

# SPILL PREVENTION, CONTROL & COUNTERMEASURES (SPCC) PLAN

## CHATHAM MUNICIPAL AIRPORT Chatham, Massachusetts

AIP No. 3-25-0015-23-2018  
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*Town of Chatham*

*Airport Commission  
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Chatham, MA 02633*

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## 1. INTRODUCTION

This Spill Prevention, Control and Countermeasures (SPCC) Plan has been prepared for the Chatham Municipal Airport (the Airport), owned and operated by the Town of Chatham, Massachusetts through the Chatham Airport Commission (the Commission). The Commission, lessees and tenants at the Airport have all participated in the preparation of this SPCC and are stakeholders in its implementation.

The purpose of this SPCC Plan is to describe measures implemented and/or to be implemented by the Airport to help prevent oil discharges from occurring, and to prepare the Airport to respond in a safe, effective and timely manner to mitigate the impacts of a discharge.

This plan has been prepared to meet the requirements of Title 40, Code of Federal Regulations, Part 112 (40 CFR part 112). In addition, this plan shall be used as a reference for oil storage information and testing records, as a tool to communicate practices on preventing and responding to discharges to employees, as a guide for inspections, and as a resource during an emergency event.

The Airport does not pose a risk of substantial harm under 40 CFR part 112. A *Substantial Harm Criteria Checklist (40 CFR 112.20(e)) Certification of Applicability* is included in Appendix A.

This plan provides guidance on actions that the Airport shall perform to comply with the SPCC rules, including but not limited to:

- Perform monthly and yearly site inspections as defined in this plan (see Section 4.6 *Inspection, Tests and Records*) using the checklists included in Appendix B.
- Perform preventative maintenance of equipment, secondary containment systems, and discharge prevention systems described in this plan to maintain them in proper working condition.
- Establish and conduct yearly employee training (see Section 4.7 *Personnel, Training and Discharge Prevention Procedures*) using the logs in Appendix B.
- If either of the following occurs, submit the SPCC plan to the EPA Region 1 Regional Administrator (RA) and the Massachusetts Department of Environmental Protection (MDEP), as well as other information as described in this plan (see Section 6.4 *Discharge Notification*):
  - Discharges of greater than 1,000 gallons of oil into or upon the navigable waters of the U.S. or adjoining shorelines in any given spill event, or
  - Discharges of greater than 42 gallons of oil in each of two (2) spill events within any given 12-month period.

- Review this SPCC Plan at least once every five (5) years and amend it to include more effective prevention and control technologies, should such technology significantly reduce the likelihood of a spill event and has been proven effective in the field at the time of review. All plan amendments, with the exception of administrative changes, shall be recertified by a Professional Engineer (PE) within the Commonwealth of Massachusetts.
  
- Amend the SPCC Plan within six (6) months if there is a change in the facility description, construction, operation, or maintenance that materially affects the spill prevention. A revised plan shall be recertified by a Professional Engineer (PE) within the Commonwealth of Massachusetts.
  
- Review the plan yearly and update it to reflect any administrative changes (i.e. personnel changes or revisions to contact information). All administrative changes shall be documented in the plan review log (see Section 2.4 *Plan Review*), but do not have to be certified by a PE.

### **1.1 Definition of “Oil”**

For the purpose of this SPCC, it is important to define the term oil. 40 CFR Part 112.2 defines the term oil as follows:

*“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.”*

### **1.2 Applicability**

This SPCC Plan has been prepared solely for the Chatham Municipal Airport, which is owned and operated by the Town of Chatham, Massachusetts acting through the Chatham Airport Commission, in compliance with applicable laws, rules, regulations and/or policies pertaining to stormwater pollution. This SPCC Plan is not intended to serve as a compliance document for any other entity, including airport tenants or others. The preparation and implementation of this SPCC Plan does not relieve such entities from their responsibility under current law to prepare their own SPCC Plan and obtain any applicable permits, as required.

Checklists such as those for fuel transfer are intended to point out procedures for spill prevention and not intended to be step-by-step guides for fuel transfer. Fuel system operators are responsible for customizing the checklists to meet the requirements of their systems and procedures.

## **2. PLAN ADMINISTRATION**

### **2.1 Management Approval and Designated Person**

The Airport is committed to preventing discharges of oil to navigable waters and the environment, and to maintain required standards for spill prevention control and countermeasures through the implementation, review and amendment of this plan. This SPCC Plan has the full approval of the Airport and its Management. Chatham Municipal Airport shall commit the necessary resources to implement this plan.

The Commission Chairman is the Designated Person accountable for oil prevention at the Airport and has the authority to commit the necessary resources to implement this plan. The Commission Chairman is Mr. Huntley Harrison. The *Management Approval and Designated Person Certification* is located in Appendix A of this plan.

### **2.2 Professional Engineer Certification**

A Professional Engineer (PE), registered in the Commonwealth of Massachusetts, who is familiar with the requirements of 40 CFR Part 112, attests that this Spill Prevention, Control and Countermeasures (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 the plan is adequate for Chatham Municipal Airport (40 CFR part 112.3(d)).

The PE certifying this SPCC Plan for the Airport is Mr. Nikolas A. Ippolito, PE (Commonwealth of Massachusetts License No. 53593) from Gale Associates, Inc. of 6 Bedford Farms Drive, Suite 101, Bedford, NH 03110. The *Professional Engineer Certification* is located in Appendix A of this plan.

### **2.3 Location of SPCC Plan**

In accordance with 40 CFR part 112.3(e), Chatham Municipal Airport has a complete copy of the SPCC Plan with the Airport Manager, Mr. Timothy Howard, at his airport office. Mr. Howard is typically at the Airport between the hours of 9:00 AM and 6:00 PM Monday through Friday.

In addition, complete copies of the SPCC Plan will be located at Town Hall, 549 Main Street, Chatham MA 02633 and in the fuel dispensing facility shed (located at the aboveground storage tank (AST)).

### **2.4 Plan Review**

Per 40 CFR part 112, the SPCC Plan shall be reviewed to help ensure that the plan is current and updated. See the following subsections for the required SPCC Plan reviews.

#### ***2.4.1 Changes in Facility Configuration***

In accordance with 40 CFR part 112.5(a), the Airport shall review and evaluate this plan for any changes in the facility design, construction, operation and/or maintenance that affects the facility's potential for a discharge, which includes but is not limited to:

- Commissioning or decommissioning of the containers (bulk storage containers, i.e. AST),
- Reconstruction, replacement and/or installation of piping systems,
- Construction or demolition that might alter secondary containment structures, or
- Changes of product or service (i.e. replace AvGas with Jet-A, or the addition of Jet-A AST), revisions to standard operations, modification of testing/inspection procedures or use of new or modified industry standards or maintenance procedures.

Amendments to the plan that address changes of this nature shall be referred to as "technical amendments" and shall be certified by a licensed PE in the Commonwealth. Non-technical changes, referred to as "administrative amendments", shall be done by the facility owner and/or operator and do not have to be certified by a PE. "Administrative amendments" include the following:

- Changes to the name or contact information of individuals responsible for the implementation of this plan; or
- Changes in the name or contact information of spill response or cleanup contractors.

The Airport shall make the required revisions within six (6) months of the change(s) and the SPCC Plan shall be implemented with the changes within six (6) months of the amendment(s). The Facility Manager shall be responsible for initiating and coordinating revisions to the plan.

#### ***2.4.2 Scheduled Plan Reviews***

In accordance with 40 CFR part 112.5(b), the Airport shall review the SPCC Plan at least once every five (5) years. Revisions to the Plan, if warranted, shall be made within six (6) months of the five (5) year review. A Professional Engineer, registered in the Commonwealth of Massachusetts, shall certify any "technical amendment" to this plan in accordance with 40 CFR part 112.3(d).

Unless a technical or administrative amendment warrants an earlier review the first Plan review shall be conducted on, or prior to, March of 2026.

#### ***2.4.3 Record of Plan Reviews***

Scheduled reviews and plan amendments shall be recorded in the *Plan Review Log* (see Appendix B). The log shall be completed even if no amendments are made to the plan as a result of the review.

### 3. GENERAL FACILITY INFORMATION

Table 3-1 shown below, lists the general facility information for Chatham Municipal Airport.

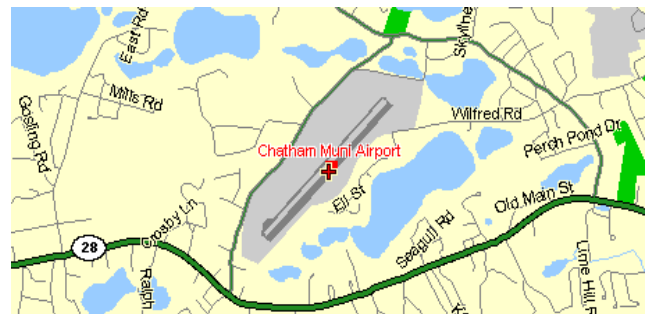
**Table 3-1: Facility Information**

<b>Name:</b>	Chatham Municipal Airport
<b>Address:</b>	240 George Ryder Road Chatham, MA 02633
<b>Type:</b>	Bulk Storage Distribution Facility One (1) Aboveground Storage Tank (AST) <ul style="list-style-type: none"> <li>• 10,000-gal AvGas AST</li> </ul> One Mobile Fuel Truck <ul style="list-style-type: none"> <li>• 3,000-gal Jet-A Gasoline</li> </ul>
<b>Date of Initial Operations:</b>	1940 Aboveground Storage Tank Installed in 2008
<b>Owner/Operator:</b>	Town of Chatham Airport Commission Town Hall 549 Main Street Chatham, MA 02633
<b>Primary Contact:</b>	Huntley Harrison, Commission Chairman (508) 241-1947

#### 3.1 Facility Description

##### 3.1.1 Location of Activities

The Airport is a general aviation airport located in the Town of Chatham, Massachusetts Barnstable County. The Airport is situated just over one mile north of Nantucket Sound and one mile south of Pleasant Bay. Chatham Harbor and the Atlantic Ocean are located approximately two miles to the east of the Airport. The property is bounded by George Ryder Road to the west and north, Route 28/Main Street to the south, and Ell Street, Sky Way and Wilfred Road to the east (see Figure 3-1).



**Figure 3-1**

### **3.1.2 Oil Storage**

The Airport is equipped with a fuel storage and dispensing facility (overwing dispenser) that includes a 10,000-gallon low lead aviation gasoline (AvGas) aboveground storage tank (AST) installed in 2008. The AST is a steel, double-walled, thermally insulated tank. The 2008 AST installation included the removal of two 10,000-gallon underground fuel storage tanks (UST), including all appurtenances associated with the USTs. The current fueling area includes a 1,600 square foot fueling apron, fuel storage tank, a shed with fueling equipment, and a subsurface stormwater drainage system with an in-line oil/water separator and secondary containment system. Located in the equipment shed is the fuel pump, fuel management system, tank filling station, and a hose reel. The area is well lit and protected with bollards.

Additionally, the Airport is equipped with a 3,000-gallon Jet-A mobile refueler truck which is parked adjacent to the fuel farm when in operation. The mobile refueler is operated by Cape Cod Flying Circus, Inc. Mobile refueling trucks are exempt from the secondary containment requirements of the SPCC regulations, but they are required to meet the general spill containment requirements of 40 CFR 112.7(c). Spill control equipment is located on the vehicle and is replenished as required. The vehicle is inspected daily prior to use for leaks, spills, and general condition of the tank. The Airport maintains inspection records and only trained personnel perform fuel transfer operations.

See Figure 2 *Site and Fuel Facility Area Map* in Appendix C of this plan.

## **3.2 Evaluation of Discharge Potential**

### **3.2.1 Distance to Navigable Water and Flow Paths**

The Airport is a 101± acre site that sits atop a plateau approximately 68 feet above mean sea level. The terrain of the Airport property is primarily level having average slopes of less than one percent with undulations in topography near the Airport's southerly and eastern property lines (see map of airport vicinity in Appendix C). Approximately 27% of the Airport's property consists of impervious surfaces, including buildings, parking aprons, and runway and taxiway pavements. The remainder consists mainly of grass, with some low-lying vegetation and forested areas.

In general, surface water from the Airport is transported through man-made and natural vegetated swales to either underground culvert pipes or infiltration type catch basins. Storm water management is detailed in the Airport's Stormwater Pollution Prevention Plan (SWPPP). The Airport has adopted an extensive stormwater management inspection and assessment program and use of Best Management Practices to prevent discharge and help eliminate pollutants from stormwater. See Figure 2, *Site and Fuel Facility Area Map*, located in Appendix C for flow directions and locations of the Airport's drainage structures.

Fueling from the AST occurs on a concrete fueling apron. Potential spills on the fueling apron would not directly enter navigable waters. The designated fueling area is graded so that a potential spill is diverted to a catch basin in the middle of the area. From the catch basin, spilled fuel would be piped to a float valve (specific gravity valve) that closes if a petroleum product is present. The petroleum product would be diverted to a secondary containment tank while clean stormwater is sent to a stormwater infiltration system. A motorized drainage gate valve between the oil/water separator and leaching basin provides an additional barrier to fuel entering groundwater. It can be manually closed in the event of a spill.

Should spilled fuel escape the containment systems in place, the areas outside the fueling apron drain through grassed swales to a series of catch and leaching basins, potentially reaching as far as an infiltration basin and infiltration trench on the opposite side of the airport's main apron. Oil does not have the potential to directly reach navigable waters; stormwater in the vicinity would be infiltrated. The closest navigable water to the fuel facility is Blue Pond, approximately 1,000 feet away.

### ***3.2.2 Discharge History***

The Commonwealth of Massachusetts Executive Office of Energy & Environmental Affairs (EEA) offers a searchable online data portal<sup>1</sup> identifying waste sites and reported releases of hazardous materials within the state. A total of 99 records exist for releases within the boundaries of the Town of Chatham. Of these 99 records, one record of a release (#4-0001147) occurred on April 15, 1992 on the Airport and it has a DEP NFA (No Further Action) compliance status. This status means that response actions were taken at the time of the incident and MDEP feels that "no further action" was required for the site. A second release (#4-0013528), located near the south end of the Airport but off of Airport property, occurred on November 29, 1997 and it has an RAO compliance status. This status, short for "Response Action Outcome," means that the response actions carried out were sufficient to achieve a level of no significant risk, or at least ensure that all substantial hazards were eliminated.

Further investigation via the Massachusetts EEA Data Portal revealed additional information about the November 28, 1997 release (#4-0013528). According to the December 1998 Response Action Outcome (RAO) Statement prepared by the licensed site professional assigned to the incident, a small plane crashed on privately-owned property located at 1652 Main Street in Chatham, Massachusetts, which is located south of the Runway 06 end, off of Airport property. The crash occurred in the rear portion of the property next to Bearses Pond. According to the RAO Statement, approximately 30 gallons of aviation gasoline leaked from the wing tanks, contaminating soil and groundwater below the plane. Additionally, a separate small area approximately 20 feet from the main body of the plane was also contaminated by lubricating oil where the engine landed.

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<sup>1</sup> <https://eeonline.eea.state.ma.us/Portal#!/search/wastesite>

Response actions were supervised by a licensed site professional (LSP) to remove oil-contaminated soil from the site of the aircraft engine and aviation gasoline contaminated soil from the plane area. Based on these remedial response actions, a permanent solution was achieved, and the site is classified as “closed”.

No other reportable releases have occurred on Airport property since 1997. EEA Waste Site and Reported Release search results are contained in Appendix E.

#### **4. DISCHARGE PREVENTION – GENERAL SPCC PROVISIONS**

The following measures are currently implemented or will be implemented in the future to help prevent oil discharges during the handling, use, and/or transferring of oil at Chatham Municipal Airport.

##### **4.1 Compliance with Applicable Requirements**

This section addresses 40 CFR part 112.7(a)(2) regarding compliance with applicable requirements of 40 CFR part 112.7.

The bulk storage container has a double-wall construction that provides intrinsic secondary containment. Drainage structures, a diversionary structure, and a storage tank provide containment for spills in the tank loading and fuel dispensing areas. Discharges would not enter navigable waters.

