 Assuming a length of 0.5 mile from the point of discharge through an open concrete channel or concrete storm drain to a navigable water, the travel times (distance/velocity) are:

1.8 minutes at a velocity of 25 feet per second
14.7 minutes at a velocity of 3 feet per second
22.0 minutes for at a velocity of 2 feet per second

5.4 The distances that shall be considered to determine the planning distance are illustrated in Figure C-I of this attachment. The relevant distances can be described as follows:

D1=Distance from the nearest opportunity for discharge, X_1, to a storm drain or an open concrete channel leading to navigable water.
D2=Distance through the storm drain or open concrete channel to navigable water.
D3=Distance downstream from the outfall within which fish and wildlife and sensitive environments could be injured or a public drinking water intake would be shut down as determined by the planning distance formula.
D4=Distance from the nearest opportunity for discharge, X_2, to fish and wildlife and sensitive environments not bordering navigable water.

5.5 A facility owner or operator whose nearest opportunity for discharge is located within 0.5 mile of a navigable water must complete the planning distance calculation (D3) for the type of navigable water near the facility or use a comparable formula.

5.6 A facility that is located at a distance greater than 0.5 mile from a navigable water must also calculate a planning distance (D3) if it is in close proximity (i.e., D1 is less than 0.5 mile and other factors are conducive to oil travel over land) to storm drains that flow to navigable waters. Factors to be considered in assessing oil transport over land to storm drains shall include the topography of the surrounding area, drainage patterns, man-made barriers (excluding secondary containment structures), and soil distribution and porosity. Storm drains or concrete drainage channels that are located in close proximity to the facility can provide a direct pathway to navigable waters, regardless of the length of the drainage pipe. If D1 is less than or equal to 0.5 mile, a discharge from the facility could pose substantial harm because the time to travel the distance from the storm drain to the navigable water (D2) is virtually instantaneous.

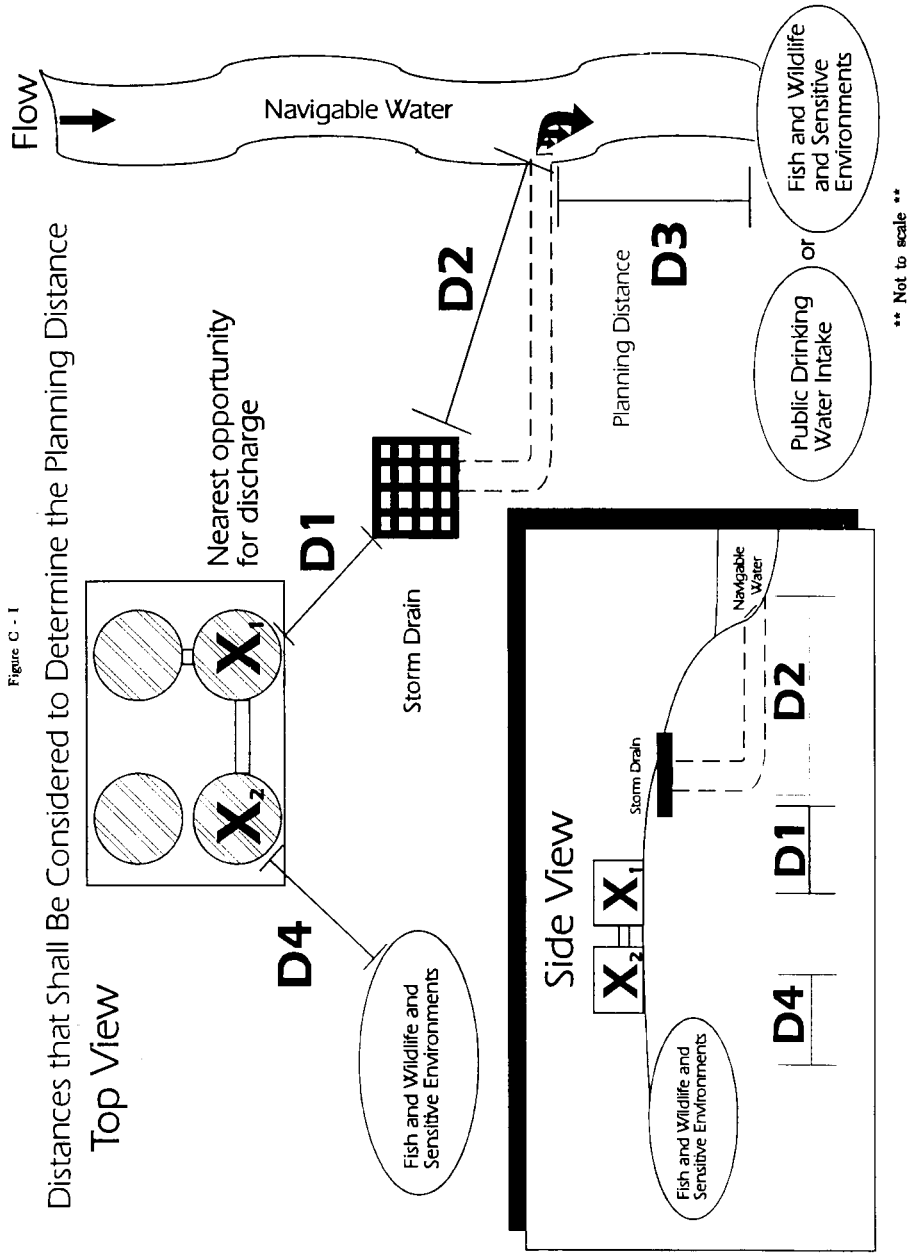
5.7 A facility's proximity to fish and wildlife and sensitive environments not bordering a navigable water, as depicted as D4 in Figure C–I of this attachment, must also be considered, regardless of the distance from the facility to navigable waters. Factors to be considered in assessing oil transport over land to fish and wildlife and sensitive environments should include the topography of the surrounding area, drainage patterns, man-made barriers (excluding secondary containment structures), and soil distribution and porosity.

5.8 If a facility is not found to pose substantial harm to fish and wildlife and sensitive environments not bordering navigable waters via oil transport on land, then supporting documentation should be maintained at the facility. However, such documentation should be submitted with the response plan if a facility is found to pose substantial harm.

[4] The design velocities were obtained from Howard County, Maryland Department of Public Works' Storm Drainage Design Manual.

Figure C - 1

Distances that Shall Be Considered to Determine the Planning Distance



[59 FR 34102, July 1, 1994, as amended at 65 FR 40798, June 30, 2000; 67 FR 47152, July 17, 2002]

APPENDIX D TO PART 112—DETERMINATION OF A WORST CASE DISCHARGE PLANNING VOLUME

1.0 Instructions

1.1 An owner or operator is required to complete this worksheet if the facility meets the criteria, as presented in Appendix C to this part, or it is determined by the RA that the facility could cause substantial harm to the environment. The calculation of a worst case discharge planning volume is used for emergency planning purposes, and is required in 40 CFR 112.20 for facility owners or operators who must prepare a response plan. When planning for the amount of resources and equipment necessary to respond to the worst case discharge planning volume, adverse weather conditions must be taken into consideration. An owner or operator is required to determine the facility's worst case discharge planning volume from either part A of this appendix for an onshore storage facility, or part B of this appendix for an onshore production facility. The worksheet considers the provision of adequate secondary containment at a facility.

1.2 For onshore storage facilities and production facilities, permanently manifolded oil storage tanks are defined as tanks that are designed, installed, and/or operated in such a manner that the multiple tanks function as one storage unit (i.e., multiple tank volumes are equalized). In a worst case discharge scenario, a single failure could cause the discharge of the contents of more than one tank. The owner or operator must provide evidence in the response plan that tanks with common piping or piping systems are not operated as one unit. If such evidence is provided and is acceptable to the RA, the worst case discharge planning volume would be based on the capacity of the largest oil storage tank within a common secondary containment area or the largest oil storage tank within a single secondary containment area, whichever is greater. For permanently manifolded tanks that function as one oil storage unit, the worst case discharge planning volume would be based on the combined oil storage capacity of all manifolded tanks or the capacity of the largest single oil storage tank within a secondary containment area, whichever is greater. For purposes of this rule, permanently manifolded tanks that are separated by internal divisions for each tank are considered to be single tanks and individual manifolded tank volumes are not combined.

1.3 For production facilities, the presence of exploratory wells, production wells, and oil storage tanks must be considered in the calculation. Part B of this appendix takes these additional factors into consideration and provides steps for their inclusion in the total worst case discharge planning volume. Onshore oil production facilities 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. Although a potential worst case discharge planning volume is calculated within each section of the worksheet, the final worst case amount depends on the risk parameter that results in the greatest volume.

1.4 Marine transportation-related transfer facilities that contain fixed aboveground onshore structures used for bulk oil storage are jointly regulated by EPA and the U.S. Coast Guard (USCG), and are termed ''complexes.'' Because the USCG also requires response plans from transportation-related facilities to address a worst case discharge of oil, a separate calculation for the worst case discharge planning volume for USCG-related facilities is included in the USCG IFR (see Appendix E to this part, section 13, for availability). All complexes that are jointly regulated by EPA and the USCG must compare both calculations for worst case discharge planning volume derived by using the EPA and USCG methodologies and plan for whichever volume is greater.

PART A: WORST CASE DISCHARGE PLANNING VOLUME CALCULATION FOR ONSHORE STORAGE FACILITIES[1]

Part A of this worksheet is to be completed by the owner or operator of an SPCC-regulated facility (excluding oil production facilities) if the facility meets the criteria as presented in Appendix C to this part, or if it is determined by the RA that the facility could cause substantial harm to the environment. If you are the owner or operator of a production facility, please proceed to part B of this worksheet.

A.1 SINGLE-TANK FACILITIES

For facilities containing only one aboveground oil storage tank, the worst case discharge planning volume equals the capacity of the oil storage tank. If adequate secondary containment (sufficiently large to contain the capacity of the aboveground oil storage tank plus sufficient freeboard to allow for precipitation) exists for the oil storage tank, multiply the capacity of the tank by 0.8.

(1) FINAL WORST CASE VOLUME: _____ GAL

(2) Do not proceed further.

[1] ''Storage facilities'' represent all facilities subject to this part, excluding oil production facilities.

A.2 SECONDARY CONTAINMENT—MULTIPLE-TANK FACILITIES

Are *all* aboveground oil storage tanks or groups of aboveground oil storage tanks at the facility *without* adequate secondary containment?[2]

_____ (Y/N)

A.2.1 If the answer is yes, the final worst case discharge planning volume equals the *total aboveground oil storage capacity at the facility*.

(1) FINAL WORST CASE VOLUME: _____ GAL

(2) Do not proceed further.

A.2.2 If the answer is no, calculate the total aboveground oil storage capacity of tanks without adequate secondary containment. If *all* aboveground oil storage tanks or groups of aboveground oil storage tanks at the facility have adequate secondary containment, ENTER ''0'' (zero).

_____ GAL

A.2.3 Calculate the capacity of the largest single aboveground oil storage tank within an adequate secondary containment area or the combined capacity of a group of aboveground oil storage tanks permanently manifolded together, whichever is greater, PLUS THE VOLUME FROM QUESTION A.2.2.

FINAL WORST CASE VOLUME:[3] _____ GAL

PART B: WORST CASE DISCHARGE PLANNING VOLUME CALCULATION FOR ONSHORE PRODUCTION FACILITIES

Part B of this worksheet is to be completed by the owner or operator of an SPCC-regulated oil production facility if the facility meets the criteria presented in Appendix C to this part, or if it is determined by the RA that the facility could cause substantial harm. A production facility consists of all wells (producing and exploratory) and related equipment in a single geographical oil or gas field operated by a single operator.

B.1 SINGLE-TANK FACILITIES

B.1.1 For facilities containing only one aboveground oil storage tank, the worst case discharge planning volume equals the capacity of the aboveground oil storage tank plus the production volume of the well with the highest output at the facility. If adequate secondary containment (sufficiently large to contain the capacity of the aboveground oil storage tank plus sufficient freeboard to allow for precipitation) exists for the storage tank, multiply the capacity of the tank by 0.8.

B.1.2 For facilities with production wells producing by pumping, if the rate of the well with the highest output is known and the number of days the facility is unattended can be predicted, then the production volume is equal to the pumping rate of the well multiplied by the greatest number of days the facility is unattended.

B.1.3 If the pumping rate of the well with the highest output is estimated or the maximum number of days the facility is unattended is estimated, then the production volume is determined from the pumping rate of the well multiplied by 1.5 times the greatest number of days that the facility has been or is expected to be unattended.

B.1.4 Attachment D–1 to this appendix provides methods for calculating the production volume for exploratory wells and production wells producing under pressure.

(1) FINAL WORST CASE VOLUME: _____ GAL

(2) Do not proceed further.

B.2 SECONDARY CONTAINMENT—MULTIPLE-TANK FACILITIES

Are *all* aboveground oil storage tanks or groups of aboveground oil storage tanks at the facility *without* adequate secondary containment?

_____ (Y/N)

B.2.1 If the answer is yes, the final worst case volume equals the total aboveground oil storage capacity without adequate secondary containment plus the production volume of the well with the highest output at the facility.

(1) For facilities with production wells producing by pumping, if the rate of the well with the highest output is known and the number of days the facility is unattended can be predicted, then the production volume is equal to the pumping rate of the well multiplied by the greatest number of days the facility is unattended.

(2) If the pumping rate of the well with the highest output is estimated or the maximum number of days the facility is unattended is estimated, then the production volume is determined from the pumping rate of the well multiplied by 1.5 times the greatest number of days that the facility has been or is expected to be unattended.

(3) Attachment D–1 to this appendix provides methods for calculating the production volumes for exploratory wells and production wells producing under pressure.

(A) FINAL WORST CASE VOLUME: _____ GAL

(B) Do not proceed further.

[2] Secondary containment is described in 40 CFR part 112, subparts A through C. Acceptable methods and structures for containment are also given in 40 CFR 112.7(c)(1).

[3] All complexes that are jointly regulated by EPA and the USCG must also calculate the worst case discharge planning volume for the transportation-related portions of the facility and plan for whichever volume is greater.

B.2.2 If the answer is no, calculate the total aboveground oil storage capacity of tanks without adequate secondary containment. If *all* aboveground oil storage tanks or groups of aboveground oil storage tanks at the facility have adequate secondary containment, ENTER ''0'' (zero).

_____ GAL

B.2.3 Calculate the capacity of the largest single aboveground oil storage tank within an adequate secondary containment area or the combined capacity of a group of aboveground oil storage tanks permanently manifolded together, whichever is greater, plus the production volume of the well with the highest output, PLUS THE VOLUME FROM QUESTION B.2.2. Attachment D–1 provides methods for calculating the production volumes for exploratory wells and production wells producing under pressure.

(1) FINAL WORST CASE VOLUME:[4] _____ GAL

(2) Do not proceed further.

ATTACHMENTS TO APPENDIX D

ATTACHMENT D–I—METHODS TO CALCULATE PRODUCTION VOLUMES FOR PRODUCTION FACILITIES WITH EXPLORATORY WELLS OR PRODUCTION WELLS PRODUCING UNDER PRESSURE

1.0 Introduction

The owner or operator of a production facility with exploratory wells or production wells producing under pressure shall compare the well rate of the highest output well (rate of well), in barrels per day, to the ability of response equipment and personnel to recover the volume of oil that could be discharged (rate of recovery), in barrels per day. The result of this comparison will determine the method used to calculate the production volume for the production facility. This production volume is to be used to calculate the worst case discharge planning volume in part B of this appendix.

2.0 Description of Methods

2.1 Method A

If the well rate would overwhelm the response efforts (i.e., rate of well/rate of recovery ≥1), then the production volume would be the 30-day forecasted well rate for a well 10,000 feet deep or less, or the 45-day forecasted well rate for a well deeper than 10,000 feet.

(1) For wells 10,000 feet deep or less:

Production volume=30 days × rate of well.

(2) For wells deeper than 10,000 feet:

Production volume=45 days × rate of well.

2.2 Method B

2.2.1 If the rate of recovery would be greater than the well rate (i.e., rate of well/rate of recovery <1), then the production volume would equal the sum of two terms:

Production volume=discharge $volume_1$ + discharge $volume_2$

2.2.2 The first term represents the volume of the oil discharged from the well between the time of the blowout and the time the response resources are on scene and recovering oil (discharge $volume_1$).

Discharge $volume_1$=(days unattended+days to respond) × (rate of well)

2.2.3 The second term represents the volume of oil discharged from the well after the response resources begin operating until the discharge is stopped, adjusted for the recovery rate of the response resources (discharge $volume_2$).

(1) For wells 10,000 feet deep or less:

Discharge $volume_2$=[30 days−(days unattended + days to respond)] × (rate of well) × (rate of well/rate of recovery)

(2) For wells deeper than 10,000 feet:

Discharge $volume_2$=[45 days−(days unattended + days to respond)] × (rate of well) × (rate of well/rate of recovery)

3.0 Example

3.1 A facility consists of two production wells producing under pressure, which are both less than 10,000 feet deep. The well rate of well A is 5 barrels per day, and the well rate of well B is 10 barrels per day. The facility is unattended for a maximum of 7 days. The facility operator estimates that it will take 2 days to have response equipment and personnel on scene and responding to a blowout, and that the projected rate of recovery will be 20 barrels per day.

(1) First, the facility operator determines that the highest output well is well B. The facility operator calculates the ratio of the rate of well to the rate of recovery:

10 barrels per day/20 barrels per day=0.5 Because the ratio is less than one, the facility operator will use Method B to calculate the production volume.

(2) The first term of the equation is:

Discharge $volume_1$=(7 days + 2 days) × (10 barrels per day)=90 barrels

(3) The second term of the equation is:

Discharge $volume_2$=[30 days—(7 days + 2 days)] × (10 barrels per day) × (0.5)=105 barrels

(4) Therefore, the production volume is:

Production volume=90 barrels + 105 barrels=195 barrels

[4] All complexes that are jointly regulated by EPA and the USCG must also calculate the worst case discharge planning volume for the transportation-related portions of the facility and plan for whichever volume is greater.

3.2 If the recovery rate was 5 barrels per day, the ratio of rate of well to rate of recovery would be 2, so the facility operator would use Method A. The production volume would have been:

30 days × 10 barrels per day=300 barrels

[59 FR 34110, July 1, 1994; 59 FR 49006, Sept. 26, 1994, as amended at 65 FR 40800, June 30, 2000; 67 FR 47152, July 17, 2002]

APPENDIX E TO PART 112—DETERMINATION AND EVALUATION OF REQUIRED RESPONSE RESOURCES FOR FACILITY RESPONSE PLANS

1.0 Purpose and Definitions

1.1 The purpose of this appendix is to describe the procedures to identify response resources to meet the requirements of § 112.20. To identify response resources to meet the facility response plan requirements of 40 CFR 112.20(h), owners or operators shall follow this appendix or, where not appropriate, shall clearly demonstrate in the response plan why use of this appendix is not appropriate at the facility and make comparable arrangements for response resources.

1.2 Definitions.

1.2.1 *Animal fat* means a non-petroleum oil, fat, or grease of animal, fish, or marine mammal origin. Animal fats are further classified based on specific gravity as follows:

(1) Group A—specific gravity less than 0.8.

(2) Group B—specific gravity equal to or greater than 0.8 and less than 1.0.

(3) Group C—specific gravity equal to or greater than 1.0.

1.2.2 *Nearshore* is an operating area defined as extending seaward 12 miles from the boundary lines defined in 46 CFR part 7, except in the Gulf of Mexico. In the Gulf of Mexico, it means the area extending 12 miles from the line of demarcation (COLREG lines) defined in 49 CFR 80.740 and 80.850.

1.2.3 *Non-persistent oils* or *Group 1 oils* include:

(1) A petroleum-based oil that, at the time of shipment, consists of hydrocarbon fractions:

(A) At least 50 percent of which by volume, distill at a temperature of 340 degrees C (645 degrees F); and

(B) At least 95 percent of which by volume, distill at a temperature of 370 degrees C (700 degrees F); and

(2) A non-petroleum oil, other than an animal fat or vegetable oil, with a specific gravity less than 0.8.

1.2.4 *Non-petroleum oil* means oil of any kind that is not petroleum-based, including but not limited to: fats, oils, and greases of animal, fish, or marine mammal origin; and vegetable oils, including oils from seeds, nuts, fruits, and kernels.

1.2.5 *Ocean* means the nearshore area.

1.2.6 *Operating area* means Rivers and Canals, Inland, Nearshore, and Great Lakes geographic location(s) in which a facility is handling, storing, or transporting oil.

1.2.7 *Operating environment* means Rivers and Canals, Inland, Great Lakes, or Ocean. These terms are used to define the conditions in which response equipment is designed to function.

1.2.8 *Persistent oils* include:

(1) A petroleum-based oil that does not meet the distillation criteria for a non-persistent oil. Persistent oils are further classified based on specific gravity as follows:

(A) Group 2—specific gravity less than 0.85;

(B) Group 3—specific gravity equal to or greater than 0.85 and less than 0.95;

(C) Group 4—specific gravity equal to or greater than 0.95 and less than 1.0; or

(D) Group 5—specific gravity equal to or greater than 1.0.

(2) A non-petroleum oil, other than an animal fat or vegetable oil, with a specific gravity of 0.8 or greater. These oils are further classified based on specific gravity as follows:

(A) Group 2—specific gravity equal to or greater than 0.8 and less than 0.85;

(B) Group 3—specific gravity equal to or greater than 0.85 and less than 0.95;

(C) Group 4—specific gravity equal to or greater than 0.95 and less than 1.0; or

(D) Group 5—specific gravity equal to or greater than 1.0.

1.2.9 *Vegetable oil* means a non-petroleum oil or fat of vegetable origin, including but not limited to oils and fats derived from plant seeds, nuts, fruits, and kernels. Vegetable oils are further classified based on specific gravity as follows:

(1) Group A—specific gravity less than 0.8.

(2) Group B—specific gravity equal to or greater than 0.8 and less than 1.0.

(3) Group C—specific gravity equal to or greater than 1.0.

1.2.10 Other definitions are included in § 112.2, section 1.1 of Appendix C, and section 3.0 of Appendix F.

2.0 Equipment Operability and Readiness

2.1 All equipment identified in a response plan must be designed to operate in the conditions expected in the facility's geographic area (i.e., operating environment). These conditions vary widely based on location and season. Therefore, it is difficult to identify a single stockpile of response equipment that will function effectively in each geographic location (i.e., operating area).

2.2 Facilities handling, storing, or transporting oil in more than one operating environment as indicated in Table 1 of this appendix must identify equipment capable of successfully functioning in each operating environment.

2.3 When identifying equipment for the response plan (based on the use of this appendix), a facility owner or operator must consider the inherent limitations of the operability of equipment components and response systems. The criteria in Table 1 of this appendix shall be used to evaluate the operability in a given environment. These criteria reflect the general conditions in certain operating environments.

2.3.1 The Regional Administrator may require documentation that the boom identified in a facility response plan meets the criteria in Table 1 of this appendix. Absent acceptable documentation, the Regional Administrator may require that the boom be tested to demonstrate that it meets the criteria in Table 1 of this appendix. Testing must be in accordance with ASTM F 715, ASTM F 989, or other tests approved by EPA as deemed appropriate (see Appendix E to this part, section 13, for general availability of documents).

2.4 Table 1 of this appendix lists criteria for oil recovery devices and boom. All other equipment necessary to sustain or support response operations in an operating environment must be designed to function in the same conditions. For example, boats that deploy or support skimmers or boom must be capable of being safely operated in the significant wave heights listed for the applicable operating environment.

2.5 A facility owner or operator shall refer to the applicable Area Contingency Plan (ACP), where available, to determine if ice, debris, and weather-related visibility are significant factors to evaluate the operability of equipment. The ACP may also identify the average temperature ranges expected in the facility's operating area. All equipment identified in a response plan must be designed to operate within those conditions or ranges.

2.6 This appendix provides information on response resource mobilization and response times. The distance of the facility from the storage location of the response resources must be used to determine whether the resources can arrive on-scene within the stated time. A facility owner or operator shall include the time for notification, mobilization, and travel of resources identified to meet the medium and Tier 1 worst case discharge requirements identified in sections 4.3 and 9.3 of this appendix (for medium discharges) and section 5.3 of this appendix (for worst case discharges). The facility owner or operator must plan for notification and mobilization of Tier 2 and 3 response resources as necessary to meet the requirements for arrival on-scene in accordance with section 5.3 of this appendix. An on-water speed of 5 knots and a land speed of 35 miles per hour is assumed, unless the facility owner or operator can demonstrate otherwise.

2.7 In identifying equipment, the facility owner or operator shall list the storage location, quantity, and manufacturer's make and model. For oil recovery devices, the effective daily recovery capacity, as determined using section 6 of this appendix, must be included. For boom, the overall boom height (draft and freeboard) shall be included. A facility owner or operator is responsible for ensuring that the identified boom has compatible connectors.

3.0 Determining Response Resources Required for Small Discharges—Petroleum Oils and Non-Petroleum Oils Other Than Animal Fats and Vegetable Oils

3.1 A facility owner or operator shall identify sufficient response resources available, by contract or other approved means as described in §112.2, to respond to a small discharge. A small discharge is defined as any discharge volume less than or equal to 2,100 gallons, but not to exceed the calculated worst case discharge. The equipment must be designed to function in the operating environment at the point of expected use.

3.2 Complexes that are regulated by EPA and the United States Coast Guard (USCG) must also consider planning quantities for the transportation-related transfer portion of the facility.

3.2.1 *Petroleum oils.* The USCG planning level that corresponds to EPA's ''small discharge'' is termed ''the average most probable discharge.'' A USCG rule found at 33 CFR 154.1020 defines ''the average most probable discharge'' as the lesser of 50 barrels (2,100 gallons) or 1 percent of the volume of the worst case discharge. Owners or operators of complexes that handle, store, or transport petroleum oils must compare oil discharge volumes for a small discharge and an average most probable discharge, and plan for whichever quantity is greater.

3.2.2 *Non-petroleum oils other than animal fats and vegetable oils.* Owners or operators of complexes that handle, store, or transport non-petroleum oils other than animal fats and vegetable oils must plan for oil discharge volumes for a small discharge. There is no USCG planning level that directly corresponds to EPA's ''small discharge.'' However, the USCG (at 33 CFR 154.545) has requirements to identify equipment to contain oil resulting from an operational discharge.

3.3 The response resources shall, as appropriate, include:

3.3.1 One thousand feet of containment boom (or, for complexes with marine transfer components, 1,000 feet of containment boom or two times the length of the largest vessel that regularly conducts oil transfers to or from the facility, whichever is greater), and a means of deploying it within 1 hour of the discovery of a discharge;

3.3.2 Oil recovery devices with an effective daily recovery capacityequal to the amount of oil discharged in a small discharge or greater which is available at the

facility within 2 hours of the detection of an oil discharge; and

3.3.3 Oil storage capacity for recovered oily material indicated in section 12.2 of this appendix.

4.0 Determining Response Resources Required for Medium Discharges—Petroleum Oils and Non-Petroleum Oils Other Than Animal Fats and Vegetable Oils

4.1 A facility owner or operator shall identify sufficient response resources available, by contract or other approved means as described in §112.2, to respond to a medium discharge of oil for that facility. This will require response resources capable of containing and collecting up to 36,000 gallons of oil or 10 percent of the worst case discharge, whichever is less. All equipment identified must be designed to operate in the applicable operating environment specified in Table 1 of this appendix.

4.2 Complexes that are regulated by EPA and the USCG must also consider planning quantities for the transportation-related transfer portion of the facility.

4.2.1 *Petroleum oils.* The USCG planning level that corresponds to EPA's ''medium discharge'' is termed ''the maximum most probable discharge.'' The USCG rule found at 33 CFR part 154 defines ''the maximum most probable discharge'' as a discharge of 1,200 barrels (50,400 gallons) or 10 percent of the worst case discharge, whichever is less. Owners or operators of complexes that handle, store, or transport petroleum oils must compare calculated discharge volumes for a medium discharge and a maximum most probable discharge, and plan for whichever quantity is greater.

4.2.2 *Non-petroleum oils other than animal fats and vegetable oils.* Owners or operators of complexes that handle, store, or transport non-petroleum oils other than animal fats and vegetable oils must plan for oil discharge volumes for a medium discharge. For non-petroleum oils, there is no USCG planning level that directly corresponds to EPA's ''medium discharge.''

4.3 Oil recovery devices identified to meet the applicable medium discharge volume planning criteria must be located such that they are capable of arriving on-scene within 6 hours in higher volume port areas and the Great Lakes and within 12 hours in all other areas. Higher volume port areas and Great Lakes areas are defined in section 1.1 of Appendix C to this part.

4.4 Because rapid control, containment, and removal of oil are critical to reduce discharge impact, the owner or operator must determine response resources using an effective daily recovery capacity for oil recovery devices equal to 50 percent of the planning volume applicable for the facility as determined in section 4.1 of this appendix. The effective daily recovery capacity for oil recovery devices identified in the plan must be determined using the criteria in section 6 of this appendix.

4.5 In addition to oil recovery capacity, the plan shall, as appropriate, identify sufficient quantity of containment boom available, by contract or other approved means as described in §112.2, to arrive within the required response times for oil collection and containment and for protection of 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 and Sensitive Environments'' (see Appendix E to this part, section 13, for availability) and the applicable ACP. Although 40 CFR part 112 does not set required quantities of boom for oil collection and containment, the response plan shall identify and ensure, by contract or other approved means as described in §112.2, the availability of the quantity of boom identified in the plan for this purpose.

4.6 The plan must indicate the availability of temporary storage capacity to meet section 12.2 of this appendix. If available storage capacity is insufficient to meet this level, then the effective daily recovery capacity must be derated (downgraded) to the limits of the available storage capacity.

4.7 The following is an example of a medium discharge volume planning calculation for equipment identification in a higher volume port area: The facility's largest aboveground storage tank volume is 840,000 gallons. Ten percent of this capacity is 84,000 gallons. Because 10 percent of the facility's largest tank, or 84,000 gallons, is greater than 36,000 gallons, 36,000 gallons is used as the planning volume. The effective daily recovery capacity is 50 percent of the planning volume, or 18,000 gallons per day. The ability of oil recovery devices to meet this capacity must be calculated using the procedures in section 6 of this appendix. Temporary storage capacity available on-scene must equal twice the daily recovery capacity as indicated in section 12.2 of this appendix, or 36,000 gallons per day. This is the information the facility owner or operator must use to identify and ensure the availability of the required response resources, by contract or other approved means as described in §112.2. The facility owner shall also identify how much boom is available for use.

5.0 Determining Response Resources Required for the Worst Case Discharge to the Maximum Extent Practicable

5.1 A facility owner or operator shall identify and ensure the availability of, by

contract or other approved means as described in §112.2, sufficient response resources to respond to the worst case discharge of oil to the maximum extent practicable. Sections 7 and 10 of this appendix describe the method to determine the necessary response resources. Worksheets are provided as Attachments E–1 and E–2 at the end of this appendix to simplify the procedures involved in calculating the planning volume for response resources for the worst case discharge.

5.1 A facility owner or operator shall identify and ensure the availability of, by contract or other approved means as described in §112.2, sufficient response resources to respond to the worst case discharge of oil to the maximum extent practicable. Sections 7 and 10 of this appendix describe the method to determine the necessary response resources. Worksheets are provided as Attachments E–1 and E–2 at the end of this appendix to simplify the procedures involved in calculating the planning volume for response resources for the worst case discharge.

5.2 Complexes that are regulated by EPA and the USCG must also consider planning for the worst case discharge at the transportation-related portion of the facility. The USCG requires that transportation-related facility owners or operators use a different calculation for the worst case discharge in the revisions to 33 CFR part 154. Owners or operators of complex facilities that are regulated by EPA and the USCG must compare both calculations of worst case discharge derived by EPA and the USCG and plan for whichever volume is greater.

5.3 Oil discharge response resources identified in the response plan and available, by contract or other approved means as described in §112.2, to meet the applicable worst case discharge planning volume must be located such that they are capable of arriving at the scene of a discharge within the times specified for the applicable response tier listed as follows

	Tier 1 (in hours)	Tier 2 (in hours)	Tier 3 (in hours)
Higher volume port areas	6	30	54
Great Lakes	12	36	60
All other river and canal, inland, and nearshore areas	12	36	60

The three levels of response tiers apply to the amount of time in which facility owners or operators must plan for response resources to arrive at the scene of a discharge to respond to the worst case discharge planning volume. For example, at a worst case discharge in an inland area, the first tier of response resources (*i.e.,* that amount of on-water and shoreline cleanup capacity necessary to respond to the fraction of the worst case discharge as indicated through the series of steps described in sections 7.2 and 7.3 or sections 10.2 and 10.3 of this appendix) would arrive at the scene of the discharge within 12 hours; the second tier of response resources would arrive within 36 hours; and the third tier of response resources would arrive within 60 hours.

5.4 The effective daily recovery capacity for oil recovery devices identified in the response plan must be determined using the criteria in section 6 of this appendix. A facility owner or operator shall identify the storage locations of all response resources used for each tier. The owner or operator of a facility whose required daily recovery capacity exceeds the applicable contracting caps in Table 5 of this appendix shall, as appropriate, identify sources of additional equipment, their location, and the arrangements made to obtain this equipment during a response. The owner or operator of a facility whose calculated planning volume exceeds the applicable contracting caps in Table 5 of this appendix shall, as appropriate, identify sources of additional equipment equal to twice the cap listed in Tier 3 or the amount necessary to reach the calculated planning volume, whichever is lower. The resources identified above the cap shall be capable of arriving on-scene not later than the Tier 3 response times in section 5.3 of this appendix. No contract is required. While general listings of available response equipment may be used to identify additional sources (i.e., ''public'' resources vs. ''private'' resources), the response plan shall identify the specific sources, locations, and quantities of equipment that a facility owner or operator has considered in his or her planning. When listing USCG-classified oil spill removal organization(s) that have sufficient removal capacity to recover the volume above the response capacity cap for the specific facility, as specified in Table 5 of this appendix, it is not necessary to list specific quantities of equipment.

5.5 A facility owner or operator shall identify the availability of temporary storage capacity to meet section 12.2 of this appendix. If available storage capacity is insufficient, then the effective daily recovery capacity must be derated (downgraded) to the limits of the available storage capacity.

5.6 When selecting response resources necessary to meet the response plan requirements, the facility owner or operator shall, as appropriate, ensure that a portion of

those resources is capable of being used in close-to-shore response activities in shallow water. For any EPA-regulated facility that is required to plan for response in shallow water, at least 20 percent of the on-water response equipment identified for the applicable operating area shall, as appropriate, be capable of operating in water of 6 feet or less depth.

5.7 In addition to oil spill recovery devices, a facility owner or operator shall identify sufficient quantities of boom that are available, by contract or other approved means as described in §112.2, to arrive on-scene within the specified response times for oil containment and collection. The specific quantity of boom required for collection and containment will depend on the facility-specific information and response strategies employed. A facility owner or operator shall, as appropriate, also identify sufficient quantities of oil containment boom to protect 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 and Sensitive Environments'' (see Appendix E to this part, section 13, for availability), and the applicable ACP. Refer to this guidance document for the number of days and geographic areas (*i.e.*, operating environments) specified in Table 2 and Table 6 of this appendix.

5.8 A facility owner or operator shall also identify, by contract or other approved means as described in §112.2, the availability of an oil spill removal organization(s) (as described in §112.2) capable of responding to a shoreline cleanup operation involving the calculated volume of oil and emulsified oil that might impact the affected shoreline. The volume of oil that shall, as appropriate, be planned for is calculated through the application of factors contained in Tables 2, 3, 6, and 7 of this appendix. The volume calculated from these tables is intended to assist the facility owner or operator to identify an oil spill removal organization with sufficient resources and expertise.

6.0 Determining Effective Daily Recovery Capacity for Oil Recovery Devices

6.1 Oil recovery devices identified by a facility owner or operator must be identified by the manufacturer, model, and effective daily recovery capacity. These capacities must be used to determine whether there is sufficient capacity to meet the applicable planning criteria for a small discharge, a medium discharge, and a worst case discharge to the maximum extent practicable.

6.2 To determine the effective daily recovery capacity of oil recovery devices, the formula listed in section 6.2.1 of this appendix shall be used. This formula considers potential limitations due to available daylight, weather, sea state, and percentage of emulsified oil in the recovered material. The RA may assign a lower efficiency factor to equipment listed in a response plan if it is determined that such a reduction is warranted.

6.2.1 The following formula shall be used to calculate the effective daily recovery capacity:

$R = T \times 24 \text{ hours} \times E$

where:

R—Effective daily recovery capacity;

T—Throughput rate in barrels per hour (nameplate capacity); and

E—20 percent efficiency factor (or lower factor as determined by the Regional Administrator).

6.2.2 For those devices in which the pump limits the throughput of liquid, throughput rate shall be calculated using the pump capacity.

6.2.3 For belt or moptype devices, the throughput rate shall be calculated using the speed of the belt or mop through the device, assumed thickness of oil adhering to or collected by the device, and surface area of the belt or mop. For purposes of this calculation, the assumed thickness of oil will be ¼ inch.

6.2.4 Facility owners or operators that include oil recovery devices whose throughput is not measurable using a pump capacity or belt/mop speed may provide information to support an alternative method of calculation. This information must be submitted following the procedures in section 6.3.2 of this appendix.

6.3 As an alternative to section 6.2 of this appendix, a facility owner or operator may submit adequate evidence that a different effective daily recovery capacity should be applied for a specific oil recovery device. Adequate evidence is actual verified performance data in discharge conditions or tests using American Society of Testing and Materials (ASTM) Standard F 631–99, F 808–83 (1999), or an equivalent test approved by EPA as deemed appropriate (see Appendix E to this part, section 13, for general availability of documents).

6.3.1 The following formula must be used to calculate the effective daily recovery capacity under this alternative:

$R = D \times U$

where:

R—Effective daily recovery capacity;

D—Average Oil Recovery Rate in barrels per hour (Item 26 in F 808–83; Item 13.2.16 in F 631–99; or actual performance data); and

U—Hours per day that equipment can operate under discharge conditions. Ten hours per day must be used unless a facility owner or operator can demonstrate that the recovery operation can be sustained for longer periods.

6.3.2 A facility owner or operator submitting a response plan shall provide data that supports the effective daily recovery capacities for the oil recovery devices listed. The following is an example of these calculations:

(1) A weir skimmer identified in a response plan has a manufacturer's rated throughput at the pump of 267 gallons per minute (gpm).

267 gpm=381 barrels per hour (bph)
R=381 bph×24 hr/day×0.2=1,829 barrels per day

(2) After testing using ASTM procedures, the skimmer's oil recovery rate is determined to be 220 gpm. The facility owner or operator identifies sufficient resources available to support operations for 12 hours per day.

220 gpm=314 bph
R=314 bph×12 hr/day=3,768 barrels per day

(3) The facility owner or operator will be able to use the higher capacity if sufficient temporary oil storage capacity is available. Determination of alternative efficiency factors under section 6.2 of this appendix or the acceptability of an alternative effective daily recovery capacity under section 6.3 of this appendix will be made by the Regional Administrator as deemed appropriate.

7.0 Calculating Planning Volumes for a Worst Case Discharge—Petroleum Oils and Non-Petroleum Oils Other Than Animal Fats and Vegetable Oils

7.1 A facility owner or operator shall plan for a response to the facility's worst case discharge. The planning for on-water oil recovery must take into account a loss of some oil to the environment due to evaporative and natural dissipation, potential increases in volume due to emulsification, and the potential for deposition of oil on the shoreline. The procedures for non-petroleum oils other than animal fats and vegetable oils are discussed in section 7.7 of this appendix.

7.2 The following procedures must be used by a facility owner or operator in determining the required on-water oil recovery capacity:

7.2.1 The following must be determined: the worst case discharge volume of oil in the facility; the appropriate group(s) for the types of oil handled, stored, or transported at the facility [persistent (Groups 2, 3, 4, 5) or non-persistent (Group 1)]; and the facility's specific operating area. See sections 1.2.3 and 1.2.8 of this appendix for the definitions of non-persistent and persistent oils, respectively. Facilities that handle, store, or transport oil from different oil groups must calculate each group separately, unless the oil group constitutes 10 percent or less by volume of the facility's total oil storage capacity. This information is to be used with Table 2 of this appendix to determine the percentages of the total volume to be used for removal capacity planning. Table 2 of this appendix divides the volume into three categories: oil lost to the environment; oil deposited on the shoreline; and oil available for on-water recovery.

7.2.2 The on-water oil recovery volume shall, as appropriate, be adjusted using the appropriate emulsification factor found in Table 3 of this appendix. Facilities that handle, store, or transport oil from different petroleum groups must compare the on-water recovery volume for each oil group (unless the oil group constitutes 10 percent or less by volume of the facility's total storage capacity) and use the calculation that results in the largest on-water oil recovery volume to plan for the amount of response resources for a worst case discharge.

7.2.3 The adjusted volume is multiplied by the on-water oil recovery resource mobilization factor found in Table 4 of this appendix from the appropriate operating area and response tier to determine the total on-water oil recovery capacity in barrels per day that must be identified or contracted to arrive on-scene within the applicable time for each response tier. Three tiers are specified. For higher volume port areas, the contracted tiers of resources must be located such that they are capable of arriving on-scene within 6 hours for Tier 1, 30 hours for Tier 2, and 54 hours for Tier 3 of the discovery of an oil discharge. For all other rivers and canals, inland, nearshore areas, and the Great Lakes, these tiers are 12, 36, and 60 hours.

7.2.4 The resulting on-water oil recovery capacity in barrels per day for each tier is used to identify response resources necessary to sustain operations in the applicable operating area. The equipment shall be capable of sustaining operations for the time period specified in Table 2 of this appendix. The facility owner or operator shall identify and ensure the availability, by contract or other approved means as described in §112.2, of sufficient oil spill recovery devices to provide the effective daily oil recovery capacity required. If the required capacity exceeds the applicable cap specified in Table 5 of this appendix, then a facility owner or operator shall ensure, by contract or other approved means as described in §112.2, only for the quantity of resources required to meet the cap, but shall identify sources of additional resources as indicated in section 5.4 of this appendix. The owner or operator of a facility whose planning volume exceeded the cap in 1993 must make arrangements to identify and ensure the availability, by contract or other approved means as described in §112.2, for additional capacity to be under contract by 1998 or 2003, as appropriate. For a facility that handles multiple groups of oil, the required effective daily recovery capacity for each oil group is calculated before applying the cap. The oil group calculation resulting in the largest on-water recovery volume

must be used to plan for the amount of response resources for a worst case discharge, unless the oil group comprises 10 percent or less by volume of the facility's total oil storage capacity.

7.3 The procedures discussed in sections 7.3.1–7.3.3 of this appendix must be used to calculate the planning volume for identifying shoreline cleanup capacity (for Group 1 through Group 4 oils).

7.3.1 The following must be determined: the worst case discharge volume of oil for the facility; the appropriate group(s) for the types of oil handled, stored, or transported at the facility [persistent (Groups 2, 3, or 4) or non-persistent (Group 1)]; and the geographic area(s) in which the facility operates (*i.e.*, operating areas). For a facility handling, storing, or transporting oil from different groups, each group must be calculated separately. Using this information, Table 2 of this appendix must be used to determine the percentages of the total volume to be used for shoreline cleanup resource planning.

7.3.2 The shoreline cleanup planning volume must be adjusted to reflect an emulsification factor using the same procedure as described in section 7.2.2 of this appendix.

7.3.3 The resulting volume shall be used to identify an oil spill removal organization with the appropriate shoreline cleanup capability.

7.4 A response plan must identify response resources with fire fighting capability. The owner or operator of a facility that handles, stores, or transports Group 1 through Group 4 oils that does not have adequate fire fighting resources located at the facility or that cannot rely on sufficient local fire fighting resources must identify adequate fire fighting resources. The facility owner or operator shall ensure, by contract or other approved means as described in §112.2, the availability of these resources. The response plan must also identify an individual located at the facility to work with the fire department for Group 1 through Group 4 oil fires. This individual shall also verify that sufficient well-trained fire fighting resources are available within a reasonable response time to a worst case scenario. The individual may be the qualified individual identified in the response plan or another appropriate individual located at the facility.

7.5 The following is an example of the procedure described above in sections 7.2 and 7.3 of this appendix: A facility with a 270,000 barrel (11.3 million gallons) capacity for #6 oil (specific gravity 0.96) is located in a higher volume port area. The facility is on a peninsula and has docks on both the ocean and bay sides. The facility has four aboveground oil storage tanks with a combined total capacity of 80,000 barrels (3.36 million gallons) and no secondary containment. The remaining facility tanks are inside secondary containment structures. The largest aboveground oil storage tank (90,000 barrels or 3.78 million gallons) has its own secondary containment. Two 50,000 barrel (2.1 million gallon) tanks (that are not connected by a manifold) are within a common secondary containment tank area, which is capable of holding 100,000 barrels (4.2 million gallons) plus sufficient freeboard.

7.5.1 The worst case discharge for the facility is calculated by adding the capacity of all aboveground oil storage tanks without secondary containment (80,000 barrels) plus the capacity of the largest aboveground oil storage tank inside secondary containment. The resulting worst case discharge volume is 170,000 barrels or 7.14 million gallons.

7.5.2 Because the requirements for Tiers 1, 2, and 3 for inland and nearshore exceed the caps identified in Table 5 of this appendix, the facility owner will contract for a response to 10,000 barrels per day (bpd) for Tier 1, 20,000 bpd for Tier 2, and 40,000 bpd for Tier 3. Resources for the remaining 7,850 bpd for Tier 1, 9,750 bpd for Tier 2, and 7,600 bpd for Tier 3 shall be identified but need not be contracted for in advance. The facility owner or operator shall, as appropriate, also identify or contract for quantities of boom identified in their response plan for the protection of fish and wildlife and sensitive environments within the area potentially impacted by a worst case discharge from the facility. 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 and Sensitive Environments,'' (see Appendix E to this part, section 13, for availability) and the applicable ACP. Attachment C–III to Appendix C provides a method for calculating a planning distance to fish and wildlife and sensitive environments and public drinking water intakes that may be impacted in the event of a worst case discharge.

7.6 The procedures discussed in sections 7.6.1–7.6.3 of this appendix must be used to determine appropriate response resources for facilities with Group 5 oils.

7.6.1 The owner or operator of a facility that handles, stores, or transports Group 5 oils shall, as appropriate, identify the response resources available by contract or other approved means, as described in §112.2. The equipment identified in a response plan shall, as appropriate, include:

(1) Sonar, sampling equipment, or other methods for locating the oil on the bottom or suspended in the water column;

(2) Containment boom, sorbent boom, silt curtains, or other methods for containing the oil that may remain floating on the surface or to reduce spreading on the bottom;

(3) Dredges, pumps, or other equipment necessary to recover oil from the bottom and shoreline;

(4) Equipment necessary to assess the impact of such discharges; and

(5) Other appropriate equipment necessary to respond to a discharge involving the type of oil handled, stored,, or transported.

7.6.2 Response resources identified in a response plan for a facility that handles, stores, or transports Group 5 oils under section 7.6.1 of this appendix shall be capable of being deployed (on site) within 24 hours of discovery of a discharge to the area where the facility is operating.

7.6.3 A response plan must identify response resources with fire fighting capability. The owner or operator of a facility that handles, stores, or transports Group 5 oils that does not have adequate fire fighting resources located at the facility or that cannot rely on sufficient local fire fighting resources must identify adequate fire fighting resources. The facility owner or operator shall ensure, by contract or other approved means as described in §112.2, the availability of these resources. The response plan shall also identify an individual located at the facility to work with the fire department for Group 5 oil fires. This individual shall also verify that sufficient well-trained fire fighting resources are available within a reasonable response time to respond to a worst case discharge. The individual may be the qualified individual identified in the response plan or another appropriate individual located at the facility.

7.7 *Non-petroleum oils other than animal fats and vegetable oils.* The procedures described in sections 7.7.1 through 7.7.5 of this appendix must be used to determine appropriate response plan development and evaluation criteria for facilities that handle, store, or transport non-petroleum oils other than animal fats and vegetable oils. Refer to section 11 of this appendix for information on the limitations on the use of chemical agents for inland and nearshore areas.

7.7.1 An owner or operator of a facility that handles, stores, or transports non-petroleum oils other than animal fats and vegetable oils must provide information in his or her plan that identifies:

(1) Procedures and strategies for responding to a worst case discharge to the maximum extent practicable; and

(2) Sources of the equipment and supplies necessary to locate, recover, and mitigate such a discharge.

7.7.2 An owner or operator of a facility that handles, stores, or transports non-petroleum oils other than animal fats and vegetable oils must ensure that any equipment identified in a response plan is capable of operating in the conditions expected in the geographic area(s) (*i.e.,* operating environments) in which the facility operates using the criteria in Table 1 of this appendix. When evaluating the operability of equipment, the facility owner or operator must consider limitations that are identified in the appropriate ACPs, including:

(1) Ice conditions;

(2) Debris;

(3) Temperature ranges; and

(4) Weather-related visibility.

7.7.3 The owner or operator of a facility that handles, stores, or transports non-petroleum oils other than animal fats and vegetable oils must identify the response resources that are available by contract or other approved means, as described in §112.2. The equipment described in the response plan shall, as appropriate, include:

(1) Containment boom, sorbent boom, or other methods for containing oil floating on the surface or to protect shorelines from impact;

(2) Oil recovery devices appropriate for the type of non-petroleum oil carried; and

(3) Other appropriate equipment necessary to respond to a discharge involving the type of oil carried.

7.7.4 Response resources identified in a response plan according to section 7.7.3 of this appendix must be capable of commencing an effective on-scene response within the applicable tier response times in section 5.3 of this appendix.

7.7.5 A response plan must identify response resources with fire fighting capability. The owner or operator of a facility that handles, stores, or transports non-petroleum oils other than animal fats and vegetable oils that does not have adequate fire fighting resources located at the facility or that cannot rely on sufficient local fire fighting resources must identify adequate fire fighting resources. The owner or operator shall ensure, by contract or other approved means as described in §112.2, the availability of these resources. The response plan must also identify an individual located at the facility to work with the fire department for fires of these oils. This individual shall also verify that sufficient well-trained fire fighting resources are available within a reasonable response time to a worst case scenario. The individual may be the qualified individual identified in the response plan or another appropriate individual located at the facility.

8.0 Determining Response Resources Required for Small Discharges—Animal Fats and Vegetable Oils

8.1 A facility owner or operator shall identify sufficient response resources available, by contract or other approved means as described in §112.2, to respond to a small discharge of animal fats or vegetable oils. A small discharge is defined as any discharge volume less than or equal to 2,100 gallons, but not to exceed the calculated worst case discharge. The equipment must be designed to function in the operating environment at the point of expected use.

8.2 Complexes that are regulated by EPA and the USCG must also consider planning quantities for the marine transportation-related portion of the facility.

8.2.1 The USCG planning level that corresponds to EPA's ''small discharge'' is termed ''the average most probable discharge.'' A USCG rule found at 33 CFR 154.1020 defines ''the average most probable discharge'' as the lesser of 50 barrels (2,100 gallons) or 1 percent of the volume of the worst case discharge. Owners or operators of complexes that handle, store, or transport animal fats and vegetable oils must compare oil discharge volumes for a small discharge and an average most probable discharge, and plan for whichever quantity is greater.

8.3 The response resources shall, as appropriate, include:

8.3.1 One thousand feet of containment boom (or, for complexes with marine transfer components, 1,000 feet of containment boom or two times the length of the largest vessel that regularly conducts oil transfers to or from the facility, whichever is greater), and a means of deploying it within 1 hour of the discovery of a discharge;

8.3.2 Oil recovery devices with an effective daily recovery capacity equal to the amount of oil discharged in a small discharge or greater which is available at the facility within 2 hours of the detection of a discharge; and

8.3.3 Oil storage capacity for recovered oily material indicated in section 12.2 of this appendix.

9.0 Determining Response Resources Required for Medium Discharges—Animal Fats and Vegetable Oils

9.1 A facility owner or operator shall identify sufficient response resources available, by contract or other approved means as described in §112.2, to respond to a medium discharge of animal fats or vegetable oils for that facility. This will require response resources capable of containing and collecting up to 36,000 gallons of oil or 10 percent of the worst case discharge, whichever is less. All equipment identified must be designed to operate in the applicable operating environment specified in Table 1 of this appendix.

9.2 Complexes that are regulated by EPA and the USCG must also consider planning quantities for the transportation-related transfer portion of the facility. Owners or operators of complexes that handle, store, or transport animal fats or vegetable oils must plan for oil discharge volumes for a medium discharge. For non-petroleum oils, there is no USCG planning level that directly corresponds to EPA's ''medium discharge.'' Although the USCG does not have planning requirements for medium discharges, they do have requirements (at 33 CFR 154.545) to identify equipment to contain oil resulting from an operational discharge.

9.3 Oil recovery devices identified to meet the applicable medium discharge volume planning criteria must be located such that they are capable of arriving on-scene within 6 hours in higher volume port areas and the Great Lakes and within 12 hours in all other areas. Higher volume port areas and Great Lakes areas are defined in section 1.1 of Appendix C to this part.

9.4 Because rapid control, containment, and removal of oil are critical to reduce discharge impact, the owner or operator must determine response resources using an effective daily recovery capacity for oil recovery devices equal to 50 percent of the planning volume applicable for the facility as determined in section 9.1 of this appendix. The effective daily recovery capacity for oil recovery devices identified in the plan must be determined using the criteria in section 6 of this appendix.

9.5 In addition to oil recovery capacity, the plan shall, as appropriate, identify sufficient quantity of containment boom available, by contract or other approved means as described in §112.2, to arrive within the required response times for oil collection and containment and for protection of 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 and Sensitive Environments'' (59 FR 14713–22, March 29, 1994) and the applicable ACP. Although 40 CFR part 112 does not set required quantities of boom for oil collection and containment, the response plan shall identify and ensure, by contract or other approved means as described in §112.2, the availability of the quantity of boom identified in the plan for this purpose.

9.6 The plan must indicate the availability of temporary storage capacity to meet section 12.2 of this appendix. If available storage capacity is insufficient to meet this level, then the effective daily recovery capacity must be derated (downgraded) to the limits of the available storage capacity.

9.7 The following is an example of a medium discharge volume planning calculation for equipment identification in a higher volume port area:

The facility's largest aboveground storage tank volume is 840,000 gallons. Ten percent of this capacity is 84,000 gallons. Because 10 percent of the facility's largest tank, or 84,000 gallons, is greater than 36,000 gallons, 36,000 gallons is used as the planning volume. The effective daily recovery capacity is 50 percent of the planning volume, or 18,000 gallons per day. The ability of oil recovery devices to meet this capacity must be calculated using the procedures in section 6 of this appendix. Temporary storage capacity available on-scene must equal twice the

daily recovery capacity as indicated in section 12.2 of this appendix, or 36,000 gallons per day. This is the information the facility owner or operator must use to identify and ensure the availability of the required response resources, by contract or other approved means as described in §112.2. The facility owner shall also identify how much boom is available for use.

10.0 Calculating Planning Volumes for a Worst Case Discharge—Animal Fats and Vegetable Oils.

10.1 A facility owner or operator shall plan for a response to the facility's worst case discharge. The planning for on-water oil recovery must take into account a loss of some oil to the environment due to physical, chemical, and biological processes, potential increases in volume due to emulsification, and the potential for deposition of oil on the shoreline or on sediments. The response planning procedures for animal fats and vegetable oils are discussed in section 10.7 of this appendix. You may use alternate response planning procedures for animal fats and vegetable oils if those procedures result in environmental protection equivalent to that provided by the procedures in section 10.7 of this appendix.

10.2 The following procedures must be used by a facility owner or operator in determining the required on-water oil recovery capacity:

10.2.1 The following must be determined: the worst case discharge volume of oil in the facility; the appropriate group(s) for the types of oil handled, stored, or transported at the facility (Groups A, B, C); and the facility's specific operating area. See sections 1.2.1 and 1.2.9 of this appendix for the definitions of animal fats and vegetable oils and groups thereof. Facilities that handle, store, or transport oil from different oil groups must calculate each group separately, unless the oil group constitutes 10 percent or less by volume of the facility's total oil storage capacity. This information is to be used with Table 6 of this appendix to determine the percentages of the total volume to be used for removal capacity planning. Table 6 of this appendix divides the volume into three categories: oil lost to the environment; oil deposited on the shoreline; and oil available for on-water recovery.

10.2.2 The on-water oil recovery volume shall, as appropriate, be adjusted using the appropriate emulsification factor found in Table 7 of this appendix. Facilities that handle, store, or transport oil from different groups must compare the on-water recovery volume for each oil group (unless the oil group constitutes 10 percent or less by volume of the facility's total storage capacity) and use the calculation that results in the largest on-water oil recovery volume to plan for the amount of response resources for a worst case discharge.

10.2.3 The adjusted volume is multiplied by the on-water oil recovery resource mobilization factor found in Table 4 of this appendix from the appropriate operating area and response tier to determine the total on-water oil recovery capacity in barrels per day that must be identified or contracted to arrive on-scene within the applicable time for each response tier. Three tiers are specified. For higher volume port areas, the contracted tiers of resources must be located such that they are capable of arriving on-scene within 6 hours for Tier 1, 30 hours for Tier 2, and 54 hours for Tier 3 of the discovery of a discharge. For all other rivers and canals, inland, nearshore areas, and the Great Lakes, these tiers are 12, 36, and 60 hours.

10.2.4 The resulting on-water oil recovery capacity in barrels per day for each tier is used to identify response resources necessary to sustain operations in the applicable operating area. The equipment shall be capable of sustaining operations for the time period specified in Table 6 of this appendix. The facility owner or operator shall identify and ensure, by contract or other approved means as described in §112.2, the availability of sufficient oil spill recovery devices to provide the effective daily oil recovery capacity required. If the required capacity exceeds the applicable cap specified in Table 5 of this appendix, then a facility owner or operator shall ensure, by contract or other approved means as described in §112.2, only for the quantity of resources required to meet the cap, but shall identify sources of additional resources as indicated in section 5.4 of this appendix. The owner or operator of a facility whose planning volume exceeded the cap in 1998 must make arrangements to identify and ensure, by contract or other approved means as described in §112.2, the availability of additional capacity to be under contract by 2003, as appropriate. For a facility that handles multiple groups of oil, the required effective daily recovery capacity for each oil group is calculated before applying the cap. The oil group calculation resulting in the largest on-water recovery volume must be used to plan for the amount of response resources for a worst case discharge, unless the oil group comprises 10 percent or less by volume of the facility's oil storage capacity.

10.3 The procedures discussed in sections 10.3.1 through 10.3.3 of this appendix must be used to calculate the planning volume for identifying shoreline cleanup capacity (for Groups A and B oils).

10.3.1 The following must be determined: the worst case discharge volume of oil for the facility; the appropriate group(s) for the types of oil handled, stored, or transported at the facility (Groups A or B); and the geographic area(s) in which the facility operates

(i.e., operating areas). For a facility handling, storing, or transporting oil from different groups, each group must be calculated separately. Using this information, Table 6 of this appendix must be used to determine the percentages of the total volume to be used for shoreline cleanup resource planning.

10.3.2 The shoreline cleanup planning volume must be adjusted to reflect an emulsification factor using the same procedure as described in section 10.2.2 of this appendix.

10.3.3 The resulting volume shall be used to identify an oil spill removal organization with the appropriate shoreline cleanup capability.

10.4 A response plan must identify response resources with fire fighting capability appropriate for the risk of fire and explosion at the facility from the discharge or threat of discharge of oil. The owner or operator of a facility that handles, stores, or transports Group A or B oils that does not have adequate fire fighting resources located at the facility or that cannot rely on sufficient local fire fighting resources must identify adequate fire fighting resources. The facility owner or operator shall ensure, by contract or other approved means as described in § 112.2, the availability of these resources. The response plan must also identify an individual to work with the fire department for Group A or B oil fires. This individual shall also verify that sufficient well-trained fire fighting resources are available within a reasonable response time to a worst case scenario. The individual may be the qualified individual identified in the response plan or another appropriate individual located at the facility.

10.5 The following is an example of the procedure described in sections 10.2 and 10.3 of this appendix. A facility with a 37.04 million gallon (881,904 barrel) capacity of several types of vegetable oils is located in the Inland Operating Area. The vegetable oil with the highest specific gravity stored at the facility is soybean oil (specific gravity 0.922, Group B vegetable oil). The facility has ten aboveground oil storage tanks with a combined total capacity of 18 million gallons (428,571 barrels) and without secondary containment. The remaining facility tanks are inside secondary containment structures. The largest aboveground oil storage tank (3 million gallons or 71,428 barrels) has its own secondary containment. Two 2.1 million gallon (50,000 barrel) tanks (that are not connected by a manifold) are within a common secondary containment tank area, which is capable of holding 4.2 million gallons (100,000 barrels) plus sufficient freeboard.

10.5.1 The worst case discharge for the facility is calculated by adding the capacity of all aboveground vegetable oil storage tanks without secondary containment (18.0 million gallons) plus the capacity of the largest aboveground storage tank inside secondary containment (3.0 million gallons). The resulting worst case discharge is 21 million gallons or 500,000 barrels.

10.5.2 With a specific worst case discharge identified, the planning volume for on-water recovery can be identified as follows:

Worst case discharge: 21 million gallons (500,000 barrels) of Group B vegetable oil

Operating Area: Inland

Planned percent recovered floating vegetable oil (from Table 6, column Nearshore/Inland/Great Lakes): Inland, Group B is 20%

Emulsion factor (from Table 7): 2.0

Planning volumes for on-water recovery: 21,000,000 gallons × 0.2 × 2.0 = 8,400,000 gallons or 200,000 barrels.

Determine required resources for on-water recovery for each of the three tiers using mobilization factors (from Table 4, column Inland/Nearshore/Great Lakes)

Inland Operating Area	Tier 1	Tier 2	Tier 3
Mobilization factor by which you multiply planning volume	.15	.25	.40
Estimated Daily Recovery Capacity (bbls)	30,000	50,000	80,000

10.5.3 Because the requirements for On-Water Recovery Resources for Tiers 1, 2, and 3 for Inland Operating Area exceed the caps identified in Table 5 of this appendix, the facility owner will contract for a response of 12,500 barrels per day (bpd) for Tier 1, 25,000 bpd for Tier 2, and 50,000 bpd for Tier 3. Resources for the remaining 17,500 bpd for Tier 1, 25,000 bpd for Tier 2, and 30,000 bpd for Tier 3 shall be identified but need not be contracted for in advance.

10.5.4 With the specific worst case discharge identified, the planning volume of onshore recovery can be identified as follows:

Worst case discharge: 21 million gallons (500,000 barrels) of Group B vegetable oil

Operating Area: Inland

Planned percent recovered floating vegetable oil from onshore (from Table 6, column Nearshore/Inland/Great Lakes): Inland, Group B is 65%

Emulsion factor (from Table 7): 2.0

Planning volumes for shoreline recovery:

21,000,000 gallons × 0.65 × 2.0 = 27,300,000 gallons or 650,000 barrels

10.5.5 The facility owner or operator shall, as appropriate, also identify or contract for quantities of boom identified in the response plan for the protection of fish and wildlife

and sensitive environments within the area potentially impacted by a worst case discharge from the facility. 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 and Sensitive Environments,'' (see Appendix E to this part, section 13, for availability) and the applicable ACP. Attachment C–III to Appendix C provides a method for calculating a planning distance to fish and wildlife and sensitive environments and public drinking water intakes that may be adversely affected in the event of a worst case discharge.

10.6 The procedures discussed in sections 10.6.1 through 10.6.3 of this appendix must be used to determine appropriate response resources for facilities with Group C oils.

10.6.1 The owner or operator of a facility that handles, stores, or transports Group C oils shall, as appropriate, identify the response resources available by contract or other approved means, as described in §112.2. The equipment identified in a response plan shall, as appropriate, include:

(1) Sonar, sampling equipment, or other methods for locating the oil on the bottom or suspended in the water column;

(2) Containment boom, sorbent boom, silt curtains, or other methods for containing the oil that may remain floating on the surface or to reduce spreading on the bottom;

(3) Dredges, pumps, or other equipment necessary to recover oil from the bottom and shoreline;

(4) Equipment necessary to assess the impact of such discharges; and

(5) Other appropriate equipment necessary to respond to a discharge involving the type of oil handled, stored, or transported.

10.6.2 Response resources identified in a response plan for a facility that handles, stores, or transports Group C oils under section 10.6.1 of this appendix shall be capable of being deployed on scene within 24 hours of discovery of a discharge.

10.6.3 A response plan must identify response resources with fire fighting capability. The owner or operator of a facility that handles, stores, or transports Group C oils that does not have adequate fire fighting resources located at the facility or that cannot rely on sufficient local fire fighting resources must identify adequate fire fighting resources. The owner or operator shall ensure, by contract or other approved means as described in §112.2, the availability of these resources. The response plan shall also identify an individual located at the facility to work with the fire department for Group C oil fires. This individual shall also verify that sufficient well-trained fire fighting resources are available within a reasonable response time to respond to a worst case discharge. The individual may be the qualified individual identified in the response plan or another appropriate individual located at the facility.

10.7 The procedures described in sections 10.7.1 through 10.7.5 of this appendix must be used to determine appropriate response plan development and evaluation criteria for facilities that handle, store, or transport animal fats and vegetable oils. Refer to section 11 of this appendix for information on the limitations on the use of chemical agents for inland and nearshore areas.

10.7.1 An owner or operator of a facility that handles, stores, or transports animal fats and vegetable oils must provide information in the response plan that identifies:

(1) Procedures and strategies for responding to a worst case discharge of animal fats and vegetable oils to the maximum extent practicable; and

(2) Sources of the equipment and supplies necessary to locate, recover, and mitigate such a discharge.

10.7.2 An owner or operator of a facility that handles, stores, or transports animal fats and vegetable oils must ensure that any equipment identified in a response plan is capable of operating in the geographic area(s) (*i.e.,* operating environments) in which the facility operates using the criteria in Table 1 of this appendix. When evaluating the operability of equipment, the facility owner or operator must consider limitations that are identified in the appropriate ACPs, including:

(1) Ice conditions;

(2) Debris;

(3) Temperature ranges; and

(4) Weather-related visibility.

10.7.3. The owner or operator of a facility that handles, stores, or transports animal fats and vegetable oils must identify the response resources that are available by contract or other approved means, as described in §112.2. The equipment described in the response plan shall, as appropriate, include:

(1) Containment boom, sorbent boom, or other methods for containing oil floating on the surface or to protect shorelines from impact;

(2) Oil recovery devices appropriate for the type of animal fat or vegetable oil carried; and

(3) Other appropriate equipment necessary to respond to a discharge involving the type of oil carried.

10.7.4 Response resources identified in a response plan according to section 10.7.3 of this appendix must be capable of commencing an effective on-scene response within the applicable tier response times in section 5.3 of this appendix.

10.7.5 A response plan must identify response resources with fire fighting capability. The owner or operator of a facility that handles, stores, or transports animal fats and vegetable oils that does not have adequate fire fighting resources located at

the facility or that cannot rely on sufficient local fire fighting resources must identify adequate fire fighting resources. The owner or operator shall ensure, by contract or other approved means as described in §112.2, the availability of these resources. The response plan shall also identify an individual located at the facility to work with the fire department for animal fat and vegetable oil fires. This individual shall also verify that sufficient well-trained fire fighting resources are available within a reasonable response time to respond to a worst case discharge. The individual may be the qualified individual identified in the response plan or another appropriate individual located at the facility.

11.0 Determining the Availability of Alternative Response Methods

11.1 For chemical agents to be identified in a response plan, they must be on the NCP Product Schedule that is maintained by EPA. (Some States have a list of approved dispersants for use within State waters. Not all of these State-approved dispersants are listed on the NCP Product Schedule.)

11.2 Identification of chemical agents in the plan does not imply that their use will be authorized. Actual authorization will be governed by the provisions of the NCP and the applicable ACP.

12.0 Additional Equipment Necessary to Sustain Response Operations

12.1 A facility owner or operator shall identify sufficient response resources available, by contract or other approved means as described in §112.2, to respond to a medium discharge of animal fats or vegetables oils for that facility. This will require response resources capable of containing and collecting up to 36,000 gallons of oil or 10 percent of the worst case discharge, whichever is less. All equipment identified must be designed to operate in the applicable operating environment specified in Table 1 of this appendix.

12.2 A facility owner or operator shall evaluate the availability of adequate temporary storage capacity to sustain the effective daily recovery capacities from equipment identified in the plan. Because of the inefficiencies of oil spill recovery devices, response plans must identify daily storage capacity equivalent to twice the effective daily recovery capacity required on-scene. This temporary storage capacity may be reduced if a facility owner or operator can demonstrate by waste stream analysis that the efficiencies of the oil recovery devices, ability to decant waste, or the availability of alternative temporary storage or disposal locations will reduce the overall volume of oily material storage.

12.3 A facility owner or operator shall ensure that response planning includes the capability to arrange for disposal of recovered oil products. Specific disposal procedures will be addressed in the applicable ACP.

13.0 References and Availability

13.1 All materials listed in this section are part of EPA's rulemaking docket and are located in the Superfund Docket, 1235 Jefferson Davis Highway, Crystal Gateway 1, Arlington, Virginia 22202, Suite 105 (Docket Numbers SPCC–2P, SPCC–3P, and SPCC–9P). The docket is available for inspection between 9 a.m. and 4 p.m., Monday through Friday, excluding Federal holidays.

Appointments to review the docket can be made by calling 703–603–9232. Docket hours are subject to change. As provided in 40 CFR part 2, a reasonable fee may be charged for copying services.

13.2 The docket will mail copies of materials to requestors who are outside the Washington, DC metropolitan area. Materials may be available from other sources, as noted in this section. As provided in 40 CFR part 2, a reasonable fee may be charged for copying services. The RCRA/Superfund Hotline at 800–424–9346 may also provide additional information on where to obtain documents. To contact the RCRA/Superfund Hotline in the Washington, DC metropolitan area, dial 703–412–9810. The Telecommunications Device for the Deaf (TDD) Hotline number is 800–553–7672, or, in the Washington, DC metropolitan area, 703–412–3323.

13.3 Documents

(1) National Preparedness for Response Exercise Program (PREP). The PREP draft guidelines are available from United States Coast Guard Headquarters (G–MEP–4), 2100 Second Street, SW., Washington, DC 20593. (See 58 FR 53990–91, October 19, 1993, Notice of Availability of PREP Guidelines).

(2) ''Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments (published in the Federal Register by DOC/NOAA at 59 FR 14713–22, March 29, 1994.). The guidance is available in the Superfund Docket (see sections 13.1 and 13.2 of this appendix).

(3) ASTM Standards. ASTM F 715, ASTM F 989, ASTM F 631–99, ASTM F 808–83 (1999). The ASTM standards are available from the American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428–2959.

(4) Response Plans for Marine Transportation-Related Facilities, Interim Final Rule. Published by USCG, DOT at 58 FR 7330–76, February 5, 1993.

TABLE 1 TO APPENDIX E—RESPONSE RESOURCE OPERATING CRITERIA

Oil Recovery Devices		
Operating environment	Significant wave height [1]	Sea state
Rivers and Canals	≤ 1 foot	1
Inland	≤ 3 feet	2
Great Lakes	≤ 4 feet	2–3
Ocean	≤ 6 feet	3–4

Boom				
Boom property	Use			
	Rivers and canals	Inland	Great Lakes	Ocean
Significant Wave Height [1]	≤ 1	≤ 3	≤ 4	≤ 6
Sea State	1	2	2–3	3–4
Boom height—inches (draft plus freeboard)	6–18	18–42	18–42	≥ 42
Reserve Buoyancy to Weight Ratio	2:1	2:1	2:1	3:1 to 4:1
Total Tensile Strength—pounds	4,500	15,000–20,000.	15,000–20,000.	≥ 20,000
Skirt Fabric Tensile Strength—pounds	200	300	300	500
Skirt Fabric Tear Strength—pounds	100	100	100	125

[1] Oil recovery devices and boom *shall* be at least capable of operating in wave heights up to and including the values listed in Table 1 for each operating environment.

TABLE 2 TO APPENDIX E—REMOVAL CAPACITY PLANNING TABLE FOR PETROLEUM OILS

Spill location	Rivers and canals			Nearshore/Inland/Great Lakes		
Sustainability of on-water oil recovery	3 days			4 days		
Oil group [1]	Percent natural dissipation	Percent recovered floating oil	Percent oil onshore	Percent natural dissipation	Percent recovered floating oil	Percent oil onshore
1—Non-persistent oils	80	10	10	80	20	10
2—Light crudes	40	15	45	50	50	30
3—Medium crudes and fuels	20	15	65	30	50	50
4—Heavy crudes and fuels	5	20	75	10	50	70

[1] The response resource considerations for non-petroleum oils other than animal fats and vegetable oils are outlined in section 7.7 of this appendix.

Note: Group 5 oils are defined in section 1.2.8 of this appendix; the response resource considerations are outlined in section 7.6 of this appendix.

TABLE 3 TO APPENDIX E—EMULSIFICATION FACTORS FOR PETROLEUM OIL GROUPS [1]

Non-Persistent Oil:	
Group 1	1.0
Persistent Oil:	
Group 2	1.8
Group 3	2.0
Group 4	1.4
Group 5 oils are defined in section 1.2.7 of this appendix; the response resource considerations are outlined in section 7.6 of this appendix.	

[1] See sections 1.2.2 and 1.2.7 of this appendix for group designations for non-persistent and persistent oils, respectively.

TABLE 4 TO APPENDIX E—ON-WATER OIL RECOVERY RESOURCE MOBILIZATION FACTORS

Operating area	Tier 1	Tier 2	Tier 3
Rivers and Canals	0.30	0.40	0.60
Inland/Nearshore Great Lakes	0.15	0.25	0.40

Note: These mobilization factors are for total resources mobilized, not incremental response resources.

TABLE 5 TO APPENDIX E—RESPONSE CAPABILITY CAPS BY OPERATING AREA

	Tier 1	Tier 2	Tier 3
February 18, 1993:			
All except Rivers & Canals, Great Lakes	10K bbls/day	20K bbls/day	40K bbls/day.

TABLE 5 TO APPENDIX E—RESPONSE CAPABILITY CAPS BY OPERATING AREA—Continued

	Tier 1	Tier 2	Tier 3
Great Lakes	5K bbls/day	10K bbls/day	20K bbls/day.
Rivers & Canals	1.5K bbls/day	3.0K bbls/day	6.0K bbls/day.
February 18, 1998:			
All except Rivers & Canals, Great Lakes	12.5K bbls/day	25K bbls/day	50K bbls/day.
Great Lakes	6.35K bbls/day	12.3K bbls/day	25K bbls/day.
Rivers & Canals	1.875K bbls/day	3.75K bbls/day	7.5K bbls/day.
February 18, 2003:			
All except Rivers & Canals, Great Lakes	TBD	TBD	TBD.
Great Lakes	TBD	TBD	TBD.
Rivers & Canals	TBD	TBD	TBD.

Note: The caps show cumulative overall effective daily recovery capacity, not incremental increases.
TBD=To Be Determined.

TABLE 6 TO APPENDIX E—REMOVAL CAPACITY PLANNING TABLE FOR ANIMAL FATS AND VEGETABLE OILS

Spill location	Rivers and canals			Nearshore/Inland/Great Lakes		
Sustainability of on-water oil recovery	3 days			4 days		
Oil group [1]	Percent natural loss	Percent recovered floating oil	Percent recovered oil from onshore	Percent natural loss	Percent recovered floating oil	Percent recovered oil from onshore
Group A	40	15	45	50	20	30
Group B	20	15	65	30	20	50

[1] Substances with a specific gravity greater than 1.0 generally sink below the surface of the water. Response resource considerations are outlined in section 10.6 of this appendix. The owner or operator of the facility is responsible for determining appropriate response resources for Group C oils including locating oil on the bottom or suspended in the water column; containment boom or other appropriate methods for containing oil that may remain floating on the surface; and dredges, pumps, or other equipment to recover animal fats or vegetable oils from the bottom and shoreline.

Note: Group C oils are defined in sections 1.2.1 and 1.2.9 of this appendix; the response resource procedures are discussed in section 10.6 of this appendix.

TABLE 7 TO APPENDIX E—EMULSIFICATION FACTORS FOR ANIMAL FATS AND VEGETABLE OILS

Oil Group [1]:	
Group A	1.0
Group B	2.0

[1] Substances with a specific gravity greater than 1.0 generally sink below the surface of the water. Response resource considerations are outlined in section 10.6 of this appendix. The owner or operator of the facility is responsible for determining appropriate response resources for Group C oils including locating oil on the bottom or suspended in the water column; containment boom or other appropriate methods for containing oil that may remain floating on the surface; and dredges, pumps, or other equipment to recover animal fats or vegetable oils from the bottom and shoreline.

Note: Group C oils are defined in sections 1.2.1 and 1.2.9 of this appendix; the response resource procedures are discussed in section 10.6 of this appendix.

ATTACHMENTS TO APPENDIX E

Attachment E-1 --
Worksheet to Plan Volume of Response Resources
for Worst Case Discharge - Petroleum Oils

Part I Background Information

Step (A) Calculate Worst Case Discharge in barrels (Appendix D) [ ]
(A)

Step (B) Oil Group[1] (Table 3 and section 1.2 of this appendix) . [ ]

Step (C) Operating Area (choose one) . . . . [ ] Near shore/Inland Great Lakes [ ] or Rivers and Canals

Step (D) Percentages of Oil (Table 2 of this appendix)

Percent Lost to Natural Dissipation	Percent Recovered Floating Oil	Percent Oil Onshore
[ ]	[ ]	[ ]
(D1)	(D2)	(D3)

Step (E1) On-Water Oil Recovery $\frac{\text{Step (D2) x Step(A)}}{100}$ [ ]
(E1)

Step (E2) Shoreline Recovery $\frac{\text{Step (D3) x Step (A)}}{100}$ . . . . [ ]
(E2)

Step (F) Emulsification Factor
(Table 3 of this appendix) . . . . . [ ]
(F)

Step (G) On-Water Oil Recovery Resource Mobilization Factor
(Table 4 of this appendix)

Tier 1	Tier 2	Tier 3
[ ]	[ ]	[ ]
(G1)	(G2)	(G3)

[1] A facility that handles, stores, or transports multiple groups of oil must do separate calculations for each oil group on site except for those oil groups that constitute 10 percent or less by volume of the total oil storage capacity at the facility. For purposes of this calculation, the volumes of all products in an oil group must be summed to determine the percentage of the facility's total oil storage capacity.

Attachment E-1 (continued) --
Worksheet to Plan Volume of Response Resources
for Worst Case Discharge - Petroleum Oils

Part II On-Water Oil Recovery Capacity (barrels/day)

Tier 1	Tier 2	Tier 3
Step (E1) x Step (F) x Step (G1)	Step (E1) x Step (F) x Step (G2)	Step (E1) x Step (F) x Step (G3)

Part III Shoreline Cleanup Volume (barrels) . . . . . .

Step (E2) x Step (F)

Part IV On-Water Response Capacity By Operating Area
(Table 5 of this appendix)
(Amount needed to be contracted for in barrels/day)

Tier 1	Tier 2	Tier 3
(J1)	(J2)	(J3)

Part V On-Water Amount Needed to be Identified, but not Contracted for in Advance (barrels/day)

Tier 1	Tier 2	Tier 3
Part II Tier 1 - Step (J1)	Part II Tier 2 - Step (J2)	Part II Tier 3 - Step (J3)

NOTE: To convert from barrels/day to gallons/day, multiply the quantities in Parts II through V by 42 gallons/barrel.

Attachment E-1 Example --
Worksheet to Plan Volume of Response Resources
for Worst Case Discharge - Petroleum Oils

Part I Background Information

Step (A) Calculate Worst Case Discharge in barrels (Appendix D) [170,000] (A)

Step (B) Oil Group[1] (Table 3 and section 1.2 of this appendix) . [4]

Step (C) Operating Area (choose one) . . [X] Near shore/Inland Great Lakes [ ] or Rivers and Canals

Step (D) Percentages of Oil (Table 2 of this appendix)

Percent Lost to Natural Dissipation	Percent Recovered Floating Oil	Percent Oil Onshore
10	50	70
(D1)	(D2)	(D3)

Step (E1) On-Water Oil Recovery $\frac{\text{Step (D2) x Step (A)}}{100}$ [85,000] (E1)

Step (E2) Shoreline Recovery $\frac{\text{Step (D3) x Step (A)}}{100}$ [119,000] (E2)

Step (F) Emulsification Factor (Table 3 of this appendix) . . . . . [1.4] (F)

Step (G) On-Water Oil Recovery Resource Mobilization Factor (Table 4 of this appendix)

Tier 1	Tier 2	Tier 3
0.15	0.25	0.40
(G1)	(G2)	(G3)

[1] A facility that handles, stores, or transports multiple groups of oil must do separate calculations for each oil group on site except for those oil groups that constitute 10 percent or less by volume of the total oil storage capacity at the facility. For purposes of this calculation, the volumes of all products in an oil group must be summed to determine the percentage of the facility's total oil storage capacity.

Attachment E-1 Example (continued) --
Worksheet to Plan Volume of Response Resources
for Worst Case Discharge - Petroleum Oils

Part II On-Water Oil Recovery Capacity (barrels/day)

Tier 1	Tier 2	Tier 3
17,850	29,750	47,600
Step (E1) x Step (F) x Step (G1)	Step (E1) x Step (F) x Step (G2)	Step (E1) x Step (F) x Step (G3)

Part III Shoreline Cleanup Volume (barrels) 166,600

Step (E2) x Step (F)

Part IV On-Water Response Capacity By Operating Area
(Table 5 of this appendix)
(Amount needed to be contracted for in barrels/day)

Tier 1	Tier 2	Tier 3
10,000	20,000	40,000
(J1)	(J2)	(J3)

Part V On-Water Amount Needed to be Identified, but not Contracted for in Advance (barrels/day)

Tier 1	Tier 2	Tier 3
7,850	9,750	7,600
Part II Tier 1 - Step (J1)	Part II Tier 2 - Step (J2)	Part II Tier 3 - Step (J3)

NOTE: To convert from barrels/day to gallons/day, multiply the quantities in Parts II through V by 42 gallons/barrel.

Attachment E-2 --
Worksheet to Plan Volume of Response Resources
for Worst Case Discharge - Animal Fats and Vegetable Oils

Part I Background Information

Step (A) Calculate Worst Case Discharge in barrels (Appendix D) [ ] (A)

Step (B) Oil Group[1] (Table 7 and section 1.2 of this appendix) . [ ]

Step (C) Operating Area (choose one) . . . . [ ] Near shore/Inland Great Lakes [ ] or Rivers and Canals

Step (D) Percentages of Oil (Table 6 of this appendix)

Percent Lost to Natural Dissipation	Percent Recovered Floating Oil	Percent Oil Onshore
[ ]	[ ]	[ ]
(D1)	(D2)	(D3)

Step (E1) On-Water Oil Recovery $\frac{\text{Step (D2) x Step (A)}}{100}$ [ ] (E1)

Step (E2) Shoreline Recovery $\frac{\text{Step (D3) x Step (A)}}{100}$ . . . [ ] (E2)

Step (F) Emulsification Factor (Table 7 of this appendix) . . . . . [ ] (F)

Step (G) On-Water Oil Recovery Resource Mobilization Factor (Table 4 of this appendix)

Tier 1	Tier 2	Tier 3
[ ]	[ ]	[ ]
(G1)	(G2)	(G3)

[1] A facility that handles, stores, or transports multiple groups of oil must do separate calculations for each oil group on site except for those oil groups that constitute 10 percent or less by volume of the total oil storage capacity at the facility. For purposes of this calculation, the volumes of all products in an oil group must be summed to determine the percentage of the facility's total oil storage capacity.

Attachment E-2 (continued) --
Worksheet to Plan Volume of Response Resources
for Worst Case Discharge - Animal Fats and Vegetable Oils

Part II On-Water Oil Recovery Capacity (barrels/day)

Tier 1	Tier 2	Tier 3
Step (E1) x Step (F) x Step (G1)	Step (E1) x Step (F) x Step (G2)	Step (E1) x Step (F) x Step (G3)

Part III Shoreline Cleanup Volume (barrels) . . . .

Step (E2) x Step (F)

Part IV On-Water Response Capacity By Operating Area
(Table 5 of this appendix)
(Amount needed to be contracted for in barrels/day)

Tier 1	Tier 2	Tier 3
(J1)	(J2)	(J3)

Part V On-Water Amount Needed to be Identified, but not Contracted for in Advance (barrels/day)

Tier 1	Tier 2	Tier 3
Part II Tier 1 - Step (J1)	Part II Tier 2 - Step (J2)	Part II Tier 3 - Step (J3)

NOTE: To convert from barrels/day to gallons/day, multiply the quantities in Parts II through V by 42 gallons/barrel.

Attachment E-2 Example --
Worksheet to Plan Volume of Response Resources
for Worst Case Discharge - Animal Fats and Vegetable Oils

Part I Background Information

Step (A) Calculate Worst Case Discharge in barrels (Appendix D) . . . . . **500,000** (A)

Step (B) Oil Group[1] (Table 7 and section 1.2 of this appendix) . . . . . **B**

Step (C) Operating Area (choose one) [X] Near shore/Inl and Great Lakes [ ] or Rivers and Canals

Step (D) Percentages of Oil (Table 6 of this appendix)

Percent Lost to Natural Dissipation	Percent Recovered Floating Oil	Percent Oil Onshore
30	20	50
(D1)	(D2)	(D3)

Step (E1) On-Water Oil Recovery $\frac{\text{Step (D2) x Step (A)}}{100}$ **100,000** (E1)

Step (E2) Shoreline Recovery $\frac{\text{Step (D3) x Step (A)}}{100}$ **250,000** (E2)

Step (F) Emulsification Factor (Table 7 of this appendix) . . . . . **2.0** (F)

Step (G) On-Water Oil Recovery Resource Mobilization Factor (Table 4 of this appendix)

Tier 1	Tier 2	Tier 3
0.15	0.25	0.40
(G1)	(G2)	(G3)

[1] A facility that handles, stores, or transports multiple groups of oil must do separate calculations for each oil group on site except for those oil groups that constitute 10 percent or less by volume of the total oil storage capacity at the facility. For purposes of this calculation, the volumes of all products in an oil group must be summed to determine the percentage of the facility's total oil storage capacity.

Attachment E-2 Example (continued) --
Worksheet to Plan Volume of Response Resources
for Worst Case Discharge - Animal Fats and Vegetable Oils (continued)

Part II On-Water Oil Recovery Capacity (barrels/day)

Tier 1	Tier 2	Tier 3
30,000	50,000	80,000
Step (E1) x Step (F) x Step (G1)	Step (E1) x Step (F) x Step (G2)	Step (E1) x Step (F) x Step (G3)

Part III Shoreline Cleanup Volume (barrels) 500,000

Step (E2) x Step (F)

Part IV On-Water Response Capacity By Operating Area
(Table 5 of this appendix)
(Amount needed to be contracted for in barrels/day)

Tier 1	Tier 2	Tier 3
12,500	25,000	50,000
(J1)	(J2)	(J3)

Part V On-Water Amount Needed to be Identified, but not Contracted for in Advance (barrels/day)

Tier 1	Tier 2	Tier 3
17,500	25,000	30,000
Part II Tier 1 - Step (J1)	Part II Tier 2 - Step (J2)	Part II Tier 3 - Step (J3)

NOTE: To convert from barrels/day to gallons/day, multiply the quantities in Parts II through V by 42 gallons/barrel.

[59 FR 34111, July 1, 1994; 59 FR 49006, Sept. 26, 1994, as amended at 65 FR 40806, 40807, June 30, 2000; 65 FR 47325, Aug. 2, 2000; 66 FR 47325, Aug. 2, 2000; 66 FR 35460, 35461, June 29, 2001]

APPENDIX F TO PART 112—FACILITY-SPECIFIC RESPONSE PLAN

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1.0 Model Facility-Specific Response Plan

(A) Owners or operators of facilities regulated under this part which pose a threat of substantial harm to the environment by discharging oil into or on navigable waters or adjoining shorelines are required to prepare and submit facility-specific response plans to EPA in accordance with the provisions in this appendix. This appendix further describes the required elements in §112.20(h).

(B) Response plans must be sent to the appropriate EPA Regional office. Figure F–1 of this Appendix lists each EPA Regional office and the address where owners or operators must submit their response plans. Those facilities deemed by the Regional Administrator (RA) to pose a threat of significant and substantial harm to the environment will have their plans reviewed and approved by EPA. In certain cases, information required in the model response plan is similar to information currently maintained in the facility's Spill Prevention, Control, and Countermeasures (SPCC) Plan as required by 40 CFR 112.3. In these cases, owners or operators may reproduce the information and include a photocopy in the response plan.

(C) A complex may develop a single response plan with a set of core elements for all regulating agencies and separate sections for the non-transportation-related and transportation-related components, as described in §112.20(h). Owners or operators of large facilities that handle, store, or transport oil at more than one geographically distinct location (e.g., oil storage areas at opposite ends of a single, continuous parcel of property) shall, as appropriate, develop separate sections of the response plan for each storage area.

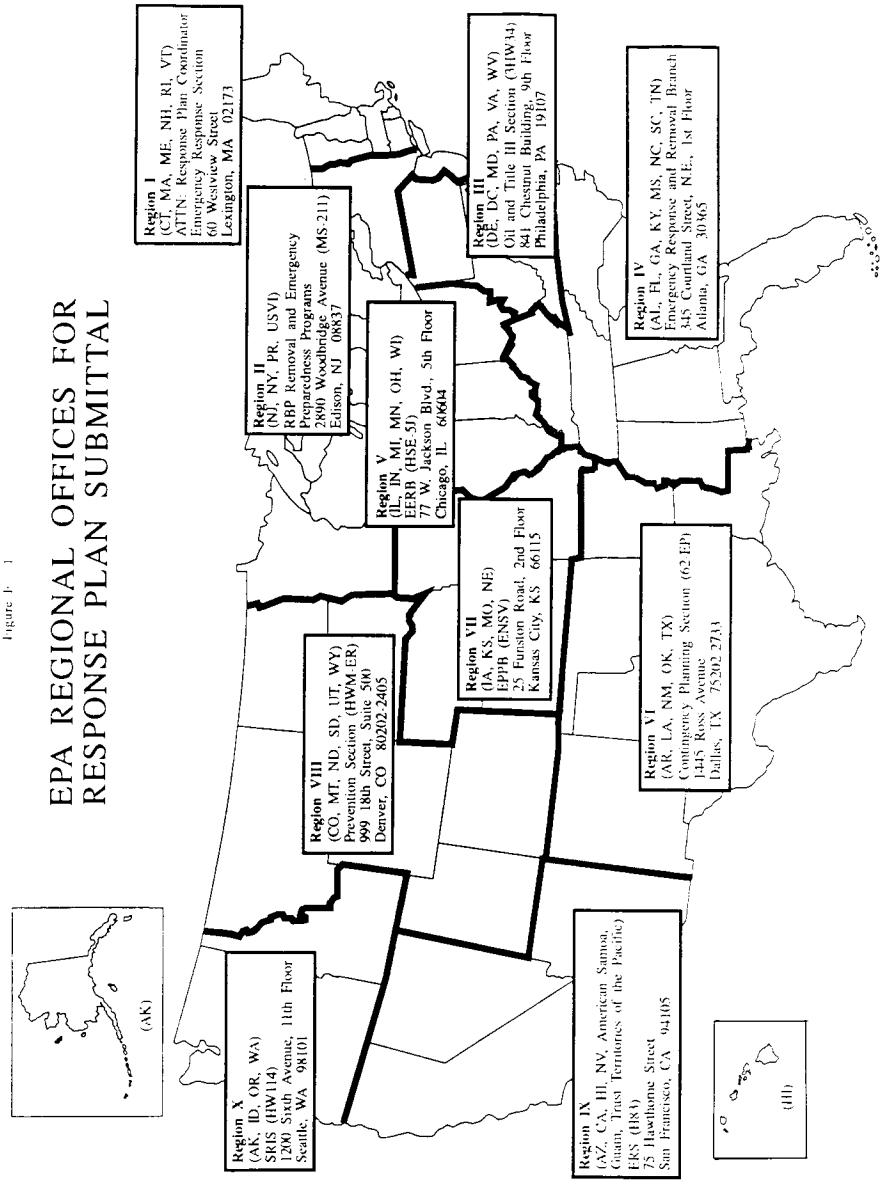

Figure 1-1

1.1 *Emergency Response Action Plan*

Several sections of the response plan shall be co-located for easy access by response personnel during an actual emergency or oil discharge. This collection of sections shall be called the Emergency Response Action Plan. The Agency intends that the Action Plan contain only as much information as is necessary to combat the discharge and be arranged so response actions are not delayed. The Action Plan may be arranged in a number of ways. For example, the sections of the Emergency Response Action Plan may be photocopies or condensed versions of the

forms included in the associated sections of the response plan. Each Emergency Response Action Plan section may be tabbed for quick reference. The Action Plan shall be maintained in the front of the same binder that contains the complete response plan or it shall be contained in a separate binder. In the latter case, both binders shall be kept together so that the entire plan can be accessed by the qualified individual and appropriate spill response personnel. The Emergency Response Action Plan shall be made up of the following sections:

1. Qualified Individual Information (Section 1.2) partial
2. Emergency Notification Phone List (Section 1.3.1) partial
3. Spill Response Notification Form (Section 1.3.1) partial
4. Response Equipment List and Location (Section 1.3.2) complete
5. Response Equipment Testing and Deployment (Section 1.3.3) complete
6. Facility Response Team (Section 1.3.4) partial
7. Evacuation Plan (Section 1.3.5) condensed
8. Immediate Actions (Section 1.7.1) complete
9. Facility Diagram (Section 1.9) complete

1.2 Facility Information

The facility information form is designed to provide an overview of the site and a description of past activities at the facility. Much of the information required by this section may be obtained from the facility's existing SPCC Plan.

1.2.1 *Facility name and location:* Enter facility name and street address. Enter the address of corporate headquarters only if corporate headquarters are physically located at the facility. Include city, county, state, zip code, and phone number.

1.2.2 *Latitude and Longitude:* Enter the latitude and longitude of the facility. Include degrees, minutes, and seconds of the main entrance of the facility.

1.2.3 *Wellhead Protection Area:* Indicate if the facility is located in or drains into a wellhead protection area as defined by the Safe Drinking Water Act of 1986 (SDWA).[1] The response plan requirements in the Wellhead Protection Program are outlined by the State or Territory in which the facility resides.

1.2.4 *Owner/operator:* Write the name of the company or person operating the facility and the name of the person or company that owns the facility, if the two are different. List the address of the owner, if the two are different.

1.2.5 *Qualified Individual:* Write the name of the qualified individual for the entire facility. If more than one person is listed, each individual indicated in this section shall have full authority to implement the facility response plan. For each individual, list: name, position, home and work addresses (street addresses, not P.O. boxes), emergency phone number, and specific response training experience.

1.2.6 *Date of Oil Storage Start-up:* Enter the year which the present facility first started storing oil.

1.2.7 *Current Operation:* Briefly describe the facility's operations and include the North American Industrial Classification System (NAICS) code.

1.2.8 *Dates and Type of Substantial Expansion:* Include information on expansions that have occurred at the facility. Examples of such expansions include, but are not limited to: Throughput expansion, addition of a product line, change of a product line, and installation of additional oil storage capacity. The data provided shall include all facility historical information and detail the expansion of the facility. An example of substantial expansion is any material alteration of the facility which causes the owner or operator of the facility to re-evaluate and increase the response equipment necessary to adequately respond to a worst case discharge from the facility.

Date of Last Update: _____

FACILITY INFORMATION FORM

Facility Name: _____
Location (Street Address): _____
City: _____ State: _____ Zip: _____
County: _____ Phone Number: ( ) _____
Latitude: _____ Degrees _____ Minutes _____ Seconds
Longitude: _____ Degrees _____ Minutes _____ Seconds
Wellhead Protection Area: _____
Owner: _____
Owner Location (Street Address): _____
(if different from Facility Address)
City: _____ State:_____ Zip: _____
County: _____ Phone Number: ( ) _____
Operator (if not Owner): _____
Qualified Individual(s): (attach additional sheets if more than one)
Name: _____
Position: _____
Work Address: _____
Home Address: _____
Emergency Phone Number: ( ) _____

[1] A wellhead protection area is defined as the surface and subsurface area surrounding a water well or wellfield, supplying a public water system, through which contaminants are reasonably likely to move toward and reach such water well or wellfield. For further information regarding State and territory protection programs, facility owners or operators may contact the SDWA Hotline at 1–800–426–4791.

Date of Oil Storage Start-up: _____
Current Operations: _____
_____
_____
Date(s) and Type(s) of Substantial Expansion(s): _____
_____
(Attach additional sheets if necessary)

1.3 Emergency Response Information

(A) The information provided in this section shall describe what will be needed in an actual emergency involving the discharge of oil or a combination of hazardous substances and oil discharge. The Emergency Response Information section of the plan must include the following components:

(1) The information provided in the Emergency Notification Phone List in section 1.3.1 identifies and prioritizes the names and phone numbers of the organizations and personnel that need to be notified immediately in the event of an emergency. This section shall include all the appropriate phone numbers for the facility. These numbers must be verified each time the plan is updated. The contact list must be accessible to all facility employees to ensure that, in case of a discharge, any employee on site could immediately notify the appropriate parties.

(2) The Spill Response Notification Form in section 1.3.1 creates a checklist of information that shall be provided to the National Response Center (NRC) and other response personnel. All information on this checklist must be known at the time of notification, or be in the process of being collected. This notification form is based on a similar form used by the NRC. Note: Do not delay spill notification to collect the information on the list.

(3) Section 1.3.2 provides a description of the facility's list of emergency response equipment and location of the response equipment. When appropriate, the amount of oil that emergency response equipment can handle and any limitations (e.g., launching sites) must be described.

(4) Section 1.3.3 provides information regarding response equipment tests and deployment drills. Response equipment deployment exercises shall be conducted to ensure that response equipment is operational and the personnel who would operate the equipment in a spill response are capable of deploying and operating it. Only a representative sample of each type of response equipment needs to be deployed and operated, as long as the remainder is properly maintained. If appropriate, testing of response equipment may be conducted while it is being deployed. Facilities without facility-owned response equipment must ensure that the oil spill removal organization that is identified in the response plan to provide this response equipment certifies that the deployment exercises have been met. Refer to the National Preparedness for Response Exercise Program (PREP) Guidelines (see Appendix E to this part, section 13, for availability), which satisfy Oil Pollution Act (OPA) response exercise requirements.

(5) Section 1.3.4 lists the facility response personnel, including those employed by the facility and those under contract to the facility for response activities, the amount of time needed for personnel to respond, their responsibility in the case of an emergency, and their level of response training. Three different forms are included in this section. The Emergency Response Personnel List shall be composed of all personnel employed by the facility whose duties involve responding to emergencies, including oil discharges, even when they are not physically present at the site. An example of this type of person would be the Building Engineer-in-Charge or Plant Fire Chief. The second form is a list of the Emergency Response Contractors (both primary and secondary) retained by the facility. Any changes in contractor status must be reflected in updates to the response plan. Evidence of contracts with response contractors shall be included in this section so that the availability of resources can be verified. The last form is the Facility Response Team List, which shall be composed of both emergency response personnel (referenced by job title/position) and emergency response contractors, included in one of the two lists described above, that will respond immediately upon discovery of an oil discharge or other emergency (i.e., the first people to respond). These are to be persons normally on the facility premises or primary response contractors. Examples of these personnel would be the Facility Hazardous Materials (HAZMAT) Spill Team 1, Facility Fire Engine Company 1, Production Supervisor, or Transfer Supervisor. Company personnel must be able to respond immediately and adequately if contractor support is not available.

(6) Section 1.3.5 lists factors that must, as appropriate, be considered when preparing an evacuation plan.

(7) Section 1.3.6 references the responsibilities of the qualified individual for the facility in the event of an emergency.

(B) The information provided in the emergency response section will aid in the assessment of the facility's ability to respond to a worst case discharge and will identify additional assistance that may be needed. In addition, the facility owner or operator may want to produce a wallet-size card containing a checklist of the immediate response and notification steps to be taken in the event of an oil discharge.

1.3.1 Notification

Date of Last Update: _____

EMERGENCY NOTIFICATION PHONE LIST WHOM TO NOTIFY

Reporter's Name: _____
Date: _____
Facility Name: _____
Owner Name: _____
Facility Identification Number: _____
Date and Time of Each NRC Notification: __

Organization	Phone No.
1. National Response Center (NRC):	1–800–424–8802
2. Qualified Individual:	_____
Evening Phone:	_____
3. Company Response Team:	_____
Evening Phone:	_____
4. Federal On-Scene Coordinator (OSC) and/or Regional Response Center (RRC):	_____
Evening Phone(s):	_____
Pager Number(s):	_____
5. Local Response Team (Fire Dept./Co operatives):	_____
6. Fire Marshall:	_____
Evening Phone:	_____
7. State Emergency Response Commis sion (SERC):	_____
Evening Phone:	_____
8. State Police:	_____
9. Local Emergency Planning Committee (LEPC):	_____
10. Local Water Supply System:	_____
Evening Phone:	_____
11. Weather Report:	_____
12. Local Television/Radio Station for Evacuation Notification:	_____
13. Hospitals:	_____

SPILL RESPONSE NOTIFICATION FORM

Reporter's Last Name: _____
First: _____
M.I.: _____
Position: _____
Phone Numbers:
Day ( ) –
Evening ( ) –
Company: _____
Organization Type: _____
Address: _____
_____
City: _____
State: _____
Zip: _____
Were Materials Discharged? _____ (Y/N) Confidential? _____ (Y/N)
Meeting Federal Obligations to Report? _____ (Y/N) Date Called: _____
Calling for Responsible Party? _____ (Y/N) Time Called: _____

Incident Description

Source and/or Cause of Incident: _____
_____
_____
_____
_____
Date of Incident: _____
Time of Incident: _____ AM/PM
Incident Address/Location: _____
_____
Nearest City:_____ State: _____ County: _____ Zip: _____
Distance from City: _____ Units of Measure: _____ Direction from City: _____
Section: _____ Township: _____ Range: _____ Borough: _____
Container Type: _____ Tank Oil Storage Capacity: _____ Units of Measure: _____
Facility Oil Storage Capacity: _____ Units of Measure: _____
Facility Latitude: _____ Degrees _____ Minutes _____ Seconds
Facility Longitude: _____ Degrees _____ Minutes _____ Seconds

Material

CHRIS Code	Discharged quantity	Unit of measure	Material Discharged in water	Quantity	Unit of measure

CHRIS Code	Discharged quantity	Unit of measure	Material Discharged in water	Quantity	Unit of measure

Response Action

Actions Taken to Correct, Control or Mitigate Incident:

_____

_____

_____

_____

Impact

Number of Injuries: _____ Number of Deaths: _____

Were there Evacuations? _____ (Y/N) Number Evacuated: _____

Was there any Damage? _____ (Y/N)

Damage in Dollars (approximate): _____

Medium Affected: _____

Description: _____

More Information about Medium: _____

_____

_____

Additional Information

Any information about the incident not recorded elsewhere in the report:

_____

_____

_____

Caller Notifications

EPA? _____ (Y/N) USCG? _____ (Y/N) State? _____ (Y/N)

Other? _____ (Y/N) Describe: _____

1.3.2 Response Equipment List

Date of Last Update:_____

FACILITY RESPONSE EQUIPMENT LIST

1. Skimmers/Pumps—Operational Status: __

Type, Model, and Year: _____

_____

Type Model Year

Number: _____

Capacity: _____ gal./min.

Daily Effective Recovery Rate: _____

Storage Location(s): _____

Date Fuel Last Changed: _____

2. Boom—Operational Status: _____

Type, Model, and Year: _____

Type Model Year

Number: _____

Size (length): _____ ft.

Containment Area: _____ sq. ft.

Storage Location: _____

3. Chemicals Stored (Dispersants listed on EPA's NCP Product Schedule)

Type	Amount	Date purchased	Treatment capacity	Storage location

Were appropriate procedures used to receive approval for use of dispersants in accordance with the NCP (40 CFR 300.910) and the Area Contingency Plan (ACP), where applicable?_____ (Y/N).

Name and State of On-Scene Coordinator (OSC) authorizing use: _____ .

Date Authorized: _____ .

4. Dispersant Dispensing Equipment—Operational Status: _____ .

Type and year	Capacity	Storage location	Response time (minutes)

Type and year	Capacity	Storage location	Response time (minutes)

5. Sorbents—Operational Status: _____
Type and Year Purchased: _____
Amount: _____
Absorption Capacity (gal.): _____
Storage Location(s): _____
6. Hand Tools—Operational Status: _____

Type and year	Quantity	Storage location

7. Communication Equipment (include operating frequency and channel and/or cellular phone numbers)—Operational Status: _____

Type and year	Quantity	Storage location/ number

8. Fire Fighting and Personnel Protective Equipment—Operational Status: _____

Type and year	Quantity	Storage location

Type and year	Quantity	Storage location

9. Other (e.g., Heavy Equipment, Boats and Motors)—Operational Status: _____

Type and year	Quantity	Storage location

1.3.3 Response Equipment Testing/Deployment

Date of Last Update:_____

Response Equipment Testing and Deployment Drill Log

Last Inspection or Response Equipment Test Date: _____
Inspection Frequency: _____
Last Deployment Drill Date: _____
Deployment Frequency: _____
Oil Spill Removal Organization Certification (if applicable): _____

1.3.4 Personnel

Date of Last Update:_____

EMERGENCY RESPONSE PERSONNEL

Company Personnel

Name	Phone [1]	Response time	Responsibility during response action	Response training type/date
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				

[1] Phone number to be used when person is not on-site.

EMERGENCY RESPONSE CONTRACTORS

Date of Last Update: _____

Contractor	Phone	Response time	Contract responsibility [1]
1.			
2.			

EMERGENCY RESPONSE CONTRACTORS—Continued

Date of Last Update: _____

Contractor	Phone	Response time	Contract responsibility [1]
3.			
4.			

[1] Include evidence of contracts/agreements with response contractors to ensure the availability of personnel and response equipment.

FACILITY RESPONSE TEAM

Date of Last Update:_____

Team member	Response time (minutes)	Phone or pager number (day/evening)
Qualified Individual:		/
		/
		/
		/
		/
		/
		/
		/
		/
		/
		/

		/
		/
		/
		/
		/
		/
		/

Note: If the facility uses contracted help in an emergency response situation, the owner or operator must provide the contractors' names and review the contractors' capacities to provide adequate personnel and response equipment.

1.3.5 Evacuation Plans

1.3.5.1 Based on the analysis of the facility, as discussed elsewhere in the plan, a facility-wide evacuation plan shall be developed. In addition, plans to evacuate parts of the facility that are at a high risk of exposure in the event of a discharge or other release must be developed. Evacuation routes must be shown on a diagram of the facility (see section 1.9 of this appendix). When developing evacuation plans, consideration must be given to the following factors, as appropriate:

(1) Location of stored materials;

(2) Hazard imposed by discharged material;

(3) Discharge flow direction;

(4) Prevailing wind direction and speed;

(5) Water currents, tides, or wave conditions (if applicable);

(6) Arrival route of emergency response personnel and response equipment;

(7) Evacuation routes;

(8) Alternative routes of evacuation;

(9) Transportation of injured personnel to nearest emergency medical facility;

(10) Location of alarm/notification systems;

(11) The need for a centralized check-in area for evacuation validation (roll call);

(12) Selection of a mitigation command center; and

(13) Location of shelter at the facility as an alternative to evacuation.

1.3.5.2 One resource that may be helpful to owners or operators in preparing this section of the response plan is The *Handbook of Chemical Hazard Analysis Procedures* by the Federal Emergency Management Agency (FEMA), Department of Transportation (DOT), and EPA. *The Handbook of Chemical Hazard Analysis Procedures* is available from: FEMA , Publication Office, 500 C. Street, S.W., Washington, DC 20472, (202) 646–3484.

1.3.5.3 As specified in §112.20(h)(1)(vi), the facility owner or operator must reference existing community evacuation plans, as appropriate.

1.3.6 Qualified Individual's Duties

The duties of the designated qualified individual are specified in §112.20(h)(3)(ix). The qualified individual's duties must be described and be consistent with the minimum requirements in §112.20(h)(3)(ix). In addition, the qualified individual must be identified with the Facility Information in section 1.2 of the response plan.

1.4 Hazard Evaluation

This section requires the facility owner or operator to examine the facility's operations closely and to predict where discharges could occur. Hazard evaluation is a widely used industry practice that allows facility owners or operators to develop a complete understanding of potential hazards and the response actions necessary to address these hazards. *The Handbook of Chemical Hazard Analysis Procedures,* prepared by the EPA, DOT, and the FEMA and the *Hazardous Materials Emergency Planning Guide* (NRT–1), prepared by the National Response Team are good references for conducting a hazard analysis. Hazard identification and evaluation will assist facility owners or operators in planning for potential discharges, thereby reducing the severity of discharge impacts that may occur in the future. The evaluation also may help the operator identify and correct potential sources of discharges. In addition, special hazards to workers and emergency response personnel's health and safety shall be evaluated, as well as the facility's oil spill history.