The AST is inspected regularly, and inspections shall follow the schedule in accordance with the Steel Tank Institute (STI) SP-001 tank inspection standards. Any leakage from the primary container would be detected through visual inspecting of the interstitial space of the secondary containment tank that is performed on a monthly basis. Any leakage from the secondary shell would be detected visually during the daily inspections performed by authorized personnel of the Airport.

The mobile refueler truck delivers fuel to aircraft parked on the aircraft parking apron or at hangars where aircraft are stored. Structural controls are not feasible for this varied operation. As an alternative to installing a containment area structural control for mobile fueling operations, the Airport will utilize:

- Discharge response procedures;
- Storm drain covers;
- Drip pans;
- Spill kits located for easy access; and
- Trained personnel performing the fueling operation

##### **4.2 Facility Layout Diagram**

Figure 1 *Airport Vicinity Map* shows the general location of Chatham Municipal Airport on a USGS quadrangle map. Figure 2 *Site and Fuel Facility Area Map* displays the Airport and the location of the AST. See Appendix C for figures. Figure 2 also shows the locations

of all drainage structures (i.e. storm drain inlets, basins, etc...) and the direction of surface water runoff. As required by 40 CFR part 112.7(a)(3), Figure 2 also indicates the location and contents stored in the AST.

### 4.3 Spill Reporting

Per 40 CFR part 112.7(a)(4), the Airport shall complete a spill notification form upon detection of a discharge and prior to reporting a spill to the proper notification contacts. A *Discharge Notification Form* is included in Appendix B of this plan.

### 4.4 Potential Discharge Volumes and Direction of Flow

Table 4-1 shown below outlines the potential volume, discharge rate, general direction of flow in the event of equipment failure and means of secondary containment for various parts of the Chatham Municipal Airport where oil is stored, used, and handled.

**Table 4-1: Potential Discharge Volumes and Direction of Flow**

Potential Event	Maximum Volume Released (gal)	Maximum Discharge Rate	Direction of Flow	Secondary Containment
<b>Bulk Storage Area (AST) (See Figure 2 Site and Fuel Facility Area Map in Appendix C)</b>				
Failure of AST	10,000	Gradual to instantaneous	S to catch basin at corner of apron and parallel taxiway	Intrinsic secondary containment and supplemental containment in addition*
Tank overfill	Unknown	Unknown	SW to catch basin at center of fueling apron	Intrinsic secondary containment, oil/water separator with secondary 8,000-gallon UST**
Pipe failure	Unknown	100-200 gpm	SW to catch basin at center of fueling apron	Intrinsic secondary containment, oil/water separator with secondary 8,000-gallon UST**
Leaking pipe or valve	Unknown	1 gpm	SW to catch basin at center of fueling apron	Intrinsic secondary containment, oil/water separator with secondary 8,000-gallon UST**
<b>Loading / Offloading Area</b>				
Offloading truck leak or failure	Volume of offloading truck	Gradual to instantaneous	SW to catch basin at center of fueling apron	oil/water separator with secondary 8,000-gallon UST, spill response kit**
Hose leak during offloading from truck to ASTs	Unknown	Unknown	SW to catch basin at center of fueling apron	oil/water separator with secondary 8,000-gallon UST, spill response kit**

Potential Event	Maximum Volume Released (gal)	Maximum Discharge Rate	Direction of Flow	Secondary Containment
Hose leak during truck offloading to airplanes	1 to 200	30-50 gpm	SW to catch basin at center of fueling apron	oil/water separator with secondary 8,000-gallon UST, spill response kit**
<b>Fuel Dispensing Area (See Figure 2 Site and Fuel Facility Area Map in Appendix C)</b>				
AST and fuel dispenser hose/connections leak	1 to 200	60 gpm	N to catch basin in apron	oil/water separator with secondary 8,000-gallon UST, drip pan, and spill response kit**

\* In addition to the secondary containment listed, a graded low point and pair of swales directed towards a catch basin-leaching basin would prevent a discharge from flowing towards a navigable water.

\*\* In addition to the secondary containment listed, graded low points, a series of swales directed towards catch basin-leaching basins, and an infiltration basin with infiltration trench would prevent a discharge from flowing towards a navigable water.

## 4.5 Containment and Diversionary Structures

Per 40 CFR part 112.7(c), Chatham Municipal Airport shall provide appropriate containment and/or diversionary structures or equipment to help prevent a discharge. Secondary containment to prevent discharges into navigable waters is achieved by a combination of structures (e.g. built-in secondary containment, oil/water separator with secondary UST) and land-based spill response (e.g. absorbent pads, cleanup materials) at the Airport.

### 4.5.1 Bulk Storage Containers

The methods of achieving secondary containment for the bulk storage containers at the Airport are listed below:

#### 4.5.1.1 Tank Enclosure

The 10,000-gallon AST at the Airport is enclosed in an intrinsic secondary containment tank that exceeds the storage capacity of the AST. The AST is also equipped with emergency shutoff buttons. The system is also equipped with a Veeder Root overfill protection system with audible alarm and automatic shutoff, which activates when the tank level reaches 90% and 95% fill levels (respectively).

#### ***4.5.1.2 Drainage System***

The designated fueling area is graded so that a potential spill is diverted to a catch basin, where it is piped to an oil/water separator with a float valve (specific gravity valve) that closes if a petroleum product is present. Petroleum product would then be diverted to a secondary UST, rather than continuing to a leaching basin, as would be the case for uncontaminated stormwater. The secondary UST is an 8,000-gallon double-walled tank. A motorized drainage gate valve between the oil/water separator and leaching basin provides an additional barrier to fuel entering the drainage system, and eventually groundwater.

#### ***4.5.1.3 Sorbent Material***

There is a spill cleanup kit located in the fuel dispensing facility shed. The spill cleanup kit includes absorbent materials, booms, non-spark shovels, portable barriers, and empty drums and/or bags.

### ***4.5.2 Loading and Offloading Area***

The methods of achieving secondary containment for the loading and offloading area at the Airport are listed below:

#### ***4.5.2.1 Drainage System***

The drainage system listed for the bulk storage containers applies to the secondary containment of the loading and offloading area as well.

#### ***4.5.2.2 Sorbent Material***

The spill cleanup kit listed in the previous section applies to the secondary containment of loading and offloading areas as well.

### ***4.5.3 Fuel Dispensing***

The methods of achieving secondary containment for fuel dispensing at the Airport are listed below:

#### ***4.5.3.1 Enclosure and Drip Pan***

The fuel dispenser for the AST is housed within an enclosure and is equipped with a drip pan located underneath the dispenser.

#### ***4.5.3.2 Drainage System***

The drainage system listed for the bulk storage containers applies to the secondary containment of fuel dispensing as well.

### 4.5.3.3 Sorbent Material

The spill cleanup kit listed in the previous section applies to the secondary containment of fuel dispensing as well.

## 4.6 Inspections, Tests and Records

Per 40 CFR part 112.7(e), the Airport shall conduct inspections, tests and evaluations of the AST, fuel dispenser, and the refueling truck. The following table summarizes the various inspections and tests that shall be or are already being performed. Inspections and testing shall be performed daily, monthly and annually.

**Table 4-2: Inspection and Testing**

Facility Component	Action(s)	Frequency/Circumstance(s)
Aboveground Storage Tank (AST)	<ul style="list-style-type: none"> <li>• Visually inspect AST integrity</li> <li>• Combine visual inspection with non-destructive shell testing</li> <li>• Inspect outside and area surrounding tank for signs of deterioration and leaks</li> </ul>	Perform monthly, annually, during scheduled inspections and when repairs are done
AST supports and foundation	<ul style="list-style-type: none"> <li>• Inspect AST supports and foundation</li> </ul>	Perform monthly, annually, during scheduled inspections and when repairs are done
All outlets, valves, connections, pipes and hoses of the AST	<ul style="list-style-type: none"> <li>• Visually inspect</li> <li>• Check that all containment drains and tank drain valves are locked</li> </ul>	Prior to loading and offloading to/from the fuel farm
AST sensors and safety devices	<ul style="list-style-type: none"> <li>• Test for proper operation</li> </ul>	Monthly and annually
AST fuel dispenser	<ul style="list-style-type: none"> <li>• Visually inspect</li> </ul>	Daily and monthly
All outlets, valves, connections and hoses of tank truck	<ul style="list-style-type: none"> <li>• Visually inspect</li> </ul>	Prior to filling and departing the fuel farm area.
Mobile Refueler Tank	<ul style="list-style-type: none"> <li>• Visually inspect</li> <li>• Check piping and connections</li> </ul>	Weekly

### 4.6.1 Daily Inspection

The system operators shall perform a complete daily walk-through of the fuel farm and the area surrounding it. The daily inspection shall include but is not limited to:

- Looking for AST and equipment damage or leakage,
- Staining or discoloration of pavement and soils, and
- Verifying that the AST drain valves are functioning properly.

See the *Daily Inspection Checklist* form in Appendix B of this plan. This form shall be filled out, filed in Appendix G of this plan and retained for a period of three (3) years. The operator may add additional items to this checklist as they see fit.

#### **4.6.2 Weekly Inspection**

The mobile refueler tank shall be visually inspected each week for equipment damage, leakage, and integrity of the piping and connections. See the *Weekly Inspection Checklist* form in Appendix B of this plan. This form shall be filled out, filed in Appendix G of this plan and retained for a period of three (3) years. The operator may add additional items to this checklist as they see fit.

#### **4.6.3 Monthly Inspection**

Monthly inspections at the Airport shall include, but are not limited to, the following elements:

- Observing the exterior of the AST, fuel dispensers and other equipment for signs of deterioration, leaks, corrosion and/or fatigue.
- Observing the AST foundation and supports for signs of excessive settlement and instability.
- Verifying that the overfill prevention system for the AST is operating properly.
- Checking the spill cleanup kit equipment and materials and restocking as needed.
- Observing all outlets, valves, pipes, connections and hoses on the AST and fuel dispensing facility for proper condition and proper operation.

All problems found or assumed during the monthly inspection shall be reported to the authorized representative of the Airport and shall be repaired as soon as possible so as to prevent a larger discharge or a discharge to navigable waters. All discharges shall be cleaned up immediately upon discovery.

See the *Monthly Inspection Checklist* form in Appendix B of this plan. This form shall be filled out, signed by an authorized representative, filed in Appendix G of this plan and retained for a period of three (3) years.

#### **4.6.4 Annual Inspection**

A more thorough inspection of the ASTs and fuel dispensing facility at the Airport shall be conducted on an annual basis. This inspection can be combined with the servicing of the fuel systems. The annual inspection complements the monthly and daily inspections that are performed. It is preferable to conduct the annual inspection after a large storm

event has occurred to verify the imperviousness and/or proper function of the drainage system.

See the *Annual Inspection Checklist* form in Appendix B of this plan. This form shall be filled out, signed by an authorized representative, filed in Appendix E of this plan and retained for a period of three (3) years.

#### **4.6.5 Periodic AST Integrity Testing**

In addition to the daily, monthly and yearly inspections of the AST and fuel dispensing facility at the Airport, the AST shall be evaluated periodically by an outside certified tank inspector. The evaluation shall follow the Steel Tank Institute (STI) *Standard for the Inspection of Aboveground Storage Tanks*, SP-001, 2005 Version or as amended. See Table 5-2 in Section 5.2.6 *Inspections and Tests* of this report for further information regarding the testing requirements.

### **4.7 Personnel, Training and Discharge Prevention Procedures**

Per 40 CFR part 112.7(f) the Airport has personnel, training and discharge prevention procedures in place as part of the SPCC. The Town of Chatham, acting by and through its Airport Commission is responsible for discharge prevention, control and response preparedness activities at Chatham Municipal Airport.

The Airport shall instruct oil-handling personnel designated to operate and maintain the equipment on discharge procedure protocols, applicable pollution control laws, rules and regulations, general airport operations and the content of the SPCC Plan. Any new personnel potentially required to perform such operations shall be provided with the same training prior to their involvement.

The Airport shall also conduct annual discharge prevention briefings for all personnel involved in related oil operations. These briefings shall be focused on ensuring the continual understanding and adherence to the discharge prevention procedures of this SPCC Plan. The briefings shall also mention any discharges or failures, malfunctioning equipment and/or components and any new prevention procedures and/or best management practices (BMP). The briefings shall be conducted with a set agenda, but participants shall be allowed to partake in discussions pertaining to the topics at hand. New airport employees will be trained within 30 days of employment at the Airport.

See the *Annual Training and Briefing Log* form in Appendix B of this plan. This form shall be filled out, signed by an authorized representative, filed in Appendix E of this plan and retained for a period of three (3) years.

### **4.8 Security**

This section shall address 40 CFR part 112.7(g) requirements regarding security at the Airport and the fuel dispensing facility.

A chain link perimeter fence to limit access to the facility protects the Airport. The Airport is supported by approximately 8,443 LF of 8-foot high, chain-link fencing with barbed wire around the perimeter of the airfield.

The Airport is periodically patrolled during the day and night by the Chatham Police Department as part of the Airport's overall security plan.

The Airport is staffed with Airport personnel from 9:00 AM to 6:00 PM and often later into the evening, seven days per week.

The Main Apron area and the fueling area are lighted at night. The AST and fuel dispenser are surrounded with concrete filled steel bollards to help prevent airplanes and vehicles from hitting them.

All valves for the AST and the containment system are locked in the open position and may only be closed by authorized personnel.

The fuel dispenser attached to the AST is held within an enclosure. Outside of business hours, the enclosure is secured and only accessible to authorized airport personnel. The system is credit card operated, and fuel can only be dispensed by trained personnel. The enclosure is locked when it is outside the Airport hours of operation.

The loading/unloading connections of the fuel facility are securely capped when they are not in service, in stand-by service for an extended time, or when emptied of liquid content either by draining or by invert gas pressure.

#### **4.9 Tank Truck Loading/Unloading Rack Requirements**

This section shall address 40 CFR part 112.7(h) requirements regarding loading/unloading of tank truck(s) at the Airport and the fuel farm.

There is a potential for discharges during tank truck loading and unloading operations at the Airport and the fuel farm. The Airport is committed to ensuring safe and effective transfers of oil during loading and unloading of tank trucks and has not had a reportable spill in the known past.

The following measures are implemented or shall be implemented to help prevent discharges during tank truck loading and unloading operations at the Airport. The fuel system operators and delivery truck operators are encouraged to have their own measures above and beyond those listed herein.

##### ***4.9.1 Secondary Containment***

40 CFR part 112.7(h)(1) requires that airports have a containment system that is designed to hold at least the maximum capacity of any single compartment of a tank truck that loads and unloads at the Airport. The oil/water separator system in place at the existing fuel farm provides secondary containment of the bulk storage containers, the loading and offloading area, and the fuel dispensing area. The designated fueling

area is graded so that a potential spill is diverted to a catch basin, then piped to an oil/water separator with a float valve (specific gravity valve) that closes if a petroleum product is present. The petroleum product would then be diverted to a secondary UST. This system meets or exceeds the maximum capacity of any single compartment of a tank truck that loads and unloads at the Airport.

#### **4.9.2 Loading/Unloading Procedures**

All suppliers of oil shall meet the minimum requirements and regulations for tank truck loading/unloading established by the U.S. Department of Transportation (DOT) when operating at the Airport. The fuel system operators are responsible to ensure that all suppliers understand the site layout of the Airport, know the procedures for entering the Airport and unloading oil, and have the required equipment necessary to respond to a potential discharge from the vehicle and/or fuel delivery hose.

Authorized personnel shall supervise oil deliveries from suppliers. At a minimum, they should supervise all new suppliers and periodically observe existing, approved suppliers.

All loading and unloading of tank trucks shall take place in the designated loading/unloading area.

Filling operations of tank trucks shall be performed by authorized personnel trained in the proper discharge prevention procedures. The truck driver and/or the authorized personnel shall remain with the tank truck at all times during the transfer of fuel. Table 4-3 outlines the minimum procedures required to be performed during all transfer operations.

**Table 4-3: Minimum SPCC Fuel Transfer Procedures**

Stage	Minimum Tasks
Prior to loading/unloading  Prior to loading/unloading (Continued)	<ul style="list-style-type: none"> <li>• Visually check all hoses for leaks and wet spots</li> <li>• Check that there is sufficient volume available in the AST or truck</li> <li>• Check that the drain valve on the AST is closed and in the locked position</li> <li>• Secure the vehicle with wheel chocks or interlocks</li> <li>• Check that the vehicle has the parking brake set</li> <li>• Verify proper alignment of valves and proper functioning of the pumping system</li> <li>• When filling a tank truck, inspect the lowermost drain and all outlets</li> <li>• Provide adequate bonding/grounding prior to connecting to the fuel transfer point</li> <li>• Turn off cell phone and all other electronic devices</li> <li>• Verify location and accessibility of spill control kit</li> </ul>
During loading/unloading	<ul style="list-style-type: none"> <li>• The driver must stay with the vehicle at all times during loading/unloading</li> <li>• Periodically inspect all systems, valves, hoses and connections</li> <li>• When loading, keep all internal and external valves on the receiving tank open along with the pressure relief valve</li> <li>• When making connection, shut off the vehicle's engine. When transferring materials, shut off the vehicle's engine unless it is required to operate the pump.</li> </ul>

Stage	Minimum Tasks
	<ul style="list-style-type: none"> <li>• Monitor the liquid levels in the receiving tank to prevent overfilling</li> <li>• Monitor the flow meter to determine the rate of flow</li> <li>• When topping off the tank, reduce the rate of flow to prevent overflow</li> </ul>
After loading/unloading	<ul style="list-style-type: none"> <li>• Check that the transfer process is completed</li> <li>• Close all tank and loading valves prior to disconnecting</li> <li>• Securely close all internal, external and dome cover valves prior to disconnecting</li> <li>• Secure all hatches</li> <li>• Disconnect the grounding/bonding wires</li> <li>• Make sure the hoses have been drained to remove the remaining material before they leave the connection. A drip pan shall be used</li> <li>• Cap the end of the hose and other connecting devices before moving them to prevent leakage</li> <li>• Remove the wheel chocks or interlocks from the vehicle</li> <li>• Inspect the lowermost drain and all outlets on the tank and truck prior to departure. Tighten, adjust or replace caps, valves or other equipment as necessary to prevent leakage or spills</li> </ul>

In addition, the tank system is equipped with a “Veerer Root”™ overfill prevention system, which triggers an audible alarm when the tank is filled above 90% of the capacity and an automatic shutoff which activates at 95% full.

See the *Minimum SPCC Fuel Transfer Checklist* included in Appendix B of this plan. The checklist should be completed whenever fuel is transferred at the Airport. The completed checklist shall be filed and retained for a three (3) year period in Appendix E of this plan.

#### 4.10 Brittle Fracture Evaluation

This section addresses 40 CFR part 112.7(i) regarding field-constructed aboveground tanks that undergo repair, alteration, reconstruction or a change in service. The AST was manufacturer built with a field-constructed pumping system.

As mentioned in the American Petroleum Institute (API) *Standard 653 Tank Inspection, Repair, Alteration, and Reconstruction* (API-653), brittle fracture is not a concern if the shell thickness of a tank is less than one-half inch. The tank thickness for the AST at the Airport is less than ½ inch. This eliminates the requirement for brittle fracture evaluation on the AST.

If the AST undergoes repair, alteration, reconstruction or a change in service that might affect the risk of a discharge or failure, it will be reevaluated for risk of discharge or failure in accordance with all applicable standards.

#### 4.11 Conformance with Applicable State Requirements

This section addresses 40 CFR part 112.7(j) regarding conformance with applicable state rules, regulations and/or guidelines.

The AST at Chatham Municipal Airport is registered with the state and local authorities and has a current certificate of registration.

Massachusetts General Law Part I, Title XX, Chapter 148, Section 37 regulates storage tanks of more than 10,000-gallon capacity. These regulations do not apply to the Airport's AST with a capacity of exactly 10,000 gallons.

With the exception of the secondary UST (for containment purposes), there are no known underground storage tanks (UST) remaining at the Airport. All UST's were removed from the Airport prior to the installation of the AST in 2008. The removal of these UST's was done in conformance with applicable laws, regulations and/or guidelines.

The U.S. Environmental Protection Agency (EPA) regulates stormwater through a permit program called the National Pollutant Discharge Elimination System (NPDES). Airports must comply with the Multi-Sector General Permit (MSGP) for Industrial Activities through the Notice of Intent (NOI) process. The Airport has recently filed an NOI and updated its Stormwater Pollution Prevention Plan (SWPPP) to be in compliance with the NPDES MSGP. See the SWPPP for further information.

## 5. DISCHARGE PREVENTION – SPCC PROVISIONS

### 5.1 Facility Drainage

This section addresses 40 CFR 112.8(b) regarding facility drainage. The Airport currently has no containment system (e.g. loading/unloading rack) that requires the drainage of water.

Any potential discharges from the AST will be contained by the intrinsic secondary containment system. Discharges that occur during loading/unloading and fuel dispensing operations will drain through a specially designed oil/water separator system. Discharges would be diverted to the oil/water separator with a float valve (specific gravity valve) that closes when petroleum product is present. Petroleum product would then be diverted to a secondary UST, where it would be retained until it can be pumped out. This system is designed to provide spill storage required under 40 CFR part 112.8(b)(3) and (4), as allowed in 40 CFR part 112.7(a)(2).

### 5.2 Bulk Storage Containers (ASTs)

Table 5.1 shown below summarizes the construction, volume and contents of the ASTs in the fuel at the Airport.

**Table 5-1: List of Bulk Storage Containers**

Location	Type	Capacity (gal)	Content	Discharge Prevention and Containment
Fuel Farm	AST	10,000	AvGas fuel	Intrinsic Secondary Containment Liquid Level Gauge Veeder Root Overfill Protection System

#### 5.2.1 Construction

This section addresses 40 CFR part 112.8(c)(1) regarding the materials and construction of the AST at the Airport. The AST is constructed of steel in accordance with industry standards. The design and construction of the AST is compatible with the characteristics of the materials stored and with temperature and pressure conditions.

#### 5.2.2 Secondary Containment

This section addresses 40 CFR part 112.8(c)(2) regarding this secondary containment of the AST. The AST is constructed with intrinsic secondary containment exceeding the AST's volume. Since the secondary containment is not subject to precipitation, a leak from the primary container can be fully contained should an event occur. The interstitial space between the primary and secondary containers shall be inspected monthly to detect any leak from the primary container. The AST is equipped with liquid level gauges and overfill alarms to prevent overfills from occurring during loading.

Discharges from loading/unloading and fuel dispensing operations will flow to an oil/water separator and be diverted to a secondary UST, where they will be retained until they can be pumped out. This system is engineered to meet or exceed the maximum capacity of potential discharges at the Airport.

### ***5.2.3 Drainage from Diked Areas***

This section addresses 40 CFR part 112.8(c)(3) regarding the drainage of diked areas. The Airport currently has no diked areas that contribute to the secondary containment system.

### ***5.2.4 Corrosion Protection***

This section addresses 40 CFR part 112.8(c)(4) regarding the protection of USTs from corrosion. The only UST at the Airport is the secondary UST designed to receive diverted spills. This double-walled tank is constructed from fiberglass and surrounded by sand. Corrosion protection is not required.

### ***5.2.5 Partially Buried and Bunkered Tanks***

This section addresses 40 CFR part 112.8(c)(5) regarding corrosion protection for partially buried and bunkered tanks. Since there are no partially buried or bunkered tanks at the Airport, this does not apply.

### ***5.2.6 Inspections and Tests***

This section addresses 40 CFR part 112.8(c)(6) regarding the inspection and testing of ASTs. Visual inspection of the AST at the Airport shall be conducted by authorized personnel and performed according to the procedures described in this SPCC Plan.

The schedule and scope of required certified inspections and tests performed on the AST shall be as specified in STI Standard SP-001. The external inspection of the shell, as specified in the standards or if recommended by the certified tank inspector, is to assess the integrity of the tank for continued oil storage.

All records of certified tank inspections shall be filed in Appendix F of this plan and retained for a period of at least three (3) years.

Table 5-2 shown below summarizes the inspections and tests that shall be performed on the Airport's AST.

**Table 5-2: Scope and Frequency of AST Inspections and Tests**

<b>Inspection/Test</b>	<b>Frequency</b>
Visual inspection by authorized personnel (per the checklist in Appendix B)	Monthly
	Annually
External inspection by certified tank inspector (per STI Standard SP-001)	20 years
Internal inspection by certified tank inspector (per STI Standard SP-001)	As recommended*

*\*Internal inspection may be recommended by a certified tank inspector based on his/her findings from the external inspection.*

### **5.2.7 Heating Coils**

This section addresses 40 CFR part 112.8(c)(7) regarding heating coils equipped in ASTs. The AST is not equipped with heating coils.

### **5.2.8 Overfill Prevention Systems**

This section addresses 40 CFR part 112.8(c)(8) regarding the overfill prevention systems installed on ASTs. The Airport's AST is equipped with a Veeder Root overfill protection system, which engages an audible alarm when the tank is filled above 90% of its capacity and automatic shutoff at 95% of the tank capacity. This system is supplemented by a direct reading level gauge.

Authorized personnel shall be present during the entire tank filling operation to monitor fuel levels within the AST.

### **5.2.9 Effluent Treatment Facilities**

This section addresses 40 CFR part 112.8(c)(9) regarding the observing of effluent treatment facilities. The Airport does not have any effluent treatment facilities for which system upsets could cause a discharge.

### **5.2.10 Visible Discharges**

This section addresses 40 CFR part 112.8(c)(10) regarding visible discharges at the Airport. Visible discharges from the AST, including seams, gaskets, piping, pumps, valves, rivets, and/or bolts shall be corrected as soon as possible upon discovery.

### **5.2.11 Mobile and Portable Containers**

This section addresses 40 CFR part 112.8(c)(11) regarding mobile (except mobile refuelers) and portable oil storage containers at the Airport. 40 CFR Part 112.8(c)(11)

states “position or locate mobile or portable oil storage containers to prevent a discharge ... 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. Since there are no mobile and portable oil storage containers at the Airport, this does not apply.

### **5.3 Transfer Operations, Pumping and In-Plant Processes**

This section addresses 40 CFR part 112.8(d) regarding the transfer operations, pumping and in-plant operations at the Airport. Transfer operations at the Airport include the following:

- The filling of airplanes using the fuel dispenser attached to the AST
- The transfer of oil into and/or from tanker trucks at the loading/unloading area

All aboveground piping and valves shall be inspected monthly to assess their condition. Inspection shall include aboveground valves, piping, appurtenances, expansion joints, valve glands and bodies catch pans, pipeline valves, locking of valves, and metal surfaces. Observations shall be noted on the *Monthly Inspection Checklist* in Appendix B of this plan.

Warning signs shall be posted at appropriate locations around the fuel farm to prevent vehicles from damaging aboveground piping and appurtenances. Most of the aboveground piping and appurtenances are located within areas that are not accessible by vehicles. Furthermore, the fuel farm is surrounded by yellow painted concrete filled steel bollards to prevent vehicular accidents involving the fuel farm.

## 6. DISCHARGE RESPONSE

This section shall describe the required response and cleanup procedures should an oil discharge event occur. Uncontrolled discharge of oil to surface water, groundwater, and/or soils is prohibited by state and federal laws, regulations and/or guidelines. In the event of an oil discharge, immediate actions to control, contain and recover the discharged product(s) are required.

In general, these following steps shall be taken in the event of an oil discharge:

- ❑ Eliminate potential sources of spark;
- ❑ If at all possible and safe to do so, identify and shut down the source of the discharge to stop the flow of the product;
- ❑ Contain the discharge using the Spill Cleanup Kit(s) (i.e. sorbents, trenches, sandbags, or other materials);
- ❑ Contact the Chatham Fire Department;
- ❑ Contact the Facility Manager (Timothy Howard) or his alternate;
- ❑ Contact regulatory authorities and the response organization; and
- ❑ Collect and dispose of recovered products according to all applicable regulations.

For the purpose of establishing the appropriate response procedures required for any given discharge event, the SPCC Plan shall classify discharges into “minor” and “major”. The classifications shall depend on the volume and characteristics of the discharged material(s).

An *Emergency Contact List* is included in Appendix B of this plan. This list shall be posted at predetermined locations throughout the Airport (at a minimum by the fuel farm). The *List of Minimum Spill Response Materials* is also included in Appendix B of this plan.

The protection of human lives is the first priority in any discharge response.

### 6.1 Minor Discharge Response

A “minor” discharge shall be defined as any discharge that poses no significant harm or threat to the environment and human health and safety. The following list further defines the characteristics of a “minor” discharge:

- ❑ The quantity of discharged material(s) is small (e.g. usually involves less than 10-gallons of material),
- ❑ The discharged material(s) are easily stopped and controlled at the time of the discharge,

- ❑ The discharged material(s) are located near the source of the discharge,
- ❑ The discharged material(s) are not likely to reach any sources of water,
- ❑ There is little to no risk to human health or safety, and
- ❑ There is little to no risk of a fire or an explosion.

“Minor” discharges are usually the responsibility of the Airport’s authorized personnel to clean up. The following is a list of guidelines that shall apply to a “minor” discharge event:

- ❑ Immediately notify the Chatham Fire Department, and Facility Manager (Timothy Howard).
- ❑ Under the direction of the Facility Manager and the Chatham Fire Department, contain the discharge with discharge response materials and equipment. Place all discharge cleanup debris in the properly labeled waste container(s).
- ❑ The Facility Manager shall complete the *Discharge Notification Form* (see Appendix B of this plan) and then file and retain it for three (3) years in Appendix H of this report.
- ❑ Should the discharge be greater than 10-gallons, the Facility Manager shall contact the Massachusetts Department of Environmental Protection Incident Response Division (see the *Emergency Contact List* in Appendix B for contact numbers).

## 6.2 Major Discharge Response

A “major” discharge shall be defined as any discharge that cannot be safely controlled or cleaned up by the Airport and thus poses significant harm or threat to the environment and human health and safety. The following list further defines the characteristics of a “major” discharge:

- ❑ The discharge is large enough to spread beyond the immediate discharge area,
- ❑ The discharged material(s) is likely to reach or has reached any sources of water,
- ❑ The discharged material(s) requires special equipment, training and/or procedures to be cleaned up,
- ❑ The discharged material(s) potentially poses or does pose a hazard to human health or safety, or
- ❑ There is a potential risk or danger of a fire or an explosion.

The following is a list of guidelines that shall apply to a “major” discharge event:

- All workers and personnel of the Airport shall immediately evacuate the site and move to areas that are a safe distance from the discharge.
- Immediately notify the Chatham Fire Department and the Facility Manager. Inform the Chatham Fire Department or Chatham Police Department should anyone be injured.
- The Facility Manager shall notify the Chatham Airport Commission Chairman.
- The Facility Manager shall call the spill response and cleanup contractor listed on the *Emergency Contact List* in Appendix B of this plan.
- The Facility Manager shall immediately notify the Massachusetts Department of Environmental Protection Incident Response Division and the National Response Center.
- The Facility Manager shall record all calls on the *Discharge Notification Form* in Appendix B and file and retain it for three (3) years in Appendix H of this plan.
- The Facility Manager shall coordinate the cleanup and obtain assistance from a cleanup contractor or other response organizations as required.

If the Facility Manager is not available at the time of the discharge, then the Town of Chatham shall be contacted and the designated alternate or next highest person in seniority shall assume the responsibilities for the coordination of response activities.

### **6.3 Waste Disposal**

Any waste(s) that are the result of a “minor” discharge response shall be placed/contained in impervious bags, drums and/or buckets. The Facility Manager shall coordinate and ensure the proper disposal of all wastes. These wastes shall be removed from the Airport by a licensed waste hauler within two weeks of the “minor” discharge event.

Waste(s) that are the result of a “major” discharge response shall be removed and disposed of by the cleanup contractor.

### **6.4 Discharge Notification**

A discharge of any size from the Airport that affects or threatens to affect navigable waters or adjoining shorelines must be reported immediately to the National Response Center. The National Response Center operates 24 hours a day and seven (7) days a week (see the *Emergency Contact List* in Appendix B for contact numbers).