1.4.1 Hazard Identification

The Tank and Surface Impoundment (SI) forms, or their equivalent, that are part of this section must be completed according to the directions below. (''Surface Impoundment'' means a facility or part of a facility which is a natural topographic depression, man-made excavation, or diked area formed primarily of earthen materials (although it may be lined with man-made materials), which is designed to hold an accumulation of liquid wastes or wastes containing free liquids, and which is not an injection well or a seepage facility.) Similar worksheets, or their equivalent, must be developed for any other type of storage containers.

(1) List each tank at the facility with a separate and distinct identifier. Begin aboveground tank identifiers with an ''A'' and belowground tank identifiers with a ''B'', or submit multiple sheets with the aboveground tanks and belowground tanks on separate sheets.

(2) Use gallons for the maximum capacity of a tank; and use square feet for the area.

(3) Using the appropriate identifiers and the following instructions, fill in the appropriate forms:

(a) Tank or SI number—Using the aforementioned identifiers (A or B) or multiple reporting sheets, identify each tank or SI at the facility that stores oil or hazardous materials.

(b) Substance Stored—For each tank or SI identified, record the material that is stored therein. If the tank or SI is used to store more than one material, list all of the stored materials.

(c) Quantity Stored—For each material stored in each tank or SI, report the average volume of material stored on any given day.

(d) Tank Type or Surface Area/Year—For each tank, report the type of tank (e.g., floating top), and the year the tank was originally installed. If the tank has been refabricated, the year that the latest refabrication was completed must be recorded in parentheses next to the year installed. For

each SI, record the surface area of the impoundment and the year it went into service.

(e) Maximum Capacity—Record the operational maximum capacity for each tank and SI. If the maximum capacity varies with the season, record the upper and lower limits.

(f) Failure/Cause—Record the cause and date of any tank or SI failure which has resulted in a loss of tank or SI contents.

(4) Using the numbers from the tank and SI forms, label a schematic drawing of the facility. This drawing shall be identical to any schematic drawings included in the SPCC Plan.

(5) Using knowledge of the facility and its operations, describe the following in writing:

(a) The loading and unloading of transportation vehicles that risk the discharge of oil or release of hazardous substances during transport processes. These operations may include loading and unloading of trucks, railroad cars, or vessels. Estimate the volume of material involved in transfer operations, if the exact volume cannot be determined.

(b) Day-to-day operations that may present a risk of discharging oil or releasing a hazardous substance. These activities include scheduled venting, piping repair or replacement, valve maintenance, transfer of tank contents from one tank to another, etc. (not including transportation-related activities). Estimate the volume of material involved in these operations, if the exact volume cannot be determined.

(c) The secondary containment volume associated with each tank and/or transfer point at the facility. The numbering scheme developed on the tables, or an equivalent system, must be used to identify each containment area. Capacities must be listed for each individual unit (tanks, slumps, drainage traps, and ponds), as well as the facility total.

(d) Normal daily throughput for the facility and any effect on potential discharge volumes that a negative or positive change in that throughput may cause.

HAZARD IDENTIFICATION TANKS [1]

Date of Last Update: _____

Tank No.	Substance Stored (Oil and Hazardous Substance)	Quantity Stored (gallons)	Tank Type/Year	Maximum Capacity (gallons)	Failure/Cause

[1] Tank = any container that stores oil.
Attach as many sheets as necessary.

HAZARD IDENTIFICATION SURFACE IMPOUNDMENTS (SIS)

Date of Last Update: _____

SI No.	Substance Stored	Quantity Stored (gallons)	Surface Area/Year	Maximum Capacity (gallons)	Failure/Cause

HAZARD IDENTIFICATION SURFACE IMPOUNDMENTS (SIS)—Continued

Date of Last Update: _____

SI No.	Substance Stored	Quantity Stored (gallons)	Surface Area/Year	Maximum Capacity (gallons)	Failure/Cause

Attach as many sheets as necessary.

1.4.2 Vulnerability Analysis

The vulnerability analysis shall address the potential effects (i.e., to human health, property, or the environment) of an oil discharge. Attachment C–III to Appendix C to this part provides a method that owners or operators shall use to determine appropriate distances from the facility to fish and wildlife and sensitive environments. Owners or operators can use a comparable formula that is considered acceptable by the RA. If a comparable formula is used, documentation of the reliability and analytical soundness of the formula must be attached to the response plan cover sheet. This analysis must be prepared for each facility and, as appropriate, must discuss the vulnerability of:

(1) Water intakes (drinking, cooling, or other);

(2) Schools;

(3) Medical facilities;

(4) Residential areas;

(5) Businesses;

(6) Wetlands or other sensitive environments;[2]

(7) Fish and wildlife;

(8) Lakes and streams;

(9) Endangered flora and fauna;

(10) Recreational areas;

(11) Transportation routes (air, land, and water);

(12) Utilities; and

(13) Other areas of economic importance (e.g., beaches, marinas) including terrestrially sensitive environments, aquatic environments, and unique habitats.

1.4.3 Analysis of the Potential for an Oil Discharge

Each owner or operator shall analyze the probability of a discharge occurring at the facility. This analysis shall incorporate factors such as oil discharge history, horizontal range of a potential discharge, and vulnerability to natural disaster, and shall, as appropriate, incorporate other factors such as tank age. This analysis will provide information for developing discharge scenarios for a worst case discharge and small and medium discharges and aid in the development of techniques to reduce the size and frequency of discharges. The owner or operator may need to research the age of the tanks the oil discharge history at the facility.

1.4.4 Facility Reportable Oil Spill History

Briefly describe the facility's reportable oil spill[3] history for the entire life of the facility to the extent that such information is reasonably identifiable, including:

(1) Date of discharge(s);

(2) List of discharge causes;

(3) Material(s) discharged;

(4) Amount discharged in gallons;

(5) Amount of discharge that reached navigable waters, if applicable;

(6) Effectiveness and capacity of secondary containment;

(7) Clean-up actions taken;

(8) Steps taken to reduce possibility of recurrence;

(9) Total oil storage capacity of the tank(s) or impoundment(s) from which the material discharged;

(10) Enforcement actions;

(11) Effectiveness of monitoring equipment; and

(12) Description(s) of how each oil discharge was detected.

[2] Refer to the DOC/NOAA ''Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments'' (See appendix E to this part, section 13, for availability).

[3] As described in 40 CFR part 110, reportable oil spills are those 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.

The information solicited in this section may be similar to requirements in 40 CFR 112.4(a). Any duplicate information required by §112.4(a) may be photocopied and inserted.

1.5 Discharge Scenarios

In this section, the owner or operator is required to provide a description of the facility's worst case discharge, as well as a small and medium discharge, as appropriate. A multi-level planning approach has been chosen because the response actions to a discharge (*i.e.*, necessary response equipment, products, and personnel) are dependent on the magnitude of the discharge. Planning for lesser discharges is necessary because the nature of the response may be qualitatively different depending on the quantity of the discharge. The facility owner or operator shall discuss the potential direction of the discharge pathway.

1.5.1 Small and Medium Discharges

1.5.1.1 To address multi-level planning requirements, the owner or operator must consider types of facility-specific discharge scenarios that may contribute to a small or medium discharge. The scenarios shall account for all the operations that take place at the facility, including but not limited to:

(1) Loading and unloading of surface transportation;
(2) Facility maintenance;
(3) Facility piping;
(4) Pumping stations and sumps;
(5) Oil storage tanks;
(6) Vehicle refueling; and
(7) Age and condition of facility and components.

1.5.1.2 The scenarios shall also consider factors that affect the response efforts required by the facility. These include but are not limited to:

(1) Size of the discharge;
(2) Proximity to downgradient wells, waterways, and drinking water intakes;
(3) Proximity to fish and wildlife and sensitive environments;
(4) Likelihood that the discharge will travel offsite (*i.e.*, topography, drainage);
(5) Location of the material discharged (*i.e.*, on a concrete pad or directly on the soil);
(6) Material discharged;
(7) Weather or aquatic conditions (*i.e.*, river flow);
(8) Available remediation equipment;
(9) Probability of a chain reaction of failures; and
(10) Direction of discharge pathway.

1.5.2 Worst Case Discharge

1.5.2.1 In this section, the owner or operator must identify the worst case discharge volume at the facility. Worksheets for production and non-production facility owners or operators to use when calculating worst case discharge are presented in Appendix D to this part. When planning for the worst case discharge response, all of the aforementioned factors listed in the small and medium discharge section of the response plan shall be addressed.

1.5.2.2 For onshore storage facilities and production facilities, permanently manifolded oil storage tanks are defined as tanks that are designed, installed, and/or operated in such a manner that the multiple tanks function as one storage unit (i.e., multiple tank volumes are equalized). In this section of the response plan, owners or operators must provide evidence that oil storage tanks with common piping or piping systems are not operated as one unit. If such evidence is provided and is acceptable to the RA, the worst case discharge volume shall be based on the combined oil storage capacity of all manifold tanks or the oil storage capacity of the largest single oil storage tank within the secondary containment area, whichever is greater. For permanently manifolded oil storage tanks that function as one storage unit, the worst case discharge shall be based on the combined oil storage capacity of all manifolded tanks or the oil storage capacity of the largest single tank within a secondary containment area, whichever is greater. For purposes of the worst case discharge calculation, permanently manifolded oil storage tanks that are separated by internal divisions for each tank are considered to be single tanks and individual manifolded tank volumes are not combined.

1.6 Discharge Detection Systems

In this section, the facility owner or operator shall provide a detailed description of the procedures and equipment used to detect discharges. A section on discharge detection by personnel and a discussion of automated discharge detection, if applicable, shall be included for both regular operations and after hours operations. In addition, the facility owner or operator shall discuss how the reliability of any automated system will be checked and how frequently the system will be inspected.

1.6.1 Discharge Detection by Personnel

In this section, facility owners or operators shall describe the procedures and personnel that will detect any discharge of oil or release of a hazardous substance. A thorough discussion of facility inspections must be included. In addition, a description of initial response actions shall be addressed. This section shall reference section 1.3.1 of the response plan for emergency response information.

1.6.2 Automated Discharge Detection

In this section, facility owners or operators must describe any automated discharge detection equipment that the facility has in place. This section shall include a discussion of overfill alarms, secondary containment sensors, etc. A discussion of the plans to verify an automated alarm and the actions to be taken once verified must also be included.

1.7 Plan Implementation

In this section, facility owners or operators must explain in detail how to implement the facility's emergency response plan by describing response actions to be carried out under the plan to ensure the safety of the facility and to mitigate or prevent discharges described in section 1.5 of the response plan. This section shall include the identification of response resources for small, medium, and worst case discharges; disposal plans; and containment and drainage planning. A list of those personnel who would be involved in the cleanup shall be identified. Procedures that the facility will use, where appropriate or necessary, to update their plan after an oil discharge event and the time frame to update the plan must be described.

1.7.1 Response Resources for Small, Medium, and Worst Case Discharages

1.7.1.1 Once the discharge scenarios have been identified in section 1.5 of the response plan, the facility owner or operator shall identify and describe implementation of the response actions. The facility owner or operator shall demonstrate accessibility to the proper response personnel and equipment to effectively respond to all of the identified discharge scenarios. The determination and demonstration of adequate response capability are presented in Appendix E to this part. In addition, steps to expedite the cleanup of oil discharges must be discussed. At a minimum, the following items must be addressed:

(1) Emergency plans for spill response;

(2) Additional response training;

(3) Additional contracted help;

(4) Access to additional response equipment/experts; and

(5) Ability to implement the plan including response training and practice drills.

1.7.1.2A recommended form detailing immediate actions follows.

OIL SPILL RESPONSE—IMMEDIATE ACTIONS

1. Stop the product flow	Act quickly to secure pumps, close valves, etc.
2. Warn personnel	Enforce safety and security measures.
3. Shut off ignition sources.	Motors, electrical circuits, open flames, etc.
4. Initiate containment	Around the tank and/or in the water with oil boom.
5. Notify NRC	1–800–424–8802
6. Notify OSC	
7. Notify, as appropriate	

Source: FOSS, Oil Spill Response—Emergency Procedures, Revised December 3, 1992.

1.7.2 Disposal Plans

1.7.2.1 Facility owners or operators must describe how and where the facility intends to recover, reuse, decontaminate, or dispose of materials after a discharge has taken place. The appropriate permits required to transport or dispose of recovered materials according to local, State, and Federal requirements must be addressed. Materials that must be accounted for in the disposal plan, as appropriate, include:

(1) Recovered product;

(2) Contaminated soil;

(3) Contaminated equipment and materials, including drums, tank parts, valves, and shovels;

(4) Personnel protective equipment;

(5) Decontamination solutions;

(6) Adsorbents; and

(7) Spent chemicals.

1.7.2.2 These plans must be prepared in accordance with Federal (e.g., the Resource Conservation and Recovery Act [RCRA]), State, and local regulations, where applicable. A copy of the disposal plans from the facility's SPCC Plan may be inserted with this section, including any diagrams in those plans.

Material	Disposal facility	Location	RCRA permit/manifest
1.			
2.			
3.			
4.			

1.7.3 Containment and Drainage Planning

A proper plan to contain and control a discharge through drainage may limit the threat of harm to human health and the environment. This section shall describe how to contain and control a discharge through drainage, including:

(1) The available volume of containment (use the information presented in section 1.4.1 of the response plan);

(2) The route of drainage from oil storage and transfer areas;

(3) The construction materials used in drainage troughs;

(4) The type and number of valves and separators used in the drainage system;

(5) Sump pump capacities;

(6) The containment capacity of weirs and booms that might be used and their location (see section 1.3.2 of this appendix); and

(7) Other cleanup materials.

In addition, a facility owner or operator must meet the inspection and monitoring requirements for drainage contained in 40 CFR part 112, subparts A through C. A copy of the containment and drainage plans that are required in 40 CFR part 112, subparts A through C may be inserted in this section, including any diagrams in those plans.

NOTE: The general permit for stormwater drainage may contain additional requirements.

1.8 Self-Inspection, Drills/Exercises, and Response Training

The owner or operator must develop programs for facility response training and for drills/exercises according to the requirements of 40 CFR 112.21. Logs must be kept for facility drills/exercises, personnel response training, and spill prevention meetings. Much of the recordkeeping information required by this section is also contained in the SPCC Plan required by 40 CFR 112.3. These logs may be included in the facility response plan or kept as an annex to the facility response plan.

1.8.1 Facility Self-Inspection

Under 40 CFR 112.7(e), you must include the written procedures and records of inspections for each facility in the SPCC Plan. You must include the inspection records for each container, secondary containment, and item of response equipment at the facility. You must cross-reference the records of inspections of each container and secondary containment required by 40 CFR 112.7(e) in the facility response plan. The inspection record of response equipment is a new requirement in this plan. Facility self-inspection requires two-steps: (1) a checklist of things to inspect; and (2) a method of recording the actual inspection and its findings. You must note the date of each inspection. You must keep facility response plan records for five years. You must keep SPCC records for three years.

1.8.1.1. Tank Inspection

The tank inspection checklist presented below has been included as guidance during inspections and monitoring. Similar requirements exist in 40 CFR part 112, subparts A through C. Duplicate information from the SPCC Plan may be photocopied and inserted in this section. The inspection checklist consists of the following items:

TANK INSPECTION CHECKLIST

1. Check tanks for leaks, specifically looking for:
   A. drip marks;
   B. discoloration of tanks;
   C. puddles containing spilled or leaked material;
   D. corrosion;
   E. cracks; and
   F. localized dead vegetation.
2. Check foundation for:
   A. cracks;
   B. discoloration;
   C. puddles containing spilled or leaked material;
   D. settling;
   E. gaps between tank and foundation; and
   F. damage caused by vegetation roots.
3. Check piping for:
   A. droplets of stored material;
   B. discoloration;
   C. corrosion;
   D. bowing of pipe between supports;
   E. evidence of stored material seepage from valves or seals; and
   F. localized dead vegetation.

TANK/SURFACE IMPOUNDMENT INSPECTION LOG

Inspector	Tank or SI#	Date	Comments

TANK/SURFACE IMPOUNDMENT INSPECTION LOG—Continued

Inspector	Tank or SI#	Date	Comments

1.8.1.2 Response Equipment Inspection

Using the Emergency Response Equipment List provided in section 1.3.2 of the response plan, describe each type of response equipment, checking for the following:

Response Equipment Checklist

1. Inventory (item and quantity);
2. Storage location;
3. Accessibility (time to access and respond);
4. Operational status/condition;
5. Actual use/testing (last test date and frequency of testing); and
6. Shelf life (present age, expected replacement date).

Please note any discrepancies between this list and the available response equipment.

RESPONSE EQUIPMENT INSPECTION LOG

[Use section 1.3.2 of the response plan as a checklist]

Inspector	Date	Comments

RESPONSE EQUIPMENT INSPECTION LOG—Continued

[Use section 1.3.2 of the response plan as a checklist]

Inspector	Date	Comments

1.8.1.3 Secondary Containment Inspection

Inspect the secondary containment (as described in sections 1.4.1 and 1.7.2 of the response plan), checking the following:

Secondary Containment Checklist

1. Dike or berm system.
   A. Level of precipitation in dike/available capacity;
   B. Operational status of drainage valves;
   C. Dike or berm permeability;
   D. Debris;
   E. Erosion;
   F. Permeability of the earthen floor of diked area; and
   G. Location/status of pipes, inlets, drainage beneath tanks, etc.
2. Secondary containment
   A. Cracks;
   B. Discoloration;
   C. Presence of spilled or leaked material (standing liquid);
   D. Corrosion; and
   E. Valve conditions.
3. Retention and drainage ponds
   A. Erosion;
   B. Available capacity;
   C. Presence of spilled or leaked material;
   D. Debris; and
   E. Stressed vegetation.

The tank inspection checklist presented below has been included as guidance during inspections and monitoring. Similar requirements exist in 40 CFR part 112, subparts A through C. Similar requirements exist in 40 CFR 112.7(e). Duplicate information from the SPCC Plan may be photocopied and inserted in this section.

1.8.2 Facility Drills/Exercises

(A) CWA section 311(j)(5), as amended by OPA, requires the response plan to contain a description of facility drills/exercises. According to 40 CFR 112.21(c), the facility owner or operator shall develop a program of facility response drills/exercises, including evaluation procedures. Following the PREP guidelines (see Appendix E to this part, section 13, for availability) would satisfy a facility's requirements for drills/exercises under this part. Alternately, under §112.21(c), a facility owner or operator may develop a program that is not based on the PREP guidelines. Such a program is subject to approval by the Regional Administrator based on the description of the program provided in the response plan.

(B) The PREP Guidelines specify that the facility conduct internal and external drills/exercises. The internal exercises include: qualified individual notification drills, spill management team tabletop exercises, equipment deployment exercises, and unannounced exercises. External exercises include Area Exercises. Credit for an Area or Facility-specific Exercise will be given to the facility for an actual response to a discharge in the area if the plan was utilized for response to the discharge and the objectives of the Exercise were met and were properly evaluated, documented, and self-certified.

(C) Section 112.20(h)(8)(ii) requires the facility owner or operator to provide a description of the drill/exercise program to be carried out under the response plan. Qualified Individual Notification Drill and Spill Management Team Tabletop Drill logs shall be provided in sections 1.8.2.1 and 1.8.2.2, respectively. These logs may be included in the facility response plan or kept as an annex to the facility response plan. See section 1.3.3 of this appendix for Equipment Deployment Drill Logs.

1.8.2.1 Qualified Individual Notification Drill Logs

Qualified Individual Notification Drill Log

Date: _____
Company: _____
Qualified Individual(s): _____
Emergency Scenario: _____
_____
_____
Evaluation: _____
_____
_____
_____
Changes to be Implemented: _____
_____
_____
Time Table for Implementation: _____
_____

1.8.2.2 Spill Management Team Tabletop Exercise Logs

Spill Management Team Tabletop Exercise Log

Date: _____
Company: _____
Qualified Individual(s): _____
Emergency Scenario: _____
_____
_____
Evaluation: _____
_____
_____
_____
Changes to be Implemented: _____
_____
_____
Time Table for Implementation: _____

1.8.3 Response Training

Section 112.21(a) requires facility owners or operators to develop programs for facility response training. Facility owners or operators are required by §112.20(h)(8)(iii) to provide a description of the response training program to be carried out under the response plan. A facility's training program can be based on the USCG's Training Elements for Oil Spill Response, to the extent applicable to facility operations, or another response training program acceptable to the RA. The training elements are available from the USCG Office of Response (G–MOR) at (202) 267–0518 or fax (202) 267–4085. Personnel response training logs and discharge prevention meeting logs shall be included in sections 1.8.3.1 and 1.8.3.2 of the response plan respectively. These logs may be included in the facility response plan or kept as an annex to the facility response plan.

1.8.3.1 Personnel Response Training Logs

PERSONNEL RESPONSE TRAINING LOG

Name	Response training/date and number of hours	Prevention training/date and number of hours

1.8.3.2 Discharge Prevention Meetings Logs

DISCHARGE PREVENTION MEETING LOG

Date: _____
Attendees: _____
_____
_____
_____
_____
_____
_____
_____
_____
_____

Subject/issue identified	Required action	Implementation date

1.9 Diagrams

The facility-specific response plan shall include the following diagrams. Additional diagrams that would aid in the development of response plan sections may also be included.

(1) The Site Plan Diagram shall, as appropriate, include and identify:
(A) the entire facility to scale;
(B) above and below ground bulk oil storage tanks;
(C) the contents and capacities of bulk oil storage tanks;
(D) the contents and capacity of drum oil storage areas;
(E) the contents and capacities of surface impoundments;
(F) process buildings;
(G) transfer areas;
(H) secondary containment systems (location and capacity);
(I) structures where hazardous materials are stored or handled, including materials stored and capacity of storage;
(J) location of communication and emergency response equipment;
(K) location of electrical equipment which contains oil; and
(L) for complexes only, the interface(s) (i.e., valve or component) between the portion of the facility regulated by EPA and the portion(s) regulated by other Agencies. In most cases, this interface is defined as the last valve inside secondary containment before piping leaves the secondary containment area to connect to the transportation-related portion of the facility (i.e., the structure used or intended to be used to transfer oil to or from a vessel or pipeline). In the absence of secondary containment, this interface is the valve manifold adjacent to the tank nearest the transfer structure as described above. The interface may be defined differently at a specific facility if agreed to by the RA and the appropriate Federal official.

(2) The Site Drainage Plan Diagram shall, as appropriate, include:
(A) major sanitary and storm sewers, manholes, and drains;
(B) weirs and shut-off valves;
(C) surface water receiving streams;
(D) fire fighting water sources;
(E) other utilities;
(F) response personnel ingress and egress;
(G) response equipment transportation routes; and
(H) direction of discharge flow from discharge points.

(3) The Site Evacuation Plan Diagram shall, as appropriate, include:
(A) site plan diagram with evacuation route(s); and
(B) location of evacuation regrouping areas.

1.10 Security

According to 40 CFR 112.7(g) facilities are required to maintain a certain level of security, as appropriate. In this section, a description of the facility security shall be provided and include, as appropriate:

(1) emergency cut-off locations (automatic or manual valves);
(2) enclosures (e.g., fencing, etc.);
(3) guards and their duties, day and night;
(4) lighting;
(5) valve and pump locks; and
(6) pipeline connection caps.

The SPCC Plan contains similar information. Duplicate information may be photocopied and inserted in this section.

2.0 Response Plan Cover Sheet

A three-page form has been developed to be completed and submitted to the RA by owners or operators who are required to prepare and submit a facility-specific response plan. The cover sheet (Attachment F–1) must accompany the response plan to provide the Agency with basic information concerning the facility. This section will describe the Response Plan Cover Sheet and provide instructions for its completion.

2.1 General Information

Owner/Operator of Facility: Enter the name of the owner of the facility (if the owner is the operator). Enter the operator of the facility if otherwise. If the owner/operator of

the facility is a corporation, enter the name of the facility's principal corporate executive. Enter as much of the name as will fit in each section.

(1) *Facility Name:* Enter the proper name of the facility.

(2) *Facility Address:* Enter the street address, city, State, and zip code.

(3) *Facility Phone Number:* Enter the phone number of the facility.

(4) *Latitude and Longitude:* Enter the facility latitude and longitude in degrees, minutes, and seconds.

(5) *Dun and Bradstreet Number:* Enter the facility's Dun and Bradstreet number if available (this information may be obtained from public library resources).

(6) North American Industrial Classification System (NAICS) Code: Enter the facility's NAICS code as determined by the Office of Management and Budget (this information may be obtained from public library resources.)

(7) *Largest Oil Storage Tank Capacity:* Enter the capacity in GALLONS of the largest aboveground oil storage tank at the facility.

(8) *Maximum Oil Storage Capacity:* Enter the total maximum capacity in GALLONS of all aboveground oil storage tanks at the facility.

(9) *Number of Oil Storage Tanks:* Enter the number of all aboveground oil storage tanks at the facility.

(10) *Worst Case Discharge Amount:* Using information from the worksheets in Appendix D, enter the amount of the worst case discharge in GALLONS.

(11) *Facility Distance to Navigable Waters:* Mark the appropriate line for the nearest distance between an opportunity for discharge (i.e., oil storage tank, piping, or flowline) and a navigable water.

2.2 Applicability of Substantial Harm Criteria

Using the flowchart provided in Attachment C–I to Appendix C to this part, mark the appropriate answer to each question. Explanations of referenced terms can be found in Appendix C to this part. If a comparable formula to the ones described in Attachment C–III to Appendix C to this part is used to calculate the planning distance, documentation of the reliability and analytical soundness of the formula must be attached to the response plan cover sheet.

2.3 Certification

Complete this block after all other questions have been answered.

3.0 Acronyms

ACP: Area Contingency Plan
ASTM: American Society of Testing Materials
bbls: Barrels
bpd: Barrels per Day
bph: Barrels per Hour
CHRIS: Chemical Hazards Response Information System
CWA: Clean Water Act
DOI: Department of Interior
DOC: Department of Commerce
DOT: Department of Transportation
EPA: Environmental Protection Agency
FEMA: Federal Emergency Management Agency
FR: Federal Register
gal: Gallons
gpm: Gallons per Minute
HAZMAT: Hazardous Materials
LEPC: Local Emergency Planning Committee
MMS: Minerals Management Service (part of DOI)
NAICS: North American Industrial Classification System
NCP: National Oil and Hazardous Substances Pollution Contingency Plan
NOAA: National Oceanic and Atmospheric Administration (part of DOC)
NRC: National Response Center
NRT: National Response Team
OPA: Oil Pollution Act of 1990
OSC: On-Scene Coordinator
PREP: National Preparedness for Response Exercise Program
RA: Regional Administrator
RCRA: Resource Conservation and Recovery Act
RRC: Regional Response Centers
RRT: Regional Response Team
RSPA: Research and Special Programs Administration
SARA: Superfund Amendments and Reauthorization Act
SERC: State Emergency Response Commission
SDWA: Safe Drinking Water Act of 1986
SI: Surface Impoundment
SPCC: Spill Prevention, Control, and Countermeasures
USCG: United States Coast Guard

4.0 References

CONCAWE. 1982. Methodologies for Hazard Analysis and Risk Assessment in the Petroleum Refining and Storage Industry. Prepared by CONCAWE's Risk Assessment Ad-hoc Group.

U.S. Department of Housing and Urban Development. 1987. Siting of HUD-Assisted Projects Near Hazardous Facilities: Acceptable Separation Distances from Explosive and Flammable Hazards. Prepared by the Office of Environment and Energy, Environmental Planning Division, Department of Housing and Urban Development. Washington, DC.

U.S. DOT, FEMA and U.S. EPA. Handbook of Chemical Hazard Analysis Procedures.

U.S. DOT, FEMA and U.S. EPA. Technical Guidance for Hazards Analysis: Emergency

Planning for Extremely Hazardous Substances.

The National Response Team. 1987. Hazardous Materials Emergency Planning Guide. Washington, DC.

The National Response Team. 1990. Oil Spill Contingency Planning, National Status: A Report to the President. Washington, DC. U.S. Government Printing Office.

Offshore Inspection and Enforcement Division. 1988. Minerals Management Service, Offshore Inspection Program: National Potential Incident of Noncompliance (PINC) List. Reston, VA.

ATTACHMENTS TO APPENDIX F

Attachment F–1—Response Plan Cover Sheet

This cover sheet will provide EPA with basic information concerning the facility. It must accompany a submitted facility response plan. Explanations and detailed instructions can be found in Appendix F. Please type or write legibly in blue or black ink. Public reporting burden for the collection of this information is estimated to vary from 1 hour to 270 hours per response in the first year, with an average of 5 hours per response. This estimate includes time for reviewing instructions, searching existing data sources, gathering the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate of this information, including suggestions for reducing this burden to: Chief, Information Policy Branch, Mail Code: PM–2822, U.S. Environmental Protection Agency, Ariel Rios Building, 1200 Pennsylvania Avenue, NW., Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington D.C. 20503.

GENERAL INFORMATION

Owner/Operator of Facility:

_____

Facility Name: _____

Facility Address (street address or route):

_____

_____

City, State, and U.S. Zip Code:

_____

Facility Phone No.: _____

Latitude (Degrees: North):

_____

degrees, minutes, seconds

Dun & Bradstreet Number:[1]

_____

Largest Aboveground Oil Storage Tank Capacity (Gallons):

_____

[1] These numbers may be obtained from public library resources.

Number of Aboveground Oil Storage Tanks:

_____

Longitude (Degrees: West):

_____

degrees, minutes, seconds _____

North American Industrial Classification System (NAICS) Code:[1] _____

_____

Maximum Oil Storage Capacity (Gallons): __

Worst Case Oil Discharge Amount (Gallons):

Facility Distance to Navigable Water. Mark the appropriate line. _____

0–¼ mile ____ ¼–½ mile ____ ½–1 mile ____ >1 mile ____

APPLICABILITY OF SUBSTANTIAL HARM CRITERIA

Does the facility transfer oil over-water[2] to or from vessels and does the facility have a total oil storage capacity greater than or equal to 42,000 gallons?

Yes _____

No _____

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

Yes _____

No _____

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[2] (as calculated using the appropriate formula in Appendix C or a comparable formula) such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments?[3]

Yes _____

No _____

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

[2] Explanations of the above-referenced terms can be found in Appendix C to this part. If a comparable formula to the ones contained in Attachment C–III is used to establish the appropriate distance to fish and wildlife and sensitive environments or public drinking water intakes, documentation of the reliability and analytical soundness of the formula must be attached to this form.

[3] 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 and Sensitive Environments'' (see Appendix E to this part, section 13, for availability) and the applicable ACP.

gallons and is the facility located at a distance[2] (as calculated using the appropriate formula in Appendix C or a comparable formula) such that a discharge from the facility would shut down a public drinking water intake?[2] _____

Yes _____

No _____

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[2] in an amount greater than or equal to 10,000 gallons within the last 5 years?

Yes _____

No _____

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 information, I believe that the submitted information is true, accurate, and complete.

Signature: _____

Name (Please type or print): _____

_____

Title: _____

Date: _____

[59 FR 34122, July 1, 1994; 59 FR 49006, Sept. 26, 1994, as amended at 65 FR 40816, June 30, 2000; 65 FR 43840, July 14, 2000; 66 FR 34561, June 29, 2001; 67 FR 47152, July 17, 2002]

PART 113—LIABILITY LIMITS FOR SMALL ONSHORE STORAGE FACILITIES

Subpart A—Oil Storage Facilities

Sec.
113.1 Purpose.
113.2 Applicability.
113.3 Definitions.
113.4 Size classes and associated liability limits for fixed onshore oil storage facilities, 1,000 barrels or less capacity.
113.5 Exclusions.
113.6 Effect on other laws.

AUTHORITY: Sec. 311(f)(2), 86 Stat. 867 (33 U.S.C. 1251 (1972)).

SOURCE: 38 FR 25440, Sept. 13, 1973, unless otherwise noted.

Subpart A—Oil Storage Facilities

§ 113.1 Purpose.

This subpart establishes size classifications and associated liability limits for small onshore oil storage facilities with fixed capacity of 1,000 barrels or less.

§ 113.2 Applicability.

This subpart applies to all onshore oil storage facilities with fixed capacity of 1,000 barrels or less. When a discharge to the waters of the United States occurs from such facilities and when removal of said discharge is performed by the United States Government pursuant to the provisions of subsection 311(c)(1) of the Act, the liability of the owner or operator and the facility will be limited to the amounts specified in § 113.4.

§ 113.3 Definitions.

As used in this subpart, the following terms shall have the meanings indicated below:

(a) *Aboveground* storage facility means a tank or other container, the bottom of which is on a plane not more than 6 inches below the surrounding surface.

(b) *Act* means the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1151, *et seq.*

(c) *Barrel* means 42 United States gallons at 60 degrees Fahrenheit.

(d) *Belowground* storage facility means a tank or other container located other than as defined as ''Aboveground''.

(e) *Discharge* includes, but is not limited to any spilling, leaking, pumping, pouring, emitting, emptying or dumping.

(f) *Onshore Oil Storage Facility* means any facility (excluding motor vehicles and rolling stock) of any kind located in, on, or under, any land within the United States, other than submerged land.

(g) *On-Scene Coordinator* is the single Federal representative designated pursuant to the National Oil and Hazardous Substances Pollution Contingency Plan and identified in approved Regional Oil and Hazardous Substances Pollution Contingency Plans.

(h) *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.

Federal Register

Friday,
December 5, 2008

Part II

Environmental Protection Agency

40 CFR Part 112

Oil Pollution Prevention; Spill Prevention, Control, and Countermeasure Rule Requirements—Amendments; Final Rule

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ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 112

[EPA–HQ–OPA–2007–0584; FRL–8746–3]

RIN 2050–AG16

Oil Pollution Prevention; Spill Prevention, Control, and Countermeasure Rule Requirements—Amendments

AGENCY: Environmental Protection Agency.

ACTION: Final rule.

SUMMARY: The Environmental Protection Agency (EPA or the Agency) is amending the Spill Prevention, Control, and Countermeasure (SPCC) rule in order to provide increased clarity, to tailor requirements to particular industry sectors, and to streamline certain requirements for those facility owners or operators subject to the rule, which should result in greater protection to human health and the environment. Specifically, this final rule: Exempts hot-mix asphalt (HMA), pesticide application equipment and related mix containers, and heating oil containers at single-family residences from the SPCC rule; amends the definition of ''facility'' to clarify the existing flexibility associated with describing a facility's boundaries; amends the facility diagram requirement to provide additional flexibility; defines ''loading/unloading rack'' to clarify the equipment subject to the provisions for facility tank car and tank truck loading/unloading racks, as well as amends the provisions for this equipment; provides streamlined requirements for a subset of qualified facilities; amends the general secondary containment requirement to provide more clarity; exempts non-transportation-related tank trucks from the sized secondary containment requirements; amends the security requirements; amends the integrity testing requirements to allow greater flexibility in the use of industry standards; amends the integrity testing requirements for containers that store animal fats or vegetable oils and meet certain criteria; streamlines a number of requirements for onshore oil production facilities; and exempts underground oil storage tanks at nuclear power generation facilities. EPA is also providing clarification in the preamble to this final rule on additional issues raised by the regulated community and, in a separate action in the **Federal Register** of November 26, 2008, (73 FR 72016), the Agency is proposing a new compliance date for farms.

DATES: This final rule is effective February 3, 2009.

ADDRESSES: The public docket for this rulemaking, Docket ID No. EPA–HQ–OPA–2007–0584, contains the information related to this rulemaking, including the response to comment document. All documents in the docket are listed in index at the *http://www.regulations.gov.* Although listed in the index, some information may not be publicly available, such as Confidential Business Information (CBI) or other information the disclosure of which is restricted by statute. Certain other material, such as copyrighted material, will be publicly available only in hard copy. Publicly available docket materials are available either electronically at *http://www.regulations.gov* or in hard copy at the EPA Docket, EPA/DC, EPA West, Room 3334, 1301 Constitution Ave., NW., Washington, DC. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number of the Public Reading Room is 202–566–1744, and the telephone number to make an appointment to view the docket is 202–566–0276.

FOR FURTHER INFORMATION CONTACT: For general information, contact the Superfund, TRI, EPCRA, RMP, and Oil Information Center at 800–424–9346 or TDD at 800–553–7672 (hearing impaired). In the Washington, DC metropolitan area, contact the Superfund, TRI, EPCRA, RMP, and Oil Information Center at 703–412–9810 or TDD 703–412–3323. For more detailed information on specific aspects of this final rule, contact either Vanessa E. Rodriguez at 202–564–7913 *(rodriguez.vanessa@epa.gov),* or Mark W. Howard at 202–564–1964 *(howard.markw@epa.gov),* U.S. Environmental Protection Agency, 1200 Pennsylvania Avenue, NW., Washington, DC, 20460–0002, Mail Code 5104A.

SUPPLEMENTARY INFORMATION: The contents of this preamble are:

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I. General Information

The Environmental Protection Agency (EPA or the Agency) is amending the Spill Prevention, Control, and Countermeasure (SPCC) rule to address a number of issues that have been raised by the regulated community. These amendments are intended to clarify, tailor, and streamline certain requirements for those facility owners or operators who are required to prepare and implement an SPCC Plan (or ''Plan''). Specifically:

- EPA is exempting hot-mix asphalt (HMA) from the SPCC requirements. This material is unlikely to flow as a result of the entrained aggregate, such that there would be very few circumstances in which a discharge of HMA would have the potential to reach navigable waters or adjoining shorelines. EPA will continue to regulate asphalt cement (AC), asphalt emulsions, and cutbacks, which are not HMA (that is, they are not entrained with aggregate).
- EPA is exempting pesticide application equipment and related mix containers, regardless of ownership or where used, that may currently be subject to the SPCC rule when crop oil or adjuvant oil is added to formulations.
- EPA is exempting residential heating oil containers (that is, those used solely at single-family residences) from the SPCC requirements. This exemption applies to aboveground containers, as well as completely buried heating oil tanks, at single-family residences, including those located at farms.
- EPA is modifying the definition of ''facility'' to clarify that contiguous or non-contiguous buildings, properties, parcels, leases, structures, installations, pipes, or pipelines may be considered separate facilities, and to specify that the ''facility'' definition governs the applicability of 40 CFR part 112. These revisions will allow an owner or operator to separate or aggregate containers to determine the facility boundaries, based on such factors as ownership or operation of the buildings, structures, containers, and equipment on the site, the activities being conducted, property boundaries, and other relevant considerations.
- EPA is revising the facility diagram requirement at § 112.7(a)(3) to clarify how containers, fixed and mobile, are identified on the facility diagram. EPA is also clarifying that where facility diagrams become complicated due to the presence of multiple fixed oil storage containers or complex piping/transfer areas at a facility, the owner or operator can include that information separately in the SPCC Plan in an accompanying table or key. For any mobile or portable containers located in a certain area of the facility, an owner or operator can mark the area on the diagram. If the total number of mobile or portable containers changes, the owner or operator can indicate the potential range in number of containers and the anticipated contents and capacities of the mobile or portable containers maintained at the facility in the Plan.
- EPA is defining the term ''loading/unloading rack,'' and specifying that this definition governs the applicability of the provision at § 112.7(h), *Facility tank car and tank truck loading/unloading rack*. This amendment provides clarity to the regulated community on whether this provision applies to a facility. Furthermore, EPA is specifically excluding oil production facilities and farms from the requirements at § 112.7(h), because loading/unloading racks are not typically found at these facilities (loading/unloading activities at these facilities will remain subject to the general secondary containment requirements of § 112.7(c)). EPA also is finalizing editorial revisions to the provision at § 112.7(h) for clarity.
- EPA is streamlining and tailoring the SPCC requirements for a subset of qualified facilities. Qualified facilities were addressed in a recent amendment to the SPCC rule (71 FR 77266, December 26, 2006). The owner or operator of such a facility has the option to self-certify his SPCC Plan. This final rule further designates a subset of qualified facilities (''Tier I qualified facilities'') as those that meet the current qualified facility eligibility criteria and that have no oil storage containers with an individual aboveground storage capacity greater than 5,000 U.S. gallons. The owner or operator of a Tier I qualified facility has the option to complete a self-certified SPCC Plan template (found in Appendix G to 40 CFR part 112) in lieu of a full SPCC Plan. The owner or operator can complete the SPCC Plan template, which is comprised of a set of streamlined SPCC rule requirements, and implement those streamlined requirements, to comply with the SPCC regulation. All other qualified facilities will be designated as ''Tier II qualified facilities.''
- EPA is amending the general secondary containment requirements at § 112.7(c) to clarify that the scope of secondary containment need only take into consideration the typical failure mode, and most likely quantity of oil that would be discharged, consistent with current Agency guidance. This amendment also provides additional examples of prevention systems for onshore facilities found at § 112.7(c)(1).
- EPA is extending the exemption from the sized secondary containment requirement for mobile refuelers provided in the December 2006 SPCC rule amendments (71 FR 77266, December 26, 2006) to non-transportation-related tank trucks at a facility subject to the SPCC rule.
- EPA is amending the facility security requirements at § 112.7(g) to allow an owner or operator of a facility to tailor his security measures to the facility's specific characteristics and location. A facility owner or operator is required to describe in the SPCC Plan how he secures and controls access to the oil handling, processing, and storage areas; secures master flow and drain valves; prevents unauthorized access to starter controls on oil pumps; secures out-of-service and loading/unloading connections of oil pipelines; and addresses the appropriateness of security lighting to both prevent acts of vandalism and assist in the discovery of oil discharges. This action extends the streamlined security requirements that EPA provided to qualified facilities in the December 2006 SPCC rule amendments (71 FR 77266, December 26, 2006) to all facilities subject to the security requirements.
- EPA is amending the requirements at §§ 112.8(c)(6) and 112.12(c)(6) to provide flexibility in complying with the bulk storage container integrity testing requirements. That is, EPA is modifying the current provision to allow an owner or operator to consult and rely on industry standards to determine the appropriate qualifications for personnel performing tests and

inspections, as well as the type and frequency of integrity testing required for a particular container size and configuration. This action extends the streamlined bulk storage container inspection requirement that EPA provided to qualified facilities in the December 2006 SPCC rule amendments (71 FR 77266, December 26, 2006) to all facilities subject to the integrity testing provisions.

- EPA is differentiating the integrity testing requirements at § 112.12(c)(6) for an owner or operator of a facility that handles certain types of Animal Fats and Vegetable Oils (AFVOs). EPA is providing the Professional Engineer (PE) or an owner or operator self-certifying an SPCC Plan with the flexibility to determine the scope of integrity testing that is appropriate for containers that store AFVOs, based on compliance with certain FDA regulations and other criteria.
- EPA is finalizing several amendments to tailor the requirements for oil production facilities to address a number of concerns that have been raised by this sector. Specifically, EPA is: Modifying the definition of ''production facility'' to be consistent with the amendments to the definition of ''facility;'' extending the timeframe by which the owner or operator of a new oil production facility must prepare and implement an SPCC Plan; providing an alternative option for flow-through process vessels at oil production facilities to comply with the general secondary containment requirement and additional oil spill prevention measures in lieu of sized secondary containment requirements; providing an exemption for certain intra-facility gathering lines subject to regulatory requirements of the U.S. Department of Transportation's (DOT's) pipeline regulations in 49 CFR parts 192 or 195; providing an alternative option for flowlines and intra-facility gathering lines at oil production facilities for contingency planning in lieu of all secondary containment requirements, while establishing more specific requirements for a flowline/intra-facility gathering line maintenance program; exempting certain produced water containers that do not contain oil as certified by a Professional Engineer (PE); providing compliance alternatives to sized secondary containment for produced water storage containers that are not otherwise exempt; establishing an option for an oil production facility to be eligible to self-certify an SPCC Plan as a qualified facility; and clarifying the definition of ''permanently closed'' as it applies to oil production facilities and containers present at an oil production facility.
- EPA is exempting underground oil storage tanks deferred under 40 CFR part 280 that supply emergency diesel generators at nuclear power generation facilities and that are subject to design criteria under the Nuclear Regulatory Commission (NRC) regulations. This exemption includes both tanks that are completely buried and tanks that are below-grade and vaulted.

In this notice, EPA is also reiterating clarifications to a number of issues of concern to the regulated community that were provided in the 2007 proposal (72 FR 58378, October 15, 2007), including the consideration of man-made structures in determining how to comply with the SPCC rule requirements and the applicability of the rule to wind turbines that are used to produce electricity. Additionally, EPA is explaining actions that will be taken in collaboration with DOT to clarify the jurisdiction over facilities, as defined in a Memorandum of Understanding (MOU) between the DOT and EPA (36 FR 24080, November 24, 1971). EPA also is finalizing technical corrections to §§ 112.3 and 112.12. This rulemaking marks the completion of the SPCC-related improvements planned by the Agency at this time. EPA greatly benefited from the considerable public input in the recent SPCC rulemakings. Given the breadth of these changes, and the importance of the SPCC program, EPA plans to review the implementation of these changes after these latest revisions become effective. With regard to the oil production industry, this revision would include an examination of the utility and effectiveness of the new approaches for avoiding and minimizing spills.

II. Entities Potentially Affected by This Final Rule

Industry sector	NAICS code
Oil Production	211111
Farms	111, 112
Electric Utility Plants	2211
Petroleum Refining and Related Industries	324
Chemical Manufacturing	325
Food Manufacturing	311, 312
Manufacturing Facilities Using and Storing Animal Fats and Vegetable Oils	311, 325
Metal Manufacturing	331, 332
Other Manufacturing	31–33
Real Estate Rental and Leasing	531–533
Retail Trade	441–446, 448, 451–454
Contract Construction	23
Wholesale Trade	42
Other Commercial	492, 541, 551, 561–562
Transportation	481–488
Arts Entertainment & Recreation	711–713
Other Services (Except Public Administration)	811–813
Petroleum Bulk Stations and Terminals	4247
Education	61
Hospitals & Other Health Care	621, 622
Accommodation and Food Services	721, 722
Fuel Oil Dealers	45431
Gasoline stations	4471
Information Finance and Insurance	51, 52
Mining	212
Warehousing and Storage	493
Religious Organizations	813110
Military Installations	928110
Pipelines	4861, 48691

Industry sector	NAICS code
Government	92

The list of potentially affected entities in the above table may not be exhaustive. The Agency's goal is to provide a guide for readers to consider regarding entities that potentially could be affected by this action. However, this action may affect other entities not listed in this table. If you have questions regarding the applicability of this action to a particular entity, consult the person listed in the preceding section titled **FOR FURTHER INFORMATION CONTACT**.

III. Statutory Authority and Delegation of Authority

Section 311(j)(1)(C) of the Clean Water Act (CWA or the Act), 33 U.S.C. 1321(j)(1)(C), requires the President to issue regulations establishing procedures, methods, equipment, and other requirements to prevent discharges of oil to navigable waters or adjoining shorelines from vessels and facilities and to contain such discharges. The President delegated the authority to regulate non-transportation-related onshore facilities to EPA in Executive Order 11548 (35 FR 11677, July 22, 1970), which was superseded by Executive Order 12777 (56 FR 54757, October 22, 1991). An MOU between DOT and EPA (36 FR 24080, November 24, 1971) established the definitions of transportation-related and non-transportation-related facilities. An MOU between EPA, the U.S. Department of the Interior (DOI), and DOT (59 FR 34102, July 1, 1994) re-delegated the responsibility to regulate certain offshore facilities from DOI to EPA.

IV. Background

The SPCC rule was originally promulgated on December 11, 1973 (38 FR 34164). On July 17, 2002, EPA published a final rule amending the SPCC rule, formally known as the Oil Pollution Prevention regulation (40 CFR part 112). The July 2002 rule included revisions to the requirements for SPCC Plans and for Facility Response Plans (FRPs). It also included new subparts outlining the requirements for various classes of oil; revised the applicability of the regulation; amended the requirements for completing SPCC Plans; and made other modifications (67 FR 47042). The revised rule became effective on August 16, 2002. After publication of this rule, several members of the regulated community filed legal challenges to certain aspects of the rule.[1] All of the issues raised in the litigation have been resolved; EPA published clarifications in the **Federal Register** to several aspects of the revised rule (69 FR 29728, May 25, 2004),[2] and in a separate action in the **Federal Register** of November 26, 2008, (73 FR 71941), the Agency is announcing the vacatur of the July 17, 2002 revisions to the definition of ''navigable waters.'' In addition, concerns were raised about the ability to implement certain aspects of the July 2002 rule.

As a result, EPA proposed amendments to the SPCC rule in December 2005 and finalized them in December 2006 to address a number of issues, including those pertaining to certain ''qualified'' facilities, qualified oil-filled operational equipment, motive power containers, mobile refuelers, removal of provisions inapplicable to AFVOs, and the compliance date for farms. See the rule amendment that was published in the **Federal Register** at 71 FR 77266 (December 26, 2006) for a more detailed discussion of these amendments.

In addition, EPA released the *SPCC Guidance for Regional Inspectors* in December 2005. This guidance document is intended to assist regional inspectors in reviewing the implementation of the SPCC rule at a regulated facility. The guidance document is designed to facilitate an understanding of the rule's applicability, to help clarify the role of the inspector in the review and evaluation of a facility owner or operator's compliance with the performance-based SPCC requirements, and to provide a consistent national policy on several SPCC-related issues. The guidance is available on the Agency's Web site at *http://www.epa.gov/emergencies*. EPA intends to issue revisions to this guidance document that address changes made to the SPCC rule, consistent with the regulatory amendments in this action and the December 2006 amendments (71 FR 77266, December 26, 2006).

Furthermore, EPA has amended the dates for compliance with the July 2002 amendments to the SPCC rule by extending the dates for preparing or amending, and implementing revised SPCC Plans in 40 CFR 112.3(a), (b), and (c), most recently by a rule published May 16, 2007 (72 FR 27443). EPA took the most recent action to provide owners or operators of facilities the time necessary to fully understand the amendments to the SPCC rule finalized in December 2006, and to allow potentially affected owners and operators an opportunity to make any changes to their facilities and to their SPCC Plans, as well as to provide time for the Agency to take final action on this amendment. EPA expects that this extension will provide the regulated community time to review and understand any revised material presented in the *SPCC Guidance for Regional Inspectors*. Please see the **Federal Register** notice at 72 FR 27443, May 16, 2007 for further discussion of the July 1, 2009 compliance date. In a separate action in the **Federal Register** of November 26, 2008 (73 FR 72016), EPA is also proposing new dates by which the owners or operators of facilities must prepare or amend and implement their SPCC Plan.

The December 2006 SPCC rule amendments (71 FR 77266, December 26, 2006) addressed only certain areas of the SPCC requirements and specific issues and concerns raised by the regulated community. The EPA Regulatory Agenda and the 2005 Office of Management and Budget (OMB) report on ''Regulatory Reform of the U.S. Manufacturing Sector'' highlighted other areas where further changes may be appropriate. Therefore, in October 2007, EPA proposed additional amendments to the SPCC rule to address these changes (72 FR 58378, October 15, 2007). Section V of this notice describes EPA's final action on those proposed amendments and presents the major comments received on the proposal, as well as EPA's response to those comments. For a more complete discussion of the comments received, and the Agency's response to comments, *see Comment and Response Document: Spill Prevention, Control, and Countermeasure Rule 2008 Amendments*, a copy of which is available in the docket for this rulemaking.

[1] *American Petroleum Institute* v. *Johnson*, 571 F.Supp. 2d 165 (D.D.C. 2008). The only issue resolved through litigation was the challenge to the definition of navigable waters in the 2002 rule amendment.

[2] Several commenters requested that the Agency codify the clarifications as part of this rulemaking. To the extent the subject matter of the clarification has been reflected in this rulemaking, the Agency has either incorporated the clarification in the regulatory text or reaffirmed the Agency's position in this preamble.

V. This Action

A. Hot-Mix Asphalt

Hot-mix asphalt (HMA) is a blend of asphalt cement (AC) and aggregate material, such as stone, sand, or gravel, which is formed into final paving products for use on roads and parking lots. All types of asphalt, including HMA, are petroleum oil products. Under this amendment to the SPCC rule, EPA is exempting HMA from SPCC rule applicability.

1. Hot-Mix Asphalt Exemption

EPA is exempting HMA from SPCC rule applicability by adding a new paragraph (8) under the general applicability section, § 112.1(d), and modifying § 112.1(d)(2) so that the capacity of storage containers solely containing HMA is not counted toward the facility's oil storage capacity calculation. EPA is taking this action based on the fact that this material is unlikely to flow as a result of the entrained aggregate, such that there would be very few circumstances in which a discharge of HMA would have the potential to reach navigable waters or adjoining shorelines. This is particularly of concern at facilities subject to the SPCC requirements solely because of the presence of HMA. EPA never intended that HMA be included as part of a facility's SPCC Plan.

a. Comments

Several commenters expressed general support for the exemption, and no comments were submitted that opposed the proposed exemption.

b. Response to Comments

EPA agrees with the commenters and is finalizing the exemption for HMA, as proposed.

2. Alternative Options Considered

As an alternate approach, EPA also considered exempting both HMA and AC from the requirements of the SPCC rule, but chose not to propose, nor finalize, such an option. Therefore, this exemption for HMA does not include AC. Although AC is semi-solid or solid at ambient temperature and pressure, it is generally stored at elevated temperatures. At such elevated temperatures, AC has fluid flow properties similar to other semi-solid oils, such as paraffin wax and heavy bunker fuels and therefore is capable of flowing. All of these oils are regulated under the SPCC rule to prevent discharges to navigable waters or adjoining shorelines.

a. Comments

A number of alternative approaches focused on extending the exemption to other similar materials, such as AC, Group 5 oils (that is, those oils with specific gravities greater than or equal to 1.0), waxes and other heavy oils. One commenter suggested extending the exemption to all solid or non-flowing materials, such as whenever oil is mixed with material that will make the mixture unlikely to flow at ambient temperatures: Oil mixed with sorbents, gelled oils, etc. Another commenter suggested extending the exemption to other Group 5 oils. Other commenters suggested extending this exemption to paraffin wax or to all waxes. One commenter requested that EPA clarify that any oils associated with asphalt production be regulated if their total volume exceeds 1,320 U.S. gallons.

b. Response to Comments

The Agency disagrees with these commenters. Unlike HMA, these materials do have the potential to discharge into navigable waters or adjoining shorelines because they are generally stored at elevated temperatures and thus, are capable of flowing if there is a release from the container. No new or compelling data was provided by commenters who disagreed with this position. However, it should be noted that the SPCC rule only applies to facilities that, due to their location, can reasonably be expected to discharge oil to navigable waters or adjoining shorelines. In determining whether there is a reasonable expectation of discharge, an owner or operator of a facility may consider the nature and flow properties of the oils handled at the facility. If a facility owner or operator determines that there is a reasonable expectation of a discharge of oil to navigable waters or adjoining shorelines from any single oil container (including a container storing oil associated with hot-mix asphalt production), and other rule applicability criteria are met, then all oil containers at the facility are subject to the rule's requirements (except as otherwise exempted).

In addition, as EPA noted in the preamble to the proposed rule, the Agency believes that the SPCC rule already provides the facility owner or operator with significant flexibility to select prevention and control measures that are appropriate and cost-effective for the facility and type of product being stored. For example, the secondary containment requirements of the SPCC rule may be satisfied if the secondary containment system, including walls and floor, are capable of containing the oil and are constructed so that any discharge from a primary containment system will not escape secondary containment before cleanup occurs (§ 112.7(c)) and diked areas are sufficiently impervious to contain the oil (§§ 112.8(c)(2) and 112.12(c)(2)). Therefore, the flow properties of Group 5 oils (as for any oil) may be considered in designing appropriate means of secondary containment. If, once cooled, the oil remains in place, an effective means of secondary containment may involve surrounding the bulk storage container with an earthen berm that will contain the oil until it can solidify.

B. Farms

The owner or operator of a farm, by virtue of storing or using oil, is potentially subject to the SPCC requirements. EPA promulgated the definition of farm at § 112.2 in the December 2006 amendments to the SPCC rule (71 FR 77266, December 26, 2006), which defined a farm as ''* * * a facility on a tract of land devoted to the production of crops or raising of animals, including fish, which produced and sold, or normally would have produced and sold, $1,000 or more of agricultural products during a year.'' While the December 2006 amendments streamlined the requirements for most of the farms that are subject to SPCC requirements, EPA believes further amendments to the SPCC regulations are appropriate given the unique characteristics of farms (for example, their geographic scale, configuration, land ownership and lease structure, and on-farm activities). Specifically, EPA recognizes that a farm: May be privately owned and may contain the residence of the owner or operator; has a configuration that varies across the country, from farm to farm and season to season; contains low-volume oil storage that is often dispersed across different land parcels separated by roads and natural barriers; may have multiple fueling sites; may be located in a remote area; stores oil on-site for on-farm use and not for further distribution; uses oil seasonally in different quantities; and leases a significant amount of land to or from secondary parties. EPA is finalizing a number of amendments to the SPCC rule potentially affecting farms and other facilities which were proposed in October 2007 (72 FR 58378, October 15, 2007), including an exemption for pesticide application equipment and related mix containers, and providing clarification on the applicability of the mobile refueler requirements to farm nurse tanks. Additionally farms are likely to benefit

from other amendments finalized in this rule, such as clarifications to the definition of facility; the option to allow a subset of qualified facilities (''Tier I qualified facilities'') to complete the SPCC Plan template in Appendix G of this part in lieu of preparing a full SPCC Plan; exemption of residential heating oil tanks at single family residences; amendments to the security and integrity testing requirements; exemption from the loading/unloading rack requirements; and amendments to the facility diagram requirements.

In addition, EPA extended the compliance date for the owner or operator of a farm, as defined in § 112.2, to prepare or amend and implement the farm's SPCC Plan until the effective date of a rule addressing whether to provide differentiated requirements for farms (71 FR 77266, December 26, 2006). EPA believes that the amendments to the SPCC rule in this action address the concerns raised by the agricultural industry. In a separate action in the **Federal Register** of November 26, 2008, (73 FR 72016), EPA is proposing new dates by which the owner or operator of a farm that is a qualified facility must prepare or amend and implement his SPCC Plan.

1. Exemption for Pesticide Application Equipment and Related Mix Containers

EPA is adding a new paragraph (10) under the general applicability section, § 112.1(d), to exempt all pesticide application equipment and related mix containers. EPA is also modifying § 112.1(d)(2) so that the capacity of these pesticide application equipment and related mix containers is not counted toward the facility's oil storage capacity calculation. Pesticide application equipment includes ground boom applicators, airblast sprayers, and specialty aircraft that are used to apply measured quantities of pesticides to crops and/or soil. Related mix containers are those used to mix pesticides with water and, as needed, adjuvant oils, just prior to loading into application equipment. In the October 2007 (72 FR 58378, October 15, 2007), proposal, EPA proposed to limit this exemption to pesticide application equipment and related mix containers used at farms. In this final rule, however, EPA is extending the exemption to all pesticide application equipment and related mix containers, regardless of ownership or where used, because the application of pesticides through the use of this equipment is the same at any location.

EPA is taking this action consistent with its findings in evaluating the potential harm posed by pesticide containers and application equipment when promulgating the *Standards for Pesticide Containment Structures* in 40 CFR part 165, Subpart E (see 71 FR 47330, August 16, 2006). These regulations apply to retailers who repackage agricultural pesticides, custom blenders of agricultural pesticides, and commercial applicators of agricultural pesticides, but do not apply to pesticide application equipment and related mix containers, because they do not fit the definition of stationary pesticide containers. In the development of the proposed exemption to the SPCC rule (72 FR 58378, October 15, 2007), EPA indicated that pesticide formulations may contain crop oil or adjuvant oil in the mix formulations just prior to application, which could subject certain pesticide containers to the SPCC requirements. This same condition could exist at agricultural retailers that provide custom application services, as well as commercial applicators. At these facilities, pesticide application equipment, such as ground boom sprayers and aerial applicators could be loaded with pesticide mix formulations with crop oil or adjuvant oil. In these instances, similar to on-farm pesticide application equipment, this equipment could have been subject to the SPCC requirements when oil is mixed with the pesticide formulation just prior to use.

Under this amendment, containers (55 U.S. gallons or greater in capacity) storing oil prior to mixing it with a pesticide, or containers used to store pesticides that contain oil, are considered bulk storage containers and continue to be regulated as such under the SPCC rule.

a. Comments

Several commenters expressed general support for the exemption of pesticide application equipment and related mix containers on farms from the SPCC requirements. Other commenters suggested that the exemption should be extended to all users of this equipment, arguing that this would limit the potential for duplicative regulation of pesticides by the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) and the SPCC program. For example, the energy utilities sector requested an exemption for the pesticide application equipment and related mix containers they use to maintain their right-of-way networks and to preserve treated wood poles used in electricity transmission and distribution. One commenter suggested that the Agency exempt pesticide mixtures with low concentrations of oil from SPCC regulation altogether.

b. Response to Comments

EPA evaluated the merits of extending the exemption for all pesticide application equipment and related mix containers at farms to all such equipment, regardless of ownership or where used, based on the fact that this pesticide use, and certain pesticide containers, are already subject to ''similar'' regulation under FIFRA to assure the safe use, reuse, storage, and disposal of pesticide containers. As such, EPA agrees with the commenters that it would be appropriate to extend the exemption to pesticide application equipment and related mix containers, regardless of ownership or point of use.

On the other hand, EPA does not agree that the Agency should exempt pesticide mixtures with low concentrations of oil from SPCC regulation. Pesticide mix formulations, such as those that contain crop oil or adjuvant oil, are potentially subject to the SPCC rule because they are considered oil mixtures. The statutory definition of oil includes oil of any kind and in any form (33 U.S.C. section 1321(a)(1)), and does not exclude oil mixtures. Discharges of oil mixtures to navigable waters or adjoining shorelines may be harmful as set forth in 40 CFR part 110.

2. Applicability of Mobile Refueler Requirements to Farm Nurse Tanks

In the October 2007 notice of proposed rulemaking (72 FR 58378, October 15, 2007), EPA clarified that the definition of mobile refueler, as promulgated in the December 2006 amendments to the SPCC rule (71 FR 77266, December 26, 2006), includes a nurse tank, which is a mobile/portable container used at farms to store and transport fuel for transfers to or from farm equipment (such as tractors and combines) to other bulk storage containers (such as containers used to provide fuel to wellhead/relift pumps) at the farm. A nurse tank is often mounted on a trailer for transport around the farm; thus, EPA believes that this function is consistent with that of a mobile refueler. A nurse tank, like other types of mobile refuelers, is exempt from the sized secondary containment requirements at §§ 112.8(c)(2) and 112.12(c)(2), but is still subject to the general secondary containment requirements at § 112.7(c).

a. Comments

Several commenters supported the Agency's clarification that a nurse tank is considered a mobile refueler, and

thus exempt from the sized secondary containment requirements. Some commenters also requested that EPA clarify that the definition of mobile refuelers includes non-road licensed refueling equipment which are used to refuel farm equipment in the fields.

b. Response to Comments

EPA agrees with those commenters supporting the clarification. EPA also understands that agricultural retail suppliers may provide refueling services via non-road licensed equipment to farm equipment in farm fields. As the Agency described in the preamble to the proposed rule (72 FR 58378, October 15, 2007), a nurse fuel tank is typically used at a farm to store and transport fuel to or from farm equipment. Therefore, EPA agrees with commenters that non-road licensed equipment that is used to refuel farm equipment functions as a mobile refueler, similar to a farm fuel nurse tank. Additionally, owners and operators of these nurse tanks may benefit from other amendments in this action regarding the extension of relief from sized secondary containment to all non-transportation-related tank trucks. For example, nurse tanks containing oils other than a fuel such as lubrication or hydraulic oil, would also be eligible.

3. Differentiating the SPCC Requirements for Farms

In developing the amendments in the October 2007 proposed rule, EPA considered and took comment on a number of alternatives for differentiating the SPCC requirements for farms, but are not finalizing them, as discussed below.

a. No Further Action

EPA evaluated whether any further action was necessary specific to farms, including no further action. As described in the proposal (72 FR 58378, October 15, 2007), the Agency proposed amendments based on previous comments from agricultural stakeholders, farm-related site visits conducted by EPA and the August 16, 2006, action concerning pesticide containers (40 CFR part 165, Subpart E, 71 FR 47330). EPA is finalizing those actions; the Agency also is promulgating the following additional amendments to the SPCC regulation that could also benefit farmers: Clarifications to the definition of facility; the option to allow the owners and operators of a subset of qualified facilities (*i.e.*, ''Tier I qualified facilities'') to complete the SPCC Plan template in Appendix G of this part in lieu of preparing a full SPCC Plan; exemption of residential heating oil tanks at single family residences, including at farms; amendments to the security and integrity testing requirements; exemption from the loading/unloading rack requirements; and amendments to the facility diagram requirements.

b. Exempt Farms Below a Certain Storage Capacity Threshold

EPA considered exempting farms that stored oil below a certain oil storage capacity threshold (other than 1,320 U.S. gallons) from the SPCC requirements, but determined that there was insufficient data available to support an exemption exclusive to farms. While farming operations may be unique, the storage tanks found at farms are similar in function and design as those found at other types of facilities, and therefore have a similar potential for discharge. As a result, EPA chose not to propose this option, but did request comment on the merits of this approach.

c. Alternative Qualified Facility Eligibility Criteria for Farms

Under § 112.6, a facility that has an aggregate aboveground storage capacity of 10,000 U.S. gallons or less and has not had a single discharge exceeding 1,000 U.S. gallons or two discharges each exceeding 42 U.S. gallons within any twelve month period in the three years prior to Plan certification, or since becoming subject to 40 CFR part 112 if the facility has been in operation for less than three years is eligible for the qualified facility Plan requirements (*i.e.* a self-certified Plan in lieu of a PE certified Plan). The current criteria for qualified facilities, found at § 112.3(g), treat farms like all other facilities. However, EPA considered whether there are alternative criteria unique to farms that would be appropriate for identifying qualified facilities. In the October 2007 proposed rulemaking, EPA requested comment on (1) whether a change in the criteria is appropriate for farms; and (2) whether a higher threshold is appropriate for farms.

d. Comments

Several commenters recommended that the Agency provide an exemption for farms at a minimum of 10,000 U.S. gallons oil storage capacity, citing a lack of risk at such a volume and/or the potential for cost savings, although no specific data was provided to support this position. Other commenters suggested that EPA adopt a higher threshold, such as a 20,000-gallon threshold, as a criterion for qualified facility eligibility. Specifically, agricultural stakeholders requested that EPA raise the Tier I individual container threshold to 10,000 U.S. gallons and raise the Tier II total oil storage capacity threshold to 20,000 U.S. gallons. These commenters supported this threshold by citing limitations on the lower limit for bulk purchase of oil, the need to maintain empty and/or seasonal-use tanks on a farm, the lack of financial resources to hire environmental managers, the low likelihood of oil spills in the industry, and general environmental stewardship practices inherently in place.

Still other commenters provided additional comments and suggestions related to farms. One commenter requested that EPA remove the qualified facility approach so that all farmers, including small businesses and other small oil storage facilities are required to prepare a complete SPCC Plan certified by a PE based on 1,320-gallon storage capacity. Other commenters requested additional time for farms to comply with the SPCC regulation, stating that this additional time will provide farmers and others the opportunity to work with government agencies, including the U.S. Department of Agriculture (USDA), on the development of a model plan or guidelines. Finally, a commenter sought clarification that oil tanks not in use can be classified as out of service, without the need to remove the tanks from the facility.

e. Response to Comments

EPA continues to believe that there is insufficient data to support an outright exemption exclusively for farms beyond the existing aboveground storage capacity threshold of 1,320 U.S. gallons that applies to all facilities (§ 112.1(d)(2)(ii)). As noted previously, no data was provided by the commenters to support such an exemption. In addition, EPA notes that a significant number of owners and operators of farms will benefit from the amendments finalized in this action and the December 2006 SPCC rule amendments (71 FR 77266, December 26, 2006), which allow a significant number of farms to develop self-certified SPCC Plans.

With respect to an alternative ''qualified facility'' threshold, EPA considered the commenters' suggestions for modifying the existing qualified facilities threshold of 10,000 U.S. gallons total aboveground storage capacity. However, the agricultural community did not provide information that would lead the Agency to conclude that farms are sufficiently different to warrant further differentiation from other facilities that store oil. In fact, EPA believes that many non-farm facilities could have similar needs to purchase

fuel in bulk and may have similar if not identical storage needs as identified by agricultural stakeholders. Thus, EPA is not persuaded by these comments to raise the existing qualified facilities threshold solely for farms beyond 10,000 U.S. gallons. In setting the qualified facilities threshold at 10,000 U.S. gallons in the December 2006 amendments, EPA sought to provide an alternative for facilities, among other things, with simple oil storage configurations and smaller quantities of oil handled (see 71 FR 77271, December 26, 2006). EPA continues to maintain that the focus of the qualified facilities alternative should be on simple configurations and small quantities of oil stored or handled.[3]

It should also be noted that, as described in Section V.G of this notice, EPA is finalizing a multi-tiered approach to allow the owner or operator of a facility that meets the eligibility criteria for a qualified facility to self-certify his SPCC Plan, and allow the owners or operators of a subset of qualified facilities (*i.e.*, ''Tier I qualified facilities'') to complete the SPCC Plan template in Appendix G of this part in lieu of preparing a full SPCC Plan. EPA believes that the Tier I qualified facility alternative should focus on facilities with the simplest configurations and smallest oil storage containers. Commenters did not provide sufficient data to support an increase in the Tier I threshold for farms higher than proposed. For more information on Tier I and Tier II qualified facilities, see Section V.G of this notice.

EPA also disagrees that the amendments to the SPCC rule in December 2006 provide ''special treatment'' to any eligible facility. Farmers, small businesses, and other small oil storage facilities may be eligible to self-certify their SPCC Plans if they meet the eligibility criteria for qualified facilities in § 112.3(g). In providing this option for facilities handling smaller amounts of oil, the Agency sought to focus on those smaller, less complex operations that may be concerned about the impact of using a PE on their limited budget. Some of the current noncompliance with the SPCC regulation may be attributed to those concerns. The Agency believes that providing a streamlined option for owners and operators of these smaller, less complex facilities should improve the overall compliance for the SPCC regulation, ultimately resulting in greater environmental protection (71 FR 77270, December 26, 2006). The owners and operators of farms, small businesses and other small oil storage facilities may be eligible to self-certify their SPCC Plans if they meet the eligibility criteria for qualified facilities in § 112.3(g).

EPA defines permanently closed at § 112.2. Any container that meets this definition is not subject to the SPCC regulation and therefore would not be included in the facility's aggregate oil storage capacity. The definition does not require that the permanently closed container be removed from the facility. Similarly, a new, empty tank that arrives at a farm or other SPCC-regulated facility is not to be counted towards a facility's aggregate oil storage capacity until the tank is actually used to contain oil. EPA discusses this clarification further in section V.M of this notice.

In response to the commenters requesting additional time for farms to comply with the SPCC regulation, EPA believes that the amendments to the SPCC rule in this final action address the concerns raised by the agricultural industry. Farmers will benefit from many of the streamlined rule provisions including: Clarifications to the definition of facility; the option to allow the owners and operators of a subset of qualified facilities (*i.e.*, ''Tier I qualified facilities'') to complete the SPCC Plan template in Appendix G of this part in lieu of preparing a full SPCC Plan; exemption of residential heating oil tanks at single family residences, including farmsteads; amendments to the security and integrity testing requirements; exemption from the loading/unloading rack requirements; and amendments to the facility diagram requirements. Furthermore, in a separate action in the **Federal Register** of November 26, 2008, (73 FR 72016), EPA is proposing a new compliance date for the owner or operator of a farm, as defined in § 112.2, that also meets the eligibility criteria as a qualified facility, to prepare or amend and implement the farmer's SPCC Plan.

C. Residential Heating Oil Containers

Many regulated facilities, including farms, may include the residence of the owner or operator within the geographical confines of the facility. EPA did not intend to regulate residential uses of oil (that is, those at non-commercial buildings) under the SPCC rule. Therefore, EPA is exempting residential heating oil containers at single family residences from the SPCC requirements.

1. Exemption for Residential Heating Oil Containers

EPA is adding a new paragraph (9) under the general applicability section, § 112.1(d) to exempt from SPCC applicability containers that are used to store oil for the sole purpose of heating single-family residences (including a residence at a farm). EPA is also modifying § 112.1(d)(2) so that the capacity of the single-family residential heating oil containers are not counted toward facility aggregate oil storage capacity. This action removes from SPCC applicability containers (both aboveground and completely buried) located at a single-family residence that are used solely to store heating oil used to heat the residence. Under this amendment, the owner or operator is not required to count any residential heating oil container as part of the facility's aggregate storage capacity for the purpose of determining SPCC applicability, and no SPCC requirements will apply to the exempt containers. The SPCC requirements continue to apply, however, to oil containers used to heat other non-residential buildings within a facility, because the exemption covers only residential heating oil containers at single family residences.

a. Comments

Several commenters expressed support for the exemption of residential heating oil containers at single family residences from the SPCC requirements. However, some commenters suggested extending the exemption to locations beyond single-family residences. One commenter suggested that EPA exempt buildings and offices located remotely from mining operations. Another commenter suggested the exemption should include heating oil tanks at a facility occupied daily, with storage capacity not exceeding 5,000 gallons, in containers not exceeding 1,000 gallons, because these facilities are regularly occupied, and thus would not pose any more likelihood of a release than a single-family residence. One commenter suggested exempting heating oil storage containers that serve four or fewer households, consistent with the Federal underground storage tank regulations.

b. Response to Comments

EPA agrees with those commenters who supported the exemption, and is finalizing the exemption as proposed, because EPA views a single-family residence as a household that has direct ownership of the oil stored in the heating oil container. The Agency did not intend, by itself, that a single-family

[3] Although the Agency chose not to raise the threshold for farms in identifying who is eligible as a ''qualified facility,'' the Agency estimates that under the current qualified facilities eligibility criteria, greater than 90 percent of farms subject to the SPCC rule could be eligible.

residence that stores heating oil for its use be subject to SPCC applicability, particularly because such residences generally do not have significant quantities of other types of oil. The preamble to the original 1973 SPCC rule (38 FR 34164, December 11, 1973), identified containers of 660 U.S. gallons as the normal domestic code size for non-buried heating oil containers, and that buildings may have two such containers. The storage capacity thresholds for SPCC rule applicability were initially established at 660 U.S. gallons for an individual container and 1,320 U.S. gallons total aboveground capacity for the facility, based on the possible capacity of residential heating oil containers. Thus, the presence of heating oil containers at a single-family residence was generally not intended, by itself, to trigger SPCC applicability. On the other hand, EPA disagrees with those commenters who suggested extending the exemption beyond heating oil containers at single-family residences. Owners and operators of commercial facilities, such as mining operations and commercial multi-family structures (such as condominiums and apartment complexes), will generally store much larger volumes of oil, and if there is a reasonable expectation of an oil discharge to navigable waters or adjoining shorelines, EPA believes it needs to be addressed in the SPCC Plan. Of course, any facility that has an aggregate oil storage capacity of less than 1,320 U.S. gallons in aboveground containers or 42,000 U.S. gallons in completely buried tanks are not subject to the SPCC regulation (see § 112.1(d)(2)). In addition, if a commercial facility (for example, a university) includes a single-family residence on the premises, then any heating oil container associated solely with this residence is exempt from SPCC rule applicability.

2. Alternative Option Considered

EPA invited comments on an exemption only for residential heating oil containers located at farms, because farms commonly include, within the geographical confines of the facility, the residence of the farmer. Under this option, only heating oil containers associated with single-family residences on farms would benefit from an exemption from the SPCC rule.

a. Comments

One commenter supported exempting heating oil storage containers located at a farm facility's single-family residence.

b. Response to Comments

EPA agrees with the commenter that heating oil containers located at a single-family residence at a farm should be exempt from the SPCC rule and is finalizing such an exemption. However, the commenter did not provide any basis to limit the exemption solely to farms. Because EPA believes the same rationale applies to exempt heating oil containers to single-family residences at facilities other than farms, the exemption applies to all single-family residences.

D. Definition of Facility

EPA first defined both ''facility'' and ''production facility'' at § 112.2 in the July 2002 amendments to the SPCC rule (67 FR 47042, July 17, 2002). Under this action, EPA is modifying the definition of facility in three ways: (1) To clarify that this definition alone governs the applicability of 40 CFR part 112; (2) to clarify that containers can be separated or aggregated, based on various factors in defining ''facility''—that is, the owner or operator has discretion in identifying which contiguous or non-contiguous buildings, properties, parcels, leases, structures, installations, pipes, or pipelines make up the facility; and (3) to add the qualifier ''oil'' before the term ''waste treatment.''

1. Revisions to the Definition of Facility

EPA is amending the definition of ''facility,'' as found in § 112.2, in the following ways:

- To show that only the definition of ''facility'' rather than the definition of ''production facility'' determines applicability for purposes of part 112, and specifically in § 112.20(f)(1) when applied to an oil production facility, EPA is adding the sentence ''Only this definition governs whether a facility is subject to this part.'' to the definition of facility. This language is consistent with the clarification on the definition of facility published in a May 25, 2004 **Federal Register** notice (69 FR 29728).
- To address concerns over how oil containers and equipment can be separated or aggregated for purposes of determining ''the facility,'' and thus, the applicability of the SPCC requirements to ''the facility,'' EPA is inserting the sentence ''Contiguous or non-contiguous buildings, properties, parcels, leases, structures, installations, pipes, or pipelines under the ownership or operation of the same person may be considered separate facilities.'' These revisions allow an owner or operator of a facility to separate or aggregate containers to determine the facility boundaries, based on such factors as ownership or operation of the buildings, structures, containers, and equipment on the site, and activities being conducted, property boundaries, and other relevant considerations. EPA is adding the terms ''property,'' ''parcel,'' and ''lease'' to the list of terms mentioned in the first sentence of the definition. EPA believes that adding these terms further distinguishes the attributes that can be considered in determining facility boundaries. These additions are merely examples of terms that might define a facility and are familiar to the regulated community, such as farmers or oil production facility owners. They are not meant to be exclusive.
- To clarify that the term ''waste treatment'' refers to oil waste treatment and not to treatment of any other type of waste that may be generated, EPA is amending the first sentence of the definition of facility to add the qualifier ''oil'' before the term ''waste treatment.''

a. Comments

Many commenters expressed general support for the proposed amendments. Several commenters stated that these revisions would allow them the ability to prioritize compliance activities in environmentally and economically beneficial ways (for example, being able to plan for potential discharges in areas where they are more likely to occur). Several commenters indicated that certain types of facilities, such as those in the wind power, agriculture, electrical utility, forestry, aviation, and coal mining industries, might be managed by multiple operators, and that dividing a parcel of land into facilities on the basis of these individual operations makes sense.

One commenter, however, objected to the amendment if it would result in a facility being disaggregated into more than one facility, thereby lowering the total oil capacity volume of the 'new' facility to below the regulatory thresholds.

b. Response to Comments

EPA agrees with those commenters who supported this approach. The Agency also agrees with the commenters that the owner or operator has the discretion to determine what constitutes a facility. That is, the rule may become applicable to a facility for the first time in cases of aggregation of buildings, structures or equipment and associated storage or type of activity, or the division of the facility may end applicability due to separation of buildings, structures or equipment and associated oil storage or type of activity. Thus, EPA recognizes that this

amendment may have the effect of removing a facility from being subject to the SPCC requirements. However, an owner or operator may not make facility determinations indiscriminately and in such a manner as to simply avoid applicability of the rule (for example, the division of one facility into separate facilities with one oil storage container located at each facility where all storage containers are located side-by-side or close to each other, and are used for the same purpose). For further information on the definition of facility, *see* Chapter 2 of the *SPCC Guidance for Regional Inspectors.*

2. Determining the Components of a Facility: Examples of Aggregation or Separation

The factors for determining the boundaries of a facility as listed in the definition of facility are not exclusive, but are merely examples. The *SPCC Guidance for Regional Inspectors* elaborates on additional factors that may be considered. Those factors may include, but are not limited to: Ownership, management, or operation of the containers, buildings, structures, equipment, installations, pipes, or pipelines on the site; similarity in functions, operational characteristics, and types of activities occurring at the site; adjacency; or shared drainage pathways. In the October 2007 proposed rule, EPA provided several examples and hypothetical scenarios of how a facility owner or operator may determine what is considered a ''facility'' for the purposes of an SPCC Plan (*see* 72 FR 58387, October 15, 2007).

a. Comments

One commenter stated that, for oil and gas operations, owners and/or operators often combine many leases together. These leases may not be associated with the same oil or gas field, but they are associated with the same operator. The commenter requested assurance that this practice is consistent with the amended definition of facility.

While additional comments did not focus on the specific examples provided, several commenters raised questions about how the modification to the definition of facility may affect various types of facilities. One commenter supported flexibility to prepare single or multiple SPCC Plans for wind power plants, which potentially involve many landowners spread over large areas. One commenter requested clarity that a petroleum refinery owner may determine that refinery operations are a facility and ongoing remediation activities at the same petroleum refinery location can be considered a separate facility. Another commenter from the aviation sector requested that EPA clarify whether a tank at an exempt facility may be subject to regulation by transferring fuel from the tank to a regulated mobile refueler. Several commenters suggested that operators may prepare multi-facility SPCC Plans that combine common elements (such as structures, equipment, inspections, integrity testing, secondary containment designs, and response procedures), while retaining site-specific information; these commenters urge EPA to clarify that using a single Plan for multiple locations does not force facilities to be considered a single facility for FRP purposes.

b. Response to Comments

As described in the hypothetical scenario (72 FR 58387, October 15, 2007), the Agency reiterates that an owner or operator of an oil production facility may aggregate some or all of his leases into one Plan, at his discretion, whether or not they are associated with the same oil or gas field. Thus, this practice is consistent with the amended definition of facility being promulgated by this action.

With respect to the other comments submitted on how the definition of facility may affect various types of facilities, EPA agrees that wind power plants, whether spread over large or small areas and which may involve multiple landowners, may be appropriately defined as single or multiple facilities, depending on the circumstances, at the owner or operator's discretion. Such facilities may be included in single or multiple facility SPCC Plans. EPA also generally agrees with the commenter that a petroleum refinery owner or operator may, at his discretion, decide that remediation activities at an operating petroleum refinery constitute a separate facility. Furthermore, EPA agrees with the commenter that the Agency does not regulate the transfer of fuel at an exempt facility. However, once the fuel is transferred to a regulated container at an otherwise regulated SPCC facility, the transfer activity becomes subject to the SPCC requirements.

Finally, as noted previously, the definition of facility determines the applicability for all purposes under part 112. Thus, once an owner or operator defines the extent of his facility, that definition determines applicability for both SPCC and FRP purposes. The owner or operator may, at his discretion, create a Plan that includes more than one site, and define it as one facility which pertains to both FRP and SPCC applicability. An owner or operator may also combine multiple facilities into a single SPCC Plan, combining common elements, while retaining facility-specific information (a multi-facility Plan). While the Plan may encompass multiple facilities, the applicability of SPCC and FRP requirements is determined by the extent of each individual facility. The amendment to the definition of facility and the clarifications described in this action should not be viewed as a deterrent to the use of multi-facility SPCC Plans, a concern expressed by operators in the oil production sector.

3. Alternative Options Considered

In developing the amendments finalized in this notice, EPA considered alternatives for addressing the definition of facility, including taking no action, and addressing concerns only through guidance. No comments were received on these specific alternative options. EPA also requested comments on other alternatives that could serve to address the needs of the regulated community, while at the same time maintain appropriate levels of environmental protection.

a. Comments

A commenter suggested removing the terms ''* * * property, parcel, lease * * *'' from the definition of facility because the commenter believes these terms complicate and confuse the definition. Another commenter urged EPA to state that the determination of a ''facility'' for the purpose of preparing an SPCC Plan does not preclude the operator from making a different determination of the scope of the facility for the purposes of reporting or planning under any other Federal or state statute. Other commenters recommended that EPA clarify that a lease does not necessarily define a facility. Another commenter also requested that EPA clarify that the definition of facility excludes DOT and U.S. Coast Guard (USCG) components. Still another commenter suggested that EPA codify the litigation settlement language either as rule amendments or an appendix to the rule. Finally, one commenter recommended that EPA give 120 days to a facility owner or operator to resolve any compliance concerns, including a disputed facility determination.

b. Response to Comments

EPA disagrees with the suggested edit to remove the terms ''* * * property, parcel, lease * * *'' from the definition of facility. Unlike the commenter, the

Agency believes that these terms serve as clarifying examples of what may constitute a facility.

EPA agrees that the definition of facility, as defined in § 112.2, applies only for purposes of part 112, and not for purposes of any other Federal or state statute. However, this would not prevent the owner or operator of a facility from defining the facility boundaries in the same way that he defines it to comply with other regulations.

EPA clarifies that a lease may, at the owner or operator's discretion, constitute a facility, but does not necessarily create a facility. According to the definition, contiguous or non-contiguous buildings, properties, leases, structures, installations, pipes, or pipelines under the ownership or operation of the same person may be considered separate facilities. The definition further lists several site-specific factors, including, but not limited to, ownership or operation of buildings, structures, and equipment on the same site and types of activity at the site.

Generally, a facility for SPCC purposes excludes components which are not subject to EPA's jurisdiction, but are subject to the jurisdiction of other agencies, such as DOT or USCG. However, EPA and DOT recognize that in certain situations, dual jurisdiction has been applied to certain components of a facility, and that this approach can pose confusion to the regulated community. EPA and DOT thus are currently working to minimize overlapping regulation in accordance with their 1971 MOU regarding agency jurisdiction (36 FR 24080, November 24, 1971) and will publish the results of that effort in the **Federal Register** at a later date. For more information, please refer to the proposed rule **Federal Register** notice (72 FR 58419, October 15, 2007).

EPA believes that this action addresses the facility definition issue in the settlement of the 2002 SPCC rule litigation, because in the amended definition, EPA clarifies that only this definition is used to determine whether a facility is subject to 40 CFR part 112. EPA also has stated in this preamble that the positions that EPA has taken in the July 2002 SPCC rule litigation settlement are still the Agency's existing positions.

Finally, EPA disagrees that owners or operators of SPCC regulated facilities should be given 120 days to address any possible compliance concerns, including but not limited to, differences of opinion on a facility determination. Whether or not a total or partial Plan is needed, or whether an existing SPCC Plan should be amended is a compliance issue, subject to the provisions of § 112.1(f) or § 112.4(e) and (f). Both of these sections provide adequate time for appeal from an initial decision of the Regional Administrator to the Administrator. Therefore, a period of 120 days is not included in this final rule to allow the owner or operator to resolve compliance issues.

E. Facility Diagram

Section 112.7(a)(3) of the SPCC rule requires that a facility owner or operator include in his SPCC Plan a facility diagram that identifies the location and contents of oil containers, connecting piping, and transfer stations. EPA is amending the SPCC rule to provide additional flexibility to the requirement that the facility diagram include the location and contents of each container.

EPA is also requiring that certain containers and piping, exempted from SPCC requirements in this action, be identified on the facility diagram and marked as ''exempt.'' This includes intra-facility gathering lines subject to the requirements of 49 CFR part 192 or 195 as described in § 112.1(d)(11); and any produced water container, as defined in § 112.2, that meets the requirements at § 112.9(c)(6)(i) as described in § 112.1(d)(12). This will assist facility and EPA personnel in defining the jurisdictional boundaries at the facility and provide emergency response personnel with information that can be used to identify hazards during a spill response activity. EPA has not required that all containers exempted from the rule be marked on the facility diagram because in many cases it would be burdensome. For example, the mobility of motive power containers and mobile/portable containers with a capacity of less than 55 U.S. gallons would make them difficult to track on a facility diagram. For more information on these exemptions, see sections V.L and V.M of this preamble.

1. Revision to the Facility Diagram Requirement Regarding Mobile or Portable Containers

EPA is amending § 112.7(a)(3) to clarify that the facility diagram must include all fixed (that is, not mobile or portable) containers. For any mobile or portable containers (such as drums or totes), a facility owner or operator must mark the area of the facility on the diagram where such containers are stored. The facility owner or operator may mark the number of containers, contents and capacity of each container either on the facility diagram, or provide a separate description in the SPCC Plan. If the total number of mobile or portable containers changes, the owner or operator can include an estimate in the Plan of the number of containers, the anticipated contents, and capacities of the mobile or portable containers maintained at the facility.

EPA believes that the revision to the facility diagram requirements for mobile or portable containers will simplify the process for developing a facility diagram by allowing for a general description of both the area of the facility where they are located and of their contents, rather than representing each container individually.

a. Comments

Many commenters expressed general support for the amendments, while one commenter opposed the amendment because of increased cost estimates for facility diagram preparation. Several other commenters requested that EPA clarify, via rule language, which containers are considered mobile or portable (such as 55-gallon drums, intermodal bulk containers, mobile/portable maintenance tanks, and other small containers put into place and later moved). Other commenters suggested that EPA require only mobile or portable storage container locations that are ''fixed,'' ''permanent,'' or ''dedicated'' be included in the diagram. These commenters assert that internal facility tracking of these containers is sufficient for planning and emergency response purposes, that single drums are not reasonable to track on a diagram, and that their inclusion on the diagram does not provide increased environmental protection.

Several additional approaches were suggested by commenters. One commenter suggested that EPA allow facility operators to use ''range reporting'' for the number of containers and their quantities that may be in use at the facility. One commenter recommended allowing the use of an administrative alternative, such as a computerized tracking system, to provide real-time information on the quantity, type, location, and person responsible for mobile/portable containers. One other commenter suggested that § 112.5 should be amended to specify other examples of Plan changes that do not require re-certification. Finally, one commenter supported the use of facility diagrams for SPCC Plans that have already been prepared for other programs.

b. Response to Comments

The Agency agrees with those commenters that support the proposal,

and believes that clarification and simplification of these requirements will reduce costs and facilitate compliance. Thus, EPA disagrees with the commenter who argued, without any supporting data, that the facility diagram amendments would increase the cost of preparing a facility diagram. In addition, the Agency does not believe that it needs to clarify, via rule language, which containers are considered mobile or portable. The Agency has already provided examples of mobile/portable containers in *Section 4.4.4: Secondary Containment Requirements for Mobile/Portable Containers of the SPCC Guidance for Regional Inspectors* (for example, 55 gallon drums, skid tanks, totes, and intermodal bulk containers). Some oil refinery tank trucks and fueling trucks dedicated to a particular facility (such as a construction site, military base, or similar large facility) may fall under this category.

The Agency also disagrees with those commenters regarding the need to include on the facility diagram only those mobile or portable container locations that are ''fixed,'' ''permanent,'' or ''dedicated.'' The Agency believes and clearly stated in preamble to the proposed rule (72 FR 58378, October 15, 2007) that mobile or portable containers should be marked on the facility diagram in their out-of-service or designated storage area, primary storage areas, or areas where they are most frequently located, and believes that the final rule language accomplishes this purpose.

The Agency agrees with the comments supporting the flexibility of reporting an area on the facility diagram (such as a drum storage area) for these containers, as well as providing reasonable estimates (including ranges) for the potential number of mobile or portable containers, types of oil, and anticipated capacities in the SPCC Plan. The Agency believes that these estimates can be effectively used to determine the applicability of the rule thresholds and provide a general description of the mobile/portable containers in the Plan; this clarification may be particularly useful when the number of containers change frequently at the facility.

While the idea of an internal computerized tracking system, utilizing container bar codes to provide real-time information on the quantity, type, location, and person responsible for oil containers of 55 U.S. gallons or greater may suit some facilities, the Agency does not believe it can reasonably require such a system for all SPCC-regulated facilities. However, EPA believes that the amendments allow a facility owner or operator to implement such a system to assist in their tracking of mobile or portable containers, and to use it to meet the SPCC Plan requirement for these types of containers, if desired.

Also, the Agency does not believe it needs to expand the list of examples of compliance activities that do not require PE certification, as including every potential scenario is unreasonable. Owners or operators can refer to the existing list of changes that may require PE certification in § 112.5 and to the *SPCC Guidance for Regional Inspectors*.

Finally, the Agency does not require that a facility diagram be developed exclusively for the SPCC Plan, and does not agree that it needs to amend the rule language to allow for this. A facility diagram prepared for a state or Federal plan (including the FRP requirements under § 112.20) or for other purposes (for example, construction permits, facility modifications, or other pollution prevention requirements) may be used in an SPCC Plan if it meets the requirements of the SPCC rule (for example, it includes the contents and capacities of containers; transfer areas; and piping). Thus, EPA believes that the existing regulations allow for a facility diagram developed for other programs to be used, which not only facilitates compliance with this requirement, but also reduces the cost of diagram preparation.

2. Indicating Complicated Areas of Piping or Oil-Filled Equipment on a Facility Diagram

A facility diagram must also include all transfer stations and connecting pipes (§ 112.7(a)(3)). Associated piping and oil-filled manufacturing equipment present at an SPCC-regulated facility may be difficult to clearly present on a facility diagram, due to their relative location, complexity, or design. Therefore, in the October 2007 proposal (72 FR 58378, October 15, 2007), EPA requested comment on whether a rule revision is appropriate to provide further clarification on how complicated areas of piping or oil-filled equipment may be indicated on the facility diagram.

EPA believes that the *SPCC Guidance for Regional Inspectors* adequately addresses the flexibility inherent in the existing SPCC rule related to indicating these areas on a facility diagram, and that no additional rule amendment is necessary.

a. Comments

Several commenters expressed general support for an amendment to the regulations to provide further clarification on how piping or oil-filled equipment can be addressed on the facility diagram. These commenters noted the difficulties associated with including oil-filled equipment or piping detail on a diagram, and requested that EPA offer other options. Suggestions included a table identifying the oil-filled equipment and associated storage capacities; flow charts; piping inventories; summary statements; drawings; PE-required details; electrical one-line diagrams; and other means. One commenter suggested that the clarifications on flexibility provided in the *SPCC Guidance for Regional Inspectors* on the way the facility diagram can be drawn should be made part of the rule itself.

Another commenter stated that oil-filled equipment located in buildings with multiple floors, or in process areas with numerous other pieces of equipment, should not be required to be shown in the facility diagram, because including such detail is impractical for a complex site (such as a petroleum refinery or chemical plant). The commenter recommended that EPA limit the diagram requirements exclusively to fixed bulk oil storage containers. Other commenters expressed difficulties with depicting complex hydraulic and lubricant tubing; older equipment attributes; and indoor and/or outdoor piping (particularly at older facilities) that pose no risk of discharge to navigable waters or adjoining shorelines.

b. Response to Comments

The Agency interprets the requirement at § 112.7(a)(3) to allow an owner or operator of a facility to represent such systems in a less detailed manner on the facility diagram in the SPCC Plan, as long as the information is contained in more detailed diagrams of the systems or is contained in some other form and such information is maintained elsewhere at the facility and this location is referenced in the SPCC Plan. The *SPCC Guidance for Regional Inspectors* describes the Agency's interpretation of the requirements for a facility diagram that allow an owner or operator to determine the scale and level of detail shown on a facility diagram according to the needs and complexity of the facility. Thus, the Agency agrees with those commenters who believe that the guidance adequately addresses the flexibility for complying with these requirements. The guidance document illustrates how the current regulatory requirement allows flexibility in the way the facility diagram is drawn to include complex

designs of oil-filled equipment or pipelines. As noted in the guidance document, schematic representations that provide a general overview of the piping service (for example, supply/return) may provide sufficient information when combined with a description of the piping in the SPCC Plan. Alternatively, overlay diagrams showing different portions of the piping system may be used where the density and/or complexity of the piping system would make a single diagram difficult to read. For areas of complicated piping, which often include different types, numbers, and lengths of pipes, the facility diagram may show a simplified box labeled ''piping'' or show a single line that identifies the service (for example, supply/return), as long as more detailed diagrams are available elsewhere at the facility. Therefore, because the existing regulations already provide adequate flexibility, which is further described in the *SPCC Guidance for Regional Inspectors*, and because the Agency believes that amending the regulatory text will not provide any greater clarity, EPA has decided not to provide further amendment to the rule.

F. Loading/Unloading Racks

Tank car and tank truck loading/unloading racks are subject to specific requirements in § 112.7(h), including sized secondary containment. EPA is finalizing a definition for the term ''loading/unloading rack,'' which governs whether a facility is subject to § 112.7(h). Under this amendment, the requirements described at § 112.7(h) only apply to areas of a regulated facility where a loading/unloading rack, as defined in § 112.2, is located.

A loading/unloading rack can be located at any type of facility; however, the loading and unloading areas associated with oil production tank batteries and farms generally do not have the equipment described in the definition of loading/unloading rack finalized in this action. Therefore, EPA is specifically excluding oil production facilities and farms from the requirements at § 112.7(h).

1. Loading/Unloading Rack Definition

EPA is finalizing the following definition for ''loading/unloading rack'' under § 112.2: ''*Loading/unloading rack* means a fixed structure (such as a platform, gangway) necessary for loading or unloading a tank truck or tank car, which is located at a facility subject to the requirements of this part. A loading/unloading rack includes a loading or unloading arm and may include any combination of the following: Piping assemblages, valves, pumps, shut-off devices, overfill sensors, or personnel safety devices.'' This definition is a slightly modified version of the definition proposed in October 2007. In developing the proposed definition, EPA reviewed information from a number of different sources and reviewed various types of equipment considered components of loading racks (*see* 72 FR 58378, October 15, 2007). The Agency sought comment on the proposed definition of ''loading/unloading rack'' and requested suggestions on any other definitions for ''loading/unloading rack'' that would be more suitable. EPA also requested a description of a ''loading/unloading arm.''

a. Comments

Many commenters expressed general support for the proposed definition of loading/unloading rack. However, other commenters opposed the proposed definition, suggesting that it is too broad and consequently includes many loading/unloading areas or equipment that would not normally be components of ''racks,'' such as storage containers equipped with safety platforms, piping assemblages, valves, pumps, shut-off devices, overfill sensors, or personnel safety devices. One commenter expressed concern that the proposed definition of loading rack could include a facility ''where filling/emptying is accomplished by direct connection to the same tanks.'' Another commenter expressed concern that, by not defining ''loading arm,'' EPA might inadvertently cause hoses used at loading racks to be identified as loading/unloading arms. Still another commenter stated that, in the state of Alaska, many rural facilities do not have a gangway and a fixed loading arm, so the proposed definition would leave these facilities not subject to § 112.7(h).

Several commenters emphasized that a loading arm is an essential component of a loading/unloading rack, and that EPA's definition should be modified to reflect this fact. A commenter recommended that accessories, such as piping assemblages, valves, pumps, shut-off devices, overfill sensors, personnel safety devices be deleted from the definition, as these may or may not be a part of the rack, and one or more of these devices (for example, overfill sensors) are typically present on most tanks. The commenter also recommended that the definition of loading/unloading rack be narrowed to cover only permanently installed platforms, gangways or loading/unloading arms used in the loading or unloading of tack trucks or tank cars.

Other commenters requested that EPA more clearly define the components, such as platforms, gangways, and loading/unloading arms, and confirm that flexible hoses used at a loading/unloading rack should not be considered loading/unloading arms. Two commenters provided a suggested definition for ''loading/unloading arm.'' Specifically, these commenters suggested that ''loading/unloading arm'' be defined as ''consisting of at least two articulated parts that are connected in such a way that relative movement is feasible to transfer product via top or bottom loading/unloading to a transportation vehicle.''

One commenter suggested that the definition of loading/unloading rack be changed to identify examples of what are not loading racks (i.e., a nozzled connection to a tank, connection consisting of a flexible hose, a single connection with a valve, or a loading structure that is not overhead). This commenter also requested that EPA remove references to ''unloading'' from the definition.

Two commenters suggested a definition involving a throughput threshold for an area to be considered a loading rack (for example, limiting ''racks'' to those loading/unloading facilities with an annual average of 100 trucks, on a five-year rolling average; a throughput threshold of 800,000 gallons per month, based on the relatively low likelihood of a spill when petroleum product is transferred only occasionally). Another commenter suggested that EPA narrow the definition of loading/unloading racks by associating the definition with the flow-rate capacities of the associated pump systems, and clarify that loading/unloading racks are not typically associated with oil-filled operating equipment.

One commenter suggested that small tank transfers—that is, using a small transfer hose to fill a shop-built tank, and therefore having the potential of only a small release—should be viewed as a loading area and be subject to § 112.7(c), whereas large tank transfers—that is, using a larger hose equipped with a hose coupler and a stationary pump to transfer product at a rate greater than 50 gallons per minute, with the consequent likelihood of a larger release—should be viewed as a loading rack and be subject to § 112.7(h). Another commenter suggested a definition that would require loading/unloading racks to be used only for transportation-related tank trucks, rail cars, or vessels, not intra-facility vehicles.

Finally, one commenter suggested that EPA clarify that the requirement applies only to tank cars or tank trucks located within the loading/unloading rack and not to tank cars or trucks waiting to enter the loading/unloading rack.

b. Response to Comments

EPA agrees that the proposed definition of ''loading/unloading rack'' should be refined to provide clarity and address the concerns about the scope of the definition. Therefore, EPA has modified the proposed definition to provide more clarity by addressing concerns that a loading/unloading arm is an essential component of a loading rack, while describing other components that may be found at a loading or unloading rack.

The Agency does not intend this definition to include simple loading or unloading configurations, but rather to only include the associated equipment and structure associated with loading/unloading arms as part of a rack. Equipment present at a loading/unloading area where a pipe stand connects to a tank car or tank truck via a flexible hose, which is not equipped with a loading or unloading arm, is not considered a loading/unloading rack as defined in this action. However, the presence of flexible hoses on oil transfer equipment does not always indicate that the equipment is exempt from the definition of loading/unloading rack, as some top and bottom loading/unloading racks are made up of a combination of steel loading arms connected by flexible hosing.

EPA believes that providing the list of equipment usually associated with a loading/unloading rack in the definition will be useful for the owner or operator and the PE in determining the applicability of the rule requirements at § 112.7(h) to the facility. The Agency agrees with commenters that the key to the definition is the presence of a loading or unloading arm in association with a permanent structure and other equipment. Thus, the Agency has added the phrase ''a loading/unloading rack includes a loading or unloading arm'' in the definition to illustrate this point.

A definition for ''loading/unloading arm'' was not proposed. However, EPA understands, consistent with comments, that a loading/unloading arm is typically a movable piping assembly that may include fixed piping or a combination of fixed and flexible piping, typically with at least one swivel joint (that is, at least two articulated parts that are connected in such a way that relative movement is feasible to transfer product via top or bottom loading/unloading to a tank truck or rail car). However, certain loading/unloading arm configurations present at loading racks may include a loading/unloading arm that is a combination of flexible piping (hoses) and rigid piping without a swivel joint. In this case, a swivel joint is not present on the loading arm because flexible piping is attached directly to the rigid piping of the loading arm and the flexible hose provides the movement needed to conduct loading or unloading operations in lieu of the swivel joint.

Commenters raised concerns that, because of the new loading/unloading rack definition, many transfer operations (particularly those at rural facilities with no gangways or fixed loading arms) will not be regulated under the SPCC rule. The Agency disagrees with this assertion. Although the Agency intends the definition of loading/unloading rack to clearly delineate those facilities subject to the § 112.7(h) regulatory requirements (such as sized secondary containment), any otherwise regulated SPCC facility will still be subject to the general secondary containment requirements under § 112.7(c) for all areas where oil is transferred into or out of any regulated container.

EPA received several alternatives to the definition of loading/unloading rack contained in the October 2007 proposal. EPA considered these alternative definitions in developing the definition for loading/unloading rack promulgated in this notice. Specifically, several commenters recommended that the definition of loading/unloading rack be based on throughput, offering various throughput numbers as a method of defining transfer operations that would be subject to the § 112.7(h) requirements. However, these suggestions included limited supporting data. The complexity in determining a rack's throughput for a given time period would add additional burden on the owner and operator of a facility. Furthermore, there is no basis for deciding on a specific time period for this determination. Thus, EPA is not basing its definition of loading/unloading rack on a rack's throughput. Other commenters suggested that the definition provide examples only of equipment that should not be considered a loading or unloading rack. The Agency believes that it is much clearer to define the equipment typically associated with a loading or unloading rack than to provide a list of equipment that are not considered a loading or unloading rack. Most of the suggested definitions, however, focused on the presence of a loading arm as indicative of a loading or unloading rack. Many of the definitions focused on the presence of a structure and a list of related equipment. EPA agrees with many of the concepts illustrated in the alternative definitions received from commenters. Thus, EPA is finalizing an equipment-based definition, as proposed, as a clearer method for identifying transfer activities subject to the requirements of § 112.7(h).

Commenters suggested that EPA delete reference to the accessories, such as piping assemblages, valves, pumps, shut-off devices, overfill sensors, and personnel safety devices from the definition, as these may or may not be a part of the rack, and one or more of these devices (such as overfill sensors) are typically present on most tanks. The definition is not intended to address oil containers (such as tanks); the list of equipment specifically addresses equipment associated with loading/unloading rack structures. EPA believes that providing examples of equipment usually associated with loading/unloading racks would be useful for the owner or operator of a facility, as well as the PE, for determining the applicability of the definition.

EPA also is clarifying in this notice that tank cars and tank trucks are only subject to the requirements of § 112.7(h) when conducting loading or unloading operations associated with a loading/unloading rack as defined in this action. Otherwise, they are subject to the general secondary containment requirements at § 112.7(c). In addition, the definition finalized in this action typically will not include oil-filled equipment; however, transfers associated with oil-filled operational equipment where a rack is not present are still required to meet the general containment requirements of § 112.7(c).

2. Requirements for Loading/Unloading Racks

Although the title of § 112.7(h) refers to ''loading/unloading rack,'' the text of the requirement referred to ''loading/unloading areas.'' Therefore, to provide additional clarity, EPA is changing all references from loading/unloading ''area'' to loading/unloading ''rack.'' For example, § 112.7(h)(1) is modified as follows: ''Where loading/unloading rack drainage does not flow into a catchment basin or treatment facility designed to handle discharges, use a quick drainage system for tank car or tank truck loading/unloading racks. You must design any containment system to hold at least the maximum capacity of any single compartment of a tank car or tank truck loaded or unloaded at the facility.'' Section 112.7(h)(2) is similarly

modified and includes a technical correction of the word ''break'' to ''brake'' to correct a typographical error.

In the preamble to the July 2002 amendments to the SPCC rule (67 FR 47042, July 17, 2002), EPA stated that § 112.7(h) ''applies to containers which are aboveground (including partially buried tanks, bunkered tanks, or vaulted tanks) or completely buried (except those exempted by this rule)'' (67 FR 47110, July 17, 2002). Thus, this statement seems to indicate that § 112.7(h) does not apply to a loading/unloading rack (or any other transfer area) associated with a container that is exempted from the rule, such as an Underground Storage Tanks (USTs) that are subject to all of the technical requirements of 40 CFR part 280 or a state program approved under part 281. As described in the October 2007 proposal (72 FR 58378, October 15, 2007), EPA has reconsidered this position because a transfer to or from such a container at an SPCC-regulated facility is a potential source of discharge of oil into navigable waters or adjoining shorelines. Additionally, because a loading/unloading rack, or other transfer area, associated with an UST is not typically part of the UST system, it is not subject to all of the technical requirements of 40 CFR part 280 or 281. Therefore, EPA believes that such a loading/unloading rack should be regulated under the SPCC regulations in the same manner as any other transfer equipment or transfer activity located at an otherwise regulated SPCC facility.

a. Comments

Two commenters expressed general support for the amendments to § 112.7(h). However, one commenter suggested exempting loading/unloading activity from SPCC regulation, because standard industry practice is to place the connection valve inside a secondary containment area during loading/unloading. Other commenters suggested that EPA eliminate the sized secondary containment requirements for loading/unloading racks. Another commenter requested that EPA codify the settlement language regarding loading/unloading rack (*American Petroleum Institute* v. *Leavitt*, No. 1:02CV02247 PLF and *Marathon Oil Co.* v. *Leavitt, No.* 1:02CV02254 PLF). One other commenter suggested revised text for § 112.7(h) focusing on special control measures for portions of the facility with a higher likelihood of a discharge as described in § 112.1(b) (such as transfer areas where containers are frequently open for filling, or where couplings are frequently connected and disconnected from containers).

With regard to EPA's reconsideration of the applicability of § 112.7(h) to a loading/unloading rack associated with a container that is exempted from the rule, such as USTs that are subject to all of the technical requirements of 40 CFR part 280 or a state program approved under 40 CFR part 281, a commenter disagreed and stated that the provisions associated with 40 CFR 280.30(a) address spill prevention.

b. Response to Comments

EPA did not propose: (1) To exempt (nor does the Agency agree that the final rule should exempt) loading or unloading activities conducted at loading/unloading racks from the SPCC rule or (2) that such loading/unloading racks be exempted from the sized secondary containment requirements. Although the industry practices described by the commenter may be used to meet the rule requirements that exist for loading and unloading activities, these do not provide adequate justification to exempt this equipment from the SPCC regulation.