A *Discharge Notification Form* is included in Appendix B of this plan. This form shall aid in the reporting of discharge events. The following is a list of information required for the reporting of discharges:

- Name, location, organization and telephone number;
- Name and address of the party(s) responsible for the discharge incident;
- Date, time, and duration of the discharge incident;
- Location of the discharge incident;
- Source and cause of the release or discharge;
- Type of material(s) released or discharged;
- Quantity of material(s) released or discharged;
- Danger or threat posed by the release or discharge;
- Number and types of any injuries (if applicable);
- Media (i.e. air, water, etc...) affected or threatened by the release or discharge;
- Weather conditions at the discharge incident location; and
- Any other pertinent information that may help the emergency personnel respond to the incident.

Contact information for reporting a discharge is included in Appendix B of this plan (*Emergency Contact List*). In addition, the Airport shall post the *Emergency Contact List* at predetermined locations throughout the Airport (at a minimum by the fuel farm).

In addition to the reporting discussed above, 40 CFR 112.4 requires that the Airport submit information to the U.S. EPA Regional Administrator (RA) and the appropriate state agency (Massachusetts Department of Environment Protection (MDEP)) in charge of oil pollution control (see the *Emergency Contact List* in Appendix B) whenever there is a discharge more than 1,000 gallons of oil in any given event, or more than 42 gallons of oil in each of two discharge events within a 12-month period, as defined in 40 CFR part 112.1(b).

The following is a list of information that must be submitted to the U.S. EPA RA and MDEP within 60 days of any given spill event meeting these criteria:

- Name of the facility;
- Name of the owner/operator;
- Location of the facility;
- Maximum storage or handling capacity and normal daily throughput;
- Corrective actions and countermeasures taken, including a description of the equipment repair(s) and replacement(s);
- Description of facility, including maps, flow diagrams, and topographical maps;
- Cause of discharge(s) to navigable waters or adjoining shorelines, including a failure analysis of the system and subsystem in which the failure occurred;
- Any additional preventive measures taken or contemplated to minimize possible recurrence; and
- Any other pertinent information requested by the RA.

A *Standard Agency Notification Report* form is included in Appendix B of this plan. This form shall be used for submitting the necessary information to the U.S. EPA RA and MDEP.

## 6.5 Cleanup Contractors and Equipment Suppliers

See the *Emergency Contact List* in Appendix B of this plan for contact information of specialized spill response and cleanup contractors. These contractors have the appropriate equipment and training required to respond to a discharge that affects navigable waters or adjoining shorelines.

There are three (3) spill cleanup kits at the Airport, one (1) in the aircraft maintenance hangar, one (1) at the fuel dispensing facility shed, and one (1) in the Jet-A mobile refueling truck. The *List of Minimum Spill Response Materials* is located in Appendix B of this plan. The inventory of the two (2) kits shall be checked on a monthly basis. Additional materials and equipment shall be supplied if the inventory of each kit is less than the *List of Minimum Spill Response Materials*. These materials and/or equipment can be obtained from the Chatham Fire Department or ordered from the following suppliers:

- West Coast Spill Supplies (888-548-3800)
- Grainger (800-472-4643)
- Maxymillian Technologies (413-499-3050)

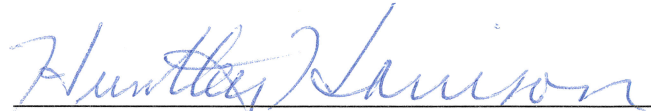
**APPENDICES**

## APPENDIX A – CERTIFICATIONS

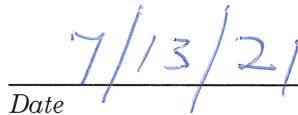
**MANAGEMENT APPROVAL AND DESIGNATED PERSON  
CERTIFICATION**

Chatham Municipal Airport is committed to preventing discharges of oil to navigable waters and the environment, and to maintaining required standards for spill prevention control and countermeasures through the implementation, review and amendment to this plan. This SPCC Plan has the full approval of the Airport and its management. The Airport has committed the necessary resources to implement this plan.

The Authorized Facility Representative is the Designated Person Accountable for Oil Spill Prevention at the facility and has the authority to commit the necessary resources to implement this plan. The Authorized Facility Representative for Chatham Municipal Airport is Mr. Huntley Harrison, Airport Commission Chairman.



*Signature – Huntley Harrison*



*Date*

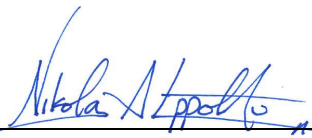
Airport Commission, Chairman

*Title*

## PROFESSIONAL ENGINEER CERTIFICATION

The undersigned Professional Engineer (PE), registered in the Commonwealth of Massachusetts, is familiar with the requirements Title 40 of the Code of Federal Regulations, Part 112 (40 CFR part 112) and has visited and examined the facility, or has supervised the examination of the facility by appropriately qualified personnel. The undersigned PE attests that this Spill Prevention, Control and Countermeasures (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 the plan is adequate for Chatham Municipal Airport. [40 CFR part 112.3(d)]

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 and operator maintains, tests and inspects equipment, containment, and other devices as prescribed in this plan.

  
\_\_\_\_\_  
*Signature*

53593, Commonwealth of Massachusetts  
*Professional Engineer Registration No., State*

Nikolas A. Ippolito, PE  
*Name*

Project Manager  
*Title*

Gale Associates, Inc.  
*Company*

7/12/2021  
*Date*

**SUBSTANTIAL HARM CRITERIA CHECKLIST (40 CFR 112.20 (e))  
CERTIFICATION OF APPLICABILITY**

FACILITY NAME: Chatham Municipal Airport

FACILITY ADDRESS: State Road Chatham, Massachusetts

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 such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments?

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 such that a discharge from the facility would shut down a public drinking water intake?

Yes  No

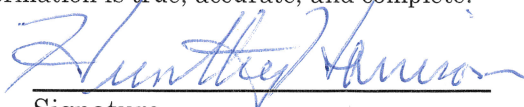
5. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and has the facility experienced a reportable oil spill in an amount greater than or equal to 10,000 gallons within the last 5 years?

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.

Huntley Harrison  
Name (please type or print)

  
Signature

Chairman, Airport Commission  
Title

7/13/21  
Date

## APPENDIX B – FORMS, LOGS AND CHECKLISTS



## DISCHARGE NOTIFICATION FORM

<b>Part A: Basic Spill Data</b>		
<b>Type of Spilled Substance:</b>	<b>Notification Person:</b>	
<b>Quantity Released:</b>	<b>Spill Date and Time:</b>	
<b>Location of Spill:</b>	<b>Discovery Date and Time:</b>	
	<b>Spill Duration:</b>	
<b>Source and Cause of Spill:</b>		
<b>Facility Name &amp; Location:</b> Chatham Municipal Airport 240 George Ryder Road Chatham, MA 02633	<b>Release to/Media Affected:</b> [ ] air    [ ] water    [ ] soil [ ] containment [ ] other _____	
<b>Owner / Company Name:</b> Town of Chatham 549 Main Street Chatham, MA 02633	<b>Telephone:</b> Facility: 508-945-9000 24 hour: 978-987-3572	<b>Name and Address of Responsible Party(s):</b> _____ _____ _____
<b>Nature of spill and any environmental or health effects:</b> [ ] Injuries: _____ [ ] Fatalities: _____		
<b>Part B: Notification Checklist</b>		
<b>Spill Type</b>	<b>Notification Date and Time</b>	<b>Name of Person that Received Call</b>
<b>Spill is any amount of petroleum product:</b>		
Chatham Fire Department 911		
Massachusetts Department of Environmental Protection 1-888-304-1133 or 1-413-784-1149		
<b>Spill reaches groundwater or surface water:</b>		
Chatham Fire Department 911		
Massachusetts Department of Environmental Protection 1-888-304-1133		
USEPA National Response Center 1-800-424-8802		
<b>Part C: Other Information</b>		

Send a copy of completed form to the Town of Chatham Fire Department Environmental Compliance Officer.

## DAILY INSPECTION CHECKLIST AVIATION FUEL (AVGAS) AST

Month and Year: \_\_\_\_\_ Inspector(s) Initials: \_\_\_\_\_

This inspection checklist shall be filled out on a daily basis by authorized personnel of Chatham Municipal Airport. The inspector shall initial the checklist daily. At the end of each month, the completed checklist shall be filed in Appendix G of the SPCC Plan and retained for a period of three (3) years.

Daily Inspection/Action	Date																															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Inspect general condition of Fuel Farm																																
Fire extinguishers																																
Security system																																
Spill kit																																
Perform tank sumps and record findings																																
Pressurize system and check for leaks																																
Sump filter vessels and record findings																																
System flow rate																																
Filter differential pressure and record psi																																
Inspect hoses, swivels, seals and nozzles																																
Grounding/bonding reel, cables and clamps																																
Check and drain containment																																
<b>Approval Initials</b>																																

Comments: \_\_\_\_\_  
\_\_\_\_\_

Corrective Actions: \_\_\_\_\_  
\_\_\_\_\_

## WEEKLY INSPECTION CHECKLIST JET-A MOBILE REFUELER

Month and Year: \_\_\_\_\_ Inspector(s) Initials: \_\_\_\_\_

This inspection checklist shall be filled out on a weekly basis by authorized personnel of Chatham Municipal Airport. The inspector shall initial the checklist weekly. At the end of each month, the completed checklist shall be filed in Appendix G of the SPCC Plan and retained for a period of three (3) years.

Weekly Inspection/Actions	Week (Enter Date)				
	1: _____	2: _____	3: _____	4: _____	5: _____
Visually inspect surfaces, specifically looking for drip marks, discoloration, puddles, corrosion, cracks, and chipped paint					
Check piping and connections for droplets, discoloration, corrosion, bowing between supports, and evidence of stored material on joints, valves, or seals					
Inspect, and clean if necessary, normal operating vents and emergency vents					
<b>Approval Initials and Date</b>					

**Comments:** \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**Corrective Actions:** \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

## MONTHLY INSPECTION CHECKLIST AVIATION FUEL (AVGAS) AST

Year: \_\_\_\_\_ Inspector(s) Initials: \_\_\_\_\_

This inspection checklist shall be filled out on a monthly basis by authorized personnel of Chatham Municipal Airport. The inspector shall initial the checklist monthly. At the end of each year, the completed checklist shall be filed in Appendix G of the SPCC Plan and retained for a period of three (3) years.

Monthly Inspection/Actions	Month											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Filter system evaluation												
Ground/bond continuity check												
Inspect nozzle screen												
Signs and placards												
Floating suction												
Product meter seals												
All daily inspections												
<b>Approval Initials and Date</b>												

**Comments:** \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**Corrective Actions:** \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

## ANNUAL INSPECTION CHECKLIST AVIATION FUEL (AVGAS) AST

**Year:** \_\_\_\_\_ **Inspector(s) Initials:** \_\_\_\_\_

This inspection checklist shall be filled out on an annual basis by authorized personnel of Chatham Municipal Airport. The inspector shall initial the checklist annually. At the end of each year, the completed checklist shall be filed in Appendix G of the SPCC Plan and retained for a period of three (3) years.

Annual Inspection/Actions	Check	Comments
Product tank inspection		
Meter calibration		
Differential pressure gauges		
Filter elements		
Water defense system		
Filter/separator heaters		
Tank vents		
Fuel storage safety systems		
All daily inspections		
All monthly inspections		
<b>Approval Signature and Date</b>		
	<i>Authorized Signature</i>	<i>Date</i>

**Comments:** \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**Corrective Actions:** \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**Recommendations:** \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_



## STANDARD AGENCY NOTIFICATION FORM

Information contained in this form must be submitted to U.S. Environmental Protection Agency (EPA) Region 1 Regional Administrator (RA) and to the Massachusetts Department of Environmental Protection (MDEP) within 60 days of a qualifying discharge event. See Section 6 *Discharge Response* for what is defined as a qualifying event. Prior to submitting this completed form, be sure to make a copy of it and file it in Appendix E of the SPCC Plan. This document shall be retained for a time period of three (3) years.

<b>Facility:</b>	Chatham Municipal Airport 240 George Ryder Road Chatham, MA 02633
<b>Owner/Operator:</b>	Town of Chatham – Airport Commission 549 Main Street Chatham, MA 02633
<b>Name of person filing report</b>	
<b>Maximum storage capacity</b>	13,000 gallons
<b>Daily throughput</b>	_____ gallons
<b>Nature of Qualifying Incident(s):</b>	
<input type="checkbox"/> Discharge to navigable waters or adjoining shorelines greater than 1,000 gallons <input type="checkbox"/> Second discharge exceeding 42 gallons within a 12-month period	
<b>Description of Facility (attach maps, flow diagrams and topographical maps):</b>	
<p>The Chatham Municipal Airport is a general aviation airport in the Town of Chatham, Massachusetts. The airport handles, stores and distributes aviation fuel to customers of the Airport. Its fuel storage and dispensing facility, located adjacent to the main apron, contains a 10,000-gallon low lead aviation gasoline (AvGas) aboveground storage tank installed in 2008. The AST is a steel, double-walled, thermally insulated tank. The fueling area includes a 40-foot square concrete fueling apron, the fuel storage tank, a shed with fueling equipment, and a subsurface stormwater drainage system with an in-line oil/water separator.</p> <p>Jet-A fuel is distributed to customers by use of a 3,000-gallon mobile refueler truck.</p> <p>The airport is situated just over one mile north of Nantucket Sound and one mile south of Pleasant Bay. Chatham Harbor and the Atlantic Ocean are located approximately two miles to the east of the Airport. The property is bounded by George Ryder Road to the west and north, Route 28/Main Street to the south, and Ell Street, Sky Way and Wilfred Road to the east.</p> <p>Attached are maps, diagrams, and other documents pertaining to the notification form.</p>	

<b>Agency Notification Standard Report:</b>
<b>Cause of the discharge(s), including a failure analysis of the system and subsystems in which the failure occurred.</b>
<b>Corrective actions and countermeasures taken, including a description of equipment repairs and replacements:</b>
<b>Additional preventive measures taken or contemplated to minimize possibility of reoccurrence:</b>
<b>Other pertinent information:</b>

## MINIMUM SPCC FUEL TRANSFER CHECKLIST

This spill prevention checklist shall be used during all fuel transfer operations at Chatham Municipal Airport. This checklist shall be filled in each time that fuel is loaded and unloaded from the AST at the fuel farm. When it is completed, it shall be filed in Appendix E of the SPCC Plan and retained for a time period of three (3) years.

		Dealer				
		Date & Time				
Required Actions	Product Type					
<b>Before Unloading</b>						
Position operable firefighting equipment						
Locate and be aware of emergency shutoff						
Ground/bond trailer						
Open internal valve (allow 10 min. settling)						
Review paperwork						
- Correct location of bill of loading?						
- Documents all match?						
- Release certification?						
- Certificate of analysis?						
Inspection each compartment						
- White bucket						
- Clear and bright						
API gravity evaluation						
- Record the API gravity from document						
- Record API gravity test results @ 60 F						
- Record difference (+/-)						
Receiving tank preparation						
- Size of receiving tank						
- Volume of fuel in receiving tank						
- Delivery amount vs. available space						
- Sump receiving tank until clear & bright						

		Dealer				
		Date & Time				
Required Actions	Product Type					
<b>Unloading Procedure</b>						
Uncap offload hoses and inspect						
Connect inspected hoses						
Align valves for offloading						
Engage offload pump						
Operate deadman control						
Inspect for leaks						
Sump receiving filter vessel under pressure						
Remain onsite and observe entire offload						
<b>After Unloading</b>						
Disengage offload pump						
Close/realign valves						
Ensure compartments are empty						
Disconnect hoses and install caps						
Disconnect bond/ground cable						
Note new volume in tank						
Finalize and sign Release Certificate						
Assist the driver in exiting						
Note start and settling time						
One hour per foot Jet-A fuel						
Fifteen minutes per foot AvGas						
Sump tank when settling time is reached						
Secure fuel farm						

## LIST OF MINIMUM SPILL RESPONSE MATERIALS

### **Cleanup Equipment:**

Non-sparking shovel  
Push broom  
Barriers  
Speedy Dry  
Absorbent Pads  
Containment boom  
Drum container to hold equipment  
Drum container to hold contaminated materials  
Drain seals and/or mats  
Sandbags

### **Safety Equipment:**

Eye Protection (goggles)  
Protective Clothing  
Fire Extinguisher  
Vinyl or PVC Pull-on Over boots  
Neoprene Gloves

---

## EMERGENCY CONTACT LIST

### Local Emergency Agencies

Agency	Telephone #
Chatham Fire Department	911
Chatham Police Department	911

### Spill Reporting Hotlines

Agency	Telephone #
Massachusetts Department of Environmental Protection Oil Spill Response	1-888-304-1133
National Response Center USCG/USEPA	1-800-424-8802

### Spill Response Contractors

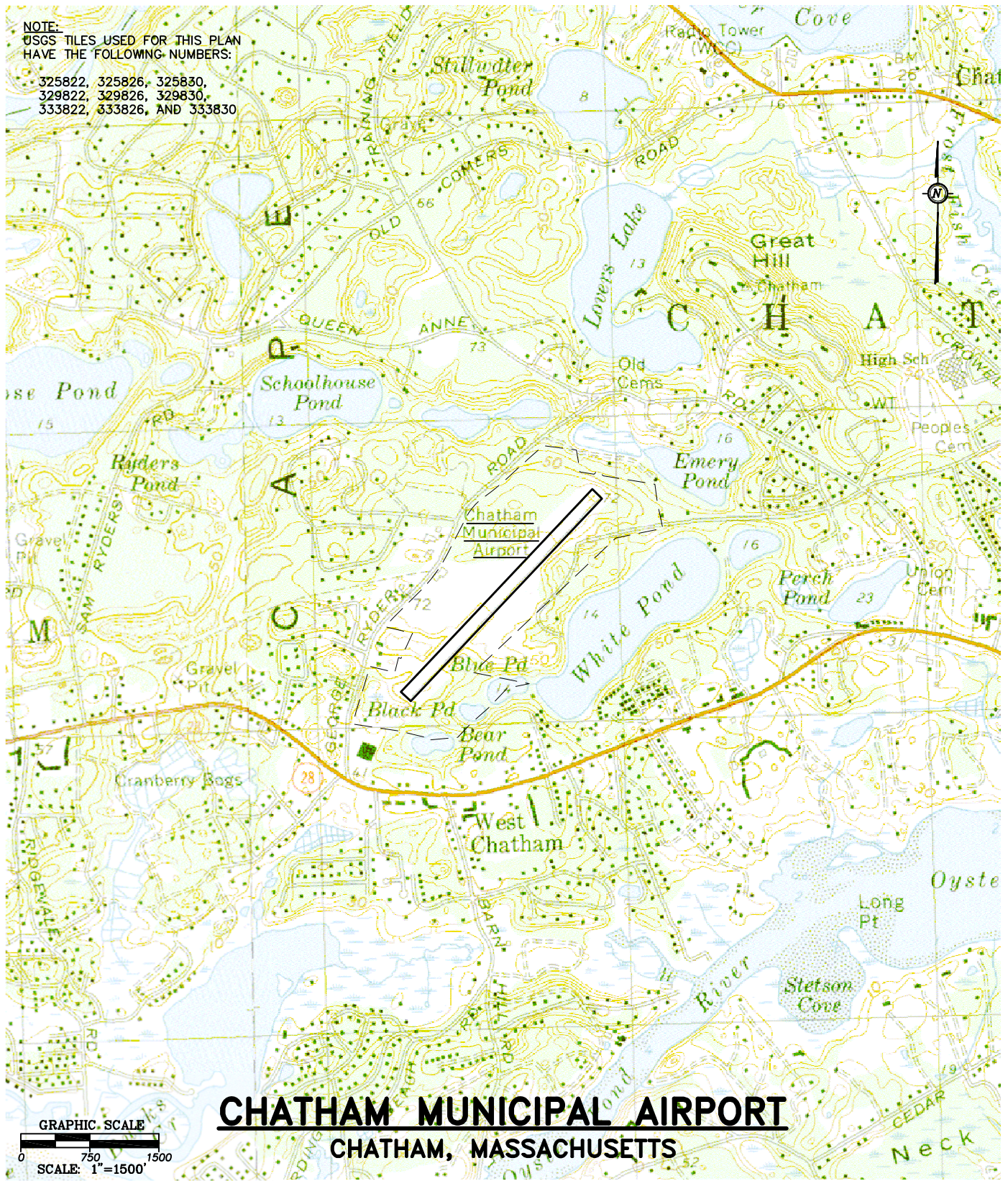
Company/Location	Telephone #
Clean Harbors	1-800-645-8265
Environmental Restoration	1-781-878-2100

### Chatham Municipal Airport

Name/Title	Telephone #
Timothy Howard, Airport Manager	508-945-5747 (Office) 508-945-9000 (Front Desk) 978-987-3572 (Cell)
Huntley Harrison, Airport Commission Chairman	508-241-1947 (Office)

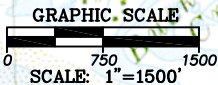
## APPENDIX C – PLANS AND MAPS

NOTE:  
 USGS TILES USED FOR THIS PLAN  
 HAVE THE FOLLOWING NUMBERS:  
 325822, 325826, 325830,  
 329822, 329826, 329830,  
 333822, 333826, AND 333830



# CHATHAM MUNICIPAL AIRPORT

## CHATHAM, MASSACHUSETTS



Gale Associates, Inc  
 Engineers Architects Planners  
 15 Constitution Drive  
 Bedford, NH 03110  
 P 603.471.1887 F 603.471.1809  
 www.gainc.com

Boston Baltimore Orlando Hartford

### VICINITY MAP

### CHATHAM AIRPORT COMMISSION CHATHAM MUNICIPAL AIRPORT CHATHAM, MASSACHUSETTS

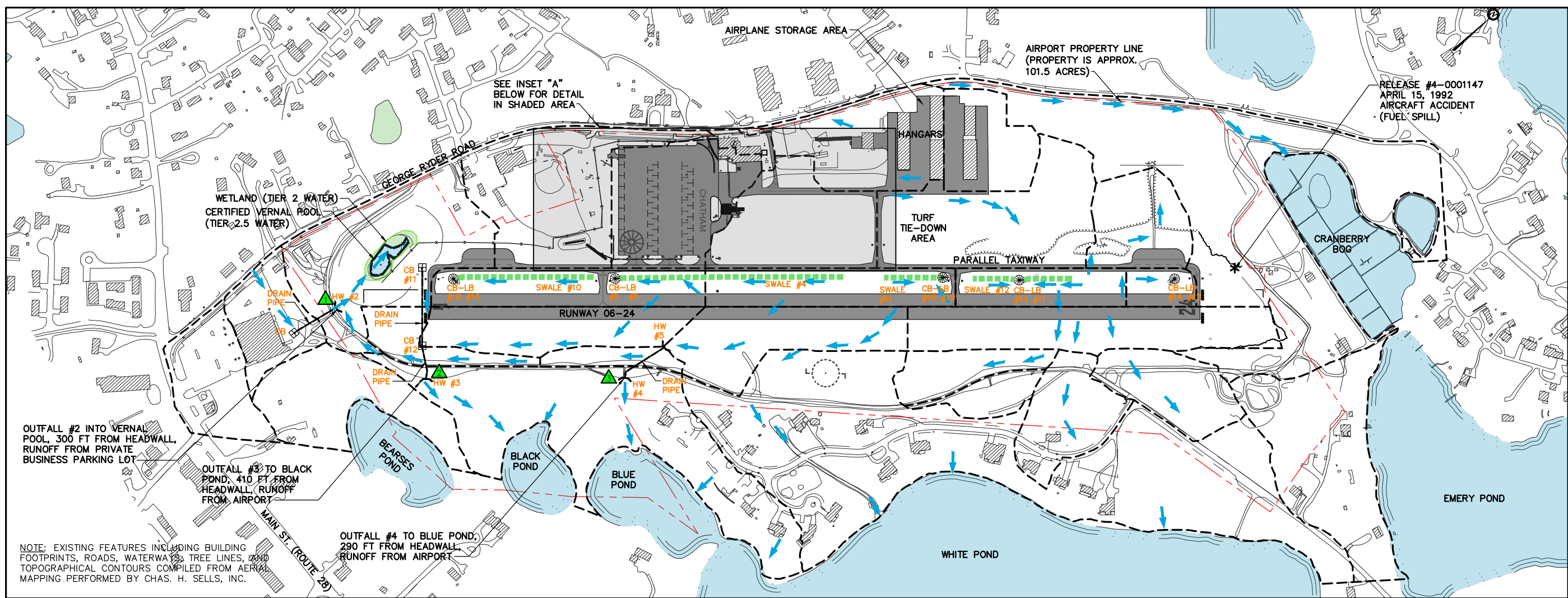
PROJ. NO:	DRAWN	REVIEWED	CADD FILE
777064	CAR		CQX-USGS-MAP

DATE: NOVEMBER 2018

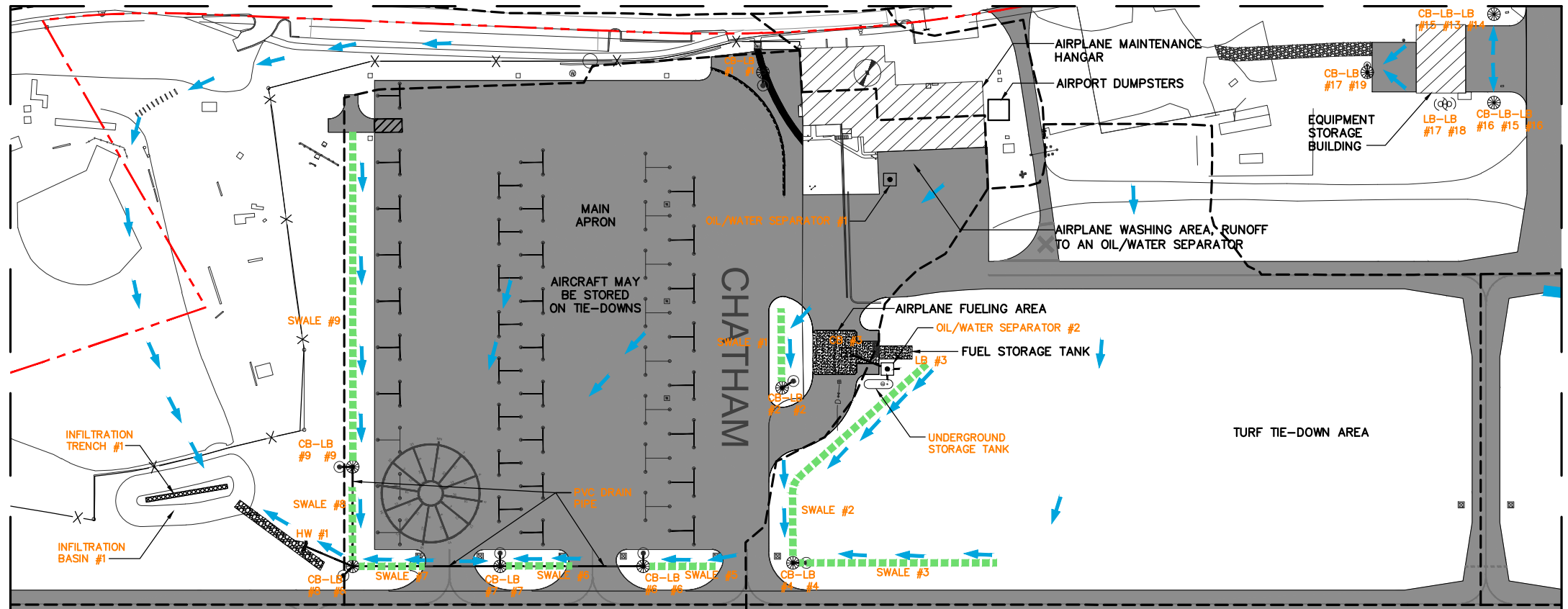
SCALE: 1"=1500'

REVISION: N/A

# FIG. 1



OVERALL PLAN



INSET "A"

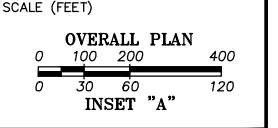
**LEGEND**

- = AIRPORT PROPERTY LINE
- = IMPERVIOUS SURFACE - AIRFIELD PAVEMENT
- = IMPERVIOUS SURFACE - BUILDING
- = DRAINAGE AREA DIVIDE LINE
- = SWALE
- = OUTFALL LOCATION
- = CATCH BASIN
- = CATCH BASIN WITH LEACHING BASIN
- = STORM WATER FLOW ARROW
- = OIL / WATER SEPARATOR
- = HEADWALL

PROJECT  
 STORM WATER POLLUTION PREVENTION PLAN  
 CHATHAM MUNICIPAL AIRPORT  
 CHATHAM, MASSACHUSETTS

OWNER  
 CHATHAM, MASSACHUSETTS

NO.	DATE	DESCRIPTION	BY
PROJECT NO.	777064		
DESIGNED BY	CAR		
DRAWN BY	AWC		
CHECKED BY	MPC		
DATE	JANUARY 2020		



SHEET TITLE

SITE MAP

FIG. 2

**APPENDIX D – TITLE 40 CODE OF FEDERAL REGULATIONS,  
PART 112 (40 CFR PART 112)**

# ELECTRONIC CODE OF FEDERAL REGULATIONS

**e-CFR data is current as of March 29, 2021**

Title 40 → Chapter I → Subchapter D → Part 112

Title 40: Protection of Environment

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## PART 112—OIL POLLUTION PREVENTION

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### Contents

#### **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 Qualified Facilities Plan Requirements.
- §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 (excluding drilling and workover 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.
- §§112.13-112.15 [Reserved]

#### **Subpart D—Response Requirements**

- §112.20 Facility response plans.
- §112.21 Facility response training and drills/exercises.
- Appendix A to Part 112—Memorandum of Understanding Between the Secretary of Transportation and the Administrator of the Environmental Protection Agency
- Appendix B to Part 112—Memorandum of Understanding Among the Secretary of the Interior, Secretary of Transportation, and Administrator of the Environmental Protection Agency
- Appendix C to Part 112—Substantial Harm Criteria
- Appendix D to Part 112—Determination of a Worst Case Discharge Planning Volume
- Appendix E to Part 112—Determination and Evaluation of Required Response Resources for Facility Response Plans
- Appendix F to Part 112—Facility-Specific Response Plan
- Appendix G to Part 112—Tier I Qualified Facility SPCC Plan

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AUTHORITY: 33 U.S.C. 1251 *et seq.*

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.

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#### **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.

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##### **§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 manmade 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 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, including, but 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.

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 any milk and milk product container and associated piping and appurtenances.

(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, 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, provided that such a tank is subject to any Nuclear Regulatory Commission provision regarding design and quality criteria, including, but 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.

(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.

(7) Any "motive power container," as defined in §112.2. The transfer of fuel or other oil into a motive power container at an otherwise regulated facility is not eligible for this exemption.

(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) Any milk and milk product container and associated piping and appurtenances.

(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.

[67 FR 47140, July 17, 2002, as amended at 71 FR 77290, Dec. 26, 2006; 73 FR 74300, Dec. 5, 2008; 74 FR 58809, Nov. 13, 2009; 76 FR 21660, Apr. 18, 2011]

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## **§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, 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.

*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.

*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.

*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.

*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.

*Mobile refueler* means a bulk storage container onboard a vehicle or towed, that is designed or used solely to store and transport fuel for transfer into or from an aircraft, motor vehicle, locomotive, vessel, ground service equipment, or other oil storage container.

*Motive power container* means any onboard bulk storage container used primarily to power the movement of a motor vehicle, or ancillary onboard oil-filled operational equipment. An onboard bulk storage container which is used to store or transfer oil for further distribution is not a motive power container. The definition of motive power container does not include oil drilling or workover equipment, including rigs.

*Navigable waters* means waters of the United States, including the territorial seas, as defined in §120.2 of this chapter.

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

*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.

*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.

*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.

[67 FR 47140, July 17, 2002, as amended at 71 FR 77290, Dec. 26, 2006; 73 FR 71943, Nov. 26, 2008; 73 FR 74300, Dec. 5, 2008; 80 FR 37108, June 29, 2015; 83 FR 5208, Feb. 6, 2018; 84 FR 56668, Oct. 22, 2019; 85 FR 22339, Apr. 21, 2020]

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### **§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 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.