Commenters also requested that EPA codify the settlement language on this issue. EPA has not done this; however, the modification to change the word ''area'' to ''rack'' in § 112.7(h) is consistent with EPA's notice in the **Federal Register** in May 2004, which noted that § 112.7(h) only applies at facilities with loading and unloading ''racks'' (69 FR 29728, May 25, 2004). EPA also maintains its position, as clarified in a letter to the Petroleum Marketers Association of America (PMAA), that loading and unloading activities that take place beyond the rack area are not subject to the requirements of § 112.7(h), but are subject, where applicable, to the general secondary containment requirements of § 112.7(c) (Letter to Daniel Gilligan, President, Petroleum Marketers Association of America, from Marianne Lamont Horinko, Assistant Administrator, Office of Solid Waste and Emergency Response, EPA, May 25, 2004 and 69 FR 29728, May 25, 2004).

EPA also does not agree with the commenter who suggested that further revisions be made to the rule requirements at § 112.7(h) to address special control measures for portions of the facility with a higher likelihood of a discharge as described in § 112.1(b). The Agency believes the current requirements are appropriate to address a discharge at the loading/unloading rack. The clarifications to the language in § 112.7(h) finalized in this action address the questions that have been raised by the regulated community on how these rule provisions apply to loading/unloading racks and do not apply to areas beyond the ''rack.''

Finally, one commenter stated that the provisions associated with 40 CFR 280.30(a) address spill prevention and thus, the requirements for loading/unloading racks should not apply to exempt USTs. While EPA recognizes that this provision (40 CFR 280.30(a)) describes spill and overfill control requirements when USTs are being filled, EPA still believes that the loading/unloading requirements should apply to these exempted USTs, for the reasons described earlier. However, EPA would note that to the extent that 40 CFR 280.30(a) addresses SPCC requirements, these measures can be described in the SPCC Plan, as appropriate. Therefore, transfers at loading/unloading racks and transfer areas associated with exempted USTs are considered regulated activities at an otherwise regulated SPCC facility. In addition, exempted USTs, at an otherwise regulated SPCC facility, equipped with a loading/unloading rack as defined in this action, are subject to the requirements of § 112.7(h). Also, exempted USTs, at an otherwise regulated SPCC facility, equipped with a transfer area (for example, dispenser or other transfer equipment) are subject to the requirements of § 112.7(c). Non-rack transfer areas are required to provide only general secondary containment for the most likely discharge, as discussed in Section V.H in this action, and may include active containment measures, such as response action or sorbent deployment. This interpretation is consistent with the approach EPA has taken with other exempt containers at an otherwise regulated SPCC facility. For example, in the preamble to the December 2006 amendments, EPA noted that although the amendment provided an exemption for motive power containers, the oil transfer activities to or from motive power containers occurring within an SPCC-regulated facility continue to be regulated (71 FR 77283, December 26, 2006). Consistent with the preamble to the December 2006 amendments, the Agency is therefore clarifying that at an SPCC-regulated facility, § 112.7(h) (including the sized secondary containment provision) applies to transfers at any loading/unloading rack associated with any type of container, including one that is exempted from the rule, as long as the loading/unloading rack meets the definition finalized in this notice. A transfer not associated with a loading or unloading rack is subject to the general secondary containment provision at § 112.7(c). No

rule change is needed to clarify this point, because a rule amendment to exempt a loading/unloading rack associated with an UST was never proposed or finalized. This clarification is intended to correct preamble language that was inconsistent with the Agency's position on other exempt containers and their associated transfer activities.

3. Exclusions

EPA is specifically excluding onshore oil production facilities and farms from the loading/unloading rack requirements at § 112.7(h) because the Agency and commenters alike believe that loading and unloading racks are not typically associated with these types of facilities. EPA is exempting these facilities from the requirements of § 112.7(h) for clarity in order to avoid confusion for owners or operators of oil production facilities or farms. At other facilities that likewise do not have a loading/unloading rack, the provisions at § 112.7(h) similarly do not apply.

Oil transfer areas, such as loading/unloading areas at farms and oil production facilities that are subject to the SPCC rule, nevertheless remain subject to the general secondary containment requirements of § 112.7(c). As EPA states in the *SPCC Guidance for Regional Inspectors*, ''Areas where oil is transferred but no loading or unloading rack is present are subject to § 112.7(c), and thus appropriate containment and/or diversionary structures are required. EPA does not require specifically sized containment for transfer areas; however, containment size must be based on good engineering practice.''

a. Comments

Several commenters expressed general support for the exclusions. In addition, one commenter requested that EPA also exclude agricultural retailers from § 112.7(h) because they are already subject to FIFRA regulations.

b. Response to Comments

The Agency agrees that it is appropriate to exclude onshore oil production facilities and farms from the loading/unloading rack requirements at § 112.7(h). Commenters confirmed EPA's understanding that there are few, if any, loading/unloading racks at oil production facilities, and that agricultural oil and fuel transfers at farms are generally not associated with loading/unloading racks. However, if an agricultural retail facility conducts fuel transfers with equipment that meets the definition of a loading/unloading rack, then this facility would be subject to the loading/unloading rack requirements at § 112.7(h). The Agency disagrees with the commenter who requested that agricultural retailers also be excluded for the loading/unloading requirements of § 112.7(h), because the FIFRA requirements do not provide spill prevention requirements at a level equivalent to the SPCC rule.

4. Alternative Option Considered

EPA considered not providing any amendments to the SPCC rule related to loading/unloading racks. Under this approach, EPA would not provide a regulatory definition for loading/unloading rack or an exclusion for farms and onshore oil production facilities from the loading/unloading rack requirements at § 112.7(h), but would instead continue to follow the interpretation of loading/unloading rack, as stated in the *SPCC Guidance for Regional Inspectors* and the May 2004 **Federal Register** notice. However, EPA did not choose this approach because the Agency believes it was important to address some of the confusion and questions raised by the regulated community.

a. Comments

Several commenters indicated that no rule change is necessary.

b. Response to Comments

As noted above, EPA disagrees with the commenters and has finalized the new definition and associated editorial changes to the rule to provide additional clarity in describing the type of equipment and facilities subject to the loading/unloading rack requirements under § 112.7(h).

G. Tier I Qualified Facilities

In December 2006, EPA finalized an amendment to the SPCC rule to allow the owner or operator of a qualified facility to self-certify his SPCC Plan. The Agency is amending the SPCC rule to provide an additional option for the owners and operators of a subset of qualified facilities that meet an additional criterion to complete and implement a streamlined, self-certified SPCC Plan template (promulgated as Appendix G to 40 CFR part 112), in order to comply with the requirements of the SPCC rule. For clarity, EPA is now using the term ''Tier II qualified facility'' to describe those qualified facilities as identified by and subject to the requirements promulgated in the December 2006 SPCC rulemaking (71 FR 77266, December 26, 2006) and the term ''Tier I qualified facility'' for a new subset of these qualified facilities. To qualify as a Tier I qualified facility in addition to meeting the eligibility criteria for a Tier II qualified facility, a facility must also have no individual aboveground oil storage containers with a capacity greater than 5,000 U.S. gallons.

A Tier II qualified facility is one that meets the criteria described in the December 2006 amendments to the SPCC rule (71 FR 77266, December 26, 2006): a facility that has an aggregate aboveground oil storage capacity of 10,000 U.S. gallons or less; and has had no single discharge as described in § 112.1(b) exceeding 1,000 U.S. gallons or no two discharges as described in § 112.1(b), each exceeding 42 U.S. gallons within any twelve-month period in the three years prior to the SPCC Plan self-certification date, or since becoming subject to 40 CFR part 112 if the facility has been in operation for less than three years (this criterion does not include discharges as described in § 112.1(b) that are the result of natural disasters, acts of war, or terrorism). EPA is now further streamlining the SPCC requirements for certain qualified facilities that meet an additional criterion.

The following table illustrates the tiers, criteria, and options for qualified facilities and all others as described in this notice:

Qualified facilities*		All other facilities
Tier I	Tier II	
10,000 U.S. gallons or less aggregate aboveground oil storage capacity; and		More than 10,000 U.S. gallons aggregate aboveground oil storage capacity, or

Qualified facilities*		All other facilities
Tier I	Tier II	
Within any twelve-month period, three years prior to the Plan certification date, or since becoming subject to the SPCC rule if in operation for less than three years, there has been: (1) No single discharge of oil to navigable waters or adjoining shorelines exceeding 1,000 U.S. gallons; and (2) No two discharges of oil to navigable waters or adjoining shorelines each exceeding 42 U.S. gallons**; and		Within any twelve-month period, three years prior to the Plan certification date, or since becoming subject to the SPCC rule if in operation for less than three years, there has been: (1) A single discharge of oil to navigable waters or adjoining shorelines exceeding 1,000 U.S. gallons; or (2) Two discharges of oil to navigable waters or adjoining shorelines each exceeding 42 U.S. gallons**; or
No individual aboveground oil containers greater than 5,000 U.S. gallons;	Has individual aboveground oil containers greater than 5,000 U.S. gallons; or Owner or operator eligible for Tier I qualified facility status, but decides not to take the option or chooses to develop a ''hybrid'' Plan;	Owner or operator eligible for qualified facility status, but decides not to take the option;
Then: Complete and self-certify Plan template (Appendix G to 40 CFR part 112) in lieu of a full PE-certified Plan.	Then: Prepare self-certified Plan in accordance with all applicable requirements of § 112.7 and subparts B and C of the rule, in lieu of a PE-certified Plan.	Then: Prepare PE-certified Plan in accordance with all applicable requirements of § 112.7 and subparts B and C.

* *See* Section V.M of this notice for more information on qualified facility eligibility criteria specific to the oil production sector.

** This criterion does not include discharges as described in § 112.1(b) that are the result of natural disasters, acts of war, or terrorism. Additionally, the gallon amount described in this criterion addresses the amount of the discharge that actually reaches navigable waters or adjoining shorelines.

1. Eligibility Criteria

As proposed in October 2007, a Tier I qualified facility must meet all of the eligibility criteria for qualified facilities promulgated by EPA in December 2006 (71 FR 77266, December 26, 2006) with an additional criterion: A maximum individual aboveground oil storage container capacity of 5,000 U.S. gallons. EPA developed the Tier I category based on an individual container capacity in order to link any streamlined requirements with a reduced potential for oil discharge. That is, the maximum individual aboveground container capacity threshold is set at 5,000 U.S. gallons because this volume is consistent with industry consensus standards that call for varying levels of stringency based on container size and configuration. For example, the Steel Tank Institute's SP001, *Standard for the Inspection of Aboveground Storage Tanks* allows for periodic visual inspection alone, with no requirement for the inspector to be professionally certified, for containers of 5,000 U.S. gallons or less that are equipped with a spill control measure and a continuous release detection method. Furthermore, a facility with smaller storage containers often has less complicated operations, is typically an end-user of oil (does not distribute the oil further), is involved in few oil transfers, and may have predominantly mobile or portable containers with a few low-capacity fixed oil storage containers. Smaller containers have a smaller potential maximum discharge size, and there may be little or no piping associated with these small containers.

a. Comments

Several commenters expressed general support for the eligibility criterion. However, some commenters suggested increasing the container capacity eligibility criterion to 10,000 gallons, while other commenters suggested various other capacity thresholds. Several commenters expressed support for a three-tiered approach to the eligibility criteria for qualified facilities, with the use of a PE only in cases where the tank capacity is above 20,000 gallons.

One commenter recommended that criteria be introduced that take into consideration a facility's proximity to environmentally sensitive area(s) either by distance or some other logical means. Another commenter suggested using actual oil storage volumes rather than capacity to determine eligibility. Still another commenter suggested that AFVOs that would solidify without heating be excluded from the 5,000 U.S. gallon maximum individual container capacity.

One other commenter requested that EPA confirm that oil-filled operational equipment is eligible for Tier I status. The commenter noted concern that the definition of Tier I qualified facility in § 112.3(g)(1) may cause confusion about whether facilities with oil-filled operational equipment are eligible for the Tier I alternative, and whether the 5,000 gallon cap applies to oil-filled equipment.

Several commenters provided alternative suggestions to the eligibility criteria for both tiers of qualified facilities. One commenter suggested that the criterion for discharge history should be more stringent and require that any discharge during the three-year period prior to the Plan certification date disqualify a facility from the self-certification option as either a Tier I or Tier II qualified facility. The discharge history criterion does not include discharges as described in § 112.1(b) that are the result of natural disasters, acts of war, or terrorism. One commenter requested that EPA define the term ''terrorism'' in the explanation of the criteria to ensure regional consistency.

Commenters also requested raising the Tier II threshold above the 10,000 U.S. gallons aboveground oil storage capacity promulgated in the December 2006 amendments (71 FR 77266, December 26, 2006).

Finally, commenters suggested that the qualification criteria do not benefit oil and gas production stakeholders because the oil storage capacity thresholds are too low to allow these facilities to qualify to develop either a self-certified Plan or a Plan following the template in Appendix G.

b. Response to Comments

The majority of commenters supported this approach with additional suggestions. Several commenters suggested alternative thresholds to consider for Tier I qualified facilities; however, these commenters did not provide sufficient data to support increasing the thresholds beyond the proposed Tier I threshold of 5,000 U.S. gallons for a single oil storage container. Therefore, EPA is finalizing the Tier I qualified facilities criterion to require a maximum individual oil container of 5,000 U.S. gallons.

One commenter suggested considering proximity to sensitive environments in determining eligibility as a qualified facility. However, consideration of the impact of an oil discharge to the environment is made when determining the applicability of the SPCC regulation to the facility. Because the SPCC rule only applies to a facility when it has a reasonable potential to discharge oil in quantities that may be harmful to navigable waters or adjoining shorelines, EPA does not believe that an additional criterion is appropriate for an SPCC-regulated facility that may impact sensitive environments.

EPA also disagrees with the commenter who suggested that EPA use the operational volumes of oil storage at the facility rather than the shell capacity of the oil storage containers. The applicability of the SPCC regulation to a facility has always been based on shell capacity when calculating total oil storage capacity of the facility and the same oil storage capacity is then considered in determining applicability of the self-certification SPCC Plan for the facility. The operational volume at a facility may change frequently and therefore create confusion on which SPCC requirements apply to the facility and how to certify the SPCC Plan.

Other commenters requested that EPA consider excluding from both qualified facility thresholds—that is, Tier I and Tier II, the capacity of those containers containing AFVOs that would solidify without heating. The Agency disagrees because, similar to AC and other high viscosity oils, these AFVO containers are typically maintained at elevated temperatures to keep the oil in the liquid state. The AFVO could still spill, flow, and, depending on the location of the facility, could potentially reach navigable waters or adjoining shorelines.

One commenter requested clarification as to whether the term ''oil storage container'' included oil-filled operational equipment. To clarify, the maximum individual oil storage container criterion applies to any aboveground container at the facility that contains oil. This includes bulk storage containers, such as tanks and mobile or portable containers, oil-filled operational equipment (such as transformers), and other oil-filled equipment, such as flow-through process equipment. Thus, oil-filled operational equipment is eligible for Tier I status.

EPA disagrees with the commenter suggesting that the criterion for discharge history be more stringent, based on the fact that some discharges result despite adherence to the SPCC Plan. EPA chose a discharge history criterion similar to the reporting requirement in § 112.4(a) because a discharge smaller than what must be reported to the EPA Regional Administrator (RA) under this section may result from normal handling of oil at the facility and may not indicate a recurring problem resulting from a deficiency in the Plan or improper Plan implementation. Therefore, the RA would not likely require the owner or operator to amend the Plan and the facility owner or operator should be eligible to self-certify the SPCC Plan as a qualified facility.

EPA is not defining terrorism in the final rule. However, the Agency notes that the Homeland Security Act of 2002 defines terrorism as ''any activity that involves an act that is dangerous to human life or potentially destructive of critical infrastructure or key resources; and is a violation of the criminal laws of the United States or of any state or other subdivision of the United States; and appears to be intended to intimidate or coerce a civilian population, to influence the policy of a government by intimidation or coercion or to affect the conduct of a government by mass destruction, assassination, or kidnapping.'' *See* Section 2(15), Homeland Security Act of 2002, Public Law 107–296, 116 Stat. 2135 (2002). The Agency does not believe that vandalism and sabotage are examples of terrorism. In the December 2006 amendments to the SPCC rule, EPA identified reportable discharges caused by external factors beyond the control of the facility owner or operator such as natural disasters, acts of war, or terrorism. The Agency specifically excluded these events from consideration in the reportable discharge history criterion for qualified facilities and qualified oil-filled operational equipment. At that time, EPA excluded sabotage and vandalism from the list of reportable discharge history extreme events because these are not necessarily beyond the control or planning ability of the facility owner or operator. (*See* 71 FR 77272, December 26, 2006.) The security provisions in § 112.7(g) require consideration for acts of vandalism. The owner or operator of a facility must describe in the Plan how he controls access to the oil-handling, processing and storage areas and the appropriateness of lighting to both prevent acts of vandalism and assist in the discovery of oil discharges.

Additionally, EPA is not changing the Tier II threshold and is not amending the total aboveground oil storage capacity for Tier II qualified facilities in this final rule as requested by some commenters. The Agency maintains that the focus of the qualified facilities alternative is on facilities with simple configurations and small quantities of oil stored or handled. The Agency addressed the eligibility criteria for the Tier II qualified facilities in the December 2006 rulemaking. The Agency recognizes that regardless of the threshold quantity selected, there are likely to be facilities just above that threshold that will be excluded. To the extent that facility owners or operators want to meet the criteria for a qualified facility, they have the option of reducing oil storage capacity at their facility by either removing containers from the facility inventory, or permanently closing containers in accordance with § 112.2.

With regard to the commenter suggesting that the qualified facilities approach does not benefit the oil and gas sector, EPA has estimated that the Tier II approach does allow approximately 13 percent of the smallest oil and gas production stakeholders to qualify to self-certify their SPCC Plans based on oil storage capacities below 10,000 U.S. gallons. In addition, the Agency also is finalizing an alternative set of criteria to qualify for Plan self-certification (Tier II) specific for oil production facilities. *See* Section V.M of this preamble for further discussion on the alternative criteria for the oil and gas production sector.

2. Provisions for Tier I Qualified Facilities

Under this amendment, in lieu of preparing a full SPCC Plan that is PE- or self-certified, an owner or operator of a Tier I qualified facility will have the option to complete the SPCC Plan template found in Appendix G of 40 CFR part 112. The Plan template is designed to be a simple SPCC Plan that includes only the requirements that apply to this tier of regulated facilities. This final rule streamlines the requirements for Tier I qualified facilities by eliminating and/or

modifying several SPCC requirements (for example, facility diagram (§ 112.7(a)(3)) and certain provisions that generally do not apply to facilities that store or handle smaller volumes of oil, such as requirements for transfers taking place at loading racks (§ 112.7(h)).

The list of applicable rule provisions for Tier I qualified facilities is included in § 112.6(a)(3). For an owner or operator of a Tier I qualified facility completing the Plan template included in Appendix G of this part, the following existing requirements under § 112.7 and in subparts B and C continue to apply: (1) Introductory paragraph of § 112.7 [4]; (2) facility description (§ 112.7(a)(3)(i), 112.7(a)(3)(iv), 112.7(a)(3)(vi), 112.7(a)(4), and 112.7(a)(5)); (3) general secondary containment (§ 112.7(c)); (4) inspections, tests and records (§ 112.7(e)); (5) personnel, training, and discharge prevention procedures (§ 112.7(f)); (6) security (§ 112.7(g)); (7) qualified oil-filled operational equipment (§ 112.7(k)); (8) facility drainage (§§ 112.8(b)(1), 112.8(b)(2), 112.12(b)(1), and 112.12(b)(2)); (9) bulk storage containers (§§ 112.8(c)(1), 112.8(c)(3), 112.8(c)(4), 112.8(c)(5), 112.8(c)(6), 112.8(c)(10), 112.12(c)(1), 112.12(c)(3), 112.12(c)(4), 112.12(c)(5), 112.12(c)(6), and 112.12(c)(10)); (10) piping inspections (§§ 112.8(d)(4) and 112.12(d)(4)); (11) oil production facility requirements (§ 112.9(b), 112.9(c)(1), 112.9(c)(2), 112.9(c)(3), 112.9(c)(4), 112.9(c)(5), 112.9(d)(1), 112.9(d)(3), and 112.9(d)(4)); and (12) requirements for onshore oil drilling and workover facilities (§ 112.10(b), 112.10(c) and 112.10(d)). This list of requirements reflects a set of currently existing requirements that apply to facilities subject to the SPCC rule. EPA found no basis to remove or modify these requirements for Tier I qualified facilities. As described below, EPA is finalizing a set of revised, or streamlined, requirements applicable to Tier I qualified facilities in lieu of certain other existing requirements.

In particular:

- In lieu of the full failure analysis requirements in § 112.7(b), under new § 112.6(a)(3)(i), an owner or operator of a Tier I qualified facility must examine areas where there is a reasonable possibility for equipment failure (such as where equipment is loaded or unloaded; where tank overflow, rupture, or leakage is possible; or at the location of any other equipment known to be a source of discharge) and include in the Plan the total quantity of oil that could be discharged and a prediction of the direction of flow. This amendment removes the requirement for an owner or operator of a Tier I qualified facility to predict the rate of flow that could result from an equipment failure.
- In lieu of the separate secondary containment requirements in §§ 112.8(c)(2) and (c)(11) and 112.12(c)(2) and (c)(11), under new § 112.6(a)(3)(ii), EPA is combining mobile/portable container requirements with the other bulk storage container secondary containment requirements, and eliminating the requirement for containment to be ''sufficiently impervious.'' Because EPA expects a Tier I qualified facility to be a small, simple operation, with oil storage containers being inside buildings, inside pre-engineered secondary containment, or a double-walled tank, the requirement for containment to be specifically designed as ''sufficiently impervious'' is unnecessary. Furthermore, the requirement for secondary containment to be capable of containing oil and constructed so that any discharge will not escape the containment system before cleanup occurs (§ 112.7(c)) still applies, and is similar in nature to the ''sufficiently impervious'' requirement. Therefore, combining these requirements streamlines two similar provisions and simplifies the requirements for Tier I qualified facilities.
- In lieu of §§ 112.8(c)(8) and 112.12(c)(8), the overfill prevention requirements, under new § 112.6(a)(3)(iii), the owner or operator of a Tier I qualified facility must ensure each container is provided with a system or documented procedure to prevent overfills of containers, and that containers are regularly tested to ensure proper operation or efficacy. This modification provides more flexibility by allowing the use of alternative methods to prevent container overfills, rather than requiring an owner or operator to meet a prescribed set of overfill prevention procedures.
- As described elsewhere in this notice, EPA is extending the streamlined security and integrity testing requirements that were provided for qualified facilities in the December 2006 SPCC rule amendment (71 FR 77266) to all facilities. Both Tier I and Tier II qualified facilities are subject to the revised security (§ 112.7(g)) and integrity testing (§§ 112.8(c)(6) and 112.12(c)(6)) provisions.

The following requirements are not included in the SPCC Plan template because, for a facility with a smaller oil storage capacity or other facilities with a simple configuration, these requirements are inapplicable or unnecessary: (1) Facility diagram (§ 112.7(a)(3)); (2) facility description (§ 112.7(a)(3)(ii), 112.7(a)(3)(iii), and 112.7(a)(3)(v)); (3) loading/unloading rack (§ 112.7(h)); (4) brittle fracture evaluation (§ 112.7(i)); (5) discussion of conformance with 40 CFR part 112 or other applicable State discharge prevention and containment regulations and guidelines (§ 112.7(j)); (6) facility drainage (§§ 112.8(b)(3), 112.8(b)(4), 112.8(b)(5), 112.12(b)(3), 112.12(b)(4), and 112.12(b)(5)); (7) monitoring internal heating coils (§§ 112.8(c)(7) and 112.12(c)(7)); (8) effluent treatment facilities (§§ 112.8(c)(9) and 112.12(c)(9)); (9) facility transfer operations (§§ 112.8(d)(1), 112.8(d)(2), 112.8(d)(3), 112.8(d)(5), 112.9(d)(2), 112.12(d)(1), 112.12(d)(2), 112.12(d)(3), and 112.12(d)(5)); and (10) produced water container provisions (§ 112.9(c)(6)).

EPA believes no further differentiation is warranted for onshore oil production facilities in § 112.9 (except for the produced water container provisions in § 112.9(c)(6) which require PE certification and therefore do not apply for Tier I qualified facilities) and onshore oil drilling and workover facilities in § 112.10. An onshore oil production facility that qualifies as a Tier I qualified facility will generally have the same type of equipment as an oil production facility with larger oil storage capacity (i.e., a wellhead with a pumpjack, flowlines, oil separation equipment and oil storage containers) and therefore, no further differentiation is warranted. An onshore drilling or workover facility has three requirements under § 112.10. The facility must: position or locate mobile drilling or workover equipment so as to prevent a discharge as described in § 112.1(b); provide catchment basins or diversion structures to intercept and contain discharges of fuel, crude oil, or oily drilling fluids; and install a blowout prevention (BOP) assembly and well control system that is effective to control wellhead pressure. The presence of smaller oil storage containers does not support differentiation of these requirements; however, an onshore oil production, drilling or workover facility that is eligible as a Tier I qualified facility will benefit from the differentiated requirements under § 112.7.

EPA also believes that no further differentiation is warranted for offshore drilling, production, and workover facilities subject to § 112.11. Due to the nature of operations associated with

[4] In the proposal to this rule, EPA inadvertently omitted from this list the introductory paragraph of § 112.7, and for clarity is including it now.

these types of facilities, they are not likely to meet the criterion of a maximum individual container capacity of 5,000 U.S. gallons.

The Agency notes that under the existing SPCC requirements, the Regional Administrator (RA), after reviewing a facility's Plan, has the authority under § 112.4 to require an owner or operator of a facility to amend the SPCC Plan if the RA finds that an amendment is necessary to prevent and contain discharges from the facility. Such an amendment may include requiring PE certification in accordance with § 112.3(d). This provision also applies to Tier I qualified facilities. That is, an RA could, if warranted, require a Tier I qualified facility to prepare a full (i.e., not using the template) SPCC Plan with PE certification.

The Agency also notes that use of the Plan template approach is optional. Under this final rule, an owner or operator of a Tier I qualified facility can choose to prepare and implement either a full PE-certified SPCC Plan or a self-certified SPCC Plan according to all of the requirements of § 112.6(b) in order to comply with the requirements under 40 CFR part 112. In other words, if a Tier I qualified facility owner or operator chooses not to use the Plan template in Appendix G, he could comply with the Tier II qualified facility requirements in § 112.6(b) or choose to prepare a full PE-certified Plan instead of a self-certified one. EPA modified the introductory sentences to § 112.6 and the text of § 112.6(a)(1) slightly from the text that was proposed, in order to make this optional approach more clear.

a. Comments

Many commenters expressed general support for the amended requirements for Tier I qualified facilities. However, a few commenters indicated that more stringent requirements would be appropriate for Tier I qualified facilities. One commenter suggested that a PE certify the SPCC Plan template for Tier I qualified facilities to ensure compliance. Another commenter suggested that EPA require review and approval of the Plan by someone who is familiar with industry standards and is ''certified'' to perform inspections following industry standards; the commenter believes this would address the potential liabilities and environmental impacts associated with self-certification by inexperienced owners and operators. One other commenter suggested that Tier I qualified facilities should be required to have a facility diagram, because if Tier I qualified facilities are small and simple, a diagram should not be an excessive burden. Still another commenter requested that EPA remove the five-year review requirements; instead, the commenter suggested that the Plan should only be updated whenever there is a material change in the facility that may affect discharges.

Many commenters also requested additional relief for Tier I or other regulated facilities. One commenter suggested that ''streamlined'' regulatory provisions should be extended to all regulated facilities. One commenter suggested that Tier I qualified facilities should only be required to meet the general requirements under § 112.7 and the security and integrity testing requirements for qualified facilities. Other commenters requested that EPA confirm that an Appendix G template may be certified by a PE, and that Tier I qualified facilities may complete a full self- or PE-certified Plan should they choose. Finally, one commenter suggested that the owner or operator of a regulated facility certify under oath that he has met the SPCC requirements.

b. Response to Comments

EPA's basis for developing a self-certified Plan template which contains a streamlined set of requirements for facilities that meet the Tier I eligibility criteria is that the Agency believes that implementation of the requirements in the template can provide environmental protection and prevent the discharge of oil into navigable waters or adjoining shorelines. Therefore, EPA does not agree with commenters that a third-party representative (such as a PE or a certified inspector) should confirm compliance with the rule requirements. As stated earlier, due to the simplicity of these facilities and other factors described above, EPA believes it is appropriate to allow a facility owner or operator to self-certify the SPCC Plan. It is the responsibility of the owner or operator of any SPCC-regulated facility to ensure compliance with 40 CFR part 112 and ensure implementation of the Plan.

The Agency also disagrees with the commenter who suggested that EPA require a facility diagram for Tier I qualified facilities. Although the Agency does not intend for a facility diagram to be an excessive burden for an owner or operator to develop, EPA believes the completed template provides the same information that would be available on a facility diagram for a Tier I qualified facility. The SPCC rule requirements for a facility diagram are: (1) To mark the location and contents of each fixed oil storage container (including containers and piping that are otherwise exempted from the rule) and storage areas where mobile or portable containers are located; and (2) to include all transfer stations and connecting pipes. In the case of a Tier I qualified facility, the visual representation of the diagram is not necessary because EPA believes that these facilities would have few aboveground oil storage containers with limited transfer areas and very little piping (if any). The ''Oil Storage Containers and Capacities'' table in Appendix G, Section III (Table G–2) of the template requires that all oil storage containers (such as aboveground containers, completely buried tanks, and oil-filled equipment) be listed, including the contents and oil storage capacity of each container. The ''Containers with Potential for an Oil Discharge'' table in Appendix G, Section III (Table G–4) requests the following information for transfer areas and piping: the volume of oil that could potentially be discharged and the flow direction of an uncontained discharge (i.e., a description of where the discharge would flow if secondary containment fails). A facility diagram for a Tier I qualified facility would provide minimal additional planning benefit to prevent an oil discharge from the facility.

EPA also disagrees that it should delete the five-year review requirements. The Agency agrees that the SPCC Plan should be updated whenever there is a material change in the facility that may affect discharges. However, Tier I qualified facilities should remain subject to the same requirement to periodically review and update the Plan to include more effective prevention and control technology in order to reduce the likelihood of a discharge as described in § 112.1(b).

A commenter suggested that all facilities should be eligible for streamlined provisions. While the Agency has amended the SPCC regulations in the past (71 FR 77266, December 26, 2006) and in this action to streamline certain SPCC rule requirements (for example, security and integrity testing) for all facilities, the streamlined provisions included in the Plan template in Appendix G are limited to Tier I qualified facilities based on the Agency's judgment that eliminating and/or modifying certain SPCC requirements was appropriate for facilities that store or handle smaller volumes of oil and that meet the eligibility criteria. Other facilities contain larger volumes of oil, have large oil storage containers on-site, or are more complex, and thus, applying the streamlined requirements adopted for

Tier I qualified facilities would be inappropriate.

Another commenter suggested that EPA simplify the Plan requirements for a Tier I qualified facility to include only the general requirements under § 112.7 and the security and integrity testing requirements. However, the commenter did not provide any data to support eliminating the specific requirements under Subparts B and C, such as those pertaining to facility drainage and bulk storage containers. Therefore, EPA did not incorporate this change into the final action.

One commenter requested that EPA confirm that an Appendix G template may be certified by a PE. EPA recognizes that the owner or operator of a Tier I qualified facility may decide to obtain assistance in the development of an SPCC Plan and want to have a PE certify the Plan; however, the only required certification for a Plan following Appendix G is the self-certification completed by the owner or operator of the facility. EPA is not making the PE certification an additional option for compliance for Tier I qualified facilities because the Agency believes that this may suggest that it expects PE-certified Plans for this subset of qualified facilities. In addition, because the purpose of establishing the ''Tier I category'' was to allow facilities that met the Tier I eligibility criteria to meet the requirements of the SPCC rule in a streamlined manner, EPA believes it would complicate the rule, particularly if the owner or operator of the facility wants to request that environmental equivalence determinations be allowed for Tier I qualified facilities, such as allowed for Tier II facilities under the Tier II hybrid Plan. However, as EPA has noted previously, completion of the Appendix G template is optional. The owner or operator of a Tier I qualified facility may choose to have a PE-certified SPCC Plan following all the requirements in § 112.7 and subparts B and C, as applicable, or prepare a hybrid Plan that includes all applicable provisions under Tier II.

Another commenter suggested requiring that the owner or operator of a regulated facility certify under oath that he has met the SPCC requirements. Section § 112.6(a)(1) requires the owner or operator certify that: (i) He is familiar with the applicable requirements of 40 CFR part 112; (ii) he has visited and examined the facility; (iii) he has prepared the Plan in accordance with accepted and sound industry practices and standards; (iv) he has established procedures for required inspections and testing in accordance with industry inspection and testing standards or recommended practices; (v) he will fully implement the Plan; (vi) the facility meets the qualification criteria in § 112.3(g)(1); (vii) the Plan does not deviate from any requirement of this part as allowed by § 112.7(a)(2) and § 112.7(d) or include an exemption/measures pursuant to § 112.9(c)(6) for produced water containers and any associated piping and appurtenances downstream from the container; and (viii) the Plan and individual(s) responsible for implementing this Plan have the approval of management, and the facility owner or operator has committed the necessary resources to fully implement this Plan. EPA believes that inclusion of the self-certification statements in the Plan and signature of the owner or operator is sufficient to demonstrate that he understands his responsibilities under 40 CFR part 112.

3. SPCC Plan Template

The SPCC Plan template for Tier I qualified facilities is found in Appendix G in this final rule. To facilitate the development of SPCC Plans at Tier I qualified facilities, EPA intends to make the Plan template available on its Web site, *http://www.epa.gov/emergencies.* Once completed and certified by the owner or operator, the Plan template serves as the SPCC Plan for the facility. As for any facility subject to the SPCC rule, the owner or operator must maintain a written copy of the Plan—which in this case would be the completed and self-certified SPCC Plan template—at the facility or at the nearest field office if the facility is attended less than four hours per day (§ 112.3(e)).

The Agency emphasizes that use of the Plan template approach is optional. An owner or operator of a Tier I qualified facility can choose to prepare and implement either a full PE-certified SPCC Plan or a self-certified SPCC Plan according to all of the requirements of § 112.6(b) (for a Tier II qualified facility) in order to comply with the requirements under 40 CFR part 112.

In the October 2007 proposal, EPA sought comments on whether the SPCC Plan template addressed the concerns of owners and operators of facilities with relatively smaller volumes of oil, while maintaining the environmental protection intended by the regulation. The Agency also sought comments on the clarity and ease-of-use of the Plan template. The Agency has modified the Plan template based on specific comments received.

a. Comments

Several commenters were generally supportive of the template format and/or content. However, one commenter indicated that the template is too easy to use, provides no assurance of compliance, and will be ignored by small facilities. Another commenter suggested that the template does not provide enough instruction and will encourage facility operators that have little knowledge of part 112 to develop SPCC Plans that are meaningless. On the other hand, several commenters expressed concern that the Appendix G template would be too burdensome.

Other commenters suggested that EPA allow for a flexible Tier I qualified facility Plan format rather than require the owner or operator to use the template in Appendix G. Several other commenters suggested that EPA allow, as part of the Appendix G template, the Plan to take a ''hybrid'' approach, as allowed for Tier II qualified facilities, to provide flexibility to Tier I qualified facilities that need to deviate from the rule requirements when the owner or operator determines that secondary containment is impracticable or when there is an alternative measure that provides equivalent environmental protection to an SPCC rule requirement.

A commenter suggested that operators preparing multi-facility SPCC Plans covering multiple facilities that are individually eligible for Tier I status should also be allowed to use the template, and that the rule should be specifically modified to reflect this. Another commenter suggested that EPA publish the template as guidance or an educational primer for Tier I qualified facilities, and make it readily available on the EPA Web site. Another commenter requested that EPA provide for an online submission of the template-based Plan for increased compliance.

Finally, several commenters pointed out a number of areas where minor formatting, wording, or other corrections could be made to the template for simplification, clarity, or improved accuracy (as described in the response to comments section below).

b. Response to Comments

EPA received several comments that the Plan template in Appendix G is too burdensome for Tier I qualified facilities, while other commenters argued that it is too easy to use. The Plan template is designed to be a simple and straightforward SPCC Plan that includes only the requirements that should apply to Tier I qualified facilities. EPA intends to provide supplementary guidance on the Agency's Web site to assist owners and operators of Tier I (and Tier II) qualified facilities in the development of an SPCC Plan for these facilities. Thus, EPA

expects that such additional guidance will help those facilities that choose to utilize the Appendix G template to comply with the SPCC Plan requirement.

Several commenters suggested that EPA allow for a flexible Plan format rather than require the owner or operator to use the template in Appendix G. EPA agrees that it is appropriate to allow the use of a flexible Plan format for qualified facilities that, for example, want to combine multiple local, state or Federal regulatory requirements into one Plan, as long as a cross-reference is provided. Therefore, EPA is amending the rule language in § 112.6(a)(1) to allow for a flexible Plan format for owners or operators of Tier I qualified facilities that do not choose to use the template provided in Appendix G of the rule. The amended rule text states that the template in Appendix G may be used as the SPCC Plan to meet the 40 CFR part 112 requirements. However, if the Appendix G template is not used, then an equivalent Plan must be prepared in writing, and must be supplemented with a section that cross-references the location of requirements listed in this part. For example, the owner or operator of a facility that has developed a Stormwater Pollution Prevention Plan (SWPPP) under the National Pollutant Discharge Elimination System (NPDES) that meets all of the applicable SPCC regulatory requirements in § 112.6(a)(3) and Appendix G may use the SWPPP as the SPCC Plan. However, the SWPPP must include a cross-reference and the self-certification statements in § 112.6(a)(1) and Appendix G. An owner or operator of a Tier I qualified facility may use the template in Appendix G to comply with the regulation or use it as a model and modify it as necessary to meet the facility-specific needs, as long as all applicable rule requirements are included in the SPCC Plan. The following sample cross-reference is intended to be an example of the owner/operator's development of such a cross-reference.

SAMPLE CROSS-REFERENCE FOR PLANS USING LOCAL, STATE, OR OTHER FEDERAL REGULATIONS TO SATISFY SPCC REQUIREMENTS

SPCC provision	Description of requirement	Plan page
§ 112.4	Spill reporting requirements	
§ 112.5(b)	Five-year Plan review	
§ 112.6(a)(1)	Preparation and self-certification of the Plan	
§ 112.6(a)(2)	Certification of technical amendments	
§ 112.6(a)(3)(i)	Failure analysis	
§ 112.6(a)(3)(ii)	Bulk storage container secondary containment	
§ 112.6(a)(3)(iii)	Overfill prevention	
§ 112.7(a)(3)(i)	Address the type of oil in each container and its storage capacity	
§ 112.7(a)(3)(iv)	Address countermeasures for discharge discovery, response, and cleanup	
§ 112.7(a)(3)(vi)	Provide contact list and phone numbers for those to be contacted in case of a discharge	
§ 112.7(a)(4)	Provide NRC notification information	
§ 112.7(a)(5)	Describe procedures you will use when a discharge occurs	
§ 112.7(c)	Provide appropriate containment and/or diversionary structures or equipment to prevent a discharge as described in § 112.1(b).	
§ 112.7(e)	Conduct inspections and tests in accordance with written procedures that you develop for the facility	
§ 112.7(f)	Train oil-handling personnel in the operation and maintenance of equipment to prevent discharges; discharge procedure protocols; applicable pollution control laws, rules, and regulations; general facility operations; and the contents of the facility Plan.	
§ 112.7(g)	Implementation of security measures to prevent unauthorized access to oil handling, processing, and storage area.	
§ 112.7(k)	Requirements related to oil-filled operational equipment	
§§ 112.8(b)(1), 112.12(b)(1).	Restrain drainage from diked storage areas	
§§ 112.8(b)(2), 112.12(b)(2).	Use valves of manual, open-and-closed design for the drainage of diked areas; if facility drainage drains into a watercourse, inspect and drain uncontaminated retained stormwater.	
§§ 112.8(c)(1), 112.12(c)(1).	Do not use a container for oil storage unless its material and construction are compatible with the material stored and conditions of storage such as pressure and temperature.	
§§ 112.8(c)(3), 112.12(c)(3).	Drainage of uncontaminated rainwater from the diked area into a storm drain or discharge of an effluent into an open watercourse.	
§§ 112.8(c)(4), 112.12(c)(4).	Protect completed buried storage tanks from corrosion and regularly leak test buried metallic storage tanks.	
§§ 112.8(c)(5), 112.12(c)(5).	Do not use partially buried or bunkered metallic tanks for the storage of oil unless protected from corrosion.	
§§ 112.8(c)(6), 112.12(c)(6).	Administer integrity testing for storage tanks	
§§ 112.8(c)(10), 112.12(c)(10).	Promptly correct visible discharges which result in a loss of oil from the container	
§§ 112.8(d)(4), 112.12(d)(4).	Regularly inspect all aboveground valves, piping and appurtenances	
§ 112.9(b)	Requirements for oil production facility drainage	
§ 112.9(c)(1)	Material compatibility requirements for containers at oil production facilities	
§ 112.9(c)(2)	Secondary containment requirements for tank battery, separation, and treating facility installations at oil production facilities.	
§ 112.9(c)(3)	Container inspection requirements at oil production facilities	
§ 112.9(c)(4)	Overfill prevention requirements at oil production facilities	
§ 112.9(c)(5)	Requirements for flow-through process vessels at oil production facilities	
§ 112.9(d)(1)	All aboveground valves and piping associated with transfer operations are inspected periodically and upon a regular schedule.	

SAMPLE CROSS-REFERENCE FOR PLANS USING LOCAL, STATE, OR OTHER FEDERAL REGULATIONS TO SATISFY SPCC REQUIREMENTS—Continued

SPCC provision	Description of requirement	Plan page
§ 112.9(d)(3)	For flowlines and intra-facility gathering lines that do not have secondary containment in accordance with § 112.7(c), prepare an oil spill contingency plan and a written commitment of resources (except when the facility has submitted a Facility Response Plan in accordance with § 112.20).	
§ 112.9(d)(4)	Prepare and implement a written program of flowline/intra-facility gathering line maintenance	
§ 112.10(b)	Position or locate mobile drilling or workover equipment so as to prevent a discharge as described in § 112.1(b).	
§ 112.10(c)	Provide catchment basin or diversion structures to intercept and contain discharges	
§ 112.10(d)	Install a blowout prevention assembly and well control system before drilling	

Commenters also suggested that EPA allow Tier I qualified facilities, as part of the Appendix G template, to use the ''hybrid'' approach, as is currently allowed for Tier II qualified facilities to provide flexibility to Tier I qualified facilities that need to deviate from the rule requirements when the owner or operator determines that secondary containment is impracticable, when there is an alternative measure that provides equivalent environmental protection to an SPCC rule requirement, or when an owner or operator wants to include an exemption/measures pursuant to § 112.9(c)(6) for produced water containers and any associated piping and appurtenances downstream from the container. EPA has decided not to allow Tier I facilities to utilize a ''hybrid approach,'' because the primary purpose of developing the ''Tier I'' category is to allow those facilities with simple oil storage configurations to have a relatively simple means to comply with the SPCC requirements. Allowing Tier I facilities to use a hybrid approach would seem to defeat that purpose. If a facility qualifies to use the Appendix G template but has site-specific factors that make it difficult to use the template as written, then the Appendix G Plan template may not be an appropriate tool for the facility to address the oil spill planning elements for the facility. Instead, the facility could elect to comply with the SPCC requirements as a Tier II qualified facility—that is, self-certify that they comply with the full set of rule requirements in § 112.7(c) and subparts B and C, as applicable, rather than the differentiated requirements designed specifically for facilities with simple oil storage configurations. For example, if the owner or operator cannot provide secondary containment for a bulk storage container at a Tier I qualified facility because it is impracticable, then it is appropriate that the Plan include a facility diagram (§ 112.7(a)(3)) to show where the container is located at the facility and a prediction of the direction, rate of flow and quantity of oil that may be discharged from the container (§ 112.7(b)). EPA believes it is appropriate to require the owner or operator to comply with requirements that would not otherwise apply to Tier I qualified facilities because this information may be necessary as part of the spill prevention practices for the facility. Therefore, the owner or operator of the facility may choose to develop a hybrid Plan following the Tier II qualified facility requirements in § 112.6(b) or a PE-certified SPCC Plan following § 112.7 and subparts B and C, as applicable.

Commenters also requested that EPA allow the owner or operator of several facilities that each individually meet the criteria for a qualified facility to develop a multi-facility SPCC Plan in accordance with the Tier I requirements. EPA agrees that this is appropriate and the final rule allows flexibility in the Plan format to accommodate a multi-facility Plan approach for Tier I qualified facilities. The owner or operator of the facility is still required to meet all applicable requirements of the rule in the Plan as described in § 112.6(a)(3) and Appendix G.

With respect to the comment that EPA allow such SPCC Plans to be submitted online, EPA does not believe that online submission of the template-based Plan will increase compliance with the SPCC regulation because there is currently no requirement for the owner or operator of a regulated facility to submit an SPCC Plan to the Agency, unless requested to do so by the Regional Administrator. The Agency requires that owners and operators maintain a copy of the Plan at the facility, in accordance with § 112.3(e).

EPA has amended the text that was proposed as Appendix G of 40 CFR part 112 to incorporate many of the suggested recommendations in the final rule. To simplify or clarify use of the template, these amendments will:

- Ensure the Table in Attachment 3.2 of Appendix G is consistent with the STI–SP001 requirements for Category I Tanks.
- Clarify which oil storage containers at the facility must be included when calculating the total facility oil storage capacity to determine eligibility of the facility for Tier I and II requirements—that is, any aboveground container at the facility that contains oil and that is not otherwise exempt from the rule. This includes bulk storage containers, such as tanks and mobile or portable containers; oil-filled operational equipment (such as transformers); and other oil-filled equipment, such as flow-through process equipment.
- Include formatting suggestions that make the template easier to use and technical corrections, such as providing letter references for the owner or operator's obligations in the certification statement; numbering tables; using numbered or lettered superscripts; identifying acronyms when they are first used in the document (for example, Regional Administrator (RA) in Section III, Part 6); and moving the spill reporting requirements to the correct section in the template (from Section III, Part 6 to Section III, Part 8.)
- Clarify that EPA means aboveground oil storage capacity in Section I, Part 6.a and 6.c of Appendix G.
- Clarify that the NRC Notification Procedures in Section III, Part 7 must be conducted immediately following identification of a discharge to navigable waters or adjoining shorelines.
- Clarify which containers are exempt from the regulation and not required to be included in the table in Section III, Part 1. Exempt containers that are not included in the capacity calculation include: Any container with a storage capacity of less than 55 U.S. gallons of oil; storage containers used exclusively for wastewater treatment; permanently closed containers; motive power containers; hot-mix asphalt containers; heating oil containers used solely at a single-family residence; and pesticide application equipment or related mix containers. Although the criteria to determine eligibility for qualified facilities focuses on the aboveground oil

storage containers at the facility, completely buried tanks at a qualified facility, unless they are otherwise exempt, such as USTs that are subject to all of the technical requirements of 40 CFR part 280 or a state program approved under 40 CFR part 281, are still subject to the rule requirements and must be addressed in the template. They are not counted towards the qualified facility threshold because they are not aboveground containers. Finally, certain produced water containers may be exempt from the rule; however, this exemption is based on certification by a PE and therefore produced water containers at a Tier I qualified facility SPCC Plan would not be eligible for the exemption. In other words, the owner or operator of a Tier I qualified facility would not be eligible to develop a self-certified SPCC Plan using the template in Appendix G and have a produced water container exempt from the regulation, because the exemption requires a PE certification. (See section V.M of this preamble for further discussion on produced water containers.)

- Amend the Onshore Facility Checklists to indicate that not all provisions may be applicable to all owners or operators, and provide instructions to indicate on the checklist when a provision is not applicable.
- Clarify the scope of the inspection requirements for bulk storage containers in the Inspection Log in Attachment 3 of Appendix G.
- Revise the discussion in Section III, Part 2 to include the word ''secondary.''

Finally, EPA considered, but did not adopt the following recommendations to amend the template to:

- *Revise the template in Appendix G to change ''navigable waters or adjoining shorelines'' to ''discharges as described in § 112.1(b).''* EPA refers to navigable waters or adjoining shorelines in the template to make the document easier to understand and more user-friendly; the Agency does not consider this to be a limitation in the scope of the rule. The language in § 112.7 also applies to these facilities and uses the term ''discharges as described in § 112.1(b).''
- *Include a section for state and local requirements.* The Agency does not believe that it is necessary for the owner or operator of a facility to address state or local requirements as part of the SPCC Plan. However, the Agency is amending the rule language to allow for a flexible Plan format for Tier I qualified facilities. This will allow a facility owner or operator to address local, state and/or other Federal requirements in one Plan for oil spill prevention planning purposes if he so chooses. The Agency will also clarify in rule text that § 112.7(j) does not apply to Tier I qualified facilities.
- *Remove mode of failure in the Secondary Containment table in Appendix G.* This table addresses rule requirements for both § 112.7(b) and (c) along with the more specific secondary containment requirements under Subparts B and C. Therefore, the Agency believes it is appropriate to have the owner or operator identify 'the mode of failure; the flow direction and quantity of the discharge; and the secondary containment method and containment capacity' for the containers listed. The owner or operator may use either active or passive approaches for complying with the secondary containment requirements (for more information, *see* the *SPCC Guidance for Regional Inspectors*).
- *Refer to the Plan format in Appendix G as document rather than ''template.''* Once the owner or operator completes the Appendix G template to include site-specific information, the resulting document is an SPCC Plan for the facility.
- *Amend the self-certification statement to specifically highlight the owner or operator's responsibility to provide secondary containment.* The elements of the Tier I self-certification requirement are similar in scope to those required for an owner or operator of a Tier II qualified facility who chooses to self-certify a Plan (as promulgated in December 2006, 71 FR 77266). Additionally, the Agency has described the secondary containment requirements of the regulation in more detail in the *SPCC Guidance for Regional Inspectors.*
- *Amend the table heading.* ''Secondary containment capacity (gallons)'' with the superscript that identifies the secondary containment requirements for bulk storage containers. The Agency believes that the table appropriately identifies the secondary containment requirements for bulk storage containers and mobile/portable containers. Additionally, the Agency has described the secondary containment requirements of the regulation in more detail in the *SPCC Guidance for Regional Inspectors.*
- *Move footnotes to the discussion preceding the tables in the Appendix.* The Agency believes it is appropriate to provide guidance to assist in the development of the SPCC Plan template in a separate document, if necessary, rather than increase the length of the template.
- *Simplify secondary containment information (Section III, Tables 1 and 2).* The Agency disagrees that additional simplification is appropriate for these tables. The tables are designed to address the various oil storage containers, equipment and oil-handling areas where secondary containment is required. For Tier I qualified facilities with only one or two oil storage containers, the tables should be easy to complete.
- *Amend the information that must be reported to the NRC in Section III, Part 7.* The bullets in the table cite the current regulatory requirements in § 112.7(a)(4), which also conforms with the type of information that is collected by the NRC.
- *Amend the Contingency Plan checklist included as an attachment to Appendix G.* EPA did not propose to amend the contingency plan requirements under 40 CFR part 109 and the checklist is intended as a reminder for the owner or operator to address these requirements when developing the contingency plan for the facility (when applicable). This contingency plan checklist is intended as a guide to assist the owner or operator of a Tier I qualified facility to prepare a contingency plan in lieu of the general secondary containment requirements for qualified oil-filled operational equipment or as an alternative to sized secondary containment for specific equipment at an oil production facility (such as flowlines).

4. Self-Certification and Plan Amendments

The elements of the Tier I self-certification requirement are similar in scope to those required for an owner or operator of a Tier II qualified facility who chooses to self-certify an SPCC Plan (as promulgated in December 2006, 71 FR 77266). An owner or operator of a Tier I qualified facility who chooses to complete an Appendix G template Plan (or some other equivalent Plan) is required to certify that: (1) He is familiar with the applicable requirements of the SPCC rule; (2) he has visited and examined the facility; (3) the Plan has been prepared in accordance with accepted and sound industry practices and standards; (4) the procedures for required inspections and testing have been established in accordance with industry inspection and testing standards and recommended practices; (5) the Plan is being fully implemented; (6) the facility meets the qualification criteria set forth under § 112.3(g)(1); (7) the Plan does not utilize the environmental equivalence or impracticability provisions under § 112.7(a)(2) and 112.7(d), or include an

exemption/measures pursuant to § 112.9(c)(6) for produced water containers and any associated piping and appurtenances downstream from the container; and (8) the Plan and the individual(s) responsible for implementing the Plan have the full approval of management and the facility owner or operator has committed the necessary resources to fully implement the Plan.

Under § 112.5 of the SPCC rule, an owner or operator must review and amend the SPCC Plan following any change in facility design, construction, operation, or maintenance that materially affects its potential for a discharge as described in § 112.1(b). Consistent with the current requirement for qualified facilities, the owner or operator of a Tier I qualified facility is allowed to self-certify any of these technical amendments to the Plan under § 112.6(a)(2), and document this certification in the Plan template (or some other equivalent Plan).

If the owner or operator of a Tier I qualified facility makes changes to the facility such that the maximum individual aboveground oil storage container capacity is greater than 5,000 U.S. gallons, the facility no longer qualifies as a Tier I facility, even if the total oil storage capacity is less than 10,000 U.S. gallons, and is not eligible to implement the self-certified Appendix G template Plan (or some other equivalent Plan). The facility owner or operator must determine whether the facility still meets the eligibility criteria for a Tier II qualified facility (i.e., total aboveground storage capacity remains below 10,000 U.S. gallons). If the facility meets the Tier II qualified facility criteria, within six months following the change in the facility, the owner or operator is required to prepare and implement an SPCC Plan in accordance with § 112.6(b) or prepare and implement an SPCC Plan in accordance with the general Plan requirements in § 112.7, and the applicable requirements in subparts B and C, including having the Plan certified by a PE, as required under § 112.3(d). If, on the other hand, the facility is no longer a qualified facility, the owner or operator is required to, within six months following the change in the facility, prepare and implement an SPCC Plan in accordance with the general Plan requirements in § 112.7, and the applicable requirements in subparts B and C, including have the Plan certified by a PE.

a. Comments

A commenter noted that the self-certification statement ''should not be modeled after what EPA desires to see a licensed PE provide.'' The commenter noted that promoting or encouraging development of qualified facility SPCC Plans by non-licensed engineers violates codes in many states.

b. Response to Comments

While the owner or operator of a qualified facility may choose to self-certify the SPCC Plan in lieu of a PE certified Plan, he is still required to comply with all of the SPCC requirements and to develop and implement a spill prevention program in accordance with good engineering practices. The owner or operator may do so by following guidance, industry standards, industry design specifications or industry recommended or best management practices. This is analogous to how a person with no accounting experience is expected to comply with applicable state and Federal tax laws. Many people choose to have a Certified Public Accountant (CPA) prepare their annual tax documents; however, the Internal Revenue Service (IRS) does not require that a CPA conduct this activity. A person that chooses to complete the tax forms on his own is not relieved from the liability to do so in accordance with all Federal and state requirements. That person is expected to understand the tax laws and regulations and prepare the documents following all applicable requirements. He may choose to use the forms and guidance provided by the IRS or state agency, or use software or other publicly available guidance to aid him in the correct completion of the tax forms.

For SPCC, the Agency believes that an owner or operator who follows guidance; standard design and operational protocols; industry standards or recommended practices; or guidance developed by professional associations is following ''good engineering practices'' to comply with the SPCC rule requirements. Where operational changes at a facility are necessary to comply with the rule requirements, the owner or operator must follow all appropriate state and local requirements (such as for permitting and construction) and, if necessary, obtain the appropriate professional assistance. However, in the case of a qualified facility, EPA believes that the development of the SPCC Plan itself is not an engineering function and an owner or operator can prepare an SPCC Plan that describes how the facility complies with the SPCC rule requirements. For a qualified facility, the Agency believes it is appropriate for the owner or operator to attest that the information in the SPCC Plan is true and accurate following the self-certification language in § 112.6. EPA modeled the certification statements after the PE certification provision in § 112.3(d) with amendments to remove language specific to engineering certification. Although EPA agrees that the owner or operator of a facility should not be making engineering determinations without proper credentials, the Agency believes that there are elements of those attestations that are appropriate for an owner or operator, such as acknowledging that they are familiar with the requirements of this part. EPA also included additional attestations for the owner or operator of the facility pertaining to the qualification criteria and management approval of the SPCC Plan.

Finally, to the extent that a state has adopted a law, regulation, or policy, such as one based on the National Council of Examiners for Engineering and Surveying, that requires a PE to perform certain functions, including certifying Plans, nothing in this action affects whether a facility owner or operator would be required to utilize a PE to meet the state or local requirements because this action does not preempt any state or local requirements. Therefore, in states where the engineer licensing boards have prohibited SPCC Plan self-certification, the owner or operator may not be able to utilize the Tier I and Tier II options to self-certify the Plan to comply with the SPCC requirements.

5. Tier II Qualified Facility Requirements

EPA is designating qualified facilities that do not meet the additional criterion for Tier I qualified facilities (i.e., no individual aboveground oil storage container with a capacity greater than 5,000 U.S. gallons) as Tier II qualified facilities. Although the organization of the regulatory text in § 112.6 has changed in order to accommodate the tiered approach, the requirements for Tier II qualified facilities remain the same as they were when these requirements were promulgated on December 26, 2006 (71 FR 77266). Tier II qualified facilities may choose to comply with the requirements in § 112.6(b) by completing and implementing a self-certified SPCC Plan, in lieu of having a PE-certified Plan. The self-certified SPCC Plan must comply with all of the applicable requirements of section § 112.7 and subparts B and C of the rule; any deviations as allowed pursuant to § 112.7(c)(2) and (d) must be certified by a licensed PE (''hybrid Plan''). Also see

section V.M.7.d of this preamble, *Overlap Between Produced Water Container Alternatives and Qualified Facilities,* for information on using the ''hybrid Plan'' approach to self-certify an SPCC Plan using one of the alternative approaches for produced water containers (exempt a produced water container or take advantage of the alternative requirements in § 112.9(c)(6)). Owners and operators of Tier II qualified facilities are not able to use the Appendix G template because it does not include all of the SPCC requirements that may apply for these facilities.

Additionally, in order to address the concerns of the oil and gas sector, EPA is finalizing an alternative set of qualified facility eligibility criteria specific for onshore oil production facilities that does not rely on facility oil storage capacities. EPA believes these alternative criteria are more appropriate to qualify the oil production facilities for Plan self-certification. See Section V.M of this document for further discussion on the alternative criteria for the oil and gas production sector.

a. Comments

Two commenters suggested that EPA allow Tier II qualified facilities to self-certify Plans. Additional commenters requested that Tier II qualified facilities be allowed to use the template.

b. Response to Comments

EPA is designating qualified facilities that do not meet the additional criterion for Tier I qualified facilities (i.e., no individual aboveground oil storage container with a capacity greater than 5,000 U.S. gallons) as Tier II qualified facilities. The requirements for Tier II qualified facilities remain the same as they were when they were promulgated in December 2006. Only Tier I qualified facilities will be able to use the template in Appendix G of 40 CFR part 112 to comply with the SPCC rule. The streamlined provisions included in the Plan template in Appendix G are limited to Tier I qualified facilities because they were specifically analyzed and designed for facilities that store limited quantities of oil, in small oil storage containers and generally have simple configurations. Other facilities contain larger volumes of oil, have large oil storage containers on-site, or are more complex and thus, applying the streamlined requirements adopted for Tier I qualified facilities would be inappropriate.

6. Alternative Option Considered

In the October 2007 proposal (72 FR 58378, October 15, 2007), EPA described an option wherein the Agency would exempt a certain subset of qualified facilities from the SPCC requirements altogether, based on a lower facility storage capacity threshold (such as 5,000 U.S. gallons).

a. Comments

One commenter supported this option.

b. Response to Comments

EPA did not receive any data to support an exemption of a subset of qualified facilities. Therefore, the Agency is not finalizing this amendment.

H. General Secondary Containment

At a facility subject to the SPCC rule, all areas with the potential for a discharge as described in § 112.1(b) are subject to the general secondary containment provision, § 112.7(c). These areas may have loading/unloading areas (also referred to as transfer areas), piping, and/or mobile refuelers, and may include other areas of a facility where oil is present. The general secondary containment requirement requires that these areas be designed with appropriate containment and/or diversionary structures to prevent a discharge of oil in quantities that may be harmful (that is, as described in 40 CFR part 110; *see* § 112.1(b)). EPA is amending the general secondary containment provision to provide additional clarity, consistent with the guidance published in the *SPCC Guidance for Regional Inspectors.* EPA is also amending § 112.7(c) to provide an alternative to the sized secondary containment requirements for flowlines and intra-facility gathering lines at oil production facilities, as described in Section V.M of this notice.

1. Revisions to the General Secondary Containment Requirement

EPA is amending the general secondary containment requirement at § 112.7(c) in three ways: (1) By adding text regarding the method, design and capacity of secondary containment; (2) by specifically allowing both active and passive measures of secondary containment; and (3) by including additional examples of prevention systems. Section V.M of this notice describes an additional modification to the provision to address flowlines and intra-facility gathering lines at oil production facilities.

Specifically, EPA is amending § 112.7(c) by adding the text ''In determining the method, design, and capacity for secondary containment, you need only to address the typical failure mode, and the most likely quantity of oil that would be discharged. Secondary containment may be either active or passive in design.'' This addition is intended to make clear that the scope of the general secondary containment requirement takes into consideration the typical failure mode, and most likely quantity of oil that would be discharged, consistent with current EPA guidance *(SPCC Guidance for Regional Inspectors).*

EPA is also amending § 112.7(c) to make it clear that the requirement allows for the use of both active and passive secondary containment measures to prevent a discharge to navigable waters or adjoining shorelines. Active containment measures are those that require deployment or other specific action by the operator. These measures may be deployed either before an activity involving the handling of oil starts, or in reaction to a discharge, so long as the active measure is designed to prevent an oil discharge from reaching navigable waters or adjoining shorelines. Passive measures are permanent installations and do not require deployment or action by the owner or operator.

EPA is further amending the general secondary containment provision at § 112.7(c)(1) to include the following additional examples of prevention systems for onshore facilities: Drip pans, sumps, and collection systems. Drip pans are typically used to isolate and contain small drips or leaks until the source of the leak is repaired. They are commonly used with product dispensing containers (such as drums), uncoupling of hoses during bulk transfer operations, and for pumps, valves, and fittings. Sumps and collection systems generally involve a permanent pit or reservoir and the connected troughs/trenches that collect oil. By expanding the list of examples of secondary containment methods found in § 112.7(c)(1), EPA intends to increase the clarity and better represent current prevention practices. EPA emphasizes that the list of prevention systems are examples only; other containment methods may be used, consistent with good engineering practice.

a. Comments

Many commenters expressed general support for the amendments to § 112.7(c). However, one commenter suggested that allowing secondary containment for the most likely quantity of oil discharged instead of worst case discharge contradicts § 112.7(c) and is inconsistent with 33 U.S.C. 1321(j)(5)(D).

In addition, some commenters indicated that this amendment would increase the number of calculations

necessary to determine likely release scenarios. The commenter requested that EPA provide latitude to the certifying PE in developing the different release scenarios and secondary containment requirements that are appropriate for the facility, stating that calculations should not have to be included. A commenter also suggested that EPA allow the use of a common collection area or containment area, rather than individual containment when there are several tanks located in close proximity to each other. Another commenter suggested that EPA should clarify in the rule text whether general secondary containment is required for buried piping. Other commenters suggested changes to a sentence in § 112.7(c) to replace the word ''tank'' with ''piping or oil-filled equipment.''

Additionally, a commenter requested further examples on the elements that can comprise an acceptable secondary containment system, and commenters suggested that EPA clarify that the list of examples is not all-inclusive.

b. Response to Comments

The Agency's authority to promulgate the SPCC rule is found in 33 U.S.C. 1321(j)(1)(C) and requires the Agency to promulgate regulations establishing procedures, methods, equipment and other requirements for equipment to prevent discharges of oil and to contain those discharges. The statutory provision gives the Agency broad discretion to establish the requirements under the SPCC rule. Nowhere in this statutory provision is a requirement that the SPCC regulations address worst case discharges. Section 1321(j)(5)(D), however, directs the Agency to issue regulations to require owners or operators to prepare and submit plans to respond to worst case discharges. Consistent with this statutory provision, EPA has promulgated facility response plan regulations in 40 CFR part 112 Subpart D. Therefore, EPA does not agree with the commenter who suggested that this amendment is inconsistent with 33 U.S.C. 1321(j)(5)(D).

Commenters also requested clarification on how much supporting documentation is necessary (for example, calculations) to demonstrate compliance with the general secondary containment requirements. In order to determine that the facility has provided appropriate secondary containment that complies with § 112.7(c), an EPA inspector may review the supporting documentation in the SPCC Plan (*see* the *SPCC Guidance for Regional Inspectors*, Chapter 4). If calculations are not included with the SPCC Plan, and the inspector suspects the general secondary containment is inadequate, the inspector may request supporting documentation from the owner or operator. Industry guidance recommends that facility owners or operators include any secondary containment capacity calculations and/or design standards with the Plan. API Bulletin D16, ''Suggested Procedure for Development of Spill Prevention Control and Countermeasure Plans,'' contains example calculations to which inspectors may refer (see Exhibit E of ''Suggested Procedure for Development of Spill Prevention Control and Countermeasure Plans,'' API Bulletin D16. Third Edition, December 2002). Calculations may be provided as part of the documentation to support the adequacy of containment measures employed at the facility, although they are not required. Nevertheless, the Plan preparer must include enough detail in the SPCC Plan to describe the efficacy of the measures used to comply with the general secondary containment requirements in § 112.7(c).

With respect to the use of common containment systems, the Agency wants to make clear that it is not necessary to provide separate containment systems for each individual container or equipment. Instead, the Plan preparer may choose to design facility drainage to provide a common collection area for multiple containers, piping or oil-filled equipment located at the facility. In order to comply with the general secondary containment requirements, the owner or operator must first identify the typical failure mode and quantity of oil that could be discharged. Based on site-specific conditions, he can determine what capacity is needed and design the secondary containment system accordingly.

Commenters also requested clarification on the type of equipment subject to the general secondary containment requirements. The general secondary containment provision in § 112.7(c) is intended to address the potential for oil discharges from all regulated parts of a facility. Containment method, design, and capacity are determined by good engineering practice to contain an oil discharge until cleanup occurs. This determination should consider all areas of the facility with a potential to discharge oil, including, but not limited to, piping (both aboveground and buried), transfer areas and oil-filled operational equipment.

The Agency does not agree that it is necessary to replace the word ''tank'' with ''piping or oil-filled equipment'' in § 112.7(c), as suggested. Tanks, piping and oil-filled equipment are all examples of primary containment systems and the Agency does not believe it is necessary to replace one example with another in the rule language. However, the word ''secondary'' is being added for clarity and accomplishes the point raised by the commenter.

EPA also is amending the language in § 112.7(c)(1) to include additional examples of secondary containment methods, as proposed. One commenter requested additional clarification on other methods that may be used to comply with the secondary containment requirements, such as surface impoundments, on their own, or in connection with other elements, such as oil/water separators or water treatment. Section 112.7(c) states that ''at a minimum, you must use one of the following prevention systems or its equivalent * * *.'' EPA clarified in Chapter 4 of the *SPCC Guidance for Regional Inspectors* that the list of secondary containment methods in § 112.7(c) are examples only and not meant to be all-inclusive. Other containment methods may be used, consistent with good engineering practice. For example, a facility could use an oil/water separator, combined with a drainage system, to collect and retain discharges of oil within the facility. Surface impoundments, oil/water separators, and wastewater treatment systems that are designed and maintained in a way to meet the requirements of § 112.7(c) to prevent a discharge as described in § 112.1(b) would also serve as equivalent prevention systems. Additionally, certification of the SPCC Plan verifies that secondary containment methods are appropriate for the facility and that they follow good engineering practice.

I. General Secondary Containment for Non-Transportation-Related Tank Trucks

In the December 2006 amendments to the SPCC rule (71 FR 77266, December 26, 2006), EPA exempted mobile refuelers from the sized secondary containment requirements applicable to bulk storage containers. EPA recognizes that other non-transportation-related tanker trucks may operate similarly to mobile refuelers, though not specifically transferring fuel (*i.e.*, transformer oils, lubrication oils, or certain AFVOs). Therefore, they may have the same difficulty in complying with the sized secondary containment requirements. EPA is now extending the amendment provided to mobile refuelers in the December 2006 amendments (*i.e.*, an exemption from the sized secondary

containment requirements) to non-transportation-related tank trucks at a facility subject to the SPCC rule. Specifically, §§ 112.6(a)(3)(ii), 112.8(c)(2), 112.8(c)(11), 112.12(c)(2), and 112.12(c)(11) have been amended to include the phrase ''except mobile refuelers and other non-transportation-related tank trucks.'' Such non-transportation-related tank trucks include those used to store (for short periods of time) and transport fuel, crude oil, condensate, non-petroleum, or other oils for transfer to or from bulk storage containers; for example, a truck used to refill oil-filled equipment at an electrical substation or a pump truck at an oil production facility. Under this approach, the general secondary containment requirements at § 112.7(c) will still apply.

1. Comments

Commenters generally supported extending the exemption for mobile refuelers from the sized secondary containment requirements in §§ 112.8(c)(6) and 112.12(c)(6) to non-transportation-related tank trucks. However, a number of commenters requested that EPA expand the scope of the relief or clarify its applicability. Specifically, commenters requested that the relief be given to various other types of vehicles and equipment, including tank cars or rail cars; mobile refueling tank trucks at drilling and workover facilities; vehicles associated with oil-filled electrical/operational equipment; mobile/portable tanks used for maintenance activities associated with oil-filled electrical equipment; vehicles involved in transloading (as defined in 49 CFR 171.8); and small truck-mounted refueling and oil tanks, up to 220 gallons, that are used to transport oils and fuels to various remote facilities and construction sites.

One commenter opposed extending the regulatory relief to non-transportation-related tank trucks because there are technically-feasible methods for facility owners or operators to conform with the requirements, such as double-lined tanks, and that regulatory relief would effectively punish those facilities that have already incurred the costs of conforming with the sized secondary requirements for tank trucks. The commenter further stated that tank trucks are high-risk oil containers and that to relax the SPCC requirements would not serve to protect the environment.

2. Response to Comments

EPA agrees with the commenters who argued that non-transportation-related tank trucks at a facility subject to the SPCC rule should be exempted from the sized secondary containment requirements, but should remain subject to the general secondary containment requirements. EPA also agrees with commenters who suggested that the exemption from the sized secondary containment requirements should cover small truck-mounted oil tanks and other tank trucks, such as bulk chemical trucks and vacuum trucks. These trucks are similar to mobile refuelers and are included in the exemption from sized secondary containment when the truck-mounted oil tank is used to refill a fuel container, an electrical transformer, or a hydraulic reservoir on a combine or piece of mining equipment. Similarly, mobile refueling tank trucks at drilling and workover facilities are included in the exemption from the sized secondary containment requirements.

However, EPA disagrees with commenters that the exemption should be extended to tank cars or rail cars. EPA believes that tank cars and rail cars typically operate in fixed areas of a facility where sized secondary containment can be provided, given the land area that is generally dedicated to a rail spur. Similarly, the exemption is not being extended to mobile/portable containers because the Agency believes that sized secondary containment can be provided for containers that generally operate in fixed locations at a facility, but are occasionally moved to other fixed locations within the facility for similar service.

One commenter suggested that transloading activities, as defined by DOT at 49 CFR 171.8, should be exempted from the sized secondary containment requirements. ''Transloading'', which for the purposes of hazardous materials regulations means the transfer of a hazardous material from one packaging to another packaging for contained shipment of the material (see 49 CFR 171.8). This rulemaking, however, focuses on clarifying SPCC requirements applicable to non-transportation-related trucks and the specific topic of ''transloading'' falls outside this scope.

EPA also disagrees with the commenter who opposed extending regulatory relief to non-transportation-related tank trucks. EPA believes that sized secondary containment is not necessary, and in some cases, not appropriate, for the same reasons the Agency exempted mobile refuelers from the sized secondary containment requirements. In addition, the general secondary containment requirement in § 112.7(c) still applies, which provides adequate flexibility for the prevention of oil discharges as described in § 112.1(b). For example, active measures to respond to an oil discharge from a vehicular accident may be used to comply with the general secondary containment requirement.

J. Security

EPA is amending the facility security requirements at § 112.7(g) to allow an owner or operator of a facility to tailor his security measures to the facility's specific characteristics and location. Thus, this amendment extends the streamlined security requirements that EPA provided to qualified facilities in the December 2006 SPCC rule amendments (71 FR 77266, December 26, 2006) to all facilities subject to the security requirements.

1. Revisions to the Security Requirements

The application of the SPCC security requirements is often determined by the facility's geographical/spatial factors, such that there is no ''one-size-fits-all'' method to comply with this requirement. Therefore, EPA is modifying the security requirements at § 112.7(g) to allow the owner or operator to design the security arrangements at the facility to address the specific circumstances that apply. Thus, this amendment allows an owner or operator to describe in his SPCC Plan how he will:

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

A facility owner or operator is required to document in his SPCC Plan how these security measures are implemented. These requirements replace the more prescriptive fencing and other requirements, previously found in § 112.7(g)(1) through (5), and allow the facility owner or operator to determine how best to secure and control access to areas where a discharge to navigable waters or adjoining shorelines may originate.

EPA believes that this amendment will eliminate the need for PE-certified environmentally equivalent alternatives to the specified security requirements, because the provision provides the flexibility for the owner or operator to provide whatever measures are most appropriate for the facility, as long as

they accomplish the stated security goals. For example, with this rule revision, the Agency allows the facility owner or operator to determine how lighting and/or fencing can be used to deter intruders and to assist in the discovery of oil discharges, or whether taking a different, site-specific approach is most appropriate. The Agency believes the added flexibility will not have a negative impact on the protection of the environment, and that it will assist the regulated community to better tailor the security requirements to their particular situation.

Because the revised requirements at § 112.7(g) apply to all facilities (excluding oil production facilities), EPA is removing the security requirements previously found at § 112.6(c)(3) for qualified facilities; the provision would be redundant.

a. Comments

Many commenters expressed general support for the amendments to the security requirements. One commenter noted that it is important to allow the operator to determine the security and lighting needs for safety reasons. Another commenter agreed that flexibility is warranted given increased security measures due to the requirements from the Department of Homeland Security (DHS) or DOT.

Still another commenter suggested that EPA should not establish security requirements because DHS has recently published a rule affecting the security of farms and is expected to promulgate additional rules; EPA's efforts may be duplicative. Several other commenters suggested that EPA avoid duplication of security requirements if existing security plans are in place as required by other Federal or state regulations. Finally, one commenter requested that EPA provide additional clarification to identify the security benefits of fencing.

b. Response to Comments

The Agency agrees with the commenters' general support for the amendment and is finalizing the amendment to the security requirements, as proposed. With this amendment, the Agency recognizes that there is no one single approach to ensure proper facility security. The Agency believes that replacing the more prescriptive fencing and other security requirements, previously found at § 112.7(g), will allow the facility owner or operator to determine how best to secure and control access to oil handling and storage areas at the facility. This approach provides the flexibility suggested by several commenters to prevent unauthorized access to the facility using whatever method is most appropriate. Thus, the owner or operator of the facility can comply with DHS security requirements, other existing Federal, state or local security requirements, or an industry recommended practice and describe these measures in the Plan to comply with the SPCC security requirement.

The Agency does not believe it needs to provide additional clarification to identify the security benefits of fencing, as the flexibility in this rule allows that determination to be made by the owner or operator based on his facility's specific circumstances.

K. Integrity Testing

EPA is amending the requirements at §§ 112.8(c)(6) and 112.12(c)(6) to provide flexibility in complying with the bulk storage container integrity testing requirements. Specifically, EPA is modifying the provision to allow an owner or operator to consult and rely on industry standards to determine the appropriate qualifications for tank inspectors/testing personnel and the type and frequency of integrity testing required for a particular container size and configuration. Thus, this action extends the streamlined bulk storage container integrity testing requirement that EPA provided to qualified facilities in the December 2006 SPCC rule amendments (71 FR 77266, December 26, 2006) to all facilities subject to the integrity testing provision.

1. Amendments to Integrity Testing Requirements

EPA is replacing the previous regulatory requirements at §§ 112.8(c)(6) and 112.12(c)(6) with the integrity testing requirements promulgated in December 2006 for qualified facilities (§ 112.6(c)(4)). This amendment requires a facility owner or operator to:

- Test/inspect each aboveground container for integrity on a regular schedule and whenever material repairs are made.
- Determine, in accordance with industry standards, the appropriate qualifications of personnel performing tests and inspections and the frequency and type of testing and inspections, which take into account container size, configuration, and design.

Because the revised requirements at §§ 112.8(c)(6) and 112.12(c)(6) apply to all facilities (excluding oil production facilities), EPA is removing the integrity testing requirements previously found at § 112.6(c)(4) for qualified facilities; this provision is redundant. These revised provisions allow, for example, an owner or operator to adopt integrity testing requirements that are outlined in industry standards in lieu of integrity testing without the need for environmental equivalence determinations certified by a PE. An owner or operator is still required to keep comparison records (records of inspections and tests kept under usual and customary business practices will suffice) and to inspect the container's supports and foundations. The owner or operator also is still required to conduct frequent inspection of the outside of the container for signs of deterioration, discharges, or accumulation of oil inside diked areas.

Under the revised provision, a facility owner or operator may still deviate from the rule provision, or from an industry standard, if the alternate measure is equivalent to the environmental protections provided by the rule requirement (as provided in § 112.7(a)(2)). In this case, a PE would need to certify the reason for the deviation and that the alternate measures are environmentally equivalent.

These amendments apply only to the integrity testing requirements in §§ 112.8(c)(6) and 112.12(c)(6). The bulk storage container inspection requirements for onshore oil production facilities in § 112.9(c)(3) are not affected by this amendment.

a. Comments

Many commenters expressed general support for the amendments to the integrity testing provisions. Some commenters suggested that a requirement for visual inspections with weekly or monthly frequency would be inappropriate because such a schedule is impracticable; they agreed that the frequency and documentation of visual inspections should be based upon PE judgment and site-specific conditions. Other commenters agreed that the PE should determine the appropriate testing/inspection requirements for each container and that industry standards should be used as appropriate.

Two commenters suggested that the amendments are too prescriptive, and not performance-based, and that the amendment detracts from a PE's ability to assess site-specific conditions. Other commenters disagreed with EPA's reference to industry standards in setting environmental regulations and objected to the use of the term ''industry standards'' for inspector qualifications and integrity testing methods because these standards are unnecessarily strict.

In addition, several other approaches were suggested by commenters. One commenter suggested that tank integrity testing criteria should be limited to

visual inspections. One commenter suggested extending ''environmental equivalence of visual-only testing to all elevated tanks and tanks on release prevention barriers (RPBs), regardless of volume.'' One commenter suggested that EPA should allow the owner or operator of a facility with indoor tanks to adopt different inspection requirements (not outlined by industry standards); the facilities would still have to keep records and perform monthly visual inspections, but not be required to hire third-party inspectors.

One commenter suggested that EPA should codify the PMAA standards; these standards allow operators, who are not certified tank inspectors, but who have training and experience to visually inspect tanks at petroleum production facilities, refineries, and terminals, to conduct such inspections. Several other commenters specifically recommended using standards, such as Steel Tank Institute (STI) SP001 and American Petroleum Institute (API) Standard 653. One commenter suggested that EPA should eliminate the phrase ''qualified personnel'' from the amended rule text. A few other commenters recommended that EPA incorporate API/EPA litigation settlement language concerning inspection requirements for smaller containers, specifically allowing visual inspection in certain site-specific circumstances, into the regulation at § 112.12(c)(6).

b. Response to Comments

EPA agrees with those commenters who supported amending the integrity testing requirements at §§ 112.8(c)(6) and 112.12(c)(6). EPA disagrees that the amendments are too prescriptive. The amended integrity testing requirements are intended to provide more flexibility to the owner or operator of an SPCC-regulated facility in the selection of the appropriate scope and frequency of integrity testing for all classes of bulk storage containers, including indoor and outdoor tanks and portable containers (such as 55-gallon drums and totes). The July 2002 rule revisions (67 FR 47042, July 17, 2002) amended the integrity testing requirements in §§ 112.8(c)(6) and 112.12(c)(6) to require visual inspections, plus some other form of testing, for each bulk storage container 55 U.S. gallons or greater; this amendment modifies this requirement to allow the owner or operator to determine the frequency and type of testing and inspections that are appropriate, according to site-specific conditions (for example, type and age of tanks, condition of tanks, and overall tank/secondary containment configuration), while also considering relevant integrity testing standards.

EPA maintains that inspection of containers storing oil in accordance with recognized industry inspection (integrity testing) standards is an important aspect of oil spill prevention. Industry standards are technical guidelines created by experts in a particular industry for use throughout that industry. These guidelines assist in establishing common levels of safety and common practices for manufacture, maintenance, and repair. Created by standard-setting organizations using a consensus process, the standards establish the minimum accepted industry practice. EPA recognizes that some industry standards now provide differentiated inspection requirements for various container sizes and configurations that may allow for visual inspection of certain types of oil storage containers, such as drums and totes and certain tanks up to 5,000 U.S. gallons. EPA's amendments to the integrity testing requirements are intended to allow the use of these industry standards without the need for environmental equivalence discussions in an SPCC Plan when a recognized industry standard is followed. EPA notes that use of a particular standard is voluntary; however, when a standard (or any part of a standard) is incorporated into a facility's SPCC Plan, then adherence to that standard (or part of a standard) is mandatory for implementation of the SPCC Plan.

It should also be noted that these amendments do not restrict the use of environmental equivalence, including establishing differentiated inspection requirements for shop-built tanks versus field-erected tanks, and other alternatives suggested by commenters. Owners or operators still have the ability to develop alternative, environmentally equivalent integrity testing procedures for bulk storage containers in accordance with § 112.7(a)(2). These equivalent measures must be in accordance with good engineering practice and are subject to certification by a PE.

EPA described the environmental equivalence flexibility available to a PE with respect to integrity testing in a letter to the PMAA.[5] While the policy and approach for the use of environmental equivalence described in this letter is still valid, the approach taken in this final rule amending the integrity testing requirements allows inspection requirements outlined in industry standards to be used without the need for environmental equivalence determinations certified by a PE. A major industry standard for integrity testing (STI SP001) was modified since the letter to PMAA was written to outline ''good engineering practice'' for integrity testing of shop-built containers. This may affect a PE's decision whether to certify an environmentally equivalent approach as described in the PMAA letter, or to follow the industry standard as provided by the amendment finalized in this rule.

In response to the comment that EPA should clarify acceptable industry standards for all integrity testing procedures, the Agency provided a list of organizations that may be helpful in the identification and explanation of industry standards in the **Federal Register** notice for the July 2002 SPCC rule revisions (67 FR 47058, July 17, 2002). In addition, EPA also provided an overview and description of the scope and key elements of pertinent industry standards in Chapter 7 of the *SPCC Guidance for Regional Inspectors*. While the Agency is allowing industry to rely on industry standards to assess the inspection and integrity testing scheme, EPA does not believe that any specific industry standards should be incorporated, by reference, into the rule. As EPA noted in the preamble to the July 2002 SPCC rule revisions (67 FR 47070, July 17, 2002), while facility owners or operators should look to specific industry standards as a guide for preparing SPCC Plans, EPA does not believe that incorporating specific standards into this rule is appropriate. Such incorporation freezes standards into rules, which may become outdated or obsolete. The decision in every case as to the applicability of any industry standard will be one for the PE, or the owner or operator of the facility who self-certifies an SPCC Plan.

Finally, commenters suggested allowing the use of alternative inspection techniques and the qualification requirements for inspectors; however EPA believes that these amendments are consistent with industry standards related to integrity testing.

L. Animal Fats and Vegetable Oils

Under this final rulemaking, EPA is differentiating the integrity testing requirements at § 112.12(c)(6) for an owner or operator of a facility that handles certain types of AFVOs.

EPA is providing the PE or an owner or operator self-certifying an SPCC Plan with the flexibility to use a visual

[5] Letter to Daniel Gilligan, President, Petroleum Marketers Association of America, from Marianne Lamont Horinko, Assistant Administrator, Office of Solid Waste and Emergency Response, EPA, May 25, 2004.

inspection program for integrity testing that is appropriate for containers that store AFVOs that meet certain criteria. This flexibility applies to those bulk storage containers that are subject to the applicable sections of the Food and Drug Administration (FDA) regulation 21 CFR part 110, *Current Good Manufacturing Practice in Manufacturing, Packing or Holding Human Food*, and that meet the following additional criteria: (1) The containers are elevated; (2) the containers are made from austenitic stainless steel; (3) the containers have no external insulation; and (4) the containers are shop-built. That is, an owner or operator with containers meeting these criteria can use visual inspection of these containers equivalent to industry standards, in lieu of the revised integrity testing requirements found at § 112.12(c)(6), without having to make an environmental equivalence determination in accordance with § 112.7(a)(2). The owner or operator is required to document the procedures for inspections and testing in their SPCC Plan, including those for AFVO bulk storage containers that are eligible for the differentiated requirements described in this amendment.

1. Differentiated Requirements for AFVOs

Stakeholders have commented that AFVOs merit differentiated requirements under the SPCC regulation. In particular, the regulated community has pointed to differences between the toxicity and biodegradation profiles of AFVOs and those of petroleum oils. Because of these claims, and in response to the Edible Oil Regulatory Reform Act (EORRA), the Agency has on several occasions formally requested information and supporting scientific data that would inform such a determination. (*See* 72 FR 58400, October 15, 2007, for a discussion of EPA's data review.) EPA then considered whether an alternative approach to differentiation that is not based on the oil's toxicity and its inherent physical/chemical properties, but rather based on the way these oils are stored and handled at a facility would be appropriate. EPA focused specifically on the integrity testing requirements for bulk storage of AFVOs to address concerns raised by the regulated community. As a result, this final rule establishes differentiated integrity testing requirements for certain bulk storage containers that store AFVOs and that meet specific design and operational criteria.

Because this is an alternative, EPA is not requiring that an owner or operator use this option. The alternative provides additional flexibility in meeting the provisions set forth in § 112.12(c)(6) to address stakeholder concerns. In addition, an owner or operator may make an environmental equivalence determination, in accordance with § 112.7(a)(2) for integrity testing of a bulk storage container.

a. Comments

Several commenters expressed support for EPA's efforts to reduce the regulatory burden to facilities storing AFVOs because these substances are different from petroleum oils. One commenter appreciated EPA's clarification regarding reasonable expectation of discharge for AFVOs that are solid or semi-solid at ambient temperature and pressure. However, one commenter suggested the current criteria are too limiting to provide relief, because many AFVO storage containers would not meet the criteria and thus, would not be eligible. Another commenter, on the other hand, indicated the proposal was overly lax and should be reconsidered.

b. Response to Comments

EPA notes that this alternative option is based not on the differences between petroleum oil and AFVOs, but on the way these oils are stored and handled at a facility. With regard to the comment about certain AFVOs solidifying at room temperature, EPA notes that the applicability of the SPCC rule must be made in accordance with the provisions set forth in § 112.1. The Agency notes that the SPCC rule only applies to facilities that, due to their location, can reasonably be expected to discharge oil to navigable waters or adjoining shorelines. In determining whether there is a reasonable expectation of discharge, an owner or operator of a facility may consider the nature and flow properties of the oils handled at the facility. However, if a facility owner or operator determines that there is a reasonable expectation to discharge oil to navigable waters or adjoining shorelines for any single oil container, all oil containers at the facility are subject to the rule's requirements, except as otherwise exempted.

The Agency acknowledges comments on the criteria being both too limiting and also overly lax, but EPA believes that the criteria developed strikes the appropriate balance between regulatory requirements and environmental protection.

2. Differentiation Criteria: Containers Subject to FDA Regulations—21 CFR Part 110

The differentiated integrity testing requirements finalized in this action are available only to those bulk storage containers that are subject to the applicable sections of the FDA regulation at 21 CFR part 110. When developing an integrity testing program for AFVO bulk storage containers, FDA rule requirements may substitute for an industry standard. Applicable requirements within 21 CFR part 110, when taken together with the additional criteria in this amendment, serve as equivalent alternative measures that include the main elements of an integrity testing program under the SPCC regulation. The minimal elements for an integrity testing program can be separated into three main structural integrity areas: (1) Container foundations, (2) container support structures, and (3) the container itself.

- *Container foundations.* FDA requires that facilities be constructed in such a manner that the floor, walls, and ceilings be adequately cleaned and kept clean and in good repair (21 CFR 110.20(b)(4)). Bulk storage containers that sit atop floors that fall under this requirement are expected to be maintained and kept in good repair.
- *Container support structure.* FDA requires all plant equipment, including the container's structural supports, to be designed of such material and workmanship as to be adequately cleanable, and for it to be properly maintained (21 CFR 110.40(a)). Periodic maintenance of the structural support(s) of a bulk storage container is also an oil spill preventive measure.
- *Container itself.* FDA requires the design, construction, and use of equipment to preclude the adulteration of food with, among other potential contaminants, metal fragments (21 CFR 110.40(a)). FDA further requires that food contact surfaces be corrosion resistant when in contact with food. FDA also requires equipment that is in the manufacturing or food-handling area and that does not come into contact with food must be constructed and kept in a clean condition (21 CFR 110.40(c)). The exterior surface of bulk storage containers that are located in the manufacturing or food-handling area and that are subject to this requirement are expected to be maintained to a higher standard than other bulk storage containers, which are not subject to a similar requirement.

a. Comments

One commenter agreed with the logic that container foundations and support structures meeting the FDA requirements may also meet the intent and practicality of the SPCC requirements. Another commenter agreed that offering options for environmental equivalence is a good step, but suggested that the options should go beyond the FDA standards and include other industry standards that offer equivalent protection.

b. Response to Comments

EPA agrees with those comments supporting the use of FDA's regulations as a basis for establishing a qualifying criterion for differentiated integrity testing requirements for AFVOs. The Agency also agrees that compliance with industry standards and requirements other than 21 CFR part 110 may also meet the SPCC inspection, evaluation, and testing requirements. In the preamble to the July 2002 SPCC rule amendments, EPA provided examples of industry standards that may constitute good engineering practice for assessing the integrity of different types of containers for oil storage (67 FR 47120, July 17, 2002). Additionally, the SPCC rule provides flexibility regarding the integrity testing requirements of bulk storage containers, as long as the alternatives provide equivalent environmental protection per § 112.7(a)(2).

3. Differentiation Criteria: Elevated Bulk Storage Containers

The differentiated integrity testing requirements finalized in this action are available only to those bulk storage containers that are elevated. Food equipment, by design, is generally elevated above the floor using legs or another means of support so that the space between the equipment and the floor can be cleaned. For the purposes of oil spill prevention, elevated bulk storage containers allow visual inspections for oil discharges all around the container. An elevated bulk storage container used for food oils also facilitates complete drainage because they are designed such that the oil is withdrawn from the lowest point in the container, so that foreign substances or materials do not accumulate and contaminate the food oil. For the purposes of oil spill prevention, self-draining containers operating using gravity flow allows complete drainage and prevents substances other than oil (such as water) from accumulating at the bottom of the container, thus minimizing corrosion. EPA believes that the self-drainage design, in conjunction with the applicable regulatory requirements, is likely to prevent the corrosion of the internal contact surface in food-grade AFVO bulk storage containers.

a. Comments

Several commenters suggested including non-elevated containers in EPA's criteria for the integrity testing provision. Commenters reference non-elevated food industry tanks that are positioned on pads so long as the area can be adequately cleaned and kept in good repair, and vessels that incorporate a bottom-discharge design which eliminates the build-up of water and materials in the bottom of the tank and prevents corrosion.

b. Response to Comments

While EPA recognizes similarities between elevated and bottom-discharge designs, the Agency does not agree with the request to expand the scope of the AFVO alternative criterion to include non-elevated bulk storage containers. Although some food industry facilities may use non-elevated tanks, food equipment is generally designed to be elevated (for example, to stand on legs); this elevated design allows the space between the plant equipment and the floor to be easily cleaned. FDA also recommends that all equipment should be so installed and maintained so as to facilitate cleaning of the equipment and of all adjacent spaces.

Bottom-discharge designs similarly eliminate the build-up of water and materials in the bottom of the tanks. However, the Agency believes that having the tanks elevated facilitates maintenance, inspections, and monitoring for oil discharges all around the bulk storage container, all of which are critical in allowing for the differentiated integrity testing requirements. It is important to note that the differentiated requirements are an available alternative. The owner or operator may choose to include bulk storage container designs that provide equivalent environmental protection in their SPCC Plan, in accordance with § 112.7(a)(2). For example, bulk storage containers built according to industry standards (such as 3–A Sanitary Standards) may provide additional features that facilitate visual inspection (such as manholes for internal inspection) that may provide comparable environmental protection.

4. Differentiation Criteria: Containers Made From Austenitic Stainless Steel

The differentiated integrity testing requirements finalized in this action are available only for those bulk storage containers that are made of austenitic stainless steel. EPA believes that non-homogenous container systems (for example, containers with external insulation, an external coating, a mild-carbon steel shell, an internal liner) are more complex than homogenous container systems (such as containers constructed solely of austenitic stainless steel) and may require additional inspection measures to ensure the integrity of the container. Furthermore, austenitic stainless steel containers are often used because cleaning agents and acidic detergents used to clean food and non-food contact surfaces can be corrosive if used on incompatible surfaces. Therefore, EPA is limiting this alternative approach for integrity testing to AFVO bulk storage containers made of austenitic stainless steel.

a. Comments

A commenter agreed with EPA to limit the alternative integrity testing requirements to austenitic stainless steel tanks and vessels. However, several commenters suggested that EPA consider including carbon steel tanks in the eligibility criteria for the flexibility to determine the scope of integrity testing, especially considering the widespread use of these containers and the consistency with EPA's current SPCC guidance. A commenter also cited the cost difference between a mild steel tank (commonly used in the industry) and a stainless steel tank.

b. Response to Comments

EPA agrees with the commenter who supported limiting the alternative integrity testing requirements to bulk storage containers made of austenitic stainless steel for the reasons stated above. As one commenter noted, carbon steel tanks that are interior-lined may pose more significant inspection requirements because the interior lining may fail to adhere to the tank, and not provide the intended protection of the carbon steel. Other commenters believed that limiting alternative testing requirements to austenitic stainless steel would limit the usefulness of the alternative option. While this assertion may be correct, the Agency nevertheless believes that expanding this alternative to include carbon steel containers is not appropriate, because non-austenitic stainless steels, including but not limited to carbon steel, are not as inherently corrosion resistant as austenitic stainless steel to the materials stored or handled in them (that is, they are more susceptible to internal corrosion) or to the operating environment (that is, they are more

susceptible to external corrosion). Furthermore, non-austenitic stainless steel containers may require a liner; these liners can fail or delaminate, promoting the potential for internal or external corrosion. Thus, the Agency believes the austenitic stainless steel criterion is an integral part of the criteria for differentiated requirements. Again, these differentiated requirements are an available alternative that the owner or operator may choose to include in their SPCC Plan. The owner or operator may choose to make an environmental equivalence determination, in accordance with § 112.7(a)(2), for similar corrosion resistant materials.

5. Differentiation Criteria: Containers With No External Insulation

The differentiated integrity testing requirements finalized in this action are available only to those bulk storage containers with no external insulation. The Agency believes that inspections based on frequent monitoring of the exterior surface of a bulk storage container for corrosion and/or other mechanisms that can threaten a container's integrity is a minimum criterion for an alternative measure that provides equivalent environmental protection. External insulation covering the outside of a bulk storage container acts as a physical barrier to effective visual examination of the exterior surface. If not properly sealed, insulating materials covering the exterior surface of a bulk storage container and/or any associated equipment and piping can become damp. Insulation that retains moisture and that is adjacent to a container's exterior surface can cause significant corrosion, which may threaten the integrity of the container.

EPA is unaware of any sanitation provision or regulatory requirement that requires an inspection between the insulation and the exterior surface of a bulk storage container. Furthermore, the Agency does not know of any established industry methods or procedures, or industry standards specific to AFVOs, to evaluate the exterior surface of a bulk storage container that is covered by insulation. Therefore, EPA believes only containers with no external insulation should be eligible for this alternative for integrity testing.

a. Comments

One commenter stated that effective visual examination is difficult for tanks with external insulation; therefore, the commenter agreed that the alternative integrity testing requirements should only be applied to tanks with no external insulation. However, several commenters suggested that EPA revise its AFVO alternate integrity testing criteria to allow insulated or jacketed tanks to be used under this amendment, as long as there are sufficient access ports installed in key locations to observe an appropriate quantity of the exterior of the tank. Commenters cite the need for this type of tank to maintain product viscosity. Commenters also note that there is an established industry practice allowing for visual inspection of insulated tanks. In addition, one commenter suggested insulation is very prevalent in the industry and the increased energy cost for non-insulated containers would be prohibitive.

b. Response to Comments

The Agency agrees with those commenters that supported limiting the alternative criterion to bulk storage containers that have no external insulation because external insulation is a barrier to visual examination, making effective visual inspection difficult. At the same time, EPA recognizes that some AFVO bulk storage containers need insulation to maintain temperatures. However, the Agency disagrees with the commenters that suggested this criterion should be expanded to include jacketed tanks that have sufficient access ports installed at key locations.

The Agency believes it is important that the criteria for differentiated requirements account for the effect of corrosion under the thermal insulation, including but not limited to, the effect of moisture, chloride leaching, and/or temperature. The effects of corrosion under thermal insulation are well documented in the technical literature. (*See*, for example, National Association of Corrosion Engineers (NACE) Standard RP0198–2004.) Thus, because external insulation covering the outside of a bulk storage container acts as a barrier to effective visual examination, EPA believes this is a minimum criterion for this alternative, the Agency is limiting the alternative criterion to those containers that have no external insulation. However, bulk storage containers that store food oil and are built according to industry standards (such as 3–A Sanitary Standards) may have additional design features that provide equivalent environmental protection and thus meet the intent of the criteria. For example, container configurations built according to 3–A Sanitary Standards typically include ''manholes'' that facilitate complete access for examination of the entire internal surface. These containers also typically have an outer shell (that is, a double wall) that is sealed completely (for example, with completely welded seams) so that the container integrity is maintained by removing any potential for the insulation to be exposed to moisture. In addition, some AFVO bulk storage containers that are refrigerated may suppress corrosion potential, whereas containers that are heated to facilitate oil flow may promote corrosion potential. The Agency believes the rule provides the facility owner or operator with significant flexibility to make an environmental equivalence determination, in accordance with § 112.7(a)(2), which may be used to address those insulated bulk storage containers that have alternative configurations, including access ports.

Finally, the Agency disagrees with those commenters who suggested that the alternative criterion should include insulated containers because they are prevalent in the industry or because the increased energy cost for non-insulated containers would be prohibitive. The Agency is not mandating the use of any type of container, but rather is allowing flexibility for the owner or operator of facilities that have containers that meet the alternative criterion.

6. Differentiation Criteria: Shop-Fabricated Containers

The differentiated integrity testing requirements finalized in this action are available only to shop-fabricated containers (i.e., shop-built). Shop-fabricated containers are those containers that are shop-assembled in one piece before they are transported to the installation site; this limits the maximum capacity of the container so that it can be transported over the road by truck. Shop-fabricated containers generally have lower volume capacities, smaller tank diameters, and a fewer number of welds than field-erected containers, and they are typically comprised of a single type of material with a single wall thickness.

Field-erected (i.e., field-constructed) containers, on the other hand, can store much larger volumes of oil. They have larger container capacities because individual pieces of the container can be transported to and assembled at the installation site. Because of their greater size and complexity, field-erected containers generally have more stringent engineering requirements than shop-fabricated containers, which would need to be considered in developing an appropriate integrity testing program. For example, field-erected containers may have variable shell-wall

thicknesses, and/or be comprised of different materials to account for variations in the stresses caused by hydrostatic pressure. These field-erected containers generally have a significantly greater number of welds as compared to a shop-fabricated container because they are fabricated on-site from individual pieces. The stress on the container walls and joints is greater as the diameter and/or height of the container increases. A brittle fracture evaluation of a field-erected container may be necessary if the thickness of the shell wall is above a certain value and the container undergoes a repair, alteration, reconstruction, or a change in service that might affect the likelihood of a discharge or failure (§ 112.7(i)).

This option, therefore, is limited to shop-fabricated containers because they are simpler in design and construction (they are typically subject to less stress, have fewer welds, and are less likely to be subject to brittle fracture failure) than field-erected containers. The Steel Tank Institute's (STI) SP001, *Standard for the Inspection for Aboveground Storage Tanks*, establishes the scope and frequency for visual inspections of shop-fabricated containers. This rule amendment is consistent with past regulatory guidance and current industry best practices for this particular class of bulk storage containers.

a. Comments

One commenter suggested that EPA should not limit consideration of alternative integrity testing to only shop-fabricated containers. The commenter indicated that while field-erected tanks are larger than shop-fabricated tanks, they are designed to meet industry standards; there are no data to support a higher failure rate; and industry standards for visual inspections apply to field-erected tanks.

Two commenters also suggested that EPA modify the rule to clarify that tanks that are pre-fabricated in sections, and then field-erected in a limited number of places, should qualify for the alternative provisions, since many AFVO facilities utilize these tanks and there are fewer field welds than for a completely field-erected tank. In addition, one commenter suggested that these partial field-assembled tanks are not necessarily the large capacity containers that EPA may seek to exclude from the integrity testing provision.

b. Response to Comments

For the reasons stated above, EPA believes it is appropriate to limit the alternative integrity testing criterion to shop-fabricated containers: They are simpler in design and construction in relation to field-erected containers, including those bulk storage containers that are partially field assembled. EPA believes this criterion distinguishes between more complex bulk storage containers, which may require greater integrity testing scrutiny, and smaller, less complex containers.

EPA disagrees with the commenter who questioned whether this criterion was relevant, by asserting that the industry standards for visual inspection apply to field-erected tanks. While visual inspection may be a component of an integrity testing program for field-erected tanks, EPA is unaware of any industry standard which limits integrity testing for a field-erected bulk storage container to visual inspection only. Industry standards typically incorporate visual inspection into a broader integrity testing program which typically also includes non-destructive testing on a regular schedule and includes inspection of the tank's shell and bottom plate. EPA believes this criterion, in combination with the others, limits the applicability of the integrity testing relief to those AFVO containers that, because of equipment design and handling requirements already provide environmentally equivalent protection. In contrast, containers that are partially shop-fabricated and then finalized in the field may be subject to additional inspection requirements to bring these containers into service and for continued service beyond fully shop-fabricated containers. It should also be noted that the rule provides sufficient flexibility to make an environmental equivalence determination, in accordance with § 112.7(a)(2), which may be used to address fielded-erected containers that may vary in complexity, including field-erected containers comprised of pre-fabricated sections.

7. Required Recordkeeping

The SPCC regulations require that inspections and tests be conducted in accordance with the written procedures that the owner or operator or the certifying PE develop for the facility and that records of inspections and testing be kept with the SPCC Plan in accordance with the recordkeeping provisions of § 112.7(e). EPA believes that visual inspection that is part of the periodic maintenance of the bulk storage container's support and foundation must be documented. Records of inspections and tests kept under usual and customary business practices will suffice. To take advantage of this alternative option for AFVOs, the owner or operator or PE should refer to the appropriate requirements under 21 CFR part 110 to develop an appropriate inspection, evaluation, and testing program for an SPCC-regulated facility.

No comments were submitted in reference to this requirement.

8. Other Suggested Criteria and Options

EPA received a number of comments with suggestions for other approaches to provide integrity testing relief to certain AFVO containers.

a. Comments

Two commenters suggested extending the testing frequency for AFVO containers based upon the internal corrosion differences between AFVO and petroleum-based oils. Other commenters suggested that EPA exempt from the integrity testing requirements storage containers used for AFVO in compliance with the secondary containment provisions and that undergo visual inspection on a routine basis. The commenters noted that a leak would be discovered before it could escape into the environment due to the inspection frequency.

Another commenter requested that EPA use the same approach for AFVO as detailed in the *SPCC Guidance for Regional Inspectors* (Chapter 7) where it is explained that other design approaches, other industry standards, or other good engineering practices may be used alone or as a 'hybrid' program where equivalent results in meeting the SPCC requirements is obtained. The commenter suggested that the language should be expanded to allow the same alternatives for similar containers of all oil covered by the regulation.

One commenter recommended that EPA require a certified external tank and vessel inspection every ten years for tanks/vessels greater than 10,000 gallons capacity when non-hazardous substances are stored and annual inspections are conducted by a preventive maintenance inspector who is familiar with the equipment and the FTPI 2007–1 standard.

Several commenters suggested exempting milk storage containers from SPCC requirements based on additional regulations which address storage for on-farm milk storage containers. Specifically, these commenters identified the Grade ''A'' Pasteurized Milk Ordinance (PMO), which addresses milk intended for human consumption.

b. Response to Comments

Regarding the comment on extending inspection frequency for AFVO containers, the rule does not establish a required frequency and the owner or

operator of the facility or PE can establish an inspection schedule to account for the chemical and physical characteristics of the oil being stored and for any other factors which may affect the integrity of a bulk storage container. In response to the comment requesting that EPA allow visual inspection and secondary containment instead of integrity testing on AFVO storage containers, EPA notes that the revisions to § 112.12(c)(6) may allow the owner or operator to conduct visual inspections to satisfy the integrity testing requirements, as long as they are conducted in accordance with industry standards.

EPA is also finalizing changes to § 112.12(c)(6) incorporating industry standards into an integrity testing program for AFVO bulk storage containers (consistent with the provision finalized at § 112.8(c)(6) for other oils). EPA also believes there is sufficient flexibility provided in § 112.7(a)(2) to make an environmental equivalence determination with respect to developing a hybrid integrity testing program. Therefore, EPA believes that the rule already allows other design approaches, other industry standards, or other good engineering practices to be used alone or as a 'hybrid' program where equivalent results in meeting the SPCC requirements are obtained.

Regarding the comments suggesting that integrity testing should follow specific fiberglass tank and pipe industry standards (FTPI 2007–1), the SPCC rule requires that the Plan be prepared in accordance with good engineering practices, including consideration of applicable industry standards (§ 112.3(d)(1)(iii)). An owner or operator may follow the fiberglass tank and pipe standards, if appropriate for the particular facility's characteristics. Thus, the rule already provides for this. However, it should be noted that when a standard (or any part of a standard) is incorporated into a facility's SPCC Plan, then adherence to that standard (or part of a standard) is mandatory for implementation of the Plan.

In response to the proposed differentiated integrity testing requirements for certain AFVO bulk storage containers, several commenters requested an exemption for bulk storage containers holding milk. The Agency considered comments supporting an exemption of certain milk bulk storage containers from the SPCC requirements. PMO is a model ordinance maintained through a cooperative agreement between the states, the FDA, and the regulated community. States typically adopt it either by reference or by directly incorporating its requirements into statutes or regulations. EPA agrees with commenters that milk containers merit further consideration with respect to SPCC rule applicability and the PMO. Thus, in the near future, EPA intends to publish a proposed rule on alternative regulatory approaches for milk, including an exemption based upon the PMO.

M. Oil Production Facilities

Since its original promulgation in 1973, the SPCC rule has included differentiated requirements for oil production facilities (§ 112.9), as compared to other types of facilities (§§ 112.8, 112.10, 112.11, and 112.12). Based on issues presented by the regulated community, EPA is finalizing certain revisions that further streamline, tailor or clarify the SPCC requirements for oil production facilities. Specifically, EPA is finalizing the following modifications for oil production facilities: excluding oil production facilities from the loading/unloading rack requirements at § 112.7(h), as described in Section V.F of this action; revising the definition of ''production facility''; extending the timeframe by which the owner or operator of a new oil production facility must prepare and implement an SPCC Plan; providing an alternative option for flow-through process vessels at oil production facilities to comply with the general secondary containment requirement and additional oil spill prevention measures in lieu of sized secondary containment requirements; providing an exemption for certain intra-facility gathering lines from the SPCC requirements; providing an alternative option for flowlines and intra-facility gathering lines at oil production facilities for contingency planning in lieu of all secondary containment requirements, while establishing more prescriptive requirements for a flowline/intra-facility gathering line maintenance program; providing compliance alternatives for certain produced water containers that do not contain oil as certified by a PE; providing compliance alternatives to sized secondary containment for produced water storage containers that are not otherwise exempt; establishing alternative criteria for an oil production facility to be eligible to self-certify an SPCC Plan as a qualified facility; and clarifying the definition of ''permanently closed'' as it applies to an oil production facility.

1. Definition of Production Facility

As described in Section V.D of this action, EPA is modifying the definition of ''facility'' to clarify that contiguous or non-contiguous buildings, properties, parcels, leases, structures, installations, pipes, or pipelines may be considered separate facilities, and to specify that the ''facility'' definition governs the applicability of 40 CFR part 112. To provide clarity consistent with these revisions, EPA is also finalizing modifications to the definition of ''production facility.'' A ''production facility'' is a type of ''facility'' as defined in § 112.2. The revised definition reads as follows: ''*Production facility* means all structures (including but not limited to wells, platforms, or storage facilities), piping (including but not limited to flowlines or intra-facility gathering lines), or equipment (including but not limited to workover equipment, separation equipment, or auxiliary non-transportation-related equipment) used in the production, extraction, recovery, lifting, stabilization, separation or treating of oil (including condensate) and associated storage or measurement and is located in an oil or gas field, at a facility. This definition governs whether such structures, piping, or equipment are subject to a specific section of this part.''

With these revisions, EPA is adding a sentence at the end of the definition to clarify that while only the definition of ''facility'' governs the overall applicability of 40 CFR part 112, the definition of ''production facility'' is used to determine which sections of the rule may apply at a particular facility. (The sections for administrative and general rule requirements continue to apply to all facilities under 40 CFR part 112.) This change to the definition of production facility addresses concerns raised during litigation challenging the 2002 rule amendments and discussed in the May 25, 2004 **Federal Register** notice (69 FR 29728). EPA has also modified the phrase ''and located in a single geographical oil or gas field operated by a single operator'' to clarify that a production facility ''is located in an oil or gas field.'' This is consistent with this rulemaking's revisions to the definition of ''facility'' that emphasize the flexibility in how a facility owner or operator can determine the boundaries of a facility.

a. Comments

Several commenters expressed general support for EPA's proposed amendments to the definition of ''production facility.'' However, one commenter stated that the reference to '* * * property, parcels, leases * * *' in the definition of ''facility'' causes uncertainty because leases regularly extend beyond the size of a production facility. Several commenters also

suggested that the proposed addition of the phrase ''may be,'' would cause the definition to become ambiguous.

The Agency also received comment on various other suggested options. For example, operators of facilities producing AFVO requested that EPA clarify that this section applies only to petroleum oil production by adding the word ''petroleum'' to the definition of production facility, while several other commenters suggested removing the reference to ''a single geographical oil or gas field'' to reduce confusion. Several commenters expressed concerns regarding multi-facility Plans for production facility operations. Another commenter requested EPA remove the phrase ''gathering line'' from the definition of production facility to avoid dual jurisdiction. Two commenters requested additional clarity regarding natural gas and the definition of production facility. Finally, two commenters suggested that EPA include additional infrastructure, activities and equipment that support production operations under the specific requirements of § 112.9, or requested use of a ''primary function'' test of a facility to determine the facility's applicability to specific sections of the SPCC regulation.

b. Response to Comments

EPA agrees with those commenters who supported the modifications to the definition, and is finalizing revisions to the definition of ''production facility,'' with certain changes as described in this section. The Agency disagrees that the revised definition leads to industry uncertainty. The changes clearly indicate that the definition of production facility specifically identifies which rule requirements apply to a facility. For example, oil production facilities are excluded from the rule requirements in § 112.8: ''*Spill Prevention, Control, and Countermeasure Plan requirements for onshore facilities (excluding production facilities),*'' whereas the rule requirements in § 112.9: ''*Spill Prevention, Control, and Countermeasure Plan requirements for onshore oil production facilities*'' specify that these requirements only apply to production facilities.

EPA also disagrees with the commenter who suggested that the addition of the term ''petroleum'' to the definition of production facility is necessary. The addition of the term ''petroleum'' is unnecessary because the definition itself indicates that the type of facilities addressed in the definition is one that is involved with petroleum crude oil production and not any other type of oil production, such as AFVO production. EPA's intent has always been that the definition of production facility addresses petroleum crude oil production, extraction, recovery, lifting, stabilization, separation or treatment and associated storage or measurement. For example, the definition includes terms associated with petroleum crude oil production, such as gathering lines and flowlines which are exclusively associated with upstream petroleum crude oil/gas production, not AFVO production or processing facilities. The term ''oil or gas field'' is used exclusively in upstream crude oil and gas production, not in AFVO production. This language further clarifies that the definition of production facility is specific to petroleum crude oil and gas production operations rather than AFVO production.

Several commenters expressed concern regarding multi-facility Plans for oil production operations. The Agency does not intend to require an owner or operator who uses one SPCC Plan to address multiple SPCC-regulated facilities to aggregate the storage capacity of the individual facilities covered in the multi-facility SPCC Plan. However, the method in which an owner or operator defines the boundaries of individual facilities must be consistent in determining both FRP and SPCC applicability. The Agency believes that the changes to the definitions of ''facility'' and ''production facility'' will not discourage the use of multi-facility Plans because the Agency does not require the aggregation of individual facility capacities covered under a multi-facility Plan. To provide further clarity, EPA has removed the limiting term ''single geographic'' from the production facility definition. This change together with the other modifications finalized in this action, make it clear that an owner or operator is not compelled, by the definition of production facility, to aggregate separate facilities located in a ''single geographic'' oil production field into a single facility. If an owner or operator has several distinct operations in one oil field, he is not required to consolidate these operations into a single facility. On the other hand, the owner or operator does have the flexibility to consolidate these operations if he so chooses.

To address the commenter's concerns that EPA is adding the terms ''intra-facility'' in front of the term gathering line, the Agency notes that the addition of this term clarifies that EPA only regulates those gathering lines located within a facility, as determined by the owner or operator. The Agency disagrees with commenters who suggested removing the term ''gathering lines'' from the production facility definition to avoid dual jurisdiction. Gathering lines that are located within the boundaries of an SPCC-regulated facility are considered to be ''intra-facility gathering lines'' and are subject to EPA's jurisdiction. However, EPA is exempting intra-facility gathering lines subject to the regulatory requirements of DOT's pipeline regulations in 49 CFR parts 192 or 195 from this regulation. See section V.M.4 of this notice for more information.

EPA does agree that clarification on how these rules address natural gas facilities is appropriate. In some cases, a natural gas production facility may store condensate (petroleum oil) in quantities that meet the applicability criteria for the SPCC requirements and should be considered a production facility when determining applicability of specific requirements in the rule (such as § 112.9). In this final rule, therefore, EPA is adding the phrase ''(*including condensate*)'' to the definition. This clarification is consistent with the current definition and provides additional clarity. Gaseous phase hydrocarbons, such as natural gas, present at SPCC-regulated facilities are not regulated under the SPCC rule. A detailed explanation of this interpretation can be found at 69 FR 29729–29730, May 25, 2004.

EPA does not agree with the ''primary function'' approach to determine the applicability to specific sections of the SPCC regulation or the commenters' interpretation that, where geographic considerations warrant, the definition of production facility should include all infrastructure associated with activities and equipment that support operations (such as base camps, airports, vehicle/equipment repair operations, electrical generating facilities, construction equipment). The definition of ''production facility'' is used to determine which of the sections of the rule apply for these support operations. The definition of production facility extends to all containers and equipment directly related to the production of crude oil; it does not include infrastructure (containers and equipment) not uniquely associated with or in support of crude oil production. This is consistent with the approach the Agency has taken in other EPA regulations, such as the Resource Conservation and Recovery Act (RCRA) Subtitle C regulations for oil and natural gas exploration, development and production (53 FR 25447, July 6, 1988).

Thus, the Agency is clarifying in this notice that only the infrastructure, containers and equipment uniquely associated with the production of crude oil is subject to the specific requirements for a production facility (§ 112.9). Containers, equipment and piping containing crude oil used in the production, extraction, recovery, lifting, stabilization, separation or treatment of oil or gas condensate, or their associated storage or measurement is considered part of an oil production facility and subject to the specific requirements of § 112.9. Specific examples of containers, piping or equipment uniquely associated with or in support of the production of crude oil include, but are not limited to: Well heads; flowlines and intra-facility gathering lines; manifolds; heater treaters, free-water knockout or other primary separation vessels; bulk storage containers for crude oil or condensate; produced water containers; containers or pits storing drilling fluids; drilling oil storage/use; containers used for drilling completion operations; and hydraulic, dielectric, and lubrication oils used exclusively to support oil production operations. All other infrastructure or equipment that indirectly support crude oil production must meet the specific bulk storage requirements under § 112.8 or specific AFVO requirements under § 112.12, as applicable. (Any infrastructure and equipment at a facility subject to the SPCC rule, whether in direct support of crude oil production operations, or not, are also subject to the general rule requirements of §§ 112.1–112.7.)

For example, containers storing oil that support vehicle repair or maintenance (such as gasoline, lubricating oil) at a production facility are subject to both the general rule requirements and the specific requirements of § 112.8 because they are not directly or uniquely associated with crude oil production. Similarly, heating oil storage containers that support offices, oil storage to support construction activities, oil storage in transformers or electrical utility stations, or oil storage/processing to support refining operations (for example, topping facilities) and other bulk storage or the operational use of oil in containers, equipment and piping not used in the production, extraction, recovery, lifting, stabilization, separation or treatment of oil or gas condensate, or their associated storage or measurement are not considered part of an oil production facility and therefore are subject to both the general rule requirements and the rule requirements for onshore facilities under § 112.8 (or § 112.12 for AFVO).

The 1971 MOU memorialized the agencies' intent to minimize overlapping regulation by ''assign[ing] one agency the responsibility for regulating a complete operation at any one facility.'' EPA and DOT will revise the 2000 guidance memorandum, acknowledging that it has not provided a clear basis for implementing the 1971 MOU or delineating EPA and DOT jurisdiction (36 FR 24080, November 24, 1971). EPA will continue its work to improve SPCC guidance for pipeline operators and will communicate the results of discussions in a manner that affords further opportunity for public comment.

2. Modifications to § 112.9 for Drilling and Workover Facilities

To clarify that drilling and workover activities are not subject to the provisions at § 112.9, EPA is amending the title of § 112.9 to read ''Spill Prevention, Control, and Countermeasure Plan requirements for onshore oil production facilities (excluding drilling and workover facilities).'' EPA is also amending the introductory sentence of the section accordingly.

As described in the October 2007 proposed rule (72 FR 58378, October 15, 2007), during the life of an oil well, maintenance or remedial work may be necessary to improve productivity. A specialized workover rig, and associated containers and equipment are brought on-site to perform maintenance or remedial activities on the well. Workover operations that perform maintenance or remedial activities on oil wells are distinct from the normal production operations, and as such are not subject to the requirements of § 112.9, but are subject to the applicable requirements in § 112.10 (for onshore facilities) or § 112.11 (for offshore facilities). Workover activities are a distinct operation and, if conducted by a separate owner or operator, may be considered a separate mobile facility. Workover facilities may have a different SPCC Plan, separate from the production facility. EPA notes that although production activities may temporarily cease during workover, if the production equipment and containers (such as those found in a tank battery) remain in operation or storing oil (that is, they are not ''permanently closed''), then the production facility owner or operator must maintain his own SPCC Plan during workover activities.

a. Comments

Two commenters expressed support for EPA's clarification excluding drilling and workover facilities from the provisions of § 112.9.

b. Response to Comments

The Agency agrees with the commenters and is finalizing the amendment as proposed.

3. SPCC Plan Preparation and Implementation

As described in the October 2007 proposed rule (72 FR 58378, October 15, 2007), the variables associated with the start of operations at new oil production facilities could lead to significant changes in necessary storage capacity and facility design. In this rulemaking, EPA is finalizing an amendment to allow a new oil production facility (that is, one that becomes operational after July 1, 2009) a period of six months after the start of operations to prepare and implement an SPCC Plan. EPA is excluding oil production facilities from the current requirements at § 112.3(b)(1), and is adding a new paragraph at § 112.3(b)(3) to require the owner or operator of a new oil production facility to prepare and implement an SPCC Plan six months after the start of operations.

The rule amendment applies at a new oil production facility that begins operating after July 1, 2009. The amendment does not apply to drilling or workover activities at a production facility. Drilling and workover operations are subject to the requirements at § 112.3(c) for mobile facilities and may implement a general SPCC Plan. Therefore, both during the initial drilling of the well, as well as during any workover activity, there are measures required for spill prevention and response for any oil discharges that occur from a drilling or workover facility subject to this rule. This amendment would not apply to an existing production facility in which a new well is drilled, and added to the existing tank battery/facility. In this case, the facility owner or operator must amend the SPCC Plan in accordance with § 112.5(a), which requires the Plan to be amended within six months of the facility change, and implementation within six months of the amendment.

With this amendment, EPA recognizes that for some oil fields, based on the often variable conditions of the oil reservoir, the type and proportion of products may be uncertain until after the process of extraction has started. During this timeframe, additional equipment may be added or removed

from the facility which would require an amendment to the SPCC Plan and the owner or operator of a new oil production facility may need to make multiple revisions to the Plan. The Agency believes that allowing a new oil production facility six months after the start of operations to prepare and implement an SPCC Plan properly addresses these concerns. The ''start of operations'' for an oil production facility is indicated by the start of well fluid pumping, transfer via flowlines, separation, treatment or storage of crude oil, or the storage of other oils in capacities that exceed the rule's current oil storage capacity thresholds for applicability.

a. Comments

Several commenters expressed support for EPA's proposed amendment to allow new oil production facilities six months to prepare and implement an SPCC Plan. Two commenters, however, suggested that EPA allow owners and operators one year for sufficient time for Plan preparation and implementation. Another commenter suggested that EPA provide an automatic extension for a facility owner or operator based on his inability to obtain the services of a PE.

b. Response to Comments

The Agency agrees with those commenters supporting an extension of six months to the timeframe by which an oil production facility must prepare and implement an SPCC Plan. The Agency disagrees with the suggested alternative of one year for the owner or operator to prepare and implement an SPCC Plan after the start of production operations. The Agency recognizes the unique characteristics of an oil production facility, but given that an oil production facility is likely to stabilize operations within six months from start-up, a one-year time period for Plan preparation and implementation is inappropriate. If a facility owner or operator needs additional time to prepare and implement the SPCC Plan, the existing rule already provides the owner or operator the opportunity to request an extension of time to come into compliance in accordance with § 112.3(f) when circumstances are beyond his control. This may occur, for example, when there are no qualified personnel available or if there are equipment delivery delays.

4. Flowlines and Intra-Facility Gathering Lines

EPA is finalizing a conditional exemption from secondary containment requirements under the SPCC rule for flowlines and intra-facility gathering lines. That is, in lieu of general secondary containment, an owner or operator may opt to prepare a contingency plan and written commitment of manpower, equipment, and materials. Additionally, EPA is finalizing specific requirements for a flowlines and intra-facility gathering lines maintenance program. EPA is also exempting intra-facility gathering lines that are subject to the regulatory requirements at 49 CFR parts 192 or 195 from the SPCC requirements. EPA is not promulgating definitions of flowlines and intra-facility gathering lines in this action.

a. Definition of Flowline and Intra-Facility Gathering Line and Exemption

In the October 2007 proposal (72 FR 58378, October 15, 2007), EPA requested comments as to whether regulatory definitions for ''flowline'' and ''intra-facility gathering line'' are necessary, and if so, suggestions for appropriate definitions. This request was intended to determine whether clarification of the scope of the terms and their applicability under the SPCC rule was necessary. EPA indicated in the proposal that the Agency did not believe that such definitions were necessary because there is a common understanding of these terms within the affected industry. The Agency is clarifying the scope of the SPCC rule's applicability to gathering lines and finalizing an amendment that exempts the ''intra-facility'' gathering lines that are subject to both EPA and DOT regulatory requirements from the SPCC rule in response to comments on the proposed conditional exemption from secondary containment requirements for flowlines and intra-facility gathering lines. The Agency believes that this exemption is a logical outgrowth of the proposal and the comments received. In the October 2007 proposal, EPA acknowledged that given the characteristics of certain intra-facility gathering lines, these pipelines may be regulated under requirements of both EPA and DOT (72 FR 58407, October 15, 2007). EPA also recognized in the proposal that DOT requirements for pipelines may be similar in scope to SPCC regulations, so that compliance with DOT requirements may be considered environmentally equivalent to certain SPCC requirements. EPA also recognized in the proposal that DOT requirements for pipelines may be similar in scope to SPCC regulations, so that compliance with DOT requirements may be considered environmentally equivalent to certain SPCC requirements. DOT has promulgated regulations for pipelines under 49 CFR parts 192 (*Transportation of Natural and Other Gas by Pipeline*), 194 (*Response Plans for Onshore Oil Pipelines*) and 195 (*Transportation of Hazardous Liquids by Pipeline*). DOT has the statutory authority over gas or hazardous liquid pipelines of any diameter within environmentally sensitive rural areas (defined as ''unusually sensitive areas''), and liquid pipelines above six inches in diameter operating at low pressure. While many gathering lines are under DOT's statutory authority, only a subset of them has DOT regulatory requirements.

EPA recognizes that gathering lines can be outside the Agency's jurisdiction because they ''transport'' oil outside of an oil production facility. EPA has jurisdiction only over non-transportation-related facilities, which includes pipelines that transport oil within a facility. Any inter-facility pipeline, including a gathering line, that transports oil between facilities or from a facility to a vessel, or from a facility to a transportation-related pipeline facility, such as a transmission line, or a pipeline breakout tank, is considered transportation-related and is therefore outside the jurisdiction of EPA and not subject to the SPCC rule. However, the definition of ''facility'' as it applies to the SPCC rule is flexible. Depending upon how an owner/operator defines his facility under the SPCC rule, an oil production facility may also include gathering lines. While gathering lines within the SPCC facility boundaries are intra-facility piping, EPA is maintaining the term intra-facility gathering lines because it is a term that is well recognized within the production sector. For those intra-facility gathering lines that are regulated by both EPA and DOT, EPA is exempting them from the SPCC requirements. In other words, the exemption is for intra-facility gathering lines present at a facility where the piping is subject to both EPA and DOT jurisdiction and regulations. EPA's focus with the SPCC rule is the regulation of oil storage at facilities engaged in activities related to drilling, producing, gathering, processing, refining, transferring, distributing and use of oil, while DOT's focus is in the area of pipeline regulation; therefore, EPA believes it is appropriate to defer to DOT's technical regulation in lieu of EPA's intra-facility gathering line requirements. EPA believes this change is appropriate and is a logical outgrowth of the proposal and several comments received regarding jurisdiction of intra-facility gathering lines.

Only those lines that are subject to DOT regulations are eligible for the exemption finalized in this action.

Those intra-facility gathering lines located at a facility that are not subject to the regulatory requirements at 49 CFR parts 192 and 195 remain subject to the requirements in 40 CFR part 112. Other equipment and piping at an oil production facility (such as flowlines), remain subject to the SPCC requirements. In addition, this exemption requires that owners or operators of a facility identify and mark as ''exempt'' the location of exempt piping on the facility diagram. This requirement will assist facility and EPA personnel in defining the boundaries of EPA and DOT jurisdiction and provide response personnel with information used to identify hazards during a spill response activity.

As discussed in Section V.D of this notice, an owner or operator has the flexibility under the definition of facility to determine the boundaries of their SPCC facility; thus, the facility may include intra-facility gathering lines. DOT defines a production facility under 49 CFR parts 195 as ''piping or equipment used in the production, extraction, recovery, lifting, stabilization, separation or treating of petroleum or carbon dioxide, or associated storage or measurement. (To be a production facility under this definition, piping or equipment must be used in the process of extracting petroleum from the ground, and preparing it for transportation by pipeline.)'' (49 CFR 195.2) This definition is similar in scope to EPA's definition of production facility described above. However, DOT provides additional specificity regarding the endpoints of a production operation for the purpose of defining a gathering line. Under 49 CFR part 192, DOT clarifies that the beginning of gathering may not extend beyond the furthermost downstream point in a production operation (49 CFR 192.8(a)(1)).

Comments. Two commenters suggested clarifications of the term flowline, one of whom suggested a definition. Two other commenters stated that definitions for flowline or intra-facility gathering line were not needed, while several commenters suggested that the references to ''gathering lines'' with flowlines be eliminated, citing the confusion of using the term and noting the MOU with DOT, which specifically limits EPA's jurisdiction of these lines. Another commenter requested that EPA clarify that post-separation gas gathering lines are exempt from the SPCC rule. One other commenter suggested that EPA modify § 112.1(d)(1)(ii) to include an exemption for all gathering lines.

Response to comments. EPA disagrees with those commenters that suggest there is a need to define the terms ''flowline'' and ''gathering line.'' EPA believes the oil production sector has a common understanding of these terms and that specific definitions are not needed. ''Flowlines'' are piping that transfer crude oil and well fluids from the wellhead to the tank battery where separation and treatment equipment are typically located. Flowlines may also connect a tank battery to an injection well. Depending on the size of the oil field, flowlines may range in diameter and run from hundreds of feet to miles between the wellheads and the tank batteries or primary separation operations. The term ''gathering lines'' refers to piping or pipelines that transfer crude oil product between tank batteries, within or between facilities. Gathering lines often originate from an oil production facility's lease automatic custody transfer (LACT) unit, which transfers oil to other facilities involved in gathering, refining or pipeline transportation operations.

EPA considers gathering lines subject to EPA's jurisdiction if they are located within the boundaries of an otherwise regulated SPCC/FRP facility (that is, intra-facility gathering lines). Therefore, to address the concerns raised by commenters, the Agency is including the phrase ''intra-facility'' in front of the term gathering lines to clarify that EPA only has the authority to regulate piping, in this case intra-facility gathering lines, which are located within a facility boundary. The Agency also is finalizing an amendment that excludes from regulation those ''intra-facility'' gathering lines subject to both EPA and DOT regulatory requirements. Specifically, one commenter suggested that EPA modify § 112.1(d) to include an exemption for all gathering lines. While EPA does not agree that all intra-facility gathering lines, located within a production facility, should be excluded from the SPCC requirements, the Agency does agree that minimizing dual regulation, where appropriate, is beneficial to the regulated community. Therefore, EPA is finalizing a new exemption under § 112.1(d)(2)(i) and 112.1(d)(11) for intra-facility gathering lines subject to DOT regulation. The Agency believes this change is appropriate and is a logical outgrowth of the proposal and several comments received regarding jurisdiction of intra-facility gathering lines.

However, the Agency does not want to create a regulatory ''gap'' with this action. Gathering lines, as well as flowlines are a source of oil spills, as demonstrated in EPA's study of the exploration and production sector, ''Considerations for the Regulation of Onshore Oil Exploration and Production Facilities Under the Spill Prevention, Control, and Countermeasure Regulation (May 30, 2007; located in the docket for this rulemaking: EPA–HQ–OPA–2007–0584–0015). Currently, EPA has only a limited set of requirements for flowlines and intra-facility gathering lines, whereas DOT has more comprehensive requirements for pipelines (which are only applicable to a subset of gathering lines within DOT jurisdiction). Additionally, there are no industry standards for flowline or gathering line maintenance. Therefore, intra-facility gathering lines located at a facility that are not subject to the regulatory requirements under 49 CFR parts 192 or 195 remain subject to EPA's SPCC regulations under 40 CFR part 112. These lines also remain subject to EPA jurisdiction and the Agency, if appropriate, can use existing rule mechanisms under § 112.1(f) to bring exempted intra-facility gathering lines back under the SPCC rule requirements.

One commenter requested that EPA clarify that post-separation gas gathering lines are exempt from the rule. EPA maintains its position that hydrocarbons in a gaseous phase under ambient temperature and pressure, such as natural gas, are not regulated under the SPCC rule. However, production facilities can include piping with both oil and gas phases. In this instance, such a facility's dual-phase flowlines and intra-facility gathering lines (that is, those carrying both gas and liquid phase hydrocarbon) are subject to the SPCC requirements (unless they are subject to 49 CFR parts 192 or 195 and are therefore exempt) because if the lines were to rupture or leak, they may discharge oil to navigable waters or adjoining shorelines in quantities that may be harmful as defined in 40 CFR part 110.

b. Exemption From Secondary Containment

EPA believes that secondary containment is, in most cases, impracticable for flowlines and intra-facility gathering lines. Therefore, the Agency is amending § 112.7(c) to provide an alternative (which is optional) to the general secondary containment requirements for flowlines and intra-facility gathering lines (unless they are exempt from regulation). In lieu of secondary containment, the Agency will require the implementation of an oil spill contingency plan in accordance with 40 CFR part 109 (Criteria for State, Local and Regional Oil Removal Contingency Plans) and a written

commitment of manpower, equipment, and materials required to expeditiously control and remove any quantity of oil discharged that may be harmful, without having to make an impracticability determination for each piece of piping. The Agency is tailoring the requirements in an effort to improve compliance and enhance environmental protection.

Comments. Several commenters expressed support for EPA's proposed amendment to remove the secondary containment requirements for flowlines and intra-facility gathering lines at oil production facilities. Several commenters requested, however, that EPA acknowledge the option for owners or operators to select sized secondary containment based on site conditions and recommendations of the PE under certain circumstances. One commenter suggested a modification to allow collection areas rather than individual containment along gathering lines. Another commenter, however, stated that the proposed amendment to exempt flowlines and intra-facility gathering lines at oil production facilities from the secondary containment requirements is inconsistent with 33 U.S.C. 1321(j)(5)(D).

Response to comments. EPA agrees with the majority of commenters that secondary containment for flowlines and intra-facility gathering lines is, in most cases, impracticable and that providing secondary containment for these lines can be difficult and expensive for an owner or operator. Flowlines and intra-facility gathering lines are often several miles long, can be buried, can extend far from the main facility, and are often placed across land that is not owned by the owner or operator of the oil production facility. Providing secondary containment structures for these lines may result in soil erosion and negative impacts to the land (such as when they are located in farm fields). Buried flowlines present additional difficulty, because their exact location may be uncertain, especially at an oil production facility that has changed ownership since the original installation of the lines.

The Agency also recognizes that some facilities have already installed containment for flowlines and intra-facility gathering lines and therefore should not be required to provide a contingency plan in addition to secondary containment. Therefore, EPA agrees with those commenters who suggested that the requirement for a contingency plan in lieu of secondary containment should be an option.

Contingency planning is one of the many tools that the Agency has provided in the SPCC regulatory requirements. The Agency disagrees with the comment arguing that a contingency plan requirement is inconsistent with the intent of 33 U.S.C. 1321(j)(5)(D). The Agency's authority to promulgate the SPCC regulations is found in Section 311(j)(1)(C) of the Clean Water Act, 33 U.S.C. 1321(j)(1)(C). Section 311(j)(1)(C) requires the President to issue regulations establishing procedures, methods, equipment, and other requirements to prevent discharges of oil to navigable waters or adjoining shorelines from vessels and facilities and to contain such discharges. The statutory provision gives the Agency broad discretion to establish the requirements under the SPCC rule. Also, Section 311(j)(5)(D), 33 U.S.C. 1321(j)(5)(D), lists the requirements for facility response plans. The Agency has promulgated regulations for facility response plans in 40 CFR 112.20 and 112.21. The purpose of the SPCC program is to prevent and control oil discharges from reaching navigable waters or adjoining shorelines. However, it is important to recognize that despite best prevention efforts, discharges may occur. The contingency plan requirements under the SPCC program have dual purposes. They include components to prevent oil that has escaped its container or secondary containment from reaching navigable waters or adjoining shorelines, and also include components that address the timely and appropriate response actions to be implemented when an oil discharge does impact navigable waters or adjoining shorelines.

c. Contingency Plan in Lieu of Secondary Containment

EPA is amending §§ 112.7(c) and 112.9(d)(3) to provide an alternative to the secondary containment requirements for flowlines and intra-facility gathering lines at an oil production facility. In lieu of secondary containment, a facility owner or operator may opt to implement an oil spill contingency plan in accordance with 40 CFR part 109 (Criteria for State, Local and Regional Oil Removal Contingency Plans) and prepare a written commitment of manpower, equipment, and materials required to expeditiously control and remove any quantity of oil discharged that may be harmful, without having to make an impracticability determination for each piece of piping. The Agency is amending this provision in an effort to improve compliance and enhance environmental protection. The use of a contingency plan does not relieve the owner or operator of liability associated with an oil discharge to navigable waters or adjoining shorelines that violates the provisions of Section 311(b)(3) of the Clean Water Act, 33 U.S.C. 1321(b)(3). EPA is also amending § 112.7(a) to make it clear that the contingency plan provisions under § 112.9(d)(3) are not subject to the environmental equivalence provision.

Comments. Several commenters expressed support for EPA's proposal to require an oil spill contingency plan in lieu of secondary containment. One commenter, however, suggested an option to require annual physical inspections and the installation of isolation valves. Two other commenters requested that EPA reduce the burden of using this alternative option, because the documentation effort for a contingency plan is extensive.

Response to comments. The Agency does not agree that annual physical inspections and the installation of isolation valves are appropriate, because this could prove to be impracticable for some lines, specifically those that are buried.

With respect to the comments regarding the additional burden that a contingency plan requirement would impose on facilities, the Agency recognizes that this amendment would require additional documentation. However, EPA believes that a contingency plan is necessary when secondary containment is not provided. This final rule allows the owner or operator of the facility to develop a contingency plan as an option to general secondary containment. The contingency plan required when secondary containment is not practicable for flowlines and intra-facility gathering lines should rely on strong maintenance, corrosion protection, testing, recordkeeping, and inspection procedures to prevent and quickly detect discharges from such lines. It should also ensure quick availability and deployment of response equipment. The complexity or simplicity of a facility's contingency plan is subject to good engineering practice as determined by the certifying PE. EPA developed a model contingency plan as part of the SPCC Guidance for Regional Inspectors. This model plan is intended only as an example and inspectors should only use the document for this purpose. Additionally, EPA acknowledges that given the characteristics of certain intra-facility gathering lines, these pipelines may be regulated under requirements of both EPA and DOT. Because DOT requirements for pipelines may be similar in purpose and scope, EPA

recognizes that compliance with the DOT requirements (for example, 49 CFR part 194) for these gathering lines may be considered to satisfy the contingency planning requirement. Therefore a contingency plan developed for 49 CFR part 194 may serve to meet the SPCC Plan requirements. In addition, as previously discussed, the Agency is exempting intra-facility gathering lines that are subject to the regulatory requirements under 49 CFR part 192 or 195 from 40 CFR part 112. Furthermore, the owner or operator of an oil production facility who has prepared an FRP under § 112.20 satisfies the contingency planning requirement for flowlines and intra-facility gathering lines because an FRP is more comprehensive than a contingency plan under 40 CFR part 109. If such a facility owner or operator has already developed an FRP to comply with § 112.20, then he does not need to develop a contingency plan in accordance with 40 CFR part 109. The certifying PE must ensure that the FRP is adequate for the facility and prepared in accordance with good engineering practice. Similarly, the owner or operator of an oil production facility who has prepared a state spill or pollution prevention contingency plan that meets the requirements of 40 CFR part 109 may opt to use this state plan to comply with the SPCC contingency plan requirements.

It should also be noted that the contingency planning requirement is an alternative to the requirement for general secondary containment for flowlines and intra-facility gathering lines and the facility owner or operator can decide which option to comply with. The purpose of this action is to provide options and streamlined requirements that should improve compliance with the rule. The Agency recognizes that flowlines and intra-facility gathering lines are a source of oil discharges and believes that this action provides an alternative method for owners/operators to develop spill prevention and response practices for this equipment to maintain environmental protection.

d. Requirements for a Flowline and Intra-Facility Gathering Line Maintenance Program

EPA is amending the requirement for an owner or operator to prepare and implement a written flowline and intra-facility gathering line maintenance program under § 112.9(d)(4). This action specifies that the requirements apply to intra-facility gathering lines, as well as flowlines at an oil production facility. Intra-facility gathering lines pose the same potential for discharge as flowlines. EPA never intended to regulate the two types of piping differently. Under the amended provisions, a maintenance program must address procedures to:

- Ensure that such flowlines and intra-facility gathering lines and associated valves and equipment are compatible with the type of production fluids, their potential corrosivity, volume, and pressure, and other conditions expected in the operational environment.
- Visually inspect and/or test flowlines and intra-facility gathering lines and associated appurtenances on a periodic and regular schedule for leaks, oil discharges, corrosion, or other conditions that could lead to a discharge as described in § 112.1(b). The frequency and type of testing must allow for the implementation of a contingency plan as described under part 109 of this chapter, if there is no secondary containment.
- Take corrective action or make repairs to any flowlines and intra-facility gathering lines and associated appurtenances as indicated by regularly scheduled visual inspections, tests, or evidence of a discharge.
- Promptly remove or initiate actions to stabilize and remediate any accumulations of oil discharges associated with flowlines, intra-facility gathering lines, and associated appurtenances.

Comments. Several commenters expressed support for EPA's proposed revisions to the flowline/intra-facility gathering line program, although some commenters suggested the addition of corrosion protection for these lines. A number of commenters expressed concern that the requirement for a contingency plan and maintenance program would be burdensome. Some of these commenters suggested using a maintenance program based on risk levels and good industry practices, as determined by a PE. Another commenter requested that the current language be maintained for a program of flowline maintenance.

Other commenters provided suggested other revisions. Specifically, some commenters provided alternative language for the provisions under § 112.9(d)(4). One commenter stated that the proposed requirement under the design and development requirements of § 112.9(d)(4)(i) is vague and unnecessary given the responsibility of a PE certifying the Plan. Other commenters also suggested adding language that would acknowledge that other methods of immobilizing hydrocarbons in soil matrices such as physical, chemical and/or biological treatment methods to address oil accumulations associated with flowlines rather than ''prompt removal.'' Finally, commenters expressed concern with the phrase ''promptly remove'', as associated with actions to stabilize and remediate any accumulations of oil discharges. Commenters suggested replacing this phrase with ''upon discovery''.

Response to comments. EPA is finalizing the amended requirements for a flowline and intra-facility maintenance program under § 112.9(d)(4), specifying that the requirements apply to intra-facility gathering lines, as well as flowlines at an oil production facility. The Agency believes that an effective flowline maintenance program is necessary to detect a discharge in a timely manner so that the oil discharge response operations described in the contingency plan may be implemented effectively. Additionally, eliminating the requirement for secondary containment necessitates more prescriptive requirements for discharge prevention to ensure the integrity of the primary containment of the pipe itself.

EPA is finalizing requirements under § 112.9(d)(4) to require a performance-based program of flowline and intra-facility gathering line maintenance that addresses the facility owner or operator's procedures, that must be documented in their SPCC Plan. EPA agrees with several comments on the language associated with these requirements and has made several changes to the proposed rule in response to these comments. EPA is finalizing the requirement under § 112.9(d)(4)(iv) with some modifications to the proposed regulatory text. The finalized rule states: ''Promptly remove or initiate actions to stabilize and remediate any accumulations of oil discharges associated with flowlines, intra-facility gathering lines, and associated appurtenances.'' This measure is intended to ensure the removal of oil accumulations in order to prevent a discharge. The Agency disagrees with the comment that suggested replacing ''Promptly remove'' with ''Upon discovery.'' ''Promptly remove'' indicates that the owner or operator of the facility has both the responsibility and flexibility to outline an inspection program under § 112.9(d)(4)(ii) which puts the timeframe for ''prompt removal'' in the context of the inspection frequency. Commenters also suggested, however, that language be added that would acknowledge that other methods of immobilizing

hydrocarbons in soil matrices, such as physical, chemical and/or biological treatment methods can be used. The Agency agrees that other methods may be used to stabilize and remediate, and thus, the regulatory text has been revised by adding the phrase, ''remove or initiate actions to stabilize and remediate'' to the rule. EPA considers the removal of oil-contaminated soil as a method to prevent oil from becoming a discharge as described in § 112.1(b). Disposal of oil must be in accordance with applicable Federal, state, and local requirements; under § 112.7(a)(3)(v), a facility owner or operator is required to describe the methods of disposal of recovered materials in accordance with applicable legal requirements. For the purposes of this provision, EPA believes that the removal of recoverable oil can be combined with physical, chemical, and/or biological treatment methods to address any residual oil. These treatment methods must be consistent with other Federal, state or local requirements as applicable, and must be properly managed to prevent a discharge as described in § 112.1(b).

EPA believes that the variations in production facility piping design, layout and location makes flexibility important in order to encourage compliance with this requirement, and believes that this flexibility is already available. However, the flowline and intra-facility gathering line maintenance program requirements also are subject to the environmental equivalence provision found at § 112.7(a)(2). That is, the facility owner or operator may deviate from the requirements if an environmentally equivalent alternate measure is implemented. EPA recognizes that other Federal or state requirements may be environmentally equivalent to certain SPCC requirements, including the flowline and intra-facility gathering line maintenance program requirement. An environmental equivalence determination is subject to review and certification by a PE.

5. Flow-Through Process Vessels

EPA is modifying the requirements at § 112.9(c) to provide an alternative to the sized secondary containment requirements for flow-through process vessels at oil production facilities. Flow-through process vessels, such as horizontal or vertical separation vessels—for example, heater-treater, free-water knockout, gun-barrel, etc.—have the primary purpose of separating the oil from other fractions (water and/or gas) and sending the fluid streams to the appropriate container. Specifically, in lieu of sized secondary containment, a facility owner or operator may opt to provide general secondary containment, inspect or test flow-through process vessels and components for leaks, corrosion or other conditions that could lead to a discharge, as described in § 112.1(b), promptly remove or initiate actions to stabilize and remediate any oil accumulations, and take corrective action should a discharge occur. EPA also would require that sized secondary containment be installed if the facility discharges more than 1,000 U.S. gallons of oil in a single discharge as described in § 112.1(b), or discharges more than 42 U.S. gallons of oil in each of two discharges as described in § 112.1(b) within any twelve month period, from flow-through process vessels (excluding discharges that are the result of natural disasters, acts of war, or terrorism) within six months of such a discharge.

EPA is taking this action because the Agency agrees with concerns regarding the requirement to provide sized secondary containment around flow-through process vessels, such as heater-treaters, due to a potential fire hazard if spilled oil collects around such equipment. EPA also recognizes that similar flow-through process equipment (i.e., oil-filled manufacturing equipment, such as reaction vessels, fermentors, high pressure vessels, mixing tanks, dryers, heat exchangers, and distillation columns) at non-production facilities are not subject to the more stringent sized secondary containment and inspection requirements required for bulk storage containers; only the general secondary containment requirements at § 112.7(c) apply. However, EPA recognizes that process equipment at non-production facilities, such as at manufacturing facilities, is typically attended during hours of operation and there is a greater potential to immediately discover and correct a discharge at non-production facilities than at oil production facilities, which are generally unattended. Therefore, EPA is requiring additional measures for flow-through process vessels at oil production facilities that do not have sized secondary containment, including inspection or testing of components, prompt removal or initiation of actions to stabilize and remediate any oil accumulations, and corrective action.

a. Exemption From Sized Secondary Containment

EPA is amending the requirements in § 112.9(c)(2) to add the phrase ''Except as described in paragraph (c)(5) of this section for flow-through process vessels'' at the beginning of the provision. This amendment removes the requirement to provide sized secondary containment for flow-through process vessels at oil production facilities without making an impracticability determination, and allows the facility owner or operator the option to comply with the alternate requirements in § 112.9(c)(5) instead.

The general secondary containment requirement of § 112.7(c) still applies to flow-through process vessels; they must be provided with secondary containment so that any discharge does not escape the containment system before cleanup occurs. As described in Section V.H of this notice, EPA is amending § 112.7(c) to clarify that the provision allows for the use of both active and passive secondary containment measures to prevent a discharge to navigable waters or adjoining shorelines. Active containment measures are those that require deployment or other specific action by the operator. These measures may be deployed either before an activity involving the handling of oil starts, or in reaction to a discharge, so long as the active measure is designed to prevent an oil discharge from reaching navigable waters or adjoining shorelines. However, active measures would generally have limited applicability at oil production facilities because these facilities are typically not attended and owners or operators may not be able to detect a discharge in a timely manner to successfully implement the active measures. In contrast, passive measures are installations that do not require deployment or action by the owner or operator and may be more appropriate for unattended production operations. The *SPCC Guidance for Regional Inspectors* provides several examples of the use of active and passive measures at an SPCC-regulated facility.

With this action, owners or operators of oil production facilities are no longer required to locate flow-through process vessels within a secondary containment system sized for the entire capacity of the largest single container and sufficient freeboard to contain precipitation. However, EPA believes that oil production facility owners and operators may want to provide secondary containment (such as berms) around the entire tank battery, as many oil production facilities currently do. These batteries can include flow-through process vessels, such as separators, along with oil stock tanks and other bulk storage containers. Such a facility design would provide the maximum environmental protection.

Comments. Several commenters expressed support for EPA's alternative option for flow-through process vessels

in lieu of sized secondary containment. Two commenters, however, requested that EPA clarify whether secondary containment is an alternative to the proposed option, while one commenter requested clarification on whether EPA means containment would hold the single largest process vessel and not containment sized to hold all vessel fluids. Another commenter expressed concern that the proposed requirements are burdensome; DOE generally supported that position and encouraged EPA to consider existing state regulatory programs in lieu of additional requirements.

Another commenter expressed concern that flow-through process vessels at production facilities cause pollution that can not be remediated to the pre-spill condition. Still another commenter was concerned that more oil than the contents of the vessels may be discharged because oil may be constantly flowing into these vessels from the wells. Finally, one commenter expressed concern that the proposed exemption from sized secondary containment is inconsistent with 33 U.S.C. 1321(j)(5)(D), which the commenter believes requires every SPCC Plan to identify the resources necessary to ''mitigate or prevent a substantial threat of'' a worst case discharge. The commenter expressed concern that general secondary containment for a ''most likely'' spill would fail to prevent the worst case discharge.

Response to comments. EPA recognizes that some facilities have already provided sized secondary containment in accordance with § 112.9(c)(2) for flow-through process vessels at productions facilities. EPA agrees with commenters that facility owners or operators who have installed such containment should not be required to comply with the additional requirements for these vessels. Therefore, EPA is amending the rule to indicate that flow-through process vessels equipped with sized secondary containment in accordance with § 112.9(c)(2) and (c)(3) are not required to comply with the alternate requirements under § 112.9(c)(5).

In response to the commenter who asked about the size of containment required, EPA notes that in determining how to provide appropriate general secondary containment for flow-through process vessels, a production facility owner or operator may consider the typical failure mode and most likely quantity of oil that would be discharged (*see* § 112.7(c)). Based on these site-specific conditions, the owner or operator can determine what capacity of secondary containment is needed, and design the containment method accordingly. The design for general secondary containment should address site-specific factors, including, but not limited to, frequency of site visits, rate of flow of the wells, capacity of the containers, and whether the facility is equipped with automatic shut-off devices to prevent an overflow. However, as discussed elsewhere in this preamble, general secondary containment is based on the most likely discharge, not the worst case discharge. EPA agrees with the commenter who expressed concern regarding the effects of a discharge from flow-through process vessels, but the Agency believes that this alternative approach, which requires general secondary containment in accordance with § 112.7(c) and the additional requirements to inspect, repair equipment, and address oil accumulations that may occur following a discharge from flow-through process vessels, addresses this concern. The Agency also believes the alternative requirements for flow-through process vessels address the concern that these facilities are constantly operating and have constant flow of fluids through this equipment because the owner or operator must inspect the equipment and take corrective action to address a discharge following procedures described in the SPCC Plan.

As part of this action, EPA considered whether existing state regulatory programs could satisfy the amended requirements. Although a number of states do have requirements for oil production facilities to prevent spills, they do not provide a comprehensive, national approach that would be equivalent to the SPCC requirements, as these programs have been developed to meet states' individual goals. Therefore, EPA believes that relying solely on state programs would not provide nationwide consistent requirements for spill prevention. However, the Agency recognizes the benefits of allowing the owner or operator of a regulated facility to take credit for compliance with state program requirements when these serve to meet certain SPCC requirements and can be referenced in accordance with 40 CFR part 112.

The Agency also disagrees with those commenters who characterized the amended requirements as excessive, and the requests for EPA to reconsider the necessity of additional measures in lieu of sized secondary containment. The amendment allows an owner or operator to provide general secondary containment for flow-through process vessels and requires new prevention measures as an alternative to the rule's existing sized secondary containment requirement. The alternative measures are optional—that is, the owner or operator may still choose to comply with the sized secondary containment requirement, and the facility owner or operator decides which option is best suited to the design and operation of the facility. The Agency believes that the alternative approach finalized in this rule for flow-through process vessels allows the owner or operator of an oil production facility flexibility in how to design secondary containment for this equipment and in how to comply with the additional requirements that maintain environmental protection.

The Agency disagrees with the commenter who argued that the revised option for flow-through process vessels at production facilities is inconsistent with the intent of 33 U.S.C. 1321(j)(5)(D). The Agency's authority to promulgate the SPCC regulations is found in Section 311(j)(1)(C) of the Clean Water Act, 33 U.S.C. 1321(j)(1)(C). Section 311(j)(1)(C) requires the President to issue regulations establishing procedures, methods, equipment, and other requirements to prevent discharges of oil to navigable waters and adjoining shorelines from vessels and facilities and to contain such discharges. The statutory provision gives the Agency broad discretion to establish the requirements under the SPCC rule. The purpose of the SPCC program is to prevent and control oil discharges from reaching navigable waters or adjoining shorelines. Also, Section 311(j)(5)(D), 33 U.S.C. 1321(j)(5)(D), lists the requirements for facility response plans. The Agency has promulgated regulations for facility response plans in 40 CFR 112.20–21and this action does not impact the requirement for an owner/operator to prepare and implement an FRP when the facility meets the substantial harm criteria in § 112.20(f). Therefore, this amendment does not conflict with the requirements under 33 U.S.C. 1321 (j)(5)(D).

b. Additional Requirements

Because oil production facilities are typically unattended while operating, EPA is adding a provision at § 112.9(c)(5) to provide additional requirements for flow-through process vessels at those facilities that do not provide sized secondary containment. These additional requirements include periodic inspection and/or testing for leaks, corrosion, or other conditions that could lead to a discharge as described in § 112.1(b); corrective action or repairs to flow-through process vessels and any associated components as indicated by

regularly scheduled visual inspections, tests, or evidence of an oil discharge; and prompt removal or initiation of actions to stabilize and remediate any accumulations of oil discharges associated with flow-through process vessels.

Comments. One commenter recommended not mandating routine inspection of flow-through vessels, because oil and gas operators routinely visit tank batteries and wells and the lease operator would observe leaks from the vessels. The commenter also stated that weather conditions require aerial inspections during the winter months, which may not be possible given the proposed requirement. Another commenter expressed concern with the burden of complying with the additional inspection requirements.

Several commenters provided alternative language for promptly removing any accumulations of oil discharges as described under § 112.9(c)(5). Specifically, commenters suggested adding language that would acknowledge other methods of immobilizing hydrocarbons in soil matrices (such as physical, chemical and/or biological treatment methods) to address oil accumulations associated with flowlines. Commenters also expressed concern with the phrase ''promptly remove'' and suggested replacing it with the phrase ''upon discovery.''

Response to comments. The requirement of periodic inspection and/or testing of flow-through process vessels and associated appurtenances on a regular schedule for leaks, corrosion, or other conditions that could lead to a discharge as described in § 112.1(b) is intended to increase the likelihood that a discharge will be prevented or detected promptly. This is especially true for components that typically cause discharges, such as dump valves. These requirements are consistent with the inspection requirements for bulk storage containers under § 112.9(c)(3). EPA recognizes that because oil production facilities are typically unattended, remote, and have a constant flow of oil and well fluids, sized secondary containment measures provide environmental protection for any potential discharge. EPA does not intend for inspections to create a public safety concern for personnel conducting inspections and EPA expects that the SPCC Plan will include provisions to address weather-related concerns that may impact the inspection schedule. Because EPA is revising the rule such that flow-through process vessels are subject to the general secondary containment requirement (§ 112.7(c)) instead of the sized secondary containment requirement, the Agency seeks to ensure that any leak, or potential for a leak, is detected promptly enough to prevent a discharge of the entire contents of the separation or treating equipment. Therefore, EPA believes it is important to require that inspections be completed and documented in accordance with the requirements in § 112.7(e).

EPA is amending the requirement under § 112.9(c)(5)(iii) with some modifications to the proposed language, in response to comments regarding removal of oil accumulations. Specifically, commenters suggested adding language that would acknowledge that other methods of immobilizing hydrocarbons in solid matrices, such as physical, chemical and/or biological treatment methods should be allowed. EPA agrees that other methods may be used to stabilize and remediate and thus, the Agency is adding the phrase, ''remove or initiate actions to stabilize and remediate'' to address this concern. EPA considers the removal of oil-contaminated soil as a method to prevent oil from becoming a discharge as described in § 112.1(b). Disposal of oil must be in accordance with applicable Federal, state, and local requirements; under § 112.7(a)(3)(v), a facility owner or operator is required to describe the methods of disposal of recovered materials in accordance with applicable legal requirements. For the purposes of this provision, removal of recoverable oil may be combined with physical, chemical, and/or biological treatment methods to address any residual oil. These treatment methods must be consistent with other Federal, state or local requirements as applicable, and must be properly managed to prevent a discharge as described in § 112.1(b). However, the Agency disagrees with the comment that suggested replacing ''Promptly remove'' with ''Upon discovery.'' ''Promptly remove'' indicates that the owner or operator of a facility has both the responsibility and flexibility to outline an inspection program under § 112.9(c)(5)(i) which puts the timeframe for ''prompt removal'' in the context of the inspection frequency.

Finally, EPA believes that variations in oil production facility piping design, layout, and location make flexibility important in order to encourage compliance with these additional measures. However, such flexibility is already available in that these requirements for flow-through process vessels are subject to the environmental equivalence provision found at § 112.7(a)(2). For example, other Federal or state requirements may be environmentally equivalent to certain SPCC requirements. Thus, the facility owner or operator may deviate from the requirements if an environmentally equivalent alternate measure, subject to review and certification by a PE, is implemented. The environmental equivalence provision found at § 112.7(a)(2) cannot be used for any containment provision associated with flow-through process vessels.

c. Reportable Discharge

EPA is finalizing a provision at § 112.9(c)(5)(iv) to require that a production facility owner or operator ensure that all flow-through process vessels subject to this subpart (that is, are using the new alternative to sized secondary containment) comply with § 112.9(c)(2) and (c)(3) within six months from the discovery of a discharge from a flow-through process vessel of more than 1,000 U.S. gallons of oil in a single discharge as described in § 112.1(b), or more than 42 U.S. gallons of oil in each of two discharges as described in § 112.1(b), occurring within any twelve month period. When determining spill history, the amount specified in the criterion (either 1,000 or 42 U.S. gallons) refers to the amount of the discharge that actually reaches navigable waters or adjoining shorelines, and not the total amount of the discharge. Discharges as described in § 112.1(b) that are the result of natural disasters, acts of war, or terrorism are not considered toward this requirement. A flow-through process vessel using this alternative approach must already comply with § 112.9(c)(1) and § 112.9(c)(4) and therefore these requirements were not added to § 112.9(c)(5)(iv).

Comments. Two commenters expressed concern with the reportable discharge criterion because § 112.4 already requires a facility with a discharge as described in this provision to submit a report to the Regional Administrator within 60 days.

Response to comments. While the Agency acknowledges that EPA continues to require a facility that has had a discharge as described in § 112.1(b) to submit a report to the Regional Administrator within 60 days, EPA believes that the owner or operator of a facility that has had such a discharge, as described in this criterion, should be required to comply with the sized secondary containment requirement because it would appear that the facility was not able to prevent discharges to navigable waters or adjoining shorelines by complying with the alternative standard—that is, general

secondary containment with additional measures. If a facility owner or operator is unable to successfully prevent oil discharges using general containment requirements and additional measures, EPA believes that requiring sized secondary containment provides a fail-safe method to address the risk of discharges. The Agency's preferred method for preventing discharges from flow-through process vessels at these constantly-flowing, unattended facilities is the use of sized secondary containment. Sized secondary containment provides a buffer to allow for containment of fluids from these vessels until a discharge is discovered. Thus, the owner or operator would be required to automatically amend the SPCC Plan and provide sized secondary containment for all flow-through process vessels at the production facility within six months of the discharge. This containment must be sized to contain the contents of the single largest container, with sufficient freeboard for precipitation. Additionally, the owner or operator must submit a report to the EPA Regional Administrator as required under § 112.4(a).

The discharge criterion is a well-established threshold in the SPCC rule. This discharge criterion is similar to the provision in § 112.4(a) for discharges that must be reported to the EPA Regional Administrator. Under § 112.4, a facility owner or operator must report certain information to the Regional Administrator whenever the facility experiences a discharge reportable under § 112.4. The Agency has used this criterion for eligibility for alternative measures in the past, such as to allow the owner or operator of a qualified facility to self-certify the SPCC Plan and to allow the use of contingency planning and other measures in lieu of secondary containment for qualified oil-filled operational equipment (see 71 FR 77266, December 26, 2006). The Agency believes that finalizing this criterion to trigger the requirement to redesign secondary containment is consistent with other spill history criteria used elsewhere in the SPCC rule.

6. Alternative Qualified Facility Eligibility Criteria for Oil Production Facilities

In December 2006 (71 FR 77266, December 26, 2006), EPA promulgated an amendment to the SPCC rule to allow the owner or operator of a qualified facility to self-certify his SPCC Plan, which in this final rule EPA identifies as a Tier II qualified facility. Furthermore, as described in Section V.G of this notice, EPA is establishing an additional option for a subset of qualified facilities (designated as Tier I qualified facilities) that meet an additional criterion. The owner and operator of a Tier I qualified facility may complete and implement a streamlined, self-certified SPCC Plan template (promulgated as Appendix G to 40 CFR part 112).

The following table illustrates the tiers, criteria, and options for production facilities meeting the qualified facilities eligibility criteria and all other production facilities, as described in this notice:

Production facilities that are qualified facilities		All other production facilities
Tier I	Tier II	
Oil production facility and: (1) No more than two producing wells per single tank battery / ten barrels or less of crude oil per well per day / if the facility has an injection well; or (2) No more than four producing wells per single tank battery / ten barrels or less of crude oil per well per day / no injection wells; or (3) The facility has10,000 U.S. gallons or less aggregate aboveground oil storage capacity; and		Oil production facility with an aggregate aboveground oil storage capacity greater than 10,000 gallons and: (1) More than two producing wells per single tank battery with one or more injection wells; (2) More than four producing wells per single tank battery; or (3) More than ten barrels of crude oil produced per well per day; or
Within any twelve-month period, three years prior to the Plan certification date, or since becoming subject to the SPCC rule if in operation for less than three years, there has been: (1) No single discharge of oil to navigable waters or adjoining shorelines exceeding 1,000 U.S. gallons; and (2) No two discharges of oil to navigable waters or adjoining shorelines each exceeding 42 U.S. gallons*; and		Within any twelve-month period, three years prior to the Plan certification date, or since becoming subject to the SPCC rule if in operation for less than three years, there has been: (1) A single discharge of oil to navigable waters or adjoining shorelines exceeding 1,000 U.S. gallons; or (2) Two discharges of oil to navigable waters or adjoining shorelines each exceeding 42 U.S. gallons*; or
No individual aboveground oil containers greater than 5,000 U.S. gallons;	Has individual aboveground oil containers greater than 5,000 U.S. gallons; or Owner or operator eligible for Tier I qualified facility status, but decides not to take the option or chooses to develop a ''hybrid'' Plan;	Owner or operator eligible for qualified facility status, but decides not to take the option;
Then: Complete and self-certify Plan template Appendix G to 40 CFR part 112) in lieu of a full PE-certified Plan.	Then: Prepare a self-certified Plan in accordance with all applicable requirements of § 112.7 and subparts B and C of the rule, in lieu of a PE-certified Plan.	Then: Prepare a PE-certified Plan in accordance with all applicable requirements of § 112.7 and subparts B and C.

* This criterion does not include discharges as described in § 112.1(b) that are the result of natural disasters, acts of war, or terrorism. Additionally, the gallon amount described in this criterion addresses the amount of the discharge that actually reaches navigable waters or adjoining shorelines.

In the October 2007 proposed rule, EPA solicited comment on whether the Agency should consider alternative criteria in identifying a ''qualified facility,'' and thus, allow the owner or operator of an oil production facility to self-certify the SPCC Plan, notwithstanding the tank storage capacity at the facility. Specifically, EPA requested comment on an approach that was suggested by EPA and two approaches that were suggested by DOE (*see* 72 FR 58411, October 15, 2007 for a more detailed description of the specific approaches on which EPA solicited comment.) Based on the comments received, and the Agency's evaluation of this industry sector, EPA is finalizing in this rule an amendment that provides alternative criteria for identifying qualified facilities in the oil production sector for onshore facilities. EPA believes that alternative eligibility criteria for identifying a qualified facility for certain onshore oil production facilities is appropriate because, notwithstanding their simple configurations, many of these small oil production facilities cannot meet the 10,000 gallon aggregate aboveground oil storage capacity threshold for Tier I and II qualified facility designation. Given (1) the large number of marginal or stripper wells in the U.S.[6]; (2) that they contribute a significant portion of the country's oil production; and (3) EPA's understanding of the particular aboveground oil storage container capacities and the nature of the fluids handled at certain small oil production facilities, other criteria beyond oil storage container capacity are more appropriate in determining whether an owner or operator of such a facility should self-certify his SPCC Plan. These other criteria, unique to small oil production facilities, serve to identify a qualified facility consistent with the intent of this approach as promulgated on December 26, 2006 (71 FR 77266), by identifying the simplest operations by factors other than strictly capacity.

A qualified oil production facility is one that meets all of these conditions: (1) No more than two producing wells per single tank battery if the facility has an injection well; or no more than four producing wells per single tank battery with no injection wells at the facility; (2) each well produces no more than ten barrels of crude oil per day; and (3) the facility has not had a single discharge as described in § 112.1(b) exceeding 1,000 U.S. gallons or two discharges as described in § 112.1(b) each exceeding 42 U.S. gallons within any twelve month period in the three years prior to Plan certification, or since becoming subject to 40 CFR part 112 if the facility has been in operation for less than three years. Facilities with no more than two producing wells are eligible to be a qualified facility regardless of whether they have injection wells. Discharges as described in § 112.1(b) that are the result of natural disasters, acts of war, or terrorism do not disqualify a facility owner or operator from the alternative option described above.

The Tier II qualified facility eligibility criteria at § 112.3(g)(2) have been amended to include these criteria for oil production facilities. The owner or operator of a qualified oil production facility may choose to prepare a self-certified SPCC Plan in lieu of a Plan certified by a PE. An oil production facility owner or operator exercising this option may be required to make production or shipping records available to support his eligibility. Records kept under usual and customary business practices will suffice, and must be kept for a period of three years, in accordance with § 112.7(e).

Owners or operators of oil production facilities may meet Tier II qualified facility eligibility through either criterion—has an aggregate aboveground oil storage capacity of 10,000 U.S. gallons or less (§ 112.3(g)(2)(i)); or the criteria described above for an onshore oil production facility (§ 112.3(g)(2)(ii)). An oil production facility that also meets the Tier I qualified facility eligibility criteria in § 112.3(g)(1) (that is, the facility has no individual oil storage container with a capacity greater than 5,000 U.S. gallons) would be eligible to develop an SPCC Plan following the template in Appendix G to the SPCC rule finalized in this rulemaking (see Section V.G of this notice).

Elsewhere in today's preamble, EPA clarified that a natural gas production facility storing condensate (petroleum oil), in quantities that meet the SPCC applicability criteria, is considered an oil production facility. Since such an onshore natural gas production facility, as described above, is considered an onshore oil production facility, it may be eligible for the qualified facility relief for marginal wells if it meets the other new criteria finalized today in § 112.3(g)(2)(ii). Additionally, since a natural gas production facility can often store smaller quantities of oil, the facility may already meet the existing ''capacity based'' qualified facility criteria in § 112.3(g)(2)(i), available to all facility types.

Additionally, in order to provide the owner or operator of a production facility that meets the qualified facility criteria with the necessary time to fully understand the new regulatory options finalized in today's action, EPA is proposing, in a separate action in the **Federal Register** of November 26, 2008 (73 FR 72016), a new compliance date to prepare or amend and implement the production facility's SPCC Plan.

a. Alternative Qualified Facility Eligibility Criteria for Oil Production Facilities

This approach is intended as an alternative to the existing 10,000 gallon aggregate aboveground oil storage capacity eligibility criteria. It provides tailored qualified facility eligibility criteria based on process operating conditions and equipment unique to oil production facilities rather than static oil storage capacity. The owner or operator of an oil production facility that meets the 10,000 gallon threshold may already self-certify his SPCC Plan and does not also need to meet the differentiated criterion for oil production facilities finalized in this action.

Ten barrels or less of crude oil produced per well per day. The ten barrels or less per well per day criteria was chosen because this production rate is consistent with the definition of a ''stripper well.'' EPA established differentiated requirements for ''stripper wells'' under the CWA, which were codified in 1979 (see 40 CFR 435.60). The Interstate Oil and Gas Compact Commission (IOGCC) also defines ''stripper wells'' as wells that produce ten barrels of oil per day or less.[7] This production rate limits the qualified oil production facility approach to those facilities with smaller quantities of oil and associated fluids.

Maximum of two producing wells per single tank battery (if the facility has an injection well) or maximum of four producing wells per single tank battery (with no injection wells at facility). In the October 2007 proposal, EPA suggested that the criterion used to identify qualified oil production facilities should be a maximum of four wells at a single tank battery producing no more than ten barrels of oil per day (72 FR 58378, October 15, 2007). The Agency requested comment on this approach. While commenters expressed

[6] The Interstate Oil and Gas Compact Commission estimates that there are 422,255 marginal oil wells as of January 1, 2007 (IOGCC Marginal Wells: 2007 Report).

[7] *See* Interstate Oil and Gas Compact Commission, 2006: ''Marginal Wells: Fuels for Economic Growth'', p. 4 (defining ''stripper wells'' as wells that produce 10 barrels of oil per day or less).

support generally for a definition of ''qualified facility'' specific to the oil production sector, they also argued that limiting the definition to those facilities with four wells or fewer would not allow many facilities to take advantage of this approach. However, the Agency analyzed comments provided on the original proposal that established qualified facilities (70 FR 73524, December 12, 2005) together with the comments provided on the approach described in the October 2007 proposed rule (72 FR 58378) relative to the overall reason for identification of a qualified facility; that is, that owners and operators of facilities that handle small oil quantities, with simple, straightforward processes and equipment, should be capable of developing, implementing, and self-certifying an SPCC Plan without the services of a PE. With this underlying principle in mind, EPA considered the type and scale of operations and the equipment involved at small, marginal well oil production facilities and concluded that when there are no injection wells at the facility, four producing wells per single tank battery is an appropriate criteria to define a simple oil production facility configuration.

One or more injection wells are typically used to inject produced water underground for disposal or to enhance recovery of oil from production wells. The underground injection process can add additional piping to the design of an oil production facility. Consequently, EPA has included a ''no injection wells'' criterion for qualified oil production facilities with more than two wells per single tank battery. The injection well process typically consists of piping extending from a produced water container to the injection wellhead, valves, and pumps and may include tank level indicators, floats, flow controls, and actuators/switches that add additional equipment to the oil production facility. EPA believes the integration of such injection equipment and its operation into the design and operation of the production facility calls for PE certification rather than the owner or operator self-certifying of the SPCC Plan at facilities that have more than two production wells and injection wells. EPA also does not believe it is reasonable or appropriate for an owner or operator to designate the injection well and its associated piping a separate facility just to meet the alternative qualified facility eligibility criteria. However, as noted in section V.M.7, an injection well that injects fluids that were stored in a container that is exempt from the SPCC regulation under § 112.9(c)(6)(i) will not preclude a facility from being eligible for treatment as a qualified facility under § 112.3(g)(2)(ii). Therefore, the Agency believes that at a facility with no injection wells and a maximum of four producing wells per single tank battery, each of which produce ten barrels or less of crude oil per well per day, captures the oil production operations targeted by the self-certification option because these facilities, with a limited number of producing wells per tank battery operating at a low flow rate, and no injection wells or associated equipment, are less complex than other oil production facilities.

Commenters also argued that ''no injection wells'' is not part of an established definition and that small facilities that utilize injection for secondary or tertiary recovery would not qualify. As EPA considered the type and scale of operations, and the likely quantities of oil handled, EPA also analyzed whether marginal well oil production facilities with an injection well that handle small oil quantities could be similarly less complex than other oil production facilities. The Agency established the threshold of two wells per single tank battery if there is one or more injection wells at the facility because field observation and professional judgment suggests that with two wells, the tank battery is typically situated near the well head to minimize the length of flowlines. As the number of wells flowing to a single tank battery decreases to two wells, the footprint of the facility potentially decreases and the lesser area encompassed by a facility with fewer wells flowing to the tank battery means that significantly shorter flowlines are needed to move well fluids to separation and storage processes. EPA also understands that as the number of wells in a lease (the term used for the area of wells run by an owner or operator) decreases, the number of tanks and separators typically decreases. Depending on the flow rates and well locations, separate tank batteries serving widely separated wells may be installed on one lease. Fewer valves, smaller separation equipment and fewer or smaller storage tanks in the tank battery are also expected at a facility with two wells than those with four wells per single tank battery. Finally, based on the Agency's best professional judgment and experience in the field, pumpers and well service operations typically occur once or twice per week; on this basis, the likely quantities of well fluids and marketable oil generated by a two-well operation per single tank battery is more consistent with the quantities expected at qualified facilities that are not oil production facilities. By limiting the overall number of producing wells, and therefore the associated equipment and piping at an oil production facility, the Agency is targeting those production facilities that should be eligible to self-certify SPCC Plans. In order to strike a balance between those operations with injection wells and those without, EPA is allowing oil production facilities with no more than two producing wells that also have injection wells an option to self certify the Plan. Regardless of the presence of injection wells at these facilities, the overall number of wells and associated equipment is still limited by this approach. In addition, the likely smaller oil quantities stored at a two-well facility with injection wells captures the smaller operators targeted by the self-certification option because these facilities are similar in complexity to an oil production facility with four producing wells per tank battery with no injection wells. Similarly, the specification of ''per single tank battery'' is intended to make clear that the self-certification option for production facilities does not extend to a central processing area (a production treatment and separation operation that receives fluids from a qualified facility tank battery).

Although the criterion limits the number of wells per single tank battery, it does not limit the number of tank batteries located at the oil production facility. That is, EPA believes that tank batteries within an oil production facility may still have simple configurations and the presence of multiple tank batteries does not add complexity to the overall oil production facility. As EPA discussed previously in Section V.D of the preamble, the owner or operator of a production facility has the flexibility to define the facility's boundaries such that it can include multiple tank batteries. Therefore, if the oil production facility meets one of the two alternative criteria described in this section (that is, it has no more than two producing wells per single tank battery each of which produce ten barrels or less of crude oil per well per day if there are injection wells; or the facility has no more than four producing wells per single tank battery, each of which produce ten barrels or less of crude oil per well per day, and has no injection wells at the facility; and meets the reportable discharge history criterion) the owner or operator can self-certify the SPCC Plan.

Comments. Many commenters expressed general support that EPA

utilize other relevant criteria in identifying a ''qualified facility'' in the oil production sector, although most of the commenters did not support the approach EPA is promulgating in this final rule. However, other commenters questioned why oil production facilities would have different criteria than facilities in other industries when they already have less stringent requirements under the SPCC rule. Two commenters opposed any alternative eligibility criteria for production facilities, arguing that the basis of the qualified facility approach is to provide an alternative for the truly small operator to avoid the cost of PE certification of his SPCC Plan. Commenters questioned why EPA would reduce requirements for oil production facilities given the sector's spill history and operational complexity. These commenters requested that all facilities above 1,320 gallons of total aboveground oil storage capacity should be certified by a PE.

Still other commenters questioned the number of wells and other conditions that EPA described in the preamble to the proposal. One commenter stated that limiting the option to facilities with four wells is of concern because the number is not well-established and would restrict the applicability of this option. Several commenters also expressed concern with the ''no injection wells'' criterion, noting that injection does not add complexity to the facility, is a common practice, and the produced water that is reinjected is of low oil content. Commenters also stated that ''no injection wells'' is not part of an established definition and that small facilities that utilize injection for secondary or tertiary recovery would not qualify.

Other commenters suggested other approaches or options that EPA could pursue. For example, one commenter suggested the alternative eligibility criteria should be a production rate less than five barrels per day per well, and very simple operations consisting of no more than three wells flowing to one tank battery and no injection wells. Two other commenters provided support for oil production facilities to qualify for Tier I, although some commenters suggested that the Tier I qualified facility threshold discussed in the October 2007 proposal would be too limiting, and suggested that a facility with one 400 barrel (16,800 U.S. gallons) oil tank should be eligible for the Tier I category.

Response to comments. EPA agrees in principle with the commenters who supported alternative qualified facility eligibility criteria for oil production facilities and is finalizing the option described in the proposal with some modifications. The Agency does not agree that PE certification should be required for all facilities with more than 1,320 U.S. gallons oil storage capacity, given that the Agency has already promulgated an approach allowing owners and operators of facilities that meet certain criteria, including a total aboveground oil storage capacity of 10,000 U.S. gallons or less to self-certify Plans. A number of commenters pointed out that oil production facilities are already subject to a differentiated set of requirements under the SPCC rule. While the Agency recognizes this, it continues to believe that a differentiated alternative for facilities with simple configurations has merit, and that providing the added flexibility of self-certification for the smaller oil handlers/simpler operations, along with the other streamlined requirements tailored to the unique features of this sector (as described elsewhere in the preamble to this final rule) should improve overall spill prevention and environmental protection.

Because the configuration of an oil production facility is variable, complexity depends upon a number of factors, including, but not limited to: The oil field, production rate, type of fluid, operating equipment and conditions, and viscosity of the oil. Because oil production facilities do not have a ''typical'' configuration, the Agency has finalized eligibility criteria intended to minimize the complexity of the operations where self-certification seems appropriate. By setting the maximum number of wells at four producing wells if there are no injection wells at the facility, or two producing wells if there are injection wells at the facility, there is a greater likelihood that those wells are located near the tank battery. EPA believes that the four-well criterion targets those oil production facilities with less complex operations and configurations, consistent with other qualified facilities. Similarly, the criterion that excludes underground injection for a facility with four producing wells eliminates the complexity associated with injection related equipment. By limiting the number of producing wells per single tank battery to two producing wells at facilities that have injection, EPA believes that because of the smaller oil storage capacities and the greater likelihood that those wells are located near the tank battery, a marginal well oil production facility with two producing wells is consistent with other qualified facilities. In addition, the reduced complexity in decreasing from four to two producing wells is similar to the change in complexity associated with injection wells. As noted above, EPA believes a PE need not be involved in the SPCC Plan at facilities with a limited number of wells and associated equipment and piping.

A number of commenters noted that by limiting the number of wells per tank battery and not allowing injection wells to be utilized in designating a qualified facility for the oil production sector, it would limit the number of oil production facilities that could self-certify their SPCC Plan. First, it should be noted that in designating a ''qualified facility'' in the oil production sector, the purpose is to identify those facilities that should be eligible to self-certify their SPCC Plan without the involvement of a PE-that is, those facilities that handle small quantities of oil, with simple and straightforward processes and equipment, and not to maximize the number of oil production facilities that could be eligible to self-certify their SPCC Plan. However, EPA also estimated the number of facilities that would meet the eligibility criteria for a qualified facility under the eligibility criteria promulgated today for the oil production sector. Based on our analysis (which can be found in the Regulatory Impact Analysis for this action, located in the docket for this rulemaking), EPA estimates that approximately one third of oil production facilities would meet the alternative eligibility criteria. If those oil production facilities that meet the eligibility criteria for self-certification based on the 10,000 gallon threshold are also included, EPA estimates that almost half of oil production facilities could take advantage of self-certifying their SPCC Plan. Thus, EPA does not agree with commenters that the eligibility criteria being promulgated today for defining a qualified facility in the oil production sector is too narrow.

The Agency also agrees that oil production facilities should also be eligible as Tier I qualified facilities. Thus, the owner or operator of an oil production facility that meets the criteria finalized under this rulemaking and additionally meets the Tier I qualified facility eligibility criteria in § 112.3(g)(1) (that is, the facility has no individual oil storage container with a capacity greater than 5,000 U.S. gallons) is also eligible to use the streamlined Tier I qualified facility SPCC Plan template (Appendix G to the SPCC rule). The Agency also does not agree that the eligibility criteria for Tier I are too limiting, as the relief provided by the SPCC Plan template and other streamlined requirements are targeted to

a specific segment of the universe of facilities based upon simplicity of configuration and a 5,000-gallon limit on the total aboveground storage capacity for any single container. EPA believes that facilities that qualify for Tier I have a reduced risk of discharge in harmful quantities due to this limit on aboveground single container total storage capacity. Thus, the Agency does not agree that a 400-barrel container (16,800 U.S. gallons) should qualify for Tier I, as this quantity is three times the container threshold for other Tier I qualified facilities (with a maximum aboveground oil storage container of 5,000 U.S. gallons). Commenters did not provide data to support the larger tank size or demonstrate how this would maintain environmental protection. Larger containers have the potential for a larger discharge, may have more stringent requirements for inspection and maintenance in accordance with industry standards, and therefore, EPA believes should not be eligible for the Tier I streamlined requirements.

b. Alternative Approaches for Addressing Small Oil Production Facilities as Suggested by the Department of Energy (DOE): Alternative Eligibility Criteria

In the proposal to this rulemaking (72 FR 58378, October 15, 2007), the Agency sought input on different eligibility criteria, as suggested by DOE, to identify a small oil production facility as a qualified facility. The criteria would allow for the development of a self-certified SPCC Plan, and allow the use of a streamlined SPCC Plan template for a certain set of facilities, similar to that found in proposed Appendix G to the SPCC rule. Under the qualified facility criteria at § 112.3(g), a facility that has an aggregate aboveground oil storage capacity of 10,000 U.S. gallons or less and has not had a single discharge as described in § 112.1(b) exceeding 1,000 U.S. gallons or two discharges as described in § 112.1(b) each exceeding 42 U.S. gallons within any twelve-month period in the three years prior to Plan certification, or since becoming subject to 40 CFR part 112 if the facility has been in operation for less than three years is eligible for the qualified facility Plan requirements at § 112.6 (i.e., a self-certified Plan in lieu of a PE certified Plan). DOE suggested that because of the unique characteristics of small oil production facility operations, such facilities may merit the establishment of small oil production facility-specific eligibility criteria, including a different aggregate oil storage capacity threshold or stripper well definition for identifying qualified facilities. For example, DOE suggested that a stripper well be defined using the IRS tax code definition of 15 barrels or less of oil per day equivalence (see 26 U.S.C. 613A). In light of this request, EPA sought comment on whether there are unique circumstances at small or marginally economic oil production facilities and the alternative criteria based on these circumstances for the possible establishment of a ''qualified facility'' provision specific to small oil production facilities that would serve to increase SPCC spill prevention and reduce the likelihood of a harmful oil discharge.

Comments. Several commenters argued that the current threshold requirements are too low to provide significant benefit for marginal oil production facilities. For example, one commenter suggested a total aboveground oil storage capacity of 50,000 gallons where no single container is greater than 21,000 gallons, whereas another commenter suggested removing consideration of this approach unless produced water storage is eliminated from the threshold calculation.

Concerning the stripper well definition, two commenters supported DOE's suggestion to use the IRS tax code definition for marginal production to ease compliance. One commenter indicated that the EPA definition remains linked to facility storage capacity, and storage capacity at marginal wells is not sized based on current production levels and in fact decreases over time.

Concerning other regulatory programs addressing the objectives of the SPCC rule, one commenter suggested that state spill prevention regulatory programs should serve small production facilities rather than one Federal program. However, another commenter noted that states in general simply do not address equivalent requirements of the SPCC regulations and especially not to the extent of the SPCC regulations with respect to prevention of oil discharges. Two commenters suggested that EPA consider other regulatory requirements, including DOT Carrier Requirements for Spills, Spill Reporting, Transportation Security Planning, and EPA's Stormwater Discharge Permitting program, the National Pollutant Discharge and Elimination System (NPDES) program, and Underground Injection Control (UIC) program. Another commenter suggested allowing all SPCC facilities to have the option of using other equivalent prevention plans to meet SPCC planning requirements. Finally, one commenter suggested that EPA remove the self-certification provision from the rules so that all farmers, small businesses and other oil storage facilities are required to prepare a complete SPCC Plan certified by a PE to ensure ''equal and fair treatment for all owners and operators.''

Response to comments. The Agency disagrees with commenters who suggest establishing a new capacity based Tier II criterion for oil production facilities greater than the already established 10,000-gallon threshold for all facilities. While the Agency received a number of comments regarding a wide variety of thresholds for defining a Tier II qualified facility in the oil production sector, the comments did not provide sufficient data to support the threshold numbers other than it would increase the number of facilities that would be eligible as a qualified facility and thus, self-certify their SPCC Plan. More importantly, the commenters did not demonstrate how these new thresholds would maintain environmental protection. EPA does not agree with the commenters to base a new Tier II qualified facility threshold for oil production operations solely on an increased capacity threshold, as there was no justification for providing oil production facilities with a higher threshold than non-production facilities or for how the higher threshold relates to simplicity in facility configuration or operations.

Nevertheless, EPA agrees with commenters that the oil production sector has unique characteristics and that other criteria may better serve in defining a Tier II qualified facility. For example, the fact that oil production facilities have flow-through process vessels suggests that flow rate (in the form of an oil production rate) may be a better approach for setting a new criterion for identifying the simplest oil production facility operations. However, EPA disagrees with commenters who argued that the IRS tax code definition of 15 barrels or less of oil per day should be used in defining flow rate. Specifically, the IRS definition of 15 barrels of oil or less per day equivalent is calculated by dividing the average daily production of domestic crude oil and domestic natural gas from producing wells on such property for such calendar year by the number of such wells. Thus, under this approach, a facility will contain wells with marginal production, such as 15 barrels of oil per day, but also will likely contain wells that produce much greater quantities of oil, because the IRS definition calculates the average daily production of oil over all producing wells, as opposed to the amount of oil

that flows from any individual well. EPA believes that using such a definition defeats the purpose of identifying a qualified facility, which is to allow those small facilities that have relatively simple operations to self-certify their SPCC Plans. Thus, the Agency has adopted a per well approach that places a flow rate cap of ten barrels or less of oil produced per well per day, as this is consistent with the definition of ''stripper well'' codified at 40 CFR 435.60.

Additionally, because the source of the oil for production facilities is through extraction wells, the number of wells better identifies the complexity of a production operation. Finally, some of these facilities are unique as they reinject fluids in the reservoir for disposal purposes or for enhanced oil recovery. The presence of these injection wells is a characteristic unique to oil production facilities that can help to determine the complexity of the operation. These characteristics, unique to the oil production sector, provided the Agency with the basis for a tailored set of criteria to identify oil production facilities with simple configurations. Developing a criterion based solely on raising the oil storage capacity criterion would be inconsistent with the rationale established for the original 10,000-gallon criterion and would not necessarily maintain environmental protection. Thus, while EPA does not agree that raising the oil storage capacity threshold is appropriate, the Agency does agree with commenters that the unique characteristics of an oil production facility allow EPA to establish alternative criteria for a Tier II qualified facility, and EPA has finalized provisions to that effect.

Finally, EPA disagrees with commenters who suggested that the SPCC regulations are not needed because of other regulatory programs, such as state programs, or the NPDES or UIC programs. EPA conducted a comparison of a number of these programs with the SPCC program and found that they were not nationally uniform (*see Review of State Regulations Pertaining to Oil Spill Prevention at Onshore Production Facilities and Produced Water Containers,* prepared by Abt Associates Inc., June 6, 2008, and found in the docket for today's rulemaking). Further, under the Oil Pollution Act and CWA, EPA is required to promulgate oil spill prevention regulations, and it cannot delegate its responsibilities to other Federal or state programs, but has streamlined SPCC requirements or provided targeted exemptions from SPCC regulation when such regulations provide comparable or equivalent environmental protection. However, EPA has stated previously that if a facility owner or operator must comply with a state or Federal requirement that also satisfies an SPCC requirement, the owner or operator can include and reflect such effort in his SPCC Plan and not duplicate it solely for SPCC. EPA wants to minimize duplicative requirements where possible and is working to tailor requirements, where appropriate.

c. Alternative Approaches for Addressing Small Oil Production Facilities as Suggested by the Department of Energy (DOE): Exempt Existing Stripper Oil and Natural Gas Wells From all SPCC Requirements

The other approach that DOE requested that EPA solicit comment on in the proposal to this rulemaking (72 FR 58378, October 15, 2007) was to exempt stripper oil and natural gas wells from all SPCC requirements, except those applicable to crude oil and condensate tanks (e.g., tanks which store gas condensate (which is an oil) at oil and gas production facilities). The eligibility criteria for the exemption would include those facilities that meet the IRS tax code definition of stripper well property at 26 U.S.C. 613A. In addition, the eligibility criteria would not be limited, for example, to those facilities that did not have injection wells or used injection wells as secondary or tertiary recovery techniques, which DOE has indicated may be regulated under existing Federal and state regulatory programs. DOE believes that such criteria have no direct relationship to the spill risk posed by marginal wells facilities and may serve as a disincentive to enhanced oil and gas recovery and well maintenance.

Comments. Many of the commenters expressed support for an exemption of stripper oil and natural gas wells from all SPCC requirements. Commenters expressed concerns that implementation of the SPCC rule may cause oil production wells to be shut in. One other commenter suggested regulating only crude oil and condensate containers, given that the releases reported to the NRC from this industry sector are low and EPA ''has never conducted a comprehensive environmental analysis of the risks associated with these proposed regulations and whether they significantly change from the current regulatory program to this proposed one.''

Response to comments. While the majority of comments the Agency received supported an outright exemption for stripper oil and natural gas wells from the SPCC requirements, the commenters did not provide sufficient data to justify an exemption or demonstrate how an exemption would maintain environmental protection. EPA also disagrees with the commenters that the SPCC requirements and compliance costs alone would cause small oil production facilities to shut down, reducing U.S. oil production (*see* memorandum dated April 11, 2008, *Preliminary Assessment of SPCC Compliance Costs and Energy Impacts on Oil Exploration and Production*). As EPA has noted elsewhere, these facilities, which are generally unattended, can store large quantities of oil and oil/water mixtures in a variety of containers that may have large capacities. These factors, as well as others, highlight the hazard potential posed by these operations (*see Considerations for the Regulation of Onshore Oil Exploration and Production Facilities Under the Spill Prevention, Control, and Countermeasures Regulation,* May 30, 2007, in the docket for this rulemaking (EPA–HQ–OPA–2007–0584–0015)). Thus, based on this hazard, and without sufficient rationale, the Agency believes it inappropriate to grant an outright exemption for such stripper oil and natural gas wells from the SPCC requirements. However, EPA does agree that performance-based requirements tailored to the unique characteristics of marginal oil production facilities are justified, as EPA has described previously, which the Agency believes will lead to the prevention of oil spills.

7. Produced Water Containers

In the proposal for this rulemaking (72 FR 58378, October 15, 2007), EPA requested comment including appropriate rationale, information, and data, on three approaches related to produced water containers. The first approach required general secondary containment combined with additional requirements in lieu of sized secondary containment. The second approach, advanced by DOE, required inspection, maintenance, and periodic oil skimming of produced water containers in lieu of both sized and general secondary containment. Finally, comment was requested on a third approach, again advanced by DOE, that exempted produced water treatment facilities altogether.

Produced water containers are typically located within a tank battery at

an oil production facility[8] where they are used to store well fluids that result after marketable crude oil is separated from fluids extracted from the reservoir and prior to subsequent use (e.g., re-injection or beneficial reuse), further treatment, or disposal. Under normal operating conditions, a layer of oil may be present on top of the fluids in these containers. The amount of oil by volume observed in produced water containers varies, but based on EPA's understanding, is generally estimated to range from less than one to up to ten percent, and can be greater. However, the Department of Energy (DOE) and the oil production sector indicate that the oil layer may be much less, depending on the type of oil/water separation technology used, if any. Many commenters claim that the SPCC oil spill prevention requirements are inappropriately applied to produced water containers, arguing that in certain cases these containers hold mostly water with very low concentrations of oil or that produced water containers should be exempt under the exemption for wastewater treatment. EPA agrees that the SPCC regulations should not regulate the storage of oil if the discharge of that oil is not prohibited under section 311 of the Clean Water Act. Section 311(b)(3) prohibits the discharge of oil into or upon navigable waters of the United States or adjoining shorelines in such quantities as may be harmful, as determined by the President. That determination is made in 40 CFR part 110. EPA does not agree that produced water containers are eligible for the wastewater treatment exemption. However, the Agency recognizes that, depending on the use, some produced water containers may serve as oil/water separators, rather than bulk storage tanks, and such containers should be regulated in a similar fashion as other oil/water separators. To address these concerns, EPA is providing an exemption for certain produced water containers holding oil that would not violate section 311(b)(3) if discharged, and a differentiated set of requirements for other produced water containers at oil production facilities that are used for oil/water separation. EPA is also promulgating a definition of produced water container to clarify which containers will be eligible for this rule amendment. The Agency believes that the approaches for produced water containers promulgated in this rule amendment are a logical outgrowth of the three approaches discussed in the proposal and the comments received.

Specifically, EPA is finalizing two approaches for produced water containers at oil production facilities. Under the first approach, EPA is exempting produced water containers at oil production facilities from the requirements of the SPCC rule when a PE certifies, as part of the SPCC Plan, that based on the efficiency of the oil/water separation technology used, the contents of a produced water container, if completely discharged, does not contain oil in amounts that may be harmful, as described in 40 CFR part 110; the capacity of the exempted containers would not be counted in oil storage capacity.

Under the second alternative, which is drawn from two of the approaches presented in the proposal, for those produced water containers that cannot meet the criterion for the exemption under this rule, the facility owner/operator has the option to apply general secondary containment requirements and conduct visual inspections, maintenance and corrective action, in lieu of sized secondary containment, when a PE describes in the Plan and certifies that a practice is established that is designed to remove the amount of free-phase oil from the produced water container on a scheduled and routine basis. These containers are counted toward the aggregate storage capacity. As described below, if the production facility has certain types of oil discharges or fails to meet the requirements of this part of the rule, the facility will no longer be eligible for the exemption or the streamlined requirements.

EPA is taking this action because the Agency believes that there are alternative options for produced water containers that can provide the regulated community compliance flexibility while continuing to effectively protect the environment from discharges of quantities of oil that may be harmful. The options the Agency is providing for produced water containers are based on the facility's site-specific characteristics, and an owner or operator may still choose to comply with the sized secondary containment requirements of § 112.9(c)(2). For example, if a produced water container at an existing facility is already located within sized secondary containment, the owner/operator may elect to not follow the alternative requirements in § 112.9(c)(6). The comments received on the produced water options and the Agency's responses are located in section V.M.7.e. below.

a. Exemption for Produced Water Containers

A new subsection at § 112.9(c)(6) has been added to the rule to address the streamlined requirements for produced water containers. Paragraph 112.9(c)(6)(i) includes an exemption for those produced water containers and any associated piping and appurtenances downstream of the container that do not contain oil that would cause harm as described in 40 CFR 110.3 if the contents of the container are completely discharged.

EPA recognizes that some oil production facilities may have (or may want to install) separation equipment that performs at a highly efficient rate. In these cases, the contents of the produced water containers downstream of such separation equipment may not contain oil in quantities that may cause harm, as described in 40 CFR part 110. Under 40 CFR part 110, a discharge of oil in such quantities as ''may be harmful'' is defined as one that may violate applicable water quality standards; or 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 navigable water or upon adjoining shorelines. To make this determination, the PE should apply the same standard as is set forth in 40 CFR 112.1, which allows the owner or operator (and the PE) to determine if a container could reasonably be expected to discharge oil in quantities that may be harmful as described in part 110 into or upon navigable waters. This determination is made by reference to the volume of oil reasonably expected to reach navigable waters or adjoining shorelines, if the entire contents of the container are completely discharged, and not by reference to the volume of oil in the container.

EPA understands that meeting the standard described above may require oil/water separation equipment and/or techniques such as hydrocyclones, induced gas floatation, ultra-filtration, and micro-filtration. Because of the level of separation efficiency and treatment required to meet the Part 110 standard, EPA believes that the involvement of a PE is necessary. Therefore, EPA is requiring owners/operators who take advantage of this exemption to have this part of their SPCC Plan certified by a PE, even for a qualified facility. EPA has amended the PE attestation in § 112.3(d)(1) to add a provision at (1)(vi) so that the PE specifically certifies that exempted produced water containers and any

[8] A wet gas facility that stores condensate and meets the other SPCC qualifying criteria is considered an oil production facility. Otherwise, a wet gas facility falls outside the scope of the Agency's SPCC jurisdiction.

associated piping and appurtenances downstream of the container (which may include flowlines and other appurtenances associated with injection and discharge) meet the 40 CFR part 110 ''no harm'' criterion and these containers are identified in the Plan and that appropriate produced water characteristics in the container, piping and appurtenances; procedures; or maintenance required to meet the standards of Part 110 are identified. The PE must use his professional judgment in applying the necessary procedures to determine that the contents of the container, if completely discharged, will meet the ''no harm'' criteria of 40 CFR part 110 and documents them in the Plan. Additionally, in accordance with § 112.5, the owner or operator must verify on an annual basis that the produced water characteristics in the container, piping and appurtenances; procedures; or maintenance required to meet the standards of Part 110 that formed the basis for the PE certification are maintained. The owner or operator must document the verification and sign a statement that the produced water characteristics in the container, procedures, or maintenance that formed the basis for the PE certification are maintained. The following words will suffice, ''I verify that the produced water characteristics in the container, and any associated piping and appurtenances downstream from the container; procedures; or maintenance required to meet the standards of Part 110 are maintained in accordance with the PE certification.'' This rule text provides an example of how the owner or operator can document the required annual verification for the exempt produced water containers. The verification must be maintained in accordance with § 112.7(e).

If the facility experiences a discharge from an exempt produced water container or any associated piping and appurtenances downstream from the container in quantities that may be harmful to navigable waters or adjoining shorelines (as described in 40 CFR part 110) then the produced water container is no longer exempt from the rule and must comply with all provisions of the SPCC rule within six months of the discharge, including the sized secondary containment requirements at § 112.9(c)(2). The final rule, as described above, focuses on a ''container'' and related to discharges under part 110. Under the requirements of 40 CFR part 110, such a discharge must also be reported to the National Response Center (NRC) at 1–800–424–8802.

This exemption does not change the current requirement for an owner/operator of a facility to mark the location and contents of all containers, including both exempt and non-exempt produced water containers, on the facility diagram. This requirement is necessary not only to assist response personnel in identifying hazards during spill response activities, but also to assist facility and Agency personnel in determining whether the exemption criteria are being met.

b. Alternative Option for Non-Exempt Produced Water Containers

For those produced water containers that do not meet the criteria for being exempt as described above, the facility owner/operator now has the option to comply with an alternative set of requirements in lieu of providing sized secondary containment. This new alternative compliance option, which is drawn from two of the approaches presented in the proposal, is provided in paragraph § 112.9(c)(6)(ii) and is described below.

The first approach described in the proposal would allow the owner or operator of a production facility to comply with the general secondary containment requirements along with additional measures as an option in lieu of sized secondary containment for existing produced water containers. Generally, the additional measures were requirements for periodic inspections, examination and integrity testing, prompt removal of oil discharges and corrective action. The second approach described in the proposal would allow the owner or operator of a production facility to comply with additional measures in lieu of both general and sized secondary containment. Generally, the additional measures under this approach were visual inspection, implementation of a skimming program, prompt removal of oil discharges and corrective action. In response to comments, the Agency developed this alternative compliance option which includes (1) compliance with general secondary containment requirements along with additional measures and (2) implementation of a procedure or process to remove free-phase oil or skimming program.

Specifically, the general secondary containment requirement at § 112.7(c) calls for secondary containment to be designed to hold the most likely quantity of oil potentially discharged in an event, rather than installation of sized secondary containment designed to hold the contents of the largest container with sufficient freeboard. Typically, the quantity of oil contained by general secondary containment is expected to be smaller than the amount of oil that would need to be contained by sized secondary containment. EPA believes that good general secondary containment practices can be successfully implemented if such practices are designed by a PE in consideration of the site specific factors and in combination with additional oil spill prevention practices including inspections, procedures to minimize the amount of free-phase oil in the container and procedures to remove/remediate discharged oil.

The piping and appurtenances downstream of the produced water containers addressed by this section are also subject to the general secondary containment requirements in § 112.7(c) and are not subject to sized secondary containment requirements. However, the owner or operator of the facility may choose to address the downstream piping and appurtenances using the optional approach offered under new § 112.9(d)(3). These provisions are noted in the rule under § 112.9(c)(6)(ii)(A) for clarity.

Procedure to separate free-phase oil. Under this alternative, the facility owner or operator must implement a process and/or procedure for the produced water container(s) that is designed to remove free-phase oil that accumulates on the surface of the produced water container. EPA expects this procedure or process will be implemented on a periodic basis so that the amount of free phase oil that collects in these produced water containers is within the amounts managed by the general secondary containment scheme designed by the PE and implemented by the facility owner/operator. The SPCC Plan must include a description of the free-phase oil separation and removal procedure or process, the frequency it is implemented or operated, the amount of free-phase oil expected to be maintained inside the container, and a description of the adequacy of the general secondary containment approach for the produced water container, including the anticipated typical failure mode and the method, design, and capacity for general secondary containment. Additionally, the owner or operator must keep records of the implementation of these procedures in accordance with § 112.7(e).

Like the amendment for exempt produced water containers, EPA has amended the PE attestation in § 112.3(d)(1) to add a provision at (1)(vii) so that the PE specifically certifies that an oil removal procedure for non-exempt produced water containers is designed according to good engineering practice to reduce the accumulation of free-phase oil, and that

the procedures and frequency for required inspections, maintenance and testing have been established.

Because this removal procedure is essential for reducing the amount of free-phase oil in the produced water tank, EPA requires that if, upon inspection, it is discovered that the removal procedure is not implemented, then the facility owner/operator may no longer take advantage of this alternative option and must comply with the sized secondary containment requirements at § 112.9(c)(2) within six months after EPA informs the facility owner/operator of this determination of ineligibility for the option.

Additional requirements. EPA believes that the combination of general secondary containment, a free-phase oil removal methodology as certified by a PE, and the additional requirements listed below provide the appropriate amount of environmental protection for these containers in lieu of sized secondary containment. The additional requirements include periodic inspection and/or testing of produced water containers and any associated piping and appurtenances downstream from the container for leaks, corrosion, or other conditions that could lead to a discharge as described in § 112.1(b); corrective action or repairs to produced water containers and any associated piping as indicated by regularly scheduled visual inspections, tests, or evidence of an oil discharge; and prompt removal or initiation of actions to stabilize and remediate any accumulations of oil discharges associated with produced water containers.

Periodic inspection and/or testing of produced water containers and any associated piping and appurtenances downstream from the container is necessary to increase the likelihood that a discharge will be prevented or detected promptly when general secondary containment measures are used instead of sized secondary containment.

Corrective action is necessary to prevent a discharge from occurring, as well as in response to a discharge. This measure is intended to prevent discharges by ensuring that produced water containers are adequately maintained.

The requirement to promptly remove or initiate actions to stabilize or remediate any accumulations of oil discharges is intended to ensure the removal of oil accumulations around the container and any associated piping and appurtenances downstream from the container that may contribute to a discharge as described in § 112.1(b). EPA also considers the removal of oil-contaminated soil as a method to prevent oil from becoming a discharge as described in § 112.1(b). Disposal of oil and/or oil-contaminated media must be in accordance with applicable Federal, state, and local requirements.

The intent of these regulatory revisions is to treat produced water containers used for oil/water separation in a manner similar to that of a separator or flow-through process vessel, such as a heater-treater, free water knock-out, or gun barrel, because these produced water containers are being used for the same purpose. Use for oil/water separation is the basis for the differentiated treatment of flow-through process vessels as discussed in section V.M.5 above. Accordingly, these requirements are similar to those found at § 112.8(c)(5) for flow-through process vessels.

Reportable discharge. If the facility experiences a discharge of more than 1,000 U.S. gallons of oil in a single discharge as described in § 112.1(b), or discharges more than 42 U.S. gallons of oil in each of two discharges as described in § 112.1(b), occurring within any twelve month period (excluding discharges that are the result of natural disasters, acts of war, or terrorism) from a non-exempt produced water container, then the facility owner/operator may no longer take advantage of this alternative option and must comply with the sized secondary containment requirements at § 112.9(c)(2) and the inspection requirements at § 112.9(c)(3) within six months. Section 112.9(c)(6)(ii)(E) has been added to provide this requirement. A non-exempt produced water container must already comply with § 112.9(c)(1) and § 112.9(c)(4) and therefore these requirements were not added to § 112.9(c)(6)(ii)(E).

c. Definition of Produced Water Container

A production facility typically includes, at a minimum, a wellhead, a tank battery, and flowlines connecting the wellhead to the tank battery. The tank battery includes separation equipment, a crude oil or condensate container (stock oil tank), and typically a produced water container, which receives both oil and produced water from the separator, respectively. Produced water containers are typically located within the tank battery.

Produced water containers are located at a facility as part of the process that separates the oil from other fractions (water and/or gas). A produced water container is generally the last container in the separation process, as there may be more than one separator (e.g., heater-treater, gun barrel, free water knock-out) used in succession or in combination to separate the oil/water fraction.

To clarify which containers are subject to the requirements of § 112.9(c)(6), EPA provides a definition of a produced water container in § 112.2. EPA did not propose a definition for produced water containers in October 2007, but EPA believes that the definition promulgated in this notice is a logical outgrowth of the proposal. In the October 2007 proposal, EPA described produced water containers as bulk storage containers ''typically located within a tank battery at a production facility where they are used to store well fluids after separation and prior to subsequent use (e.g., re-injection or reuse), further treatment, or disposal.'' 72 FR 58413. EPA asked for and received comments on the characteristics of produced water containers (72 FR 58414) and crafted a definition to establish the specific containers eligible for this exemption consistent with the description in the proposal. A produced water container is a bulk storage container at an oil production facility used to store the produced water after initial oil/water separation, and prior to reinjection, beneficial reuse, discharge, or transfer for disposal. Piping and appurtenances downstream of the produced water container may include flowlines and other appurtenances associated with injection and discharge.

d. Overlap Between Produced Water Container Alternatives and Qualified Facilities

Some production facilities with produced water containers will meet the eligibility criteria for qualified facilities, under the previous eligibility criteria (*see* 71 FR 77266, December 26, 2006) or the additional criteria finalized in this notice exclusively for oil production facilities. EPA notes that both of the optional alternatives for a produced water container finalized in this notice (the exemption or the alternative requirements in lieu of sized secondary containment) require PE certification and are not amendments which can be self-certified. Therefore, if the owner or operator of an oil production facility qualifies as a Tier II qualified facility, and wants to self-certify his Plan and use one of the alternative approaches for produced water containers (exempt a produced water container or take advantage of the alternative requirements in § 112.9(c)(6)), then he must use a ''hybrid'' SPCC Plan. Sections of the Plan satisfying the produced water container requirements of § 112.9(c)(6)

must be certified by a PE, who completes the attestation in § 112.3(d)(1)(vi) and/or (vii). Section 112.6(b)(4)(ii) has been modified to emphasize this point. An owner or operator of an oil production facility which qualifies as a Tier I qualified facility may not use the self-certified SPCC Plan template found in Appendix G to 40 CFR part 112 if he wishes to exempt a produced water container or take advantage of the alternative requirements in § 112.9(c)(6), because the exemption or alternative requirements for produced water containers require PE certification and the template is for self-certification only.

In addition, the exemption for produced water containers meeting the criteria under § 112.9(c)(6)(i) can affect the applicability of the alternative qualified facility eligibility criteria for oil production facilities under § 112.3(g)(2)(ii). Under that section, an oil production facility with injection wells does not meet the alternative definition of qualified facility. However, if the injection well is to inject fluids from a container that is exempt under § 112.9(c)(6)(i), the presence of that injection well does not make the facility ineligible for regulation as a qualified facility under § 112.3(g)(2)(ii).

Comments. Many commenters expressed support for exempting produced water containers from the secondary containment requirements, SPCC regulation and/or an exemption for produced water treatment facilities. Some commenters suggested that the produced water containers at these facilities be subject to the wastewater treatment exemption. Other commenters suggested exempting produced water containers according to their location, upstream or downstream of separation, because the amount of oil remaining in the water after primary separation and treatment is minimal. In fact, several commenters indicated that EPA has authority to regulate discharges of oil, not water. Additionally, one commenter specifically noted that for older oil fields, produced water comprises a large amount of water or brine with extremely low oil content, ''perhaps 0.1% or less.'' One commenter claimed that produced water containers always have a layer of oil. Another commenter urged EPA to allow the certifying engineer to make the determination whether a given produced water tank or oil/water separator should have secondary containment, rather than including tanks that may or may not include measurable amounts of oil. Several commenters suggested produced water located at oil and gas facilities should be subject to the wastewater treatment exemption.

Two commenters suggested using ''primary separation'' as the difference between upstream and downstream production, while two other commenters noted it should be ''after the last separation.'' Two other commenters noted that if the facility is relying on gravity separation, the atmospheric storage tank should be considered bulk storage.

Several commenters suggested that discharges are already regulated by state law, the National Pollutant Discharge Elimination System (NPDES) program, or the Safe Drinking Water Underground Injection Control (UIC). DOE cited published information used to establish national effluent limitations for coastal oil and gas production facilities, discussed the efficiency of control and treatment technologies and found that numerous end-of-the-pipe treatment methods can achieve this level of effluent quality. One commenter suggested exempting NPDES-permitted ponds from storage capacity calculation for SPCC and FRP applicability due to their very low oil content.

Several other commenters addressed the proposed approach for additional requirements for produced water containers in lieu of sized secondary containment. One commenter supported the inspection, maintenance and periodic skimming proposed approach as a second option to an exemption. One commenter stated that field operators maintain a constant watch over the amount of oil carryover to the produced water tanks and when the oil layer reaches the point of being recoverable, the oil is skimmed and pumped. One commenter suggested ensuring that integrity testing is not required for produced water containers, because integrity testing of the typically closed-top fiberglass would be problematic, expensive, and difficult. However, other commenters opposed reduced requirements for produced water containers and expressed concerns about the potential for harmful discharges.

Response. After evaluating the comments received, EPA is modifying the requirements at § 112.9(c) to exempt produced water containers that meet certain conditions, and to allow an alternative management scheme (which is optional) for produced water containers that are used for oil/water separation in lieu of sized secondary containment. In deciding how to proceed, EPA acknowledges that the amount of oil by volume observed in produced water storage containers varies depending on a number of factors, including, but not limited to, separator efficiency, age and formation of the oilfield, and use of heat or chemical separation. EPA agrees with commenters that after separation, the amount of oil remaining in produced water can be minimal given the characteristics of the oilfield and facility/separator configuration. Therefore, EPA agrees with commenters that certain produced water containers with minimal amounts of oil may be eligible for exemption, and that certain produced water containers that are used for oil/water separation should be subject to differentiated requirements; EPA is allowing a PE to make the determination whether a given produced water container should be eligible for an exemption from the rule or for alternative requirements as described in § 112.9(c)(6)(ii). EPA believes the exemption criteria (certification by the PE that no discharge from the produced water container, including a complete loss of the capacity of the container, could cause a discharge in quantities that may be harmful as described in part 110) addresses the commenters' concerns about regulating produced water containers that do not contain oil in harmful quantities. Further, EPA believes the approach for non-exempt containers, featuring differentiated requirements and general secondary containment, provides appropriate regulatory requirements for these produced water containers.

The Agency does not agree, however, with commenters that produced water located at oil and gas facilities should be subject to the wastewater treatment exemption. The basis for the conditional exemption in these finalized amendments is whether oil is present in quantities that may be harmful. As stated in the preamble to the 2002 amendments to the SPCC rule, the goal of an oil production, recovery or recycling facility is to maximize the production and recovery of oil, which presumes that oil is present in quantities that may be harmful (67 FR 47068, July 17, 2002).

EPA has created a new section that describes alternative requirements for produced water containers (§ 112.9(c)(6)) in lieu of the sized secondary containment requirements of § 112.9(c)(2) and inspection requirements under § 112.9(c)(3). Produced water containers are typically found after the primary separation conducted by flow-through process vessels at an oil production facility. In order to address commenters who suggested using the term ''primary separation,'' the Agency has indicated

in the definition for produced water container that the container is used to store produced water after ''initial'' oil/water separation. The Agency agrees that produced water containers, including those used to separate oil from water by means of gravity separation, are bulk storage containers, and are therefore subject to requirements under § 112.9(c), including those specifically for produced water containers under paragraph (c)(6) of that section.

EPA agrees with commenters that oil production facilities may be regulated under the NPDES, UIC, other Federal regulations, and state regulations. However, the Agency's review of the scope of these programs and regulations indicates that these regulations do not necessarily provide an equivalent level of protection from accidental and incidental discharges of harmful quantities of oil to those required under the national SPCC requirements. Therefore these programs cannot serve solely as a substitute for an SPCC Plan at a facility. EPA acknowledges that onshore oil production facilities may discharge directly to surface waters pursuant to an NPDES permit and that technology-based discharge standards (effluent guidelines) for onshore produced water is ''zero discharge'' (with two exceptions: Produced water generated west of the 98th meridian that is put to beneficial use during the period of discharge (set to 35 mg/L), and stripper wells). An NPDES permit typically includes the guideline that the discharge ''shall be free from substances in amounts which would cause a visible sheen or visible deposits in the receiving water or adjoining shoreline.'' Because these permitted facilities are required to eliminate harmful quantities of oil in produced water, a produced water container at the facility may be eligible for the exemption finalized in this notice. Additionally, the NPDES requirements may be used by a PE to address the certification elements (produced water characteristics in the container and any associated piping and appurtenances downstream of the container, procedures or maintenance) required for the exemption.[9]

The Agency is finalizing an alternative to sized secondary containment requirements for a produced water container that does not meet the conditional exemption criteria described above. The alternate requirements finalized in this action take into consideration the commenters suggestions regarding the proposed alternatives. The finalized set of requirements include: Implementation of a procedure designed to separate the free-phase oil that may accumulate on the surface of the produced water, inspection or testing of the produced water container and components, prompt removal of or initiation of actions to contain and stabilize any oil accumulations, and corrective action should a discharge occur. The Agency did not include integrity testing in the finalized set of additional requirements. Produced water containers used specifically for oil/water separation serve the same purpose as separators or flow-through process vessel and thus, EPA is applying similar requirements to these containers.

EPA also agrees with the comment that when an oil layer in a produced water container becomes recoverable, the oil is typically skimmed and pumped. Consequently, EPA's final rule requiring removal and reduction of free-phase oil from the produced water container is consistent with industry practice. Whatever procedure is used must be developed by a PE, described in the Plan, and implemented by the owner or operator to reduce the amount of free-phase oil which may accumulate. Records of implementation of these procedures must be maintained in accordance with § 112.7(e).

8. Clarification of the Definition of Permanently Closed Containers

The Agency is addressing concerns expressed by the regulated community over the requirements for permanently closing a container, as described in the definition of ''permanently closed'' at § 112.2. EPA does not believe that further regulatory action is needed to address this issue. Specifically, the SPCC rule exempts from applicability and from capacity threshold determinations any oil storage container that is ''permanently closed.'' For a container to be permanently closed, all liquid and sludge must be removed from the container and connecting lines, all connecting lines and piping must be disconnected from the container and blanked off, all valves, except ventilation valves, must be closed and locked, and conspicuous signs must be posted on each container stating that it is a permanently closed container and noting the date of closure. Once permanently closed, a container is no longer required to be counted toward the total facility storage capacity, nor is it subject to the other requirements under the SPCC rule. The definition does not require that a permanently closed container be removed from the facility. In addition, any new container brought on to a facility that has never stored oil is not subject to the SPCC rule, nor is it counted toward the facility capacity until it stores oil. Furthermore, any other container that at one time stored oil but no longer contains oil or sludge, which is brought on to a facility and meets the definition of permanently closed, is not subject to the SPCC rule nor is it counted toward the facility capacity until it stores oil.