(a)(1) Except as otherwise provided in this section, if your facility, or mobile or portable 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, and implement the amended Plan no later than November 10, 2011. If such a facility becomes operational after August 16, 2002, through November 10, 2011, and could reasonably be expected to have a discharge as described in §112.1(b), you must prepare and implement a Plan on or before November 10, 2011. If such a facility (excluding oil production facilities) becomes operational after November 10, 2011, 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. You are not required to prepare a new Plan each time you move a mobile or portable facility to a new site; the Plan may be general. 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. The Plan is applicable only while the mobile or portable facility is in a fixed (non-transportation) operating mode.

(2) If your drilling, production or workover facility, including a mobile or portable facility, is offshore or has an offshore component; or your onshore facility is required to have and submit a Facility Response Plan pursuant to 40 CFR 112.20(a), and 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, and implement the amended Plan no later than November 10, 2010. If such a facility becomes operational after August 16, 2002, through November 10, 2010, and could reasonably be expected to have a discharge as described in §112.1(b), you must prepare and implement a Plan on or before November 10, 2010. If such a facility (excluding oil production facilities) becomes operational after November 10, 2010, 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. You are not required to prepare a new Plan each time you move a mobile or portable facility to a new site; the Plan may be general. 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. The Plan is applicable only while the mobile or portable facility is in a fixed (non-transportation) operating mode.

(3) If your farm, as defined in §112.2, 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, and implement the amended Plan on or before May 10, 2013. If your farm becomes operational after August 16, 2002, through May 10, 2013, and could reasonably be expected to have a discharge as described in §112.1(b), you must prepare and implement a Plan on or before May 10, 2013. If your farm becomes operational after May 10, 2013, 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.

(b) If your oil production facility as described in paragraph (a)(1) of this section becomes operational after November 10, 2011, or as described in paragraph (a)(2) of this section becomes operational after November 10, 2010, 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.

(c) [Reserved]

(d) Except as provided in §112.6, 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.

(vi) That, if applicable, for a produced water container subject to §112.9(c)(6), 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.

(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.

(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 has an aggregate aboveground oil storage capacity of 10,000 U.S. gallons or less.

[67 FR 47140, July 17, 2002, as amended at 68 FR 1351, Jan. 9, 2003; 68 FR 18894, Apr. 17, 2003; 69 FR 48798, Aug. 11, 2004; 71 FR 8466, Feb. 17, 2006; 71 FR 77290, Dec. 26, 2006; 72 FR 27447, May 16, 2007; 73 FR 74301, Dec. 5, 2008, 74 FR 29141, June 19, 2009; 74 FR 58809, Nov. 13, 2009; 75 FR 63102, Oct. 14, 2010; 76 FR 21660, Apr. 18, 2011; 76 FR 64248, Oct. 18, 2011; 76 FR 72124, Nov. 22, 2011]

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#### **§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.

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#### **§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) Except as provided in §112.6, have a Professional Engineer certify any technical amendments to your Plan in accordance with §112.3(d).

[67 FR 47140, July 17, 2002, as amended at 71 FR 77291, Dec. 26, 2006; 73 FR 74301, Dec. 5, 2008; 74 FR 58809, Nov. 13, 2009]

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#### **§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 measures pursuant to §112.9(c)(6) for produced water containers and any associated piping; 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 measures pursuant to §112.9(c)(6) for produced water containers

and any associated piping, 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 alternative procedures for skimming produced water containers 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. Such measures must be reviewed and certified, in writing, by a licensed Professional Engineer, in accordance with §112.3(d)(1)(vi).

(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.

**§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. 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. 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 paragraph (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), and 112.12(c)(11), 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 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). 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;

(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), 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.

(2) For offshore facilities:

(i) Curbing or drip pans; or

(ii) Sumps and collection systems.

(d) Provided your Plan is certified by a licensed Professional Engineer under §112.3(d), or, in the case of a qualified facility that meets the criteria in §112.3(g), the relevant sections of your Plan are certified by a licensed Professional Engineer under §112.6(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), and 112.12(c)(11) 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)*. 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)*.

(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.

(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.

(k) *Qualified Oil-filled Operational Equipment*. The owner or operator of a facility with oil-filled operational equipment that meets the qualification criteria in paragraph (k)(1) of this sub-section may choose to implement for this qualified oil-filled operational equipment the alternate requirements as described in paragraph (k)(2) of this sub-section in lieu of general secondary containment required in paragraph (c) of this section.

(1) *Qualification Criteria—Reportable Discharge History*: The owner or operator of a facility that has had no single discharge as described in §112.1(b) from any oil-filled operational equipment exceeding 1,000 U.S. gallons or no two discharges as described in §112.1(b) from any oil-filled operational equipment each exceeding 42 U.S. gallons within any twelve month period in the three years prior to the SPCC Plan certification date, or since becoming subject to this part if the facility has been in operation for less than three years (other than oil discharges as described in §112.1(b) that are the result of natural disasters, acts of war or terrorism); and

(2) *Alternative Requirements to General Secondary Containment*. If secondary containment is not provided for qualified oil-filled operational equipment pursuant to paragraph (c) of this section, the owner or operator of a facility with qualified oil-filled operational equipment must:

(i) Establish and document the facility procedures for inspections or a monitoring program to detect equipment failure and/or a discharge; and

(ii) Unless you have submitted a response plan under §112.20, provide in your Plan the following:

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

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

[67 FR 47140, July 17, 2002, as amended at 71 FR 77292, Dec. 26, 2006; 73 FR 74303, Dec. 5, 2008; 74 FR 58810, Nov. 13, 2009]

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## **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 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. 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 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.

(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). 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.

(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.

[67 FR 47146, July 17, 2002, as amended at 71 FR 77293, Dec. 26, 2006; 73 FR 74304, Dec. 5, 2008]

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### **§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:

(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) 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.

(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 overflow 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.

(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.* For each produced water container, comply with §112.9(c)(1) and (c)(4); and §112.9(c)(2) and (c)(3), or comply with the provisions of the following paragraphs (c)(6)(i) through (v):

(i) 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)(vi). 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).

(ii) 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.

(iii) 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.

(iv) Promptly remove or initiate actions to stabilize and remediate any accumulations of oil discharges associated with the produced water container.

(v) 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) *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) 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.

[73 FR 74304, Dec. 5, 2008, as amended at 74 FR 58810, Nov. 13, 2009]

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#### **§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.

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**§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.

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### **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.

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#### **§112.12 Spill Prevention, Control, and Countermeasure Plan requirements.**

If you are the owner or operator of an onshore 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 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. 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) *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).

(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). 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.

(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.

[67 FR 57149, July 17, 2002, as amended at 71 FR 77293, Dec. 26, 2006; 73 FR 74305, Dec. 5, 2008]

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#### **§§112.13-112.15 [Reserved]**

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### **Subpart D—Response Requirements**

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#### **§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]

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#### **§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]

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#### **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

[59 FR 34102, July 1, 1994]

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## 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.

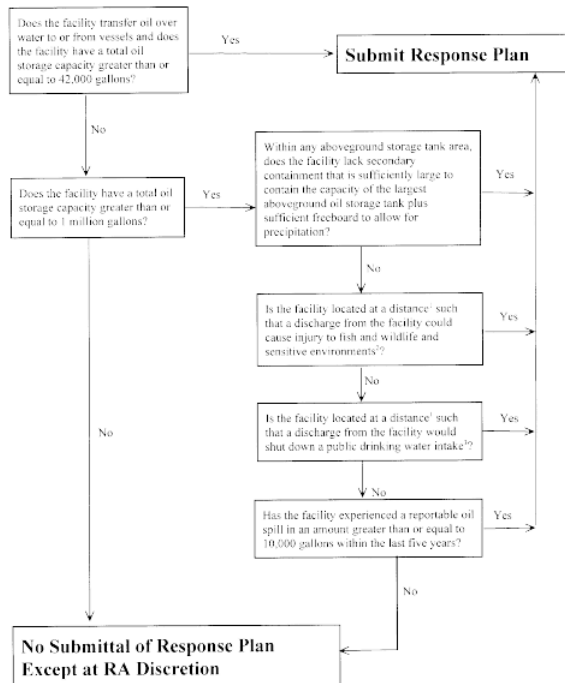
### 4.0 REFERENCES

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

## Flowchart of Criteria for Substantial Harm



<sup>1</sup> Calculated using the appropriate formula in Attachment C-III to this appendix or a comparable formula.

<sup>2</sup> 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.

<sup>3</sup> Public drinking water intakes are analogous to public water systems as described at CFR 143.2(c).

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## 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<sup>1</sup>) 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<sup>1</sup>) such that a discharge from the facility would shut down a public drinking water intake?<sup>2</sup>

<sup>1</sup>If a comparable formula is used, documentation of the reliability and analytical soundness of the comparable formula must be attached to this form.

<sup>2</sup>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).

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 writing that an alternative formula was used.<sup>1</sup>

<sup>1</sup>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.

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-1 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 sec/w mile/hrw ft (3600 sec/hr ÷ 5280 ft/mile).

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

$v = 1.49/n \times r^{2/3} \times s^{1/2}$ ; 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 (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

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 K1G 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 area	Substantial harm planning time (hrs)
----------------	--------------------------------------

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:

$$s = [(727 \text{ ft} - 1710 \text{ ft}) / 25 \text{ miles}] \times [1 \text{ mile}/5280 \text{ feet}] = 1.3 \times 10^{-4}$$

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:

$$r = 0.667 \times 20 \text{ feet} = 13.33 \text{ feet}$$

Solve for  $v$  using:

$$v = 1.49/n \times r^{2/3} \times s^{1/2}$$

$$v = [1.49/0.035] \times (13.33)^{2/3} \times (1.3 \times 10^{-4})^{1/2}$$

$$v = 2.73 \text{ feet/second}$$

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

(3) Solve for planning distance,  $d$ :

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

$$d = (2.73 \text{ ft/sec}) \times (27 \text{ hours}) \times (0.68 \text{ secw mile/hrw ft})$$

$$d = 50 \text{ miles}$$

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,  $A_1$ , can be determined by the following formula,<sup>2</sup> where  $V$  is the volume of the discharge in gallons and  $C$  is a constant conversion factor:

<sup>2</sup>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.

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

$$C = 0.1643$$

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

$$A_1 = 8.74 \times 10^8 \text{ ft}^2$$

(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 =  $\pi r^2$

(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  $A_2$ .

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

Solving for the radius,  $r$ , using the relationship  $A_1 = A_2$ :  $8.74 \times 10^8 \text{ ft}^2 = (\pi r^2)/2$

Therefore,  $r = 23,586 \text{ ft}$

$$r = 23,586 \text{ ft} \div 5,280 \text{ ft/mile} = 4.5 \text{ miles}$$

Assuming a 20 knot wind under storm conditions:

$$1 \text{ knot} = 1.15 \text{ miles/hour}$$

$$20 \text{ knots} \times 1.15 \text{ miles/hour/knot} = 23 \text{ miles/hr}$$

Assuming that the oil slick moves at 3 percent of the wind's speed:<sup>3</sup>

<sup>3</sup>*Oil Spill Prevention & Control*. National Spill Control School, Corpus Christi State University, Thirteenth Edition, May 1990.

$$23 \text{ miles/hour} \times 0.03 = 0.69 \text{ miles/hour}$$

(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:

$$\text{For Higher Volume Port Areas: } 15 \text{ hrs} \times 0.69 \text{ miles/hr} = 10.4 \text{ miles}$$

$$\text{For Great Lakes and all other areas: } 27 \text{ hrs} \times 0.69 \text{ miles/hr} = 18.6 \text{ miles}$$

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

$$\text{Higher Volume Port Areas: } d = 10.4 + 4.5 \text{ miles or approximately } 15 \text{ miles}$$

$$\text{Great Lakes and all other areas: } d = 18.6 + 4.5 \text{ miles or approximately } 23 \text{ miles}$$

#### 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,  $d$ :

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

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

$$d = 9.18 \text{ miles.}$$

(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 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.<sup>4</sup> 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:

<sup>4</sup>The design velocities were obtained from Howard County, Maryland Department of Public Works' Storm Drainage Design Manual.

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.

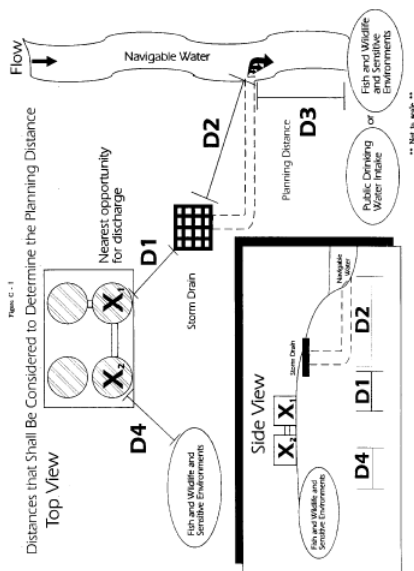
D4 = Distance from the nearest opportunity for discharge,  $X_2$ , to fish and wildlife and sensitive environments not bordering navigable water.

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.



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

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## 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

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<sup>1</sup>

<sup>1</sup>"Storage facilities" represent all facilities subject to this part, excluding oil production facilities.

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.

##### 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?<sup>2</sup>

<sup>2</sup>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).

\_\_\_\_ (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:<sup>3</sup> \_\_\_\_ GAL

<sup>3</sup>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.

#### 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.

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:<sup>4</sup> \_\_\_\_ GAL

<sup>4</sup>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.

(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

= 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<sub>1</sub> + discharge volume<sub>2</sub>

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<sub>1</sub>).

Discharge volume<sub>1</sub> = (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<sub>2</sub>).

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

Discharge volume<sub>2</sub> = [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<sub>2</sub> = [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<sub>1</sub> = (7 days + 2 days) × (10 barrels per day) = 90 barrels

(3) The second term of the equation is:

Discharge volume<sub>2</sub> = [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

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]

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## 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 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 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.

storage tank volume is 10 percent greater than 10 percent of the capacity of 10,000 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.

5.2 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

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 mop type 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  $\frac{1}{4}$  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)

$R = 381 \text{ bph} \times 24 \text{ hr/day} \times 0.2 = 1,829 \text{ barrels per day}$

(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

$R = 314 \text{ bph} \times 12 \text{ hr/day} = 3,768 \text{ barrels per day}$

(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

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  $\times$  0.2  $\times$  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  $\times$  0.65  $\times$  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 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.

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 <sup>1</sup>			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 <sup>1</sup>	≤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

<sup>1</sup>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		
	3 days			4 days		
Sustainability of on-water oil recovery	Percent natural dissipation	Percent recovered floating oil	Percent oil onshore	Percent natural dissipation	Percent recovered floating oil	Percent oil onshore
Oil group <sup>1</sup>						
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

<sup>1</sup>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<sup>1</sup>**

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.	

<sup>1</sup>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
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		
	3 days			4 days		
Sustainability of on-water oil recovery	Percent natural loss	Percent recovered floating oil	Percent recovered oil from onshore	Percent natural loss	Percent recovered floating oil	Percent recovered oil from onshore
Oil group <sup>1</sup>						
Group A	40	15	45	50	20	30
Group B	20	15	65	30	20	50

<sup>1</sup>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 <sup>1</sup> :	
Group A	1.0
Group B	2.0

<sup>1</sup>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<sup>1</sup> (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
<input type="text"/>	<input type="text"/>	<input type="text"/>
(D1)	(D2)	(D3)

Step (E1) On-Water Oil Recovery  $\frac{\text{Step (D2)} \times \text{Step (A)}}{100}$   (E1)

Step (E2) Shoreline Recovery  $\frac{\text{Step (D3)} \times \text{Step (A)}}{100}$   (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
<input type="text"/>	<input type="text"/>	<input type="text"/>
(G1)	(G2)	(G3)

<sup>1</sup> 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.

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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
<input type="text"/>	<input type="text"/>	<input type="text"/>
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
<input type="text"/>	<input type="text"/>	<input type="text"/>
(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
<input type="text"/>	<input type="text"/>	<input type="text"/>
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.

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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)   
(A)

Step (B) Oil Group<sup>1</sup> (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
<input type="text" value="10"/>	<input type="text" value="50"/>	<input type="text" value="70"/>
(D1)	(D2)	(D3)

Step (E1) On-Water Oil Recovery  $\frac{\text{Step (D2)} \times \text{Step (A)}}{100}$    
(E1)

Step (E2) Shoreline Recovery  $\frac{\text{Step (D3)} \times \text{Step (A)}}{100}$    
(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
<input type="text" value="0.15"/>	<input type="text" value="0.25"/>	<input type="text" value="0.40"/>
(G1)	(G2)	(G3)

<sup>1</sup> 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 oil products in an oil group must be summed to determine the percentage of the facility's total oil storage capacity.