EPA also is clarifying that the permanent closure requirements under the SPCC rule are separate and distinct from the closure requirements in regulations promulgated under Subtitle C of the Resource Conservation and Recovery Act (RCRA) (i.e., *Standards For Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities at 40 CFR part 264 and Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities*) at 40 CFR part 264 and 265. These regulations describe the requirements for operators of facilities that use tank systems for storing or treating hazardous waste, as well as the requirements for tank closure and post-closure care (§§ 264.197 and 265.197). These requirements generally do not apply to an oil production facility. According to the applicability provision in § 264.1(b), ''the standards in this part apply to owners and operators of all facilities which treat, store, or dispose of hazardous waste, except as specifically provided otherwise in this part or part 261 of this chapter'' (emphasis added). 40 CFR part 261 states that ''Drilling fluids, produced waters, and other wastes associated with the exploration, development, or production of crude oil, natural gas or geothermal energy'' are not hazardous waste (§ 261.4(b)(5)). Therefore, an oil production facility does not have to undergo the expense of permanent closure under Part 264 or 265 of RCRA, because these wastes (i.e. drilling fluids, produced waters, and other wastes associated with the exploration, development, or production of crude oil) are not subject to these regulations.

Comments. Two commenters expressed support for EPA's proposed clarification that permanently closed containers need neither be removed from the facility nor be rendered permanently out of use in the future. One commenter suggested additional clarification stating that permanently sealed, unused oil containers can remain on-site at the facility with a minimum of cleaning and preparation.

[9] As noted above, because the definition of discharge under section 311(a)(2) excludes discharges subject to an NPDES permit, SPCC regulations promulgated under section 311(j) do not, and are not intended to, prevent such discharges.

Another commenter expressed concern, however, that the cost of closing a container would be prohibitive, and suggested it may cause premature abandonment of the operation. The commenter suggested that requiring a container to be cleaned is not necessary since the container would remain within the diked area.

Several commenters provided other suggested options. One commenter suggested that EPA clarify that sealing an empty container removes the container from being part of the production facility according to the definition of production facility. Agricultural stakeholders suggested that EPA modify its position on permanently closed containers so that a container removed from service can be placed back into service with minimal operational effort so that farmers and agribusiness can acquire storage capacity flexibility in response to variable production rates and economic conditions. One commenter suggested that small containers with a capacity between 500 and 1,500 gallons used for fueling and maintenance be allowed to be temporarily closed and exempt from the SPCC requirements when closed.

Response to comments. The Agency recognizes that variable economic conditions and production rates at an oil production facility may cause certain containers to be unused for long periods of time. However, EPA does not believe that it is appropriate to exempt containers from the SPCC requirements without requiring that all liquid and sludge be removed, even if the container remains in an area that is diked and it is for a temporary period of time. A ''temporary closure'' would be intended for situations where containers would only be closed for short periods of time, and arguably need less stringent requirements than a permanent closure. The significant difference in closure requirements between EPA's current ''permanent'' closure requirements and the suggested ''temporary'' closure requirements appears to be the removal of liquid and sludge from the container and connecting lines. EPA believes that allowing liquid and sludge to remain in the container, without the benefit of the SPCC rule protections, creates the potential for a discharge, regardless of the size of the container. One commenter suggested that such containers would remain in the diked area and thus, the potential for oil to be discharged would be minimal. However, if a container was no longer subject to the SPCC rule, there would be no requirement that it be contained in a diked area or that any precautions be taken to prevent the discharge of oil to navigable waters or adjoining shorelines. Finally, EPA believes that the permanent closure provisions require actions that render the container unavailable for oil storage, by requiring that all connecting lines and piping must be disconnected from the container and blanked off, and that all valves (except ventilation valves) must be closed and locked, thus preventing accidental spills where the container is inadvertently filled with oil. These provisions also serve as a clear indicator as to the status of a container and whether it is considered a regulated container under this rule and part of the storage capacity of the facility. EPA believes that these requirements are reasonable and provide the flexibility of allowing the container to remain on site for future use. EPA does not agree that cleaning a tank is cost-prohibitive and may shut in wells prematurely. The decision to clean and close a container in accordance with the SPCC provision is typically made by an owner or operator who can determine whether it is cost-effective to close the tank or to let it remain in service and not incur the costs associated with closure, including cleaning.

The Agency also disagrees with the comments suggesting that an owner or operator need only ''seal'' a tank without requiring that all liquid and sludge be removed in an effort not to be subject to the SPCC rule. For a container to be considered permanently closed at an oil production facility, as well as at any other SPCC-regulated facility, all liquid and sludge must be removed from the container and connecting lines, all connecting lines and piping must be disconnected from the container and blanked off, all valves, except ventilation valves, must be closed and locked, and conspicuous signs must be posted on each container stating that it is a permanently closed container and noting the date of closure. Once permanently closed, a container is no longer required to be counted toward the total facility storage capacity, nor is it subject to the other requirements under the SPCC rule (such as secondary containment).

EPA reiterates the statement it made in the preamble to the July 2002 amendments to the SPCC rule: ''If a tank is not permanently closed, it is still available for storage and the possibility of a discharge as described in § 112.1(b), remains. Nor does a short time period of storage eliminate the possibility of such a discharge. Therefore, a prevention plan is necessary. A tank closed for a temporary period of time may contain oil mixed with sludge or residues of product, which could be discharged. Discharges from these facilities could cause severe environmental damage during such temporary storage and are therefore subject to the rule'' (67 FR 47059, July 17, 2002).

Finally, as noted previously, the definition of ''permanently closed'' does not require that a container be removed from the facility; permanently closed containers may be brought back into use as needed for variations in production rates and economic conditions. However, a facility owner or operator should review state and local regulations, which may have additional requirements when the container is brought back into service.

9. Oil and Natural Gas Pipeline Facilities

EPA's current SPCC rules exempt ''equipment, or operation of a vessel or transportation-related onshore or offshore facility'' that is subject to DOT authority under the November 24, 1971 EPA–DOT MOU (1971 MOU; Appendix A of 40 CFR part 112). The 1971 MOU memorialized the agencies' intent to minimize overlapping regulation by ''assign[ing] one agency the responsibility for regulating a complete operation at any one facility.'' The final rule makes no change in these provisions and is not otherwise intended to impose new requirements on DOT-regulated oil and natural gas pipelines. Rather, by granting operators new flexibility in delineating facility boundaries, the final rule should reduce uncertainty and minimize, if not eliminate, overlapping enforcement. To the same ends, as EPA stated in the NPRM, EPA and DOT have committed to realize the goal of the 1971 MOU to more clearly define the jurisdictional scope of the SPCC requirements over oil and gas related infrastructure.

Comments. Several commenters expressed support for EPA and DOT in committing to a revision of the 1971 MOU, noting that a guideline memorandum issued by EPA and DOT in 2000 failed to achieve its intended purpose and has created confusion concerning the application of SPCC requirements to breakout tanks that are subject to DOT's pipeline safety regulation (49 CFR part 195). These commenters urged EPA and DOT to withdraw or modify the 2000 memorandum and develop additional guidance, with industry input, for eliminating dual regulation of pipeline systems. Commenters representing natural gas pipeline operators urged EPA and DOT to designate the specific equipment and appurtenances that are part of natural gas pipeline systems subject to the SPCC exemption in 40

CFR 112.1. Other commenters suggested that EPA specifically include an exemption for dry gas production facilities in the rule language to prevent any difference in regional interpretation. Still other commenters suggested that EPA determine Agency jurisdiction according to the primary function of the facility: one commenter suggested that DOT should exert sole jurisdiction over facilities that primarily provide breakout or pipeline terminus tankage, and another commenter suggested that the percentage of throughput by a particular mode can be used to delineate jurisdiction. Finally, other commenters suggested that the jurisdiction for all gathering lines should be under the sole jurisdiction of DOT, as these gathering pipelines would include both pipelines transporting product from a production facility, as well as pipelines gathering production from satellite storage locations to a central storage location.

Response to comments. The Agency has consulted with DOT in the development of this rulemaking, and will continue these consultations to address the EPA/DOT jurisdictional issues. EPA and DOT will revise the 2000 guidance memorandum, acknowledging that it has not provided a clear basis for implementing the 1971 MOU or delineating EPA and DOT jurisdiction. The agencies, as part of that effort, are evaluating the viability of a ''primary function'' approach described by commenters. EPA will continue work to improve guidance for pipeline operators and will communicate the results of discussions in a manner that affords public comment.

With respect to a 'dry gas production facility,' the Agency maintains its position that a dry gas production facility is not an oil production, oil recovery, or oil recycling facility, as described in the clarification published May 25, 2004 in the **Federal Register** notice (69 FR 29728) regarding the applicability of the wastewater treatment exemption to dry gas facilities. In that notice, EPA stated, ''A dry gas production facility is a facility that produces natural gas from a well (or wells) from which it does not also produce condensate or crude oil that can be drawn off the tanks, containers or other production equipment at the facility. As discussed in the preamble to the July 2002 rulemaking, 'the goal of an oil production, oil recovery, or oil recycling facility is to maximize the production or recovery of oil. * * *' 67 FR 47068. A dry gas facility does not meet this description.'' As such, dry gas facilities as defined here are not subject to the SPCC requirements and therefore, do not need to be addressed in the EPA/DOT MOU.

EPA disagrees with commenters that all gathering lines should be under the jurisdiction of DOT. As explained elsewhere in this notice (see discussion on flowlines and intra-facility gathering lines), EPA will continue to regulate only those intra-facility gathering lines not subject to DOT regulation. EPA is also finalizing an exemption to address the concern of commenters regarding dual regulatory requirements for these piping systems.

N. Man-made Structures

The preamble to the October 2007 notice of proposed rulemaking (72 FR 58378, October 15, 2007) addressed the consideration of man-made structures in determining the SPCC rule's applicability. Consistent with statements made in the preamble to a 1976 amendment to the rule (41 FR 34164, December 11, 1976), EPA maintains that man-made features, such as drainage control structures and dikes, are not to be used to conclude that there is no reasonable expectation that a discharge from the facility will reach navigable waters or adjoining shorelines. If there is a reasonable expectation that a discharge from the facility would reach navigable waters or adjoining shorelines in the absence of such containment or other structures, the facility is subject to the SPCC requirements. Secondary containment is required as part of an SPCC Plan and man-made structures, such as dikes, berms and retaining walls are often used to meet this planning requirement. However, unless properly implemented and maintained (as required by the SPCC rule), man-made structures may fail, thus putting the environment at risk in the event of a discharge. Therefore, it would defeat the preventative purpose of the rule to consider these structures (i.e., those required by the regulation) when determining applicability of the rule to a facility.

Nevertheless, EPA believes that it is appropriate for a facility owner or operator to consider man-made structures (for example, dikes, equipment, buildings, basements or other containment structures) to determine how to comply with the SPCC rule. More specifically, if an oil storage container at a regulated facility is located inside a building, the PE or facility owner or operator self-certifying the SPCC Plan may take into consideration the ability of the building walls and/or drainage systems to serve as secondary containment for the container. Furthermore, if, at a regulated facility, indoor conditions are such that they reduce external corrosion and potential for discharges, these operating conditions may be considered in the development of a site-specific container integrity inspection program. Given the clarifications provided in the preamble discussion of the proposal, EPA does not believe that further regulatory action is needed to address this issue.

1. Comments

Many commenters expressed general support for the clarifications on man-made structures related to secondary containment and integrity testing. One commenter, however, requested additional discussion and clarification on ''locationally exempt facilities,'' that is, facilities that may not be subject to the SPCC regulations because of their low likelihood of discharge to navigable waters or adjoining shorelines. The commenter recommended that consideration of man-made features that predate construction of an otherwise regulated facility should be allowed for a locational exemption.

Other commenters, however, did not believe that EPA's clarification goes far enough and requested specific exemptions based on EPA's reasoning regarding the potential ability for building features to serve as secondary containment. Thus, these commenters recommended exempting certain oil storage units located wholly within buildings, such as containers storing hydraulic oil for an elevator, emergency generators with a day tank, or machining coolant systems. Finally, one commenter recommended clarifying text in § 112.1(d)(1)(i) to ''allow consideration of such man-made features when conducting a reasonable expectation to discharge determination.''

2. Response to Comments

With regard to the commenter requesting clarification on ''locationally exempt facilities,'' in 1976, EPA amended the SPCC rule to clarify that when determining applicability of the rule to a facility, consideration must be based solely upon the geographical aspects of the facility, and that consideration of man-made features, such as dikes, equipment, or other structures that may serve to restrain, hinder, contain or otherwise prevent a discharge as described in § 112.1(b) should not be considered. When an owner or operator determines that the facility could not reasonably be expected to discharge oil in quantities that may be harmful to navigable waters or adjoining shorelines based upon geographic and locational aspects of the facility, then no SPCC Plan is required,

such as when a facility is located in a topographic low area or on flat land far from navigable waters or adjoining shorelines.

EPA disagrees with those commenters requesting an exemption for oil-filled equipment or other oil storage containers located inside buildings. That is, the requirements apply to all containers, unless otherwise specifically exempted, whether they are located inside or outside a building. Thus, EPA does not agree that text be included in § 112.1(d)(1)(i) to allow the consideration of man-made features when conducting a reasonable expectation to discharge because, as discussed above, the rule already allows the facility owner or operator to consider geographical and locational aspects of the facility (such as proximity to navigable waters or adjoining shorelines, land contour, drainage, etc.) in the determination. However, the SPCC Plan preparer may consider whether the building design provides adequate secondary containment to meet the general secondary containment requirements under § 112.7 for oil storage containers located indoors at a regulated facility. The owner or operator of a facility with oil-filled equipment may also be eligible for alternative compliance measures under § 112.7(k) for qualified oil-filled operational equipment if it meets the criteria in § 112.7(k)(1).

O. Underground Emergency Diesel Generator Tanks at Nuclear Power Stations

Under this final action, EPA is exempting underground oil storage tanks deferred under 40 CFR part 280, as originally promulgated, that supply emergency diesel generators at nuclear power generation facilities licensed by Nuclear Regulatory Commission (NRC) and that meet the NRC design criteria and quality assurance criteria. This exemption includes both tanks that are completely buried and tanks that are below-grade and vaulted. An underground storage tank or UST is defined in 40 CFR part 280 as ''any one or combination of tanks * * * the volume of which is 10 percent or more beneath the surface of the ground.'' Below-grade vaulted tanks and completely buried tanks that serve as underground emergency diesel generator tanks at nuclear power plants fall within this definition. Part 280 also states that a ''storage tank situated in an underground area (such as a basement, cellar, mineworking, drift, shaft, or tunnel) if the storage tank is situated upon or above the surface of the floor'' is not an UST. Under the NRC regulations, a nuclear power generation facility must meet certain design criteria to ensure that the plant will be operated in a manner protective of the public's health and safety (such as 10 CFR part 50, Appendix A). These NRC design criteria cover the design, fabrication, installation, testing and operation of structures, systems, and components important to safety. Future construction permits and operating licenses for nuclear power stations may be issued per 10 CFR part 52, *Early Site Permits; Standard Design Certifications; and Combined Licenses for Nuclear Power Plants.* EPA compared the NRC regulations and guidelines with the relevant SPCC requirements. Under 10 CFR part 50, Appendices A and B, nuclear power generation facility operators must identify the relevant codes and standards, develop and implement a quality assurance program, and maintain appropriate records of the design, fabrication, erection, and testing throughout the life of the nuclear unit. The quality assurance program required per Appendix B must be documented by written policies, procedures or instructions and implemented as documented. To assist nuclear power unit licensees in complying with the license requirements, the NRC has developed a number of guidance documents, including documents pertaining to the operation of standby diesel generators. NRC Regulatory Guide 1.137, ''Fuel-Oil Systems for Standby Diesel Generators'' details the requirements for inspection and testing of fuel oil systems, corrosion protection, and the periodic cleaning of fuel supply tanks. These measures are similar to the measures required under the SPCC regulation for completely buried tanks, which include corrosion protection of buried tanks (§ 112.8(c)(4)) and of buried piping (§ 112.8(d)(1)), and inspection and testing of buried piping (§ 112.8(d)(4)). According to NRC, this guideline represents one acceptable method to meet the NRC requirements for these standby systems. If a licensee chooses an alternative approach, then equivalency must be demonstrated through an engineering review by the NRC as part of the licensing process.

EPA notes that nuclear power plants have unique characteristics that differentiate them from other types of SPCC-regulated facilities. Thus, EPA understands that certain actions necessary to comply with the SPCC rule could be impracticable at NRC facilities, because they may compromise the availability of the emergency diesel generation tank and consequently affect the reliability of the nuclear power supply and result in the shut down of a nuclear power plant. EPA believes that the NRC operating safety requirements best address the specific and unique operational challenges at nuclear power plants. EPA is, therefore, exempting underground oil storage tanks deferred under 40 CFR part 280 that supply emergency diesel generators at licensed NRC nuclear power generation facilities and that are subject to design criteria and quality assurance criteria under the NRC regulations. Below-grade vaulted tanks and completely buried tanks that serve as underground emergency diesel generator tanks at nuclear power plants fall within this exemption. This is consistent with 40 CFR 280.10(c)(3) which indicates that ''Any UST system that is part of an emergency generator system at nuclear power generation facilities regulated by the Nuclear Regulatory Commission under 10 CFR part 50, appendix A'' is deferred from regulation under certain parts of part 280. Note also that due to this exemption, these tanks are no longer counted toward the aggregate oil storage capacity under § 112.1(d)(2)(i).

1. Comments

Many commenters expressed general support for the amendments. One commenter specifically supports the revision in order to avoid dual regulation by EPA and NRC. Some commenters, however, expressed concern that EPA's proposed language was too narrow, because NRC's licensing program does not only regulate tanks under 10 CFR part 50; new facilities' tanks are likely to fall under the alternate regulation of 10 CFR part 52, and some older facilities might not be regulated by Appendix A or B of 10 CFR part 50. One commenter suggested that EPA remove the specific reference to the text of 10 CFR part 50, replacing with more general language.

Some commenters also suggested that vaulted tanks, which are usually aboveground or in a below-grade structural vault, should be exempted because of the impracticability of inspecting those tanks. One commenter suggested that EPA can use the phrase ''completely below-grade tank'' in § 112.1(d)(2)(i) and (d)(4) to identify the exempted tank universe as including below-grade vaults.

2. Response to Comments

EPA proposed language (72 FR 58378, October 15, 2007) to exempt completely buried tanks at a nuclear power generation facility that meet the NRC design criteria specifically at 10 CFR part 50, Appendices A and B. The Agency agrees with those commenters

that suggested this language is too limiting, and that because of this narrow reference to specific regulatory citation, grandfathered and/or newly constructed tanks at nuclear power generation facilities that are licensed by the NRC may not be eligible for the exemption under the SPCC rule. The language may also cause future confusion if NRC restructures its requirements or imposes new ones; the narrow reference may render this amended language obsolete. Therefore, EPA has modified the final rule language to address these concerns by not including references to 10 CFR Part 50. This will avoid future amendments to the SPCC rule in the event that NRC modifies the specific regulatory citations regarding design and/or operating requirements for completely buried tanks.

EPA agrees with the commenters who argued that the exemption should be extended to below-grade, vaulted tanks that do not meet the definition of a completely buried tank as defined in § 112.2. Commenters argue that there is insufficient space for physical inspection of the emergency diesel generator tanks at nuclear power plants that are located in below-grade structural vaults. EPA however, disagrees that all below-grade, vaulted tanks should be included in the exemption because some of these tanks can be physically inspected. In those cases, an inspector can routinely walk into the room and view the sides of the tank, while in other cases, the design of the vault is such that the space between the vault and the tank makes it impractical for an inspector to enter the confined space surrounding the tank on a routine basis. Therefore, EPA is extending the exemption to these below-grade, vaulted tanks that do not provide enough space for physical inspection. By way of background, 40 CFR part 280.12 defines an ''underground area'' as ''an underground room, such as a basement, cellar, shaft or vault, providing enough space for physical inspection of the exterior of the tank situated on or above the surface of the floor.'' Thus, where there is insufficient space for physical inspection, tanks have been removed from UST regulation. Therefore, EPA is basing the exemption on the definition of an UST under part 280, which encompasses below-grade, vaulted tanks that cannot be physically inspected.

P. Wind Turbines

The Agency was requested to address the applicability of the SPCC rule to wind turbines used to produce electricity. As discussed in the October 2007 notice of proposed rulemaking (72 FR 58378, October 15, 2007), the Agency believes that wind turbines meet the definition of oil-filled operational equipment promulgated in the December 2006 SPCC rule amendments (71 FR 77266, December 26, 2006), and thus can take advantage of the alternative compliance option provided for this type of equipment, to the extent that the wind turbines meet the oil storage capacity threshold in the rule. The amendments to the SPCC rule promulgated in December 2006 allow owners and operators of facilities with eligible oil-filled operational equipment the option to prepare an oil spill contingency plan and a written commitment of manpower, equipment, and materials to expeditiously control and remove any oil discharged that may be harmful without having to make an individual impracticability determination as required in § 112.7(d). If an owner or operator takes this option, he is also required to establish and document an inspection or monitoring program for this qualified oil-filled operational equipment to detect equipment failure and/or a discharge in lieu of providing secondary containment.

1. Comments

Several commenters agreed that the discussion in EPA's proposal added sufficient clarity on the applicability of the SPCC rule to wind turbines. One commenter also suggested that the discussion about turbines with gearbox capacities of 55 gallons or more meeting the definition of oil-filled equipment be included in EPA's *SPCC Guidance for Regional Inspectors.* Finally, one commenter considers a wind farm a facility and, asserted that because the total oil stored in the turbine gear cases plus the lubricant replacement storage may exceed the 1,320-gallon threshold, a full SPCC Plan should be required.

2. Response to Comments

The Agency agrees with those commenters who supported EPA's clarification on the applicability of the SPCC requirements to wind turbines. In addition, EPA will update the *SPCC Guidance for Regional Inspectors* to reflect the clarifications regarding the applicability of the SPCC rule to wind turbines that were discussed in the preamble to the proposed rule amendments (72 FR 58378, October 15, 2007). In response to the commenter who requested clarity on whether a wind farm is a facility, the owner or operator should refer to the definition of ''facility'' at § 112.2, to determine how to aggregate or disaggregate groups of turbines in order to define the boundaries of his facility (or facilities). A wind farm facility that meets the rule's oil storage capacity threshold and, due to its location, could reasonably be expected to have a discharge to navigable waters or adjoining shorelines, is subject to the SPCC rule and must prepare and implement an SPCC Plan. The clarification provided in this notice does not affect the applicability of the rule to wind farm facilities, but explains how wind turbines are considered under the rule and what provisions may apply to this type of equipment.

Q. Technical Corrections

EPA is finalizing a technical correction to the introductory paragraph of § 112.3 to move the phrase ''in writing'' after ''must prepare'' and then insert the phrase ''and implement'' after the phrase ''in writing,'' in order to provide an explicit requirement for a facility owner or operator to both prepare and implement an SPCC Plan. This paragraph describes the requirement for an owner or operator of an onshore or offshore facility subject to the rule to prepare an SPCC Plan, in writing, and in accordance with § 112.7 and any other applicable section of the rule. Adding the term ''and implement'' to this paragraph is consistent with the subsequent subsections, which provide compliance dates to both prepare or amend, and implement, an SPCC Plan for various categories of facility owners and operators. In describing the requirement to prepare a Plan in the introductory paragraph of § 112.3, the Agency inadvertently excluded the explicit requirement to also implement that Plan. Clearly, a facility owner or operator must implement his SPCC Plan in order for it to be effective in preventing discharges of oil to navigable waters or adjoining shorelines.

EPA also is finalizing a technical correction to the introductory paragraph of § 112.12 to delete the phrase ''(excluding a production facility).'' In the December 2006 amendments to the SPCC rule (71 FR 77266, December 26, 2006), EPA amended Subpart C of 40 CFR part 112 by removing several sections because they were not appropriate for AFVOs. At that time, as a point of clarification, EPA also removed the phrase ''for onshore facilities (excluding production facilities)'' from the title of § 112.12, because, having removed the inapplicable production facility requirements from Subpart C, it was no longer necessary to differentiate onshore oil production facilities from other facilities in § 112.12. However, EPA inadvertently neglected to remove the

corresponding phrase from the introductory paragraph of the section. EPA is correcting this inadvertent omission. Finally, the Agency is amending the regulation to include ''U.S.'' before gallons in several places, to indicate that the Agency means the U.S. gallon unit of measure and not the Imperial unit of measure.

1. Comments

One commenter expressed support for the technical corrections. Another commenter specifically supported the technical correction to § 112.12.

2. Response to comments

The Agency agrees with the need for these technical corrections and is finalizing them in this rulemaking.

VI. Statutory and Executive Order Reviews

A. Executive Order 12866—Regulatory Planning and Review

Under section 3(f)(1) of Executive Order (EO) 12866 (58 FR 51735, October 4, 1993), this action is an ''economically significant regulatory action'' because it is likely to have an annual effect on the economy of $100 million or more. Accordingly, EPA submitted this action to the Office of Management and Budget (OMB) for review under EO 12866 and any changes made in response to OMB's recommendations have been documented in the docket for this rulemaking. In addition, EPA prepared an analysis of the potential costs and benefits associated with this action. This analysis is contained in the regulatory impact analysis (RIA) entitled, ''Regulatory Impact Analysis for the Final Amendments to the Oil Pollution Prevention Regulations (40 CFR part 112)'' (July 2008). A copy of the analysis is available in the docket for this rulemaking and the analysis is briefly summarized below.

For the economic impact analysis of these amendments, EPA used the SPCC rule requirements at 40 CFR part 112, as amended in July 2002 (67 FR 47042, July 17, 2002) as the baseline to estimate the potential cost savings to regulated facilities from these amendments. The cost savings are not adjusted for the estimated, potential cost savings for the 2006 rule amendments and may overestimate the cost savings for these amendments, particularly for Tier I qualified facilities, revisions to the integrity testing requirement, and the proposed amendments to delay SPCC Plan preparation and implementation for new oil production facilities. The regulatory impact analysis developed in support of this final rule compares the compliance costs for owners and operators of facilities affected by the amendments in this rule to the costs owners and operators would face under the July 2002 SPCC rule amendments. The regulatory amendments have fourteen major components: (1) Exempt hot-mix asphalt; (2) exempt pesticide application equipment and related mix containers; (3) exempt residential heating oil containers at single-family residences; (4) amend the definition of ''facility'' to clarify the currently existing flexibility associated with describing a facility's boundaries; (5) amend the facility diagram requirement to provide additional clarity; (6) define ''loading/unloading rack'' to clarify the equipment subject to the provisions for facility tank car and tank truck loading/unloading racks, as well as amending the provision for this equipment; (7) provide streamlined requirements for a subset of qualified facilities; (8) amend the general secondary containment requirement to provide more clarity; (9) exempt non-transportation-related tank trucks from the sized secondary containment requirements; (10) amend the security requirements; (11) amend the integrity testing requirements to allow a greater amount of flexibility in the use of industry standards; (12) amend the integrity testing requirements for containers that store AFVOs that meet certain criteria; (13) tailor a number of requirements at oil production facilities; and (14) exempt underground oil storage tanks at nuclear power generation facilities. EPA is also providing clarification in the preamble to this rule on two additional issues identified by the regulated community: (1) The consideration of man-made structures in determining how to comply with the SPCC rule requirements and (2) the applicability of the rule to wind turbines for electricity generation.

For each of these components, EPA estimated potential cost savings to regulated facilities that may result from reductions in compliance costs. The main steps used to estimate the compliance cost impacts of this final rule are as follows:

- Develop the baseline universe of SPCC-regulated facilities;
- Estimate the number of facilities affected by the rule amendments;
- Estimate changes in unit compliance cost for each regulated facility affected by the rule;
- Estimate total compliance cost savings to owners and operators of potentially affected facilities; and
- Annualize compliance cost savings over a ten-year period, 2010 through 2019, and discount the estimates using three and seven percent discount rates.

Based on these steps, EPA estimated the annualized compliance cost savings to potentially affected facilities associated with each of the major components of the rule, and presents the results of the economic analysis in Exhibit 1. EPA uses four key assumptions in its regulatory impact analysis. First, the Agency assumes that cost minimization behavior applies to all owners and operators of facilities that qualify for reduced regulatory requirements, whereby all those affected would seek burden relief. Second, EPA assumed, consistent with EPA's guidelines for conducting economic analyses, that all existing owners and operators of facilities are in full compliance with the July 17, 2002 amendments to the SPCC rule (67 FR 47042). Third, EPA assumes that owners and operators of existing SPCC-regulated facilities would forgo compliance activities offered as alternatives where there is only a one-time initial investment because they would have already incurred the one-time cost. For example, EPA assumes that an owner or operator of an existing facility who would qualify for reduced security requirements under the final rule that allows facility owners or operators to tailor their security measures to the facility's specific characteristics and location, would have already provided the security measures as per the July 2002 rule amendments or demonstrated environmental equivalence for tailored security measures. Therefore, owners and operators of existing facilities would not take advantage of the provided alternative. Fourth, EPA assumes that compliance is nationally consistent although EPA recognizes that there is variability in state regulations and the distribution of affected facilities.

Exhibit 1 presents the estimated cost savings for each rule component and for the final rule amendments in total. For several rule amendments, such as the security requirements and facilities handling AFVOs, EPA did not have numeric data on the number of affected facilities within a general industry sector; thus, it developed three scenarios to evaluate a range of cost savings.[10] The exhibit below presents

[10] For example, to develop a range for the number of affected AFVO facilities, EPA contacted industry experts who determined that 40 percent to 90 percent of containers at AFVO facilities are made of stainless steel and almost all containers have bottom drainage. Therefore, based on professional judgment, the Agency considered three scenarios: 40% (low), 65% (medium) and 90% (high) of all

Continued

the estimated cost savings for these regulatory amendments which EPA estimates to be about $176 million on an annualized basis (2007$). The total potential cost savings are calculated taking into account the mid-point values of the estimated ranges of statistical distributions for unit costs. These estimates are not necessarily additive, given that they do not account for interactions that might exist among the various components of the rule.[11]

The oil production sector and farms will benefit from multiple components of the final rule. Specifically, farms will benefit from the amendments to: requirements for qualified facilities (i.e., Tier I); and security requirements, integrity testing requirements, and the facility diagram requirements. Farms will also benefit from the exemption from loading/unloading rack requirements; the exemption for pesticide application equipment and related mix containers, and single-family residential heating oil containers; and clarifications for nurse tanks and the definition of ''facility.'' The total cost savings to farm owners and operators from these amendments are estimated at $13 million on an annualized basis (2007$).

The oil production sector will also benefit from a number of the revisions to the SPCC rules, including the facility diagram requirements; an exemption from the loading/unloading rack requirements and for certain produced water containers when certified by a PE; some will benefit from the new requirements for Tier I qualified facilities; and amendments specific to the oil production sector (for example, the six-month delay in preparation and implementation of SPCC Plans and the exemption of flow-through process vessels from sized secondary containment requirements). The total savings to owners and operators of oil production facilities from all of the amendments that affect this sector are estimated at $116 million on an annualized basis (2007$).

EXHIBIT 1—ESTIMATED COMPLIANCE COST SAVINGS FOR THE REGULATORY AMENDMENTS

Rule component/scenario	Annualized cost savings ($2007, in millions, 7% discount rate)
Hot-Mix Asphalt:	
Exempt HMA containers	$8
Farms:	
Exempt pesticide application equipment and related mix containers	$4
Applicability of Mobile Refueler Requirements to Farm Nurse Tanks	
Residential Heating Oil Containers:	
Exempt single-family residential heating oil containers	$2
Definition of Facility:	
Revise the definition of ''facility''	No cost impact.
Facility Diagram:	
Revise facility diagram requirement	$3
Loading/Unloading Racks [1]:	
Define ''loading/unloading rack''	$51
Tier I Qualified Facilities:	
Provide streamlined requirements for Tier I qualified facilities	$24
General Secondary Containment:	
Revisions to the general secondary containment provision	No cost impact.
General Secondary Containment for Non-Transportation-Related Tank Trucks:	
Extend regulatory relief for mobile refuelers to the non-transportation-related tank trucks	No cost impact.
Security Requirements:	
Revise security requirements [2]	$9
Integrity Testing:	
Amend the integrity testing requirements to allow a greater amount of flexibility in the use of industry standards at all facilities.	$11
Animal Fats and Vegetable Oil:	
Amend integrity testing requirements for AFVO containers that meet certain criteria [3]	$2
Oil Production Facilities:	
Six-month delay for Plan preparation and implementation	$24
Exempt flowlines and gathering lines from secondary containment	No net cost impact.
Flow-through process vessels	$7
Streamlined requirements for small production facilities with marginal wells	$30
Produced water containers	No cost savings estimated.
Man-Made Structures:	
Consider manmade structures in determining SPCC rule applicability	No cost impact.
Nuclear Power Stations:	
Exempt underground oil storage tanks at nuclear power generation facilities.	Less than $1.
Wind turbines:	
Clarify applicability of the rule to wind turbines used to produce electricity	No cost impact.
Total	$176

[1] Mid-point estimate (17% of oil production facilities, 50% of AFVO facilities, and 8% of medium and large farms affected). Cost savings might be higher or lower using different assumptions.
[2] Mid-point estimate (50% of farms affected). Cost savings might be higher or lower using different assumptions.
[3] Mid-point estimate (65% of facilities affected). Cost savings might be lower using different assumptions.

AFVO facilities would have food oil tanks that are eligible.

[11] Certain industry sectors are affected by multiple rule components. As a result, taking advantage of one new requirement might preclude a facility from benefiting from other proposed requirements. The estimate also takes into account the overlap of the six-month delay with the relief for new small production facilities. The six-month delay is specifically designed to allow time for the facility production operations to stabilize in order to avoid the need for multiple certifications of the Plan by a PE. However, because small production facilities that meet the new qualified facility criteria would not have to have their SPCC Plan certified by a PE, they will not incur cost savings from the six-month delay in preparing SPCC Plan.

EPA recognizes that the economic analysis is constrained by limited availability of data and information. The SPCC regulation does not have a notification requirement for regulated facilities and thus, EPA relies on state information; Federal and proprietary databases; and information from industry experts as a basis for the cost information included in the analysis.

B. Paperwork Reduction Act

The information collection requirements for this final rule have been submitted for approval to OMB under the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.* The information collection requirements are not enforceable until OMB approves them. The Information Collection Request (ICR) document prepared by EPA has been assigned EPA ICR number 0328.14.

EPA does not collect the information required by the SPCC rule on a routine basis. SPCC Plans ordinarily need not be submitted to EPA, but must generally be maintained at the facility. Preparation, implementation, and maintenance of an SPCC Plan by the facility owner or operator helps prevent oil discharges to navigable waters or adjoining shorelines and mitigate the environmental damage caused by such discharges. Therefore, the primary user of the data is the facility personnel. While EPA may, from time to time, request information under these regulations, such requests are not routine.

Although facility personnel are the primary data user, EPA also uses the data in certain situations. In particular, EPA reviews SPCC Plans: (1) When it requests a facility owner or operator to submit required information in the event of certain discharges of oil or to evaluate an extension request; and (2) as part of EPA's inspection program. State and local governments also may use the data, which are not necessarily available elsewhere and can greatly assist local emergency preparedness efforts. Preparation of the information for affected facilities is required under section 311(j)(1) of the Clean Water Act as implemented by 40 CFR part 112.

EPA estimates that in the absence of this rulemaking, approximately 623,000 existing facilities would be subject to the SPCC rule in 2010 and have SPCC Plans. In addition, EPA estimates that approximately 17,400 new facilities would become subject to the SPCC requirements during that year, resulting in a total of about 640,000 regulated facilities in 2010.[12]

Under this final rule, the storage capacity of containers solely containing HMA, residential heating oil containers at single-family residences, pesticide application equipment and related mix containers, and underground oil storage tanks at nuclear power generation facilities are exempt from the SPCC requirements; EPA is amending the definition of ''facility'' to clarify that contiguous or non-contiguous buildings, properties, parcels, leases, structures, installations, pipes, or pipelines may be considered separate facilities, and to specify that the ''facility'' definition governs the applicability of 40 CFR part 112; EPA is amending the facility diagram requirement to provide additional clarity for all facilities; EPA is providing a definition for the term ''loading/unloading rack,'' which determines whether a facility is subject to the provisions at § 112.7(h), as well as specifically excluding onshore oil production facilities and farms from the requirements of § 112.7(h); providing an option that allows a subset of qualified facilities (Tier I) to complete and implement an SPCC Plan template (Appendix G to 40 CFR part 112) in order to comply with the SPCC rule requirements; amending the general secondary containment requirements to provide more clarity; exempting non-transportation-related tank trucks from the sized secondary containment requirements; modifying the security requirements to allow an owner or operator to tailor his security measures to the facility's specific characteristics and location; replacing the current integrity testing requirements with the requirements provided for qualified facilities, as promulgated in December 2006; providing flexibility in the rule for determining the scope of integrity testing that is appropriate for containers that store AFVOs that are intended for human consumption and that meet other criteria; and finally, this rulemaking streamlines the requirements for oil production facilities by modifying the definition of production facility to be consistent with the amendments to the definition of facility, extending the timeframe by which a new oil production facility must prepare and implement an SPCC Plan, providing an alternative option for flow-through process vessels at oil production facilities to comply with the general secondary containment requirements and additional oil spill prevention measures in lieu of sized secondary containment requirements, establishing more specific requirements for contingency planning and a flowline/intra-facility gathering line maintenance program, while exempting such flowlines and intra-facility gathering lines at oil production facilities from the secondary containment requirements, providing an exemption for certain intra-facility gathering lines, exempting certain produced water storage containers at oil production facilities that do not contain oil as certified by a Professional Engineer (PE), establishing alternative criteria for an oil production facility to be eligible to self-certify an SPCC Plan as a qualified facility, and clarifying the definition of ''permanently closed'' as it applies to an oil production facility.

Under this action, an estimated 640,000 regulated facilities are subject to the SPCC information collection requirements of this rule in 2010.[13] The Agency estimates that as a result of these amendments to tailor, clarify, and streamline certain SPCC requirements, the reporting and recordkeeping burden would decrease by approximately 1.3 million hours. The final rule amendments would reduce capital and operation and management costs by approximately $53 million on an annualized basis.[14] Burden is defined at 5 CFR 1320.3(b).

An agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for EPA's regulations in 40 CFR are listed in 40 CFR part 9. When this ICR is approved by OMB, the Agency will publish a technical amendment to 40 CFR part 9 in the **Federal Register** to display the OMB control number for the approved information collection requirements contained in this final rule.

C. Regulatory Flexibility Act

The Regulatory Flexibility Act generally requires an agency to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements under the Administrative Procedure Act or any other statute unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities

[12] To estimate the number of SPCC-regulated facilities in 2010, EPA used the estimated number of facilities for 2005 (571,000) and applied annual, industry-specific growth rates that resulted in about 640,000 facilities.

[13] To estimate the number of SPCC-regulated facilities in 2010, EPA used the estimated number of facilities for 2005 (571,000) and applied annual industry-specific growth rates.

[14] The paperwork burden reduction does not include the reduction associated with the amendment for milk bulk storage containers, because EPA only accounted for containers storing petroleum-based oil and not milk or related substances, when estimating the universe of affected facilities.

include small businesses, small organizations, and small governmental jurisdictions.

For purposes of assessing the impacts of this final rule on small entities, a small entity is defined as: (1) A small business as defined in the U.S. Small Business Administration's (SBA) regulations at 13 CFR 121.201—the SBA defines small businesses by category of business using North American Industry Classification System (NAICS) codes, and in the case of farms and oil production facilities, which constitute a large percentage of the facilities affected by this rule, generally defines small businesses as having less than $0.5 million to $27.5 million per year in sales receipts, depending on the industry, or 500 or fewer employees, respectively; (2) a small governmental jurisdiction that is a government of a city, county, town, school district or special district with a population of less than 50,000; and (3) a small organization that is any not-for-profit enterprise that is independently owned and operated and is not dominant in its field.

After considering the economic impacts of this rule on small entities, the Agency certifies that this action would not have a significant economic impact on a substantial number of small entities. In determining whether a rule has a significant economic impact on a substantial number of small entities, the impact of concern is any significant adverse economic impact on small entities, since the primary purpose of the regulatory flexibility analyses is to identify and address regulatory alternatives ''which minimize any significant economic impact of the rule on small entities'' (5 U.S.C. 603 and 604). Thus, an agency may certify that a rule would not have a significant economic impact on a substantial number of small entities if the rule relieves regulatory burden, or otherwise has a positive economic effect on all of the small entities subject to the rule.

Under the final rule amendments, the following issues are addressed: Exempt HMA and HMA containers, pesticide application equipment and related mix containers, residential heating oil containers at single-family residences, and underground oil storage tanks at nuclear power generation facilities from the SPCC requirements; amend the definition of ''facility'' to clarify the flexibility associated with the existing definition in describing a facility's boundaries; clarify how containers, fixed and mobile, are identified on the facility diagram; define ''loading/unloading rack'' to clarify whether a facility is subject to the SPCC rule requirements of § 112.7(h); streamline the requirements for a subset of qualified facilities (Tier I qualified facilities); amend the general secondary containment requirements to provide more clarity; exempt non-transportation-related tank trucks from the sized secondary containment requirements; amend the facility security requirements to allow an owner or operator to tailor security measures to his facility's specific characteristics and location; replace the current integrity testing requirements with the regulatory requirements for a qualified facility promulgated on December 26, 2006 (71 FR 77266); provide flexibility in the rule to determine the scope of integrity testing that is appropriate for containers that store AFVOs that are intended for human consumption and that meet other criteria; and initiate several amendments to tailor the requirements for oil production facilities to address concerns raised by the production sector, respectively.

Overall, EPA estimates that this action will reduce annual compliance costs by approximately $176 million on an annualized basis (2007$) for owners and operators of affected facilities. Total costs were annualized over a 10-year period using a seven percent discount rate. EPA derived these savings by estimating the number of facilities affected by each amendment; identifying the specific behavioral changes that may occur (for example, choosing to prepare an SPCC Plan template instead of a full SPCC Plan); estimating the unit costs of compliance measures under the baseline and amended scenarios; and applying the change in unit costs to the projected number of affected facilities.

EPA has therefore concluded that this rule will relieve regulatory burden for small entities and therefore, certify that this rule will not have a significant economic impact on a substantial number of small entities.

D. Unfunded Mandates Reform Act

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Public Law 104–4, establishes requirements for Federal agencies to assess the effects of their regulatory actions on state, local, and tribal governments and the private sector. Under section 202 of UMRA, EPA generally must prepare a written statement, including a cost-benefit analysis, for proposed and final rules with ''Federal mandates'' that may result in expenditures to state, local, and tribal governments, in the aggregate, or to the private sector, of $100 million or more in any one year. Before promulgating an EPA rule for which a written statement is needed, section 205 of UMRA generally requires EPA to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective, or least burdensome alternative that achieves the objectives of the rule. The provisions of section 205 do not apply when they are inconsistent with applicable law. Moreover, section 205 allows EPA to adopt an alternative other than the least costly, most cost-effective, or least burdensome alternative if the Administrator publishes with the rule an explanation why that alternative was not adopted.

Before EPA establishes any regulatory requirements that may significantly or uniquely affect small governments, including tribal governments, it must have developed under section 203 of UMRA a small government agency plan. The plan must provide for notifying potentially affected small governments, enabling officials of affected small governments to have meaningful and timely input in the development of EPA regulatory proposals with significant Federal intergovernmental mandates, and informing, educating, and advising small governments on compliance with the regulatory requirements.

EPA has determined that this rule amendment does not contain a Federal mandate that may result in expenditures of $100 million or more for state, local, and tribal governments, in the aggregate, or the private sector in any one year. This final rule would reduce compliance costs on owners and operators of affected facilities by approximately $176 million on an annualized basis (2007$), although EPA acknowledges this total estimate is derived from analyses of individual major components of the rule that are not necessarily additive, given that they do not account for interactions that may exist among the various components. Thus, this rule amendment is not subject to the requirements of sections 202 and 205 of the UMRA.

EPA has determined that this rule amendment contains no regulatory requirements that might significantly or uniquely affect small governments. As explained above, the effect of the rule amendment will be to reduce burden for facility owners and operators, including certain small governments that are subject to the rule.

E. Executive Order—13132 Federalism

Executive Order 13132, entitled ''Federalism'' (64 FR 43255, August 10, 1999), requires EPA to develop an accountable process to ensure ''meaningful and timely input by State

and local officials in the development of regulatory policies that have federalism implications.'' ''Policies that have federalism implications'' is defined in the Executive Order to include regulations that have ''substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.''

This rule amendment does not have federalism implications. It would not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. Under CWA section 311(o), states may impose additional requirements, including more stringent requirements, relating to the prevention of oil discharges to navigable waters or adjoining shorelines. EPA recognizes that some states have more stringent requirements (56 FR 54612, October 22, 1991). This rule amendment will not preempt state law or regulations. Thus, Executive Order 13132 does not apply to this action.

F. Executive Order 13175—Consultation and Coordination With Indian Tribal Governments

Executive Order 13175, entitled ''Consultation and Coordination with Indian Tribal Governments'' (65 FR 67249, November 9, 2000), requires EPA to develop an accountable process to ensure ''meaningful and timely input by tribal officials in the development of regulatory policies that have tribal implications.'' This rule amendment does not have tribal implications, as specified in Executive Order 13175. This rule amendment will not significantly or uniquely affect communities of Indian trial governments. Thus, Executive Order 13175 does not apply to this action.

G. Executive Order 13045—Protection of Children from Environmental Health & Safety Risks

Executive Order 13045,'' Protection of Children from Environmental Health Risks and Safety Risks'' (62 FR 19885, April 23, 1997) applies to any rule that: (1) Is determined to be ''economically significant'' as defined under Executive Order 12866, and (2) concerns an environmental health or safety risk that EPA has reason to believe may have a disproportionate effect on children. If the regulatory action meets both criteria, the Agency must evaluate the environmental health or safety effects of the planned rule on children, and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by the Agency.

Although this final rule is economically significant in that it would reduce compliance costs on owners or operators of affected facilities by approximately $176 million on an annualized basis (2007$), it is not subject to the Executive Order because the Agency does not have reason to believe the environmental health or safety risk addressed by this action presents a disproportionate risk to children.

H. Executive Order 13211—Actions That Significantly Affect Energy Supply, Distribution, or Use

This rule amendment is not a ''significant energy action'' as defined in Executive Order 13211, ''Actions Concerning Regulations that Significantly Affect Energy Supply, Distribution, or Use'' (66 FR 28355, May 22, 2001) because it is not likely to have a significant adverse effect on the supply, distribution, or use of energy. The overall effect of the action is to decrease the regulatory burden on facility owners or operators subject to its provisions.

I. National Technology Transfer and Advancement Act

Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (NTTAA), Public Law 104–113, section 12(d) (15 U.S.C. 272 note) directs EPA to use voluntary consensus standards in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards, such as materials specifications, test methods, sampling procedures, and business practices that are developed or adopted by voluntary consensus standards bodies. The NTTAA directs EPA to provide Congress, through OMB, explanations when the Agency decides not to use available and applicable voluntary consensus standards.

The owner or operator of a facility subject to the SPCC rule has the flexibility to consider applicable industry standards in the development of an SPCC Plan, in accordance with good engineering practice. However, this rulemaking does not involve technical standards, as it does not set or incorporate by reference any one specific technical standard. Therefore, the NTTAA does not apply.

J. Executive Order 12898—Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations

Executive Order 12898 (59 FR 7629, February 16, 1994) establishes Federal executive policy on environmental justice. Its main provision directs Federal agencies, to the greatest extent practicable and permitted by law, to make environmental justice part of their mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority populations and low-income populations in the United States. EPA has determined that this final rule will not have disproportionately high and adverse human health or environmental effects on minority or low-income populations because it does not affect the level of protection provided to human health or the environment. The overall effect of the action is to decrease the regulatory burden on facility owners or operators subject to its provisions.

K. Congressional Review Act

The Congressional Review Act, 5 U.S.C. 801 *et seq.*, as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. EPA will submit a report containing this rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the **Federal Register**. A major rule cannot take effect until 60 days after it is published in the **Federal Register**. This action is a ''major rule'' as defined by 5 U.S.C. 804(2) because it will likely result in an annual effect on the economy of $100 million or more. This rule will be in effect on February 3, 2009.

List of Subjects in 40 CFR Part 112

Environmental protection, Animal fats and vegetable oils, Hot-mix Asphalt, Farms, Flammable and combustible materials, Integrity testing, Loading racks, Materials handling and storage, Natural gas, Oil pollution, Oil and gas exploration and production, Oil spill response, Penalties, Petroleum, Reporting and recordkeeping requirements, Secondary containment, Security, Tanks, Unloading racks, Water pollution control, Water resources.

Dated: November 20, 2008.

Stephen L. Johnson,

Administrator.

■ For the reasons stated in the preamble, the Environmental Protection Agency amends 40 CFR part 112 as follows:

PART 112—OIL POLLUTION PREVENTION

■ 1. The authority citation for part 112 continues to read as follows:

Authority: 33 U.S.C. 1251 *et seq.*; 33 U.S.C. 2720; and E.O. 12777 (October 18, 1991), 3 CFR, 1991 Comp., p. 351.

Subpart A—[Amended]

■ 2. Amend § 112.1 as follows:

■ a. By revising paragraphs (d)(2)(i) and (d)(2)(ii);

■ b. By revising paragraph (d)(4); and

■ c. By adding paragraphs (d)(8) through (d)(12).

§ 112.1 General applicability.

* * * * *

(d) * * *

(2) * * *

(i) The completely buried storage capacity of the facility is 42,000 U.S. gallons or less of oil. For purposes of this exemption, the completely buried storage capacity of a facility excludes the capacity of a completely buried tank, as defined in § 112.2, and connected underground piping, underground ancillary equipment, and containment systems, that is currently subject to all of the technical requirements of part 280 of this chapter or all of the technical requirements of a State program approved under part 281 of this chapter, or the capacity of any underground oil storage tanks deferred under 40 CFR part 280 that supply emergency diesel generators at a nuclear power generation facility licensed by the Nuclear Regulatory Commission and subject to any Nuclear Regulatory Commission provision regarding design and quality criteria, not limited to 10 CFR part 50. The completely buried storage capacity of a facility also excludes the capacity of a container that is ''permanently closed,'' as defined in § 112.2 and the capacity of intra-facility gathering lines subject to the regulatory requirements of 49 CFR part 192 or 195.

(ii) The aggregate aboveground storage capacity of the facility is 1,320 U.S. gallons or less of oil. For the purposes of this exemption, only containers with a capacity of 55 U.S. gallons or greater are counted. The aggregate aboveground storage capacity of a facility excludes:

(A) The capacity of a container that is ''permanently closed'' as defined in § 112.2;

(B) The capacity of a ''motive power container'' as defined in § 112.2;

(C) The capacity of hot-mix asphalt or any hot-mix asphalt container;

(D) The capacity of a container for heating oil used solely at a single-family residence;

(E) The capacity of pesticide application equipment and related mix containers.

(F) The capacity of a produced water container, as defined in § 112.2, and any associated piping or appurtenances downstream of the container, that meets the requirements at § 112.9(c)(6)(i).

* * * * *

(4) Any completely buried storage tank, as defined in § 112.2, and connected underground piping, underground ancillary equipment, and containment systems, at any facility, that is subject to all of the technical requirements of part 280 of this chapter or a State program approved under part 281 of this chapter, or any underground oil storage tanks including below-grade vaulted tanks, deferred under 40 CFR part 280, as originally promulgated, that supply emergency diesel generators at a nuclear power generation facility licensed by the Nuclear Regulatory Commission, except that such a tank may qualify for the exemption if it is subject to any Nuclear Regulatory Commission provision regarding design and quality criteria, not limited to 10 CFR part 50. Such emergency generator tanks must be marked on the facility diagram as provided in § 112.7(a)(3), if the facility is otherwise subject to this part.

* * * * *

(8) Hot-mix asphalt, or any hot-mix asphalt container.

(9) Any container for heating oil used solely at a single-family residence.

(10) Any pesticide application equipment or related mix containers.

(11) Intra-facility gathering lines subject to the regulatory requirements of 49 CFR part 192 or 195, except that such a line's location must be identified and marked as ''exempt'' on the facility diagram as provided in § 112.7(a)(3), if the facility is otherwise subject to this part.

(12) A *produced water container,* as defined in § 112.2 and any associated piping or appurtenances downstream of the container, that meets the requirements at § 112.9(c)(6)(i), except that such a tank's location must be identified and marked as ''exempt'' on the facility diagram as provided in § 112.7(a)(3), if the facility is otherwise subject to this part.

* * * * *

■ 3. Amend § 112.2 by revising the definitions for ''Facility,'' ''Production facility,'' and adding definitions for ''Loading/unloading rack'' and ''Produced water container'' in alphabetical order to read as follows:

§ 112.2 Definitions.

* * * * *

Facility means any mobile or fixed, onshore or offshore building, property, parcel, lease, structure, installation, equipment, pipe, or pipeline (other than a vessel or a public vessel) used in oil well drilling operations, oil production, oil refining, oil storage, oil gathering, oil processing, oil transfer, oil distribution, and oil waste treatment, or in which oil is used, as described in Appendix A to this part. The boundaries of a facility depend on several site-specific factors, including but not limited to, the ownership or operation of buildings, structures, and equipment on the same site and types of activity at the site. Contiguous or non-contiguous buildings, properties, parcels, leases, structures, installations, pipes, or pipelines under the ownership or operation of the same person may be considered separate facilities. Only this definition governs whether a facility is subject to this part.

* * * * *

Loading/unloading rack means a fixed structure (such as a platform, gangway) necessary for loading or unloading a tank truck or tank car, which is located at a facility subject to the requirements of this part. A loading/unloading rack includes a loading or unloading arm, and may include any combination of the following: piping assemblages, valves, pumps, shut-off devices, overfill sensors, or personnel safety devices.

* * * * *

Produced water container means a storage container at an oil production facility used to store the produced water after initial oil/water separation, and prior to reinjection, beneficial reuse, discharge, or transfer for disposal.

Production facility means all structures (including but not limited to wells, platforms, or storage facilities), piping (including but not limited to flowlines or intra-facility gathering lines), or equipment (including but not limited to workover equipment, separation equipment, or auxiliary non-transportation-related equipment) used in the production, extraction, recovery, lifting, stabilization, separation or treating of oil (including condensate), or associated storage or measurement, and is located in an oil or gas field, at a facility. This definition governs whether such structures, piping, or equipment

are subject to a specific section of this part.

* * * * *

■ 4. Amend § 112.3 as follows:
■ a. By revising the introductory text;
■ b. By revising paragraph (b)(1);
■ c. By adding paragraph (b)(3);
■ d. By adding paragraph (d)(1)(vi) and (d)(1)(vii); and
■ e. By revising paragraph (g).

§ 112.3 Requirement to prepare and implement a Spill Prevention, Control, and Countermeasure Plan.

The owner or operator or an onshore or offshore facility subject to this section must prepare in writing and implement a Spill Prevention Control and Countermeasure Plan (hereafter ''SPCC Plan'' or ''Plan''),'' in accordance with § 112.7 and any other applicable section of this part.

* * * * *

(b)(1) If you are the owner or operator of an onshore or offshore facility (excluding oil production facilities) that becomes operational after July 1, 2009, and could reasonably be expected to have a discharge as described in § 112.1(b), you must prepare and implement a Plan before you begin operations.

* * * * *

(3) If you are the owner or operator of an oil production facility that becomes operational after July 1, 2009, and could reasonably be expected to have a discharge as described in § 112.1(b), you must prepare and implement a Plan within six months after you begin operations.

* * * * *

(d) * * *

(vi) That, if applicable, all exempted produced water containers and any associated piping and appurtenances downstream of the container, including flowlines and other appurtenances associated with injection or discharge, meet the criteria described in § 112.9(c)(6)(i) and are identified in the Plan; and appropriate produced water characteristics in the container and any associated piping and appurtenances downstream of the container, procedures, or maintenance required to meet the standards of Part 110 required for the produced water container are identified in the Plan.

(vii) That, if applicable, for a produced water container subject to § 112.9(c)(6)(ii), any procedure to minimize the amount of free-phase oil is designed to reduce the accumulation of free-phase oil and the procedures and frequency for required inspections, maintenance and testing have been established and are described in the Plan.

* * * * *

(g) *Qualified Facilities.* The owner or operator of a qualified facility as defined in this subparagraph may self-certify his facility's Plan, as provided in § 112.6. A qualified facility is one that meets the following Tier I or Tier II qualified facility criteria:

(1) A Tier I qualified facility meets the qualification criteria in paragraph (g)(2) of this section and has no individual aboveground oil storage container with a capacity greater than 5,000 U.S. gallons.

(2) A Tier II qualified facility is one that has had no single discharge as described in § 112.1(b) exceeding 1,000 U.S. gallons or no two discharges as described in § 112.1(b) each exceeding 42 U.S. gallons within any twelve month period in the three years prior to the SPCC Plan self-certification date, or since becoming subject to this part if the facility has been in operation for less than three years (other than discharges as described in § 112.1(b) that are the result of natural disasters, acts of war, or terrorism), and either:

(i) Has an aggregate aboveground oil storage capacity of 10,000 U.S. gallons or less; or

(ii) Is an onshore oil production facility with:

(A) No more than two producing wells per single tank battery, each of which produce ten barrels or less of crude oil per well per day, if the facility has an injection well; or

(B) No more than four producing wells per single tank battery, each of which produce ten barrels or less of crude oil per well per day, and with no injection wells at the facility.

■ 5. Amend § 112.5 as follows:
■ a. By redesignating paragraphs (b) and (c) as paragraph (d) and (e);
■ b. By revising the newly redesignated paragraph (d) and;
■ c. Adding new paragraphs (b) and (c).

The additions and revisions read as follows:

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

* * * * *

(b) For onshore oil production facilities with produced water containers exempted pursuant to the requirements at § 112.9(c)(6)(i), on an annual basis, the owner or operator must verify that the produced water characteristics in the container and any associated piping and appurtenances downstream of the container, procedures, or maintenance required to meet the standards of Part 110 that formed the basis for the PE certification described in that section are maintained. If an owner or operator fails to maintain the produced water characteristics in the container, or in the associated downstream piping and appurtenances; procedures; or maintenance required to meet the standards of 40 CFR part 110 that formed the basis for the PE's certification, then the produced water container and any associated piping and appurtenances downstream are ineligible for this exemption, and you must, within six months, comply with all provisions under this part applicable to the container and amend your Plan. A technical amendment made under this section must be prepared within three months and implemented as soon as possible, but not later than three months following the preparation of the amendment.

(c) The owner or operator of an onshore oil production facility with produced water containers exempted according to the requirements at § 112.9(c)(6)(i), must maintain the verifications in accordance with § 112.7(e). You must document your verification and sign a statement that the produced water characteristics in the container and any associated piping and appurtenances downstream from the container, procedures, or maintenance required to meet the standards of Part 110 are maintained in accordance with the PE certification. The following words will suffice, ''I verify that the produced water characteristics in the container and any associated piping and appurtenances downstream of the container, procedures, or maintenance required to meet the standards of 40 CFR part 110 that formed the basis for the PE's certification are maintained.''

(d) Notwithstanding compliance with paragraphs (a) and (c) of this section, complete a review and evaluation of the SPCC Plan at least once every five years from the date your facility becomes subject to this part; or, if your facility was in operation on or before August 16, 2002, five years from the date your last review was required under this part. As a result of this review and evaluation, you must amend your SPCC Plan within six months of the review to include more effective prevention and control technology if the technology has been field-proven at the time of the review and will significantly reduce the likelihood of a discharge as described in § 112.1(b) from the facility. You must implement any amendment as soon as possible, but not later than six months following preparation of any amendment. You must document your

completion of the review and evaluation, and must sign a statement as to whether you will amend the Plan, either at the beginning or end of the Plan or in a log or an appendix to the Plan. The following words will suffice, ''I have completed review and evaluation of the SPCC Plan for (name of facility) on (date), and will (will not) amend the Plan as a result.''

* * * * *

■ 6. Revise § 112.6 to read as follows:

§ 112.6 Qualified Facilities Plan Requirements.

Qualified facilities meeting the Tier I applicability criteria in § 112.3(g)(1) are subject to the requirements in paragraph (a) of this section. Qualified facilities meeting the Tier II applicability criteria in § 112.3(g)(2) are subject to the requirements in paragraph (b) of this section.

(a) *Tier I Qualified Facilities.*

(1) *Preparation and Self-Certification of the Plan.* If you are an owner or operator of a facility that meets the Tier I qualified facility criteria in § 112.3(g)(1), you must either: comply with the requirements of paragraph (a)(3) of this section; or prepare and implement a Plan meeting requirements of paragraph (b) of this section; or prepare and implement a Plan meeting the general Plan requirements in § 112.7 and applicable requirements in subparts B and C, including having the Plan certified by a Professional Engineer as required under § 112.3(d). If you do not follow the Appendix G template, you must prepare an equivalent Plan that meets all of the applicable requirements listed in this part, and you must supplement it with a section cross-referencing the location of requirements listed in this part and the equivalent requirements in the other prevention plan. To complete the template in Appendix G, you must certify that:

(i) You are familiar with the applicable requirements of 40 CFR part 112;

(ii) You have visited and examined the facility;

(iii) You prepared the Plan in accordance with accepted and sound industry practices and standards;

(iv) You have established procedures for required inspections and testing in accordance with industry inspection and testing standards or recommended practices;

(v) You will fully implement the Plan;

(vi) The facility meets the qualification criteria in § 112.3(g)(1);

(vii) The Plan does not deviate from any requirement of this part as allowed by § 112.7(a)(2) and 112.7(d) or include an exemption/measures pursuant to § 112.9(c)(6) for produced water containers and any associated piping and appurtenances downstream from the container; and

(viii) The Plan and individual(s) responsible for implementing this Plan have the approval of management, and the facility owner or operator has committed the necessary resources to fully implement this Plan.

(2) *Technical Amendments.* You must certify any technical amendments to your Plan in accordance with paragraph (a)(1) of this section when there is a change in the facility design, construction, operation, or maintenance that affects its potential for a discharge as described in § 112.1(b). If the facility change results in the facility no longer meeting the Tier I qualifying criteria in § 112.3(g)(1) because an individual oil storage container capacity exceeds 5,000 U.S. gallons or the facility capacity exceeds 10,000 U.S. gallons in aggregate aboveground storage capacity, within six months following preparation of the amendment, you must either:

(i) Prepare and implement a Plan in accordance with § 112.6(b) if you meet the Tier II qualified facility criteria in § 112.3(g)(2); or

(ii) Prepare and implement a Plan in accordance with the general Plan requirements in § 112.7, and applicable requirements in subparts B and C, including having the Plan certified by a Professional Engineer as required under § 112.3(d).

(3) *Plan Template and Applicable Requirements.* Prepare and implement an SPCC Plan that meets the following requirements under § 112.7 and in subparts B and C of this part: introductory paragraph of §§ 112.7, 112.7(a)(3)(i), 112.7(a)(3)(iv), 112.7(a)(3)(vi), 112.7(a)(4), 112.7(a)(5), 112.7(c), 112.7(e), 112.7(f), 112.7(g), 112.7(k), 112.8(b)(1), 112.8(b)(2), 112.8(c)(1), 112.8(c)(3), 112.8(c)(4), 112.8(c)(5), 112.8(c)(6), 112.8(c)(10), 112.8(d)(4), 112.9(b), 112.9(c)(1), 112.9(c)(2), 112.9(c)(3), 112.9(c)(4), 112.9(c)(5), 112.9(d)(1), 112.9(d)(3), 112.9(d)(4), 112.10(b), 112.10(c), 112.10(d), 112.12(b)(1), 112.12(b)(2), 112.12(c)(1), 112.12(c)(3), 112.12(c)(4), 112.12(c)(5), 112.12(c)(6), 112.12(c)(10), and 112.12(d)(4). The template in Appendix G to this part has been developed to meet the requirements of 40 CFR part 112 and, when completed and signed by the owner or operator, may be used as the SPCC Plan. Additionally, you must meet the following requirements:

(i) *Failure analysis, in lieu of the requirements in § 112.7(b).* Where experience indicates a reasonable potential for equipment failure (such as loading or unloading equipment, tank overflow, rupture, or leakage, or any other equipment known to be a source of discharge), include in your Plan a prediction of the direction and total quantity of oil which could be discharged from the facility as a result of each type of major equipment failure.

(ii) *Bulk storage container secondary containment, in lieu of the requirements in §§ 112.8(c)(2) and (c)(11) and 112.12(c)(2) and (c)(11).* Construct all bulk storage container installations (except mobile refuelers and other non-transportation-related tank trucks), including mobile or portable oil storage containers, so that you provide a secondary means of containment for the entire capacity of the largest single container plus additional capacity to contain precipitation. Dikes, containment curbs, and pits are commonly employed for this purpose. You may also use an alternative system consisting of a drainage trench enclosure that must be arranged so that any discharge will terminate and be safely confined in a catchment basin or holding pond. Position or locate mobile or portable oil storage containers to prevent a discharge as described in § 112.1(b).

(iii) *Overfill prevention, in lieu of the requirements in §§ 112.8(c)(8) and 112.12(c)(8).* Ensure that each container is provided with a system or documented procedure to prevent overfills of the container, describe the system or procedure in the SPCC Plan and regularly test to ensure proper operation or efficacy.

(b) *Tier II Qualified Facilities.*

(1) *Preparation and Self-Certification of Plan.* If you are the owner or operator of a facility that meets the Tier II qualified facility criteria in § 112.3(g)(2), you may choose to self-certify your Plan. You must certify in the Plan that:

(i) You are familiar with the requirements of this part;

(ii) You have visited and examined the facility;

(iii) The Plan has been prepared in accordance with accepted and sound industry practices and standards, and with the requirements of this part;

(iv) Procedures for required inspections and testing have been established;

(v) You will fully implement the Plan;

(vi) The facility meets the qualification criteria set forth under § 112.3(g)(2);

(vii) The Plan does not deviate from any requirement of this part as allowed by § 112.7(a)(2) and 112.7(d), or include an exemption/measures pursuant to § 112.9(c)(6) for produced water containers and any associated piping

and appurtenances downstream from the container, except as provided in paragraph (b)(3) of this section; and

(viii) The Plan and individual(s) responsible for implementing the Plan have the full approval of management and the facility owner or operator has committed the necessary resources to fully implement the Plan.

(2) *Technical Amendments.* If you self-certify your Plan pursuant to paragraph (b)(1) of this section, you must certify any technical amendments to your Plan in accordance with paragraph (b)(1) of this section when there is a change in the facility design, construction, operation, or maintenance that affects its potential for a discharge as described in § 112.1(b), except:

(i) If a Professional Engineer certified a portion of your Plan in accordance with paragraph (b)(4) of this section, and the technical amendment affects this portion of the Plan, you must have the amended provisions of your Plan certified by a Professional Engineer in accordance with paragraph (b)(4)(ii) of this section.

(ii) If the change is such that the facility no longer meets the Tier II qualifying criteria in § 112.3(g)(2) because it exceeds 10,000 U.S. gallons in aggregate aboveground storage capacity you must, within six months following the change, prepare and implement a Plan in accordance with the general Plan requirements in § 112.7 and the applicable requirements in subparts B and C of this part, including having the Plan certified by a Professional Engineer as required under § 112.3(d).

(3) *Applicable Requirements.* Except as provided in this paragraph, your self-certified SPCC Plan must comply with § 112.7 and the applicable requirements in subparts B and C of this part:

(i) *Environmental Equivalence.* Your Plan may not include alternate methods which provide environmental equivalence pursuant to § 112.7(a)(2), unless each alternate method has been reviewed and certified in writing by a Professional Engineer, as provided in paragraph (b)(4) of this section.

(ii) *Impracticability.* Your Plan may not include any determinations that secondary containment is impracticable and provisions in lieu of secondary containment pursuant to § 112.7(d), unless each such determination and alternate measure has been reviewed and certified in writing by a Professional Engineer, as provided in paragraph (b)(4) of this section.

(iii) *Produced Water Containers.* Your Plan may not include any produced water container exemptions or alternative procedures for skimming in lieu of sized secondary containment pursuant to § 112.9(c)(6), unless they have been reviewed and certified in writing by a Professional Engineer, as provided in paragraph (b)(4) of this section.

(4) *Professional Engineer Certification of Portions of a Qualified Facility's Self-Certified Plan.*

(i) As described in paragraph (b)(3) of this section, the facility owner or operator may not self-certify alternative measures allowed under § 112.7(a)(2) or (d), that are included in the facility's Plan. Such measures must be reviewed and certified, in writing, by a licensed Professional Engineer. For each alternative measure allowed under § 112.7(a)(2), the Plan must be accompanied by a written statement by a Professional Engineer that states the reason for nonconformance and describes the alternative method and how it provides equivalent environmental protection in accordance with § 112.7(a)(2). For each determination of impracticability of secondary containment pursuant to § 112.7(d), the Plan must clearly explain why secondary containment measures are not practicable at this facility and provide the alternative measures required in § 112.7(d) in lieu of secondary containment. By certifying each measure allowed under § 112.7(a)(2) and (d), the Professional Engineer attests:

(A) That he is familiar with the requirements of this part;

(B) That he or his agent has visited and examined the facility; and

(C) That the alternative method of environmental equivalence in accordance with § 112.7(a)(2) or the determination of impracticability and alternative measures in accordance with § 112.7(d) is consistent with good engineering practice, including consideration of applicable industry standards, and with the requirements of this part.

(ii) As described in paragraph (b)(3) of this section, the facility owner or operator may not self-certify measures as described in § 112.9(c)(6) for produced water containers and any associated piping and appurtenances downstream from the container. Such measures must be reviewed and certified, in writing, by a licensed Professional Engineer, in accordance with § 112.3(d)(1)(vi) or (vii), as applicable.

(iii) The review and certification by the Professional Engineer under this paragraph is limited to the alternative method which achieves equivalent environmental protection pursuant to § 112.7(a)(2); to the impracticability determination and measures in lieu of secondary containment pursuant to § 112.7(d); or the measures pursuant to § 112.9(c)(6) for produced water containers and any associated piping and appurtenances downstream from the container.

■ 7. Amend § 112.7 as follows:

■ a. By revising the first sentence in paragraph (a)(2);

■ b. By revising paragraphs (a)(3) introductory text and (a)(3)(i);

■ c. By revising paragraphs (c) introductory text and (c)(1);

■ d. By revising paragraph (g); and

■ e. By revising the heading to paragraph (h), paragraphs (h)(1) and (h)(2).

§ 112.7 General requirements for Spill Prevention, Control, and Countermeasure Plans.

* * * * *

(a) * * *

(2) Comply with all applicable requirements listed in this part. Except as provided in § 112.6, your Plan may deviate from the requirements in paragraphs (g), (h)(2) and (3), and (i) of this section and the requirements in subparts B and C of this part, except the secondary containment requirements in paragraphs (c) and (h)(1) of this section, and §§ 112.8(c)(2), 112.8(c)(11), 112.9(c)(2), 112.9(d)(3), 112.10(c), 112.12(c)(2), and 112.12(c)(11), where applicable to a specific facility, if you provide equivalent environmental protection by some other means of spill prevention, control, or countermeasure.

* * *

* * * * *

(3) Describe in your Plan the physical layout of the facility and include a facility diagram, which must mark the location and contents of each fixed oil storage container and the storage area where mobile or portable containers are located. The facility diagram must identify the location of and mark as ''exempt'' underground tanks that are otherwise exempted from the requirements of this part under § 112.1(d)(4), and produced water containers and any associated piping and appurtenances downstream from the container, that are otherwise exempted from the requirements of this part under § 112.1(d)(12). The facility diagram must also include all transfer stations and connecting pipes, including intra-facility gathering lines that are otherwise exempted from the requirements of this part under § 112.1(d)(11). You must also address in your Plan:

(i) The type of oil in each fixed container and its storage capacity. For mobile or portable containers, either

provide the type of oil and storage capacity for each container or provide an estimate of the potential number of mobile or portable containers, the types of oil, and anticipated storage capacities;

* * * * *

(c) Provide appropriate containment and/or diversionary structures or equipment to prevent a discharge as described in § 112.1(b), except as provided in paragraph (k) of this section for qualified oil-filled operational equipment, and except as provided in § 112.9(d)(3) for flowlines and intra-facility gathering lines at an oil production facility. The entire containment system, including walls and floor, must be capable of containing oil and must be constructed so that any discharge from a primary containment system, such as a tank, will not escape the containment system before cleanup occurs. In determining the method, design, and capacity for secondary containment, you need only to address the typical failure mode, and the most likely quantity of oil that would be discharged. Secondary containment may be either active or passive in design. At a minimum, you must use one of the following prevention systems or its equivalent:

(1) For onshore facilities:

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

(ii) Curbing or drip pans;

(iii) Sumps and collection systems;

(iv) Culverting, gutters, or other drainage systems;

(v) Weirs, booms, or other barriers;

(vi) Spill diversion ponds;

(vii) Retention ponds; or

(viii) Sorbent materials.

* * * * *

(g) *Security (excluding oil production facilities).* Describe in your Plan how you secure and control access to the oil handling, processing and storage areas; secure master flow and drain valves; prevent unauthorized access to starter controls on oil pumps; secure out-of-service and loading/unloading connections of oil pipelines; and address the appropriateness of security lighting to both prevent acts of vandalism and assist in the discovery of oil discharges.

(h) Facility tank car and tank truck loading/unloading rack (excluding offshore facilities, farms, and oil production facilities).

(1) Where loading/unloading rack drainage does not flow into a catchment basin or treatment facility designed to handle discharges, use a quick drainage system for tank car or tank truck loading/unloading racks. You must design any containment system to hold at least the maximum capacity of any single compartment of a tank car or tank truck loaded or unloaded at the facility.

(2) Provide an interlocked warning light or physical barrier system, warning signs, wheel chocks or vehicle brake interlock system in the area adjacent to a loading/unloading rack, to prevent vehicles from departing before complete disconnection of flexible or fixed oil transfer lines.

* * * * *

Subpart B—[Amended]

■ 8. Amend § 112.8 by revising the first sentence in paragraph (c)(2) and revising paragraphs (c)(6) and (c)(11) to read as follows:

§ 112.8 Spill Prevention, Control, and Countermeasure Plan requirements for onshore facilities (excluding oil production facilities).

* * * * *

(c) * * *

(2) Construct all bulk storage tank installations (except mobile refuelers and other non-transportation-related tank trucks) so that you provide a secondary means of containment for the entire capacity of the largest single container and sufficient freeboard to contain precipitation.* * *

* * * * *

(6) Test or inspect each aboveground container for integrity on a regular schedule and whenever you make material repairs. You must determine, in accordance with industry standards, the appropriate qualifications for personnel performing tests and inspections, the frequency and type of testing and inspections, which take into account container size, configuration, and design (such as containers that are: shop-built, field-erected, skid-mounted, elevated, equipped with a liner, double-walled, or partially buried). Examples of these integrity tests include, but are not limited to: visual inspection, hydrostatic testing, radiographic testing, ultrasonic testing, acoustic emissions testing, or other systems of non-destructive testing. You must keep comparison records and you must also inspect the container's supports and foundations. In addition, you must frequently inspect the outside of the container for signs of deterioration, discharges, or accumulation of oil inside diked areas. Records of inspections and tests kept under usual and customary business practices satisfy the recordkeeping requirements of this paragraph.

* * * * *

(11) Position or locate mobile or portable oil storage containers to prevent a discharge as described in § 112.1(b). Except for mobile refuelers and other non-transportation-related tank trucks, you must furnish a secondary means of containment, such as a dike or catchment basin, sufficient to contain the capacity of the largest single compartment or container with sufficient freeboard to contain precipitation.

* * * * *

■ 9. Amend § 112.9 as follows:

■ a. By revising the section heading;

■ b. By revising the introductory text;

■ c. By revising paragraphs (c)(2) and (c)(3);

■ d. By adding paragraphs (c)(5) and (c)(6);

■ e. By revising paragraph (d)(3); and

■ f. By adding paragraph (d)(4).

§ 112.9 Spill Prevention, Control, and Countermeasure Plan Requirements for onshore oil production facilities (excluding drilling and workover facilities).

If you are the owner or operator of an onshore oil production facility (excluding a drilling or workover facility), you must:

* * * * *

(c) * * *

(2) Except as described in paragraph (c)(5) of this section for flow-through process vessels and paragraph (c)(6) of this section for produced water containers and any associated piping and appurtenances downstream from the container, construct all tank battery, separation, and treating facility installations, so that you provide a secondary means of containment for the entire capacity of the largest single container and sufficient freeboard to contain precipitation. You must safely confine drainage from undiked areas in a catchment basin or holding pond.

(3) Except as described in paragraph (c)(5) of this section for flow-through process vessels and paragraph (c)(6) of this section for produced water containers and any associated piping and appurtenances downstream from the container, periodically and upon a regular schedule visually inspect each container of oil for deterioration and maintenance needs, including the foundation and support of each container that is on or above the surface of the ground.

* * * * *

(5) *Flow-through process vessels.* The owner or operator of a facility with flow-through process vessels may choose to implement the alternate requirements as described below in lieu of sized secondary containment required in paragraphs (c)(2) and (c)(3) of this section.

(i) Periodically and on a regular schedule visually inspect and/or test flow-through process vessels and associated components (such as dump valves) for leaks, corrosion, or other conditions that could lead to a discharge as described in § 112.1(b).

(ii) Take corrective action or make repairs to flow-through process vessels and any associated components as indicated by regularly scheduled visual inspections, tests, or evidence of an oil discharge.

(iii) Promptly remove or initiate actions to stabilize and remediate any accumulations of oil discharges associated with flow-through process vessels.

(iv) If your facility discharges more than 1,000 U.S. gallons of oil in a single discharge as described in § 112.1(b), or discharges more than 42 U.S. gallons of oil in each of two discharges as described in § 112.1(b) within any twelve month period, from flow-through process vessels (excluding discharges that are the result of natural disasters, acts of war, or terrorism) then you must, within six months from the time the facility becomes subject to this paragraph, ensure that all flow-through process vessels subject to this subpart comply with § 112.9(c)(2) and (c)(3).

(6) *Produced water containers.*

(i) A produced water container, and any associated piping and appurtenances downstream from the container, are exempt from the requirements of this part if a Professional Engineer certifies in accordance with § 112.3(d)(1)(vi) that no discharge from the produced water container, including a complete loss of the capacity of the container, could cause a discharge in quantities that may be harmful, as described in part 110 of this chapter. This determination for the container must be made in accordance with § 112.1(d)(1)(i).

(A) The SPCC Plan must include a description of the produced water characteristics in the container, procedures, or maintenance required to meet the standards of Part 110 and the owner or operator's annual verifications prepared in accordance with § 112.5.

(B) If an exempt produced water container as described in paragraph (c)(6)(i) of this section experiences a discharge as described in § 112.1(b), then such container, piping, and appurtenances are ineligible for this exemption and you must comply with all provisions under this part applicable to the container, including § 112.9(c)(2) and (c)(3) within six months of the date of the discharge.

(ii) For each container not exempted as described in paragraph (c)(6)(i) of this section, comply with § 112.9(c)(1) and (c)(4); and § 112.9(c)(2) and (c)(3), or:

(A) Implement, on a regular schedule, a procedure for each produced water container that is designed to separate the free-phase oil that accumulates on the surface of the produced water. Include in the Plan a description of the procedures, frequency, amount of free-phase oil expected to be maintained inside the container, and a Professional Engineer certification in accordance with § 112.3(d)(1)(vii). Maintain records of such events in accordance with § 112.7(e). Records kept under usual and customary business practices will suffice for purposes of this paragraph. If this procedure is not implemented as described in the Plan or no records are maintained, then you must comply with § 112.9(c)(2) and (c)(3).

(B) On a regular schedule, visually inspect and/or test the produced water container and associated piping for leaks, corrosion, or other conditions that could lead to a discharge as described in § 112.1(b) in accordance with good engineering practice.

(C) Take corrective action or make repairs to the produced water container and any associated piping as indicated by regularly scheduled visual inspections, tests, or evidence of an oil discharge.

(D) Promptly remove or initiate actions to stabilize and remediate any accumulations of oil discharges associated with the produced water container.

(E) If your facility discharges more than 1,000 U.S. gallons of oil in a single discharge as described in § 112.1(b), or discharges more than 42 U.S. gallons of oil in each of two discharges as described in § 112.1(b) within any twelve month period from a produced water container subject to this subpart (excluding discharges that are the result of natural disasters, acts of war, or terrorism) then you must, within six months from the time the facility becomes subject to this paragraph, ensure that all produced water containers subject to this subpart comply with § 112.9(c)(2) and (c)(3).

(d) * * *

(3) For flowlines and intra-facility gathering lines that are not provided with secondary containment in accordance with § 112.7(c), unless you have submitted a response plan under § 112.20, provide in your Plan the following:

(i) An oil spill contingency plan following the provisions of part 109 of this chapter.

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

(4) Prepare and implement a written program of flowline/intra-facility gathering line maintenance. The maintenance program must address your procedures to:

(i) Ensure that flowlines and intra-facility gathering lines and associated valves and equipment are compatible with the type of production fluids, their potential corrosivity, volume, and pressure, and other conditions expected in the operational environment.

(ii) Visually inspect and/or test flowlines and intra-facility gathering lines and associated appurtenances on a periodic and regular schedule for leaks, oil discharges, corrosion, or other conditions that could lead to a discharge as described in § 112.1(b). For flowlines and intra-facility gathering lines that are not provided with secondary containment in accordance with § 112.7(c), the frequency and type of testing must allow for the implementation of a contingency plan as described under part 109 of this chapter.

(iii) Take corrective action or make repairs to any flowlines and intra-facility gathering lines and associated appurtenances as indicated by regularly scheduled visual inspections, tests, or evidence of a discharge.

(iv) Promptly remove or initiate actions to stabilize and remediate any accumulations of oil discharges associated with flowlines, intra-facility gathering lines, and associated appurtenances.

Subpart C—[Amended]

■ 11. Amend § 112.12 as follows:
■ a. By revising the introductory text;
■ b. By revising the first sentence in paragraph (c)(2); and
■ c. By revising paragraphs (c)(6) and (c)(11).

§ 112.12 Spill Prevention, Control, and Countermeasure Plan Requirements.

If you are the owner or operator of an onshore facility, you must:

* * * * *

(c) * * *

(2) Construct all bulk storage tank installations (except mobile refuelers and other non-transportation-related tank trucks) so that you provide a secondary means of containment for the entire capacity of the largest single container and sufficient freeboard to contain precipitation. * * *

* * * * *

(6) *Bulk storage container inspections.*

(i) Except for containers that meet the criteria provided in paragraph (c)(6)(ii)

of this section, test or inspect each aboveground container for integrity on a regular schedule and whenever you make material repairs. You must determine, in accordance with industry standards, the appropriate qualifications for personnel performing tests and inspections, the frequency and type of testing and inspections, which take into account container size, configuration, and design (such as containers that are: shop-built, field-erected, skid-mounted, elevated, equipped with a liner, double-walled, or partially buried). Examples of these integrity tests include, but are not limited to: Visual inspection, hydrostatic testing, radiographic testing, ultrasonic testing, acoustic emissions testing, or other systems of non-destructive testing. You must keep comparison records and you must also inspect the container's supports and foundations. In addition, you must frequently inspect the outside of the container for signs of deterioration, discharges, or accumulation of oil inside diked areas. Records of inspections and tests kept under usual and customary business practices satisfy the recordkeeping requirements of this paragraph.

(ii) For bulk storage containers that are subject to 21 CFR part 110, are elevated, constructed of austenitic stainless steel, have no external insulation, and are shop-fabricated, conduct formal visual inspection on a regular schedule. In addition, you must frequently inspect the outside of the container for signs of deterioration, discharges, or accumulation of oil inside diked areas. You must determine and document in the Plan the appropriate qualifications for personnel performing tests and inspections. Records of inspections and tests kept under usual and customary business practices satisfy the recordkeeping requirements of this paragraph (c)(6).

* * * * *

(11) Position or locate mobile or portable oil storage containers to prevent a discharge as described in § 112.1(b). Except for mobile refuelers and other non-transportation-related tank trucks, you must furnish a secondary means of containment, such as a dike or catchment basin, sufficient to contain the capacity of the largest single compartment or container with sufficient freeboard to contain precipitation.

* * * * *

■ 12. Add Appendix G to read as follows:

BILLING CODE 6560–50–P

APPENDIX G to Part 112-
Tier I Qualified Facility SPCC Plan

This template constitutes the SPCC Plan for the facility, when completed and signed by the owner or operator of a facility that meets the applicability criteria in §112.3(g)(1). This template meets the requirements of 40 CFR part 112. Maintain a complete copy of the Plan at the facility if the facility is normally attended at least four hours per day, or for a facility attended fewer than four hours per day, at the nearest field office.

Facility Description

Facility Name _____

Facility Address _____

City _____ State _____ ZIP _____

County _____ Tel. Number ( ) -

Owner or operator Name _____

Owner or operator Address _____

City _____ State _____ ZIP _____

County _____ Tel. Number ( ) -

I. Self-Certification Statement (§112.6(a)(1))

The owner or operator of a facility certifies that each of the following is true in order to utilize this template to comply with the SPCC requirements:

I _____, certify that the following is accurate:

1. I am familiar with the applicable requirements of 40 CFR part 112;
2. I have visited and examined the facility;
3. This Plan was prepared in accordance with accepted and sound industry practices and standards;
4. Procedures for required inspections and testing have been established in accordance with industry inspection and testing standards or recommended practices;
5. I will fully implement the Plan;
6. This facility meets the following qualification criteria (under §112.3(g)(1)):
   a. The aggregate aboveground oil storage capacity of the facility is 10,000 U.S. gallons or less; or is an onshore oil production facility with no more than two producing wells per single tank battery, each of which produce ten barrels or less of crude oil per well per day if the facility has an injection well; or, is an onshore oil production facility with no more than four producing wells per single tank battery, each of which produce ten barrels or less of crude oil per well per day and with no injection wells at the facility; and
   b. The facility has had no single discharge as described in §112.1(b) exceeding 1,000 U.S. gallons and no two discharges as described in §112.1(b) each exceeding 42 U.S. gallons within any twelve month period in the three years prior to the SPCC Plan self-certification date, or since becoming subject to 40 CFR part 112 if the facility has been in operation for less than three years (not including oil discharges as described in §112.1(b) that are the result of natural disasters, acts of war, or terrorism); and
   c. There is no individual oil storage container at the facility with an aboveground

capacity greater than 5,000 U.S. gallons.

7. This Plan does not deviate from any requirement of 40 CFR part 112 as allowed by §112.7(a)(2) (environmental equivalence) and §112.7(d) (impracticability of secondary containment) or include an exemption/measures pursuant to §112.9(c)(6) for produced water containers and any associated piping and appurtenances downstream from the container;.
8. This Plan and individual(s) responsible for implementing this Plan have the full approval of management and I have committed the necessary resources to fully implement this Plan.

I also understand my other obligations relating to the storage of oil at this facility, including, among others:

1. To report an oil discharge to navigable waters or adjoining shorelines to the appropriate authorities. Notification information is included in this Plan.
2. To review and amend this Plan whenever there is a material change at the facility that affects the potential for an oil discharge, and at least once every five years. Reviews and amendments are recorded in an attached log [See Five Year Review Log and Technical Amendment Log in Attachments 1.1 and 1.2.]
3. Optional use of a contingency plan. A contingency plan:
    a. May be used in lieu of secondary containment for qualified oil-filled operational equipment, in accordance with the requirements under §112.7(k), and;
    b. Must be prepared for flowlines and/or intra-facility gathering lines which do not have secondary containment at an oil production facility, and;
    c. Must include an established and documented inspection or monitoring program;
    d. an oil spill contingency plan following the provisions of 40 CFR part 109; and a written commitment of manpower, equipment and materials to expeditiously remove any quantity of oil discharged that may be harmful. If applicable, a copy of the contingency plan and any additional documentation will be attached to this Plan as Attachment 2.

By completing this Plan template, I certify that I have satisfied the requirement to prepare and implement a Plan under §112.3 and all of the requirements under §112.6(a). I certify that the information contained in this Plan is true.

Signature _____ Title: _____
Name _____ Date: ____/_____/20___

II. Record of Plan Review and Amendments

Five Year Review (§112.5(b)):

Complete a review and evaluation of this SPCC Plan at least once every five years. As a result of the review, amend this Plan within six months to include more effective prevention and control measures for the facility, if applicable. Implement any amendment as soon as possible, but no later than six months following Plan amendment. Document completion of the review and evaluation, and complete the Five Year Review Log in Attachment 1.1. If the facility no longer meets Tier I qualified facility eligibility, the owner or operator must revise the Plan to meet Tier II qualified facility requirements, or complete a full PE certified Plan.

Table G-1 Technical Amendments (§§112.5(a), (c) and 112.6(a)(2))	
This SPCC Plan will be amended when there is a change in the facility design, construction, operation, or maintenance that materially affects the potential for a discharge to navigable waters or adjoining shorelines. Examples include adding or removing containers, reconstruction, replacement, or installation of piping systems, changes to secondary containment systems, changes in product stored at this facility, or revisions to standard operating procedures.	☐
Any technical amendments to this Plan will be re-certified in accordance with Section I of this Plan template. *[§112.6(a)(2)]* [See Technical Amendment Log in Attachment 1.2]	☐

III. Plan Requirements

1. Oil Storage Containers (§112.7(a)(3)(i)):

Table G-2 Oil Storage Containers and Capacities		
This table includes a complete list of all oil storage containers (aboveground containers[1] and completely buried tanks[2]) with capacity of 55 U.S. gallons or more, unless otherwise exempt from the rule. For mobile/portable containers, an estimate number of containers, types of oil, and anticipated capacities are provided.		☐
Oil Storage Container *(indicate whether aboveground (A) or completely buried (B))*	**Type of Oil**	**Shell Capacity (gallons)**

Total Aboveground Storage Capacity[a] _____ gallons

Total Completely Buried Storage Capacity _____ gallons

Facility Total Oil Storage Capacity _____ gallons

[a]Counts toward qualified facility applicability threshold

2. Secondary Containment and Oil Spill Control (§§112.6(a)(3)(i) and (ii), 112.7(c) and 112.9(c)(2)):

Table G-3 Secondary Containment and Oil Spill Control	
Appropriate secondary containment and/or diversionary structures or equipment[a] is provided for all oil handling containers, equipment, and transfer areas to prevent a discharge to navigable waters or adjoining shorelines. The entire secondary containment system, including walls and floor, is capable of containing oil and is constructed so that any discharge from a primary containment system, such as a tank or pipe, will not escape the containment system before	☐

[1]Aboveground storage containers that must be included when calculating total facility oil storage capacity include: tanks and mobile or portable containers; oil-filled operational equipment (e.g. transformers); other oil-filled equipment, such as flow-through process equipment. Exempt containers that are not included in the capacity calculation include: any container with a storage capacity of less than 55 gallons of oil; containers used exclusively for wastewater treatment; permanently closed containers; motive power containers; hot-mix asphalt containers; heating oil containers used solely at a single-family residence; and pesticide application equipment or related mix containers.

[2] Although the criteria to determine eligibility for qualified facilities focuses on the aboveground oil storage containers at the facility, the completely buried tanks at a qualified facility are still subject to the rule requirements and must be addressed in the template; however, they are not counted toward the qualified facility threshold.

[a] Use one of the following methods of secondary containment or its equivalent: (1) Dikes, berms, or retaining walls sufficiently impervious to contain oil; (2) Curbing; (3) Culverting, gutters, or other drainage systems; (4) Weirs, booms, or other barriers; (5) Spill diversion ponds; (6) Retention ponds; or (7) Sorbent materials.

Table G-4 below identifies the tanks and containers at the facility with the potential for an oil discharge; the mode of failure; the flow direction and potential quantity of the discharge; and the secondary containment method and containment capacity that is provided.

Table G-4 Containers with Potential for an Oil Discharge					
Area	Type of failure (discharge scenario)	Potential discharge volume (gallons)	Direction of flow for uncontained discharge	Secondary containment method[a]	Secondary containment capacity (gallons)
Bulk Storage Containers and Mobile/Portable Containers[b]					
Oil-filled Operational Equipment (e.g., hydraulic equipment, transformers)[c]					
Piping, Valves, etc.					
Product Transfer Areas (location where oil is loaded to or from a container, pipe or other piece of equipment.)					
Other Oil-Handling Areas or Oil-Filled Equipment (e.g. flow-through process vessels at an oil production facility)					

[a] Use one of the following methods of secondary containment or its equivalent: (1) Dikes, berms, or retaining walls sufficiently impervious to contain oil; (2) Curbing; (3) Culverting, gutters, or other drainage systems; (4) Weirs, booms, or other barriers; (5) Spill diversion ponds; (6) Retention ponds; or (7) Sorbent materials.

[b] For storage tanks and bulk storage containers, the secondary containment capacity must be at least the capacity of the largest container plus additional capacity to contain rainfall or other precipitation.

[c] For oil-filled operational equipment: Document in the table above if alternative measures to secondary containment (as described in §112.7(k)) are implemented at the facility.

3. Inspections, Testing, Recordkeeping and Personnel Training (§§112.7(e) and (f), 112.8(c)(6), 112.12(c)(6)):

Table G-5 Inspections, Testing, Recordkeeping and Personnel Training	
An inspection and testing program is implemented for all aboveground storage containers and piping at this facility. *[§112.8(c)(6), 112.12(c)(6)]*	☐
The following is a description of the inspection and testing program (e.g. reference to industry standard utilized, scope, frequency, method of inspection or test, and person conducting the inspection) for all aboveground storage containers and piping at this facility:	

Inspections, tests, and records are conducted in accordance with written procedures developed for the facility. Records of inspections and tests kept under usual and customary business practices will suffice for purposes of this paragraph. *[§112.7(e)]*	☐
A record of the inspections and tests are kept at the facility or with the SPCC Plan for a period of three years. *[§112.7(e)]* [See Inspection Log and Schedule in Attachment 3.1]	☐
Inspections and tests are signed by the appropriate supervisor or inspector. *[§112.7(e)]*	☐
Personnel, training, and discharge prevention procedures [§112.7(f)]	
Oil-handling personnel are trained in the operation and maintenance of equipment to prevent discharges; discharge procedure protocols; applicable pollution control laws, rules, and regulations; general facility operations; and, the contents of the facility SPCC Plan. *[§112.7(f)]*	☐
A person who reports to facility management is designated and accountable for discharge prevention. *[§112.7(f)]* Name/Title:_____	☐
Discharge prevention briefings are conducted for oil-handling personnel annually to assure adequate understanding of the SPCC Plan for that facility. Such briefings highlight and describe past reportable discharges or failures, malfunctioning components, and any recently developed precautionary measures. *[§112.7(f)]* [See Oil-handling Personnel Training and Briefing Log in Attachment 3.4]	☐

4. Security (excluding oil production facilities) §112.7(g):

Table G-6 Implementation and Description of Security Measures	
Security measures are implemented at this facility to prevent unauthorized access to oil handling, processing, and storage area. The following is a description of how you secure and control access to the oil handling, processing and storage areas; secure master flow and drain valves; prevent unauthorized access to starter controls on oil pumps; secure out-of-service and loading/unloading connections of oil pipelines; address the appropriateness of security lighting to both prevent acts of vandalism and assist in the discovery of oil discharges:	☐

5. Emergency Procedures and Notifications (§112.7(a)(3)(iv) and 112.7(a)(5)):

Table G-7 Description of Emergency Procedures and Notifications	
The following is a description of the immediate actions to be taken by facility personnel in the event of a discharge to navigable waters or adjoining shorelines *[§112.7(a)(3)(iv) and 112.7(a)(5)]*:	☐

6. Contact List (§112.7(a)(3)(vi)):

Table G-8 Contact List	
Contact Organization / Person	**Telephone Number**
National Response Center (NRC)	1-800-424-8802
Cleanup Contractor(s)	
Key Facility Personnel	
Designated Person Accountable for Discharge Prevention:	Office:
	Emergency:
	Office:
	Emergency:
	Office:
	Emergency:
	Office:
	Emergency:
State Oil Pollution Control Agencies	
Other State, Federal, and Local Agencies	
Local Fire Department	
Local Police Department	
Hospital	
Other Contact References (e.g., downstream water intakes or neighboring facilities)	

7. NRC Notification Procedure (§112.7(a)(4) and (a)(5)):

Table G-9 NRC Notification Procedure	
In the event of a discharge of oil to navigable waters or adjoining shorelines, the following information identified in Attachment 4 will be provided to the National Response Center immediately following identification of a discharge to navigable waters or adjoining shorelines [See Discharge Notification Form in Attachment 4]: *[§112.7(a)(4)]*	☐
• The exact address or location and phone number of the facility; • Date and time of the discharge; • Type of material discharged; • Estimate of the total quantity discharged; • Estimate of the quantity discharged to navigable waters; • Source of the discharge; • Description of all affected media; • Cause of the discharge; • Any damages or injuries caused by the discharge; • Actions being used to stop, remove, and mitigate the effects of the discharge; • Whether an evacuation may be needed; and • Names of individuals and/or organizations who have also been contacted.	

8. SPCC Spill Reporting Requirements (Report within 60 days) (§112.4):

Submit information to the EPA Regional Administrator (RA) and the appropriate agency or agencies in charge of oil pollution control activities in the State in which the facility is located within 60 days from one

of the following discharge events:

- A single discharge of more than 1,000 U.S. gallons of oil to navigable waters or adjoining shorelines or
- Two discharges to navigable waters or adjoining shorelines each more than 42 U.S. gallons of oil occurring within any twelve month period

You must submit the following information to the RA:

(1) Name of the facility;
(2) Your name;
(3) Location of the facility;
(4) Maximum storage or handling capacity of the facility and normal daily throughput;
(5) Corrective action and countermeasures you have taken, including a description of equipment repairs and replacements;
(6) An adequate description of the facility, including maps, flow diagrams, and topographical maps, as necessary;
(7) The cause of the reportable discharge, including a failure analysis of the system or subsystem in which the failure occurred; and
(8) Additional preventive measures you have taken or contemplated to minimize the possibility of recurrence

* * * * *

NOTE: Complete one of the following sections (A, B or C)

as appropriate for the facility type.

A. Onshore Facilities (excluding production) (§§112.8(b) and (d), 112.12(b) and (d)):

The owner or operator must meet the general rule requirements as well as requirements under this section. Note that not all provisions may be applicable to all owners/operators. For example, a facility may not maintain completely buried metallic storage tanks installed after January 10, 1974, and thus would not have to abide by requirements in §§112.8(c)(4) and 112.12(c)(4), listed below. In cases where a provision is not applicable, write "N/A".

Table G-10 General Rule Requirements for Onshore Facilities	
Drainage from diked storage areas is restrained by valves to prevent a discharge into the drainage system or facility effluent treatment system, except where facility systems are designed to control such discharge. *[§§112.8(b)(1) and 112.12(b)(1)]*	☐
Valves of manual, open-and-closed design are used for the drainage of diked areas. *[§§112.8(b)(2) and 112.12(b)(2)]*	☐
The containers at the facility are compatible with materials stored and conditions of storage such as pressure and temperature. *[§§112.8(c)(1) and 112.12(c)(1)]*	☐
Secondary containment for the bulk storage containers (including mobile/portable oil storage containers) holds the capacity of the largest container plus additional capacity to contain precipitation. Mobile or portable oil storage containers are positioned to prevent a discharge as described in §112.1(b). *[§112.6(a)(3)(ii)]*	☐
If uncontaminated rainwater from diked areas drains into a storm drain or open watercourse the following procedures will be implemented at the facility: *[§§112.8(c)(3) and 112.12(c)(3)]*	
• Bypass valve is normally sealed closed	☐
• Retained rainwater is inspected to ensure that its presence will not cause a discharge to navigable waters or adjoining shorelines	☐
• Bypass valve is opened and resealed under responsible supervision	☐
• Adequate records of drainage are kept [See Dike Drainage Log in Attachment 3.3]	☐
For completely buried metallic tanks installed on or after January 10, 1974 at this facility *[§§112.8(c)(4) and 112.12(c)(4)]*:	
• Tanks have corrosion protection with coatings or cathodic protection compatible with local soil conditions.	☐
• Regular leak testing is conducted.	☐
For partially buried or bunkered metallic tanks *[§112.8(c)(5) and §112.12(c)(5)]*:	
• Tanks have corrosion protection with coatings or cathodic protection compatible with local soil conditions.	☐
Each aboveground container is tested or inspected for integrity on a regular schedule and whenever material repairs are made. Scope and frequency of the inspections and inspector qualifications are in accordance with industry standards. Container supports and foundations are regularly inspected. [See Inspection Log and Schedule and Bulk Storage Container Inspection Schedule in Attachments 3.1 and 3.2] *[§112.8(c)(6) and §112.12(c)(6)(i)]*	☐
Outsides of containers are frequently inspected for signs of deterioration, discharges, or accumulation of oil inside diked areas. [See Inspection Log and Schedule in Attachment 3.1] *[§§112.8(c)(6) and 112.12(c)(6)]*	☐
For bulk storage containers that are subject to 21 CFR part 110 which are shop-fabricated, constructed of austenitic stainless steel, with a manhole and have no external insulation, formal visual inspection is conducted on a regular schedule. Appropriate qualifications for personnel performing tests and inspections are documented. [See Inspection Log and Schedule and Bulk Storage Container Inspection Schedule in Attachments 3.1 and 3.2] *[§112.12(c)(6)(ii)]*	☐
Each container is provided with a system or documented procedure to prevent overfills for the container, Describe:	☐

Table G-10 General Rule Requirements for Onshore Facilities	
Liquid level sensing devices are regularly tested to ensure proper operation [See Inspection Log and Schedule in Attachment 3.1]. *[§112.6(a)(3)(iii)]*	☐
Visible discharges which result in a loss of oil from the container, including but not limited to seams, gaskets, piping, pumps, valves, rivets, and bolts are promptly corrected and oil in diked areas is promptly removed. *[§§112.8(c)(10) and 112.12(c)(10)]*	☐
Aboveground valves, piping, and appurtenances such as flange joints, expansion joints, valve glands and bodies, catch pans, pipeline supports, locking of valves, and metal surfaces are inspected regularly. [See Inspection Log and Schedule in Attachment 3.1] *[§§112.8(d)(4) and 112.12(d)(4)]*	☐
Integrity and leak testing are conducted on buried piping at the time of installation, modification, construction, relocation, or replacement. [See Inspection Log and Schedule in Attachment 3.1] *[§§112.8(d)(4) and 112.12(d)(4)]*	☐

B. Onshore Oil Production Facilities (excluding drilling and workover facilities) (§112.9(b), (c), and (d)):

The owner or operator must meet the general rule requirements as well as the requirements under this section. Note that not all provisions may be applicable to all owners/operators. In cases where a provision is not applicable, write "N/A".

Table G-11 General Rule Requirements for Onshore Oil Production Facilities	
At tank batteries, separation and treating areas, drainage is closed and sealed except when draining uncontaminated rainwater. Accumulated oil on the rainwater is returned to storage or disposed of in accordance with legally approved methods. *[§112.9(b)(1)]*	☐
Prior to drainage, diked areas are inspected and *[§112.9(b)(1)]*:	
• Retained rainwater is inspected to ensure that its presence will not cause a discharge to navigable waters	☐
• Bypass valve is opened and resealed under responsible supervision	☐
• Adequate records of drainage are kept [See Dike Drainage Log in Attachment 3.3]	☐
Field drainage systems and oil traps, sumps, or skimmers are inspected at regularly scheduled intervals for oil, and accumulations of oil are promptly removed [See Inspection Log and Schedule in Attachment 3.1] *[§112.9(b)(2)]*	☐
The containers used at this facility are compatible with materials stored and conditions of storage. *[§112.9(c)(1)]*	☐
All tank battery, separation, and treating facility installations (except for flow-through process vessels) are constructed with a capacity to hold the largest single container plus additional capacity to contain rainfall. Drainage from undiked areas is safely confined in a catchment basin or holding pond. *[§112.9(c)(2)]*	☐
Except for flow-through process vessels, containers that are on or above the surface of the ground, including foundations and supports, are visually inspected for deterioration and maintenance needs on a regular schedule. [See Inspection Log and Schedule in Attachment 3.1] *[§112.9(c)(3)]*	☐
New and old tank batteries at this facility are engineered/updated in accordance with good engineering practices to prevent discharges including at least one of the following: (i) adequate container capacity to prevent overfill if regular pumping/gauging is delayed; (ii) overflow equalizing lines between containers so that a full container can overflow to an adjacent container; (iii) vacuum protection to prevent container collapse; or (iv) high level sensors to generate and transmit an alarm to the computer where the facility is subject to a computer	☐

Table G-11 General Rule Requirements for Onshore Oil Production Facilities	
production control system. *[§112.9(c)(4)]*	
Flow-through process vessels and associated components are: • Are constructed with a capacity to hold the largest single container plus additional capacity to contain rainfall. Drainage from undiked areas is safely confined in a catchment basin or holding pond; *[§112.9(c)(2)]* and • That are on or above the surface of the ground, including foundations and supports, are visually inspected for deterioration and maintenance needs on a regular schedule. [See Inspection Log and Schedule in Attachment 3.1] *[§112.9(c)(3)]* *Or* • Visually inspected and/or tested periodically and on a regular schedule for leaks, corrosion, or other conditions that could lead to a discharge to navigable waters; and • Corrective action or repairs are applied to flow-through process vessels and any associated components as indicated by regularly scheduled visual inspections, tests, or evidence of an oil discharge; and • Any accumulations of oil discharges associated with flow-through process vessels are promptly removed; and • Flow-through process vessels are provided with a secondary means of containment for the entire capacity of the largest single container and sufficient freeboard to contain precipitation within six months of a discharge from flow-through process vessels of more than 1,000 U.S. gallons of oil in a single discharge as described in §112.1(b), or a discharge more than 42 U.S. gallons of oil in each of two discharges as described in §112.1(b) within any twelve month period. *[§112.9(c)(5)]* *(Leave blank until such time that this provision is applicable.)*	☐ ☐ ☐ ☐ ☐
All aboveground valves and piping associated with transfer operations are inspected periodically and upon a regular schedule. The general condition of flange joints, valve glands and bodies, drip pans, pipe supports, pumping well polish rod stuffing boxes, bleeder and gauge valves, and other such items are included in the inspection. [See Inspection Log and Schedule in Attachment 3.1] *[§112.9(d)(1)]*	☐
An oil spill contingency plan and written commitment of resources is provided for flowlines and intra-facility gathering lines [See Oil Spill Contingency Plan and Checklist in Attachment 2 and Inspection Log and Schedule in Attachment 3.1] *[§112.9(d)(3)]* or Appropriate secondary containment and/or diversionary structures or equipment is provided for flowlines and intra-facility gathering lines to prevent a discharge to navigable waters or adjoining shorelines. The entire secondary containment system, including walls and floor, is capable of containing oil and is constructed so that any discharge from the pipe, will not escape the containment system before cleanup occurs.	☐ ☐
A flowline/intra-facility gathering line maintenance program to prevent discharges from each flowline has been established at this facility. The maintenance program addresses each of the following: • Flowlines and intra-facility gathering lines and associated valves and equipment are compatible with the type of production fluids, their potential corrosivity, volume, and pressure, and other conditions expected in the operational environment; • Flowlines, intra-facility gathering lines and associated appurtenances are visually inspected and/or tested on a periodic and regular schedule for leaks, oil discharges, corrosion, or other conditions that could lead to a discharge as described in §112.1(b). The frequency and type of testing allows for the implementation of a contingency plan as described under part 109 of this chapter. • Corrective action and repairs to any flowlines and intra-facility gathering lines and associated appurtenances as indicated by regularly scheduled visual inspections, tests, or evidence of a discharge.	☐ ☐ ☐ ☐

Table G-11 General Rule Requirements for Onshore Oil Production Facilities	
• Accumulations of oil discharges associated with flowlines, intra-facility gathering lines, and associated appurtenances are promptly removed. *[§112.9(d)(4)]*	☐
The following is a description of the flowline/intra-facility gathering line maintenance program implemented at this facility:	

C. Onshore Oil Drilling and Workover Facilities (§112.10(b), (c) and (d)):

The owner or operator must meet the general rule requirements as well as the requirements under this section.

Table G-12 General Rule Requirements for Onshore Oil Drilling and Workover Facilities	
Mobile drilling or worker equipment is positioned or located to prevent discharge as described in §112.1(b). *[§112.10(b)]*	☐
Catchment basins or diversion structures are provided to intercept and contain discharges of fuel, crude oil, or oily drilling fluids. *[§112.10(c)]*	☐
A blowout prevention (BOP) assembly and well control system was installed before drilling below any casing string or during workover operations. *[§112.10(d)]*	☐
The BOP assembly and well control system is capable of controlling any well-head pressure that may be encountered while the BOP assembly and well control system are on the well. *[§112.10(d)]*	☐

ATTACHMENT 1 – Five Year Review and Technical Amendment Logs

ATTACHMENT 1.1 – Five Year Review Log

I have completed a review and evaluation of the SPCC Plan for this facility, and will/will not amend this Plan as a result.

Table G-13 Review and Evaluation of SPCC Plan for Facility			
Review Date	Plan Amendment		Name and signature of person authorized to review this Plan
	Will Amend	Will Not Amend	
	☐	☐	
	☐	☐	
	☐	☐	
	☐	☐	
	☐	☐	
	☐	☐	

ATTACHMENT 1.2 – Technical Amendment Log

Any technical amendments to this Plan will be re-certified in accordance with Section I of this Plan template.

Table G-14 Description and Certification of Technical Amendments		
Review Date	Description of Technical Amendment	Name and signature of person certifying this technical amendment

ATTACHMENT 2 – Oil Spill Contingency Plan and Checklist

An oil spill contingency plan and written commitment of resources is required for:

- Flowlines and intra-facility gathering lines at oil production facilities and
- Qualified oil-filled operational equipment which has no secondary containment.

An oil spill contingency plan meeting the provisions of 40 CFR part 109, as described below, and a written commitment of manpower, equipment and materials required to expeditiously control and remove any quantity of oil discharged that may be harmful is attached to this Plan.	☐

Complete the checklist below to verify that the necessary operations outlined in 40 CFR part 109 - Criteria for State, Local and Regional Oil Removal Contingency Plans - have been included.

Table G-15 Checklist of Development and Implementation Criteria for State, Local and Regional Oil Removal Contingency Plans (§109.5)[a]	
(a) Definition of the authorities, responsibilities and duties of all persons, organizations or agencies which are to be involved in planning or directing oil removal operations.	☐
(b) Establishment of notification procedures for the purpose of early detection and timely notification of an oil discharge including:	☐
(1) The identification of critical water use areas to facilitate the reporting of and response to oil discharges.	☐
(2) A current list of names, telephone numbers and addresses of the responsible persons (with alternates) and organizations to be notified when an oil discharge is discovered.	☐
(3) Provisions for access to a reliable communications system for timely notification of an oil discharge, and the capability of interconnection with the communications systems established under related oil removal contingency plans, particularly State and National plans (e.g., NCP).	☐
(4) An established, prearranged procedure for requesting assistance during a major disaster or when the situation exceeds the response capability of the State, local or regional authority.	☐
(c) Provisions to assure that full resource capability is known and can be committed during an oil discharge situation including:	☐
(1) The identification and inventory of applicable equipment, materials and supplies which are available locally and regionally.	☐
(2) An estimate of the equipment, materials and supplies which would be required to remove the maximum oil discharge to be anticipated.	☐
(3) Development of agreements and arrangements in advance of an oil discharge for the acquisition of equipment, materials and supplies to be used in responding to such a discharge.	☐
(d) Provisions for well defined and specific actions to be taken after discovery and notification of an oil discharge including:	☐
(1) Specification of an oil discharge response operating team consisting of trained, prepared and available operating personnel.	☐

Table G-15 Checklist of Development and Implementation Criteria for State, Local and Regional Oil Removal Contingency Plans (§109.5)[a]	
(2) Predesignation of a properly qualified oil discharge response coordinator who is charged with the responsibility and delegated commensurate authority for directing and coordinating response operations and who knows how to request assistance from Federal authorities operating under existing national and regional contingency plans.	☐
(3) A preplanned location for an oil discharge response operations center and a reliable communications system for directing the coordinated overall response operations.	☐
(4) Provisions for varying degrees of response effort depending on the severity of the oil discharge.	☐
(5) Specification of the order of priority in which the various water uses are to be protected where more than one water use may be adversely affected as a result of an oil discharge and where response operations may not be adequate to protect all uses.	☐
(6) Specific and well defined procedures to facilitate recovery of damages and enforcement measures as provided for by State and local statutes and ordinances.	☐

[a] The contingency plan must be consistent with all applicable state and local plans, Area Contingency Plans, and the National Contingency Plan (NCP).

ATTACHMENT 3 – Inspections, Dike Drainage and Personnel Training Logs

ATTACHMENT 3.1 – Inspection Log and Schedule

Table G-16 Inspection Log and Schedule

This log is intended to document compliance with §§112.6(a)(3)(iii), 112.8(c)(6), 112.8(d)(4), 112.9(b)(2), 112.9(c)(3), 112,9(d)(1), 112.9(d)(4), 112.12.(c)(6), and 112.12(d)(4), as applicable.

Date of Inspection	Container / Piping / Equipment	Describe Scope (or cite Industry Standard)	Observations	Name/ Signature of Inspector	Records maintained separately [a]
					☐
					☐
					☐
					☐
					☐

[a] Indicate in the table above if records of facility inspections are maintained separately at this facility.

ATTACHMENT 3.2 – Bulk Storage Container Inspection Schedule – onshore facilities (excluding production):

To comply with integrity inspection requirement for bulk storage containers, inspect/test each shop-built aboveground bulk storage container on a regular schedule in accordance with a recognized container inspection standard based on the minimum requirements in the following table.

Table G-17 Bulk Storage Container Inspection Schedule

Container Size and Design Specification	Inspection requirement
Portable containers (including drums, totes, and intermodal bulk containers (IBC))	Visually inspect monthly for signs of deterioration, discharges or accumulation of oil inside diked areas
55 to 1,100 gallons with sized secondary containment	Visually inspect monthly for signs of deterioration, discharges or accumulation of oil inside diked areas plus any annual inspection elements per industry inspection standards
1,101 to 5,000 gallons with sized secondary containment and a means of leak detection[a]	
1,101 to 5,000 gallons with sized secondary containment and no method of leak detection[a]	Visually inspect monthly for signs of deterioration, discharges or accumulation of oil inside diked areas, plus any annual inspection elements and other specific integrity tests that may be required per industry inspection standards

[a] Examples of leak detection include, but are not limited to, double-walled tanks and elevated containers where a leak can be visually identified.

ATTACHMENT 3.3 – Dike Drainage Log

Table G-18 Dike Drainage Log						
Date	Bypass valve sealed closed	Rainwater inspected to be sure no oil (or sheen) is visible	Open bypass valve and reseal it following drainage	Drainage activity supervised	Observations	Signature of Inspector
	☐	☐	☐	☐		
	☐	☐	☐	☐		
	☐	☐	☐	☐		
	☐	☐	☐	☐		
	☐	☐	☐	☐		

ATTACHMENT 3.4 – Oil-handling Personnel Training and Briefing Log

Table G-19 Oil-Handling Personnel Training and Briefing Log		
Date	**Description / Scope**	**Attendees**

ATTACHMENT 4 – Discharge Notification Form

In the event of a discharge of oil to navigable waters or adjoining shorelines, the following information will be provided to the National Response Center [also see the notification information provided in Section 7 of the Plan]:

Table G-20 Information provided to the National Response Center in the Event of a Discharge			
Discharge/Discovery Date		Time	
Facility Name			
Facility Location (Address/Lat-Long/Section Township Range)			
Name of reporting individual		Telephone #	
Type of material discharged		Estimated total quantity discharged	Gallons/Barrels
Source of the discharge		Media affected	☐ Soil ☐ Water (specify) _____ ☐ Other (specify) _____
Actions taken			
Damage or injuries	☐ No ☐ Yes (specify)	Evacuation needed?	☐ No ☐ Yes (specify)
Organizations and individuals contacted	☐ National Response Center 800-424-8802 Time _____		
	☐ Cleanup contractor (Specify) Time _____		
	☐ Facility personnel (Specify) Time _____		
	☐ State Agency (Specify) Time _____		
	☐ Other (Specify) Time _____		

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potentially responsible parties to undertake response actions.

(e) Because state and local public safety organizations would normally be the first government representatives at the scene of a discharge or release, they are expected to initiate public safety measures that are necessary to protect the public health and welfare and that are consistent with containment and cleanup requirements in the NCP, and are responsible for directing evacuations pursuant to existing state or local procedures.

[59 FR 47473, Sept. 15, 1994]

PART 302—DESIGNATION, REPORTABLE QUANTITIES, AND NOTIFICATION

Sec.

302.1 Applicability.
302.2 [Reserved]
302.3 Definitions.
302.4 Designation of hazardous substances.
302.5 Determination of reportable quantities.
302.6 Notification requirements.
302.7 Penalties.
302.8 Continuous releases.

AUTHORITY: 42 U.S.C. 9602, 9603, and 9604; 33 U.S.C. 1321 and 1361.

SOURCE: 50 FR 13474, Apr. 4, 1985, unless otherwise noted.

§ 302.1 Applicability.

This regulation designates under section 102(a) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (''the Act'') those substances in the statutes referred to in section 101(14) of the Act, identifies reportable quantities for these substances, and sets forth the notification requirements for releases of these substances. This regulation also sets forth reportable quantities for hazardous substances designated under section 311(b)(2)(A) of the Clean Water Act.

§ 302.2 [Reserved]

§ 302.3 Definitions.

As used in this part, all terms shall have the meaning set forth below:

The Act, CERCLA, or *Superfund* means the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (Pub. L. 96–510);

Administrator means the Administrator of the United States Environmental Protection Agency (''EPA'');

Animal waste means manure (feces, urine, and other excrement produced by livestock), digestive emissions, and urea. The definition includes animal waste when mixed or commingled with bedding, compost, feed, soil and other typical materials found with animal waste.

Consumer product shall have the meaning stated in 15 U.S.C. 2052;

Environment means (1) the navigable waters, the waters of the contiguous zone, and the ocean waters of which the natural resources are under the exclusive management authority of the United States under the Fishery Conservation and Management Act of 1976, and (2) any other surface water, ground water, drinking water supply, land surface or subsurface strata, or ambient air within the United States or under the jurisdiction of the United States;

Facility means (1) any building, structure, installation, equipment, pipe or pipeline (including any pipe into a sewer or publicly owned treatment works), well, pit, pond, lagoon, impoundment, ditch, landfill, storage container, motor vehicle, rolling stock, or aircraft, or (2) any site or area where a hazardous substance has been deposited, stored, disposed of, or placed, or otherwise come to be located; but does not include any consumer product in consumer use or any vessel;

Farm means a facility on a tract of land devoted to the production of crops or raising of animals, including fish, which produced and sold, or normally would have produced and sold, $1,000 or more of agricultural products during a year.

Hazardous substance means any substance designated pursuant to 40 CFR part 302;

Hazardous waste shall have the meaning provided in 40 CFR 261.3;

Navigable waters or *navigable waters of the United States* means waters of the United States, including the territorial seas;

Offshore facility means any facility of any kind located in, on, or under, any of the navigable waters of the United States, and any facility of any kind which is subject to the jurisdiction of

the United States and is located in, on, or under any other waters, other than a vessel or a public vessel;

Onshore facility means any facility (including, but not limited to, motor vehicles and rolling stock) of any kind located in, on, or under, any land or non-navigable waters within the United States;

Person means an individual, firm, corporation, association, partnership, consortium, joint venture, commercial entity, United States Government, State, municipality, commission, political subdivision of a State, or any interstate body;

Release means any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment (including the abandonment or discarding of barrels, containers, and other closed receptacles containing any hazardous substance or pollutant or contaminant), but excludes:

(1) Any release which results in exposure to persons solely within a workplace, with respect to a claim which such persons may assert against the employer of such persons;

(2) Emissions from the engine exhaust of a motor vehicle, rolling stock, aircraft, vessel, or pipeline pumping station engine;

(3) Release of source, byproduct, or special nuclear material from a nuclear incident, as those terms are defined in the Atomic Energy Act of 1954, if such release is subject to requirements with respect to financial protection established by the Nuclear Regulatory Commission under section 170 of such Act, or for the purposes of section 104 of the Comprehensive Environmental Response, Compensation, and Liability Act or any other response action, any release of source, byproduct, or special nuclear material from any processing site designated under section 102(a)(1) or 302(a) of the Uranium Mill Tailings Radiation Control Act of 1978; and

(4) The normal application of fertilizer;

Reportable quantity (''RQ'') means that quantity, as set forth in this part, the release of which requires notification pursuant to this part;

United States include the several States of the United States, the District of Columbia, the Commonwealth of Puerto Rico, Guam, American Samoa, the United States Virgin Islands, the Commonwealth of the Northern Marianas, and any other territory or possession over which the United States has jurisdiction; and

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

[50 FR 13474, Apr. 4, 1985, as amended at 67 FR 45321, July 9, 2002; 73 FR 76959, Dec. 18, 2008]

§ 302.4 Designation of hazardous substances.

(a) *Listed hazardous substances.* The elements and compounds and hazardous wastes appearing in table 302.4 are designated as hazardous substances under section 102(a) of the Act.

(b) *Unlisted hazardous substances.* A solid waste, as defined in 40 CFR 261.2, which is not excluded from regulation as a hazardous waste under 40 CFR 261.4(b), is a hazardous substance under section 101(14) of the Act if it exhibits any of the characteristics identified in 40 CFR 261.20 through 261.24.

NOTE: The numbers under the column headed ''CASRN'' are the Chemical Abstracts Service Registry Numbers for each hazardous substance. The ''Statutory Code'' column indicates the statutory source for designating each substance as a CERCLA hazardous substance: ''1'' indicates that the statutory source is section 311(b)(2) of the Clean Water Act, ''2'' indicates that the source is section 307(a) of the Clean Water Act, ''3'' indicates that the source is section 112 of the Clean Air Act, and ''4'' indicates that the source is section 3001 of the Resource Conservation and Recovery Act (RCRA). The ''RCRA Waste Number'' column provides the waste identification numbers assigned to various substances by RCRA regulations. The ''Pounds (kg)'' column provides the reportable quantity adjustment for each hazardous substance in pounds and kilograms. Appendix A to § 302.4, which lists CERCLA hazardous substances in sequential order by CASRN, provides a per-substance grouping of regulatory synonyms (*i.e.*, names by which each hazardous substance is identified in other statutes and their implementing regulations).

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES

[Note: All Comments/Notes Are Located at the End of This Table]

Hazardous substance	CASRN	Statutory code†	RCRA waste No.	Final RQ pounds (Kg)
A2213	30558431	4	U394	5000 (2270)
Acenaphthene	83–32–9	2		100 (45.4)
Acenaphthylene	208–96–8	2		5000 (2270)
Acetaldehyde	75–07–0	1,3,4	U001	1000 (454)
Acetaldehyde, chloro-	107–20–0	4	P023	1000 (454)
Acetaldehyde, trichloro-	75–87–6	4	U034	5000 (2270)
Acetamide	60–35–5	3		100 (45.4)
Acetamide, N-(aminothioxomethyl)-	591–08–2	4	P002	1000 (454)
Acetamide, N-(4-ethoxyphenyl)-	62–44–2	4	U187	100 (45.4)
Acetamide, N-9H-fluoren-2-yl-	53–96–3	3,4	U005	1 (0.454)
Acetamide, 2-fluoro-	640–19–7	4	P057	100 (45.4)
Acetic acid	64–19–7	1		5000 (2270)
Acetic acid, (2,4-dichlorophenoxy)-, salts & esters	94–75–7	1,3,4	U240	100 (45.4)
Acetic acid, ethyl ester	141–78–6	4	U112	5000 (2270)
Acetic acid, fluoro-, sodium salt	62–74–8	4	P058	10 (4.54)
Acetic acid, lead(2+) salt	301–04–2	1,4	U144	10 (4.54)
Acetic acid, thallium(1+) salt	563–68–8	4	U214	100 (45.4)
Acetic acid, (2,4,5-trichlorophenoxy)-	93–76–5	1,4	See F027	1000 (454)
Acetic anhydride	108–24–7	1		5000 (2270)
Acetone	67–64–1	4	U002	5000 (2270)
Acetone cyanohydrin	75–86–5	1,4	P069	10 (4.54)
Acetonitrile	75–05–8	3,4	U003	5000 (2270)
Acetophenone	98–86–2	3,4	U004	5000 (2270)
2-Acetylaminofluorene	53–96–3	3,4	U005	1 (0.454)
Acetyl bromide	506–96–7	1		5000 (2270)
Acetyl chloride	75–36–5	1,4	U006	5000 (2270)
1-Acetyl-2-thiourea	591–08–2	4	P002	1000 (454)
Acrolein	107–02–8	1,2,3,4	P003	1 (0.454)
Acrylamide	79–06–1	3,4	U007	5000 (2270)
Acrylic acid	79–10–7	3,4	U008	5000 (2270)
Acrylonitrile	107–13–1	1,2,3,4	U009	100 (45.4)
Adipic acid	124–04–9	1		5000 (2270)
Aldicarb	116–06–3	4	P070	1 (0.454)
Aldicarb sulfone	1646884	4	P203	100 (45.4)
Aldrin	309–00–2	1,2,4	P004	1 (0.454)
Allyl alcohol	107–18–6	1,4	P005	100 (45.4)
Allyl chloride	107–05–1	1,3		1000 (454)
Aluminum phosphide	20859–73–8	4	P006	100 (45.4)
Aluminum sulfate	10043–01–3	1		5000 (2270)
4-Aminobiphenyl	92–67–1	3		1 (0.454)
5-(Aminomethyl)-3-isoxazolol	2763–96–4	4	P007	1000 (454)
4-Aminopyridine	504–24–5	4	P008	1000 (454)
Amitrole	61–82–5	4	U011	10 (4.54)
Ammonia	7664–41–7	1		100 (45.4)
Ammonium acetate	631–61–8	1		5000 (2270)
Ammonium benzoate	1863–63–4	1		5000 (2270)
Ammonium bicarbonate	1066–33–7	1		5000 (2270)
Ammonium bichromate	7789–09–5	1		10 (4.54)
Ammonium bifluoride	1341–49–7	1		100 (45.4)
Ammonium bisulfilte	10192–30–0	1		5000 (2270)
Ammonium carbamate	1111–78–0	1		5000 (2270)
Ammonium carbonate	506–87–6	1		5000 (2270)
Ammonium chloride	12125–02–9	1		5000 (2270)
Ammonium chromate	7788–98–9	1		10 (4.54)
Ammonium citrate, dibasic	3012–65–5	1		5000 (2270)
Ammonium fluoborate	13826–83–0	1		5000 (2270)
Ammonium fluoride	12125–01–8	1		100 (45.4)
Ammonium hydroxide	1336–21–6	1		1000 (454)
Ammonium oxalate	6009–70–7 5972–73–6 14258–49–2	1		5000 (2270)
Ammonium picrate	131–74–8	4	P009	10 (4.54)
Ammonium silicofluoride	16919–19–0	1		1000 (454)
Ammonium sulfamate	7773–06–0	1		5000 (2270)
Ammonium sulfide	12135–76–1	1		100 (45.4)
Ammonium sulfite	10196–04–0	1		5000 (2270)
Ammonium tartrate	14307–43–8 3164–29–2	1		5000 (2270)
Ammonium thiocyanate	1762–95–4	1		5000 (2270)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—Continued

[Note: All Comments/Notes Are Located at the End of This Table]

Hazardous substance	CASRN	Statutory code†	RCRA waste No.	Final RQ pounds (Kg)
Ammonium vanadate	7803–55–6	4	P119	1000 (454)
Amyl acetate	628–63–7	1		5000 (2270)
iso-Amyl acetate	123–92–2			
sec-Amyl acetate	626–38–0			
tert-Amyl acetate	625–16–1			
Aniline	62–53–3	1,3,4	U012	5000 (2270)
o-Anisidine	90–04–0	3		100 (45.4)
Anthracene	120–12–7	2		5000 (2270)
Antimony††	7440–36–0	2		5000 (2270)
ANTIMONY AND COMPOUNDS	N.A.	2,3		**
Antimony Compounds	N.A.	2,3		**
Antimony pentachloride	7647–18–9	1		1000 (454)
Antimony potassium tartrate	28300–74–5	1		100 (45.4)
Antimony tribromide	7789–61–9	1		1000 (454)
Antimony trichloride	10025–91–9	1		1000 (454)
Antimony trifluoride	7783–56–4	1		1000 (454)
Antimony trioxide	1309–64–4	1		1000 (454)
Argentate(1-), bis(cyano-C)-, potassium	506–61–6	4	P099	1 (0.454)
Aroclor 1016	12674–11–2	1,2,3		1 (0.454)
Aroclor 1221	11104–28–2	1,2,3		1 (0.454)
Aroclor 1232	11141–16–5	1,2,3		1 (0.454)
Aroclor 1242	53469–21–9	1,2,3		1 (0.454)
Aroclor 1248	12672–29–6	1,2,3		1 (0.454)
Aroclor 1254	11097–69–1	1,2,3		1 (0.454)
Aroclor 1260	11096–82–5	1,2,3		1 (0.454)
Aroclors	1336–36–3	1,2,3		1 (0.454)
Arsenic††	7440–38–2	2,3		1 (0.454)
Arsenic acid H3AsO4	7778–39–4	4	P010	1 (0.454)
ARSENIC AND COMPOUNDS	N.A.	2,3		**
Arsenic Compounds (inorganic including arsine)	N.A.	2,3		**
Arsenic disulfide	1303–32–8	1		1 (0.454)
Arsenic oxide As2O3	1327–53–3	1,4	P012	1 (0.454)
Arsenic oxide As2O5	1303–28–2	1,4	P011	1 (0.454)
Arsenic pentoxide	1303–28–2	1,4	P011	1 (0.454)
Arsenic trichloride	7784–34–1	1		1 (0.454)
Arsenic trioxide	1327–53–3	1,4	P012	1 (0.454)
Arsenic trisulfide	1303–33–9	1		1 (0.454)
Arsine, diethyl-	692–42–2	4	P038	1 (0.454)
Arsinic acid, dimethyl-	75–60–5	4	U136	1 (0.454)
Arsonous dichloride, phenyl-	696–28–6	4	P036	1 (0.454)
Asbestos†††	1332–21–4	2,3		1 (0.454)
Auramine	492–80–8	4	U014	100 (45.4)
Azaserine	115–02–6	4	U015	1 (0.454)
Aziridine	151–56–4	3,4	P054	1 (0.454)
Aziridine, 2-methyl-	75–55–8	3,4	P067	1 (0.454)
Azirino[2',3':3,4]pyrrolo[1,2–a]indole-4,7-dione, 6-amino-8-[[(aminocarbonyl)oxy]methyl]-1,1a,2,8,8a,8b-hexahydro-8a-methoxy-5- methyl-,[1aS-(1aalpha,8beta,8aalpha, 8balpha)]-.	50–07–7	4	U010	10 (4.54)
Barban	101279	4	U280	10 (4.54)
Barium cyanide	542–62–1	1,4	P013	10 (4.54)
Bendiocarb	22781233	4	U278	100 (45.4)
Bendiocarb phenol	22961826	4	U364	1000 (454)
Benomyl	17804352	4	U271	10 (4.54)
Benz[j]aceanthrylene, 1,2-dihydro-3-methyl-	56–49–5	4	U157	10 (4.54)
Benz[c]acridine	225–51–4	4	U016	100 (45.4)
Benzal chloride	98–87–3	4	U017	5000 (2270)
Benzamide, 3,5-dichloro-N-(1,1-dimethyl-2propynyl)-	23950–58–5	4	U192	5000 (2270)
Benz[a]anthracene	56–55–3	2,4	U018	10 (4.54)
1,2-Benzanthracene	56–55–3	2,4	U018	10 (4.54)
Benz[a]anthracene, 7,12-dimethyl-	57–97–6	4	U094	1 (0.454)
Benzenamine	62–53–3	1,3,4	U012	5000 (2270)
Benzenamine, 4,4′-carbonimidoylbis (N,N dimethyl-	492–80–8	4	U014	100 (45.4)
Benzenamine, 4-chloro-	106–47–8	4	P024	1000 (454)
Benzenamine, 4-chloro-2-methyl-, hydrochloride	3165–93–3	4	U049	100 (45.4)
Benzenamine, N,N-dimethyl-4-(phenylazo)-	60–11–7	3,4	U093	10 (4.54)
Benzenamine, 2-methyl-	95–53–4	3,4	U328	100 (45.4)
Benzenamine, 4-methyl-	106–49–0	4	U353	100 (45.4)
Benzenamine, 4,4′-methylenebis [2-chloro-	101–14–4	3,4	U158	10 (4.54)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—Continued

[Note: All Comments/Notes Are Located at the End of This Table]

Hazardous substance	CASRN	Statutory code†	RCRA waste No.	Final RQ pounds (Kg)
Benzenamine, 2-methyl-,hydrochloride	636–21–5	4	U222	100 (45.4)
Benzenamine, 2-methyl-5-nitro-	99–55–8	4	U181	100 (45.4)
Benzenamine, 4-nitro-	100–01–6	4	P077	5000 (2270)
Benzene [a]	71–43–2	1,2,3,4	U019	10 (4.54)
Benzeneacetic acid, 4-chloro-α-(4-chlorophenyl)-α-hydroxy-, ethyl ester.	510–15–6	3,4	U038	10 (4.54)
Benzene, 1-bromo-4-phenoxy-	101–55–3	2,4	U030	100 (45.4)
Benzenebutanoic acid, 4-[bis(2- chloroethyl)amino]-	305–03–3	4	U035	10 (4.54)
Benzene, chloro-	108–90–7	1,2,3,4	U037	100 (45.4)
Benzene, (chloromethyl)-	100–44–7	1,3,4	P028	100 (45.4)
Benzenediamine, ar-methyl-	95–80–7 496–72–0 823–40–5 25376–45–8	3,4	U221	10 (4.54)
1,2-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester	117–81–7	2,3,4	U028	100 (45.4)
1,2-Benzenedicarboxylic acid, dibutyl ester	84–74–2	1,2,3,4	U069	10 (4.54)
1,2-Benzenedicarboxylic acid, diethyl ester	84–66–2	2,4	U088	1000 (454)
1,2-Benzenedicarboxylic acid, dimethyl ester	131–11–3	2,3,4	U102	5000 (2270)
1,2-Benzenedicarboxylic acid, dioctyl ester	117–84–0	2,4	U107	5000 (2270)
Benzene, 1,2-dichloro-	95–50–1	1,2,4	U070	100 (45.4)
Benzene, 1,3-dichloro-	541–73–1	2,4	U071	100 (45.4)
Benzene, 1,4-dichloro-	106–46–7	1,2,3,4	U072	100 (45.4)
Benzene, 1,1′-(2,2-dichloroethylidene) bis[4-chloro-	72–54–8	1,2,4	U060	1 (0.454)
Benzene, (dichloromethyl)-	98–87–3	4	U017	5000 (2270)
Benzene, 1,3-diisocyanatomethyl-	91–08–7 584–84–9 26471–62–5	3,4	U223	100 (45.4)
Benzene, dimethyl-	1330–20–7	1,3,4	U239	100 (45.4)
1,3-Benzenediol	108–46–3	1,4	U201	5000 (2270)
1,2-Benzenediol,4-[1-hydroxy-2-(methyl amino)ethyl]-	51–43–4	4	P042	1000 (454)
Benzeneethanamine, alpha,alpha-dimethyl-	122–09–8	4	P046	5000 (2270)
Benzene, hexachloro-	118–74–1	2,3,4	U127	10 (4.54)
Benzene, hexahydro-	110–82–7	1,4	U056	1000 (454)
Benzene, methyl-	108–88–3	1,2,3,4	U220	1000 (454)
Benzene, 1-methyl-2,4-dinitro-	121–14–2	1,2,3,4	U105	10 (4.54)
Benzene, 2-methyl-1,3-dinitro-	606–20–2	1,2,4	U106	100 (45.4)
Benzene, (1-methylethyl)-	98–82–8	3,4	U055	5000 (2270)
Benzene, nitro-	98–95–3	1,2,3,4	U169	1000 (454)
Benzene, pentachloro-	608–93–5	4	U183	10 (4.54)
Benzene, pentachloronitro-	82–68–8	3,4	U185	100 (45.4)
Benzenesulfonic acid chloride	98–09–9	4	U020	100 (45.4)
Benzenesulfonyl chloride	98–09–9	4	U020	100 (45.4)
Benzene,1,2,4,5-tetrachloro-	95–94–3	4	U207	5000 (2270)
Benzenethiol	108–98–5	4	P014	100 (45.4)
Benzene,1,1′-(2,2,2-trichloroethylidene) bis[4-chloro-	50–29–3	1,2,4	U061	1 (0.454)
Benzene,1,1′-(2,2,2-trichloroethylidene) bis[4-methoxy-	72–43–5	1,3,4	U247	1 (0.454)
Benzene, (trichloromethyl)-	98–07–7	3,4	U023	10 (4.54)
Benzene, 1,3,5-trinitro-	99–35–4	4	U234	10 (4.54)
Benzidine	92–87–5	2,3,4	U021	1 (0.454)
Benzo[a]anthracene	56–55–3	2,4	U018	10 (4.54)
1,3-Benzodioxole, 5-(1-propenyl)-1	120–58–1	4	U141	100 (45.4)
1,3-Benzodioxole, 5-(2-propenyl)-	94–59–7	4	U203	100 (45.4)
1,3-Benzodioxole, 5-propyl-	94–58–6	4	U090	10 (4.54)
1,3-Benzodioxol-4-ol, 2,2-dimethyl-	22961826	4	U364	1000 (454)
1,3-Benzodioxol-4-ol, 2,2-dimethyl-, methyl carbamate	22781233	4	U278	100 (45.4)
Benzo[b]fluoranthene	205–99–2	2		1 (0.454)
Benzo(k)fluoranthene	207–08–9	2		5000 (2270)
7-Benzofuranol, 2,3-dihydro-2,2-dimethyl-	1563388	4	U367	10 (4.54)
7-Benzofuranol, 2,3-dihydro-2,2- dimethyl-, methylcarbamate.	1563–66–2	1,4	P127	10 (4.54)
Benzoic acid	65–85–0	1		5000 (2270)
Benzoic acid, 2-hydroxy-, compd. with (3aS-cis)-1,2,3,3a,8,8a-hexahydro-1,3a,8-trimethylpyrrolo[2,3-b]indol-5-yl methylcarbamate ester (1:1).	57647	4	P188	100 (45.4)
Benzonitrile	100–47–0	1		5000 (2270)
Benzo[rst]pentaphene	189–55–9	4	U064	10 (4.54)
Benzo[ghi]perylene	191–24–2	2		5000 (2270)
2H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo-1-phenylbutyl)-, & salts.	81–81–2	4	P001 U248	100 (45.4)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—Continued

[Note: All Comments/Notes Are Located at the End of This Table]

Hazardous substance	CASRN	Statutory code†	RCRA waste No.	Final RQ pounds (Kg)
Benzo[a]pyrene	50–32–8	2,4	U022	1 (0.454)
3,4-Benzopyrene	50–32–8	2,4	U022	1 (0.454)
ρ-Benzoquinone	106–51–4	3,4	U197	10 (4.54)
Benzotrichloride	98–07–7	3,4	U023	10 (4.54)
Benzoyl chloride	98–88–4	1		1000 (454)
Benzyl chloride	100–44–7	1,3,4	P028	100 (45.4)
Beryllium ††	7440–41–7	2,3,4	P015	10 (4.54)
BERYLLIUM AND COMPOUNDS	N.A.	2,3		**
Beryllium chloride	7787–47–5	1		1 (0.454)
Beryllium compounds	N.A.	2,3		**
Beryllium fluoride	7787–49–7	1		1 (0.454)
Beryllium nitrate	13597–99–4 7787–55–5	1		1 (0.454)
Beryllium powder ††	7440–41–7	2,3,4	P015	10 (4.54)
alpha-BHC	319–84–6	2		10 (4.54)
beta-BHC	319–85–7	2		1 (0.454)
delta-BHC	319–86–8	2		1 (0.454)
gamma-BHC	58–89–9	1,2,3,4	U129	1 (0.454)
2,2′-Bioxirane	1464–53–5	4	U085	10 (4.54)
Biphenyl	92–52–4	3		100 (45.4)
[1,1′-Biphenyl]-4,4′-diamine	92–87–5	2,3,4	U021	1 (0.454)
[1,1′-Biphenyl]-4,4′-diamine,3,3′-dichloro-	91–94–1	2,3,4	U073	1 (0.454)
[1,1′-Biphenyl]-4,4′-diamine,3,3′-dimethoxy-	119–90–4	3,4	U091	100 (45.4)
[1,1′-Biphenyl]-4,4′-diamine,3,3′-dimethyl-	119–93–7	3,4	U095	10 (4.54)
Bis(2-chloroethoxy) methane	111–91–1	2,4	U024	1000 (454)
Bis(2-chloroethyl) ether	111–44–4	2,3,4	U025	10 (4.54)
Bis(chloromethyl) ether	542–88–1	2,3,4	P016	10 (4.54)
Bis(2-ethylhexyl) phthalate	117–81–7	3,4	U028	100 (45.4)
Bromoacetone	598–31–2	4	P017	1000 (454)
Bromoform	75–25–2	2,3,4	U225	100 (45.4)
Bromomethane	74–83–9	2,3,4	U029	1000 (454)
4-Bromophenyl phenyl ether	101–55–3	2,4	U030	100 (45.4)
Brucine	357–57–3	4	P018	100 (45.4)
1,3-Butadiene	106–99–0	3		10 (4.54)
1,3-Butadiene, 1,1,2,3,4,4-hexachloro-	87–68–3	2,3,4	U128	1 (0.454)
1-Butanamine, N-butyl-N-nitroso-	924–16–3	4	U172	10 (4.54)
1-Butanol	71–36–3	4	U031	5000 (2270)
2-Butanone	78–93–3	3,4	U159	5000 (2270)
2-Butanone, 3,3-dimethyl-1(methylthio)-, O-[(methylamino)carbonyl] oxime.	39196–18–4	4	P045	100 (45.4)
2-Butanone peroxide	1338–23–4	4	U160	10 (4.54)
2-Butenal	123–73–9 4170–30–3	1,4	U053	100 (45.4)
2-Butene, 1,4-dichloro-	764–41–0	4	U074	1 (0.454)
2-Butenoic acid, 2-methyl-, 7-[[2,3-dihydroxy-2-(1-methoxyethyl)-3- methyl-1-oxobutoxy] methyl]-2,3, 5,7a-tetrahydro- 1H-pyrrolizin-1-yl ester, [1S-[1alpha(Z), 7(2S*,3R*),7aalpha]]-.	303–34–4	4	U143	10 (4.54)
Butyl acetate	123–86–4	1		5000 (2270)
iso-Butyl acetate	110–19–0			
sec-Butyl acetate	105–46–4			
tert-Butyl acetate	540–88–5			
n-Butyl alcohol	71–36–3	4	U031	5000 (2270)
Butylamine	109–73–9	1		1000 (454)
iso-Butylamine	78–81–9			
sec-Butylamine	513–49–5 13952–84–6			
tert-Butylamine	75–64–9			
Butyl benzyl phthalate	85–68–7	2		100 (45.4)
n-Butyl phthalate	84–74–2	1,2,3,4	U069	10 (4.54)
Butyric acid	107–92–6	1		5000 (2270)
iso-Butyric acid	79–31–2			
Cacodylic acid	75–60–5	4	U136	1 (0.454)
Cadmium ††	7440–43–9	2		10 (4.54)
Cadmium acetate	543–90–8	1		10 (4.54)
CADMIUM AND COMPOUNDS	N.A.	2,3		**
Cadmium bromide	7789–42–6	1		10 (4.54)
Cadmium chloride	10108–64–2	1		10 (4.54)
Cadmium compounds	N.A.	2,3		**

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—Continued

[Note: All Comments/Notes Are Located at the End of This Table]

Hazardous substance	CASRN	Statutory code†	RCRA waste No.	Final RQ pounds (Kg)
Calcium arsenate	7778–44–1	1		1 (0.454)
Calcium arsenite	52740–16–6	1		1 (0.454)
Calcium carbide	75–20–7	1		10 (4.54)
Calcium chromate	13765–19–0	1,4	U032	10 (4.54)
Calcium cyanamide	156–62–7	3		1000 (454)
Calcium cyanide Ca(CN)2	592–01–8	1,4	P021	10 (4.54)
Calcium dodecylbenzenesulfonate	26264–06–2	1		1000 (454)
Calcium hypochlorite	7778–54–3	1		10 (4.54)
Captan	133–06–2	1,3		10 (4.54)
Carbamic acid, 1H-benzimidazol-2-yl, methyl ester	10605217	4	U372	10 (4.54)
Carbamic acid, [1-[(butylamino)carbonyl]-1H-benzimidazol-2-yl]-,methyl ester.	17804352	4	U271	10 (4.54)
Carbamic acid, (3-chlorophenyl)-, 4-chloro-2-butynyl ester	101279	4	U280	10 (4.54)
Carbamic acid, [(dibutylamino)-thio]methyl-, 2,3-dihydro-2,2-dimethyl-7-benzofuranyl ester.	55285148	4	P189	1000 (454)
Carbamic acid, dimethyl-,1-[(dimethyl-amino)carbonyl]-5-methyl-1H-pyrazol-3-yl ester.	644644	4	P191	1 (0.454)
Carbamic acid, dimethyl-, 3-methyl-1-(1-methylethyl)-1H-pyrazol-5-yl ester.	119380	4	P192	100 (45.4)
Carbamic acid, ethyl ester	51–79–6	3,4	U238	100 (45.4)
Carbamic acid, methyl-, 3-methylphenyl ester	1129415	4	P190	1000 (454)
Carbamic acid, methylnitroso-, ethyl ester	615–53–2	4	U178	1 (0.454)
Carbamic acid, [1,2-phenylenebis(iminocarbonothioyl)]bis-, dimethyl ester.	23564058	4	U409	10 (4.54)
Carbamic acid, phenyl-, 1-methylethyl ester	122429	4	U373	1000 (454)
Carbamic chloride, dimethyl-	79–44–7	3,4	U097	1 (0.454)
Carbamodithioic acid, 1,2-ethanediylbis-, salts & esters	111–54–6	4	U114	5000 (2270)
Carbamothioic acid, bis(1-methylethyl)-, S-(2,3-dichloro-2-propenyl) ester.	2303–16–4	4	U062	100 (45.4)
Carbamothioic acid, bis(1-methylethyl)-, S-(2,3,3-trichloro-2-propenyl) ester.	2303175	4	U389	100 (45.4)
Carbamothioic acid, dipropyl-, S-(phenylmethyl) ester	52888809	4	U387	5000 (2270)
Carbaryl	63–25–2	1,3,4	U279	100 (45.4)
Carbendazim	10605217	4	U372	10 (4.54)
Carbofuran	1563–66–2	1,4	P127	10 (4.54)
Carbofuran phenol	1563388	4	U367	10 (4.54)
Carbon disulfide	75–15–0	1,3,4	P022	100 (45.4)
Carbonic acid, dithallium(1+) salt	6533–73–9	4	U215	100 (45.4)
Carbonic dichloride	75–44–5	1,3,4	P095	10 (4.54)
Carbonic difluoride	353–50–4	4	U033	1000 (454)
Carbonochloridic acid, methyl ester	79–22–1	4	U156	1000 (454)
Carbon oxyfluoride	353–50–4	4	U033	1000 (454)
Carbon tetrachloride	56–23–5	1,2,3,4	U211	10 (4.54)
Carbonyl sulfide	463–58–1	3		100 (45.4)
Carbosulfan	55285148	4	P189	1000 (454)
Catechol	120–80–9	3		100 (45.4)
Chloral	75–87–6	4	U034	5000 (2270)
Chloramben	133–90–4	3		100 (45.4)
Chlorambucil	305–03–3	4	U035	10 (4.54)
Chlordane	57–74–9	1,2,3,4	U036	1 (0.454)
Chlordane, alpha & gamma isomers	57–74–9	1,2,3,4	U036	1 (0.454)
CHLORDANE (TECHNICAL MIXTURE AND METABOLITES).	57–74–9	1,2,3,4	U036	1 (0.454)
CHLORINATED BENZENES	N.A.	2		**
Chlorinated camphene	8001–35–2	1,2,3,4	P123	1 (0.454)
CHLORINATED ETHANES	N.A.	2		**
CHLORINATED NAPHTHALENE	N.A.	2		**
CHLORINATED PHENOLS	N.A.	2		**
Chlorine	7782–50–5	1,3		10 (4.54)
Chlornaphazine	494–03–1	4	U026	100 (45.4)
Chloroacetaldehyde	107–20–0	4	P023	1000 (454)
Chloroacetic acid	79–11–8	3		100 (45.4)
2-Chloroacetophenone	532–27–4	3		100 (45.4)
CHLOROALKYL ETHERS	N.A.	2		**
p-Chloroaniline	106–47–8	4	P024	1000 (454)
Chlorobenzene	108–90–7	1,2,3,4	U037	100 (45.4)
Chlorobenzilate	510–15–6	3,4	U038	10 (4.54)
p-Chloro-m-cresol	59–50–7	2,4	U039	5000 (2270)
Chlorodibromomethane	124–48–1	2		100 (45.4)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—Continued

[Note: All Comments/Notes Are Located at the End of This Table]

Hazardous substance	CASRN	Statutory code†	RCRA waste No.	Final RQ pounds (Kg)
1-Chloro-2,3-epoxypropane	106–89–8	1,3,4	U041	100 (45.4)
Chloroethane	75–00–3	2,3		100 (45.4)
2-Chloroethyl vinyl ether	110–75–8	2,4	U042	1000 (454)
Chloroform	67–66–3	1,2,3,4	U044	10 (4.54)
Chloromethane	74–87–3	2,3,4	U045	100 (45.4)
Chloromethyl methyl ether	107–30–2	3,4	U046	10 (4.54)
beta-Chloronaphthalene	91–58–7	2,4	U047	5000 (2270)
2-Chloronaphthalene	91–58–7	2,4	U047	5000 (2270)
2-Chlorophenol	95–57–8	2,4	U048	100 (45.4)
o-Chlorophenol	95–57–8	2,4	U048	100 (45.4)
4-Chlorophenyl phenyl ether	7005–72–3	2		5000 (2270)
1-(o-Chlorophenyl)thiourea	5344–82–1	4	P026	100 (45.4)
Chloroprene	126–99–8	3		100 (45.4)
3-Chloropropionitrile	542–76–7	4	P027	1000 (454)
Chlorosulfonic acid	7790–94–5	1		1000 (454)
4-Chloro-o-toluidine, hydrochloride	3165–93–3	4	U049	100 (45.4)
Chlorpyrifos	2921–88–2	1		1 (0.454)
Chromic acetate	1066–30–4	1		1000 (454)
Chromic acid	11115–74–5 7738–94–5	1		10 (4.54)
Chromic acid H2CrO4, calcium salt	13765–19–0	1,4	U032	10 (4.54)
Chromic sulfate	10101–53–8	1		1000 (454)
Chromium ††	7440–47–3	2		5000 (2270)
CHROMIUM AND COMPOUNDS	N.A.	2,3		**
Chromium Compounds	N.A.	2,3		**
Chromous chloride	10049–05–5	1		1000 (454)
Chrysene	218–01–9	2,4	U050	100 (45.4)
Cobalt Compounds	N.A.	3		**
Cobaltous bromide	7789–43–7	1		1000 (454)
Cobaltous formate	544–18–3	1		1000 (454)
Cobaltous sulfamate	14017–41–5	1		1000 (454)
Coke Oven Emissions	N.A.	3		1 (0.454)
Copper ††	7440–50–8	2		5000 (2270)
COPPER AND COMPOUNDS	N.A.	2		**
Copper cyanide Cu(CN)	544–92–3	4	P029	10 (4.54)
Coumaphos	56–72–4	1		10 (4.54)
Creosote	N.A.	4	U051	1 (0.454)
Cresol (cresylic acid)	1319–77–3	1,3,4	U052	100 (45.4)
m-Cresol	108–39–4	3		100 (45.4)
o-Cresol	95–48–7	3		100 (45.4)
p-Cresol	106–44–5	3		100 (45.4)
Cresols (isomers and mixture)	1319–77–3	1,3,4	U052	100 (45.4)
Cresylic acid (isomers and mixture)	1319–77–3	1,3,4	U052	100 (45.4)
Crotonaldehyde	123–73–9 4170–30–3	1,4	U053	100 (45.4)
Cumene	98–82–8	3,4	U055	5000 (2270)
m-Cumenyl methylcarbamate	64006	4	P202	10 (4.54)
Cupric acetate	142–71–2	1		100 (45.4)
Cupric acetoarsenite	12002–03–8	1		1 (0.454)
Cupric chloride	7447–39–4	1		10 (4.54)
Cupric nitrate	3251–23–8	1		100 (45.4)
Cupric oxalate	5893–66–3	1		100 (45.4)
Cupric sulfate	7758–98–7	1		10 (4.54)
Cupric sulfate, ammoniated	10380–29–7	1		100 (45.4)
Cupric tartrate	815–82–7	1		100 (45.4)
Cyanide Compounds	N.A.	2,3		**
CYANIDES	N.A.	2,3		**
Cyanides (soluble salts and complexes) not otherwise specified.	N.A.	4	P030	10 (4.54)
Cyanogen	460–19–5	4	P031	100 (45.4)
Cyanogen bromide (CN)Br	506–68–3	4	U246	1000 (454)
Cyanogen chloride (CN)Cl	506–77–4	1,4	P033	10 (4.54)
2,5-Cyclohexadiene-1,4-dione	106–51–4	3,4	U197	10 (4.54)
Cyclohexane	110–82–7	1,4	U056	1000 (454)
Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1α, 2α, 3β–, 4α, 5α, 6β).	58–89–9	1,2,3,4	U129	1 (0.454)
Cyclohexanone	108–94–1	4	U057	5000 (2270)
2-Cyclohexyl-4,6-dinitrophenol	131–89–5	4	P034	100 (45.4)
1,3-Cyclopentadiene, 1,2,3,4,5,5-hexachloro-	77–47–4	1,2,3,4	U130	10 (4.54)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—Continued

[Note: All Comments/Notes Are Located at the End of This Table]

Hazardous substance	CASRN	Statutory code†	RCRA waste No.	Final RQ pounds (Kg)
Cyclophosphamide	50–18–0	4	U058	10 (4.54)
2,4-D Acid	94–75–7	1,3,4	U240	100 (45.4)
2,4-D Ester	94–11–1	1		100 (45.4)
	94–79–1			
	94–80–4			
	1320–18–9			
	1928–38–7			
	1928–61–6			
	1929–73–3			
	2971–38–2			
	25168–26–7			
	53467–11–1			
2,4-D, salts and esters	94–75–7	1,3,4	U240	100 (45.4)
Daunomycin	20830–81–3	4	U059	10 (4.54)
DDD	72–54–8	1,2,4	U060	1 (0.454)
4,4′-DDD	72–54–8	1,2,4	U060	1 (0.454)
DDE [b]	72–55–9	2		1 (0.454)
DDE [b]	3547–04–4	3		5000 (2270)
4,4′-DDE	72–55–9	2		1 (0.454)
DDT	50–29–3	1,2,4	U061	1 (0.454)
4,4′-DDT	50–29–3	1,2,4	U061	1 (0.454)
DDT AND METABOLITES	N.A.	2		**
DEHP	117–81–7	2,3,4	U028	100 (45.4)
Diallate	2303–16–4	4	U062	100 (45.4)
Diazinon	333–41–5	1		1 (0.454)
Diazomethane	334–88–3	3		100 (45.4)
Dibenz[a,h]anthracene	53–70–3	2,4	U063	1 (0.454)
1,2:5,6-Dibenzanthracene	53–70–3	2,4	U063	1 (0.454)
Dibenzo[a,h]anthracene	53–70–3	2,4	U063	1 (0.454)
Dibenzofuran	132–64–9	3		100 (45.4)
Dibenzo[a,i]pyrene	189–55–9	4	U064	10 (4.54)
1,2-Dibromo-3-chloropropane	96–12–8	3,4	U066	1 (0.454)
Dibromoethane	106–93–4	1,3,4	U067	1 (0.454)
Dibutyl phthalate	84–74–2	1,2,3,4	U069	10 (4.54)
Di-n-butyl phthalate	84–74–2	1,2,3,4	U069	10 (4.54)
Dicamba	1918–00–9	1		1000 (454)
Dichlobenil	1194–65–6	1		100 (45.4)
Dichlone	117–80–6	1		1 (0.454)
Dichlorobenzene	25321–22–6	1		100 (45.4)
1,2-Dichlorobenzene	95–50–1	1,2,4	U070	100 (45.4)
1,3-Dichlorobenzene	541–73–1	2,4	U071	100 (45.4)
1,4-Dichlorobenzene	106–46–7	1,2,3,4	U072	100 (45.4)
m-Dichlorobenzene	541–73–1	2,4	U071	100 (45.4)
o-Dichlorobenzene	95–50–1	1,2,4	U070	100 (45.4)
p-Dichlorobenzene	106–46–7	1,2,3,4	U072	100 (45.4)
DICHLOROBENZIDINE	N.A.	2		**
3,3′-Dichlorobenzidine	91–94–1	2,3,4	U073	1 (0.454)
Dichlorobromomethane	75–27–4	2		5000 (2270)
1,4-Dichloro-2-butene	764–41–0	4	U074	1 (0.454)
Dichlorodifluoromethane	75–71–8	4	U075	5000 (2270)
1,1-Dichloroethane	75–34–3	2,3,4	U076	1000 (454)
1,2-Dichloroethane	107–06–2	1,2,3,4	U077	100 (45.4)
1,1-Dichloroethylene	75–35–4	1,2,3,4	U078	100 (45.4)
1,2-Dichloroethylene	156–60–5	2,4	U079	1000 (454)
Dichloroethyl ether	111–44–4	2,3,4	U025	10 (4.54)
Dichloroisopropyl ether	108–60–1	2,4	U027	1000 (454)
Dichloromethane	75–09–2	2,3,4	U080	1000 (454)
Dichloromethoxyethane	111–91–1	2,4	U024	1000 (454)
Dichloromethyl ether	542–88–1	2,3,4	P016	10 (4.54)
2,4-Dichlorophenol	120–83–2	2,4	U081	100 (45.4)
2,6-Dichlorophenol	87–65–0	4	U082	100 (45.4)
Dichlorophenylarsine	696–28–6	4	P036	1 (0.454)
Dichloropropane	26638–19–7	1		1000 (454)
1,1-Dichloropropane	78–99–9			
1,3-Dichloropropane	142–28–9			
1,2-Dichloropropane	78–87–5	1,2,3,4	U083	1000 (454)
Dichloropropane—Dichloropropene (mixture)	8003–19–8	1		100 (45.4)
Dichloropropene	26952–23–8	1		100 (45.4)
2,3-Dichloropropene	78–88–6			

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—Continued

[Note: All Comments/Notes Are Located at the End of This Table]

Hazardous substance	CASRN	Statutory code†	RCRA waste No.	Final RQ pounds (Kg)
1,3-Dichloropropene	542–75–6	1,2,3,4	U084	100 (45.4)
2,2-Dichloropropionic acid	75–99–0	1		5000 (2270)
Dichlorvos	62–73–7	1,3		10 (4.54)
Dicofol	115–32–2	1		10 (4.54)
Dieldrin	60–57–1	1,2,4	P037	1 (0.454)
1,2:3,4-Diepoxybutane	1464–53–5	4	U085	10 (4.54)
Diethanolamine	111–42–2	3		100 (45.4)
Diethylamine	109–89–7	1		100 (45.4)
N,N-Diethylaniline	91–66–7	3		1000 (454)
Diethylarsine	692–42–2	4	P038	1 (0.454)
1,4-Diethyleneoxide	123–91–1	3,4	U108	100 (45.4)
Diethylene glycol, dicarbamate	5952261	4	U395	5000 (2270)
Diethylhexyl phthalate	117–81–7	2,3,4	U028	100 (45.4)
N,N′-Diethylhydrazine	1615–80–1	4	U086	10 (4.54)
O,O-Diethyl S-methyl dithiophosphate	3288–58–2	4	U087	5000 (2270)
Diethyl-p-nitrophenyl phosphate	311–45–5	4	P041	100 (45.4)
Diethyl phthalate	84–66–2	2,4	U088	1000 (454)
O,O-Diethyl O-pyrazinyl phosphorothioate	297–97–2	4	P040	100 (45.4)
Diethylstilbestrol	56–53–1	4	U089	1 (0.454)
Diethyl sulfate	64–67–5	3		10 (4.54)
Dihydrosafrole	94–58–6	4	U090	10 (4.54)
Diisopropylfluorophosphate (DFP)	55–91–4	4	P043	100 (45.4)
1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro-, (1alpha,4alpha,4abeta,5alpha, 8alpha,8abeta)-.	309–00–2	1,2,4	P004	1 (0.454)
1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro-, (1alpha,4alpha,4abeta, 5beta,8beta,8abeta)-.	465–73–6	4	P060	1 (0.454)
2,7:3,6-Dimethanonaphth[2,3- b]oxirene,3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a- octahydro-,(1aalpha,2beta, 2aalpha,3beta,6beta,6aalpha, 7beta,7aalpha)-.	60–57–1	1,2,4	P037	1 (0.454)
2,7:3,6-Dimethanonaphth[2, 3-b]oxirene,3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a- octahydro-,(1aalpha,2beta, 2abeta,3alpha,6alpha, 6abeta,7beta,7aalpha)-, & metabolites.	72–20–8	1,2,4	P051	1 (0.454)
Dimethoate	60–51–5	4	P044	10 (4.54)
3,3′-Dimethoxybenzidine	119–90–4	3,4	U091	100 (45.4)
Dimethylamine	124–40–3	1,4	U092	1000 (454)
Dimethyl aminoazobenzene	60–11–7	3,4	U093	10 (4.54)
p-Dimethylaminoazobenzene	60–11–7	3,4	U093	10 (4.54)
N,N-Dimethylaniline	121–69–7	3		100 (45.4)
7,12-Dimethylbenz[a]anthracene	57–97–6	4	U094	1 (0.454)
3,3′-Dimethylbenzidine	119–93–7	3,4	U095	10 (4.54)
alpha,alpha-Dimethylbenzylhydroperoxide	80–15–9	4	U096	10 (4.54)
Dimethylcarbamoyl chloride	79–44–7	3,4	U097	1 (0.454)
Dimethylformamide	68–12–2	3		100 (45.4)
1,1-Dimethylhydrazine	57–14–7	3,4	U098	10 (4.54)
1,2-Dimethylhydrazine	540–73–8	4	U099	1 (0.454)
alpha,alpha-Dimethylphenethylamine	122–09–8	4	P046	5000 (2270)
2,4-Dimethylphenol	105–67–9	2,4	U101	100 (45.4)
Dimethyl phthalate	131–11–3	2,3,4	U102	5000 (2270)
Dimethyl sulfate	77–78–1	3,4	U103	100 (45.4)
Dimetilan	644644	4	P191	1 (0.454)
Dinitrobenzene (mixed)	25154–54–5	1		100 (45.4)
m-Dinitrobenzene	99–65–0			
o-Dinitrobenzene	528–29–0			
p-Dinitrobenzene	100–25–4			
4,6-Dinitro-o-cresol, and salts	534–52–1	2,3,4	P047	10 (4.54)
Dinitrophenol	25550–58–7	1		10 (4.54)
2,5-Dinitrophenol	329–71–5			
2,6-Dinitrophenol	573–56–8			
2,4-Dinitrophenol	51–28–5	1,2,3,4	P048	10 (4.54)
Dinitrotoluene	25321–14–6	1,2		10 (4.54)
3,4-Dinitrotoluene	610–39–9			
2,4-Dinitrotoluene	121–14–2	1,2,3,4	U105	10 (4.54)
2,6-Dinitrotoluene	606–20–2	1,2,4	U106	100 (45.4)
Dinoseb	88–85–7	4	P020	1000 (454)
Di-n-octyl phthalate	117–84–0	2,4	U107	5000 (2270)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—Continued

[Note: All Comments/Notes Are Located at the End of This Table]

Hazardous substance	CASRN	Statutory code†	RCRA waste No.	Final RQ pounds (Kg)
1,4-Dioxane	123–91–1	3,4	U108	100 (45.4)
DIPHENYLHYDRAZINE	N.A.	2		**
1,2-Diphenylhydrazine	122–66–7	2,3,4	U109	10 (4.54)
Diphosphoramide, octamethyl-	152–16–9	4	P085	100 (45.4)
Diphosphoric acid, tetraethyl ester	107–49–3	1,4	P111	10 (4.54)
Dipropylamine	142–84–7	4	U110	5000 (2270)
Di-n-propylnitrosamine	621–64–7	2,4	U111	10 (4.54)
Diquat	85–00–7 2764–72–9	1		1000 (454)
Disulfoton	298–04–4	1,4	P039	1 (0.454)
Dithiobiuret	541–53–7	4	P049	100 (45.4)
1,3-Dithiolane-2-carboxaldehyde, 2,4-dimethyl-, O-[(methylamino)-carbonyl]oxime.	26419738	4	P185	100 (45.4)
Diuron	330–54–1	1		100 (45.4)
Dodecylbenzenesulfonic acid	27176–87–0	1		1000 (454)
Endosulfan	115–29–7	1,2,4	P050	1 (0.454)
alpha-Endosulfan	959–98–8	2		1 (0.454)
beta-Endosulfan	33213–65–9	2		1 (0.454)
ENDOSULFAN AND METABOLITES	N.A.	2		**
Endosulfan sulfate	1031–07–8	2		1 (0.454)
Endothall	145–73–3	4	P088	1000 (454)
Endrin	72–20–8	1,2,4	P051	1 (0.454)
Endrin aldehyde	7421–93–4	2		1 (0.454)
ENDRIN AND METABOLITES	N.A.	2		**
Endrin, & metabolites	72–20–8	1,2,4	P051	1 (0.454)
Epichlorohydrin	106–89–8	1,3,4	U041	100 (45.4)
Epinephrine	51–43–4	4	P042	1000 (454)
1,2-Epoxybutane	106–88–7	3		100 (45.4)
Ethanal	75–07–0	1,3,4	U001	1000 (454)
Ethanamine, N,N-diethyl-	121–44–8	1,3,4	U404	5000 (2270)
Ethanamine, N-ethyl-N-nitroso-	55–18–5	4	U174	1 (0.454)
1,2-Ethanediamine, N,N-dimethyl-N′-2- pyridinyl-N′-(2-thienylmethyl)-.	91–80–5	4	U155	5000 (2270)
Ethane, 1,2-dibromo-	106–93–4	1,3,4	U067	1 (0.454)
Ethane, 1,1-dichloro-	75–34–3	2,3,4	U076	1000 (454)
Ethane, 1,2-dichloro-	107–06–2	1,2,3,4	U077	100 (45.4)
Ethanedinitrile	460–19–5	4	P031	100 (45.4)
Ethane, hexachloro-	67–72–1	2,3,4	U131	100 (45.4)
Ethane, 1,1′-[methylenebis(oxy)]bis[2- chloro-	111–91–1	2,4	U024	1000 (454)
Ethane, 1,1′-oxybis-	60–29–7	4	U117	100 (45.4)
Ethane, 1,1′-oxybis[2-chloro-	111–44–4	2,3,4	U025	10 (4.54)
Ethane, pentachloro-	76–01–7	4	U184	10 (4.54)
Ethane, 1,1,1,2-tetrachloro-	630–20–6	4	U208	100 (45.4)
Ethane, 1,1,2,2-tetrachloro-	79–34–5	2,3,4	U209	100 (45.4)
Ethanethioamide	62–55–5	4	U218	10 (4.54)
Ethane, 1,1,1-trichloro-	71–55–6	2,3,4	U226	1000 (454)
Ethane, 1,1,2-trichloro-	79–00–5	2,3,4	U227	100 (45.4)
Ethanimidothioic acid, 2-(dimethylamino)-N-hydroxy-2-oxo-, methyl ester.	30558431	4	U394	5000 (2270)
Ethanimidothioic acid, 2-(dimethylamino)-N-[[(methylamino)carbonyl]oxy]-2-oxo-, methyl ester.	23135220	4	P194	100 (45.4)
Ethanimidothioic acid, N-[[(methylamino) carbonyl]oxy]-, methyl ester.	16752–77–5	4	P066	100 (45.4)
Ethanimidothioic acid, N,N'- [thiobis[(methylimino) carbonyloxy]]bis-, dimethyl ester.	59669260	4	U410	100 (45.4)
Ethanol, 2-ethoxy-	110–80–5	4	U359	1000 (454)
Ethanol, 2,2′-(nitrosoimino)bis-	1116–54–7	4	U173	1 (0.454)
Ethanol, 2,2'-oxybis-, dicarbamate	5952261	4	U395	5000 (2270)
Ethanone, 1-phenyl-	98–86–2	3,4	U004	5000 (2270)
Ethene, chloro-	75–01–4	2,3,4	U043	1 (0.454)
Ethene, (2-chloroethoxy)-	110–75–8	2,4	U042	1000 (454)
Ethene, 1,1-dichloro-	75–35–4	1,2,3,4	U078	100 (45.4)
Ethene, 1,2-dichloro-(E)	156–60–5	2,4	U079	1000 (454)
Ethene, tetrachloro-	127–18–4	2,3,4	U210	100 (45.4)
Ethene, trichloro-	79–01–6	1,2,3,4	U228	100 (45.4)
Ethion	563–12–2	1		10 (4.54)
Ethyl acetate	141–78–6	4	U112	5000 (2270)
Ethyl acrylate	140–88–5	3,4	U113	1000 (454)
Ethylbenzene	100–41–4	1,2,3		1000 (454)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—Continued

[Note: All Comments/Notes Are Located at the End of This Table]

Hazardous substance	CASRN	Statutory code†	RCRA waste No.	Final RQ pounds (Kg)
Ethyl carbamate	51–79–6	3,4	U238	100 (45.4)
Ethyl chloride	75–00–3	2,3		100 (45.4)
Ethyl cyanide	107–12–0	4	P101	10 (4.54)
Ethylenebisdithiocarbamic acid, salts & esters	111–54–6	4	U114	5000 (2270)
Ethylenediamine	107–15–3	1		5000 (2270)
Ethylenediamine-tetraacetic acid (EDTA)	60–00–4	1		5000 (2270)
Ethylene dibromide	106–93–4	1,3,4	U067	1 (0.454)
Ethylene dichloride	107–06–2	1,2,3,4	U077	100 (45.4)
Ethylene glycol	107–21–1	3		5000 (2270)
Ethylene glycol monoethyl ether	110–80–5	4	U359	1000 (454)
Ethylene oxide	75–21–8	3,4	U115	10 (4.54)
Ethylenethiourea	96–45–7	3,4	U116	10 (4.54)
Ethylenimine	151–56–4	3,4	P054	1 (0.454)
Ethyl ether	60–29–7	4	U117	100 (45.4)
Ethylidene dichloride	75–34–3	2,3,4	U076	1000 (454)
Ethyl methacrylate	97–63–2	4	U118	1000 (454)
Ethyl methanesulfonate	62–50–0	4	U119	1 (0.454)
Famphur	52–85–7	4	P097	1000 (454)
Ferric ammonium citrate	1185–57–5	1		1000 (454)
Ferric ammonium oxalate	2944–67–4 55488–87–4	1		1000 (454)
Ferric chloride	7705–08–0	1		1000 (454)
Ferric fluoride	7783–50–8	1		100 (45.4)
Ferric nitrate	10421–48–4	1		1000 (454)
Ferric sulfate	10028–22–5	1		1000 (454)
Ferrous ammonium sulfate	10045–89–3	1		1000 (454)
Ferrous chloride	7758–94–3	1		100 (45.4)
Ferrous sulfate	7720–78–7 7782– 63–0	1		1000 (454)
Fine mineral fibers [c]	N.A.	3		**
Fluoranthene	206–44–0	2,4	U120	100 (45.4)
Fluorene	86–73–7	2		5000 (2270)
Fluorine	7782–41–4	4	P056	10 (4.54)
Fluoroacetamide	640–19–7	4	P057	100 (45.4)
Fluoroacetic acid, sodium salt	62–74–8	4	P058	10 (4.54)
Formaldehyde	50–00–0	1,3,4	U122	100 (45.4)
Formetanate hydrochloride	23422539	4	P198	100 (45.4)
Formic acid	64–18–6	1,4	U123	5000 (2270)
Formparanate	17702577	4	P197	100 (45.4)
Fulminic acid, mercury(2+)salt	628–86–4	4	P065	10 (4.54)
Fumaric acid	110–17–8	1		5000 (2270)
Furan	110–00–9	4	U124	100 (45.4)
2-Furancarboxaldehyde	98–01–1	1,4	U125	5000 (2270)
2,5-Furandione	108–31–6	1,3,4	U147	5000 (2270)
Furan, tetrahydro-	109–99–9	4	U213	1000 (454)
Furfural	98–01–1	1,4	U125	5000 (2270)
Furfuran	110–00–9	4	U124	100 (45.4)
Glucopyranose, 2-deoxy-2–(3-methyl-3-nitrosoureido)-,D-	18883–66–4	4	U206	1 (0.454)
D-Glucose, 2-deoxy-2-[[(methylnitrosoamino)-carbonyl]amino]-.	18883–66–4	4	U206	1 (0.454)
Glycidylaldehyde	765–34–4	4	U126	10 (4.54)
Glycol ethers [d]	N.A.	3		**
Guanidine, N-methyl-N′-nitro-N-nitroso-	70–25–7	4	U163	10 (4.54)
Guthion	86–50–0	1		1 (0.454)
HALOETHERS	N.A.	2		**
HALOMETHANES	N.A.	2		**
Heptachlor	76–44–8	1,2,3,4	P059	1 (0.454)
HEPTACHLOR AND METABOLITES	N.A.	2		**
Heptachlor epoxide	1024–57–3	2		1 (0.454)
Hexachlorobenzene	118–74–1	2,3,4	U127	10 (4.54)
Hexachlorobutadiene	87–68–3	2,3,4	U128	1 (0.454)
HEXACHLOROCYCLOHEXANE (all isomers)	608–73–1	2		**
Hexachlorocyclopentadiene	77–47–4	1,2,3,4	U130	10 (4.54)
Hexachloroethane	67–72–1	2,3,4	U131	100 (45.4)
Hexachlorophene	70–30–4	4	U132	100 (45.4)
Hexachloropropene	1888–71–7	4	U243	1000 (454)
Hexaethyl tetraphosphate	757–58–4	4	P062	100 (45.4)
Hexamethylene-1,6–diisocyanate	822–06–0	3		100 (45.4)
Hexamethylphosphoramide	680–31–9	3		1 (0.454)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—Continued

[Note: All Comments/Notes Are Located at the End of This Table]

Hazardous substance	CASRN	Statutory code†	RCRA waste No.	Final RQ pounds (Kg)
Hexane	110–54–3	3		5000 (2270)
Hexone	108–10–1	3,4	U161	5000 (2270)
Hydrazine	302–01–2	3,4	U133	1 (0.454)
Hydrazinecarbothioamide	79–19–6	4	P116	100 (45.4)
Hydrazine, 1,2-diethyl-	1615–80–1	4	U086	10 (4.54)
Hydrazine, 1,1-dimethyl-	57–14–7	3,4	U098	10 (4.54)
Hydrazine, 1,2-dimethyl-	540–73–8	4	U099	1 (0.454)
Hydrazine, 1,2-diphenyl-	122–66–7	2,3,4	U109	10 (4.54)
Hydrazine, methyl-	60–34–4	3,4	P068	10 (4.54)
Hydrochloric acid	7647–01–0	1,3		5000 (2270)
Hydrocyanic acid	74–90–8	1,4	P063	10 (4.54)
Hydrofluoric acid	7664–39–3	1,3,4	U134	100 (45.4)
Hydrogen chloride	7647–01–0	1,3		5000 (2270)
Hydrogen cyanide	74–90–8	1,4	P063	10 (4.54)
Hydrogen fluoride	7664–39–3	1,3,4	U134	100 (45.4)
Hydrogen phosphide	7803–51–2	3,4	P096	100 (45.4)
Hydrogen sulfide H2S	7783–06–4	1,4	U135	100 (45.4)
Hydroperoxide, 1-methyl-1-phenylethyl-	80–15–9	4	U096	10 (4.54)
Hydroquinone	123–31–9	3		100 (45.4)
2-Imidazolidinethione	96–45–7	3,4	U116	10 (4.54)
Indeno(1,2,3-cd)pyrene	193–39–5	2,4	U137	100 (45.4)
Iodomethane	74–88–4	3,4	U138	100 (45.4)
1,3-Isobenzofurandione	85–44–9	3,4	U190	5000 (2270)
Isobutyl alcohol	78–83–1	4	U140	5000 (2270)
Isodrin	465–73–6	4	P060	1 (0.454)
Isolan	119380	4	P192	100 (45.4)
Isophorone	78–59–1	2,3		5000 (2270)
Isoprene	78–79–5	1		100 (45.4)
Isopropanolamine dodecylbenzenesulfonate	42504–46–1	1		1000 (454)
3-Isopropylphenyl N-methylcarbamate	64006	4	P202	10 (4.54)
Isosafrole	120–58–1	4	U141	100 (45.4)
3(2H)-Isoxazolone, 5–(aminomethyl)-	2763–96–4	4	P007	1000 (454)
Kepone	143–50–0	1,4	U142	1 (0.454)
Lasiocarpine	303–34–4	4	U143	10 (4.54)
Lead††	7439–92–1	2		10 (4.54)
Lead acetate	301–04–2	1,4	U144	10 (4.54)
LEAD AND COMPOUNDS	N.A.	2,3		**
Lead arsenate	7784–40–9	1		1 (0.454)
	7645–25–2			
	10102–48–4			
Lead, bis(acetato-O)tetrahydroxytri-	1335–32–6	4	U146	10 (4.54)
Lead chloride	7758–95–4	1		10 (4.54)
Lead compounds	N.A.	2,3		**
Lead fluoborate	13814–96–5	1		10 (4.54)
Lead fluoride	7783–46–2	1		10 (4.54)
Lead iodide	10101–63–0	1		10 (4.54)
Lead nitrate	10099–74–8	1		10 (4.54)
Lead phosphate	7446–27–7	4	U145	10 (4.54)
Lead stearate	1072–35–1	1		10 (4.54)
	7428–48–0			
	52652–59–2			
	56189–09–4			
Lead subacetate	1335–32–6	4	U146	10 (4.54)
Lead sulfate	7446–14–2	1		10 (4.54)
	15739–80–7			
Lead sulfide	1314–87–0	1		10 (4.54)
Lead thiocyanate	592–87–0	1		10 (4.54)
Lindane	58–89–9	1,2,3,4	U129	1 (0.454)
Lindane (all isomers)	58–89–9	1,2,3,4	U129	1 (0.454)
Lithium chromate	14307–35–8	1		10 (4.54)
Malathion	121–75–5	1		100 (45.4)
Maleic acid	110–16–7	1		5000 (2270)
Maleic anhydride	108–31–6	1,3,4	U147	5000 (2270)
Maleic hydrazide	123–33–1	4	U148	5000 (2270)
Malononitrile	109–77–3	4	U149	1000 (454)
Manganese, bis (dimethylcarbamodithioato-S,S')-	15339363	4	P196	10 (4.54)
Manganese Compounds	N.A.	3		**
Manganese dimethyldithiocarbamate	15339363	4	P196	10 (4.54)
MDI	101–68–8	3		5000 (2270)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—Continued

[Note: All Comments/Notes Are Located at the End of This Table]

Hazardous substance	CASRN	Statutory code†	RCRA waste No.	Final RQ pounds (Kg)
MEK	78–93–3	3,4	U159	5000 (2270)
Melphalan	148–82–3	4	U150	1 (0.454)
Mercaptodimethur	2032–65–7	1,4	P199	10 (4.54)
Mercuric cyanide	592–04–1	1		1(0.454)
Mercuric nitrate	10045–94–0	1		10 (4.54)
Mercuric sulfate	7783–35–9	1		10 (4.54)
Mercuric thiocyanate	592–85–8	1		10 (4.54)
Mercurous nitrate	10415–75–5	1	10 (4.54)	7782–86–7
Mercury	7439–97–6	2,3,4	U151	1 (0.454)
MERCURY AND COMPOUNDS	N.A.	2,3		**
Mercury, (acetato-O)phenyl-	62–38–4	4	P092	100 (45.4)
Mercury Compounds	N.A.	2,3		**
Mercury fulminate	628–86–4	4	P065	10 (4.54)
Methacrylonitrile	126–98–7	4	U152	1000 (454)
Methanamine, N-methyl-	124–40–3	1,4	U092	1000 (454)
Methanamine, N-methyl-N-nitroso-	62–75–9	2,3,4	P082	10 (4.54)
Methane, bromo-	74–83–9	2,3,4	U029	1000 (454)
Methane, chloro-	74–87–3	2,3,4	U045	100 (45.4)
Methane, chloromethoxy-	107–30–2	3,4	U046	10 (4.54)
Methane, dibromo-	74–95–3	4	U068	1000 (454)
Methane, dichloro-	75–09–2	2,3,4	U080	1000 (454)
Methane, dichlorodifluoro-	75–71–8	4	U075	5000 (2270)
Methane, iodo-	74–88–4	3,4	U138	100 (45.4)
Methane, isocyanato-	624–83–9	3,4	P064	10 (4.54)
Methane, oxybis(chloro-	542–88–1	2,3,4	P016	10 (4.54)
Methanesulfenyl chloride, trichloro-	594–42–3	4	P118	100 (45.4)
Methanesulfonic acid, ethyl ester	62–50–0	4	U119	1 (0.454)
Methane, tetrachloro-	56–23–5	1,2,3,4	U211	10 (4.54)
Methane, tetranitro-	509–14–8	4	P112	10 (4.54)
Methanethiol	74–93–1	1,4	U153	100 (45.4)
Methane, tribromo-	75–25–2	2,3,4	U225	100 (45.4)
Methane, trichloro-	67–66–3	1,2,3,4	U044	10 (4.54)
Methane, trichlorofluoro-	75–69–4	4	U121	5000 (2270)
Methanimidamide, N,N-dimethyl-N'-[3-[[(methylamino)-carbonyl]oxy]phenyl]-, monohydrochloride.	23422539	4	P198	100 (45.4)
Methanimidamide, N,N-dimethyl-N'-[2-methyl-4-[[(methylamino) carbonyl]oxy]phenyl]-.	17702577	4	P197	100 (45.4)
6,9-Methano-2,4,3-benzodioxathiepin, 6,7,8,9,10,10-hexachloro-1,5,5a,6,9,9a-hexahydro-, 3-oxide.	115–29–7	1,2,4	P050	1 (0.454)
4,7-Methano-1H-indene, 1,4,5,6,7,8,8-heptachloro-3a,4,7,7a-tetrahydro-.	76–44–8	1,2,3,4	P059	1 (0.454)
4,7-Methano-1H-indene, 1,2,4,5,6,7,8,8-octachloro-2,3,3a,4,7,7a-hexahydro—.	57–74–9	1,2,3,4	U036	1 (0.454)
Methanol	67–56–1	3,4	U154	5000 (2270)
Methapyrilene	91–80–5	4	U155	5000 (2270)
1,3,4-Metheno-2H-cyclobuta[cd]pentalen-2-one, 1,1a,3,3a,4,5,5,5a,5b,6-decachlorooctahydro-.	143–50–0	1,4	U142	1 (0.454)
Methiocarb	2032–65–7	1,4	P199	10 (4.54)
Methomyl	16752–77–5	4	P066	100 (45.4)
Methoxychlor	72–43–5	1,3,4	U247	1 (0.454)
Methyl alcohol	67–56–1	3,4	U154	5000 (2270)
2-Methyl aziridine	75–55–8	3,4	P067	1 (0.454)
Methyl bromide	74–83–9	2,3,4	U029	1000 (454)
1-Methylbutadiene	504–60–9	4	U186	100 (45.4)
Methyl chloride	74–87–3	2,3,4	U045	100 (45.4)
Methyl chlorocarbonate	79–22–1	4	U156	1000 (454)
Methyl chloroform	71–55–6	2,3,4	U226	1000 (454)
3-Methylcholanthrene	56–49–5	4	U157	10 (4.54)
4,4′-Methylenebis(2-chloroaniline)	101–14–4	3,4	U158	10 (4.54)
Methylene bromide	74–95–3	4	U068	1000 (454)
Methylene chloride	75–09–2	2,3,4	U080	1000 (454)
4,4′-Methylenedianiline	101–77–9	3		10 (4.54)
Methylene diphenyl diisocyanate	101–68–8	3		5000 (2270)
Methyl ethyl ketone	78–93–3	3,4	U159	5000 (2270)
Methyl ethyl ketone peroxide	1338–23–4	4	U160	10 (4.54)
Methyl hydrazine	60–34–4	3,4	P068	10 (4.54)
Methyl iodide	74–88–4	3,4	U138	100 (45.4)
Methyl isobutyl ketone	108–10–1	3,4	U161	5000 (2270)
Methyl isocyanate	624–83–9	3,4	P064	10 (4.54)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—Continued

[Note: All Comments/Notes Are Located at the End of This Table]

Hazardous substance	CASRN	Statutory code†	RCRA waste No.	Final RQ pounds (Kg)
2-Methyllactonitrile	75–86–5	1,4	P069	10 (4.54)
Methyl mercaptan	74–93–1	1,4	U153	100 (45.4)
Methyl methacrylate	80–62–6	1,3,4	U162	1000 (454)
Methyl parathion	298–00–0	1,4	P071	100 (45.4)
4-Methyl-2-pentanone	108–10–1	3,4	U161	5000 (2270)
Methyl tert-butyl ether	1634–04–4	3		1000 (454)
Methylthiouracil	56–04–2	4	U164	10 (4.54)
Metolcarb	1129415	4	P190	1000 (454)
Mevinphos	7786–34–7	1		10 (4.54)
Mexacarbate	315–18–4	1,4	P128	1000 (454)
Mitomycin C	50–07–7	4	U010	10 (4.54)
MNNG	70–25–7	4	U163	10 (4.54)
Monoethylamine	75–04–7	1		100 (45.4)
Monomethylamine	74–89–5	1		100 (45.4)
Naled	300–76–5	1		10 (4.54)
5,12-Naphthacenedione, 8-acetyl-10-[(3-amino-2,3,6-trideoxy-alpha-L-lyxo-hexopyranosyl)oxy]-7,8,9,10-tetrahydro-6,8,11-trihydroxy-1-methoxy-, (8S-cis)-.	20830–81–3	4	U059	10 (4.54)
1-Naphthalenamine	134–32–7	4	U167	100 (45.4)
2-Naphthalenamine	91–59–8	4	U168	10 (4.54)
Naphthalenamine, N,N′-bis(2-chloroethyl)-	494–03–1	4	U026	100 (45.4)
Naphthalene	91–20–3	1,2,3,4	U165	100 (45.4)
Naphthalene, 2-chloro-	91–58–7	2,4	U047	5000 (2270)
1,4-Naphthalenedione	130–15–4	4	U166	5000 (2270)
2,7-Naphthalenedisulfonic acid, 3,3′-[(3,3′-dimethyl-(1,1′-biphenyl)-4,4′-diyl)-bis(azo)]bis(5-amino-4-hydroxy)-tetrasodium salt.	72–57–1	4	U236	10 (4.54)
1-Naphthalenol, methylcarbamate	63–25–2	1,3,4	U279	100 (45.4)
Naphthenic acid	1338–24–5	1		100 (45.4)
1,4-Naphthoquinone	130–15–4	4	U166	5000 (2270)
alpha-Naphthylamine	134–32–7	4	U167	100 (45.4)
beta-Naphthylamine	91–59–8	4	U168	10 (4.54)
alpha-Naphthylthiourea	86–88–4	4	P072	100 (45.4)
Nickel††	7440–02–0	2		100 (45.4)
Nickel ammonium sulfate	15699–18–0	1		100 (45.4)
NICKEL AND COMPOUNDS	N.A.	2,3		**
Nickel carbonyl Ni(CO)4, (T-4)-	13463–39–3	4	P073	10 (4.54)
Nickel chloride	7718–54–9 37211–05–5	1		100 (45.4)
Nickel compounds	N.A.	2,3		**
Nickel cyanide Ni(CN)2	557–19–7	4	P074	10 (4.54)
Nickel hydroxide	12054–48–7	1		10 (4.54)
Nickel nitrate	14216–75–2	1		100 (45.4)
Nickel sulfate	7786–81–4	1		100 (45.4)
Nicotine, & salts	54–11–5	4	P075	100 (45.4)
Nitric acid	7697–37–2	1		1000 (454)
Nitric acid, thallium (1+) salt	10102–45–1	4	U217	100 (45.4)
Nitric oxide	10102–43–9	4	P076	10 (4.54)
p-Nitroaniline	100–01–6	4	P077	5000 (2270)
Nitrobenzene	98–95–3	1,2,3,4	U169	1000 (454)
4-Nitrobiphenyl	92–93–3	3		10 (4.54)
Nitrogen dioxide	10102–44–0 10544–72–6	1,4	P078	10 (4.54)
Nitrogen oxide NO	10102–43–9	4	P076	10 (4.54)
Nitrogen oxide NO2	10102–44–0 10544–72–6	1,4	P078	10 (4.54)
Nitroglycerine	55–63–0	4	P081	10 (4.54)
Nitrophenol (mixed)	25154–55–6	1		100 (45.4)
m-Nitrophenol	554–84–7	.....		.....
o-Nitrophenol	88–75–5	1,2		100 (45.4)
p-Nitrophenol	100–02–7	1,2,3,4	U170	100 (45.4)
2-Nitrophenol	88–75–5	1,2		100 (45.4)
4-Nitrophenol	100–02–7	1,2,3,4	U170	100 (45.4)
NITROPHENOLS	N.A.	2		**
2-Nitropropane	79–46–9	3,4	U171	10 (4.54)
NITROSAMINES	N.A.	2		**
N-Nitrosodi-n-butylamine	924–16–3	4	U172	10 (4.54)
N-Nitrosodiethanolamine	1116–54–7	4	U173	1 (0.454)
N-Nitrosodiethylamine	55–18–5	4	U174	1 (0.454)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—Continued

[Note: All Comments/Notes Are Located at the End of This Table]

Hazardous substance	CASRN	Statutory code†	RCRA waste No.	Final RQ pounds (Kg)
N-Nitrosodimethylamine	62–75–9	2,3,4	P082	10 (4.54)
N-Nitrosodiphenylamine	86–30–6	2		100 (45.4)
N-Nitroso-N-ethylurea	759–73–9	4	U176	1 (0.454)
N-Nitroso-N-methylurea	684–93–5	3,4	U177	1 (0.454)
N-Nitroso-N-methylurethane	615–53–2	4	U178	1 (0.454)
N-Nitrosomethylvinylamine	4549–40–0	4	P084	10 (4.54)
N-Nitrosomorpholine	59–89–2	3		1 (0.454)
N-Nitrosopiperidine	100–75–4	4	U179	10 (4.54)
N-Nitrosopyrrolidine	930–55–2	4	U180	1 (0.454)
Nitrotoluene	1321–12–6	1		1000 (454)
m-Nitrotoluene	99–08–1			
o-Nitrotoluene	88–72–2			
p-Nitrotoluene	99–99–0			
5-Nitro-o-toluidine	99–55–8	4	U181	100 (45.4)
Octamethylpyrophosphoramide	152–16–9	4	P085	100 (45.4)
Osmium oxide OsO4, (T–4)–	20816–12–0	4	P087	1000 (454)
Osmium tetroxide	20816–12–0	4	P087	1000 (454)
7-Oxabicyclo[2.2.1]heptane-2,3-dicarboxylic acid	145–73–3	4	P088	1000 (454)
Oxamyl	23135220	4	P194	100 (45.4)
1,2-Oxathiolane, 2,2-dioxide	1120–71–4	3,4	U193	10 (4.54)
2H-1,3,2-Oxazaphosphorin-2–amine, N,N- bis(2-chloroethyl)tetrahydro-, 2-oxide.	50–18–0	4	U058	10 (4.54)
Oxirane	75–21–8	3,4	U115	10 (4.54)
Oxiranecarboxyaldehyde	765–34–4	4	U126	10 (4.54)
Oxirane, (chloromethyl)-	106–89–8	1,3,4	U041	100 (45.4)
Paraformaldehyde	30525–89–4	1		1000 (454)
Paraldehyde	123–63–7	4	U182	1000 (454)
Parathion	56–38–2	1,3,4	P089	10 (4.54)
PCBs	1336–36–3	1,2,3		1 (0.454)
PCNB	82–68–8	3,4	U185	100 (45.4)
Pentachlorobenzene	608–93–5	4	U183	10 (4.54)
Pentachloroethane	76–01–7	4	U184	10 (4.54)
Pentachloronitrobenzene	82–68–8	3,4	U185	100 (45.4)
Pentachlorophenol	87–86–5	1,2,3,4	See F027	10 (4.54)
1,3-Pentadiene	504–60–9	4	U186	100 (45.4)
Perchloroethylene	127–18–4	2,3,4	U210	100 (45.4)
Phenacetin	62–44–2	4	U187	100 (45.4)
Phenanthrene	85–01–8	2		5000 (2270)
Phenol	108–95–2	1,2,3,4	U188	1000 (454)
Phenol, 2-chloro-	95–57–8	2,4	U048	100 (45.4)
Phenol, 4-chloro-3-methyl-	59–50–7	2,4	U039	5000 (2270)
Phenol, 2-cyclohexyl-4,6-dinitro-	131–89–5	4	P034	100 (45.4)
Phenol, 2,4-dichloro-	120–83–2	2,4	U081	100 (45.4)
Phenol, 2,6-dichloro-	87–65–0	4	U082	100 (45.4)
Phenol, 4,4′-(1,2-diethyl-1,2-ethenediyl)bis-, (E)	56–53–1	4	U089	1 (0.454)
Phenol, 2,4-dimethyl-	105–67–9	2,4	U101	100 (45.4)
Phenol, 4-(dimethylamino)-3,5-dimethyl-, 4 methylcarbamate (ester).	315–18–4	1,4	P128	1000 (454)
Phenol, (3,5-dimethyl-4-(methylthio)-, methylcarbamate	2032–65–7	1,4	P199	10 (4.54)
Phenol, 2,4-dinitro-	51–28–5	1,2,3,4	P048	10 (4.54)
Phenol, methyl-	1319–77–3	1,3,4	U052	100 (45.4)
Phenol, 2-methyl-4,6-dinitro-, & salts	534–52–1	2,3,4	P047	10 (4.54)
Phenol, 2,2′-methylenebis[3,4,6- trichloro-	70–30–4	4	U132	100 (45.4)
Phenol, 2-(1-methylethoxy)-, methylcarbamate	114–26–1	3,4	U411	100 (45.4)
Phenol, 3-(1-methylethyl)-, methyl carbamate	64006	4	P202	10 (4.54)
Phenol, 3-methyl-5-(1-methylethyl)-, methyl carbamate	2631370	4	P201	1000 (454)
Phenol, 2-(1-methylpropyl)-4,6-dinitro-	88–85–7	4	P020	1000 (454)
Phenol, 4-nitro-	100–02–7	1,2,3,4	U170	100 (45.4)
Phenol, pentachloro-	87–86–5	1,2,3,4	See F027	10 (4.54)
Phenol, 2,3,4,6-tetrachloro-	58–90–2	4	See F027	10 (4.54)
Phenol, 2,4,5-trichloro-	95–95–4	1,3,4	See F027	10 (4.54)
Phenol, 2,4,6-trichloro-	88–06–2	1,2,3,4	See F027	10 (4.54)
Phenol, 2,4,6-trinitro-, ammonium salt	131–74–8	4	P009	10 (4.54)
L-Phenylalanine, 4-[bis(2-chloroethyl)amino]-	148–82–3	4	U150	1 (0.454)
p-Phenylenediamine	106–50–3	3		5000 (2270)
Phenylmercury acetate	62–38–4	4	P092	100 (45.4)
Phenylthiourea	103–85–5	4	P093	100 (45.4)
Phorate	298–02–2	4	P094	10 (4.54)
Phosgene	75–44–5	1,3,4	P095	10 (4.54)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—Continued

[Note: All Comments/Notes Are Located at the End of This Table]

Hazardous substance	CASRN	Statutory code†	RCRA waste No.	Final RQ pounds (Kg)
Phosphine	7803–51–2	3,4	P096	100 (45.4)
Phosphoric acid	7664–38–2	1		5000 (2270)
Phosphoric acid, diethyl 4-nitrophenyl ester	311–45–5	4	P041	100 (45.4)
Phosphoric acid, lead(2+) salt (2:3)	7446–27–7	4	U145	10 (4.54)
Phosphorodithioic acid, O,O-diethyl S-[2-(ethylthio)ethyl] ester.	298–04–4	1,4	P039	1 (0.454)
Phosphorodithioic acid, O,O-diethyl S-[(ethylthio)methyl] ester.	298–02–2	4	P094	10 (4.54)
Phosphorodithioic acid, O,O-diethyl S-methyl ester	3288-58–2	4	U087	5000 (2270)
Phosphorodithioic acid, O,O-dimethyl S-[2(methylamino)-2-oxoethyl] ester.	60–51–5	4	P044	10 (4.54)
Phosphorofluoridic acid, bis(1-methylethyl) ester	55–91–4	4	P043	100 (45.4)
Phosphorothioic acid, O,O-diethyl O-(4-nitrophenyl) ester	56–38–2	1,3,4	P089	10 (4.54)
Phosphorothioic acid, O,O-diethyl O-pyrazinyl ester	297–97–2	4	P040	100 (45.4)
Phosphorothioic acid, O-[4-[(dimethylamino) sulfonyl]phenyl] O,O-dimethyl ester.	52–85–7	4	P097	1000 (454)
Phosphorothioic acid, O,O-dimethyl O-(4-nitrophenyl) ester.	298–00–0	1,4	P071	100 (45.4)
Phosphorus	7723–14–0	1,3		1 (0.454)
Phosphorus oxychloride	10025–87–3	1		1000 (454)
Phosphorus pentasulfide	1314–80–3	1,4	U189	100 (45.4)
Phosphorus sulfide	1314–80–3	1,4	U189	100 (45.4)
Phosphorus trichloride	7719–12–2	1		1000 (454)
Physostigmine	57476	4	P204	100 (45.4)
Physostigmine salicylate	57647	4	P188	100 (45.4)
PHTHALATE ESTERS	N.A.	2		**
Phthalic anhydride	85–44–9	3,4	U190	5000 (2270)
2-Picoline	109–06–8	4	U191	5000 (2270)
Piperidine, 1-nitroso-	100–75–4	4	U179	10 (4.54)
Plumbane, tetraethyl-	78–00–2	1,4	P110	10 (4.54)
POLYCHLORINATED BIPHENYLS	1336–36–3	1,2,3		1 (0.454)
Polycyclic Organic Matter[e]	N.A.	3		**
POLYNUCLEAR AROMATIC HYDROCARBONS	N.A.	2		**
Potassium arsenate	7784–41–0	1		1 (0.454)
Potassium arsenite	10124–50–2	1		1 (0.454)
Potassium bichromate	7778–50–9	1		10 (4.54)
Potassium chromate	7789–00–6	1		10 (4.54)
Potassium cyanide K(CN)	151–50–8	1,4	P098	10 (4.54)
Potassium hydroxide	1310–58–3	1		1000 (454)
Potassium permanganate	7722–64–7	1		100 (45.4)
Potassium silver cyanide	506–61–6	4	P099	1 (0.454)
Promecarb	2631370	4	P201	1000 (454)
Pronamide	23950–58–5	4	U192	5000 (2270)
Propanal, 2-methyl-2-(methyl- sulfonyl)-, O-[(methylamino)carbonyl] oxime.	1646884	4	P203	100 (45.4)
Propanal, 2-methyl-2-(methylthio)-, O-[(methylamino)carbonyl]oxime.	116–06–3	4	P070	1 (0.454)
1-Propanamine	107–10–8	4	U194	5000 (2270)
1-Propanamine, N-propyl-	142–84–7	4	U110	5000 (2270)
1-Propanamine, N-nitroso-N-propyl-	621–64–7	2,4	U111	10 (4.54)
Propane, 1,2-dibromo-3-chloro-	96–12–8	3,4	U066	1 (0.454)
Propane, 1,2-dichloro-	78–87–5	1,2,3,4	U083	1000 (454)
Propanedinitrile	109–77–3	4	U149	1000 (454)
Propanenitrile	107–12–0	4	P101	10 (4.54)
Propanenitrile, 3-chloro-	542–76–7	4	P027	1000 (454)
Propanenitrile, 2-hydroxy-2-methyl-	75–86–5	1,4	P069	10 (4.54)
Propane, 2-nitro-	79–46–9	3,4	U171	10 (4.54)
Propane, 2,2′-oxybis[2-chloro-	108–60–1	2,4	U027	1000 (454)
1,3-Propane sultone	1120–71–4	3,4	U193	10 (4.54)
1,2,3-Propanetriol, trinitrate	55–63–0	4	P081	10 (4.54)
Propanoic acid, 2-(2,4,5-trichlorophenoxy)-	93–72–1	1,4	See F027	100 (45.4)
1-Propanol, 2,3-dibromo-, phosphate (3:1)	126–72–7	4	U235	10 (4.54)
1-Propanol, 2-methyl-	78–83–1	4	U140	5000 (2270)
2-Propanone	67–64–1	4	U002	5000 (2270)
2-Propanone, 1-bromo-	598–31–2	4	P017	1000 (454)
Propargite	2312–35–8	1		10 (4.54)
Propargyl alcohol	107–19–7	4	P102	1000 (454)
2-Propenal	107–02–8	1,2,3,4	P003	1 (0.454)
2-Propenamide	79–06–1	3,4	U007	5000 (2270)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—Continued

[Note: All Comments/Notes Are Located at the End of This Table]

Hazardous substance	CASRN	Statutory code†	RCRA waste No.	Final RQ pounds (Kg)
1-Propene, 1,3-dichloro-	542–75–6	1,2,3,4	U084	100 (45.4)
1-Propene, 1,1,2,3,3,3-hexachloro-	1888–71–7	4	U243	1000 (454)
2-Propenenitrile	107–13–1	1,2,3,4	U009	100 (45.4)
2-Propenenitrile, 2-methyl-	126–98–7	4	U152	1000 (454)
2-Propenoic acid	79–10–7	3,4	U008	5000 (2270)
2-Propenoic acid, ethyl ester	140–88–5	3,4	U113	1000 (454)
2-Propenoic acid, 2-methyl-, ethyl ester	97–63–2	4	U118	1000 (454)
2-Propenoic acid, 2-methyl-, methyl ester	80–62–6	1,3,4	U162	1000 (454)
2-Propen-1-ol	107–18–6	1,4	P005	100 (45.4)
Propham	122429	4	U373	1000 (454)
beta-Propiolactone	57–57–8	3		10 (4.54)
Propionaldehyde	123–38–6	3	1000 (454)	
Propionic acid	79–09–4	1		5000 (2270)
Propionic anhydride	123–62–6	1		5000 (2270)
Propoxur (Baygon)	114–26–1	3,4	U411	100 (45.4)
n-Propylamine	107–10–8	4	U194	5000 (2270)
Propylene dichloride	78–87–5	1,2,3,4	U083	1000 (454)
Propylene oxide	75–56–9	1,3		100 (45.4)
1,2-Propylenimine	75–55–8	3,4	P067	1 (0.454)
2-Propyn-1-ol	107–19–7	4	P102	1000 (454)
Prosulfocarb	52888809	4	U387	5000 (2270)
Pyrene	129–00–0	2		5000 (2270)
Pyrethrins	121–29–9 121–21–1 8003–34–7	1		1 (0.454)
3,6-Pyridazinedione, 1,2-dihydro-	123–33–1	4	U148	5000 (2270)
4-Pyridinamine	504–24–5	4	P008	1000 (454)
Pyridine	110–86–1	4	U196	1000 (454)
Pyridine, 2-methyl-	109–06–8	4	U191	5000 (2270)
Pyridine, 3-(1-methyl-2-pyrrolidinyl)-, (S)-, & salts	54–11–5	4	P075	100 (45.4)
2,4-(1H,3H)-Pyrimidinedione, 5-[bis(2- chloroethyl)amino]-	66–75–1	4	U237	10 (4.54)
4(1H)-Pyrimidinone, 2,3-dihydro-6-methyl-2-thioxo-	56–04–2	4	U164	10 (4.54)
Pyrrolidine, 1-nitroso-	930–55–2	4	U180	1 (0.454)
Pyrrolo[2,3-b]indol-5-ol, 1,2,3,3a,8,8a- hexahydro-1,3a,8-trimethyl-, methylcarbamate (ester), (3aS-cis)-.	57476	4	P204	100 (45.4)
Quinoline	91–22–5	1,3		5000 (2270)
Quinone	106–51–4	3,4	U197	10 (4.54)
Quintobenzene	82–68–8	3,4	U185	100 (45.4)
Radionuclides (including radon)	N.A.	3		§
Reserpine	50–55–5	4	U200	5000 (2270)
Resorcinol	108–46–3	1,4	U201	5000 (2270)
Safrole	94–59–7	4	U203	100 (45.4)
Selenious acid	7783–00–8	4	U204	10 (4.54)
Selenious acid, dithallium (1+) salt	12039–52–0	4	P114	1000 (454)
Selenium††	7782–49–2	2		100 (45.4)
SELENIUM AND COMPOUNDS	N.A.	2,3		**
Selenium Compounds	N.A.	2,3		**
Selenium dioxide	7446–08–4	1,4	U204	10 (4.54)
Selenium oxide	7446–08–4	1,4	U204	10 (4.54)
Selenium sulfide SeS2	7488–56–4	4	U205	10 (4.54)
Selenourea	630–10–4	4	P103	1000 (454)
L-Serine, diazoacetate (ester)	115–02–6	4	U015	1 (0.454)
Silver ††	7440–22–4	2		1000 (454)
SILVER AND COMPOUNDS	N.A.	2		**
Silver cyanide Ag(CN)	506–64–9	4	P104	1 (0.454)
Silver nitrate	7761–88–8	1		1 (0.454)
Silvex (2,4,5-TP)	93–72–1	1,4	See F027	100 (45.4)
Sodium	7440–23–5	1		10 (4.54)
Sodium arsenate	7631–89–2	1		1 (0.454)
Sodium arsenite	7784–46–5	1		1 (0.454)
Sodium azide	26628–22–8	4	P105	1000 (454)
Sodium bichromate	10588–01–9	1		10 (4.54)
Sodium bifluoride	1333–83–1	1		100 (45.4)
Sodium bisulfite	7631–90–5	1		5000 (2270)
Sodium chromate	7775–11–3	1		10 (4.54)
Sodium cyanide Na(CN)	143–33–9	1,4	P106	10 (4.54)
Sodium dodecylbenzenesulfonate	25155–30–0	1		1000 (454)
Sodium fluoride	7681–49–4	1		1000 (454)
Sodium hydrosulfide	16721–80–5	1		5000 (2270)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—Continued

[Note: All Comments/Notes Are Located at the End of This Table]

Hazardous substance	CASRN	Statutory code†	RCRA waste No.	Final RQ pounds (Kg)
Sodium hydroxide	1310–73–2	1		1000 (454)
Sodium hypochlorite	7681–52–9	1		100 (45.4)
	10022–70–5			
Sodium methylate	124–41–4	1		1000 (454)
Sodium nitrite	7632–00–0	1		100 (45.4)
Sodium phosphate, dibasic	7558–79–4	1		5000 (2270)
	10039–32–4			
	10140–65–5			
Sodium phosphate, tribasic	7601–54–9	1		5000 (2270)
	7758–29–4			
	7785–84–4			
	10101–89–0			
	10124–56–8			
	10361–89–4			
Sodium selenite	7782–82–3	1		100 (45.4)
	10102–18–8			
Streptozotocin	18883–66–4	4	U206	1 (0.454)
Strontium chromate	7789–06–2	1		10 (4.54)
Strychnidin-10-one, & salts	57–24–9	1,4	P108	10 (4.54)
Strychnidin-10-one, 2,3-dimethoxy-	357–57–3	4	P018	100 (45.4)
Strychnine, & salts	57–24–9	1,4	P108	10 (4.54)
Styrene	100–42–5	1,3		1000 (454)
Styrene oxide	96–09–3	3		100 (45.4)
Sulfuric acid	7664–93–9	1		1000 (454)
	8014–95–7			
Sulfuric acid, dimethyl ester	77–78–1	3,4	U103	100 (45.4)
Sulfuric acid, dithallium (1+) salt	7446–18–6	1,4	P115	100 (45.4)
	10031–59–1			
Sulfur monochloride	12771–08–3	1		1000 (454)
Sulfur phosphide	1314–80–3	1,4	U189	100 (45.4)
2,4,5-T	93–76–5	1,4	See F027	1000 (454)
2,4,5-T acid	93–76–5	1,4	See F027	1000 (454)
2,4,5-T amines	2008–46–0	1		5000 (2270)
	1319–72–8			
	3813–14–7			
	6369–96–6			
	6369–97–7			
2,4,5-T esters	93–79–8	1		1000 (454)
	1928–47–8			
	2545–59–7			
	25168–15–4			
	61792–07–2			
2,4,5-T salts	13560–99–1	1		1000 (454)
TCDD	1746–01–6	2,3		1 (0.454)
TDE	72–54–8	1,2,4	U060	1 (0.454)
1,2,4,5-Tetrachlorobenzene	95–94–3	4	U207	5000 (2270)
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746–01–6	2,3		1 (0.454)
1,1,1,2-Tetrachloroethane	630–20–6	4	U208	100 (45.4)
1,1,2,2-Tetrachloroethane	79–34–5	2,3,4	U209	100 (45.4)
Tetrachloroethylene	127–18–4	2,3,4	U210	100 (45.4)
2,3,4,6-Tetrachlorophenol	58–90–2	4	See F027	10 (4.54)
Tetraethyl pyrophosphate	107–49–3	1,4	P111	10 (4.54)
Tetraethyl lead	78–00–2	1,4	P110	10 (4.54)
Tetraethyldithiopyrophosphate	3689–24–5	4	P109	100 (45.4)
Tetrahydrofuran	109–99–9	4	U213	1000 (454)
Tetranitromethane	509–14–8	4	P112	10 (4.54)
Tetraphosphoric acid, hexaethyl ester	757–58–4	4	P062	100 (45.4)
Thallic oxide	1314–32–5	4	P113	100 (45.4)
Thallium ††	7440–28–0	2		1000 (454)
THALLIUM AND COMPOUNDS	N.A.	2		**
Thallium (I) acetate	563–68–8	4	U214	100 (45.4)
Thallium (I) carbonate	6533–73–9	4	U215	100 (45.4)
Thallium chloride TlCl	7791–12–0	4	U216	100 (45.4)
Thallium (I) nitrate	10102–45–1	4	U217	100 (45.4)
Thallium oxide Tl2O3	1314–32–5	4	P113	100 (45.4)
Thallium (I) selenite	12039–52–0	4	P114	1000 (454)
Thallium (I) sulfate	7446–18–6	1,4	P115	100 (45.4)
	10031–59–1			
Thioacetamide	62–55–5	4	U218	10 (4.54)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—Continued

[Note: All Comments/Notes Are Located at the End of This Table]

Hazardous substance	CASRN	Statutory code†	RCRA waste No.	Final RQ pounds (Kg)
Thiodicarb	59669260	4	U410	100 (45.4)
Thiodiphosphoric acid, tetraethyl ester	3689–24–5	4	P109	100 (45.4)
Thiofanox	39196–18–4	4	P045	100 (45.4)
Thioimidodicarbonic diamide [(H2N)C(S)] 2NH	541–53–7	4	P049	100 (45.4)
Thiomethanol	74–93–1	1,4	U153	100 (45.4)
Thioperoxydicarbonic diamide [(H2N)C(S)] 2S2, tetramethyl-.	137–26–8	4	U244	10 (4.54)
Thiophanate-methyl	23564058	4	U409	10 (4.54)
Thiophenol	108–98–5	4	P014	100 (45.4)
Thiosemicarbazide	79–19–6	4	P116	100 (45.4)
Thiourea	62–56–6	4	U219	10 (4.54)
Thiourea, (2-chlorophenyl)-	5344–82–1	4	P026	100 (45.4)
Thiourea, 1-naphthalenyl-	86–88–4	4	P072	100 (45.4)
Thiourea, phenyl-	103–85–5	4	P093	100 (45.4)
Thiram	137–26–8	4	U244	10 (4.54)
Tirpate	26419738	4	P185	100 (45.4)
Titanium tetrachloride	7550–45–0	3		1,2,41000 (454)
Toluene	108–88–3	1,2,3,4	U220	1000 (454)
Toluenediamine	95–80–7 496–72–0 823–40–5 25376–45–8	3,4	U221	10 (4.54)
2,4-Toluene diamine	95–80–7 496–72–0 823–40–5 25376–45–8	3,4	U221	10 (4.54)
Toluene diisocyanate	91–08–7 584–84–9 26471–62–5	3,4	U223	100 (45.4)
2,4-Toluene diisocyanate	91–08–7 584–84–9 26471–62–5	3,4	U223	100 (45.4)
o-Toluidine	95–53–4	3,4	U328	100 (45.4)
p-Toluidine	106–49–0	4	U353	100 (45.4)
o-Toluidine hydrochloride	636–21–5	4	U222	100 (45.4)
Toxaphene	8001–35–2	1,2,3,4	P123	1 (0.454)
2,4,5-TP acid	93–72–1	1,4	See F027	100 (45.4)
2,4,5-TP esters	32534–95–5	1		100 (45.4)
Triallate	2303175	4	U389	100 (45.4)
1H-1,2,4-Triazol-3-amine	61–82–5	4	U011	10 (4.54)
Trichlorfon	52–68–6	1		100 (45.4)
1,2,4-Trichlorobenzene	120–82–1	2,3		100 (45.4)
1,1,1-Trichloroethane	71–55–6	2,3,4	U226	1000 (454)
1,1,2-Trichloroethane	79–00–5	2,3,4	U227	100 (45.4)
Trichloroethylene	79–01–6	1,2,3,4	U228	100 (45.4)
Trichloromethanesulfenyl chloride	594–42–3	4	P118	100 (45.4)
Trichloromonofluoromethane	75–69–4	4	U121	5000 (2270)
Trichlorophenol	25167–82–2	1		10 (4.54)
2,3,4-Trichlorophenol	15950–66–0			
2,3,5-Trichlorophenol	933–78–8			
2,3,6-Trichlorophenol	933–75–5			
3,4,5-Trichlorophenol	609–19–8			
2,4,5-Trichlorophenol	95–95–4	1,3,4	See F027	10 (4.54)
2,4,6-Trichlorophenol	88–06–2	1,2,3,4	See F027	10 (4.54)
Triethanolamine dodecylbenzenesulfonate	27323–41–7	1		1000 (454)
Triethylamine	121–44–8	1,3,4	U404	5000 (2270)
Trifluralin	1582–09–8	3		10 (4.54)
Trimethylamine	75–50–3	1		100 (45.4)
2,2,4-Trimethylpentane	540–84–1	3		1000 (454)
1,3,5-Trinitrobenzene	99–35–4	4	U234	10 (4.54)
1,3,5-Trioxane, 2,4,6-trimethyl-	123–63–7	4	U182	1000 (454)
Tris(2,3-dibromopropyl) phosphate	126–72–7	4	U235	10 (4.54)
Trypan blue	72–57–1	4	U236	10 (4.54)
Unlisted Hazardous Wastes Characteristic of Corrosivity	N.A.	4	D002	100 (45.4)
Unlisted Hazardous Wastes Characteristic of Ignitability	N.A.	4	D001	100 (45.4)
Unlisted Hazardous Wastes Characteristic of Reactivity	N.A.	4	D003	100 (45.4)
Unlisted Hazardous Wastes Characteristic of Toxicity:				
Arsenic (D004)	N.A.	4	D004	1 (0.454)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—Continued

[Note: All Comments/Notes Are Located at the End of This Table]