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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
<input type="text" value="19,850"/>	<input type="text" value="29,750"/>	<input type="text" value="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) . . . . .   
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
<input type="text" value="10,000"/>	<input type="text" value="20,000"/>	<input type="text" value="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
<input type="text" value="7,850"/>	<input type="text" value="9,750"/>	<input type="text" value="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.

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**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<sup>1</sup> (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
<input type="text"/>	<input type="text"/>	<input type="text"/>
(D1)	(D2)	(D3)

Step (E1) On-Water Oil Recovery  $\frac{\text{Step (D2)} \times \text{Step (A)}}{100}$    
(E1)

Step (E2) Shoreline Recovery  $\frac{\text{Step (D3)} \times \text{Step (A)}}{100}$  . . . . .   
(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
<input type="text"/>	<input type="text"/>	<input type="text"/>
(G1)	(G2)	(G3)

<sup>1</sup> 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.

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**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
<input type="text"/>	<input type="text"/>	<input type="text"/>
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
<input type="text"/>	<input type="text"/>	<input type="text"/>
(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
<input type="text"/>	<input type="text"/>	<input type="text"/>
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.

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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) . . . . .   
(A)

Step (B) Oil Group<sup>1</sup> (Table 7 and section 1.2 of this  
appendix) . . . . .

Step (C) Operating Area (choose  
one)  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
<input type="text" value="30"/>	<input type="text" value="20"/>	<input type="text" value="50"/>
(D1)	(D2)	(D3)

Step (E1) On-Water Oil Recovery  $\frac{\text{Step (D2)} \times \text{Step (A)}}{100}$    
(E1)

Step (E2) Shoreline Recovery  $\frac{\text{Step (D3)} \times \text{Step (A)}}{100}$    
(E2)

Step (F) Emulsification Factor  
(Table 7 of this appendix) . . . . .   
(F)

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Step (G) On-Water Oil Recovery Resource Mobilization Factor  
(Table 4 of this appendix)

Tier 1	Tier 2	Tier 3
<input type="text" value="0.15"/>	<input type="text" value="0.25"/>	<input type="text" value="0.40"/>
(G1)	(G2)	(G3)

<sup>1</sup> 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.

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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.

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[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 34560, June 29, 2001]

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## Appendix F to Part 112—Facility-Specific Response Plan

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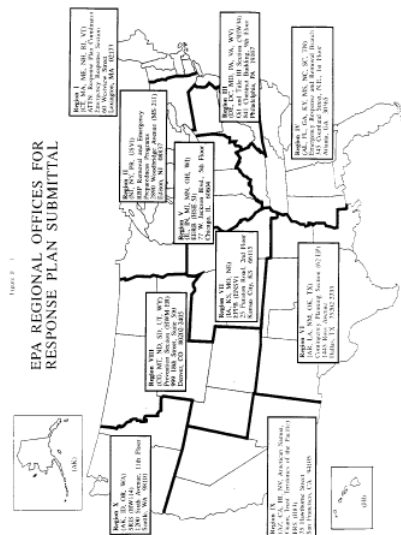
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*1.0 Model Facility-Specific Response Plan*

(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.



### 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).<sup>1</sup> The response plan requirements in the Wellhead Protection Program are outlined by the State or Territory in which the facility resides.

<sup>1</sup>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.

**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: ( ) \_\_\_\_\_

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

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./Cooperatives):	
6. Fire Marshall:	
Evening Phone:	
7. State Emergency Response Commission (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

*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)

Table with 5 columns: 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: \_\_\_ .

Table with 4 columns: 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

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 <sup>1</sup>	Response time	Responsibility during response action	Response training type/date
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				

<sup>1</sup>Phone number to be used when person is not on-site.

**EMERGENCY RESPONSE CONTRACTORS**

Date of Last Update: \_\_\_\_\_

Contractor	Phone	Response time	Contract responsibility <sup>1</sup>
1.			
2.			
3.			
4.			



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.



#### 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<sup>3</sup> history for the entire life of the facility to the extent that such information is reasonably identifiable, including:

<sup>3</sup>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.

- (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.

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 overflow 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 Discharges*

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
-----------	-------------	------	----------



- 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.

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

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:<sup>1</sup> \_\_\_\_\_

<sup>1</sup>These numbers may be obtained from public library resources.

Largest Aboveground Oil Storage Tank Capacity (Gallons): \_\_\_\_\_

Number of Aboveground Oil Storage Tanks: \_\_\_\_\_

Longitude (Degrees: West): \_\_\_\_\_

degrees, minutes, seconds \_\_\_\_\_

North American Industrial Classification System (NAICS) Code:<sup>1</sup> \_\_\_\_\_

Maximum Oil Storage Capacity (Gallons): \_\_\_\_\_

Worst Case Oil Discharge Amount (Gallons): \_\_\_\_\_

Facility Distance to Navigable Water. Mark the appropriate line. \_\_\_\_\_

0- 1/4 mile \_\_\_ 1/4 - 1/2 mile \_\_\_ 1/2 - 1 mile \_\_\_ >1 mile \_\_\_

APPLICABILITY OF SUBSTANTIAL HARM CRITERIA

Does the facility transfer oil over-water<sup>2</sup> to or from vessels and does the facility have a total oil storage capacity greater than or equal to 42,000 gallons?

<sup>2</sup>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.

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<sup>2</sup> 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<sup>2</sup> (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?<sup>3</sup>

<sup>3</sup>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.

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<sup>2</sup> (as calculated using the appropriate formula in appendix C or a comparable formula) such that a discharge from the facility would shut down public drinking water intake?<sup>2</sup>

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<sup>2</sup> in an amount greater than or equal to 10,000 gallons within the last 5 years?

Yes \_\_\_\_\_

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]

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**Appendix G to Part 112—Tier I Qualified Facility SPCC Plan**

**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 addresses 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. When making operational changes at a facility that are necessary to comply with the rule requirements, the owner/operator should follow state and local requirements (such as for permitting, design and construction) and obtain professional assistance, as appropriate.

**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; 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

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- 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 measure pursuant to §112.9(c)(6) for produced water containers and any associated piping;
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 any 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; must follow the provisions of 40 CFR part 109; and must include 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.

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\_\_

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**4. Security (excluding oil production facilities) §112.7(g):**

<b>Table G-6 Implementation and Description of Security Measures</b>	
Security measures are implemented at this facility to prevent unauthorized access to oil handling, processing, and storage area.	<input type="checkbox"/>
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)):**

<b>Table G-7 Description of Emergency Procedures and Notifications</b>
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)):

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**6. Contact List (§112.7(a)(3)(vi)):**

<b>Table G-8 Contact List</b>	
<b>Contact Organization / Person</b>	<b>Telephone Number</b>
National Response Center (NRC)	1-800-424-8802
Cleanup Contractor(s)	
<b>Key Facility Personnel</b>	
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)	

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**7. NRC Notification Procedure (§112.7(a)(4) and (a)(5)):**

<b>Table G-9 NRC Notification Procedure</b>	
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]; <i>§112.7(a)(4)</i>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• The exact address or location and phone number of the facility;</li> <li>• Date and time of the discharge;</li> <li>• Type of material discharged;</li> <li>• Estimate of the total quantity discharged;</li> <li>• Estimate of the quantity discharged to navigable waters;</li> <li>• Source of the discharge;</li> </ul>	<ul style="list-style-type: none"> <li>• Description of all affected media;</li> <li>• Cause of the discharge;</li> <li>• Any damages or injuries caused by the discharge;</li> <li>• Actions being used to stop, remove, and mitigate the effects of the discharge;</li> <li>• Whether an evacuation may be needed; and</li> <li>• Names of individuals and/or organizations who have also been contacted.</li> </ul>

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

\*\*\*\*\*

**NOTE: Complete one of the following sections (A, B or C)  
as appropriate for the facility type.**

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**A. Onshore Facilities (excluding production) (§§112.8(b) through (d), 112.12(b) through (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".

<b>Table G-10 General Rule Requirements for Onshore Facilities</b>	
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. Diked areas may be emptied by pumps or ejectors that must be manually activated after inspecting the condition of the accumulation to ensure no oil will be discharged. <i>§§112.8(b)(1) and 112.12(b)(1)</i>	<input type="checkbox"/>
Valves of manual, open-and-closed design are used for the drainage of diked areas. <i>§§112.8(b)(2) and 112.12(b)(2)</i>	<input type="checkbox"/>
The containers at the facility are compatible with materials stored and conditions of storage such as pressure and temperature. <i>§§112.8(c)(1) and 112.12(c)(1)</i>	<input type="checkbox"/>
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). <i>§112.6(a)(3)(i)</i>	<input type="checkbox"/>
If uncontaminated rainwater from diked areas drains into a storm drain or open watercourse the following procedures will be implemented at the facility: <i>§§112.8(c)(3) and 112.12(c)(3)</i>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Bypass valve is normally sealed closed</li> <li>• Retained rainwater is inspected to ensure that its presence will not cause a discharge to navigable waters or adjoining shorelines</li> <li>• Bypass valve is opened and resealed under responsible supervision</li> <li>• Adequate records of drainage are kept [See Dike Drainage Log in Attachment 3.3]</li> </ul>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
For completely buried metallic tanks installed on or after January 10, 1974 at this facility <i>§§112.8(c)(4) and 112.12(c)(4)</i> :	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Tanks have corrosion protection with coatings or cathodic protection compatible with local soil conditions.</li> <li>• Regular leak testing is conducted.</li> </ul>	<input type="checkbox"/> <input type="checkbox"/>
For partially buried or bunkered metallic tanks <i>§112.8(c)(5) and §112.12(c)(5)</i> :	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Tanks have corrosion protection with coatings or cathodic protection compatible with local soil conditions.</li> </ul>	<input type="checkbox"/>
Each aboveground bulk 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] <i>§112.8(c)(6) and §112.12(c)(6)(i)</i>	<input type="checkbox"/>
Outsides of bulk storage 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] <i>§§112.8(c)(6) and 112.12(c)(6)</i>	<input type="checkbox"/>
For bulk storage containers that are subject to 21 CFR part 110 which are shop-fabricated, constructed of austenitic stainless steel, elevated 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	<input type="checkbox"/>

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Table G-10 General Rule Requirements for Onshore Facilities	
Storage Container Inspection Schedule in Attachments 3.1 and 3.2 [§112.12(c)(6)(i)] Each container is provided with a system or documented procedure to prevent overfills for the container. Describe:	<input type="checkbox"/>
Liquid level sensing devices are regularly tested to ensure proper operation [See Inspection Log and Schedule in Attachment 3.1, §112.8(a)(3)(ii)]	<input type="checkbox"/>
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)]	<input type="checkbox"/>
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)]]	<input type="checkbox"/>
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)]]	<input type="checkbox"/>

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**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)]	<input type="checkbox"/>
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	<input type="checkbox"/>
• Bypass valve is opened and resealed under responsible supervision	<input type="checkbox"/>
• Adequate records of drainage are kept [See Dike Drainage Log in Attachment 3.3]	<input type="checkbox"/>
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(c)(2)]]	<input type="checkbox"/>
The containers used at this facility are compatible with materials stored and conditions of storage. [§112.9(c)(1)]	<input type="checkbox"/>
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)]	<input type="checkbox"/>
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)]]	<input type="checkbox"/>
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 overflow 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 production control system. [§112.9(c)(4)]	<input type="checkbox"/>
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	<input type="checkbox"/>
• 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)]]	<input type="checkbox"/>
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	<input type="checkbox"/>
• 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	<input type="checkbox"/>
• Any accumulations of oil discharges associated with flow-through process vessels are promptly removed; and	<input type="checkbox"/>

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Table G-11 General Rule Requirements for Onshore Oil Production Facilities	
<ul style="list-style-type: none"> <li>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.)</li> </ul>	<input type="checkbox"/>
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)]	<input type="checkbox"/>
An oil spill contingency plan and written commitment of resources are 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)]	<input type="checkbox"/>
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.	<input type="checkbox"/>
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:	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>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;</li> <li>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.</li> <li>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.</li> <li>Accumulations of oil discharges associated with flowlines, intra-facility gathering lines, and associated appurtenances are promptly removed. [§112.9(d)(4)]</li> </ul>	<input type="checkbox"/>
The following is a description of the flowline/intra-facility gathering line maintenance program implemented at this facility:	<input type="checkbox"/>

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**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)]	<input type="checkbox"/>
Catchment basins or diversion structures are provided to intercept and contain discharges of fuel, crude oil, or oily drilling fluids. [§112.10(c)]	<input type="checkbox"/>
A blowout prevention (BOP) assembly and well control system was installed before drilling below any casing string or during workover operations. [§112.10(d)]	<input type="checkbox"/>
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)]	<input type="checkbox"/>

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**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.

Review Date	Table G-13 Review and Evaluation of SPCC Plan for Facility		Name and signature of person authorized to review this Plan
	Plan Amendment Will Amend	Will Not Amend	
	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	

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**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 §§ 112.0(6)(3)(ii), 112.0(6)(i), 112.0(6)(j), 112.0(6)(k), 112.0(6)(l), 112.0(6)(m), 112.0(6)(n), 112.0(6)(o), and 112.0(6)(p), as applicable.

Date of Inspection	Container / Piping / Equipment	Describe Scope (or cite industry Standard)	Observations	Name/ Signature of Inspector	Records maintained separately <sup>a</sup>
					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>

<sup>a</sup> Indicate in the table above if records of facility inspections are maintained separately at this facility.

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**ATTACHMENT 3.2 – Bulk Storage Container Inspection Schedule – onshore facilities (excluding production):**

To comply with integrity inspection requirement for bulk storage containers, inspect 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 <sup>a</sup>	
1,101 to 5,000 gallons with sized secondary containment and no method of leak detection <sup>a</sup>	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

<sup>a</sup> Examples of leak detection include, but are not limited to, double-walled tanks and elevated containers where a leak can be visually identified.