Hazardous substance	CASRN	Statutory code†	RCRA waste No.	Final RQ pounds (Kg)
Barium (D005)	N.A.	4	D005	1000 (454)
Benzene (D018)	N.A.	1,2,3,4	D018	10 (4.54)
Cadmium (D006)	N.A.	4	D006	10 (4.54)
Carbon tetrachloride (D019)	N.A.	1,2,4	D019	10 (4.54)
Chlordane (D020)	N.A.	1,2,4	D020	1 (0.454)
Chlorobenzene (D021)	N.A.	1,2,4	D021	100 (45.4)
Chloroform (D022)	N.A.	1,2,4	D022	10 (4.54)
Chromium (D007)	N.A.	4	D007	10 (4.54)
o-Cresol (D023)	N.A.	4	D023	100 (45.4)
m-Cresol (D024)	N.A.	4	D024	100 (45.4)
p-Cresol (D025)	N.A.	4	D025	100 (45.4)
Cresol (D026)	N.A.	4	D026	100 (45.4)
2,4-D (D016)	N.A.	1,4	D016	100 (45.4)
1,4-Dichlorobenzene (D027)	N.A.	1,2,4	D027	100 (45.4)
1,2-Dichloroethane (D028)	N.A.	1,2,4	D028	100 (45.4)
1,1-Dichloroethylene (D029)	N.A.	1,2,4	D029	100 (45.4)
2,4-Dinitrotoluene (D030)	N.A.	1,2,4	D030	10 (4.54)
Endrin (D012)	N.A.	1,4	D012	1 (0.454)
Heptachlor (and epoxide) (D031)	N.A.	1,2,4	D031	1 (0.454)
Hexachlorobenzene (D032)	N.A.	2,4	D032	10 (4.54)
Hexachlorobutadiene (D033)	N.A.	2,4	D033	1 (0.454)
Hexachloroethane (D034)	N.A.	2,4	D034	100 (45.4)
Lead (D008)	N.A.	4	D008	10 (4.54)
Lindane (D013)	N.A.	1,4	D013	1 (0.454)
Mercury (D009)	N.A.	4	D009	1 (0.454)
Methoxychlor (D014)	N.A.	1,4	D014	1 (0.454)
Methyl ethyl ketone (D035)	N.A.	4	D035	5000 (2270)
Nitrobenzene (D036)	N.A.	1,2,4	D036	1000 (454)
Pentachlorophenol (D037)	N.A.	1,2,4	D037	10 (4.54)
Pyridine (D038)	N.A.	4	D038	1000 (454)
Selenium (D010)	N.A.	4	D010	10 (4.54)
Silver (D011)	N.A.	4	D011	1 (0.454)
Tetrachloroethylene (D039)	N.A.	2,4	D039	100 (45.4)
Toxaphene (D015)	N.A.	1,4	D015	1 (0.454)
Trichloroethylene (D040)	N.A.	1,2,4	D040	100 (45.4)
2,4,5-Trichlorophenol (D041)	N.A.	1,4	D041	10 (4.54)
2,4,6-Trichlorophenol (D042)	N.A.	1,2,4	D042	10 (4.54)
2,4,5-TP (D017)	N.A.	1,4	D017	100 (45.4)
Vinyl chloride (D043)	N.A.	2,3,4	D043	1 (0.454)
Uracil mustard	66–75–1	4	U237	10 (4.54)
Uranyl acetate	541–09–3	1		100 (45.4)
Uranyl nitrate	10102–06–4	1		100 (45.4)
	36478–76–9			
Urea, N-ethyl-N-nitroso-	759–73–9	4	U176	1 (0.454)
Urea, N-methyl-N-nitroso-	684–93–5	3,4	U177	1 (0.454)
Urethane	51–79–6	3,4	U238	100 (45.4)
Vanadic acid, ammonium salt	7803–55–6	4	P119	1000 (454)
Vanadium oxide V2O5	1314–62–1	1,4	P120	1000 (454)
Vanadium pentoxide	1314–62–1	1,4	P120	1000 (454)
Vanadyl sulfate	27774–13–6	1		1000 (454)
Vinyl acetate	108–05–4	1,3		5000 (2270)
Vinyl acetate monomer	108–05–4	1,3		5000 (2270)
Vinylamine, N-methyl-N-nitroso-	4549–40–0	4	P084	10 (4.54)
Vinyl bromide	593–60–2	3		100 (45.4)
Vinyl chloride	75–01–4	2,3,4	U043	1 (0.454)
Vinylidene chloride	75–35–4	1,2,3,4	U078	100 (45.4)
Warfarin, & salts	81–81–2	4	P001, U248	100 (45.4)
Xylene	1330–20–7	1,3,4	U239	100 (45.4)
m-Xylene	108–38–3	3		1000 (454)
o-Xylene	95–47–6	3		1000 (454)
p-Xylene	106–42–3	3		100 (45.4)
Xylene (mixed)	1330–20–7	1,3,4	U239	100 (45.4)
Xylenes (isomers and mixture)	1330–20–7	1,3,4	U239	100 (45.4)
Xylenol	1300–71–6	1		1000 (454)
Yohimban-16-carboxylic acid,11,17-dimethoxy-18-[(3,4,5-trimethoxybenzoyl)oxy]-, methyl ester (3beta,16beta,17alpha, 18beta,20alpha).	50–55–54	4	U200	5000 (2270)
Zinc††	7440–66–6	2		1000 (454)
ZINC AND COMPOUNDS	N.A.	2		**

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—Continued

[Note: All Comments/Notes Are Located at the End of This Table]

Hazardous substance	CASRN	Statutory code†	RCRA waste No.	Final RQ pounds (Kg)
Zinc acetate	557–34–6	1		1000 (454)
Zinc ammonium chloride	52628–25–8 14639–97–5 14639–98–6	1		1000 (454)
Zinc, bis(dimethylcarbamodithioato-S,S')-	137304	4	P205	10 (4.54)
Zinc borate	1332–07–6	1		1000 (454)
Zinc bromide	7699–45–8	1		1000 (454)
Zinc carbonate	3486–35–9	1		1000 (454)
Zinc chloride	7646–85–7	1		1000 (454)
Zinc cyanide Zn(CN)2	557–21–1	1,4	P121	10 (4.54)
Zinc fluoride	7783–49–5	1		1000 (454)
Zinc formate	557–41–5	1		1000 (454)
Zinc hydrosulfite	7779–86–4	1		1000 (454)
Zinc nitrate	7779–88–6	1		1000 (454)
Zinc phenolsulfonate	127–82–2	1		5000 (2270)
Zinc phosphide Zn3P2	1314–84–7	1,4	P122, U249	100 (45.4)
Zinc silicofluoride	16871–71–9	1		5000 (2270)
Zinc sulfate	7733–02–0	1		1000 (454)
Ziram	137304	4	P205	10 (4.54)
Zirconium nitrate	13746–89–9	1		5000 (2270)
Zirconium potassium fluoride	16923–95–8	1		1000 (454)
Zirconium sulfate	14644–61–2	1		5000 (2270)
Zirconium tetrachloride	10026–11–6	1		5000 (2270)
F001		4	F001	10 (4.54)
The following spent halogenated solvents used in degreasing; all spent solvent mixtures/blends used in degreasing containing, before use, a total of ten percent or more (by volume) of one or more of the halogenated solvents listed below or those solvents listed in F002, F004, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.				
(a) Tetrachloroethylene	127–18–4	2,3,4	U210	100 (45.4)
(b) Trichloroethylene	79–01–6	1,2,3,4	U228	100 (45.4)
(c) Methylene chloride	75–09–2	2,3,4	U080	1000 (454)
(d) 1,1,1-Trichloroethane	71–55–6	2,3,4	U226	1000 (454)
(e) Carbon tetrachloride	56–23–5	1,2,3,4	U211	10 (4.54)
(f) Chlorinated fluorocarbons	N.A.			5000 (2270)
F002		4	F002	10 (4.54)
The following spent halogenated solvents; all spent solvent mixtures/blends containing, before use, a total of ten percent or more (by volume) of one or more of the halogenated solvents listed below or those solvents listed in F001, F004, or F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.				
(a) Tetrachloroethylene	127–18–4	2,3,4	U210	100 (45.4)
(b) Methylene chloride	75–09–2	2,3,4	U080	1000 (454)
(c) Trichloroethylene	79–01–6	1,2,3,4	U228	100 (45.4)
(d) 1,1,1-Trichloroethane	71–55–6	2,3,4	U226	1000 (454)
(e) Chlorobenzene	108–90–7	1,2,3,4	U037	100 (45.4)
(f) 1,1,2-Trichloro-1,2,2-trifluoroethane	76–13–1			5000 (2270)
(g) o-Dichlorobenzene	95–50–1	1,2,4	U070	100 (45.4)
(h) Trichlorofluoromethane	75–69–4	4	U121	5000 (2270)
(i) 1,1,2-Trichloroethane	79–00–5	2,3,4	U227	100 (45.4)
F003		4	F003	100 (45.4)
The following spent non-halogenated solvents and the still bottoms from the recovery of these solvents.				
(a) Xylene	1330-20–7			1000 (454)
(b) Acetone	67–64–1			5000 (2270)
(c) Ethyl acetate	141–78–6			5000 (2270)
(d) Ethylbenzene	100–41–4			1000 (454)
(e) Ethyl ether	60–29–7			100 (45.4)
(f) Methyl isobutyl ketone	108–10–1			5000 (2270)
(g) n-Butyl alcohol	71–36–3			5000 (2270)
(h) Cyclohexanone	108–94–1			5000 (2270)
(i) Methanol	67–56–1			5000 (2270)
F004		4	F004	100 (45.4)
The following spent non-halogenated solvents and the still bottoms from the recovery of these solvents:				
(a) Cresols/Cresylic acid	1319–77–3	1,3,4	U052	100 (45.4)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—Continued

[Note: All Comments/Notes Are Located at the End of This Table]

Hazardous substance	CASRN	Statutory code†	RCRA waste No.	Final RQ pounds (Kg)
(b) Nitrobenzene	98–95–3	1,2,3,4	U169	1000 (454)
F005		4	F005	100 (45.4)
The following spent non-halogenated solvents and the still bottoms from the recovery of these solvents:				
(a) Toluene	108–88–3	1,2,3,4	U220	1000 (454)
(b) Methyl ethyl ketone	78–93–3	3,4	U159	5000 (2270)
(c) Carbon disulfide	75–15–0	1,3,4	P022	100 (45.4)
(d) Isobutanol	78–83–1	4	U140	5000 (2270)
(e) Pyridine	110–86–1	4	U196	1000 (454)
F006		4	F006	10 (4.54)
Wastewater treatment sludges from electroplating operations except from the following processes: (1) sulfuric acid anodizing of aluminum, (2) tin plating on carbon steel, (3) zinc plating (segregated basis) on carbon steel, (4) aluminum or zinc-aluminum plating on carbon steel, (5) cleaning/stripping associated with tin, zinc and aluminum plating on carbon steel, and (6) chemical etching and milling of aluminum.				
F007		4	F007	10 (4.54)
Spent cyanide plating bath solutions from electroplating operations.				
F008		4	F008	10 (4.54)
Plating bath residues from the bottom of plating baths from electroplating operations where cyanides are used in the process.				
F009		4	F009	10 (4.54)
Spent stripping and cleaning bath solutions from electroplating operations where cyanides are used in the process.				
F010		4	F010	10 (4.54)
Quenching bath residues from oil baths from metal heat treating operations where cyanides are used in the process.				
F011		4	F011	10 (4.54)
Spent cyanide solutions from salt bath pot cleaning from metal heat treating operations.				
F012		4	F012	10 (4.54)
Quenching wastewater treatment sludges from metal heat treating operations where cyanides are used in the process.				
F019		4	F019	10 (4.54)
Wastewater treatment sludges from the chemical conversion coating of aluminum except from zirconium phosphating in aluminum can washing when such phosphating is an exclusive conversion coating process. Wastewater treatment sludges from the manufacturing of motor vehicles using a zinc phosphating process will not be subject to this listing at the point of generation if the wastes are not placed outside on the land prior to shipment to a landfill for disposal and are either: disposed in a Subtitle D municipal or industrial landfill unit that is equipped with a single clay liner and is permitted, licensed or otherwise authorized by the state; or disposed in a landfill unit subject to, or otherwise meeting, the landfill requirements in § 258.40, § 264.301 or § 265.301. For the purposes of this listing, motor vehicle manufacturing is defined in § 261.31(b)(4)(i) and § 261.31(b)(4)(ii) describes the recordkeeping requirements for motor vehicle manufacturing facilities				
F020		4	F020	1 (0.454)
Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tri- or tetrachlorophenol or of intermediates used to produce their pesticide derivatives. (This listing does not include wastes from the production of hexachlorophene from highly purified 2,4,5-trichlorophenol.)				
F021		4	F021	1 (0.454)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—Continued

[Note: All Comments/Notes Are Located at the End of This Table]

Hazardous substance	CASRN	Statutory code†	RCRA waste No.	Final RQ pounds (Kg)
Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of pentachlorophenol or of intermediates used to produce its derivatives.				
F022	.....	4	F022	1 (0.454)
Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tetra-, penta-, or hexachlorobenzenes under alkaline conditions.				
F023	.....	4	F023	1 (0.454)
Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production of materials on equipment previously used for the production or manufacturing use (as a reactant, chemical intermediate, or a component in a formulating process) of tri- and tetrachlorophenols. (This listing does not include wastes from equipment used only for the production or use of hexachlorophene from highly purified 2,4,5-trichlorophenol.)				
F024	.....	4	F024	1 (0.454)
Process wastes, including but not limited to, distillation residues, heavy ends, tars, and reactor clean-out wastes, from the production of certain chlorinated aliphatic hydrocarbons by free radical catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one to and including five, with varying amounts and positions of chlorine substitution. (This listing does not include wastewaters, wastewater treatment sludges, spent catalysts, and wastes listed in 40 CFR 261.31 or 261.32.)				
F025	.....	4	F025	1 (0.454)
Condensed light ends, spent filters and filter aids, and spent desiccant wastes from the production of certain chlorinated aliphatic hydrocarbons, by free radical catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one to and including five, with varying amounts and positions of chlorine substitution.				
F026	.....	4	F026	1 (0.454)
Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production of materials on equipment previously used for the manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tetra-, penta-, or hexachlorobenzene under alkaline conditions.				
F027	.....	4	F027	1 (0.454)
Discarded unused formulations containing tri-, tetra-, or pentachlorophenol or discarded unused formulations containing compounds derived from these chlorophenols. (This listing does not include formulations containing hexachlorophene synthesized from prepurified 2,4,5- trichlorophenol as the sole component.)				
F028	.....	4	F028	1 (0.454)
Residues resulting from the incineration or thermal treatment of soil contaminated with EPA Hazardous Waste Nos. F020, F021, F022, F023, F026, and F027.				
F032	.....	4	F032	1 (0.454)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—Continued

[Note: All Comments/Notes Are Located at the End of This Table]

Hazardous substance	CASRN	Statutory code†	RCRA waste No.	Final RQ pounds (Kg)
Wastewaters (except those that have not come into contact with process contaminants), process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that currently use or have previously used chlorophenolic formulations (except potentially cross-contaminated wastes that have had the F032 waste code deleted in accordance with § 261.35 of this chapter or potentially cross-contaminated wastes that are otherwise currently regulated as hazardous wastes (*i.e.*, F034 or F035), and where the generator does not resume or initiate use of chlorophenolic formulations). This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote and/or pentachlorophenol.				
F034	.....	4	F034	1 (0.454)
Wastewaters (except those that have not come into contact with process contaminants), process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that use creosote formulations. This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote and/or pentachlorophenol.				
F035	.....	4	F035	1 (0.454)
Wastewaters (except those that have not come into contact with process contaminants), process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that use inorganic preservatives containing arsenic or chromium. This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote and/or pentachlorophenol.				
F037	.....	4	F037	1 (0.454)
Petroleum refinery primary oil/water/solids separation sludge-Any sludge generated from the gravitational separation of oil/water/solids during the storage or treatment of process wastewaters and oily cooling wastewaters from petroleum refineries. Such sludges include, but are not limited to those generated in oil/water/solids separators; tanks and impoundments; ditches and other conveyances; sumps; and stormwater units receiving dry weather flow. Sludges generated in stormwater units that do not receive dry weather flow, sludges generated from non-contact once-through cooling waters segregated for treatment from other process or oily cooling waters, sludges generated in aggressive biological treatment units as defined in § 261.31(b)(2) (including sludges generated in one or more additional units after wastewaters have been treated in aggressive biological treatment units) and K051 wastes are not included in this listing. This listing does include residuals generated from processing or recycling oil-bearing hazardous secondary materials excluded under § 261.4(a)(12)(i), if those residuals are to be disposed of.				
F038	.....	4	F038	1 (0.454)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—Continued

[Note: All Comments/Notes Are Located at the End of This Table]

Hazardous substance	CASRN	Statutory code†	RCRA waste No.	Final RQ pounds (Kg)
Petroleum refinery secondary (emulsified) oil/water/solids separation sludge-Any sludge and/or float generated from the physical and/or chemical separation of oil/water/solids in process wastewaters and oily cooling wastewaters from petroleum refineries. Such wastes include, but are not limited to, all sludges and floats generated in: induced air flotation (IAF) units, tanks and impoundments, and all sludges generated in DAF units. Sludges generated in stormwater units that do not receive dry weather flow, sludges generated from non-contact once-through cooling waters segregated for treatment from other process or oily cooling waters, sludges and floats generated in aggressive biological treatment units as defined in § 261.31(b)(2) (including sludges and floats generated in one or more additional units after wastewaters have been treated in aggressive biological treatment units) and F037, K048, and K051 wastes are not included in this listing.				
F039	.....	4	F039	1 (0.454)
Leachate (liquids that have percolated through land disposed wastes) resulting from the disposal of more than one restricted waste classified as hazardous under subpart D of 40 CFR part 261. (Leachate resulting from the disposal of one or more of the following EPA Hazardous Wastes and no other hazardous wastes retains its EPA Hazardous Waste Number(s): F020, F021, F022, F026, F027, and/or F028.)				
K001	.....	4	K001	1 (0.454)
Bottom sediment sludge from the treatment of wastewaters from wood preserving processes that use creosote and/or pentachlorophenol.				
K002	.....	4	K002	10 (4.54)
Wastewater treatment sludge from the production of chrome yellow and orange pigments.				
K003	.....	4	K003	10 (4.54)
Wastewater treatment sludge from the production of molybdate orange pigments.				
K004	.....	4	K004	10 (4.54)
Wastewater treatment sludge from the production of zinc yellow pigments.				
K005	.....	4	K005	10 (4.54)
Wastewater treatment sludge from the production of chrome green pigments.				
K006	.....	4	K006	10 (4.54)
Wastewater treatment sludge from the production of chrome oxide green pigments (anhydrous and hydrated).				
K007	.....	4	K007	10 (4.54)
Wastewater treatment sludge from the production of iron blue pigments.				
K008	.....	4	K008	10 (4.54)
Oven residue from the production of chrome oxide green pigments.				
K009	.....	4	K009	10 (4.54)
Distillation bottoms from the production of acetaldehyde from ethylene.				
K010	.....	4	K010	10 (4.54)
Distillation side cuts from the production of acetaldehyde from ethylene.				
K011	.....	4	K011	10 (4.54)
Bottom stream from the wastewater stripper in the production of acrylonitrile.				
K013	.....	4	K013	10 (4.54)
Bottom stream from the acetonitrile column in the production of acrylonitrile.				
K014	.....	4	K014	5000 (2270)
Bottoms from the acetonitrile purification column in the production of acrylonitrile.				
K015	.....	4	K015	10 (4.54)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—Continued

[Note: All Comments/Notes Are Located at the End of This Table]

Hazardous substance	CASRN	Statutory code†	RCRA waste No.	Final RQ pounds (Kg)
Still bottoms from the distillation of benzyl chloride.				
K016		4	K016	1 (0.454)
Heavy ends or distillation residues from the production of carbon tetrachloride.				
K017		4	K017	10 (4.54)
Heavy ends (still bottoms) from the purification column in the production of epichlorohydrin.				
K018		4	K018	1 (0.454)
Heavy ends from the fractionation column in ethyl chloride production.				
K019		4	K019	1 (0.454)
Heavy ends from the distillation of ethylene dichloride in ethylene dichloride production.				
K020		4	K020	1 (0.454)
Heavy ends from the distillation of vinyl chloride in vinyl chloride monomer production.				
K021		4	K021	10 (4.54)
Aqueous spent antimony catalyst waste from fluoromethanes production.				
K022		4	K022	1 (0.454)
Distillation bottom tars from the production of phenol/acetone from cumene.				
K023		4	K023	5000 (2270)
Distillation light ends from the production of phthalic anhydride from naphthalene.				
K024		4	K024	5000 (2270)
Distillation bottoms from the production of phthalic anhydride from naphthalene.				
K025		4	K025	10 (4.54)
Distillation bottoms from the production of nitrobenzene by the nitration of benzene.				
K026		4	K026	1000 (454)
Stripping still tails from the production of methyl ethyl pyridines.				
K027		4	K027	10 (4.54)
Centrifuge and distillation residues from toluene diisocyanate production.				
K028		4	K028	1 (0.454)
Spent catalyst from the hydrochlorinator reactor in the production of 1,1,1-trichloroethane.				
K029		4	K029	1 (0.454)
Waste from the product steam stripper in the production of 1,1,1- trichloroethane.				
K030		4	K030	1 (0.454)
Column bottoms or heavy ends from the combined production of trichloroethylene and perchloroethylene.				
K031		4	K031	1 (0.454)
By-product salts generated in the production of MSMA and cacodylic acid.				
K032		4	K032	10 (4.54)
Wastewater treatment sludge from the production of chlordane.				
K033		4	K033	10 (4.54)
Wastewater and scrub water from the chlorination of cyclopentadiene in the production of chlordane.				
K034		4	K034	10 (4.54)
Filter solids from the filtration of hexachlorocyclopentadiene in the production of chlordane.				
K035		4	K035	1 (0.454)
Wastewater treatment sludges generated in the production of creosote.				
K036		4	K036	1 (0.454)
Still bottoms from toluene reclamation distillation in the production of disulfoton.				
K037		4	K037	1 (0.454)
Wastewater treatment sludges from the production of disulfoton.				
K038		4	K038	10 (4.54)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—Continued

[Note: All Comments/Notes Are Located at the End of This Table]

Hazardous substance	CASRN	Statutory code†	RCRA waste No.	Final RQ pounds (Kg)
Wastewater from the washing and stripping of phorate production.				
K039		4	K039	10 (4.54)
Filter cake from the filtration of diethylphosphorodithioic acid in the production of phorate.				
K040		4	K040	10 (4.54)
Wastewater treatment sludge from the production of phorate.				
K041		4	K041	1 (0.454)
Wastewater treatment sludge from the production of toxaphene.				
K042		4	K042	10 (4.54)
Heavy ends or distillation residues from the distillation of tetrachlorobenzene in the production of 2,4,5-T.				
K043		4	K043	10 (4.54)
2,6-Dichlorophenol waste from the production of 2,4-D.				
K044		4	K044	10 (4.54)
Wastewater treatment sludges from the manufacturing and processing of explosives.				
K045		4	K045	10 (4.54)
Spent carbon from the treatment of wastewater containing explosives.				
K046		4	K046	10 (4.54)
Wastewater treatment sludges from the manufacturing, formulation and loading of lead-based initiating compounds.				
K047		4	K047	10 (4.54)
Pink/red water from TNT operations.				
K048		4	K048	10 (4.54)
Dissolved air flotation (DAF) float from the petroleum refining industry.				
K049		4	K049	10 (4.54)
Slop oil emulsion solids from the petroleum refining industry.				
K050		4	K050	10 (4.54)
Heat exchanger bundle cleaning sludge from the petroleum refining industry.				
K051		4	K051	10 (4.54)
API separator sludge from the petroleum refining industry.				
K052		4	K052	10 (4.54)
Tank bottoms (leaded) from the petroleum refining industry.				
K060		4	K060	1 (0.454)
Ammonia still lime sludge from coking operations.				
K061		4	K061	10 (4.54)
Emission control dust/sludge from the primary production of steel in electric furnaces.				
K062		4	K062	10 (4.54)
Spent pickle liquor generated by steel finishing operations of facilities within the iron and steel industry (SIC Codes 331 and 332).				
K064		4	K064	10 (4.54)
Acid plant blowdown slurry/sludge resulting from the thickening of blowdown slurry from primary copper production.				
K065		4	K065	10 (4.54)
Surface impoundment solids contained in and dredged from surface impoundments at primary lead smelting facilities.				
K066		4	K066	10 (4.54)
Sludge from treatment of process wastewater and/or acid plant blowdown from primary zinc production.				
K069		4	K069	10 (4.54)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—Continued

[Note: All Comments/Notes Are Located at the End of This Table]

Hazardous substance	CASRN	Statutory code†	RCRA waste No.	Final RQ pounds (Kg)
Emission control dust/sludge from secondary lead smelting. (Note: This listing is stayed administratively for sludge generated from secondary acid scrubber systems. The stay will remain in effect until further administrative action is taken. If EPA takes further action effecting the stay, EPA will publish a notice of the action in the FEDERAL REGISTER.)				
K071	.....	4	K071	1 (0.454)
Brine purification muds from the mercury cell process in chlorine production, where separately prepurified brine is not used.				
K073	.....	4	K073	10 (4.54)
Chlorinated hydrocarbon waste from the purification step of the diaphragm cellprocess using graphite anodes in chlorine production.				
K083	.....	4	K083	100 (45.4)
Distillation bottoms from aniline production.				
K084	.....	4	K084	1 (0.454)
Wastewater treatment sludges generated during the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds.				
K085	.....	4	K085	10 (4.54)
Distillation or fractionation column bottoms from the production of chlorobenzenes.				
K086	.....	4	K086	10 (4.54)
Solvent washes and sludges, caustic washes and sludges, or water washes and sludges from cleaning tubs and equipment used in the formulation of ink from pigments, driers, soaps, and stabilizers containing chromium and lead.				
K087	.....	4	K087	100 (45.4)
Decanter tank tar sludge from coking operations.				
K088	.....	4	K088	10 (4.54)
Spent potliners from primary aluminum reduction.				
K090	.....	4	K090	10 (4.54)
Emission control dust or sludge from ferrochromiumsilicon production.				
K091	.....	4	K091	10 (4.54)
Emission control dust or sludge from ferrochromium production.				
K093	.....	4	K093	5000 (2270)
Distillation light ends from the production of phthalic anhydride from ortho-xylene.				
K094	.....	4	K094	5000 (2270)
Distillation bottoms from the production of phthalic anhydride from ortho-xylene.				
K095	.....	4	K095	100 (45.4)
Distillation bottoms from the production of 1,1,1-trichloroethane.				
K096	.....	4	K096	100 (45.4)
Heavy ends from the heavy ends column from the production of 1,1,1-trichloroethane.				
K097	.....	4	K097	1 (0.454)
Vacuum stripper discharge from the chlordane chlorinator in the production of chlordane.				
K098	.....	4	K098	1 (0.454)
Untreated process wastewater from the production of toxaphene.				
K099	.....	4	K099	10 (4.54)
Untreated wastewater from the production of 2,4-D.				
K100	.....	4	K100	10 (4.54)
Waste leaching solution from acid leaching of emission control dust/sludge from secondary lead smelting.				
K101	.....	4	K101	1 (0.454)
Distillation tar residues from the distillation of aniline-based compounds in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds.				
K102	.....	4	K102	1 (0.454)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—Continued

[Note: All Comments/Notes Are Located at the End of This Table]

Hazardous substance	CASRN	Statutory code†	RCRA waste No.	Final RQ pounds (Kg)
Residue from the use of activated carbon for decolorization in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds.				
K103		4	K103	100 (45.4)
Process residues from aniline extraction from the production of aniline.				
K104		4	K104	10 (4.54)
Combined wastewater streams generated from nitrobenzene/aniline production.				
K105		4	K105	10 (4.54)
Separated aqueous stream from the reactor product washing step in the production of chlorobenzenes.				
K106		4	K106	1 (0.454)
Wastewater treatment sludge from the mercury cell process in chlorine production.				
K107		4	K107	10 (4.54)
Column bottoms from product separation from the production of 1,1- dimethylhydrazine (UDMH) from carboxylic acid hydrazines.				
K108		4	K108	10 (4.54)
Condensed column overheads from product separation and condensed reactor vent gases from the production of 1,1- dimethylhydrazine (UDMH) from carboxylic acid hydrazides.				
K109		4	K109	10 (4.54)
Spent filter cartridges from product purification from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides.				
K110		4	K110	10 (4.54)
Condensed column overheads from intermediate separation from the production of 1,1- dimethylhydrazine (UDMH) from carboxylic acid hydrazides.				
K111		4	K111	10 (4.54)
Product washwaters from the production of dinitrotoluene via nitration of toluene.				
K112		4	K112	10 (4.54)
Reaction by-product water from the drying column in the production of toluenediamine via hydrogenation of dinitrotoluene.				
K113		4	K113	10 (4.54)
Condensed liquid light ends from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene.				
K114		4	K114	10 (4.54)
Vicinals from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene.				
K115		4	K115	10 (4.54)
Heavy ends from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene.				
K116		4	K116	10 (4.54)
Organic condensate from the solvent recovery column in the production of toluene diisocyanate via phosgenation of toluenediamine.				
K117		4	K117	1 (0.454)
Wastewater from the reactor vent gas scrubber in the production of ethylene dibromide via bromination of ethene.				
K118		4	K118	1 (0.454)
Spent adsorbent solids from purification of ethylene dibromide in the production of ethylene dibromide via bromination of ethene.				
K123		4	K123	10 (4.54)
Process wastewater (including supernates, filtrates, and washwaters) from the production of ethylenebisdithiocarbamic acid and its salts.				
K124		4	K124	10 (4.54)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—Continued

[Note: All Comments/Notes Are Located at the End of This Table]

Hazardous substance	CASRN	Statutory code†	RCRA waste No.	Final RQ pounds (Kg)
Reactor vent scrubber water from the production of ethylenebisdithiocarbamic acid and its salts.				
K125	.....	4	K125	10 (4.54)
Filtration, evaporation, and centrifugation solids from the production of ethylenebisdithiocarbamic acid and its salts.				
K126	.....	4	K126	10 (4.54)
Baghouse dust and floor sweepings in milling and packaging operations from the production or formulation of ethylenebisdithiocarbamic acid and its salts.				
K131	.....	4	K131	100 (45.4)
Wastewater from the reactor and spent sulfuric acid from the acid dryer from the production of methyl bromide.				
K132	.....	4	K132	1000 (454)
Spent absorbent and wastewater separator solids from the production of methyl bromide.				
K136	.....	4	K136	1 (0.454)
Still bottoms from the purification of ethylene dibromide in the production of ethylene dibromide via bromination of ethene.				
K141	.....	4	K141	1 (0.454)
Process residues from the recovery of coal tar, including, but not limited to, collecting sump residues from the production of coke from coal or the recovery of coke by-products produced from coal. This listing does not include K087 (decanter tank tar sludges from coking operations).				
K142	.....	4	K142	1 (0.454)
Tar storage tank residues from the production of coke from coal or from the recovery of coke by-products produced from coal.				
K143	.....	4	K143	1 (0.454)
Process residues from the recovery of light oil, including, but not limited to, those generated in stills, decanters, and wash oil recovery units from the recovery of coke by- products produced from coal.				
K144	.....	4	K144	1 (0.454)
Wastewater sump residues from light oil refining, including, but not limited to, intercepting or contamination sump sludges from the recovery of coke by-products produced from coal.				
K145	.....	4	K145	1 (0.454)
Residues from naphthalene collection and recovery operations from the recovery of coke by-products produced from coal.				
K147	.....	4	K147	1 (0.454)
Tar storage tank residues from coal tar refining.				
K148	.....	4	K148	1 (0.454)
Residues from coal tar distillation, including, but not limited to, still bottoms.				
K149	.....	4	K149	10 (4.54)
Distillation bottoms from the production of alpha-(or methyl-) chlorinated toluenes, ring-chlorinated toluenes, benzoyl chlorides, and compounds with mixtures of these functional groups. [This waste does not include still bottoms from the distillation of benzyl chloride.]				
K150	.....	4	K150	10 (4.54)
Organic residuals, excluding spent carbon adsorbent, from the spent chlorine gas and hydrochloric acid recovery processes associated with the production of alpha- (or methyl-) chlorinated toluenes, ring-chlorinated toluenes, benzoyl chlorides, and compounds with mixtures of these functional groups.				
K151	.....	4	K151	10 (4.54)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—Continued

[Note: All Comments/Notes Are Located at the End of This Table]

Hazardous substance	CASRN	Statutory code†	RCRA waste No.	Final RQ pounds (Kg)
Wastewater treatment sludges, excluding neutralization and biological sludges, generated during the treatment of waste-waters from the production of alpha- (or methyl-) chlorinated toluenes, ring-chlorinated toluenes, benzoyl chlorides, and compounds with mixtures of these functional groups.				
K156		4	K156	10 (4.54)
Organic waste (including heavy ends, still bottoms, light ends, spent solvents, filtrates, and decantates) from the production of carbamates and carbamoyl oximes. (This listing does not apply to wastes generated from the manufacture of 3-iodo-2-propynyl n-butylcarbamate.)				
K157		4	K157	10 (4.54)
Wastewaters (including scrubber waters, condenser waters, washwaters, and separation waters) from the production of carbamates and carbamoyl oximes. (This listing does not apply to wastes generated from the manufacture of 3-iodo-2-propynyl n-butylcarbamate.)				
K158		4	K158	10 (4.54)
Bag house dusts and filter/separation solids from the production of carbamates and carbamoyl oximes. (This listing does not apply to wastes generated from the manufacture of 3-iodo-2-propynyl n-butylcarbamate.)				
K159		4	K159	10 (4.54)
Organics from the treatment of thiocarbamate wastes.				
K161		4	K161	1 (0.454)
Purification solids (including filtration, evaporation, and centrifugation solids), bag-house dust and floor sweepings from the production of dithiocarbamate acids and their salts. (This listing does not include K125 or K126).				
K169[f]		4	K169	10 (4.54)
Crude oil storage tank sediment from petroleum refining operations.				
K170[f]		4	K170	1 (0.454)
Clarified slurry oil tank sediment and/or in-line filter/separation solids from petroleum refining operations.				
K171[f]		4	K171	1 (0.454)
Spent hydrotreating catalyst from petroleum refining operations. (This listing does not include inert support media.)				
K172[f]		4	K172	1 (0.454)
Spent hydrorefining catalyst from petroleum refining operations. (This listing does not include inert support media.)				
K174[f]		4	K174	1 (0.454)
K175[f]		4	K175	1 (0.454)
K176.				
Baghouse filters from the production of antimony oxide, including filters from the production of intermediates (e.g., antimony metal or crude antimony oxide)		4	K176	1 (0.454)
K177.				
Slag from the production of antimony oxide that is speculatively accumulated or disposed, including slag from the production of intermediates (e.g., antimony metal or crude antimony oxide)		4	K177	5,000 (2270)
K178		4	K178	1000 (454)
Residues from manufacturing and manufacturing-site storage of ferric chloride from acids formed during the production of titanium dioxide using the chloride-ilmenite process.				
K181		4	K181	##

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—Continued

[Note: All Comments/Notes Are Located at the End of This Table]

Hazardous substance	CASRN	Statutory code†	RCRA waste No.	Final RQ pounds (Kg)
Nonwastewaters from the production of dyes and/or pigments (including nonwastewaters commingled at the point of generation with nonwastewaters from other processes) that, at the point of generation, contain mass loadings of any of the constituents identified in paragraph (c) of section 261.32 that are equal to or greater than the corresponding paragraph (c) levels, as determined on a calendar year basis				

† Indicates the statutory source defined by 1, 2, 3, and 4, as described in the note preceding Table 302.4.

† Indicates the statutory source defined by 1,2,3, and 4, as described in the note preceding Table 302.4.

†† No reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is larger than 100 micrometers (0.004 inches).

††† The RQ for asbestos is limited to friable forms only.

The Agency may adjust the statutory RQ for this hazardous substance in a future rulemaking; until then the statutory one-pound RQ applies.

§ The adjusted RQs for radionuclides may be found in Appendix B to this table.

** Indicates that no RQ is being assigned to the generic or broad class.

[a] Benzene was already a CERCLA hazardous substance prior to the CAA Amendments of 1990 and received an adjusted 10-pound RQ based on potential carcinogenicity in an August 14, 1989, final rule (54 FR 33418). The CAA Amendments specify that "benzene (including benzene from gasoline)" is a hazardous air pollutant and, thus, a CERCLA hazardous substance.

[b] The CAA Amendments of 1990 list DDE (3547–04–4) as a CAA hazardous air pollutant. The CAS number, 3547–04–4, is for the chemical, p,p'dichlorodiphenylethane. DDE or p,p′-dichlorodiphenyldichloroethylene, CAS number 72–55–9, is already listed in Table 302.4 with a final RQ of 1 pound. The substance identified by the CAS number 3547–04–4 has been evaluated and listed as DDE to be consistent with the CAA section 112 listing, as amended.

[c] Includes mineral fiber emissions from facilities manufacturing or processing glass, rock, or slag fibers (or other mineral derived fibers) of average diameter 1 micrometer or less.

[d] Includes mono- and di-ethers of ethylene glycol, diethylene glycol, and triethylene glycol R-(OCH2CH2)n-OR′ where:

n = 1, 2, or 3;
R = alkyl C7 or less; or
R = phenyl or alkyl substituted phenyl;
R' = H or alkyl C7 or less; or
OR′ consisting of carboxylic acid ester, sulfate, phosphate, nitrate, or sulfonate.

[e] Includes organic compounds with more than one benzene ring, and which have a boiling point greater than or equal to 100 °C.

[f] See 40 CFR 302.6(b)(1) for application of the mixture rule to this hazardous waste.

APPENDIX A TO § 302.4—SEQUENTIAL CAS REGISTRY NUMBER LIST OF CERCLA HAZARDOUS SUBSTANCES

CASRN	Hazardous substance
50000	Formaldehyde.
50077	Azirino[2′,3′:3,4]pyrrolo[1,2-a]indole-4,7-dione,6-amino-8-[[(aminocarbonyl)oxy]methyl]-1,1a,2,8,8a, 8b-hexahydro-8a-methoxy-5-methyl-, [1aS-(1aalpha, 8beta,8aalpha,8balpha)]-
	Mitomycin C.
50180	Cyclophosphamide.
	2H-1,3,2-Oxazaphosphorin-2-amine, N,N-bis(2-chloroethyl)tetrahydro-, 2-oxide.
50293	Benzene, 1,1′-(2,2,2- trichloroethylidene)bis[4-chloro-.
	DDT.
	4,4′-DDT.
50328	Benzo[a]pyrene.
	3,4-Benzopyrene.
50555	Reserpine.
	Yohimban-16-carboxylic acid,11,17-dimethoxy-18-[(3 ,4,5-trimethoxybenzoyl)oxy]-, methyl ester (3beta, 16beta,17alpha,18beta,20alpha)- .
51285	Phenol, 2,4-dinitro-.
	2,4-Dinitrophenol.
51434	Epinephrine.
	1,2-Benzenediol,4-[1-hydroxy-2-(methylamino) ethyl]-.
51796	Carbamic acid, ethyl ester.
	Ethyl carbamate.
	Urethane.

APPENDIX A TO § 302.4—SEQUENTIAL CAS REGISTRY NUMBER LIST OF CERCLA HAZARDOUS SUBSTANCES—Continued

CASRN	Hazardous substance
52686	Trichlorfon.
52857	Famphur.
	Phosphorothioic acid, O-[4-[(dimethylamino) sulfonyl]phenyl] O,O-dimethyl ester.
53703	Dibenz[a,h]anthracene.
	Dibenzo[a,h]anthracene.
	1,2:5,6-Dibenzanthracene.
53963	Acetamide, N-9H-fluoren-2-yl-.
	2-Acetylaminofluorene.
54115	Nicotine, & salts.
	Pyridine, 3-(1-methyl-2-pyrrolidinyl)-, (S)-, & salts.
55185	Ethanamine, N-ethyl-N-nitroso-.
	N-Nitrosodiethylamine.
55630	Nitroglycerine.
	1,2,3-Propanetriol, trinitrate.
55914	Diisopropylfluorophosphate (DFP).
	Phosphorofluororidic acid, bis(1-methylethyl) ester.
56042	Methylthiouracil.
	4(1H)-Pyrimidinone, 2,3-dihydro-6-methyl-2-thioxo-.
56235	Carbon tetrachloride.
	Methane, tetrachloro-.
56382	Parathion.
	Phosphorothioic acid, O,O-diethyl O-(4-nitrophenyl) ester.
56495	Benz[j]aceanthrylene, 1,2-dihydro-3-methyl-.
	3-Methylcholanthrene.

APPENDIX A TO § 302.4—SEQUENTIAL CAS REGISTRY NUMBER LIST OF CERCLA HAZARDOUS SUBSTANCES—Continued

CASRN	Hazardous substance
56531	Diethylstilbestrol.
	Phenol, 4,4′-(1,2-diethyl-1,2-ethenediyl)bis-, (E).
56553	Benz[a]anthracene.
	Benzo[a]anthracene.
	1,2-Benzanthracene.
56724	Coumaphos.
57147	Hydrazine, 1,1-dimethyl-.
	1,1-Dimethylhydrazine.
57249	Strychnidin-10-one, & salts.
	Strychnine, & salts.
57476	Physostigmine.
	Pyrrolo[2,3-b]indol-5-ol, 1,2,3,3a,8,8a-hexahydro-1,3a,8-trimethyl-, methylcarbamate (ester), (3aS-cis)-.
57578	beta-Propiolactone.
57647	Benzoic acid, 2-hydroxy-, compd. with (3aS-cis)-1,2,3,3a,8,8a-hexahydro-1,3a,8-trimethylpyrrolo[2,3-b]indol-5-yl methylcarbamate ester (1:1).
	Physostigmine salicylate.
57749	Chlordane.
	Chlordane, alpha & gamma isomers.
	CHLORDANE (TECHNICAL MIXTURE AND METABOLITES).
	4,7-Methano-1H-indene, 1,2,4,5,6,7,8,8-octachloro-2,3,3a,4,7,7a-hexahydro-.
57976	Benz[a]anthracene, 7,12-dimethyl-.
	7,12-Dimethylbenz[a]anthracene.
58899	γ-BHC.
	Cyclohexane, 1,2,3,4,5,6-hexachloro-(1α,2α,3β,4α,5α,6β)-.
	Lindane.
	Lindane (all isomers).
58902	Phenol, 2,3,4,6-tetrachloro-.
	2,3,4,6-Tetrachlorophenol.
59507	p-Chloro-m-cresol.
	Phenol, 4-chloro-3-methyl-.
59892	N-Nitrosomorpholine.
60004	Ethylenediamine-tetraacetic acid (EDTA).
60117	Benzenamine, N,N-dimethyl-4-(phenylazo)-.
	Dimethyl aminoazobenzene.
	p-Dimethylaminoazobenzene.
60297	Ethane, 1,1′-oxybis-.
	Ethyl ether.
60344	Hydrazine, methyl-.
	Methyl hydrazine.
60355	Acetamide.
60515	Dimethoate.
	Phosphorodithioic acid, O,O-dimethyl S-[2(methylamino)-2-oxoethyl] ester.
60571	Dieldrin.
	2,7:3,6-Dimethanonaphth[2,3-b]oxirene, 3,4,5,6,9,9-hexachloro-1a,2, 2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2aalpha,3beta,6beta, 6aalpha,7beta, 7aalpha)-.
61825	Amitrole.
	1H-1,2,4-Triazol-3-amine.
62384	Mercury, (acetato-O)phenyl-.
	Phenylmercury acetate.
62442	Acetamide, N-(4-ethoxyphenyl)-.
	Phenacetin.
62500	Ethyl methanesulfonate.
	Methanesulfonic acid, ethyl ester.
62533	Aniline.
	Benzenamine.
62555	Ethanethioamide.
	Thioacetamide.
62566	Thiourea.
62737	Dichlorvos.

APPENDIX A TO § 302.4—SEQUENTIAL CAS REGISTRY NUMBER LIST OF CERCLA HAZARDOUS SUBSTANCES—Continued

CASRN	Hazardous substance
62748	Acetic acid, fluoro-, sodium salt.
	Fluoroacetic acid, sodium salt.
62759	Methanamine, N-methyl-N-nitroso-.
	N-Nitrosodimethylamine.
63252	Carbaryl.
	1-Naphthalenol, methylcarbamate.
64006	m-Cumenyl methylcarbamate.
	3-Isopropylphenyl N-methylcarbamate.
	Phenol, 3-(1-methylethyl)-, methyl carbamate.
64006	Phenol, 3-(1-methylethyl)-, methyl carbamate (m-Cumenyl methylcarbamate).
64186	Formic acid.
64197	Acetic acid.
64675	Diethyl sulfate.
65850	Benzoic acid.
66751	Uracil mustard.
	2,4-(1H,3H)-Pyrimidinedione, 5-[bis(2-chloroethyl) amino]-.
67561	Methanol.
	Methyl alcohol.
67641	Acetone.
	2-Propanone.
67663	Chloroform.
	Methane, trichloro-.
67721	Ethane, hexachloro-.
	Hexachloroethane.
68122	Dimethylformamide.
70257	Guanidine, N-methyl-N′-nitro-N-nitroso-.
	MNNG.
70304	Hexachlorophene.
	Phenol, 2,2′-methylenebis[3,4,6-tri- chloro-.
71363	n-Butyl alcohol.
	1-Butanol.
71432	Benzene.
71556	Ethane, 1,1,1-trichloro-.
	Methyl chloroform.
	1,1,1-Trichloroethane.
72208	Endrin.
	Endrin, & metabolites.
	2,7:3.6-Dimethanonaphth[2,3-b]oxirene,3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2abeta,3alpha, 6alpha,6abeta,7beta,7aalpha)-, & metabolites.
72435	Benzene, 1,1′-(2,2,2-trichloroethylidene)bis[4-methoxy-.
	Methoxychlor.
72548	Benzene, 1,1′-(2,2-dichloroethylidene)bis[4-chloro-.
	DDD.
	TDE.
	4,4′-DDD.
72559	DDE
	4,4′-DDE.
72571	Trypan blue.
	2,7-Naphthalenedisulfonic acid, 3,3′-[(3,3′-dimethyl-(l,1′-biphenyl)-4,4′-diyl)-bis(azo)]bis(5-amino-4-hydroxy)-tetrasodium salt.
74839	Bromomethane.
	Methane, bromo-.
	Methyl bromide.
74873	Chloromethane.
	Methane, chloro-.
	Methyl chloride.
74884	Iodomethane
	Methane, iodo-.
	Methyl iodide.
74895	Monomethylamine.
74908	Hydrocyanic acid.
	Hydrogen cyanide.

APPENDIX A TO § 302.4—SEQUENTIAL CAS REGISTRY NUMBER LIST OF CERCLA HAZARDOUS SUBSTANCES—Continued

CASRN	Hazardous substance
74931	Methanethiol.
	Methyl mercaptan.
	Thiomethanol.
74953	Methane, dibromo-.
	Methylene bromide.
75003	Chloroethane.
	Ethyl chloride.
75014	Ethene, chloro-.
	Vinyl chloride.
75047	Monoethylamine.
75058	Acetonitrile.
75070	Acetaldehyde.
	Ethanal.
75092	Dichloromethane.
	Methane, dichloro-.
	Methylene chloride.
75150	Carbon disulfide.
75207	Calcium carbide.
75218	Ethylene oxide.
	Oxirane.
75252	Bromoform.
	Methane, tribromo-.
75274	Dichlorobromomethane.
75343	Ethane, 1,1-dichloro-.
	Ethylidene dichloride.
	1,1-Dichloroethane.
75354	Ethene, 1,1-dichloro-.
	Vinylidene chloride.
	1,1-Dichloroethylene.
75365	Acetyl chloride.
75445	Carbonic dichloride.
	Phosgene.
75503	Trimethylamine.
75558	Aziridine, 2-methyl-.
	2-Methyl aziridine.
	1,2-Propylenimine.
75569	Propylene oxide.
75605	Arsinic acid, dimethyl-.
	Cacodylic acid.
75649	tert-Butylamine.
75694	Methane, trichlorofluoro-.
	Trichloromonofluoromethane.
75718	Dichlorodifluoromethane.
	Methane, dichlorodifluoro-.
75865	Acetone cyanohydrin.
	Propanenitrile, 2-hydroxy-2-methyl-.
	2-Methyllactonitrile.
75876	Acetaldehyde, trichloro-.
	Chloral.
75990	2,2-Dichloropropionic acid.
76017	Ethane, pentachloro-.
	Pentachloroethane.
76448	Heptachlor.
	4,7-Methano-1H-indene, 1,4,5,6,7,8,8-heptachloro-3a,4,7,7a-tetrahydro-.
77474	Hexachlorocyclopentadiene.
	1,3-Cyclopentadiene, 1,2,3,4,5,5-hexa- chloro-.
77781	Dimethyl sulfate.
	Sulfuric acid, dimethyl ester.
78002	Plumbane, tetraethyl-.
	Tetraethyl lead.
78591	Isophorone.
78795	Isoprene.
78819	iso-Butylamine.
78831	Isobutyl alcohol.
	1-Propanol, 2-methyl-.
78875	Propane, 1,2-dichloro-.
	Propylene dichloride.
	1,2-Dichloropropane.
78886	2,3-Dichloropropene.

APPENDIX A TO § 302.4—SEQUENTIAL CAS REGISTRY NUMBER LIST OF CERCLA HAZARDOUS SUBSTANCES—Continued

CASRN	Hazardous substance
78933	2-Butanone.
	MEK.
	Methyl ethyl ketone.
78999	1,1-Dichloropropane.
79005	Ethane, 1,1,2-trichloro-.
	1,1,2-Trichloroethane.
79016	Ethene, trichloro-.
	Trichloroethylene.
79061	Acrylamide.
	2-Propenamide.
79094	Propionic acid.
79107	Acrylic acid.
	2-Propenoic acid.
79118	Chloroacetic acid.
79196	Hydrazinecarbothioamide.
	Thiosemicarbazide.
79221	Carbonochloridic acid, methyl ester.
	Methyl chlorocarbonate.
79312	iso-Butyric acid.
79345	Ethane, 1,1,2,2-tetrachloro-.
	1,1,2,2-Tetrachloroethane.
79447	Carbamic chloride, dimethyl-.
	Dimethylcarbamoyl chloride.
79469	Propane, 2-nitro-.
	2-Nitropropane.
80159	alpha,alpha-Dimethylbenzylhydroperoxide.
	Hydroperoxide, 1-methyl-1-phenylethyl-.
80626	Methyl methacrylate.
	2-Propenoic acid, 2-methyl-, methyl ester.
81812	Warfarin, & salts.
	2H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo-1-phenylbutyl)-, & salts.
82688	Benzene, pentachloronitro-.
	PCNB.
	Pentachloronitrobenzene.
	Quintobenzene.
83329	Acenaphthene.
84662	Diethyl phthalate.
	1,2-Benzenedicarboxylic acid, diethyl ester.
84742	Di-n-butyl phthalate.
	Dibutyl phthalate.
	n-Butyl phthalate.
	1,2-Benzenedicarboxylic acid, dibutyl ester.
85007	Diquat.
85018	Phenanthrene.
85449	Phthalic anhydride.
	1,3-Isobenzofurandione.
85687	Butyl benzyl phthalate.
86306	N-Nitrosodiphenylamine.
86500	Guthion.
86737	Fluorene.
86884	alpha-Naphthylthiourea.
	Thiourea, 1-naphthalenyl-.
87650	Phenol, 2,6-dichloro-.
	2,6-Dichlorophenol.
87683	Hexachlorobutadiene.
	1,3-Butadiene, 1,1,2,3,4,4-hexachloro-.
87865	Pentachlorophenol.
	Phenol, pentachloro-.
88062	Phenol, 2,4,6-trichloro-.
	2,4,6-Trichlorophenol.
88722	o-Nitrotoluene.
88755	o-Nitrophenol.
	2-Nitrophenol.
88857	Dinoseb.
	Phenol, 2-(1-methylpropyl)-4,6-dinitro-.
90040	o-Anisidine.
91087	Benzene, 1,3-diisocyanatomethyl-.
	Toluene diisocyanate.
	2,4-Toluene diisocyanate.

APPENDIX A TO § 302.4—SEQUENTIAL CAS REGISTRY NUMBER LIST OF CERCLA HAZARDOUS SUBSTANCES—Continued

CASRN	Hazardous substance
91203	Naphthalene.
91225	Quinoline.
91587	beta-Chloronaphthalene.
	Naphthalene, 2-chloro-.
	2-Chloronaphthalene.
91598	beta-Naphthylamine.
	2-Naphthalenamine.
91667	N,N-Diethylaniline.
91805	Methapyrilene.
	1,2-Ethanediamine, N,N-dimethyl-N′-2-pyridinyl-N′- (2-thienylmethyl)-.
91941	[1,1′-Biphenyl]-4,4′-diamine,3,3′-dichloro-.
	3,3′-Dichlorobenzidine.
92524	Biphenyl.
92671	4-Aminobiphenyl.
92875	Benzidine.
	[1,1′-Biphenyl]-4,4′-diamine.
92933	4-Nitrobiphenyl.
	Propanoic acid, 2-(2,4,5-trichlorophenoxy)-.
	Silvex (2,4,5-TP).
	2,4,5-TP acid.
93765	Acetic acid, (2,4,5-trichlorophenoxy)-.
93721	2,4,5-T.
	2,4,5-T acid.
93798	2,4,5-T esters.
94111	2,4-D Ester.
94586	Dihydrosafrole.
	1,3-Benzodioxole, 5-propyl-.
94597	Safrole.
	1,3-Benzodioxole, 5-(2-propenyl)-.
94791	2,4-D Ester.
94804	2,4-D Ester.
95476	o-Xylene.
95487	o-Cresol.
95501	Benzene, 1,2-dichloro-.
	o-Dichlorobenzene.
	1,2-Dichlorobenzene.
95534	Benzenamine, 2-methyl-.
	o-Toluidine.
95578	o-Chlorophenol.
	Phenol, 2-chloro-.
	2-Chlorophenol.
95807	Benzenediamine, ar-methyl-.
	Toluenediamine.
	2,4-Toluene diamine.
95943	Benzene, 1,2,4,5-tetrachloro-.
	1,2,4,5-Tetrachlorobenzene.
95954	Phenol, 2,4,5-trichloro-.
	2,4,5-Trichlorophenol.
96093	Styrene oxide.
96128	Propane, 1,2-dibromo-3-chloro-.
	1,2-Dibromo-3-chloropropane.
96457	Ethylenethiourea.
	2-Imidazolidinethione.
97632	Ethyl methacrylate.
	2-Propenoic acid, 2-methyl-, ethyl ester.
98011	Furfural.
	2-Furancarboxaldehyde.
98077	Benzene, (trichloromethyl)-.
	Benzotrichloride.
98099	Benzenesulfonic acid chloride.
	Benzenesulfonyl chloride.
98828	Benzene, (1-methylethyl)-.
	Cumene.
98862	Acetophenone.
	Ethanone, 1-phenyl-.
98873	Benzal chloride.
	Benzene, (dichloromethyl)-.
98884	Benzoyl chloride.
98953	Benzene, nitro-.

APPENDIX A TO § 302.4—SEQUENTIAL CAS REGISTRY NUMBER LIST OF CERCLA HAZARDOUS SUBSTANCES—Continued

CASRN	Hazardous substance
	Nitrobenzene.
99081	m-Nitrotoluene.
99354	Benzene, 1,3,5-trinitro-.
	1,3,5-Trinitrobenzene.
99558	Benzenamine, 2-methyl-5-nitro-.
	5-Nitro-o-toluidine.
99650	m-Dinitrobenzene.
99990	p-Nitrotoluene.
100016	Benzenamine, 4-nitro-.
	p-Nitroaniline.
100027	p-Nitrophenol.
	Phenol, 4-nitro-.
	4-Nitrophenol.
100254	p-Dinitrobenzene.
100414	Ethylbenzene.
100425	Styrene.
100447	Benzene, (chloromethyl)-.
	Benzyl chloride.
100470	Benzonitrile.
100754	N-Nitrosopiperidine.
	Piperidine, 1-nitroso-.
101144	Benzenamine, 4,4′-methylenebis[2-chloro-.
	4,4′-Methylenebis(2-chloroaniline).
101279	Barban.
	Carbamic acid, (3-chlorophenyl)-, 4-chloro-2-butynyl ester.
101553	Benzene, 1-bromo-4-phenoxy-.
	4-Bromophenyl phenyl ether.
101688	MDI.
	Methylene diphenyl diisocyanate.
101779	4,4′-Methylenedianiline.
103855	Phenylthiourea.
	Thiourea, phenyl-.
105464	sec-Butyl acetate.
105679	Phenol, 2,4-dimethyl-.
	2,4-Dimethylphenol.
106423	p-Xylene.
106445	p-Cresol.
106467	Benzene, 1,4-dichloro-.
	p-Dichlorobenzene.
	1,4-Dichlorobenzene.
106478	Benzenamine, 4-chloro-.
	p-Chloroaniline.
106490	Benzenamine, 4-methyl-.
	p-Toluidine.
106503	p-Phenylenediamine.
106514	p-Benzoquinone.
	2,5-Cyclohexadiene-1,4-dione.
	Quinone.
106887	1,2-Epoxybutane.
106898	1-Chloro-2,3-epoxypropane.
	Epichlorohydrin.
	Oxirane, (chloromethyl)-.
106934	Dibromoethane.
	Ethane, 1,2-dibromo-.
	Ethylene dibromide.
106990	1,3-Butadiene.
107028	Acrolein.
	2-Propenal.
107051	Allyl chloride.
107062	Ethane, 1,2-dichloro-.
	Ethylene dichloride.
	1,2-Dichloroethane.
107108	n-Propylamine.
	1-Propanamine.
107120	Ethyl cyanide.
	Propanenitrile.
107131	Acrylonitrile.
	2-Propenenitrile.
107153	Ethylenediamine.

APPENDIX A TO § 302.4—SEQUENTIAL CAS REGISTRY NUMBER LIST OF CERCLA HAZARDOUS SUBSTANCES—Continued

CASRN	Hazardous substance
107186	Allyl alcohol.
	2-Propen-1-ol.
107197	Propargyl alcohol.
	2-Propyn-1-ol.
107200	Acetaldehyde, chloro-.
	Chloroacetaldehyde.
107211	Ethylene glycol.
107302	Chloromethyl methyl ether.
	Methane, chloromethoxy-.
107493	Diphosphoric acid, tetraethyl ester.
	Tetraethyl pyrophosphate.
107926	Butyric acid.
108054	Vinyl acetate.
	Vinyl acetate monomer.
108101	Hexone.
	Methyl isobutyl ketone.
	4-Methyl-2-pentanone.
108247	Acetic anhydride.
108316	Maleic anhydride.
	2,5-Furandione.
108383	m-Xylene.
108394	m-Cresol.
108463	Resorcinol.
	1,3-Benzenediol.
108601	Dichloroisopropyl ether.
	Propane, 2,2″-oxybis[2-chloro-.
108883	Benzene, methyl-.
	Toluene.
108907	Benzene, chloro-.
	Chlorobenzene.
108941	Cyclohexanone.
108952	Phenol.
108985	Benzenethiol.
	Thiophenol.
109068	Pyridine, 2-methyl-.
	2-Picoline.
109739	Butylamine.
109773	Malononitrile.
	Propanedinitrile.
109897	Diethylamine.
109999	Furan, tetrahydro-.
	Tetrahydrofuran.
110009	Furan.
	Furfuran.
110167	Maleic acid.
110178	Fumaric acid.
110190	iso-Butyl acetate.
110543	Hexane.
110758	Ethene, (2-chloroethoxy)-.
	2-Chloroethyl vinyl ether.
110805	Ethanol, 2-ethoxy-.
	Ethylene glycol monoethyl ether.
110827	Benzene, hexahydro-.
	Cyclohexane.
110861	Pyridine.
111422	Diethanolamine.
111444	Bis(2-chloroethyl) ether.
	Dichloroethyl ether.
	Ethane, 1,1′-oxybis[2-chloro-.
111546	Carbamodithioic acid, 1,2-ethanediylbis-, salts & esters.
	Ethylenebisdithiocarbamic acid, salts & esters.
111911	Bis(2-chloroethoxy) methane.
	Dichloromethoxyethane.
	Ethane, 1,1′-[methylenebis(oxy)]bis(2-chloro-.
114261	Phenol, 2-(1-methylethoxy)-, methylcarbamate.
	Propoxur (Baygon).
115026	Azaserine.
	L-Serine, diazoacetate (ester).
115297	Endosulfan.

APPENDIX A TO § 302.4—SEQUENTIAL CAS REGISTRY NUMBER LIST OF CERCLA HAZARDOUS SUBSTANCES—Continued

CASRN	Hazardous substance
	6,9-Methano-2,4,3-benzodioxathiepin, 6,7,8,9,10,10-hexachloro-1,5,5a,6,9,9a-hexahydro-, 3-oxide.
115322	Dicofol.
116063	Aldicarb.
	Propanal, 2-methyl-2-(methylthio)-, O-[(methylamino)carbonyl]oxime.
117806	Dichlone.
117817	1,2-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester.
	Bis(2-ethylhexyl)phthalate.
	DEHP.
	Diethylhexyl phthalate.
117840	Di-n-octyl phthalate.
	1,2-Benzenedicarboxylic acid, dioctyl ester.
118741	Benzene, hexachloro-.
	Hexachlorobenzene.
119380	Carbamic acid, dimethyl-, 3-methyl-1-(1-methylethyl)-1H-pyrazol-5-yl ester.
	Isolan.
119904	[1,1′-Biphenyl]-4,4′-diamine,3,3′-dimethoxy-.
	3,3′-Dimethoxybenzidine.
119937	[1,1′-Biphenyl]-4,4′-diamine,3,3′- dimethyl-.
	3,3′-Dimethylbenzidine.
120127	Anthracene.
120581	Isosafrole.
	1,3-Benzodioxole, 5-(1-propenyl)-.
120809	Catechol.
120821	1,2,4-Trichlorobenzene.
120832	Phenol, 2,4-dichloro-.
	2,4-Dichlorophenol.
121142	Benzene, 1-methyl-2,4-dinitro-.
	2,4-Dinitrotoluene.
121211	Pyrethrins.
121299	Pyrethrins.
121448	Ethanamine, N,N-diethyl-.
	Triethylamine.
121697	N,N-Dimethylaniline.
121755	Malathion.
122098	alpha,alpha-Dimethylphenethylamine.
	Benzeneethanamine, alpha,alpha-dimethyl-.
122429	Carbamic acid, phenyl-, 1-methylethyl ester.
	Propham.
122667	Hydrazine, 1,2-diphenyl-.
	1,2-Diphenylhydrazine.
123319	Hydroquinone.
123331	Maleic hydrazide.
	3,6-Pyridazinedione, 1,2-dihydro-.
123386	Propionaldehyde.
123626	Propionic anhydride.
123637	Paraldehyde.
	1,3,5-Trioxane, 2,4,6-trimethyl-.
123739	Crotonaldehyde.
	2-Butenal.
123864	Butyl acetate.
123911	1,4-Diethyleneoxide.
	1,4-Dioxane.
123922	iso-Amyl acetate.
124049	Adipic acid.
124403	Dimethylamine.
	Methanamine, N-methyl-.
124414	Sodium methylate.
124481	Chlorodibromomethane.
126727	Tris(2,3-dibromopropyl) phosphate.
	1-Propanol, 2,3-dibromo-, phosphate (3:1).
126987	Methacrylonitrile.
	2-Propenenitrile, 2-methyl-.
126998	Chloroprene.
127184	Ethene, tertrachloro-.
	Perchloroethylene.

APPENDIX A TO § 302.4—SEQUENTIAL CAS REGISTRY NUMBER LIST OF CERCLA HAZARDOUS SUBSTANCES—Continued

CASRN	Hazardous substance
	Tetrachloroethylene.
127822	Zinc phenolsulfonate.
129000	Pyrene.
130154	1,4-Naphthalenedione.
	1,4-Naphthoquinone.
131113	Dimethyl phthalate.
	1,2-Benzenedicarboxylic acid, dimethyl ester.
131748	Ammonium picrate.
	Phenol, 2,4,6-trinitro-, ammonium salt.
131895	Phenol, 2-cyclohexyl-4,6-dinitro-.
	2-Cyclohexyl-4,6-dinitrophenol.
132649	Dibenzofuran.
133062	Captan.
133904	Chloramben.
134327	alpha-Naphthylamine.
	1-Naphthalenamine.
137268	Thioperoxydicarbonic diamide ([H2N)C(S)]2S2, tetramethyl-.
	Thiram.
137304	Zinc, bis(dimethylcarbamodithioato-S,S')-.
	Ziram.
140885	Ethyl acrylate.
	2-Propenoic acid, ethyl ester.
141786	Acetic acid, ethyl ester.
	Ethyl acetate.
142289	1,3-Dichloropropane.
142712	Cupric acetate.
142847	Dipropylamine.
	1-Propanamine, N-propyl-.
143339	Sodium cyanide Na(CN).
143500	Kepone.
	1,3,4-Metheno-2H-cyclobuta[cd]pentalen-2-one,1,1a,3,3a,4,5,5,5a,5b,6-decachlorooctahydro-.
145733	Endothall.
	7-Oxabicyclo[2.2.1]heptane-2,3-dicarboxylic acid.
148823	L-Phenylalanine, 4-[bis(2-chloroethyl)amino]-.
	Melphalan.
151508	Potassium cyanide K(CN).
151564	Aziridine.
	Ethylenimine.
152169	Diphosphoramide, octamethyl-.
	Octamethylpyrophosphoramide.
156605	Ethene, 1,2-dichloro- (E).
	1,2-Dichloroethylene.
156627	Calcium cyanamide.
189559	Benzo[rst]pentaphene.
	Dibenzo[a,i]pyrene.
191242	Benzo[ghi]perylene.
193395	Indeno(1,2,3-cd)pyrene.
205992	Benzo[b]fluoranthene.
206440	Fluoranthene.
207089	Benzo(k)fluoranthene.
208968	Acenaphthylene.
218019	Chrysene.
225514	Benz[c]acridine.
297972	O,O-Diethyl O-pyrazinyl phosphorothioate.
	Phosphorothioic acid, O,O-diethyl O-pyrazinyl ester.
298000	Methyl parathion.
	Phosphorothioic acid, O,O-dimethyl O-(4-nitrophenyl) ester.
298022	Phorate.
	Phosphorodithioic acid, O,O-diethyl S-[(ethylthio) methyl] ester.
298044	Disulfoton.
	Phosphorodithioic acid, O,O-diethyl S-[2-(ethylthio)ethyl] ester.

APPENDIX A TO § 302.4—SEQUENTIAL CAS REGISTRY NUMBER LIST OF CERCLA HAZARDOUS SUBSTANCES—Continued

CASRN	Hazardous substance
300765	Naled.
301042	Acetic acid, lead(2+) salt.
	Lead acetate.
302012	Hydrazine.
303344	Lasiocarpine.
	2-Butenoic acid, 2-methyl-, 7-[[2,3-dihydroxy-2-(1-methoxyethyl)-3-methyl-1-oxobutoxy]methyl]-2,3,5,7a-tetrahydro-1H-pyrrolizin-1-yl ester, [1S-[1alpha(Z),7(2S*,3R*), 7aalpha]]-.
305033	Benzenebutanoic acid, 4-[bis(2-chloroethyl)amino]-.
	Chlorambucil.
309002	Aldrin.
	1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro-, (1alpha,4alpha,4abeta,5alpha,8alpha, 8abeta)-.
311455	Diethyl-p-nitrophenyl phosphate.
	Phosphoric acid, diethyl 4-nitrophenyl ester.
315184	Mexacarbate.
	Phenol, 4-(dimethylamino)-3,5-dimethyl-, methylcarbamate (ester).
319846	alpha—BHC.
319857	beta—BHC.
319868	delta—BHC.
329715	2,5-Dinitrophenol.
330541	Diuron.
333415	Diazinon.
334883	Diazomethane.
353504	Carbon oxyfluoride.
	Carbonic difluoride.
357573	Brucine.
	Strychnidin-10-one, 2,3-dimethoxy-.
460195	Cyanogen.
	Ethanedinitrile.
463581	Carbonyl sulfide.
465736	Isodrin.
	1,4:5,8-Dimethanonaphthalene,1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro-, (1alpha,4alpha,4abeta,5beta,8beta, 8abeta)-.
492808	Auramine.
	Benzenamine, 4,4′-carbonimidoylbis[N,N-dimethyl-.
494031	Chlornaphazine.
	Naphthalenamine, N,N′-bis(2-chloroethyl)-.
496720	Benzenediamine, ar-methyl-.
	Toluenediamine.
	2,4-Toluene diamine.
504245	4-Aminopyridine.
	4-Pyridinamine.
504609	1-Methylbutadiene.
	1,3-Pentadiene.
506616	Argentate(1-), bis(cyano-C)-, potassium.
	Potassium silver cyanide.
506649	Silver cyanide Ag(CN).
506683	Cyanogen bromide (CN)Br.
506774	Cyanogen chloride (CN)Cl.
506876	Ammonium carbonate.
506967	Acetyl bromide.
509148	Methane, tetranitro-.
	Tetranitromethane.
510156	Benzeneacetic acid, 4-chloro-α- (4-chlorophenyl)-α-hydroxy-, ethyl ester.
	Chlorobenzilate.
513495	sec-Butylamine.
528290	o-Dinitrobenzene.
532274	2-Chloroacetophenone.
534521	4,6-Dinitro-o-cresol, and salts.

APPENDIX A TO § 302.4—SEQUENTIAL CAS REGISTRY NUMBER LIST OF CERCLA HAZARDOUS SUBSTANCES—Continued

CASRN	Hazardous substance
	Phenol, 2-methyl-4,6-dinitro-, & salts.
540738	Hydrazine, 1,2-dimethyl-.
	1,2-Dimethylhydrazine.
540841	2,2,4-Trimethylpentane.
540885	tert-Butyl acetate.
541093	Uranyl acetate.
541537	Dithiobiuret.
	Thioimidodicarbonic diamide [(H2N)C(S)]2NH.
541731	Benzene, 1,3-dichloro-.
	m-Dichlorobenzene.
	1,3-Dichlorobenzene.
542621	Barium cyanide.
542756	1-Propene, 1,3-dichloro-.
	1,3-Dichloropropene.
542767	Propanenitrile, 3-chloro-.
	3-Chloropropionitrile.
542881	Bis(chloromethyl)ether.
	Dichloromethyl ether.
	Methane, oxybis(chloro-.
543908	Cadmium acetate.
544183	Cobaltous formate.
544923	Copper cyanide Cu(CN).
554847	m-Nitrophenol.
557197	Nickel cyanide $Ni(CN)_2$.
557211	Zinc cyanide $Zn(CN)_2$.
	Zinc cyanide Zn(CN)2.
557346	Zinc acetate.
557415	Zinc formate.
563122	Ethion.
563688	Acetic acid, thallium(1+) salt.
	Thallium(I) acetate.
573568	2,6-Dinitrophenol.
584849	Benzene, 1,3-diisocyanatomethyl-.
	Toluene diisocyanate.
	2,4-Toluene diisocyanate.
591082	Acetamide, N-(aminothioxomethyl)-.
	1-Acetyl-2-thiourea.
592018	Calcium cyanide $Ca(CN)_2$.
592041	Mercuric cyanide.
592858	Mercuric thiocyanate.
592870	Lead thiocyanate.
593602	Vinyl bromide.
594423	Methanesulfenyl chloride, trichloro-.
	Trichloromethanesulfenyl chloride.
598312	Bromoacetone.
	2-Propanone, 1-bromo-.
606202	Benzene, 2-methyl-1,3-dinitro-.
	2,6-Dinitrotoluene.
608731	HEXACHLOROCYCLOHEXANE (all isomers).
608935	Benzene, pentachloro-.
	Pentachlorobenzene.
609198	3,4,5-Trichlorophenol.
610399	3,4-Dinitrotoluene.
615532	Carbamic acid, methylnitroso-, ethyl ester.
	N-Nitroso-N-methylurethane.
621647	Di-n-propylnitrosamine.
	1-Propanamine, N-nitroso-N-propyl-.
624839	Methane, isocyanato-.
	Methyl isocyanate.
625161	tert-Amyl acetate.
626380	sec-Amyl acetate.
628637	Amyl acetate.
628864	Fulminic acid, mercury(2+)salt.
	Mercury fulminate.
630104	Selenourea.
630206	Ethane, 1,1,1,2-tetrachloro-.
	1,1,1,2-Tetrachloroethane.
631618	Ammonium acetate.
636215	Benzenamine, 2-methyl-, hydrochloride.

APPENDIX A TO § 302.4—SEQUENTIAL CAS REGISTRY NUMBER LIST OF CERCLA HAZARDOUS SUBSTANCES—Continued

CASRN	Hazardous substance
	o-Toluidine hydrochloride.
640197	Acetamide, 2-fluoro-.
	Fluoroacetamide.
644644	Carbamic acid, dimethyl-,1-[(dimethylamino)carbonyl]-5-methyl-1H-pyrazol-3-yl ester.
	Dimetilan.
680319	Hexamethylphosphoramide.
684935	N-Nitroso-N-methylurea.
	Urea, N-methyl-N-nitroso-.
692422	Arsine, diethyl-.
	Diethylarsine.
696286	Arsonous dichloride, phenyl-.
	Dichlorophenylarsine.
757584	Hexaethyl tetraphosphate.
	Tetraphosphoric acid, hexaethyl ester.
759739	N-Nitroso-N-ethylurea.
	Urea, N-ethyl-N-nitroso-.
764410	1,4-Dichloro-2-butene.
	2-Butene, 1,4-dichloro-.
765344	Glycidylaldehyde.
	Oxiranecarboxyaldehyde.
815827	Cupric tartrate.
822060	Hexamethylene-1,6-diisocyanate.
823405	Benzenediamine, ar-methyl-.
	Toluenediamine.
	2,4-Toluene diamine.
924163	N-Nitrosodi-n-butylamine.
	1-Butanamine, N-butyl-N-nitroso-.
930552	N-Nitrosopyrrolidine.
	Pyrrolidine, 1-nitroso-.
933755	2,3,6-Trichlorophenol.
933788	2,3,5-Trichlorophenol.
959988	alpha-Endosulfan.
1024573	Heptachlor epoxide.
1031078	Endosulfan sulfate.
1066304	Chromic acetate.
1066337	Ammonium bicarbonate.
1072351	Lead stearate.
1111780	Ammonium carbamate.
1116547	Ethanol, 2,2′-(nitrosoimino)bis-.
	N-Nitrosodiethanolamine.
1120714	1,2-Oxathiolane, 2,2-dioxide.
	1,3-Propane sultone.
1129415	Carbamic acid, methyl-, 3-methylphenyl ester.
	Metolcarb.
1185575	Ferric ammonium citrate.
1194656	Dichlobenil.
1300716	Xylenol.
1303282	Arsenic oxide As2O5.
	Arsenic pentoxide.
1303328	Arsenic disulfide.
1303339	Arsenic trisulfide.
1309644	Antimony trioxide.
1310583	Potassium hydroxide.
1310732	Sodium hydroxide.
1314325	Thallic oxide.
	Thallium oxide Tl2O3.
1314621	Vanadium oxide V2O5.
	Vanadium pentoxide.
1314803	Phosphorus pentasulfide.
	Phosphorus sulfide.
	Sulfur phosphide.
1314847	Zinc phosphide Zn_3P_2.
1314870	Lead sulfide.
1319728	2,4,5-T amines.
1319773	Cresol (cresylic acid).
	Cresols (isomers and mixture).
	Cresylic acid (isomers and mixture).
	Phenol, methyl-.

APPENDIX A TO § 302.4—SEQUENTIAL CAS REGISTRY NUMBER LIST OF CERCLA HAZARDOUS SUBSTANCES—Continued

CASRN	Hazardous substance
1320189	2,4-D Ester.
1321126	Nitrotoluene.
1327533	Arsenic oxide As2O3.
	Arsenic trioxide.
1330207	Benzene, dimethyl-.
	Xylene.
	Xylene (mixed).
	Xylenes (isomers and mixture).
1332076	Zinc borate.
1332214	Asbestos.
1333831	Sodium bifluoride.
1335326	Lead subacetate.
	Lead, bis(acetato-O)tetrahydroxytri.
1336216	Ammonium hydroxide.
1336363	Aroclors.
	PCBs.
	POLYCHLORINATED BIPHENYLS.
1338234	Methyl ethyl ketone peroxide.
	2-Butanone peroxide.
1338245	Naphthenic acid.
1341497	Ammonium bifluoride.
1464535	1,2:3,4-Diepoxybutane.
	2,2′-Bioxirane.
1563388	7-Benzofuranol, 2,3-dihydro-2,2-dimethyl-.
	Carbofuran phenol.
1563662	7-Benzofuranol, 2,3-dihydro-2,2-dimethyl-, methylcarbamate.
	Carbofuran.
1582098	Trifluralin.
1615801	Hydrazine, 1,2-diethyl-.
	N,N′-Diethylhydrazine.
1634044	Methyl tert-butyl ether.
1646884	Aldicarb sulfone.
	Propanal, 2-methyl-2-(methyl-sulfonyl)-, O-[(methylamino)carbonyl] oxime.
1746016	TCDD.
	2,3,7,8-Tetrachlorodibenzo-p-dioxin.
1762954	Ammonium thiocyanate.
1863634	Ammonium benzoate.
1888717	Hexachloropropene.
	1-Propene, 1,1,2,3,3,3-hexachloro-.
1918009	Dicamba.
1928387	2,4-D Ester.
1928478	2,4,5-T esters.
1928616	2,4-D Ester.
1929733	2,4-D Ester.
2008460	2,4,5-T amines.
2032657	Mercaptodimethur.
	Methiocarb.
	Phenol, (3,5-dimethyl-4-(methylthio)-, methylcarbamate.
2303164	Carbamothioic acid, bis(1-methylethyl)-, S-(2,3-dichloro-2-propenyl) ester.
	Diallate.
2303175	Carbamothioic acid, bis(1-methylethyl)-, S-(2,3,3-trichloro-2-propenyl) ester.
	Triallate.
2312358	Propargite.
2545597	2,4,5-T esters.
2631370	Phenol, 3-methyl-5-(1-methylethyl)-, methyl carbamate.
	Promecarb.
2763964	3(2H)-Isoxazolone, 5-(aminomethyl)-.
	5-(Aminomethyl)-3-isoxazolol.
2764729	Diquat
2921882	Chlorpyrifos.
2944674	Ferric ammonium oxalate.
2971382	2,4-D Ester.
3012655	Ammonium citrate, dibasic.
3164292	Ammonium tartrate.

APPENDIX A TO § 302.4—SEQUENTIAL CAS REGISTRY NUMBER LIST OF CERCLA HAZARDOUS SUBSTANCES—Continued

CASRN	Hazardous substance
3165933	Benzenamine, 4-chloro-2-methyl-, hydrochloride.
	4-Chloro-o-toluidine, hydrochloride.
3251238	Cupric nitrate.
3288582	O,O-Diethyl S-methyl dithiophosphate.
	Phosphorodithioic acid, O,O-diethyl S-methyl ester.
3486359	Zinc carbonate.
3547044	DDE.
3689245	Tetraethyldithiopyrophosphate.
	Thiodiphosphoric acid, tetraethyl ester.
3813147	2,4,5-T amines.
4170303	Crotonaldehyde.
	2-Butenal.
4549400	N-Nitrosomethylvinylamine.
	Vinylamine, N-methyl-N-nitroso-.
5344821	Thiourea, (2-chlorophenyl)-.
	1-(o-Chlorophenyl)thiourea.
5893663	Cupric oxalate.
5952261	Ethanol, 2,2'-oxybis-, dicarbamate.
	Diethylene glycol, dicarbamate.
5972736	Ammonium oxalate.
6009707	Ammonium oxalate.
6369966	2,4,5-T amines.
6369977	2,4,5-T amines.
6533739	Carbonic acid, dithallium(1+) salt.
	Thallium(I) carbonate.
7005723	4-Chlorophenyl phenyl ether.
7421934	Endrin aldehyde.
7428480	Lead stearate.
7439921	Lead.
7439976	Mercury.
7440020	Nickel.
7440224	Silver.
7440235	Sodium.
7440280	Thallium.
7440360	Antimony.
7440382	Arsenic.
7440417	Beryllium.
	Beryllium powder.
7440439	Cadmium.
7440473	Chromium.
7440508	Copper.
7440666	Zinc.
7446084	Selenium dioxide.
	Selenium oxide.
7446142	Lead sulfate.
7446186	Sulfuric acid, dithallium(1+) salt.
	Thallium(I) sulfate.
7446277	Lead phosphate.
	Phosphoric acid, lead(2+) salt (2:3).
7447394	Cupric chloride.
7488564	Selenium sulfide SeS_2.
7550450	Titanium tetrachloride.
7558794	Sodium phosphate, dibasic.
7601549	Sodium phosphate, tribasic.
7631892	Sodium arsenate.
7631905	Sodium bisulfite.
7632000	Sodium nitrite.
7645252	Lead arsenate.
7646857	Zinc chloride.
7647010	Hydrochloric acid.
	Hydrogen chloride.
7647189	Antimony pentachloride.
7664382	Phosphoric acid.
7664393	Hydrofluoric acid.
	Hydrogen fluoride.
7664417	Ammonia.
7664939	Sulfuric acid.
7681494	Sodium fluoride.

APPENDIX A TO § 302.4—SEQUENTIAL CAS REGISTRY NUMBER LIST OF CERCLA HAZARDOUS SUBSTANCES—Continued

CASRN	Hazardous substance
7681529	Sodium hypochlorite.
7697372	Nitric acid.
7699458	Zinc bromide.
7705080	Ferric chloride.
7718549	Nickel chloride.
7719122	Phosphorus trichloride.
7720787	Ferrous sulfate.
7722647	Potassium permanganate.
7723140	Phosphorus.
7733020	Zinc sulfate.
7738945	Chromic acid.
7758294	Sodium phosphate, tribasic.
7758943	Ferrous chloride.
7758954	Lead chloride.
7758987	Cupric sulfate.
7761888	Silver nitrate.
7773060	Ammonium sulfamate.
7775113	Sodium chromate.
7778394	Arsenic acid H_3AsO_4.
7778441	Calcium arsenate.
7778509	Potassium bichromate.
7778543	Calcium hypochlorite.
7779864	Zinc hydrosulfite.
7779886	Zinc nitrate.
7782414	Fluorine.
7782492	Selenium.
7782505	Chlorine.
7782630	Ferrous sulfate.
7782823	Sodium selenite.
7782867	Mercurous nitrate.
7783008	Selenious acid.
7783064	Hydrogen sulfide H_2S.
7783359	Mercuric sulfate.
7783462	Lead fluoride.
7783495	Zinc fluoride.
7783508	Ferric fluoride.
7783564	Antimony trifluoride.
7784341	Arsenic trichloride.
7784409	Lead arsenate.
7784410	Potassium arsenate.
7784465	Sodium arsenite.
7785844	Sodium phosphate, tribasic.
7786347	Mevinphos.
7786814	Nickel sulfate.
7787475	Beryllium chloride.
7787497	Beryllium fluoride.
7787555	Beryllium nitrate.
7788989	Ammonium chromate.
7789006	Potassium chromate.
7789062	Strontium chromate.
7789095	Ammonium bichromate.
7789426	Cadmium bromide.
7789437	Cobaltous bromide.
7789619	Antimony tribromide.
7790945	Chlorosulfonic acid.
7791120	Thallium chloride TlCl.
7803512	Hydrogen phosphide.
	Phosphine.
7803556	Ammonium vanadate.
	Vanadic acid, ammonium salt.
8001352	Chlorinated camphene.
	Toxaphene.
8003198	Dichloropropane—Dichloropropene (mixture).
8003347	Pyrethrins.
8014957	Sulfuric acid.
10022705	Sodium hypochlorite.
10025873	Phosphorus oxychloride.
10025919	Antimony trichloride.
10026116	Zirconium tetrachloride.
10028225	Ferric sulfate.

APPENDIX A TO § 302.4—SEQUENTIAL CAS REGISTRY NUMBER LIST OF CERCLA HAZARDOUS SUBSTANCES—Continued

CASRN	Hazardous substance
10031591	Sulfuric acid, dithallium(1+) salt.
	Thallium(I) sulfate.
10039324	Sodium phosphate, dibasic.
10043013	Aluminum sulfate.
10045893	Ferrous ammonium sulfate.
10045940	Mercuric nitrate.
10049055	Chromous chloride.
10099748	Lead nitrate.
10101538	Chromic sulfate.
10101630	Lead iodide.
10101890	Sodium phosphate, tribasic.
10102064	Uranyl nitrate.
10102188	Sodium selenite.
10102439	Nitric oxide.
	Nitrogen oxide NO.
10102440	Nitrogen dioxide.
	Nitrogen oxide NO2.
10102451	Nitric acid, thallium(1+) salt.
	Thallium(I) nitrate.
10102484	Lead arsenate.
10108642	Cadmium chloride.
10124502	Potassium arsenite.
10124568	Sodium phosphate, tribasic.
10140655	Sodium phosphate, dibasic.
10192300	Ammonium bisulfite.
10196040	Ammonium sulfite.
10361894	Sodium phosphate, tribasic.
10380297	Cupric sulfate, ammoniated.
10415755	Mercurous nitrate.
10421484	Ferric nitrate.
10544726	Nitrogen dioxide.
	Nitrogen oxide NO2.
10588019	Sodium bichromate.
10605217	Carbamic acid, 1H-benzimidazol-2-yl, methyl ester.
	Carbendazim.
11096825	Aroclor 1260.
11097691	Aroclor 1254.
11104282	Aroclor 1221.
11115745	Chromic acid.
11141165	Aroclor 1232.
12002038	Cupric acetoarsenite.
12039520	Selenious acid, dithallium(1+) salt.
	Thallium (I) selenite.
12054487	Nickel hydroxide.
12125018	Ammonium fluoride.
12125029	Ammonium chloride.
12135761	Ammonium sulfide.
12672296	Aroclor 1248.
12674112	Aroclor 1016.
12771083	Sulfur monochloride.
13463393	Nickel carbonyl $Ni(CO)_4$, (T–4)-.
13560991	2,4,5-T salts.
13597994	Beryllium nitrate.
13746899	Zirconium nitrate.
13765190	Calcium chromate.
	Chromic acid H2CrO4, calcium salt.
13814965	Lead fluoborate.
13826830	Ammonium fluoborate.
13952846	sec-Butylamine.
14017415	Cobaltous sulfamate.
14216752	Nickel nitrate.
14258492	Ammonium oxalate.
14307358	Lithium chromate.
14307438	Ammonium tartrate.
14639975	Zinc ammonium chloride.
14639986	Zinc ammonium chloride.
14644612	Zirconium sulfate.

APPENDIX A TO § 302.4—SEQUENTIAL CAS REGISTRY NUMBER LIST OF CERCLA HAZARDOUS SUBSTANCES—Continued

CASRN	Hazardous substance
15339363	Manganese, bis(dimethylcarbamodithioato-S,S')-.
	Manganese dimethyldithiocarbamate.
15699180	Nickel ammonium sulfate.
15739807	Lead sulfate.
15950660	2,3,4-Trichlorophenol.
16721805	Sodium hydrosulfide.
16752775	Ethanimidothioic acid, N-[[(methylamino)carbonyl] oxy]-, methyl ester.
	Methomyl.
16871719	Zinc silicofluoride.
16919190	Ammonium silicofluoride.
16923958	Zirconium potassium fluoride.
17702577	Formparanate.
	Methanimidamide, N,N-dimethyl-N'-[2-methyl-4-[[(methylamino)carbonyl]oxy]phenyl]-.
17804352	Benomyl.
	Carbamic acid, [1-[(butylamino)carbonyl]-1H-benzimidazol-2-yl]-, methyl ester.
18883664	D-Glucose, 2-deoxy-2[[(methylnitrosoamino)-carbonyl]amino]-.
	Glucopyranose, 2-deoxy-2-(3-methyl-3-nitrosoureido)-, D-.
	Streptozotocin.
20816120	Osmium oxide OsO_4, (T–4)-.
	Osmium tetroxide.
20830813	Daunomycin.
	5,12-Naphthacenedione, 8-acetyl-10-[(3-amino-2,3,6-trideoxy-alpha-L-lyxo-hexopyranosyl)oxy]-7,8,9,10-tetrahydro-6,8,11-trihydroxy-1-methoxy-, (8S-cis)-.
20859738	Aluminum phosphide.
22781233	Bendiocarb.
	1,3-Benzodioxol-4-ol, 2,2-dimethyl-, methyl carbamate.
22961826	Bendiocarb phenol.
	1,3-Benzodioxol-4-ol, 2,2-dimethyl-.
23135220	Ethanimidothioic acid, 2-(dimethylamino)-N-[[(methylamino)carbonyl]oxy]-2-oxo-, methyl ester.
	Oxamyl.
23422539	Methanimidamide, N,N-dimethyl-N'-[3-[[(methylamino)-carbonyl]oxy]phenyl]-, monohydrochloride.
	Formetanate hydrochloride.
23564058	Carbamic acid, [1,2-phenylenebis(iminocarbonothioyl)]bis-, dimethyl ester.
	Thiophanate-methyl.
23950585	Benzamide, 3,5-dichloro-N-(1,1- dimethyl-2-propynyl)-.
	Pronamide.
25154545	Dinitrobenzene (mixed).
25154556	Nitrophenol (mixed).
25155300	Sodium dodecylbenzenesulfonate.
25167822	Trichlorophenol.
25168154	2,4,5-T esters.
25168267	2,4-D Ester.
25321146	Dinitrotoluene.
25321226	Dichlorobenzene.
25376458	Benzenediamine, ar-methyl-.
	Toluenediamine.
	2,4-Toluene diamine.
25550587	Dinitrophenol.
26264062	Calcium dodecylbenzenesulfonate.
26419738	1,3-Dithiolane-2-carboxaldehyde, 2,4-dimethyl-, O-[(methylamino)-carbonyl]oxime.
	Tirpate.
26471625	Benzene, 1,3-diisocyanatomethyl-.
	Toluene diisocyanate.
	2,4-Toluene diisocyanate.
26628228	Sodium azide.
26638197	Dichloropropane.
26952238	Dichloropropene.
27176870	Dodecylbenzenesulfonic acid.
27323417	Triethanolamine dodecylbenzene sulfonate.
27774136	Vanadyl sulfate.
28300745	Antimony potassium tartrate.
30525894	Paraformaldehyde.
30558431	Ethanimidothioic acid, 2-(dimethylamino)-N-hydroxy-2-oxo-, methyl ester.
	A2213.
32534955	2,4,5-TP esters.
33213659	beta - Endosulfan.
36478769	Uranyl nitrate.
37211055	Nickel chloride.
39196184	Thiofanox.
	2-Butanone, 3,3-dimethyl-1-(methylthio)-,O-[(methylamino)carbonyl] oxime.
42504461	Isopropanolamine dodecylbenzenesulfonate.
52628258	Zinc ammonium chloride.
52652592	Lead stearate.
52740166	Calcium arsenite.
52888809	Carbamothioic acid, dipropyl-, S-(phenylmethyl) ester.
	Prosulfocarb.
53467111	2,4-D Ester.
53469219	Aroclor 1242.
55285148	Carbamic acid, [(dibutylamino)-thio]methyl-, 2,3-dihydro-2,2-dimethyl-7-benzofuranyl ester.
	Carbosulfan.
55488874	Ferric ammonium oxalate.
56189094	Lead stearate.
59669260	Ethanimidothioic acid, N,N'-[thiobis[(methylimino)carbonyloxy]]bis-, dimethyl ester.
	Thiodicarb.
61792072	2,4,5-T esters.

APPENDIX B TO § 302.4—RADIONUCLIDES

Radionuclide	Atomic Number	Final RQ Ci (Bq)
Radionuclides@		1&(3.7E 10)
Actinium-224	89	100 (3.7E 12)
Actinium-225	89	1 (3.7E 10)
Actinium-226	89	10 (3.7E 11)
Actinium-227	89	0.001 (3.7E 7)
Actinium-228	89	10 (3.7E 11)
Aluminum-26	13	10 (3.7E 11)
Americium-237	95	1000 (3.7E 13)
Americium-238	95	100 (3.7E 12)
Americium-239	95	100 (3.7E 12)
Americium-240	95	10 (3.7E 11)
Americium-241	95	0.01 (3.7E 8)
Americium-242m	95	0.01 (3.7E 8)
Americium-242	95	100 (3.7E 12)
Americium-243	95	0.01 (3.7E 8)
Americium-244m	95	1000 (3.7E 13)
Americium-244	95	10 (3.7E 11)
Americium-245	95	1000 (3.7E 13)
Americium-246m	95	1000 (3.7E 13)
Americium-246	95	1000 (3.7E 13)
Antimony-115	51	1000 (3.7E 13)
Antimony-116m	51	100 (3.7E 12)
Antimony-116	51	1000 (3.7E 13)
Antimony-117	51	1000 (3.7E 13)
Antimony-118m	51	10 (3.7E 11)

APPENDIX B TO § 302.4—RADIONUCLIDES—Continued

Radionuclide	Atomic Number	Final RQ Ci (Bq)
Antimony-119	51	1000 (3.7E 13)
Antimony-120 (16 min)	51	1000 (3.7E 13)
Antimony-120 (5.76 day)	51	10 (3.7E 11)
Antimony-122	51	10 (3.7E 11)
Antimony-124m	51	1000 (3.7E 13)
Antimony-124	51	10 (3.7E 11)
Antimony-125	51	10 (3.7E 11)
Antimony-126m	51	1000 (3.7E 13)
Antimony-126	51	10 (3.7E 11)
Antimony-127	51	10 (3.7E 11)
Antimony-128 (10.4 min)	51	1000 (3.7E 13)
Antimony-128 (9.01 hr)	51	10 (3.7E 11)
Antimony-129	51	100 (3.7E 12)
Antimony-130	51	100 (3.7E 12)
Antimony-131	51	1000 (3.7E 13)
Argon-39	18	1000 (3.7E 13)
Argon-41	18	10 (3.7E 11)
Arsenic-69	33	1000 (3.7E 13)
Arsenic-70	33	100 (3.7E 12)
Arsenic-71	33	100 (3.7E 12)
Arsenic-72	33	10 (3.7E 11)
Arsenic-73	33	100 (3.7E 12)
Arsenic-74	33	10 (3.7E 11)
Arsenic-76	33	100 (3.7E 12)
Arsenic-77	33	1000 (3.7E 13)
Arsenic-78	33	100 (3.7E 12)
Astatine-207	85	100 (3.7E 12)
Astatine-211	85	100 (3.7E 12)
Barium-126	56	1000 (3.7E 13)
Barium-128	56	10 (3.7E 11)
Barium-131m	56	1000 (3.7E 13)
Barium-131	56	10 (3.7E 11)
Barium-133m	56	100 (3.7E 12)
Barium-133	56	10 (3.7E 11)
Barium-135m	56	1000 (3.7E 13)
Barium-139	56	1000 (3.7E 13)
Barium-140	56	10 (3.7E 11)
Barium-141	56	1000 (3.7E 13)
Barium-142	56	1000 (3.7E 13)
Berkelium-245	97	100 (3.7E 12)
Berkelium-246	97	10 (3.7E 11)
Berkelium-247	97	0.01 (3.7E 8)
Berkelium-249	97	1 (3.7E 10)
Berkelium-250	97	100 (3.7E 12)
Beryllium-7	4	100 (3.7E 12)
Beryllium-10	4	1 (3.7E 10)
Bismuth-200	83	100 (3.7E 12)
Bismuth-201	83	100 (3.7E 12)
Bismuth-202	83	1000 (3.7E 13)
Bismuth-203	83	10 (3.7E 11)
Bismuth-205	83	10 (3.7E 11)
Bismuth-206	83	10 (3.7E 11)
Bismuth-207	83	10 (3.7E 11)
Bismuth-210m	83	0.1 (3.7E 9)
Bismuth-210	83	10 (3.7E 11)
Bismuth-212	83	100 (3.7E 12)
Bismuth-213	83	100 (3.7E 12)
Bismuth-214	83	100 (3.7E 12)
Bromine-74m	35	100 (3.7E 12)
Bromine-74	35	100 (3.7E 12)
Bromine-75	35	100 (3.7E 12)
Bromine-76	35	10 (3.7E 11)
Bromine-77	35	100 (3.7E 12)
Bromine-80m	35	1000 (3.7E 13)
Bromine-80	35	1000 (3.7E 13)
Bromine-82	35	10 (3.7E 11)
Bromine-83	35	1000 (3.7E 13)
Bromine-84	35	100 (3.7E 12)
Cadmium-104	48	1000 (3.7E 13)
Cadmium-107	48	1000 (3.7E 13)

APPENDIX B TO § 302.4—RADIONUCLIDES—Continued

Radionuclide	Atomic Number	Final RQ Ci (Bq)
Cadmium-109	48	1 (3.7E 10)
Cadmium-113m	48	0.1 (3.7E 9)
Cadmium-113	48	0.1 (3.7E 9)
Cadmium-115m	48	10 (3.7E 11)
Cadmium-115	48	100 (3.7E 12)
Cadmium-117m	48	10 (3.7E 11)
Cadmium-117	48	100 (3.7E 12)
Calcium-41	20	10 (3.7E 11)
Calcium-45	20	10 (3.7E 11)
Calcium-47	20	10 (3.7E 11)
Californium-244	98	1000 (3.7E 13)
Californium-246	98	10 (3.7E 11)
Californium-248	98	0.1 (3.7E 9)
Californium-249	98	0.01 (3.7E 8)
Californium-250	98	0.01 (3.7E 8)
Californium-251	98	0.01 (3.7E 8)
Californium-252	98	0.1 (3.7E 9)
Californium-253	98	10 (3.7E 11)
Californium-254	98	0.1 (3.7E 9)
Carbon-11	6	1000 (3.7E 13)
Carbon-14	6	10 (3.7E 11)
Cerium-134	58	10 (3.7E 11)
Cerium-135	58	10 (3.7E 11)
Cerium-137m	58	100 (3.7E 12)
Cerium-137	58	1000 (3.7E 13)
Cerium-139	58	100 (3.7E 12)
Cerium-141	58	10 (3.7E 11)
Cerium-143	58	100 (3.7E 12)
Cerium-144	58	1 (3.7E 10)
Cesium-125	55	1000 (3.7E 13)
Cesium-127	55	100 (3.7E 12)
Cesium-129	55	100 (3.7E 12)
Cesium-130	55	1000 (3.7E 13)
Cesium-131	55	1000 (3.7E 13)
Cesium-132	55	10 (3.7E 11)
Cesium-134m	55	1000 (3.7E 13)
Cesium-134	55	1 (3.7E 10)
Cesium-135m	55	100 (3.7E 12)
Cesium-135	55	10 (3.7E 11)
Cesium-136	55	10 (3.7E 11)
Cesium-137	55	1 (3.7E 10)
Cesium-138	55	100 (3.7E 12)
Chlorine-36	17	10 (3.7E 11)
Chlorine-38	17	100 (3.7E 12)
Chlorine-39	17	100 (3.7E 12)
Chromium-48	24	100 (3.7E 12)
Chromium-49	24	1000 (3.7E 13)
Chromium-51	24	1000 (3.7E 13)
Cobalt-55	27	10 (3.7E 11)
Cobalt-56	27	10 (3.7E 11)
Cobalt-57	27	100 (3.7E 12)
Cobalt-58m	27	1000 (3.7E 13)
Cobalt-58	27	10 (3.7E 11)
Cobalt-60m	27	1000 (3.7E 13)
Cobalt-60	27	10 (3.7E 11)
Cobalt-61	27	1000 (3.7E 13)
Cobalt-62m	27	1000 (3.7E 13)
Copper-60	29	100 (3.7E 12)
Copper-61	29	100 (3.7E 12)
Copper-64	29	1000 (3.7E 13)
Copper-67	29	100 (3.7E 12)
Curium-238	96	1000 (3.7E 13)
Curium-240	96	1 (3.7E 10)
Curium-241	96	10 (3.7E 11)
Curium-242	96	1 (3.7E 10)
Curium-243	96	0.01 (3.7E 8)
Curium-244	96	0.01 (3.7E 8)
Curium-245	96	0.01 (3.7E 8)
Curium-246	96	0.01 (3.7E 8)
Curium-247	96	0.01 (3.7E 8)

APPENDIX B TO § 302.4—RADIONUCLIDES—Continued

Radionuclide	Atomic Number	Final RQ Ci (Bq)
Curium-248	96	0.001 (3.7E 7)
Curium-249	96	1000 (3.7E 13)
Dysprosium-155	66	100 (3.7E 12)
Dysprosium-157	66	100 (3.7E 12)
Dysprosium-159	66	100 (3.7E 12)
Dysprosium-165	66	1000 (3.7E 13)
Dysprosium-166	66	10 (3.7E 11)
Einsteinium-250	99	10 (3.7E 11)
Einsteinium-251	99	1000 (3.7E 13)
Einsteinium-253	99	10 (3.7E 11)
Einsteinium-254m	99	1 (3.7E 10)
Einsteinium-254	99	0.1 (3.7E 9)
Erbium-161	68	100 (3.7E 12)
Erbium-165	68	1000 (3.7E 13)
Erbium-169	68	100 (3.7E 12)
Erbium-171	68	100 (3.7E 12)
Erbium-172	68	10 (3.7E 11)
Europium-145	63	10 (3.7E 11)
Europium-146	63	10 (3.7E 11)
Europium-147	63	10 (3.7E 11)
Europium-148	63	10 (3.7E 11)
Europium-149	63	100 (3.7E 12)
Europium-150 (12.6 hr)	63	1000 (3.7E 13)
Europium-150 (34.2 yr)	63	10 (3.7E 11)
Europium-152m	63	100 (3.7E 12)
Europium-152	63	10 (3.7E 11)
Europium-154	63	10 (3.7E 11)
Europium-155	63	10 (3.7E 11)
Europium-156	63	10 (3.7E 11)
Europium-157	63	10 (3.7E 11)
Europium-158	63	1000 (3.7E 13)
Fermium-252	100	10 (3.7E 11)
Fermium-253	100	10 (3.7E 11)
Fermium-254	100	100 (3.7E 12)
Fermium-255	100	100 (3.7E 12)
Fermium-257	100	1 (3.7E 10)
Fluorine-18	9	1000 (3.7E 13)
Francium-222	87	100 (3.7E 12)
Francium-223	87	100 (3.7E 12)
Gadolinium-145	64	100 (3.7E 12)
Gadolinium-146	64	10 (3.7E 11)
Gadolinium-147	64	10 (3.7E 11)
Gadolinium-148	64	0.001 (3.7E7)
Gadolinium-149	64	100 (3.7E 12)
Gadolinium-151	64	100 (3.7E 12)
Gadolinium-152	64	0.001 (3.7E 7)
Gadolinium-153	64	10 (3.7E 11)
Gadolinium-159	64	1000 (3.7E 13)
Gallium-65	31	1000 (3.7E 13)
Gallium-66	31	10 (3.7E 11)
Gallium-67	31	100 (3.7E 12)
Gallium-68	31	1000 (3.7E 13)
Gallium-70	31	1000 (3.7E 13)
Gallium-72	31	10 (3.7E 11)
Gallium-73	31	100 (3.7E 12)
Germanium-66	32	100 (3.7E 12)
Germanium-67	32	1000 (3.7E 13)
Germanium-68	32	10 (3.7E 11)
Germanium-69	32	10 (3.7E 11)
Germanium-71	32	1000 (3.7E 13)
Germanium-75	32	1000 (3.7E 13)
Germanium-77	32	10 (3.7E 11)
Germanium-78	32	1000 (3.7E 13)
Gold-193	79	100 (3.7E 12)
Gold-194	79	10 (3.7E 11)
Gold-195	79	100 (3.7E 12)
Gold-198m	79	10 (3.7E 11)
Gold-198	79	100 (3.7E 12)
Gold-199	79	100 (3.7E 12)
Gold-200m	79	10 (3.7E 11)

APPENDIX B TO § 302.4—RADIONUCLIDES—Continued

Radionuclide	Atomic Number	Final RQ Ci (Bq)
Gold-200	79	1000 (3.7E 13)
Gold-201	79	1000 (3.7E 13)
Hafnium-170	72	100 (3.7E 12)
Hafnium-172	72	1 (3.7E 10)
Hafnium-173	72	100 (3.7E 12)
Hafnium-175	72	100 (3.7E 12)
Hafnium-177m	72	1000 (3.7E 13)
Hafnium-178m	72	0.1 (3.7E 9)
Hafnium-179m	72	100 (3.7E 12)
Hafnium-180m	72	100 (3.7E 12)
Hafnium-181	72	10 (3.7E 11)
Hafnium-182m	72	100 (3.7E 12)
Hafnium-182	72	0.1 (3.7E 9)
Hafnium-183	72	100 (3.7E 12)
Hafnium-184	72	100 (3.7E 12)
Holmium-155	67	1000 (3.7E 13)
Holmium-157	67	1000 (3.7E 13)
Holmium-159	67	1000 (3.7E 13)
Holmium-161	67	1000 (3.7E 13)
Holmium-162m	67	1000 (3.7E 13)
Holmium-162	67	1000 (3.7E 13)
Holmium-164m	67	1000 (3.7E 13)
Holmium-164	67	1000 (3.7E 13)
Holmium-166m	67	1 (3.7E 10)
Holmium-166	67	100 (3.7E 12)
Holmium-167	67	100 (3.7E 12)
Hydrogen-3	1	100 (3.7E 12)
Indium-109	49	100 (3.7E 12)
Indium-110 (69.1 min)	49	100 (3.7E 12)
Indium-110 (4.9 hr)	49	10 (3.7E 11)
Indium-111	49	100 (3.7E 12)
Indium-112	49	1000 (3.7E 13)
Indium-113m	49	1000 (3.7E 13)
Indium-114m	49	10 (3.7E 11)
Indium-115m	49	100 (3.7E 12)
Indium-115	49	0.1 (3.7E 9)
Indium-116m	49	100 (3.7E 12)
Indium-117m	49	100 (3.7E 12)
Indium-117	49	1000 (3.7E 13)
Indium-119m	49	1000 (3.7E 13)
Iodine-120m	53	100 (3.7E 12)
Iodine-120	53	10 (3.7E 11)
Iodine-121	53	100 (3.7E 12)
Iodine-123	53	10 (3.7E 11)
Iodine-124	53	0.1 (3.7E 9)
Iodine-125	53	0.01 (3.7E 8)
Iodine-126	53	0.01 (3.7E 8)
Iodine-128	53	1000 (3.7E 13)
Iodine-129	53	0.001 (3.7E 7)
Iodine-130	53	1 (3.7E 10)
Iodine-131	53	0.01 (3.7E 8)
Iodine-132m	53	10 (3.7E 11)
Iodine-132	53	10 (3.7E 11)
Iodine-133	53	0.1 (3.7E 9)
Iodine-134	53	100 (3.7E 12)
Iodine-135	53	10 (3.7E 11)
Iridium-182	77	1000 (3.7E 13)
Iridium-184	77	100 (3.7E 12)
Iridium-185	77	100 (3.7E 12)
Iridium-186	77	10 (3.7E 11)
Iridium-187	77	100 (3.7E 12)
Iridium-188	77	10 (3.7E 11)
Iridium-189	77	100 (3.7E 12)
Iridium-190m	77	1000 (3.7E 13)
Iridium-190	77	10 (3.7E 11)
Iridium-192m	77	100 (3.7E 12)
Iridium-192	77	10 (3.7E 11)
Iridium-194m	77	10 (3.7E 11)
Iridium-194	77	100 (3.7E 12)
Iridium-195m	77	100 (3.7E 12)

APPENDIX B TO § 302.4—RADIONUCLIDES—Continued

Radionuclide	Atomic Number	Final RQ Ci (Bq)
Iridium-195	77	1000 (3.7E 13)
Iron-52	26	100 (3.7E 12)
Iron-55	26	100 (3.7E 12)
Iron-59	26	10 (3.7E 11)
Iron-60	26	0.1 (3.7E 9)
Krypton-74	36	10 (3.7E 11)
Krypton-76	36	10 (3.7E 11)
Krypton-77	36	10 (3.7E 11)
Krypton-79	36	100 (3.7E 12)
Krypton-81	36	1000 (3.7E 13)
Krypton-83m	36	1000 (3.7E 13)
Krypton-85m	36	100 (3.7E 12)
Krypton-85	36	1000 (3.7E 13)
Krypton-87	36	10 (3.7E 11)
Krypton-88	36	10 (3.7E 11)
Lanthanum-131	57	1000 (3.7E 13)
Lanthanum-132	57	100 (3.7E 12)
Lanthanum-135	57	1000 (3.7E 13)
Lanthanum-137	57	10 (3.7E 11)
Lanthanum-138	57	1 (3.7E 10)
Lanthanum-140	57	10 (3.7E 11)
Lanthanum-141	57	1000 (3.7E 13)
Lanthanum-142	57	100 (3.7E 12)
Lanthanum-143	57	1000 (3.7E 13)
Lead-195m	82	1000 (3.7E 13)
Lead-198	82	100 (3.7E 12)
Lead-199	82	100 (3.7E 12)
Lead-200	82	100 (3.7E 12)
Lead-201	82	100 (3.7E 12)
Lead-202m	82	10 (3.7E 11)
Lead-202	82	1 (3.7E 10)
Lead-203	82	100 (3.7E 12)
Lead-205	82	100 (3.7E 12)
Lead-209	82	1000 (3.7E 13)
Lead-210	82	0.01 (3.7E 8)
Lead-211	82	100 (3.7E 12)
Lead-212	82	10 (3.7E 11)
Lead-214	82	100 (3.7E 12)
Lutetium-169	71	10 (3.7E 11)
Lutetium-170	71	10 (3.7E 11)
Lutetium-171	71	10 (3.7E 11)
Lutetium-172	71	10 (3.7E 11)
Lutetium-173	71	100 (3.7E 12)
Lutetium-174m	71	10 (3.7E 11)
Lutetium-174	71	10 (3.7E 11)
Lutetium-176m	71	1000 (3.7E 13)
Lutetium-176	71	1 (3.7E 10)
Lutetium-177m	71	10 (3.7E 11)
Lutetium-177	71	100 (3.7E 12)
Lutetium-178m	71	1000 (3.7E 13)
Lutetium-178	71	1000 (3.7E 13)
Lutetium-179	71	1000 (3.7E 13)
Magnesium-28	12	10 (3.7E 11)
Manganese-51	25	1000 (3.7E 13)
Manganese-52m	25	1000 (3.7E 13)
Manganese-52	25	10 (3.7E 11)
Manganese-53	25	1000 (3.7E 13)
Manganese-54	25	10 (3.7E 11)
Manganese-56	25	100 (3.7E 12)
Mendelevium-257	101	100 (3.7E 12)
Mendelevium-258	101	1 (3.7E 10)
Mercury-193m	80	10 (3.7E 11)
Mercury-193	80	100 (3.7E 12)
Mercury-194	80	0.1 (3.7E 9)
Mercury-195m	80	100 (3.7E 12)
Mercury-195	80	100 (3.7E 12)
Mercury-197m	80	1000 (3.7E 13)
Mercury-197	80	1000 (3.7E 13)
Mercury-199m	80	1000 (3.7E 13)
Mercury-203	80	10 (3.7E 11)