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**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
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

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**ATTACHMENT 3.4 – Oil-handling Personnel Training and Briefing Log**

**Table G-19 Oil-Handling Personnel Training and Briefing Log**

Date	Description / Scope	Attendees

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**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	<input type="checkbox"/> Soil	
		<input type="checkbox"/> Water (specify)	
		<input type="checkbox"/> Other (specify)	
Actions taken			
Damage or injuries	<input type="checkbox"/> No <input type="checkbox"/> Yes (specify)	Evacuation needed?	<input type="checkbox"/> No <input type="checkbox"/> Yes (specify)
Organizations and individuals contacted	<input type="checkbox"/> National Response Center 800-424-8802 Time _____		
	<input type="checkbox"/> Cleanup contractor (Specify) Time _____		
	<input type="checkbox"/> Facility personnel (Specify) Time _____		
	<input type="checkbox"/> State Agency (Specify) Time _____		
	<input type="checkbox"/> Other (Specify) Time _____		

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**APPENDIX E – COMMONWEALTH OF MASSACHUSETTS  
EXECUTIVE OFFICE OF ENERGY & ENVIRONMENTAL  
AFFAIRS (EEA) WASTE SITE AND REPORTED RELEASE  
SEARCH RESULTS**

**Waste Sites and Reported Releases of Hazardous Material**

Obtained from Commonwealth of Massachusetts Executive Office of Energy & Environmental Affairs online data portal on 8/17/2018

RTN	City/Town	Release Address	Site Name Location Aid	Reporting Category	Notification Date	Compliance Status	Date	Phase	RAO Class	Chemical Type
4-0027093	CHATHAM	74 ELDRIDGE SQUARE	CYRIL GINTHER TRUST	120 DY	02/20/2018	PSNC	03/02/2018		PN	
4-0026866	CHATHAM	27 STRONG ISLAND ROAD	ROADWAY	TWO HR	09/21/2017	PSNC	11/21/2017		PN	
4-0026840	CHATHAM	8 UNCLE ZLOTIS ROAD	RESIDENCE	TWO HR	08/27/2017	UNCLASSIFIED	08/27/2017			
4-0026743	CHATHAM	NEAR 80 BRIDGE ST	STAGE HARBOR	TWO HR	07/05/2017	ADEQUATE REG	07/05/2017			
4-0026596	CHATHAM	365 MAIN ST.	ELDRIDGE GARAGE	120 DY	04/03/2017	PSNC	11/20/2017	PHASE III	PN	
4-0026512	CHATHAM	323 ORLEANS ROAD	VACANT SITE (FORMER RESTAURANT)	120 DY	01/10/2017	PSC	09/12/2017	PHASE II	PA	
4-0026458	CHATHAM	356 MAIN STREET	ELDRIDGE GARAGE	72 HR	12/16/2016	PSNC	02/14/2017		PN	
4-0025416	CHATHAM	193 DEPOT ROAD	RESIDENCE	72 HR	12/05/2014	PSNC	02/03/2015		PN	Oil
4-0025331	CHATHAM	51 STETSON COVE LANE	RESIDENCE	120 DY	09/23/2014	PSNC	12/22/2014		PN	
4-0025170	CHATHAM	25 ENTERPRISE DRIVE	WHITELEY FUEL OIL COMPANY	TWO HR	06/11/2014	PSNC	08/05/2014		PN	Oil
4-0025049	CHATHAM	127-135 DEPOT ROAD	CHATHAM FIRE COMPLEX	72 HR	03/19/2014	TMPS	03/05/2018	PHASE IV	TN	Oil
4-0024987	CHATHAM	IN FRONT OF 36 SEARS POINT RD	STAGE HARBOR	TWO HR	02/05/2014	RAO	04/03/2014		A1	Hazardous Material
4-0024610	CHATHAM	55 TWINE FIELD DRIVE	TWINE FIELD	120 DY	05/31/2013	RAO	05/29/2014		A2	Hazardous Material
4-0024569	CHATHAM	849 MAIN ST	CUMBERLAND FARMS	TWO HR	05/25/2013	RAO	07/20/2013		A1	Oil
4-0024212	CHATHAM	678 MAIN STREET	COMMERCIAL PROPERTY	120 DY	11/06/2012	PSNC	11/04/2016	PHASE III	PN	Oil and Hazardous Material
4-0023817	CHATHAM	46 DAIRY ST	RESIDENTIAL RELEASE	TWO HR	02/24/2012	RAO	02/11/2013		A2	Oil
4-0023619	CHATHAM	70 JUDGES WAY	RESIDENCE	TWO HR	10/13/2011	RAO	09/21/2012		A2	Oil
4-0022818	CHATHAM	211 ORLEANS RD	CHATHAM CITGO	TWO HR	08/31/2010	RAO	11/01/2010		A2	Oil
4-0021856	CHATHAM	625 MAIN ST	SAINT CHRISTOPHERS CHURCH	72 HR	03/27/2009	RAO	06/09/2009		A2	Oil
4-0021678	CHATHAM	625 MAIN ST	SAINT CHRISTOPHERS CHURCH	120 DY	11/21/2008	RAO	11/30/2009		A3	Oil
4-0021005	CHATHAM	80 BRIDGE ST	STAGE HARBOR MARINE	TWO HR	01/16/2008	ADEQUATE REG	01/17/2008			Oil
4-0020992	CHATHAM	80 BRIDGE ST	STAGE HARBOR MARINE	TWO HR	01/16/2008	ADEQUATE REG	01/16/2008			Oil
4-0020768	CHATHAM	678 MAIN ST	CHATHAM MOBIL	120 DY	09/04/2007	RAO	02/03/2011	PHASE III	A2	Oil and Hazardous Material
4-0020050	CHATHAM	34 WINEBERRY WAY	FORMER RESIDENTIAL DWELLING	72 HR	09/15/2006	RAO	11/07/2006		A1	Hazardous Material
4-0019659	CHATHAM	1320 MAIN ST	NO LOCATION AID	TWO HR	03/09/2006	RAO	05/04/2006		A2	Oil
4-0019571	CHATHAM	32 LAKE ST	LAKE STREET AFFORDABLE HOUSING	120 DY	01/12/2006	RAO	08/02/2006		A2	Oil
4-0019528	CHATHAM	76 INDIAN HILL RD	N/F MCDANIEL - MORGAN RES- MAP 8G	120 DY	12/13/2005	RAO	10/19/2006		A2	Oil
4-0019270	CHATHAM	293 WHIDAH RD	NO LOCATION AID	72 HR	08/16/2005	RAO	09/30/2005		A1	Oil
4-0018429	CHATHAM	STAGE HBR	NO LOCATION AID	TWO HR	05/15/2004	ADEQUATE REG	05/15/2004			Oil
4-0018258	CHATHAM	CHATHAM HBR	75 YARDS FROM FISH PIER	TWO HR	02/19/2004	ADEQUATE REG	02/19/2004			Oil
4-0018136	CHATHAM	STAGE HBR	F/V SELDOM HOME	TWO HR	11/27/2003	ADEQUATE REG	11/27/2003			Oil
4-0018122	CHATHAM	CHATHAM FISH PIER	NO LOCATION AID	TWO HR	11/07/2003	ADEQUATE REG	11/07/2003			Oil
4-0018117	CHATHAM	OCEAN-OFF MONOMOY IS	NO LOCATION AID	TWO HR	11/06/2003	ADEQUATE REG	11/06/2003			Oil
4-0018055	CHATHAM	458 OLD QUEEN ANN RD	NO LOCATION AID	72 HR	10/03/2003	RAO	12/22/2003		A2	Oil
4-0017949	CHATHAM	STAGE HBR	NO LOCATION AID	TWO HR	08/08/2003	ADEQUATE REG	08/08/2003			Oil
4-0017460	CHATHAM	3 SEAPINE RD	NO LOCATION AID	TWO HR	11/09/2002	RAO	01/06/2003		A2	Oil
4-0017282	CHATHAM	SOUTH BCH	SOUTH BEACH	TWO HR	08/11/2002	ADEQUATE REG	08/11/2002			Oil
4-0017267	CHATHAM	7-8 MILES EAST OF CHATHAM	FV MS LINDSEY	TWO HR	08/01/2002	ADEQUATE REG	08/01/2002			Oil
4-0017162	CHATHAM	12 QUEEN RD AND DEPOT RD	NO LOCATION AID	TWO HR	06/24/2002	RAO	08/01/2002		A1	Oil
4-0017125	CHATHAM	BAR CLIFF AVENUE EXT	CHATHAM FISH PIER	72 HR	05/23/2002	RAO	05/09/2003		A2	Oil
4-0016883	CHATHAM	OFF SHORE RD	FISH PIER	TWO HR	02/10/2002	ADEQUATE REG	02/11/2002			Oil
4-0016800	CHATHAM	CHATHAM HBR	MISS KATELYN	TWO HR	12/22/2001	ADEQUATE REG	12/22/2001			Oil
4-0016493	CHATHAM	STAGE HBR	STAGE HARBOR	TWO HR	08/07/2001	ADEQUATE REG	08/07/2001			Oil
4-0016412	CHATHAM	STAGE HBR	STAGE HARBOR	TWO HR	08/03/2001	ADEQUATE REG	08/03/2001			Oil
4-0016401	CHATHAM	CHATHAM PIER	CHATHAM PIER	TWO HR	07/22/2001	ADEQUATE REG	07/22/2001			Oil
4-0016139	CHATHAM	2610 MAIN ST	RTE 28	120 DY	03/16/2001	RAO	04/06/2001		B1	Oil and Hazardous Material
4-0015688	CHATHAM	MONOMOY IS	SOUTHWESTERN TIP	TWO HR	08/22/2000	ADEQUATE REG	08/22/2000			Oil
4-0015606	CHATHAM	93 MARTHA KENDRICK DR	MONOMOY FUEL OIL CO	120 DY	07/11/2000	RAO	08/01/2000		A2	Hazardous Material
4-0015416	CHATHAM	93 MARTHA KENDRICK DR	MONOMOY FUEL OIL CO	120 DY	04/10/2000	RAO	05/16/2000		A2	Oil
4-0015248	CHATHAM	MONOMOY IS	4 MILES OFF MONOMOY ISLAND	TWO HR	01/31/2000	ADEQUATE REG	01/31/2000			Oil
4-0015244	CHATHAM	256 ENTERPRISE DR	BW FUEL STORAGE	TWO HR	01/25/2000	RAO	03/10/2000		A2	Oil
4-0015141	CHATHAM	OFFSHORE	NO LOCATION AID	TWO HR	11/21/1999	ADEQUATE REG	11/21/1999			Oil
4-0014777	CHATHAM	26 ANDREW HARDINGS LN	RESIDENCE COTTAGE	TWO HR	06/04/1999	RAO	08/09/1999		A1	Oil
4-0014517	CHATHAM	END OF BARN HILL LANE EXT	OYSTER RIVER BOATYARD	72 HR	02/10/1999	RAO	05/14/2004	PHASE II	A1	Oil
4-0014494	CHATHAM	679 MAIN ST	GETTY SERVICE	72 HR	02/02/1999	RTN CLOSED	07/08/1999			Oil
4-0014160	CHATHAM	2590 MAIN ST	NO LOCATION AID	72 HR	09/19/1998	RAO	11/25/1998		A1	Hazardous Material

4-0013893	CHATHAM	856 MAIN ST	CROWELL RD	120 DY	06/25/1998 RAO	06/25/1998	A2	Oil and Hazardous Material
4-0013664	CHATHAM	679 MAIN ST	GETTY SERVICE	72 HR	02/09/1998 PSNC	01/21/2016	PN	Oil
4-0013528	CHATHAM	1652 MAIN ST	NEAR SOUTH END OF AIRPORT	TWO HR	11/28/1997 RAO	12/03/1998	A2	Oil
4-0013200	CHATHAM	46 RYDERS COVE RD	BOAT YARD	TWO HR	07/18/1997 ADEQUATE REG	07/18/1997		Oil
4-0013060	CHATHAM	25 ENTERPRISE DR	GOULDS FUEL OIL	TWO HR	05/29/1997 RAO	07/25/1997	A1	Oil
4-0012759	CHATHAM	150-152-154 CROSS ST	CONDOS	TWO HR	01/07/1997 RAO	03/25/1997	A1	Oil
4-0012604	CHATHAM	376 CEDAR ST	NEAR STAGE NECK RD	120 DY	08/09/1996 RAO	10/24/1996	A2	Oil
4-0012582	CHATHAM	517 OLD HARBOR RD	POLE 9/46 UG	TWO HR	10/21/1996 RAO	12/23/1996	A1	Oil
4-0012568	CHATHAM	SHORE RD	NO LOCATION AID	TWO HR	10/20/1996 RAO	12/23/1996	A1	Oil
4-0012489	CHATHAM	333 OLD HARBOR RD	NO LOCATION AID	72 HR	09/11/1996 RAO	10/28/1996	A2	Oil
4-0012291	CHATHAM	FOXHILL RD	POLE 8/57	TWO HR	06/21/1996 RAO	08/20/1996	A1	Oil
4-0012174	CHATHAM	314 HARDINGS BEACH RD	NO LOCATION AID	120 DY	05/16/1996 RAO	06/18/1996	A2	Oil
4-0011999	CHATHAM	216 SHORE RD	NAUGHTON PTY	72 HR	03/08/1996 RAO	05/13/1996	A2	Oil
4-0011657	CHATHAM	613 STAGE HARBOR RD	OLD MILL BOATYARD	72 HR	09/15/1995 RAO	05/01/1996	A2	Oil
4-0011636	CHATHAM	276 OLD HARBOR RD	BAR CLIFF AVE	72 HR	09/05/1995 RAO	11/06/1995	A1	Oil
4-0011427	CHATHAM	75 SHANE DR	ASSRS MAP 15H LOT B40	TWO HR	06/02/1995 RAO	09/05/1995	A2	Oil
4-0011307	CHATHAM	47 OLD CHATHAM RD	MAP 161 LOT MD-2	72 HR	04/19/1995 RAO	07/20/1995	A2	Oil
4-0011256	CHATHAM	700 OLD HARBOUR RD	NO LOCATION AID	72 HR	04/04/1995 RAO	06/07/1995	A1	Oil
4-0011048	CHATHAM	637 MAIN ST	CVS DRUGSTORE	72 HR	01/11/1995 RAO	03/15/1996	A3	Oil
4-0010926	CHATHAM	73 BALFOUR LN	ASSRS MAP 11E LOT B3	TWO HR	11/17/1994 RAO	11/10/1995	A3	Oil
4-0010902	CHATHAM	44 OLD HARBOR LN	NO LOCATION AID	72 HR	11/04/1994 RAO	01/03/1995	A1	Oil
4-0010898	CHATHAM	70 SEA VIEW ST	NO LOCATION AID	72 HR	10/31/1994 RAO	02/24/1995	A1	Oil
4-0010802	CHATHAM	61 HILLCREST RD	OFF OLD HARBOR RD	72 HR	10/19/1994 RAO	01/04/1995	A2	Oil
4-0010571	CHATHAM	20 GAMMYS LN	AT BRIDGE ST	72 HR	06/23/1994 RAO	01/19/1995	A2	Oil
4-0010436	CHATHAM	552 SHORE RD	SOUTH OF RTE 28 INTERSECTION	72 HR	04/22/1994 RAO	08/22/1994	A1	Oil
4-0010406	CHATHAM	746 OLD HARBOR RD	X STREET SCATTEREE RD	72 HR	04/11/1994 RAO	06/14/1994	A1	Oil
4-0010403	CHATHAM	512 MAIN ST	WOW REALTY TRUST	72 HR	04/05/1994 RAO	04/04/1995	A1	Oil
4-0010383	CHATHAM	162 HORIZON DR	NO LOCATION AID	TWO HR	10/01/1993 RAO	12/01/1994	A1	Oil
4-0006038	CHATHAM	104 OLD SALT WORKS RD	PROPERTY	NONE	02/18/1994 RAO	02/23/1995	A2	
4-0006035	CHATHAM	65 SNOWBERRY LN	PROPERTY	NONE	01/18/1994 RAO	03/14/1997 PHASE II	A3	
4-0001308	CHATHAM	168 OLD HARBOR RD	1ST NATIONAL BANK OF BOSTON	NONE	07/14/1993 RAO	09/18/2002	A2	Oil
4-0001177	CHATHAM	65 SEARS RD	PROPERTY	NONE	01/15/1993 RAO	05/08/1996	A2	
4-0001147	CHATHAM	GEORGE RYDER RD	CHATHAM AIRPORT	NONE	04/15/1992 DEPNTA	02/01/1994		
4-0000923	CHATHAM	2345 MAIN ST	CLARKS AUTO SERVICE	NONE	03/13/1990 RAO	06/01/2004	C1	
4-0000709	CHATHAM	75 OLD ACADEMY RD	PROPERTY	NONE	07/15/1989 RAO	11/02/1995	A2	
4-0000596	CHATHAM	EDGEWOOD RD	PROPERTY	NONE	01/15/1989 DEPNTS	07/23/1993		
4-0000595	CHATHAM	GEORGE RYDER RD	CAPE COD MOSQUITO CONTROL	NONE	01/15/1989 DPS	12/01/2000 PHASE III		Hazardous Material
4-0000512	CHATHAM	856 MAIN ST	EXXON STATION R S 3 1172	NONE	04/15/1988 RAO	08/02/1995	NC	
4-0000406	CHATHAM	497 ORLEANS RD	ACME LAUNDRY CO	NONE	02/10/1987 RAO	03/18/2004	C1	
4-0000357	CHATHAM	261 GEORGE RYDER RD	PROPERTY	NONE	04/15/1987 DEPNTA	08/02/1995		
4-0000264	CHATHAM	608 STAGE HARBOR RD	OLD MILL BOATYARD	NONE	12/24/1986 DEPNTA	07/23/1993		
4-0000052	CHATHAM	160 MILL HILL RD	TW NICKERSON INC	NONE	05/30/1986 DEPNTA	04/19/1994		
4-0000051	CHATHAM	97 SAM RYDER RD	CHATHAM SANI LANDFILL	NONE	01/15/1987 ADEQUATE REG	08/02/1995		Oil

## APPENDIX F – RECORDS OF AST TESTS

## **APPENDIX G – COMPLETED FORMS, LOGS AND CHECKLISTS**

## APPENDIX H – COMPLETED SPILL REPORTS