APPENDIX B TO § 302.4—RADIONUCLIDES—Continued

Radionuclide	Atomic Number	Final RQ Ci (Bq)
Molybdenum-90	42	100 (3.7E 12)
Molybdenum-93m	42	10 (3.7E 11)
Molybdenum-93	42	100 (3.7E 12)
Molybdenum-99	42	100 (3.7E 12)
Molybdenum-101	42	1000 (3.7E 13)
Neodymium-136	60	1000 (3.7E 13)
Neodymium-138	60	1000 (3.7E 13)
Neodymium-139m	60	100 (3.7E 12)
Neodymium-139	60	1000 (3.7E 13)
Neodymium-141	60	1000 (3.7E 13)
Neodymium-147	60	10 (3.7E 11)
Neodymium-149	60	100 (3.7E 12)
Neodymium-151	60	1000 (3.7E 13)
Neptunium-232	93	1000 (3.7E 13)
Neptunium-233	93	1000 (3.7E 13)
Neptunium-234	93	10 (3.7E 11)
Neptunium-235	93	1000 (3.7E 13)
Neptunium-236 (1.2 E 5 yr)	93	0.1 (3.7E 9)
Neptunium-236 (22.5 hr)	93	100 (3.7E 12)
Neptunium-237	93	0.01 (3.7E 8)
Neptunium-238	93	10 (3.7E 11)
Neptunium-239	93	100 (3.7E 12)
Neptunium-240	93	100 (3.7E 12)
Nickel-56	28	10 (3.7E 11)
Nickel-57	28	10 (3.7E 11)
Nickel-59	28	100 (3.7E 12)
Nickel-63	28	100 (3.7E 12)
Nickel-65	28	100 (3.7E 12)
Nickel-66	28	10 (3.7E 11)
Niobium-88	41	100 (3.7E 12)
Niobium-89 (66 min)	41	100 (3.7E 12)
Niobium-89 (122 min)	41	100 (3.7E 12)
Niobium-90	41	10 (3.7E 11)
Niobium-93m	41	100 (3.7E 12)
Niobium-94	41	10 (3.7E 11)
Niobium-95m	41	100 (3.7E 12)
Niobium-95	41	10 (3.7E 11)
Niobium-96	41	10 (3.7E 11)
Niobium-97	41	100 (3.7E 12)
Niobium-98	41	1000 (3.7E 13)
Osmium-180	76	1000 (3.7E 13)
Osmium-181	76	100 (3.7E 12)
Osmium-182	76	100 (3.7E 12)
Osmium-185	76	10 (3.7E 11)
Osmium-189m	76	1000 (3.7E 13)
Osmium-191m	76	1000 (3.7E 13)
Osmium-191	76	100 (3.7E 12)
Osmium-193	76	100 (3.7E 12)
Osmium-194	76	1 (3.7E 10)
Palladium-100	46	100 (3.7E 12)
Palladium-101	46	100 (3.7E 12)
Palladium-103	46	100 (3.7E 12)
Palladium-107	46	100 (3.7E 12)
Palladium-109	46	1000 (3.7E 13)
Phosphorus-32	15	0.1 (3.7E 9)
Phosphorus-33	15	1 (3.7E 10)
Platinum-186	78	100 (3.7E 12)
Platinum-188	78	100 (3.7E 12)
Platinum-189	78	100 (3.7E 12)
Platinum-191	78	100 (3.7E 12)
Platinum-193m	78	100 (3.7E 12)
Platinum-193	78	1000 (3.7E 13)
Platinum-195m	78	100 (3.7E 12)
Platinum-197m	78	1000 (3.7E 13)
Platinum-197	78	1000 (3.7E 13)
Platinum-199	78	1000 (3.7E 13)
Platinum-200	78	100 (3.7E 12)
Plutonium-234	94	1000 (3.7E 13)
Plutonium-235	94	1000 (3.7E 13)
Plutonium-236	94	0.1 (3.7E 9)

APPENDIX B TO § 302.4—RADIONUCLIDES—Continued

Radionuclide	Atomic Number	Final RQ Ci (Bq)
Plutonium-237	94	1000 (3.7E 13)
Plutonium-238	94	0.01 (3.7E 8)
Plutonium-239	94	0.01 (3.7E 8)
Plutonium-240	94	0.01 (3.7E 8)
Plutonium-241	94	1 (3.7E 10)
Plutonium-242	94	0.01 (3.7E 8)
Plutonium-243	94	1000 (3.7E 13)
Plutonium-244	94	0.01 (3.7E 8)
Plutonium-245	94	100 (3.7E 12)
Polonium-203	84	100 (3.7E 12)
Polonium-205	84	100 (3.7E 12)
Polonium-207	84	10 (3.7E 11)
Polonium-210	84	0.01 (3.7E 8)
Potassium-40	19	1 (3.7E 10)
Potassium-42	19	100 (3.7E 12)
Potassium-43	19	10 (3.7E 11)
Potassium-44	19	100 (3.7E 12)
Potassium-45	19	1000 (3.7E 13)
Praseodymium-136	59	1000 (3.7E 13)
Praseodymium-137	59	1000 (3.7E 13)
Praseodymium-138m	59	100 (3.7E 12)
Praseodymium-139	59	1000 (3.7E 13)
Praseodymium-142m	59	1000 (3.7E 13)
Praseodymium-142	59	100 (3.7E 12)
Praseodymium-143	59	10 (3.7E 11)
Praseodymium-144	59	1000 (3.7E 13)
Praseodymium-145	59	1000 (3.7E 13)
Praseodymium-147	59	1000 (3.7E 13)
Promethium-141	61	1000 (3.7E 13)
Promethium-143	61	100 (3.7E 12)
Promethium-144	61	10 (3.7E 11)
Promethium-145	61	100 (3.7E 12)
Promethium-146	61	10 (3.7E 11)
Promethium-147	61	10 (3.7E 11)
Promethium-148m	61	10 (3.7E 11)
Promethium-148	61	10 (3.7E 11)
Promethium-149	61	100 (3.7E 12)
Promethium-150	61	100 (3.7E 12)
Promethium-151	61	100 (3.7E 12)
Protactinium-227	91	100 (3.7E 12)
Protactinium-228	91	10 (3.7E 11)
Protactinium-230	91	10 (3.7E 11)
Protactinium-231	91	0.01 (3.7E 8)
Protactinium-232	91	10 (3.7E 11)
Protactinium-233	91	100 (3.7E 12)
Protactinium-234	91	10 (3.7E 11)
Radium-223	88	1 (3.7E 10)
Radium-224	88	10 (3.7E 11)
Radium-225	88	1 (3.7E 10)
Radium-226Φ	88	0.1 (3.7E 9)
Radium-227	88	1000 (3.7E 13)
Radium-228	88	0.1 (3.7E 9)
Radon-220	86	0.1 (3.7E 9)
Radon-222	86	0.1 (3.7E 9)
Rhenium-177	75	1000 (3.7E 13)
Rhenium-178	75	1000 (3.7E 13)
Rhenium-181	75	100 (3.7E 12)
Rhenium-182 (12.7 hr)	75	10 (3.7E 11)
Rhenium-182 (64.0 hr)	75	10 (3.7E 11)
Rhenium-184m	75	10 (3.7E 11)
Rhenium-184	75	10 (3.7E 11)
Rhenium-186m	75	10 (3.7E 11)
Rhenium-186	75	100 (3.7E 12)
Rhenium-187	75	1000 (3.7E 13)
Rhenium-188m	75	1000 (3.7E 13)
Rhenium-188	75	1000 (3.7E 13)
Rhenium-189	75	1000 (3.7E 13)
Rhodium-99m	45	100 (3.7E 12)
Rhodium-99	45	10 (3.7E 11)
Rhodium-100	45	10 (3.7E 11)

APPENDIX B TO § 302.4—RADIONUCLIDES—Continued

Radionuclide	Atomic Number	Final RQ Ci (Bq)
Rhodium-101m	45	100 (3.7E 12)
Rhodium-101	45	10 (3.7E 11)
Rhodium-102m	45	10 (3.7E 11)
Rhodium-102	45	10 (3.7E 11)
Rhodium-103m	45	1000 (3.7E 13)
Rhodium-105	45	100 (3.7E 12)
Rhodium-106m	45	10 (3.7E 11)
Rhodium-107	45	1000 (3.7E 13)
Rubidium-79	37	1000 (3.7E 13)
Rubidium-81m	37	1000 (3.7E 13)
Rubidium-81	37	100 (3.7E 12)
Rubidium-82m	37	10 (3.7E 11)
Rubidium-83	37	10 (3.7E 11)
Rubidium-84	37	10 (3.7E 11)
Rubidium-86	37	10 (3.7E 11)
Rubidium-88	37	1000 (3.7E 13)
Rubidium-89	37	1000 (3.7E 13)
Rubidium-87	37	10 (3.7E 11)
Ruthenium-94	44	1000 (3.7E 13)
Ruthenium-97	44	100 (3.7E 12)
Ruthenium-103	44	10 (3.7E 11)
Ruthenium-105	44	100 (3.7E 12)
Ruthenium-106	44	1 (3.7E 10)
Samarium-141m	62	1000 (3.7E 13)
Samarium-141	62	1000 (3.7E 13)
Samarium-142	62	1000 (3.7E 13)
Samarium-145	62	100 (3.7E 12)
Samarium-146	62	0.01 (3.7E 8)
Samarium-147	62	0.01 (3.7E 8)
Samarium-151	62	10 (3.7E 11)
Samarium-153	62	100 (3.7E 12)
Samarium-155	62	1000 (3.7E 13)
Samarium-156	62	100 (3.7E 12)
Scandium-43	21	1000 (3.7E 13)
Scandium-44m	21	10 (3.7E 11)
Scandium-44	21	100 (3.7E 12)
Scandium-46	21	10 (3.7E 11)
Scandium-47	21	100 (3.7E 12)
Scandium-48	21	10 (3.7E 11)
Scandium-49	21	1000 (3.7E 13)
Selenium-70	34	1000 (3.7E 13)
Selenium-73m	34	100 (3.7E 12)
Selenium-73	34	10 (3.7E 11)
Selenium-75	34	10 (3.7E 11)
Selenium-79	34	10 (3.7E 11)
Selenium-81m	34	1000 (3.7E 13)
Selenium-81	34	1000 (3.7E 13)
Selenium-83	34	1000 (3.7E 13)
Silicon-31	14	1000 (3.7E 13)
Silicon-32	14	1 (3.7E 10)
Silver-102	47	100 (3.7E 12)
Silver-103	47	1000 (3.7E 13)
Silver-104m	47	1000 (3.7E 13)
Silver-104	47	1000 (3.7E 13)
Silver-105	47	10 (3.7E 11)
Silver-106m	47	10 (3.7E 11)
Silver-106	47	1000 (3.7E 13)
Silver-108m	47	10 (3.7E 11)
Silver-110m	47	10 (3.7E 11)
Silver-111	47	10 (3.7E 11)
Silver-112	47	100 (3.7E 12)
Silver-115	47	1000 (3.7E 13)
Sodium-22	11	10 (3.7E 11)
Sodium-24	11	10 (3.7E 11)
Strontium-80	38	100 (3.7E 12)
Strontium-81	38	1000 (3.7E 13)
Strontium-83	38	100 (3.7E 12)
Strontium-85m	38	1000 (3.7E 13)
Strontium-85	38	10 (3.7E 11)
Strontium-87m	38	100 (3.7E 12)

APPENDIX B TO § 302.4—RADIONUCLIDES—Continued

Radionuclide	Atomic Number	Final RQ Ci (Bq)
Strontium-89	38	10 (3.7E 11)
Strontium-90	38	0.1 (3.7E 9)
Strontium-91	38	10 (3.7E 11)
Strontium-92	38	100 (3.7E 12)
Sulfur-35	16	1 (3.7E 10)
Tantalum-172	73	100 (3.7E 12)
Tantalum-173	73	100 (3.7E 12)
Tantalum-174	73	100 (3.7E 12)
Tantalum-175	73	100 (3.7E 12)
Tantalum-176	73	10 (3.7E 11)
Tantalum-177	73	1000 (3.7E 13)
Tantalum-178	73	1000 (3.7E 13)
Tantalum-179	73	1000 (3.7E 13)
Tantalum-180m	73	1000 (3.7E 13)
Tantalum-180	73	100 (3.7E 12)
Tantalum-182m	73	1000 (3.7E 13)
Tantalum-182	73	10 (3.7E 11)
Tantalum-183	73	100 (3.7E 12)
Tantalum-184	73	10 (3.7E 11)
Tantalum-185	73	1000 (3.7E 13)
Tantalum-186	73	1000 (3.7E 13)
Technetium-93m	43	1000 (3.7E 13)
Technetium-93	43	100 (3.7E 12)
Technetium-94m	43	100 (3.7E 12)
Technetium-94	43	10 (3.7E 11)
Technetium-96m	43	1000 (3.7E 13)
Technetium-96	43	10 (3.7E 11)
Technetium-97m	43	100 (3.7E 12)
Technetium-97	43	100 (3.7E 12)
Technetium-98	43	10 (3.7E 11)
Technetium-99m	43	100 (3.7E 12)
Technetium-99	43	10 (3.7E 11)
Technetium-101	43	1000 (3.7E 13)
Technetium-104	43	1000 (3.7E 13)
Tellurium-116	52	1000 (3.7E 13)
Tellurium-121m	52	10 (3.7E 11)
Tellurium-121	52	10 (3.7E 11)
Tellurium-123m	52	10 (3.7E 11)
Tellurium-123	52	10 (3.7E 11)
Tellurium-125m	52	10 (3.7E 11)
Tellurium-127m	52	10 (3.7E 11)
Tellurium-127	52	1000 (3.7E 13)
Tellurium-129m	52	10 (3.7E 11)
Tellurium-129	52	1000 (3.7E 13)
Tellurium-131m	52	10 (3.7E 11)
Tellurium-131	52	1000 (3.7E 13)
Tellurium-132	52	10 (3.7E 11)
Tellurium-133m	52	1000 (3.7E 13)
Tellurium-133	52	1000 (3.7E 13)
Tellurium-134	52	1000 (3.7E 13)
Terbium-147	65	100 (3.7E 12)
Terbium-149	65	100 (3.7E 12)
Terbium-150	65	100 (3.7E 12)
Terbium-151	65	10 (3.7E 11)
Terbium-153	65	100 (3.7E 12)
Terbium-154	65	10 (3.7E 11)
Terbium-155	65	100 (3.7E 12)
Terbium-156m (5.0 hr)	65	1000 (3.7E 13)
Terbium-156m (24.4 hr)	65	1000 (3.7E 13)
Terbium-156	65	10 (3.7E 11)
Terbium-157	65	100 (3.7E 12)
Terbium-158	65	10 (3.7E 11)
Terbium-160	65	10 (3.7E 11)
Terbium-161	65	100 (3.7E 12)
Thallium-194m	81	100 (3.7E 12)
Thallium-194	81	1000 (3.7E 13)
Thallium-195	81	100 (3.7E 12)
Thallium-197	81	100 (3.7E 12)
Thallium-198m	81	100 (3.7E 12)
Thallium-198	81	10 (3.7E 11)

APPENDIX B TO § 302.4—RADIONUCLIDES—Continued

Radionuclide	Atomic Number	Final RQ Ci (Bq)
Thallium-199	81	100 (3.7E 12)
Thallium-200	81	10 (3.7E 11)
Thallium-201	81	1000 (3.7E 13)
Thallium-202	81	10 (3.7E 11)
Thallium-204	81	10 (3.7E 11)
Thorium-226	90	100 (3.7E 12)
Thorium-227	90	1 (3.7E 10)
Thorium-228	90	0.01 (3.7E 8)
Thorium-229	90	0.001 (3.7E 7)
Thorium-230	90	0.01 (3.7E 8)
Thorium-231	90	100 (3.7E 12)
Thorium-232Φ	90	0.001 (3.7E 7)
Thorium-234	90	100 (3.7E 12)
Thulium-162	69	1000 (3.7E 13)
Thulium-166	69	10 (3.7E 11)
Thulium-167	69	100 (3.7E 12)
Thulium-170	69	10 (3.7E 11)
Thulium-171	69	100 (3.7E 12)
Thulium-172	69	100 (3.7E 12)
Thulium-173	69	100 (3.7E 12)
Thulium-175	69	1000 (3.7E 13)
Tin-110	50	100 (3.7E 12)
Tin-111	50	1000 (3.7E 13)
Tin-113	50	10 (3.7E 11)
Tin-117m	50	100 (3.7E 12)
Tin-119m	50	10 (3.7E 11)
Tin-121m	50	10 (3.7E 11)
Tin-121	50	1000 (3.7E 13)
Tin-123m	50	1000 (3.7E 13)
Tin-123	50	10 (3.7E 11)
Tin-125	50	10 (3.7E 11)
Tin-126	50	1 (3.7E 10)
Tin-127	50	100 (3.7E 12)
Tin-128	50	1000 (3.7E 13)
Titanium-44	22	1 (3.7E 10)
Titanium-45	22	1000 (3.7E 13)
Tungsten-176	74	1000 (3.7E 13)
Tungsten-177	74	100 (3.7E 12)
Tungsten-178	74	100 (3.7E 12)
Tungsten-179	74	1000 (3.7E 13)
Tungsten-181	74	100 (3.7E 12)
Tungsten-185	74	10 (3.7E 11)
Tungsten-187	74	100 (3.7E 12)
Tungsten-188	74	10 (3.7E 11)
Uranium-230	92	1 (3.7E 10)
Uranium-231	92	1000 (3.7E 13)
Uranium-232	92	0.01 (3.7E 8)
Uranium-233	92	0.1 (3.7E 9)
Uranium-234φ	92	0.1 (3.7E 9)
Uranium-235φ	92	0.1 (3.7E 9)
Uranium-236	92	0.1 (3.7E 9)
Uranium-237	92	100 (3.7E 12)
Uranium-238φ	92	0.1& (3.7E 9)
Uranium-239	92	1000 (3.7E 13)
Uranium-240	92	1000 (3.7E 13)
Vanadium-47	23	1000 (3.7E 13)
Vanadium-48	23	10 (3.7E 11)
Vanadium-49	23	1000 (3.7E 13)
Xenon-120	54	100 (3.7E 12)
Xenon-121	54	10 (3.7E 11)
Xenon-122	54	100 (3.7E 12)
Xenon-123	54	10 (3.7E 11)
Xenon-125	54	100 (3.7E 12)
Xenon-127	54	100 (3.7E 12)
Xenon-129m	54	1000 (3.7E 13)
Xenon-131m	54	1000 (3.7E 13)
Xenon-133m	54	1000 (3.7E 13)
Xenon-133	54	1000 (3.7E 13)
Xenon-135m	54	10 (3.7E 11)
Xenon-135	54	100 (3.7E 12)

APPENDIX B TO § 302.4—RADIONUCLIDES—Continued

Radionuclide	Atomic Number	Final RQ Ci (Bq)
Xenon-138	54	10 (3.7E 11)
Ytterbium-162	70	1000 (3.7E 13)
Ytterbium-166	70	10 (3.7E 11)
Ytterbium-167	70	1000 (3.7E 13)
Ytterbium-169	70	10 (3.7E 11)
Ytterbium-175	70	100 (3.7E 12)
Ytterbium-177	70	1000 (3.7E 13)
Ytterbium-178	70	1000 (3.7E 13)
Yttrium-86m	39	1000 (3.7E 13)
Yttrium-86	39	10 (3.7E 11)
Yttrium-87	39	10 (3.7E 11)
Yttrium-88	39	10 (3.7E 11)
Yttrium-90m	39	100 (3.7E 12)
Yttrium-90	39	10 (3.7E 11)
Yttrium-91m	39	1000 (3.7E 13)
Yttrium-91	39	10 (3.7E 11)
Yttrium-92	39	100 (3.7E 12)
Yttrium-93	39	100 (3.7E 12)
Yttrium-94	39	1000 (3.7E 13)
Yttrium-95	39	1000 (3.7E 13)
Zinc-62	30	100 (3.7E 12)
Zinc-63	30	1000 (3.7E 13)
Zinc-65	30	10 (3.7E 11)
Zinc-69m	30	100 (3.7E 12)
Zinc-69	30	1000 (3.7E 13)
Zinc-71m	30	100 (3.7E 12)
Zinc-72	30	100 (3.7E 12)
Zirconium-86	40	100 (3.7E 12)
Zirconium-88	40	10 (3.7E 11)
Zirconium-89	40	100 (3.7E 12)
Zirconium-93	40	1 (3.7E 10)
Zirconium-95	40	10 (3.7E 11)
Zirconium-97	40	10 (3.7E 11)

Ci—Curie. The curie represents a rate of radioactive decay. One curie is the quantity of any radioactive nuclide which undergoes 3.7E 10 disintegrations per second.

Bq—Becquerel. The becquerel represents a rate of radioactive decay. One becquerel is the quantity of any radioactive nuclide which undergoes one disintegration per second. One curie is equal to 3.7E 10 becquerel.

@—Final RQs for all radionuclides apply to chemical compounds containing the radionuclides and elemental forms regardless of the diameter of pieces of solid material.

&—The adjusted RQ of one curie applies to all radionuclides not otherwise listed. Whenever the RQs in table 302.4 and this appendix to the table are in conflict, the lowest RQ shall apply. For example, uranyl acetate and uranyl nitrate have adjusted RQs shown in table 302.4 of 100 pounds, equivalent to about one-tenth the RQ level for uranium-238 listed in this appendix.

E—Exponent to the base 10. For example, 1.3E 2 is equal to 130 while 1.3E 3 is equal to 1300.

m—Signifies a nuclear isomer which is a radionuclide in a higher energy metastable state relative to the parent isotope.

φ—Notification requirements for releases of mixtures or solutions of radionuclides can be found in § 302.6(b) of this rule. Final RQs for the following four common radionuclide mixtures are provided: radium-226 in secular equilibrium with its daughters (0.053 curie); natural uranium (0.1 curie); natural uranium in secular equilibrium with its daughters (0.052 curie); and natural thorium in secular equilibrium with its daughters (0.011 curie).

[54 FR 33449, Aug. 14, 1989]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting § 302.4, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and at www.fdsys.gov.

§ 302.5 Determination of reportable quantities.

(a) *Listed hazardous substances.* The quantity listed in the column ''Final RQ'' for each substance in table 302.4, or in appendix B to table 302.4, is the reportable quantity (RQ) for that substance. The RQs in table 302.4 are in units of pounds based on chemical toxicity, while the RQs in appendix B to table 302.4 are in units of curies based on radiation hazard. Whenever the RQs in table 302.4 and appendix B to the table are in conflict, the lowest RQ shall apply.

(b) *Unlisted hazardous substances.* Unlisted hazardous substances designated by 40 CFR 302.4(b) have the reportable quantity of 100 pounds, except for those unlisted hazardous wastes which exhibit toxicity identified in 40 CFR 261.24. Unlisted hazardous wastes which exhibit toxicity have the reportable quantities listed in Table 302.4 for the contaminant on which the characteristic of toxicity is based. The reportable quantity applies to the waste itself, not merely to the toxic contaminant. If an unlisted hazardous waste exhibits toxicity on the basis of more than one contaminant, the reportable quantity for that waste shall be the lowest of the reportable quantities listed in Table 302.4 for those contaminants. If an unlisted hazardous waste exhibits the characteristic of toxicity and one or more of the other characteristics referenced in 40 CFR 302.4(b), the reportable quantity for that waste shall be the lowest of the applicable reportable quantities.

[51 FR 34547, Sept. 29, 1986, as amended at 54 FR 22538, May 24, 1989; 67 FR 45356, July 9, 2002]

§ 302.6 Notification requirements.

(a) Any person in charge of a vessel or an offshore or an onshore facility shall, as soon as he or she has knowledge of any release (other than a federally permitted release or application of a pesticide) of a hazardous substance from such vessel or facility in a quantity equal to or exceeding the reportable quantity determined by this part in any 24-hour period, immediately notify the National Response Center (1–800–424–8802; in Washington, DC 202–267–

2675; the facsimile number is 202–267–1322).

(b) Releases of mixtures or solutions (including hazardous waste streams) of

(1) Hazardous substances, except for radionuclides, are subject to the following notification requirements:

(i) If the quantity of all of the hazardous constituent(s) of the mixture or solution is known, notification is required where an RQ or more of any hazardous constituent is released;

(ii) If the quantity of one or more of the hazardous constituent(s) of the mixture or solution is unknown, notification is required where the total amount of the mixture or solution released equals or exceeds the RQ for the hazardous constituent with the lowest RQ; or

(iii) For waste streams K169, K170, K171, K172, K174, and K175, knowledge of the quantity of all of the hazardous constituent(s) may be assumed, based on the following maximum observed constituent concentrations identified by EPA:

Waste	Constituent	max ppm
K174	2,3,7,8-TCDD	0.000039
	1,2,3,7,8-PeCDD	0.0000108
	1,2,3,4,7,8,-HxCDD	0.0000241
	1,2,3,6,7,8,-HxCDD	0.000083
	1,2,3,7,8,9,-HxCDD	0.000062
	1,2,3,4,6,7,8-HpCDD	0.00123
	OCDD	0.0129
	2,3,7,8-TCDF	0.000145
	1,2,3,7,8-PeCDF	0.0000777
	2,3,4,7,8-PeCDF	0.000127
	1,2,3,4,7,8-HxCDF	0.001425
	1,2,3,6,7,8-HxCDF	0.000281
	1,2,3,7,8,9-HxCDF	0.00014
	2,3,4,6,7,8-HxCDF	0.000648
	1,2,3,4,6,7,8-HpCDF	0.0207
	1,2,3,4,7,8,9-HpCDF	0.0135
	OCDF	0.212
K175	Mercury	9200

(2) Radionuclides are subject to this section's notification requirements only in the following circumstances:

(i) If the identity and quantity (in curies) of each radionuclide in a released mixture or solution is known, the ratio between the quantity released (in curies) and the RQ for the radionuclide must be determined for each radionuclide. The only such releases subject to this section's notification requirements are those in which the sum of the ratios for the radionuclides in the mixture or solution released is equal to or greater than one.

(ii) If the identity of each radionuclide in a released mixture or solution is known but the quantity released (in curies) of one or more of the radionuclides is unknown, the only such releases subject to this section's notification requirements are those in which the total quantity (in curies) of the mixture or solution released is equal to or greater than the lowest RQ of any individual radionuclide in the mixture or solution.

(iii) If the identity of one or more radionuclides in a released mixture or solution is unknown (or if the identity of a radionuclide released by itself is unknown), the only such releases subject to this section's notification requirements are those in which the total quantity (in curies) released is equal to or greater than either one curie or the lowest RQ of any known individual radionuclide in the mixture or solution, whichever is lower.

(c) The following categories of releases are exempt from the notification requirements of this section:

(1) Releases of those radionuclides that occur naturally in the soil from land holdings such as parks, golf courses, or other large tracts of land.

(2) Releases of naturally occurring radionuclides from land disturbance activities, including farming, construction, and land disturbance incidental to extraction during mining activities, except that which occurs at uranium, phosphate, tin, zircon, hafnium, vanadium, monazite, and rare earth mines. Land disturbance incidental to extraction includes: land clearing; overburden removal and stockpiling; excavating, handling, transporting, and storing ores and other raw (not beneficiated or processed) materials; and replacing in mined-out areas coal ash, earthen materials from farming or construction, or overburden or other raw materials generated from the exempted mining activities.

(3) Releases of radionuclides from the dumping and transportation of coal and coal ash (including fly ash, bottom ash, and boiler slags), including the dumping and land spreading operations that occur during coal ash uses.

(4) Releases of radionuclides from piles of coal and coal ash, including fly ash, bottom ash, and boiler slags.

(d) Except for releases of radionuclides, notification of the release of an RQ of solid particles of antimony, arsenic, beryllium, cadmium, chromium, copper, lead, nickel, selenium, silver, thallium, or zinc is not required if the mean diameter of the particles released is larger than 100 micrometers (0.004 inches).

(e) The following releases are exempt from the notification requirements of this section:

(1) Releases in amounts less than 1,000 pounds per 24 hours of nitrogen oxide to the air which are the result of combustion and combustion-related activities.

(2) Releases in amounts less than 1,000 pounds per 24 hours of nitrogen dioxide to the air which are the result of combustion and combustion-related activities.

(3) Releases to the air of any hazardous substance from animal waste at farms.

[50 FR 13474, Apr. 4, 1985, as amended at 54 FR 22538, May 24, 1989; 54 FR 33481, Aug. 14, 1989; 63 FR 13475, Mar. 19, 1998; 63 FR 42189, Aug. 6, 1998; 64 FR 13114, Mar. 17, 1999; 65 FR 87132, Nov. 8, 2001; 67 FR 45356, July 9, 2002; 71 FR 58533, Oct. 4, 2006; 73 FR 76959, Dec. 18, 2008; 76 FR 9666, Feb. 22, 2011]

§ 302.7 Penalties.

(a) Any person—

(1) In charge of a vessel from which a hazardous substance is released, other than a federally permitted release, into or upon the navigable waters of the United States, adjoining shorelines, or into or upon the waters of the contiguous zone,

(2) In charge of a vessel from which a hazardous substance is released, other than a federally permitted release, which may affect natural resources belonging to, appertaining to, or under the exclusive management authority of the United States (including resources under the Fishery Conservation and Management Act of 1976), and who is otherwise subject to the jurisdiction of the United States at the time of the release, or

(3) In charge of a facility from which a hazardous substance is released, other than a federally permitted release, in a quantity equal to or greater than that reportable quantity determined under this part who fails to notify immediately the National Response Center as soon as he or she has knowledge of such release or who submits in such a notification any information which he knows to be false or misleading shall be subject to all of the sanctions, including criminal penalties, set forth in section 103(b) of the Act.

(b) Notification received pursuant to this section or information obtained by the exploitation of such notification shall not be used against any such person in any criminal case, except a prosecution for perjury or for giving a false statement.

(c) This section shall not apply to the application of a pesticide product registered under the Federal Insecticide, Fungicide, and Rodenticide Act or to the handling and storage of such a pesticide product by an agricultural producer.

[50 FR 13474, Apr. 4, 1985, as amended at 67 FR 45356, July 9, 2002]

§ 302.8 Continuous releases.

(a) Except as provided in paragraph (c) of this section, no notification is required for any release of a hazardous substance that is, pursuant to the definitions in paragraph (b) of this section, continuous and stable in quantity and rate.

(b) *Definitions.* The following definitions apply to notification of continuous releases:

Continuous. A continuous release is a release that occurs without interruption or abatement or that is routine, anticipated, and intermittent and incidental to normal operations or treatment processes.

Normal range. The normal range of a release is all releases (in pounds or kilograms) of a hazardous substance reported or occurring over any 24-hour period under normal operating conditions during the preceding year. Only releases that are both continuous and stable in quantity and rate may be included in the normal range.

Routine. A routine release is a release that occurs during normal operating procedures or processes.

Stable in quantity and rate. A release that is stable in quantity and rate is a

release that is predictable and regular in amount and rate of emission.

Statistically significant increase. A statistically significant increase in a release is an increase in the quantity of the hazardous substance released above the upper bound of the reported normal range of the release.

(c) *Notification.* The following notifications shall be given for any release qualifying for reduced reporting under this section:

(1) Initial telephone notification;

(2) Initial written notification within 30 days of the initial telephone notification;

(3) Follow-up notification within 30 days of the first anniversary date of the initial written notification;

(4) Notification of a change in the composition or source(s) of the release or in the other information submitted in the initial written notification of the release under paragraph (c)(2) of this section or the follow-up notification under paragraph (c)(3) of this section; and

(5) Notification at such times as an increase in the quantity of the hazardous substance being released during any 24-hour period represents a statistically significant increase as defined in paragraph (b) of this section.

(d) *Initial telephone notification.* Prior to making an initial telephone notification of a continuous release, the person in charge of a facility or vessel must establish a sound basis for qualifying the release for reporting under CERCLA section 103(f)(2) by:

(1) Using release data, engineering estimates, knowledge of operating procedures, or best professional judgment to establish the continuity and stability of the release;

(2) Reporting the release to the National Response Center for a period sufficient to establish the continuity and stability of the release; or

(3) When a person in charge of the facility or vessel believes that a basis has been established to qualify the release for reduced reporting under this section, initial notification to the National Response Center shall be made by telephone. The person in charge must identify the notification as an initial continuous release notification report and provide the following information:

(i) The name and location of the facility or vessel; and

(ii) The name(s) and identity(ies) of the hazardous substance(s) being released.

(e) *Initial written notification.* Initial written notification of a continuous release shall be made to the appropriate EPA Regional Office for the geographical area where the releasing facility or vessel is located. (Note: In addition to the requirements of this part, releases of CERCLA hazardous substances are also subject to the provisions of SARA title III section 304, and EPA's implementing regulations codified at 40 CFR part 355, which require initial telephone and written notifications of continuous releases to be submitted to the appropriate State emergency response commission and local emergency planning committee.)

(1) Initial written notification to the appropriate EPA Regional Office shall occur within 30 days of the initial telephone notification to the National Response Center, and shall include, for each release for which reduced reporting as a continuous release is claimed, the following information:

(i) The name of the facility or vessel; the location, including the latitude and longitude; the case number assigned by the National Response Center or the Environmental Protection Agency; the Dun and Bradstreet number of the facility, if available; the port of registration of the vessel; the name and telephone number of the person in charge of the facility or vessel.

(ii) The population density within a one-mile radius of the facility or vessel, described in terms of the following ranges: 0–50 persons, 51–100 persons, 101–500 persons, 501–1,000 persons, more than 1,000 persons.

(iii) The identity and location of sensitive populations and ecosystems within a one-mile radius of the facility or vessel (e.g., elementary schools, hospitals, retirement communities, or wetlands).

(iv) For each hazardous substance release claimed to qualify for reporting under CERCLA section 103(f)(2), the following information must be supplied:

(A) The name/identity of the hazardous substance; the Chemical Abstracts Service Registry Number for the substance (if available); and if the substance being released is a mixture, the components of the mixture and their approximate concentrations and quantities, by weight.

(B) The upper and lower bounds of the normal range of the release (in pounds or kilograms) over the previous year.

(C) The source(s) of the release (e.g., valves, pump seals, storage tank vents, stacks). If the release is from a stack, the stack height (in feet or meters).

(D) The frequency of the release and the fraction of the release from each release source and the specific period over which it occurs.

(E) A brief statement describing the basis for stating that the release is continuous and stable in quantity and rate.

(F) An estimate of the total annual amount that was released in the previous year (in pounds or kilograms).

(G) The environmental medium(a) affected by the release:

(*1*) If surface water, the name of the surface water body;

(*2*) If a stream, the stream order or average flowrate (in cubic feet/second) and designated use;

(*3*) If a lake, the surface area (in acres) and average depth (in feet or meters);

(*4*) If on or under ground, the location of public water supply wells within two miles.

(H) A signed statement that the hazardous substance release(s) described is(are) continuous and stable in quantity and rate under the definitions in paragraph (b) of this section and that all reported information is accurate and current to the best knowledge of the person in charge.

(f) *Follow-up notification.* Within 30 days of the first anniversary date of the initial written notification, the person in charge of the facility or vessel shall evaluate each hazardous substance release reported to verify and update the information submitted in the initial written notification. The follow-up notification shall include the following information:

(1) The name of the facility or vessel; the location, including the latitude and longitude; the case number assigned by the National Response Center or the Environmental Protection Agency; the Dun and Bradstreet number of the facility, if available; the port of registration of the vessel; the name and telephone number of the person in charge of the facility or vessel.

(2) The population density within a one-mile radius of the facility or vessel, described in terms of the following ranges: 0–50 persons, 51–100 persons, 101–500 persons, 501–1,000 persons, more than 1,000 persons.

(3) The identity and location of sensitive populations and ecosystems within a one-mile radius of the facility or vessel (e.g., elementary schools, hospitals, retirement communities, or wetlands).

(4) For each hazardous substance release claimed to qualify for reporting under CERCLA section 103(f)(2), the following information shall be supplied:

(i) The name/identity of the hazardous substance; the Chemical Abstracts Service Registry Number for the substance (if available); and if the substance being released is a mixture, the components of the mixture and their approximate concentrations and quantities, by weight.

(ii) The upper and lower bounds of the normal range of the release (in pounds or kilograms) over the previous year.

(iii) The source(s) of the release (e.g., valves, pump seals, storage tank vents, stacks). If the release is from a stack, the stack height (in feet or meters).

(iv) The frequency of the release and the fraction of the release from each release source and the specific period over which it occurs.

(v) A brief statement describing the basis for stating that the release is continuous and stable in quantity and rate.

(vi) An estimate of the total annual amount that was released in the previous year (in pounds or kilograms).

(vii) The environmental medium(a) affected by the release:

(A) If surface water, the name of the surface water body;

(B) If a stream, the stream order or average flowrate (in cubic feet/second) and designated use;

(C) If a lake, the surface area (in acres) and average depth (in feet or meters);

(D) If on or under ground, the location of public water supply wells within two miles.

(viii) A signed statement that the hazardous substance release(s) is(are) continuous and stable in quantity and rate under the definitions in paragraph (b) of this section and that all reported information is accurate and current to the best knowledge of the person in charge.

(g) *Notification of changes in the release.* If there is a change in the release, notification of the change, not otherwise reported, shall be provided in the following manner:

(1) *Change in source or composition.* If there is any change in the composition or source(s) of the release, the release is a new release and must be qualified for reporting under this section by the submission of initial telephone notification and initial written notification in accordance with paragraphs (c) (1) and (2) of this section as soon as there is a sufficient basis for asserting that the release is continuous and stable in quantity and rate;

(2) *Change in the normal range.* If there is a change in the release such that the quantity of the release exceeds the upper bound of the reported normal range, the release must be reported as a statistically significant increase in the release. If a change will result in a number of releases that exceed the upper bound of the normal range, the person in charge of a facility or vessel may modify the normal range by:

(i) Reporting at least one statistically significant increase report as required under paragraph (c)(7) of this section and, at the same time, informing the National Response Center of the change in the normal range; and

(ii) Submitting, within 30 days of the telephone notification, written notification to the appropriate EPA Regional Office describing the new normal range, the reason for the change, and the basis for stating that the release in the increased amount is continuous and stable in quantity and rate under the definitions in paragraph (b) of this section.

(3) *Changes in other reported information.* If there is a change in any information submitted in the initial written notification or the followup notification other than a change in the source, composition, or quantity of the release, the person in charge of the facility or vessel shall provide written notification of the change to the EPA Region for the geographical area where the facility or vessel is located, within 30 days of determining that the information submitted previously is no longer valid. Notification shall include the reason for the change, and the basis for stating that the release is continuous and stable under the changed conditions.

(4) Notification of changes shall include the case number assigned by the National Response Center or the Environmental Protection Agency and also the signed certification statement required at (c)(2)(xi) of this section.

(h) *Notification of a statistically significant increase in a release.* Notification of a statistically significant increase in a release shall be made to the National Response Center as soon as the person in charge of the facility or vessel has knowledge of the increase. The release must be identified as a statistically significant increase in a continuous release. A determination of whether an increase is a ''statistically significant increase'' shall be made based upon calculations or estimation procedures that will identify releases that exceed the upper bound of the reported normal range.

(i) *Annual evaluation of releases.* Each hazardous substance release shall be evaluated annually to determine if changes have occurred in the information submitted in the initial written notification, the followup notification, and/or in a previous change notification.

(j) *Use of the SARA Title III section 313 form.* In lieu of an initial written report or a followup report, owners or operators of facilities subject to the requirements of SARA title III section 313 may submit to the appropriate EPA Regional Office for the geographical area where the facility is located, a

copy of the Toxic Release Inventory form submitted under SARA Title III section 313 the previous July 1, provided that the following information is added:

(1) The population density within a one-mile radius of the facility or vessel, described in terms of the following ranges: 0–50 persons, 51–100 persons, 101–500 persons, 501–1,000 persons, more than 1,000 persons.

(2) The identity and location of sensitive populations and ecosystems within a one-mile radius of the facility or vessel (e.g., elementary schools, hospitals, retirement communities, or wetlands).

(3) For each hazardous substance release claimed to qualify for reporting under CERCLA section 103(f)(2), the following information must be supplied:

(i) The upper and lower bounds of the normal range of the release (in pounds or kilograms) over the previous year.

(ii) The frequency of the release and the fraction of the release from each release source and the specific period over which it occurs.

(iii) A brief statement describing the basis for stating that the release is continuous and stable in quantity and rate.

(iv) A signed statement that the hazardous substance release(s) is(are) continuous and stable in quantity and rate under the definitions in paragraph (b) of this section and that all reported information is accurate and current to the best knowledge of the person in charge.

(k) *Documentation supporting notification*. Where necessary to satisfy the requirements of this section, the person in charge may rely on recent release data, engineering estimates, the operating history of the facility or vessel, or other relevant information to support notification. All supporting documents, materials, and other information shall be kept on file at the facility, or in the case of a vessel, at an office within the United States in either a port of call, a place of regular berthing, or the headquarters of the business operating the vessel. Supporting materials shall be kept on file for a period of one year and shall substantiate the reported normal range of releases, the basis for stating that the release is continuous and stable in quantity and rate, and the other information in the initial written report, the followup report, and the annual evaluations required under paragraphs (e), (f), and (i), respectively. Such information shall be made available to EPA upon request as necessary to enforce the requirements of this section.

(l) *Multiple concurrent releases*. Multiple concurrent releases of the same substance occurring at various locations with respect to contiguous plants or installations upon contiguous grounds that are under common ownership or control may be considsred separately or added together in determining whether such releases constitute a continuous release or a statistically significant increase under the definitions in paragraph (b) of this section; whichever approach is elected for purposes of determining whether a release is continuous also must be used to determine a statistically significant increase in the release.

(m) *Penalties for failure to comply*. The reduced reporting requirements provided for under this section shall apply only so long as the person in charge complies fully with all requirements of paragraph (c) of this section. Failure to comply with respect to any release from the facility or vessel shall subject the person in charge to all of the reporting requirements of §302.6 for each such release, to the penalties under §302.7, and to any other applicable penalties provided for by law.

[55 FR 30185, July 24, 1990, as amended at 67 FR 45357, July 9, 2002]

PART 303—CITIZEN AWARDS FOR INFORMATION ON CRIMINAL VIOLATIONS UNDER SUPERFUND

Subpart A—General

Sec.
303.10 Purpose.
303.11 Definitions.
303.12 Criminal violations covered by this award authority.

Subpart B—Eligibility To File a Claim for Award and Determination of Eligibility and Amount of Award

303.20 Eligibility to file a claim for award.

Appendix B
Plan Review and Evaluation Log and SPCC Conformance Requirements

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SPCC Review and Evaluation Log

The table below documents the review and evaluation of the SPCC Plan for the Fleet Management facility and documents amendments and/or P.E. Certification that has been required. Insert all previous amendment documentation and /or P.E. Certification.

Facility Name: ***Pino Yards Fleet Management Facility***

Reviewer Signature	Reviewer Name	Date	Plan Amended?		If technical amendment P.E. Certified?		Describe Amendments: (technical and/or administrative)
			Yes	No	Yes	No	
			Yes	No	Yes	No	
			Yes	No	Yes	No	
			Yes	No	Yes	No	
			Yes	No	Yes	No	
			Yes	No	Yes	No	
			Yes	No	Yes	No	

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SPCC Conformance Requirements

The table below details the items that need to be addressed by the SPCC implementation date.

SPCC Conformance Requirements

Facility Name: ***Pino Yards Fleet Management Facility***

Finding	Priority	Action	Completion Date	Management Approval
Empty 55-gallon oil drums stored in Lube Room, Preventative Maintenance Shop, and Fuel Management Specialty Shop shall be labeled as "Empty" and removed from the facility once the new ASTs are placed into service.	Low			
Spill response plans and spill response kits shall be posted in areas of the facility where oil products are stored and/or used.	High			
All 55-gallon drums shall be labeled indicating their contents.	Low			
Install a mechanism for detecting fluid in the interstitial space (double wall) of the 500-gallon used oil storage tank located outside of the maintenance shop.	Medium			
Provide secondary containment for all 55-gallon drums containing oil.	High			

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Appendix C
Figures

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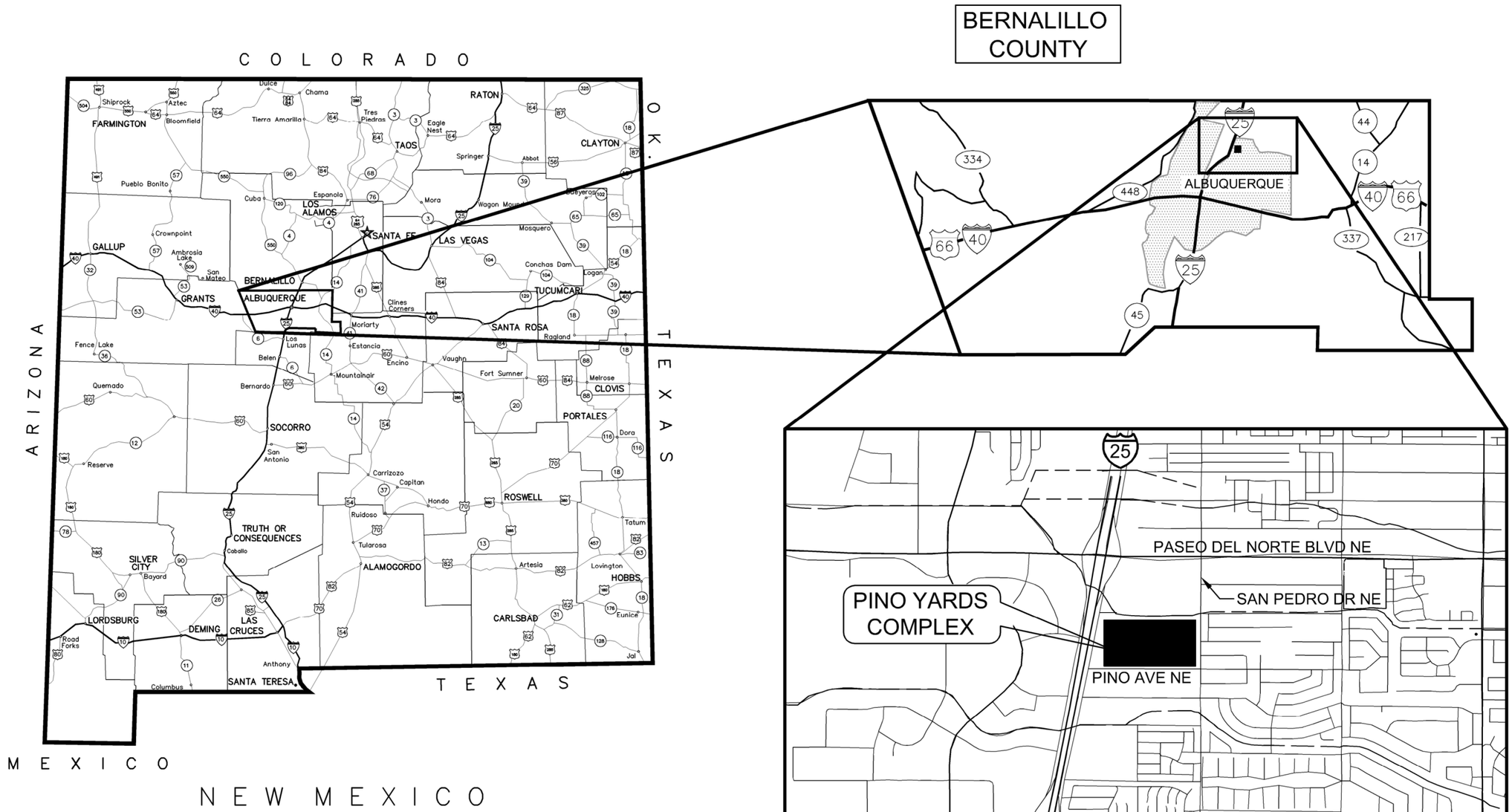

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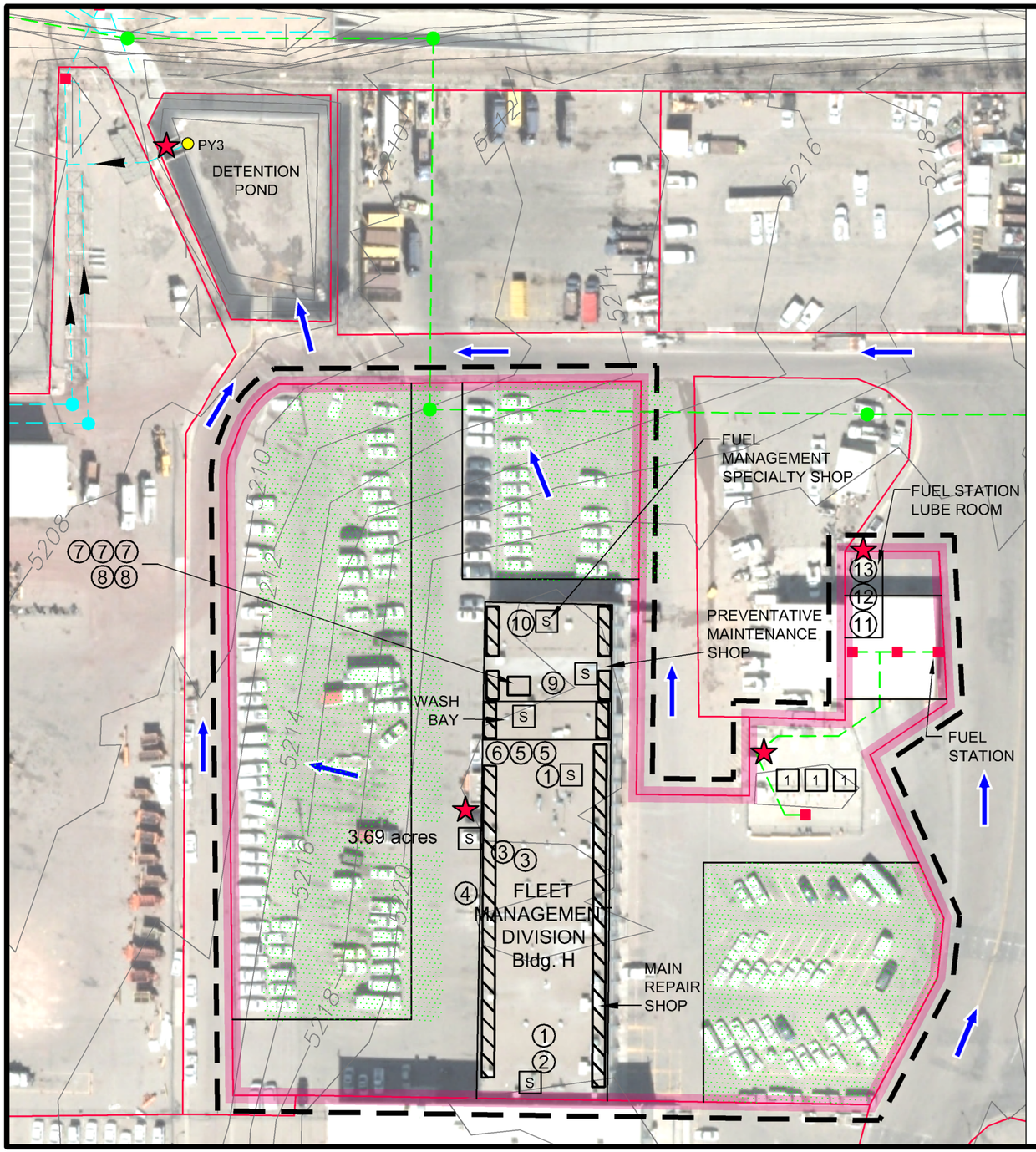
CDM Smith

City of Albuquerque
Spill Prevention, Control and Countermeasures Plan (SPCC)
Pino Yards Fleet Management Facility

Figure No. 1
General Location Map
DECEMBER 2014



N

1" = 80'

40 0 80

LEGEND

- OIL-WATER SEPARATOR (OWS) (SEE NOTE 1)
- SANITARY SEWER AND MANHOLE
- STORM DRAIN AND MANHOLE
- GRATED DROP INLET
- TRENCH DRAIN
- VEHICLE PARKING
- SURFACE WATER FLOW DIRECTION
- DRAINAGE BOUNDARY
- FACILITY BOUNDARY
- PY3 OUTFALL/MONITORING POINT & ID #
- S SPILL RESPONSE MATERIALS

NOTE:
1. FUEL STATION, WASH BUILDING AND MAINTENANCE BUILDING PROVIDED WITH TRENCH DRAINS WHICH DISCHARGE TO OWS AND SANITARY SEWER.

PETROLEUM STORAGE TANKS - COVERED BY SPCC PLAN

1. USED OIL, 250-GALLON AST (MAINTENANCE BUILDING)
2. USED OIL, 55-GALLON DRUM (MAINTENANCE BUILDING)
3. OIL, 55-GALLON DRUM (MAINTENANCE BUILDING)
4. USED OIL, 500-GALLON AST (MAINTENANCE BUILDING, OUTDOOR)
5. OIL, 250-GALLON AST (LUBE ROOM)
6. ATF, 250-GALLON AST (LUBE ROOM)
7. USED OIL, 55-GALLON DRUM (PREVENTIVE MAINTENANCE SHOP)
8. HYDRAULIC FLUID, 55-GALLON DRUM (PREVENTIVE MAINTENANCE SHOP)
9. USED OIL, 500-GALLON AST (PREVENTIVE MAINTENANCE SHOP)
10. USED OIL, 100-GALLON AST (FUEL MANAGEMENT SPECIALTY SHOP)
11. OIL, 250-GALLON AST (FUELING STATION LUBE ROOM)
12. ATF, 250-GALLON AST (FUELING STATION LUBE ROOM)
13. HYDRAULIC FLUID, 264-GALLON AST (FUELING STATION LUBE ROOM)

PETROLEUM STORAGE TANKS - COVERED BY OTHER PLANS

1. DIESEL AND UNLEADED FUEL 20,000-GALLON TANK (UST) EXEMPT

S:\0668\105002\ Pino-SPCC_Fig2 12/09/14 15:46 MesquitaRS XREFS: PINO YARD, PINO STORM PIPES, PINO STORM MH, PINO CONTOURS, ABQ_Sewer_Pino,
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AND ARE NOT TO BE USED, IN WHOLE OR PART, FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF CDM SMITH.

CDM Smith

City of Albuquerque
Spill Prevention, Control and Countermeasures Plan (SPCC)
Pino Yards Fleet Management Facility

Figure No. 2
Site Plan
DECEMBER 2014

Appendix D
Calculations

DRAFT

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SPCC Plan
Secondary Containment Capacities

1.0 Purpose/Objective

Calculate the available secondary containment capacity following the spill event of the largest container within the secondary containment area.

2.0 Procedure

At each of the locations listed below where fluids are stored, determine the secondary containment dimensions and calculate the total containment volume. Calculate the volume of the largest container storing fluid to use as the maximum spill volume and determine the remaining available secondary containment capacity and freeboard for uncovered areas.

Maintenance Building:
1) Two, single wall 250 gallon used oil maintenance.
2) One, 55-gallon used oil drum.
3) Two, 55-gallon motor oil drums.
4) Double walled 500 gallon used oil AST located outdoors.

Maintenance Building Lube Room:
5) Two, single walled 250 gallon motor oil maintenance.
6) Single walled 250 gallon ATF AST.
7) Two, 55-gallon motor oil drums.

Fueling Station Lube Room:
8) Double walled 250-gallon motor oil AST.
9) Double walled 264-gallon Hydraulic Fluid AST.
10) Double walled 250-gallon ATF AST.

Preventative Maintenance Shop:
11) Three, 55-gallon used oil drums.
12) Double walled 500-gallon used oil AST.
13) Two, 55-gallon hydraulic fluid drums.

Fuel Management Specialty Shop:
14) Double walled 100-gallon used oil AST.

3.0 References/Data Sources

CABQ Department of Finance and Administration - Fleet Management SPCC Plan Maximum Probable Spill Rate Calculations (08/05/2014)

4.0 Assumptions

Refer to Section 5.0

5.0 Calculations

Maintenance Building:

1) Two, single wall 250 gallon used oil ASTs. Any leaks or ruptures of the interior tank wall are contained within the maintenance building.
2) One, 55-gallon used oil drum is stored vertically on rigid plastic secondary containment pallet. The containment pallet has a minimum storage volume of 55-gallons.
3) Two, 55-gallon motor oil drums are stored vertically on rigid plastic secondary containment pallets. Each containment pallet has a minimum storage volume of 55-gallons.
4) Double wall 500 gallon used oil AST located outdoors. Any leaks or ruptures of the interior tank wall are contained by the outer wall.

Maintenance Building Lube Room:

5) Two, single walled 250 gallon motor oil maintenance are stored in 275 gallon plastic sumps. Any leaks or ruptures of the tank wall are contained by the sump.
6) Single wall 250 gallon ATF AST stored in 275 gallon plastic sump. Any leaks or ruptures of the tank wall are contained by the sump.
7) Two, 55-gallon motor oil drums are stored vertically on rigid plastic secondary containment pallets. Each containment pallet has a minimum storage volume of 55-gallons.

Fueling Station Lube Room:

8) Double wall 250-gallon motor oil AST. Any leaks or ruptures of the interior tank wall are contained by the outer wall.
9) Double wall 264-gallon Hydraulic Fluid AST. Any leaks or ruptures of the interior tank wall are contained by the outer wall.
10) Double wall 250-gallon ATF AST. Any leaks or ruptures of the interior tank wall are contained by the outer wall.

Preventative Maintenance Shop:

11) Three, 55-gallon used oil drums are stored vertically on rigid plastic secondary containment pallets. Each containment pallet has a minimum storage volume of 55-gallons.
12) Double wall 500-gallon used oil AST. Any leaks or ruptures of the interior tank wall are contained by the outer wall.
13) Two, 55-gallon hydraulic fluid drums are stored vertically on rigid plastic secondary containment pallets. Each containment pallet has a minimum storage volume of 55-gallons.

Fuel Management Specialty Shop:

14) Double wall 100-gallon used oil AST. Any leaks or ruptures of the interior tank wall are contained by the outer wall.

6.0 Conclusions/Results

Sized secondary containment should be provided for all stationary (fixed) aboveground oil storage tanks at the following volumes. Outdoor, uncovered storage requires an additional 6-inches of freeboard for precipitation:

Maintenance Building:

1) The two 250 gallon used oil maintenance have secondary containment provided by the Maintenance Building.

2) The 55-gallon used oil drum is located on a rigid plastic secondary containment pallet.

3) The two 55-gallon motor oil drums are located on rigid plastic secondary containment pallets.

4) The 500 gallon used oil AST located outdoors is double-wall providing secondary containment.

Maintenance Building Lube Room:

5) The two 250 gallon motor oil maintenance are stored in 275-gallon plastic sumps providing secondary containment.

6) The 250 gallon ATF AST is stored in 275-gallon plastic sumps providing secondary containment.

7) The two 55-gallon motor oil drums are located on rigid plastic secondary containment pallets.

Fueling Station Lube Room:

8) The 250-gallon motor oil AST is double-wall providing secondary containment.

9) The 264-gallon Hydraulic Fluid AST is double-wall providing secondary containment.

10) The 250-gallon ATF AST is double-wall providing secondary containment.

Preventative Maintenance Shop:

11) The three 55-gallon used oil drums are located on rigid plastic secondary containment pallets.

12) The 500-gallon used oil AST is double-wall providing secondary containment.

13) The two 55-gallon hydraulic fluid drums are located on rigid plastic secondary containment pallets.

Fuel Management Specialty Shop:

14) The 100-gallon used oil AST is double-wall providing secondary containment.

SPCC Plan
Maximum Probable Spill Rates

1.0 Purpose/Objective

Calculate the maximum probable spill rate resulting from the most probable spill from an oil container. Calculation is performed for each type of oil container.

2.0 Procedure

For each container type determine: (1) most probable method of spill, (2) size of leak/puncture, (3) amount of head. An orifice flow equation will be used to determine the velocity of spill from the leak. Spill rate is then calculated using the area of leak/puncture. Spill rates will be calculated for three volumes of oil/fuel containers.

3.0 References/Data Sources

CABQ Department of Finance and Administration- Fleet Management SPCC Plan

4.0 Assumptions

The following oil containers are located at Fleet Management:

1) Two, single wall 250 gallon used oil ASTs located indoors at the Maintenance Building.
2) One, 55-gallon used oil drum located indoors at the Maintenance Building.
3) Two, 55-gallon motor oil drums located indoors at the Maintenance Building.
4) Double walled 500 gallon used oil AST located outdoors at the Maintenance Building.
5) Two, single walled 250 gallon motor oil ASTs located in the Maintenance Building Lube Room.
6) Single walled 250 gallon ATF AST located in the Maintenance Building Lube Room.
7) Two, 55-gallon motor oil drums located in the Maintenance Building Lube Room.
8) Double walled 250-gallon motor oil AST located in the Fueling Station Lube Room.
9) Double walled 264-gallon Hydraulic Fluid AST located in the Fueling Station Lube Room.
10) Double walled 250-gallon ATF AST located in the Fueling Station Lube Room.
11) Three, 55-gallon used oil drums located in the Preventative Maintenance Shop.
12) Double walled 500-gallon used oil AST located in the Preventative Maintenance Shop.
13) Two, 55-gallon hydraulic fluid drums located in the Preventative Maintenance Shop.
14) Double walled 100-gallon used oil AST located in the Fuel Management Specialty Shop.

Orifice Flow Equation: v = Cv x sqrt(gxh)
where: v = velocity (feet/sec)
Cv = discharge coefficient
g = gravity (feet/second^2)
h = head (feet)

Continuity Equation: Q = v x A
where: Q = flow rate (gal/minute)
v = velocity (feet/second)
A = puncture/leak area (square feet)

Area of leak/puncture equation: A = pi x (D/2)^2
where: A = area of leak/puncture (square inch)
D = puncture/leak diameter (inches)
pi = constant (3.1416)

Constants: $g = 32.174 \frac{ft}{s^2}$ *(gravity)*

$Cv := 0.98$ *(orifice discharge coefficient)*

$\pi = 3.1416$ *(pi)*

5.0 Calculations

1) 500 gallon used oil tank: Potential spill comes from transfer to bulk truck. Most probable spill is overfilling the truck. Assume transfer flow rate is 60 gpm.

$Q1 := 60gpm$ *(transfer pump flow rate)*

2) 250 gallon oil and ATF tanks: Potential spill comes from transfer to tank from bulk truck. Hose break or fitting failure in transfer hose from tank to truck. Assume transfer flow rate is 60 gpm.

$Q2 := 60gpm$ *(transfer pump flow rate)*

3) 264 gallon hydraulic fluid tank: Potential spill comes from transfer to tank from bulk truck. Hose break or fitting failure in transfer hose from tank to truck. Assume transfer flow rate is 60 gpm.

$Q3 := 60gpm$ *(transfer pump flow rate)*

4) 100 gallon used tank: Potential spill comes from transfer to tank from bulk truck. Hose break or fitting failure in transfer hose from tank to truck. Assume transfer flow rate is 60 gpm.

$Q4 := 60gpm$ *(transfer pump flow rate)*

3) 55 gallon drums stored on site: Potential spill occurs from overturned drum. Drum on ground floor.

$d5 := 1in$ *(drum opening)*

$h5 := 2.9ft$ *(head)*

$A5 := \pi\left(\frac{d5}{2}\right)^2 = 0.0055\,ft^2$ *(opening area)*

$v5 := Cv\cdot\sqrt{g\cdot h5} = 9.4662\,\frac{ft}{s}$ *(velocity)*

$Q5 := v5\cdot A5 = 23\,gpm$ *(flow rate)*

6.0 Conclusions/Results

Maximum probable spill rates for each container type are as follows:

1) 500-gallon used oil tank located outside the Maintenance Building. $Q1 = 60\,gpm$

2) 250-gallon oil and ATF tanks located in the Lube Room. $Q2 = 60\cdot gpm$

3) 264-gallon hydraulic fluid tank located in the Lube Room $Q3 = 60\cdot gpm$

4) 100-gallon used oil tank located in the Fuel Management Specialty Shop. $Q4 = 60\,gpm$

3) 55-gallon drums stored throughout the site. $Q5 = 23\,gpm$

Appendix E
Inspection Checklists

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DAYTONA TRANSIT FACILITY

Portable Container MONTHLY Inspection Checklist

Based on Requirements of STI SP001

Inspection Date: _____ **Retain Until Date:** _____ **(36 Months from Inspection Date)**

Prior Inspection Date: _____ **Inspector Name:** _____

	Outdoors		Maintenance Building		Lube Room		Preventative Maintenance Shop		Fuel Management Specialty Shop		Fuel Station Lube Room		Total Drums on Site
Drum Quantity:													
1.0 AST Containment/Storage Area													
1.1 ASTs within designated storage area?	Yes		Yes		Yes		Yes		Yes		Yes		
	No		No		No		No		No		No		
1.2 Debris, spills, or other fire hazards in containment or storage area?	Yes		Yes		Yes		Yes		Yes		Yes		
	No		No		No		No		No		No		
1.3 Water in outdoor secondary containment?	Yes		Yes		Yes		Yes		Yes		Yes		
	No		No		No		No		No		No		
1.4 Drain valves operable and in closed position?	Yes		Yes		Yes		Yes		Yes		Yes		
	No		No		No		No		No		No		
1.5 Egress pathways clear and gates/doors operable?	Yes		Yes		Yes		Yes		Yes		Yes		
	No		No		No		No		No		No		
2.0 Leak Detection													
2.1 Visible signs of leakage around the container or storage area?	Yes		Yes		Yes		Yes		Yes		Yes		
	No		No		No		No		No		No		
3.0 Container													
3.1 Noticeable distortions, buckling, denting or bulging on any drums?	Yes		Yes		Yes		Yes		Yes		Yes		
	No		No		No		No		No		No		

If a shaded box is checked, immediate attention/action is necessary to address the problem.

Describe action taken here: _____

_____

_____

_____

_____

DAYTONA TRANSIT FACILITY

Aboveground Storage Tank MONTHLY Inspection Checklist

Based on Requirements of STI SP001

Prior Inspection Date: _____ **Inspector Name:** _____

	Maintenance Shop (Outdoor)		Maintenance Shop (Indoor)		Maintenace Shop Lube Room		Maintenance Shop Lube Room		Maintenance Shop Lube Room		Prevenative Maintenance Shop		Fuel Management Specialty Shop		Fuel Station Lube Room		Fuel Station Lube Room		Fuel Station Lube Room		If a shaded box is checked, immediate attention/action is necessary to address the problem. Describe here:
	Used Oil Tank		Used Oil Tank		Automatic Transmission Fluid		Motor Oil		Motor Oil		Used Oil		Used Oil		Motor Oil		Hydrualic Fluid		Automatic Trasmission Fluid		
Tank Volume:	500 Gallons		250 Gallons		250 Gallons		250 Gallons		250 Gallons		500 Gallons		100 Gallons		250 Gallons		264 Gallons		250 Gallons		
Tank Containment																					
Containment Structure Containment free of water, debris, cracks, or fire hazard	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	
Primary Tank Check for water. Water present?	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	
Containment Drain Valves Operable and in a closed position	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	
Pathways and Entry Clear and gates/doors operable	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	
Leak Detection																					
Tank Visible signs of leakage	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	
Secondary Containment Visible signs of leakage from tank into secondary containment	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	
Interstice Visible signs of leakage	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	
Tank Equipment																					
Valves a. Leaks observed	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	
b. Tank drain locked	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	
Spill containment boxes on fill pipe a. Containment free of debris, residue, and water.	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	
b. Drain valves operable and closed.	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	
Liquid Level Equipment a. Devices (both visual and mechanical) are in good condition and operable?	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	
b. Each device is easy to read.	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	
Overfill Equipment a. If equipped with a "test" button, activate the audible horn or light to confirm operation. Overfill alarm is operational?	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	
b. Overfill valve is operational?	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	
Piping Connections Leaks, corrosion and damage observed at piping connections?	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	
Tank Attachments and Appurtenances																					
Ladder and Platform Structure Secure with no sign of severe corrosion or damage?	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	
Other Conditions																					
Are there any other conditions that should be addressed for continued safe operation or that may affect the site spill prevention plan?	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	

DAYTONA TRANSIT FACILITY
Aboveground Storage Tank ANNUAL Inspection Checklist
Based on Requirements of STI SP001

Inspection Date: _____

Prior Inspection Date: _____

Retain Until Date: _____
(36 Months from Inspection Date)

Inspector Name: _____

	Maintenance Shop (Outdoor)		Maintenance Shop (Indoor)		Maintenance Shop Lube Room		Maintenance Shop Lube Room		Maintenance Shop Lube Room		Prevenative Maintenance Shop		Fuel Management Specialty Shop	
	Used Oil Tank		Used Oil Tank		Automatic Transmission Fluid		Motor Oil		Motor Oil		Used Oil		Used Oil	
Tank Volume:	500 Gallons		250 Gallons		250 Gallons		250 Gallons		250 Gallons		500 Gallons		100 Gallons	
1.0 Tank Containment														
1.1 **Containment Structure** Any of the following observed: a. holes or cracks in containment wall or floor b. Corrosion c. Leakage d. Paint failure/chipping/rust e. Tank settling	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No
2.0 Tank Foundation and Supports														
2.1 **Foundation** Settlement or foundation washout?	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No
2.2 **Concrete Pad or Ring Wall** Cracking or spalling?	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No
2.3 **Supports** Corrosion, paint failure, structural	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No
2.4 **Water Drainage** Water drains away from tank?	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No
2.5 **Tank Grounding** Strap secured and in good condition?	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No
3.0 Cathodic Protection														
3.1 **Galvanic Cathodic Protection System** Confirm system is functional, includes the wire connections for galvanic systems	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No

DAYTONA TRANSIT FACILITY
Aboveground Storage Tank ANNUAL Inspection Checklist
Based on Requirements of STI SP001

Inspection Date: _____

Prior Inspection Date: _____

Retain Until Date: _____
(36 Months from Inspection Date)

Inspector Name: _____

	Fuel Station Lube Room		Fuel Station Lube Room		Fuel Station Lube Room		If a shaded box is checked, immediate attention/action is necessary to address the problem. Describe here:	Additional remarks, comments, concerns:
	Motor Oil		Hydrualic Fluid		Automatic Trasmission Fluid			
Tank Volume:	250 Gallons		264 Gallons		250 Gallons			
1.0 Tank Containment								
1.1 **Containment Structure** Any of the following observed: a. holes or cracks in containment wall or floor b. Corrosion c. Leakage d. Paint failure/chipping/rust e. Tank settling	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No		
2.0 Tank Foundation and Supports								
2.1 **Foundation** Settlement or foundation washout?	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No		
2.2 **Concrete Pad or Ring Wall** Cracking or spalling?	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No		
2.3 **Supports** Corrosion, paint failure, structural	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No		
2.4 **Water Drainage** Water drains away from tank?	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No		
2.5 **Tank Grounding** Strap secured and in good condition?	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No		
3.0 Cathodic Protection								
3.1 **Galvanic Cathodic Protection System** Confirm system is functional, includes the wire connections for galvanic systems	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No		

DAYTONA TRANSIT FACILITY
Aboveground Storage Tank ANNUAL Inspection Checklist
Based on Requirements of STI SP001

Inspection Date: _____

Prior Inspection Date: _____

Retain Until Date: _____
(36 Months from Inspection Date)

Inspector Name: _____

	Maintenance Shop (Outdoor)		Maintenance Shop (Indoor)		Maintenance Shop Lube Room		Maintenance Shop Lube Room		Maintenance Shop Lube Room		Prevenative Maintenance Shop		Fuel Management Specialty Shop	
	Used Oil Tank		Used Oil Tank		Automatic Transmission Fluid		Motor Oil		Motor Oil		Used Oil		Used Oil	
Tank Volume:	500 Gallons		250 Gallons		250 Gallons		250 Gallons		250 Gallons		500 Gallons		100 Gallons	
3.2 **Impressed Current System** a. Operational components (power switch, meters, and alarms) are in good	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No
b. Record hour meter, ammeter, and voltmeter readings.	Hour Meter: Ammeter: Voltmeter:		Hour Meter: Ammeter: Voltmeter:		Hour Meter: Ammeter: Voltmeter:		Hour Meter: Ammeter: Voltmeter:		Hour Meter: Ammeter: Voltmeter:		Hour Meter: Ammeter: Voltmeter:		Hour Meter: Ammeter: Voltmeter:	
4.0 Tank Shell, Heads, and Roof														
4.1 **Coating** Tank coating is in good condition	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No
4.2 **Steel Condition** Any of the following observed: a. Dents	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No
4.3 **Roof Slope** Low points and/or standing water observed?	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No
5.0 Tank Equipment														
5.1 **Vents** The following components are moving	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No
5.2 **Valves**	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No
b. Corrosion observed	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No
c. Damage observed	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No
5.2.1 **Anti-siphon, check and gate valves** Confirm valves are operational by cycling the valve open and closed.	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No

DAYTONA TRANSIT FACILITY
Aboveground Storage Tank ANNUAL Inspection Checklist
Based on Requirements of STI SP001

Inspection Date: _____

Prior Inspection Date: _____

Retain Until Date: _____
(36 Months from Inspection Date)

Inspector Name: _____

	Fuel Station Lube Room		Fuel Station Lube Room		Fuel Station Lube Room		If a shaded box is checked, immediate attention/action is necessary to address the problem. Describe here:	Additional remarks, comments, concerns:
	Motor Oil		Hydrualic Fluid		Automatic Trasmission Fluid			
Tank Volume:	250 Gallons		264 Gallons		250 Gallons			
3.2 **Impressed Current System**								
a. Operational components (power switch, meters, and alarms) are in good	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No		
b. Record hour meter, ammeter, and voltmeter readings.	Hour Meter: Ammeter: Voltmeter:		Hour Meter: Ammeter: Voltmeter:		Hour Meter: Ammeter: Voltmeter:			
4.0 Tank Shell, Heads, and Roof								
4.1 **Coating** Tank coating is in good condition	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No		
4.2 **Steel Condition** Any of the following observed: a. Dents	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No		
4.3 **Roof Slope** Low points and/or standing water observed?	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No		
5.0 Tank Equipment								
5.1 **Vents** The following components are moving	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No		
5.2 **Valves**	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No		
b. Corrosion observed	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No		
c. Damage observed	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No		
5.2.1 **Anti-siphon, check and gate valves** Confirm valves are operational by cycling the valve open and closed.	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No		

DAYTONA TRANSIT FACILITY
Aboveground Storage Tank ANNUAL Inspection Checklist
Based on Requirements of STI SP001

Inspection Date: _____

Prior Inspection Date: _____

Retain Until Date: _____
(36 Months from Inspection Date)

Inspector Name: _____

	Maintenance Shop (Outdoor)		Maintenance Shop (Indoor)		Maintenance Shop Lube Room		Maintenance Shop Lube Room		Maintenance Shop Lube Room		Prevenative Maintenance Shop		Fuel Management Specialty Shop	
	Used Oil Tank		Used Oil Tank		Automatic Transmission Fluid		Motor Oil		Motor Oil		Used Oil		Used Oil	
Tank Volume:	500 Gallons		250 Gallons		250 Gallons		250 Gallons		250 Gallons		500 Gallons		100 Gallons	
5.2.2 **Pressure regulator valve** Confirm proper operation. (Note that there may be small, 1/4 inch drain plugs in the bottom of the valve that are not visible by looking from above	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No
5.2.3 **Expansion relief valve** Confirm the valve is in the proper orientation. (Note that fuel must be discharged back to the tank via a separate pipe or tubing.)	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No
5.2.4 **Solenoid valves** Cycle power to valve to check operation. (Electrical solenoids can be verified by listening to the plunger opening and closing. If no audible confirmation, the valve should be	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No
5.2.5 **Fire and shear valves** a. Manually cycle the valve to ensure	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No
b. Valves must not be wired in open position.	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No
c. Make sure fusible element is in place and correctly positioned.	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No
d. Be sure test ports are sealed with plug after testing is complete and no temporary test fixture or component remains connected to valve.	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No

DAYTONA TRANSIT FACILITY
Aboveground Storage Tank ANNUAL Inspection Checklist
Based on Requirements of STI SP001

Inspection Date: _____

Prior Inspection Date: _____

Retain Until Date: _____
(36 Months from Inspection Date)

Inspector Name: _____

	Fuel Station Lube Room		Fuel Station Lube Room		Fuel Station Lube Room		If a shaded box is checked, immediate attention/action is necessary to address the problem. Describe here:	Additional remarks, comments, concerns:
	Motor Oil		Hydraulic Fluid		Automatic Trasmission Fluid			
Tank Volume:	250 Gallons		264 Gallons		250 Gallons			
5.2.2 **Pressure regulator valve** Confirm proper operation. (Note that there may be small, 1/4 inch drain plugs in the bottom of the valve that are not visible by looking from above	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No		
5.2.3 **Expansion relief valve** Confirm the valve is in the proper orientation. (Note that fuel must be discharged back to the tank via a separate pipe or tubing.)	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No		
5.2.4 **Solenoid valves** Cycle power to valve to check operation. (Electrical solenoids can be verified by listening to the plunger opening and closing. If no audible confirmation, the valve should be	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No		
5.2.5 **Fire and shear valves** a. Manually cycle the valve to ensure	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No		
b. Valves must not be wired in open position.	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No		
c. Make sure fusible element is in place and correctly positioned.	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No		
d. Be sure test ports are sealed with plug after testing is complete and no temporary test fixture or component remains connected to valve.	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No		

DAYTONA TRANSIT FACILITY
Aboveground Storage Tank ANNUAL Inspection Checklist
Based on Requirements of STI SP001

Inspection Date: _____

Prior Inspection Date: _____

Retain Until Date: _____
(36 Months from Inspection Date)

Inspector Name: _____

	Maintenance Shop (Outdoor)		Maintenance Shop (Indoor)		Maintenance Shop Lube Room		Maintenance Shop Lube Room		Maintenance Shop Lube Room		Prevenative Maintenance Shop		Fuel Management Specialty Shop	
	Used Oil Tank		Used Oil Tank		Automatic Transmission Fluid		Motor Oil		Motor Oil		Used Oil		Used Oil	
Tank Volume:	500 Gallons		250 Gallons		250 Gallons		250 Gallons		250 Gallons		500 Gallons		100 Gallons	
5.3 **Interstitial Leak Detection Equipment** Check proper condition of equipment: ▪ The window is clean and clear in sight leak gauges. ▪ The wire connections of electronic gauges for tightness and corrosion ▪ Activate the test button, if applicable.	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No
5.4 **Spill containment boxes on fill pipe** a. Has corrosion, damage, or wear compromised the ability of the unit to perform spill containment functions?	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No
b. Ensure the connections to the AST are tightness, as well as the bolts, nuts, washers for good condition.	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No
c. Are drain valves operable and closed?	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No
5.5 **Strainer** a. Is th strainer clean and in good condition?	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No
b. Access strainer basket and check cap and gasket seal as well as bolts are in good condition.	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No

DAYTONA TRANSIT FACILITY
Aboveground Storage Tank ANNUAL Inspection Checklist
Based on Requirements of STI SP001

Inspection Date: _____

Prior Inspection Date: _____

Retain Until Date: _____
(36 Months from Inspection Date)

Inspector Name: _____

	Fuel Station Lube Room		Fuel Station Lube Room		Fuel Station Lube Room		If a shaded box is checked, immediate attention/action is necessary to address the problem. Describe here:	Additional remarks, comments, concerns:
	Motor Oil		Hydrualic Fluid		Automatic Trasmission Fluid			
Tank Volume:	250 Gallons		264 Gallons		250 Gallons			
5.3 **Interstitial Leak Detection Equipment** Check proper condition of equipment: ▪ The window is clean and clear in sight leak gauges. ▪ The wire connections of electronic gauges for tightness and corrosion ▪ Activate the test button, if applicable.	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No		
5.4 **Spill containment boxes on fill pipe** a. Has corrosion, damage, or wear compromised the ability of the unit to perform spill containment functions?	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No		
b. Ensure the connections to the AST are tightness, as well as the bolts, nuts, washers for good condition.	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No		
c. Are drain valves operable and closed?	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No		
5.5 **Strainer** a. Is th strainer clean and in good condition?	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No		
b. Access strainer basket and check cap and gasket seal as well as bolts are in good condition.	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No		

DAYTONA TRANSIT FACILITY
Aboveground Storage Tank ANNUAL Inspection Checklist
Based on Requirements of STI SP001

Inspection Date: _____

Prior Inspection Date: _____

Retain Until Date: _____
(36 Months from Inspection Date)

Inspector Name: _____

	Maintenance Shop (Outdoor)		Maintenance Shop (Indoor)		Maintenance Shop Lube Room		Maintenance Shop Lube Room		Maintenance Shop Lube Room		Prevenative Maintenance Shop		Fuel Management Specialty Shop	
	Used Oil Tank		Used Oil Tank		Automatic Transmission Fluid		Motor Oil		Motor Oil		Used Oil		Used Oil	
Tank Volume:	500 Gallons		250 Gallons		250 Gallons		250 Gallons		250 Gallons		500 Gallons		100 Gallons	
5.6 **Filter** a. Check that the filter is in good condition and is within the manufacturer's expected service life.	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No
b. Are there leaks or decreased fuel flow?	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No
5.7 **Flame Arrestors** Follow manufacturer's instructions. Check for corrosion and blockage of air passages.	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No
5.8 **Leak detector for submersible pump Systems** Test according to manufacturer's instructions and authority having jurisdiction (AHJ). Verify leak detectors are suited and properly installed for aboveground use.	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No
5.9 **Liquid level equipment** a. Has equipment been tested to ensure proper operation?	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No
b. Does equipment operate as required?	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No
c. Follow manufacturer's instructions	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No

DAYTONA TRANSIT FACILITY
Aboveground Storage Tank ANNUAL Inspection Checklist
Based on Requirements of STI SP001

Inspection Date: _____

Prior Inspection Date: _____

Retain Until Date: _____
(36 Months from Inspection Date)

Inspector Name: _____

	Fuel Station Lube Room		Fuel Station Lube Room		Fuel Station Lube Room		If a shaded box is checked, immediate attention/action is necessary to address the problem. Describe here:	Additional remarks, comments, concerns:
	Motor Oil		Hydrualic Fluid		Automatic Trasmission Fluid			
Tank Volume:	250 Gallons		264 Gallons		250 Gallons			
5.6 **Filter** a. Check that the filter is in good condition and is within the manufacturer's expected service life.	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No		
b. Are there leaks or decreased fuel flow?	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No		
5.7 **Flame Arrestors** Follow manufacturer's instructions. Check for corrosion and blockage of air passages.	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No		
5.8 **Leak detector for submersible pump Systems** Test according to manufacturer's instructions and authority having jurisdiction (AHJ). Verify leak detectors are suited and properly installed for aboveground use.	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No		
5.9 **Liquid level equipment** a. Has equipment been tested to ensure proper operation?	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No		
b. Does equipment operate as required?	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No		
c. Follow manufacturer's instructions	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No		

DAYTONA TRANSIT FACILITY
Aboveground Storage Tank ANNUAL Inspection Checklist
Based on Requirements of STI SP001

Inspection Date: _____

Prior Inspection Date: _____

Retain Until Date: _____
(36 Months from Inspection Date)

Inspector Name: _____

	Maintenance Shop (Outdoor)		Maintenance Shop (Indoor)		Maintenance Shop Lube Room		Maintenance Shop Lube Room		Maintenance Shop Lube Room		Prevenative Maintenance Shop		Fuel Management Specialty Shop	
	Used Oil Tank		Used Oil Tank		Automatic Transmission Fluid		Motor Oil		Motor Oil		Used Oil		Used Oil	
Tank Volume:	500 Gallons		250 Gallons		250 Gallons		250 Gallons		250 Gallons		500 Gallons		100 Gallons	
5.10 **Overfill Equipment** a. If equipped with a "test" button, activate the audible horn or light to confirm operation. Overfill alarm is operational?	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No
b. Overfill valve is operational?	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No
6.0 Spill Response														
6.1 **Spill Response Plan** Available and up to date	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No
6.2 **Spill Cleanup Materials** Available, stocked, and compatible	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No
6.3 **Fire Extinguisher** Available and not expired	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No
7.0 Miscellaneous														
7.1 **Electrical Wiring and Boxes** Are they in good condition?	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No
7.2 **Labels and tags** Ensure that all labels and tags are intact and readable.	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No
7.3 **Pathways and Entry** Clear and gates/doors operable	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No
7.4 **Lighting** Lighting is functional	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No

DAYTONA TRANSIT FACILITY
Aboveground Storage Tank ANNUAL Inspection Checklist
Based on Requirements of STI SP001

Inspection Date: _____

Prior Inspection Date: _____

Retain Until Date: _____
(36 Months from Inspection Date)

Inspector Name: _____

	Fuel Station Lube Room		Fuel Station Lube Room		Fuel Station Lube Room		If a shaded box is checked, immediate attention/action is necessary to address the problem. Describe here:	Additional remarks, comments, concerns:
	Motor Oil		Hydraulic Fluid		Automatic Trasmission Fluid			
Tank Volume:	250 Gallons		264 Gallons		250 Gallons			
5.10 **Overfill Equipment**								
a. If equipped with a "test" button, activate the audible horn or light to confirm operation. Overfill alarm is operational?	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No		
b. Overfill valve is operational?	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No		
6.0 Spill Response								
6.1 **Spill Response Plan** Available and up to date	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No		
6.2 **Spill Cleanup Materials** Available, stocked, and compatible	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No		
6.3 **Fire Extinguisher** Available and not expired	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No		
7.0 Miscellaneous								
7.1 **Electrical Wiring and Boxes** Are they in good condition?	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No		
7.2 **Labels and tags** Ensure that all labels and tags are intact and readable.	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No		
7.3 **Pathways and Entry** Clear and gates/doors operable	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No		
7.4 **Lighting** Lighting is functional	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No		

TANK ID _____

SPECIFICATION:

Design: ☐ UL _____ ☐ SWRI _____ ☐ Horizontal ☐ Vertical ☐ Rectangular

☐ API _____

☐ Unknown ☐ Other _____

Manufacturer: Contents: Construction Date: Last Repair/Reconstruction Date:

Dimensions: Capacity: Last Change of Service Date:

Construction: ☐ Bare Steel ☐ Cathodically Protected (Check one: A. ☐ Galvanic or B. ☐ Impressed Current) Date Installed: _____

☐ Coated Steel ☐ Concrete ☐ Plastic/Fiberglass ☐ Other

☐ Double-Bottom ☐ Double-Wall ☐ Lined Date Installed: _____

Containment: ☐ Earthen Dike ☐ Steel Dike ☐ Concrete ☐ Synthetic Liner ☐ Other _____

CRDM: ☐ Date Installed: Type:

Release Prevention Barrier: ☐ Date Installed: _____ Type: _____

TANK ID _____

SPECIFICATION:

Design: ☐ UL _____ ☐ SWRI _____ ☐ Horizontal ☐ Vertical ☐ Rectangular

☐ API _____

☐ Unknown ☐ Other _____

Manufacturer: Contents: Construction Date: Last Repair/Reconstruction Date:

Dimensions: Capacity: Last Change of Service Date:

Construction: ☐ Bare Steel ☐ Cathodically Protected (Check one: A. ☐ Galvanic or B. ☐ Impressed Current) Date Installed: _____

☐ Coated Steel ☐ Concrete ☐ Plastic/Fiberglass ☐ Other

☐ Double-Bottom ☐ Double-Wall ☐ Lined Date Installed: _____

Containment: ☐ Earthen Dike ☐ Steel Dike ☐ Concrete ☐ Synthetic Liner ☐ Other _____

CRDM: ☐ Date Installed: Type:

Release Prevention Barrier: ☐ Date Installed: _____ Type: _____

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STI SP001 AST Record

OWNER INFORMATION	FACILITY INFORMATION	INSTALLER INFORMATION
Name City of Albuquerque, Fleet Management Division	Name Pino Yards Fleet Management Facility	Name Various installers, refer to tank nameplates
Number and Street 5501 Pino St NE	Number and Street 5501 Pino St NE	Number and Street
City, State, Zip Code Albuquerque, NM 87109	City, State, Zip Code Albuquerque, NM 87109	City, State, Zip Code

.

TANK ID Maintenance Shop (outdoors), 500-gallon Used Oil AST

SPECIFICATION:

Design: ■ UL 142 ☐ SWRI _____ ■ Horizontal ☐ Vertical ☐ Rectangular

☐ API _____ ☐ Other _____

☐ Unknown

Manufacturer: Eidson Steel Products, Inc. Contents: Used oil Construction Date: N/A Last Repair/Reconstruction Date: N/A

Dimensions: N/A Capacity: 500 gallons Last Change of Service Date: N/A

Construction: ☐ Bare Steel ☐ Cathodically Protected (Check one: A. ☐ Galvanic or B. ☐ Impressed Current) Date Installed: _____

■ Coated Steel ☐ Concrete ☐ Plastic/Fiberglass ☐ Other

☐ Double-Bottom ■ Double-Wall ☐ Lined Date Installed: _____

Containment: ☐ Earthen Dike ☐ Steel Dike ☐ Concrete ☐ Synthetic Liner ■ Other drains to pond with OWS

CRDM: ■ Date Installed: N/A Type: Double wall AST

Release Prevention Barrier: ■ Date Installed: N/A Type: drains to pond with OWS

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TANK ID Maintenance Shop Lube Room, 250 gallon Motor Oil AST (Tank 1)

SPECIFICATION:

Design: ■ UL ____ ☐ SWRI ____ ■ Horizontal ☐ Vertical ☐ Rectangular

☐ API ____ ☐ Other ____

☐ Unknown

Manufacturer: N/A Contents: SAE 15W-40 Construction Date: N/A Last Repair/Reconstruction Date: N/A

Dimensions: N/A Capacity: 250 gallons Last Change of Service Date: N/A

Construction: ☐ Bare Steel ☐ Cathodically Protected (Check one: A. ☐ Galvanic or B. ☐ Impressed Current) Date Installed: ____

■ Coated Steel ☐ Concrete ☐ Plastic/Fiberglass ☐ Other

☐ Double-Bottom ☐ Double-Wall ☐ Lined Date Installed: ____

Containment: ☐ Earthen Dike ☐ Steel Dike ☐ Concrete ☐ Synthetic Liner ■ Other 275 gallon polyethylene containment sump

CRDM: ■ Date Installed: N/A Type: 275 gallon polyethylene containment sump

Release Prevention Barrier: ■ Date Installed: N/A Type: Concrete floor with drain to OWS

TANK ID Maintenance Shop Lube Room, 250 gallon Motor Oil AST (Tank 2)

SPECIFICATION:

Design: ■ UL ____ ☐ SWRI ____ ■ Horizontal ☐ Vertical ☐ Rectangular

☐ API ____

☐ Unknown ☐ Other ____

Manufacturer: N/A Contents: SAE 5W-20 Construction Date: N/A Last Repair/Reconstruction Date: N/A

Dimensions: N/A Capacity: 250 gallons Last Change of Service Date: N/A

Construction: ☐ Bare Steel ☐ Cathodically Protected (Check one: A. ☐ Galvanic or B. ☐ Impressed Current) Date Installed: ____

■ Coated Steel ☐ Concrete ☐ Plastic/Fiberglass ☐ Other

☐ Double-Bottom ☐ Double-Wall ☐ Lined Date Installed: ____

Containment: ☐ Earthen Dike ☐ Steel Dike ☐ Concrete ☐ Synthetic Liner ■ Other 275 gallon polyethylene containment sump

CRDM: ■ Date Installed: N/A Type: 275 gallon polyethylene containment sump

Release Prevention Barrier: ■ Date Installed: N/A Type: Concrete floor with drain to OWS

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TANK ID Maintenance Shop Lube Room, 250 gallon AFT AST

SPECIFICATION:

Design: ■ UL ____ ☐ SWRI ____ ■ Horizontal ☐ Vertical ☐ Rectangular

☐ API ____

☐ Unknown ☐ Other ____

Manufacturer: N/A Contents: Super ATF Construction Date: N/A Last Repair/Reconstruction Date: N/A

Dimensions: N/A Capacity: 250 gallons Last Change of Service Date: N/A

Construction: ☐ Bare Steel ☐ Cathodically Protected (Check one: A. ☐ Galvanic or B. ☐ Impressed Current) Date Installed: ____

■ Coated Steel ☐ Concrete ☐ Plastic/Fiberglass ☐ Other

☐ Double-Bottom ☐ Double-Wall ☐ Lined Date Installed: ____

Containment: ☐ Earthen Dike ☐ Steel Dike ☐ Concrete ☐ Synthetic Liner ■ Other 275 gallon polyethylene containment sump

CRDM: ■ Date Installed: N/A Type: 275 gallon polyethylene containment sump

Release Prevention Barrier: ■ Date Installed: N/A Type: Concrete floor with drain to OWS

TANK ID Preventative Maintenance Shop, 500 gallon Used Oil AST

SPECIFICATION:

Design: ■ UL 142 ☐ SWRI ____ ☐ Horizontal ☐ Vertical ■ Rectangular

☐ API ____

☐ Unknown ☐ Other ____

Manufacturer: Kohlhaas Corporation Contents: Used oil Construction Date: N/A Last Repair/Reconstruction Date: N/A

Dimensions: N/A Capacity: 500 gallons Last Change of Service Date: N/A

Construction: ☐ Bare Steel ☐ Cathodically Protected (Check one: A. ☐ Galvanic or B. ☐ Impressed Current) Date Installed: ____

■ Coated Steel ☐ Concrete ☐ Plastic/Fiberglass ☐ Other

☐ Double-Bottom ■ Double-Wall ☐ Lined Date Installed: ____

Containment: ☐ Earthen Dike ☐ Steel Dike ☐ Concrete ☐ Synthetic Liner ■ Other Double wall AST

CRDM: ■ Date Installed: N/A Type: Double wall AST

Release Prevention Barrier: ■ Date Installed: N/A Type: Concrete floor with drain to OWS

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TANK ID Fuel Management Specialty Shop, 100 gallon Used Oil AST

SPECIFICATION:

Design: ■ UL 142 ☐ SWRI _____ ☐ Horizontal ☐ Vertical ■ Rectangular

☐ API _____

☐ Unknown ☐ Other _____

Manufacturer: Kohlhaas Corporation Contents: Used oil Construction Date: N/A Last Repair/Reconstruction Date: N/A

Dimensions: N/A Capacity: 100 gallons Last Change of Service Date: N/A

Construction: ☐ Bare Steel ☐ Cathodically Protected (Check one: A. ☐ Galvanic or B. ☐ Impressed Current) Date Installed: _____

■ Coated Steel ☐ Concrete ☐ Plastic/Fiberglass ☐ Other

☐ Double-Bottom ■ Double-Wall ☐ Lined Date Installed: _____

Containment: ☐ Earthen Dike ☐ Steel Dike ☐ Concrete ☐ Synthetic Liner ■ Other Double wall AST

CRDM: ■ Date Installed: N/A Type: Double wall AST

Release Prevention Barrier: ■ Date Installed: N/A Type: Concrete floor with drain to OWS

TANK ID Fuel Station Lube Room, 250 gallon Motor Oil AST

SPECIFICATION:

Design: ■ UL 142 ☐ SWRI _____ ☐ Horizontal ☐ Vertical ■ Rectangular

☐ API _____

☐ Unknown ☐ Other _____

Manufacturer: Modern Welding Co. Contents: Motor/engine oil Construction Date: September 2013 Last Repair/Reconstruction Date: N/A

Dimensions: N/A Capacity: 250 gallons Last Change of Service Date: N/A

Construction: ☐ Bare Steel ☐ Cathodically Protected (Check one: A. ☐ Galvanic or B. ☐ Impressed Current) Date Installed: _____

■ Coated Steel ☐ Concrete ☐ Plastic/Fiberglass ☐ Other

☐ Double-Bottom ■ Double-Wall ☐ Lined Date Installed: _____

Containment: ☐ Earthen Dike ☐ Steel Dike ☐ Concrete ☐ Synthetic Liner ■ Other Double wall AST

CRDM: ■ Date Installed: N/A Type: Double wall AST

Release Prevention Barrier: ■ Date Installed: N/A Type: Concrete floor with drain to OWS

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TANK ID Fuel Station Lube Room, 250 gallon ATF AST

SPECIFICATION:

Design: ■ UL 142 ☐ SWRI _____ ☐ Horizontal ☐ Vertical ■ Rectangular

☐ API _____

☐ Unknown ☐ Other _____

Manufacturer: Modern Welding Co. Contents: ATF Construction Date: September 2013 Last Repair/Reconstruction Date: N/A

Dimensions: N/A Capacity: 250 gallons Last Change of Service Date: N/A

Construction: ☐ Bare Steel ☐ Cathodically Protected (Check one: A. ☐ Galvanic or B. ☐ Impressed Current) Date Installed: _____

■ Coated Steel ☐ Concrete ☐ Plastic/Fiberglass ☐ Other

☐ Double-Bottom ■ Double-Wall ☐ Lined Date Installed: _____

Containment: ☐ Earthen Dike ☐ Steel Dike ☐ Concrete ☐ Synthetic Liner ■ Other Double wall AST

CRDM: ■ Date Installed: N/A Type: Double wall AST

Release Prevention Barrier: ■ Date Installed: N/A Type: Concrete floor with drain to OWS

TANK ID Fuel Station Lube Room, 264 gallon hydraulic fluid AST

SPECIFICATION:

Design: ■ UL _____ ☐ SWRI _____ ■ Horizontal ☐ Vertical ☐ Rectangular

☐ API _____

☐ Unknown ☐ Other _____

Manufacturer: N/A Contents: hydraulic fluid Construction Date: N/A Last Repair/Reconstruction Date: N/A

Dimensions: N/A Capacity: 264 gallons Last Change of Service Date: N/A

Construction: ☐ Bare Steel ☐ Cathodically Protected (Check one: A. ☐ Galvanic or B. ☐ Impressed Current) Date Installed: _____

■ Coated Steel ☐ Concrete ☐ Plastic/Fiberglass ☐ Other

☐ Double-Bottom ■ Double-Wall ☐ Lined Date Installed: _____

Containment: ☐ Earthen Dike ☐ Steel Dike ☐ Concrete ☐ Synthetic Liner ■ Other Double wall AST

CRDM: ■ Date Installed: N/A Type: Double wall AST

Release Prevention Barrier: ■ Date Installed: N/A Type: Concrete floor with drain to OWS

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TANK ID _____

SPECIFICATION:

Design: ☐ UL _____ ☐ SWRI _____ ☐ Horizontal ☐ Vertical ☐ Rectangular

☐ API _____

☐ Unknown ☐ Other _____

Manufacturer: Contents: Construction Date: Last Repair/Reconstruction Date:

Dimensions: Capacity: Last Change of Service Date:

Construction: ☐ Bare Steel ☐ Cathodically Protected (Check one: A. ☐ Galvanic or B. ☐ Impressed Current) Date Installed: _____

☐ Coated Steel ☐ Concrete ☐ Plastic/Fiberglass ☐ Other

☐ Double-Bottom ☐ Double-Wall ☐ Lined Date Installed: _____

Containment: ☐ Earthen Dike ☐ Steel Dike ☐ Concrete ☐ Synthetic Liner ☐ Other _____

CRDM: ☐ Date Installed: Type:

Release Prevention Barrier: ☐ Date Installed: _____ Type: _____

TANK ID _____

SPECIFICATION:

Design: ☐ UL _____ ☐ SWRI _____ ☐ Horizontal ☐ Vertical ☐ Rectangular

☐ API _____

☐ Unknown ☐ Other _____

Manufacturer: Contents: Construction Date: Last Repair/Reconstruction Date:

Dimensions: Capacity: Last Change of Service Date:

Construction: ☐ Bare Steel ☐ Cathodically Protected (Check one: A. ☐ Galvanic or B. ☐ Impressed Current) Date Installed: _____

☐ Coated Steel ☐ Concrete ☐ Plastic/Fiberglass ☐ Other

☐ Double-Bottom ☐ Double-Wall ☐ Lined Date Installed: _____

Containment: ☐ Earthen Dike ☐ Steel Dike ☐ Concrete ☐ Synthetic Liner ☐ Other _____

CRDM: ☐ Date Installed: Type:

Release Prevention Barrier: ☐ Date Installed: _____ Type: _____

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Appendix F
Record of Annual Discharge Prevention Briefings and Training

Suggested Site Personnel Training Agenda

1. SPCC Plan
   a. Purpose of SPCC Plan
   b. Regulatory Background
   c. On-site areas of oil and fuel storage
   d. Responsibilities
2. Site Inspections
   a. Security
   b. Integrity of oil-containing vessels
   c. Lighting
   d. Vehicle fuel area
   e. Storage of drums and containers
   f. Heavy Equipment
3. Materials handling
   a. Vehicle fueling
4. Spill Response Training

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Spill Response Training Requirements

Spill prevention training requirements are outlined in *SPCC Regulations*, *40 CFR 112.7(e)(10)* and *AR 200-1, 8-4, c.(6)*. Additional safety standards are contained in *29 CFR 1910* (Occupational Safety and Health Standards).

Employee training programs must instill in personnel, at all levels of responsibility, a complete understanding of the spill prevention program, the processes and materials with which they are working, the safety hazards, the practices for preventing spills, and the procedures for responding properly and rapidly to spills. This includes training on the operation of aboveground tanks, fueling equipment, vehicle maintenance fluid dispensing systems, and standard operating procedures for the handling, storage, and proper disposal of oils and hazardous materials. This training should include both formal instruction and supervised on-the-job training.

Employee training meetings should be conducted frequently enough to assure adequate understanding of the goals and objectives of the spill prevention program and the individual responsibilities of each employee. These meetings could be part of routine employee meetings held for safety and/or fire protection. To the extent that spill prevention is a safety concern, routine safety measures may already cover much of the material on spill prevention. Such meetings should include a review of known spill events or failures, malfunctioning components, and recently developed precautionary measures. These meetings should also cover specific aspects of the spill prevention program and the procedures used to control toxic and hazardous materials in the work place.

Adequate training in a particular job is essential for understanding potential spill scenarios. Knowledge of specific operations and how spills could occur, or have occurred in the past, is important in reducing human error or incidents that can lead to spills. Employees should receive both formal and on-the-job training in job procedures and operations. Jobs with high spill potential (e.g., fuel dispensing) should include training to recognize and prevent potential hazardous situations that could lead to a spill.

The training program should be aimed at making personnel aware of not only spill prevention procedures, but also procedures for reporting spills and notifying the individuals responsible for spill response so that immediate countermeasures can be initiated. In addition, personnel involved in the spill response should be trained in how to use spill cleanup materials such as sorbents, gelling agents, foams, and neutralizing compounds. Subjects should include safety precautions, toxic side effects of chemicals they may be working with, and possible chemical reactions. Spill response drills, posters, and suggestion boxes should be used to motivate personnel to be alert to the possibility of spills and to their prevention.

All spill prevention training should be documented. Records of training and briefings (including date, instructor, attendees and subjects covered) must be maintained at the facility.

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Initial Training

All new employees whose job involves the storage or handling of oil or hazardous substances should receive training from his or her supervisor or other designated individual. The training should include, as a minimum, the following items:

- A requirement to read and understand the pertinent sections of the SPCC Plan;
- A review and discussion of past spills that relate to potential causes of spills in the new employee's job;
- A discussion of spill reporting and emergency response procedures; and
- An acknowledgment by the employee that failure to comply with NMSHTD requirements and applicable regulations concerning oil and hazardous substance spill prevention and control may result in adverse action against the employee, including disciplinary action, suspension, or termination, depending on the circumstances.

Follow-Up Training

All employees whose job involves the storage or handling of oil or hazardous substances should receive follow-up training from their supervisor or a designated representative. This training may be accomplished individually or in groups, in brief segments, or complete reviews. This follow-up training must be completed annually at a minimum and includes:

- A review of the pertinent sections of the SPCC Plan;
- A discussion of spills since the last review to illustrate the need for proper procedures;
- A review of spill reporting and emergency response procedures;
- An opportunity for employee feedback on conditions in their specific work area, including discussions of the results of any inspections relative to spill prevention;
- A reaffirmation by the employee of his/her understanding of the SPCC program and the possible ramifications of non-compliance with spill prevention procedures; and
- A discussion of hazardous materials the employee will be in contact with and locations of MSDSs.

40 CFR 112.21 FACILITY RESPONSE TRAINING AND DRILLS/EXERCISES

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)*.

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

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operations. An alternative program can also be acceptable subject to approval by the Regional Administrator.

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.

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

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

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 satisfactory for purposes of this section. An alternative program can also be acceptable subject to approval by the Regional Administrator.

[*59 FR 34070*, July 1, 1994]

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Appendix G
Spill Prevention and Response

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Appendix H
Emergency Contacts

Contacts	Phone Number	Mobile Number
Primary Facility Contact: ***Martin Raimondi, Fleet Management Supervisor***	***(505) 857-8013***	***(505) 903-9383***
Secondary Facility Contact: ***Randy Rodarte***	***(505) 857-8602***	***(505) 903-9385***
Fire/Ambulance/Police: **Communications Center: Emergency** **Police Non-Emergency**	**911** **242-2677**	
Emergency Response Contractor: ACT Mesa Environmental	(505) 349-5220 1-800-873-3645	
National Response Center	24 Hours: 1-800-424-8802	
USEPA Region VI	24 Hours: (505) 827-9126 Toll Free: (866) 372-7745	
New Mexico Environment Department (NMED) **Emergency Response Unit**	**Emergencies (24/7):** (505) 827-9329 **Non-Emergencies:** (866) 428-6535 (voicemail) or (505) 476-6000 (normal business hours)	
City of Albuquerque Storm Drainage Design Kathy Verhage, Senior Engineer	505-768-3654	
Hospital **ABQ Health Partners**	505-262-3233	

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Appendix I
Spill Response Equipment

Equipment	Quantity	Location
Maintenance Facility		
Minimum Spill Kit Locations: Maintenance Bays, Preventative Maintenance Shop, Fuel Management Specialty Shop, Wash Bay, Outdoor		
Spill Kit	2 – Maintenance Bays 1 – Preventive Maintenance Shop 1 – Fuel Management Specialty Shop 1 – Wash Bay 1 – Outdoor (by 500-gallon used oil tank)	Located in oil storage rooms and throughout vehicle and maintenance garage bay
Absorbent Pads/Booms	Stock for Routine Use	Outdoor used oil tank
Absorbent Material	Stock for Routine Use	5-gallon containers in lube room and in garage bay
Fuel Station		
Minimum Spill Kit Locations: Lube Room, Fuel Island		
Spill Kit	1 – Lube Room 1 – Fuel Island	Located in lube room and fuel island
Absorbent Material	Stock for Routine Use	5-gallon containers at lube room
Absorbent Pads/Booms	Stock for Routine Use	Lube rooms near fuel transfer areas

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Appendix J
Certification of the Applicability of the Substantial Harm Criteria Checklist

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Certification of the Applicability of the Substantial Harm Criteria Checklist

Facility Name: City of Albuquerque Department of Finance and Administration - Fleet Management Division (Fleet Management)

Facility Address: 5501 Pino Ave Ne, Albuquerque, New Mexico 87109

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 one (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 formula in attachment C-III, Appendix C, 49 CFR 112 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 to Doc/NOAA's "Guidance for Facility and Vessel Response Environments" (Section 10, Appendix C, 40 CFR 112 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 (Attachment C-III, 40 CFR 112 or a comparable formula) such that the discharge from the facility would shut down a public 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 spill in an amount greater than or equal to 10,000 gallons within the last 5 years?

   Yes _____ No ____X_____

CERTIFICATION

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

Signature_____

Name (type or print) ____Sarah C. Tuite, P.E._____

Title ___Environmental Engineer_____

Date _____

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