

SPILL PREVENTION,  
CONTROL, AND  
COUNTERMEASURE  
PLAN

Boise State University

## **PREFACE – CAUTION NOTE**

This Plan has been prepared to serve as a general guide for spill prevention, control, and countermeasure. It is intended for use by qualified personnel with a working knowledge of the Boise State University facility. It is not intended to cover all possible variations in equipment or incident, nor to provide for specific operating problems that may arise. Should additional information be required, a Materials Testing and Inspection representative should be contacted at 208-376-4748.

It is recognized that no amount of written instructions can replace intelligent thinking and reasoning on the part of the users of this Spill Prevention, Control, and Countermeasure (SPCC) Plan (hereafter “SPCC Plan” or “Plan”). This Plan is not intended to relieve the operating personnel of the responsibility for proper operation and maintenance of equipment or facilities at Boise State University. Personnel should become thoroughly familiar with the equipment they use before operating or maintaining the equipment.

Competent supervision of maintenance procedures, processes and controls is necessary to maintain safe and reliable operations of equipment used at the facility. Supervisors and managers should become familiar with this Plan and how it relates to their specific work environment.

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## **I. PURPOSE**

The intention of a Spill Prevention, Control, and Countermeasure (SPCC) Plan (hereafter “SPCC Plan” or “Plan”) is to establish the procedures and equipment required to prevent the discharge of oil and hazardous substances in quantities that violate applicable water quality standards, cause a sheen upon or discoloration of the surface of navigable waters or adjoining shorelines, or cause sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines. The Plan also establishes the activities (i.e., countermeasures) required to mitigate such discharges should they occur.

## **II. PLAN AUTHORIZATION**

This SPCC Plan has been reviewed and professional engineer certified for Boise State University pursuant to the Oil Pollution Prevention Regulations of the Environmental Protection Agency (40 CFR 112) and is authorized by the Environmental Health, Safety and Sustainability office. A complete copy of the Plan shall be maintained in the University Facilities Operations and Maintenance department and the Environmental Health, Safety and Sustainability office and be available to the Idaho Department of Environmental Quality (DEQ) and the US Environmental Protection Agency (EPA) Regional Officer, and his/her agents, upon request, for on-site review during normal working hours.

## **III. SCOPE**

This Plan applies to non-transportation-related facility operations owned or operated by Boise State University that could reasonably be expected to discharge oil into or upon the navigable waters of the United States or adjoining shorelines. Boise State University has a total aboveground oil storage capacity of more than 1,320 gallons in aboveground storage tanks and containers including generator fuel storage containers on campus, which necessitates the need for this Plan.

Responsible employees at the site shall become familiar with the contents of the Plan. The SPCC Coordinator shall be responsible for implementation of emergency spill response activities. In addition, one other full-time employee shall be trained as an alternate SPCC Coordinator to assume the responsibilities of the SPCC Coordinator in the absence of the Coordinator.

## **IV. REFERENCES**

The Environmental Health, Safety and Sustainability office at Boise State University received permission from Steven Brehio, Associate Director of the Office of Environmental Health, Safety and Sustainability at Northeastern University, Boston, Massachusetts, to use their SPCC plan as a template for the SPCC Plan at Boise State University.

The Final Report of the 1997 Campus Drainage Study at Boise State University prepared by Toothman-Orton Engineering Company was used for information on composition of the soil found on campus.

## V. DEFINITIONS

According to the Code of Federal Regulations, Title 40, Parts 110 and 112.

**NAVIGABLE WATERS:** Means “navigable waters” as defined in section 502(7) of the FWPCA, and includes:

- (1) All navigable waters of the United States, as defined in judicial decisions prior to passage of the 1972 Amendments to the FWPCA (Pub. L. 92-500), and tributaries of such waters;
- (2) Interstate waters;
- (3) Intrastate lakes, rivers, and streams which are utilized by interstate travelers for recreational or other purposes; and
- (4) Intrastate lakes, rivers, and streams from which fish or shellfish are taken and sold in interstate commerce.

Any natural surface water in the U.S., including all interstate waters, wetlands, all intrastate waters, lakes, rivers, streams, sloughs, natural ponds, etc.

**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.

**SHEEN:** An iridescent appearance on the surface of water.

## VI. PLAN COMPONENTS AND ASSIGNMENTS

### A. MANAGEMENT APPROVAL

The Plan has been reviewed by Boise State University management and a signed statement of management approval is included in the Appendix of this document.

### B. PROFESSIONAL ENGINEER CERTIFICATION

The Plan for this site has been reviewed and certified to be in accordance with good engineering practices by a registered Professional Engineer. A signed statement of review and certification is included in the Appendix of this document.

### C. PLAN REVIEWS AND AMENDMENTS

As set forth in 40 CFR 112, this SPCC Plan shall be reviewed and/or amended, if necessary, whenever there is a change in the design of the site, construction, operation, or

maintenance which materially affects the site's potential for the discharge of regulated material.

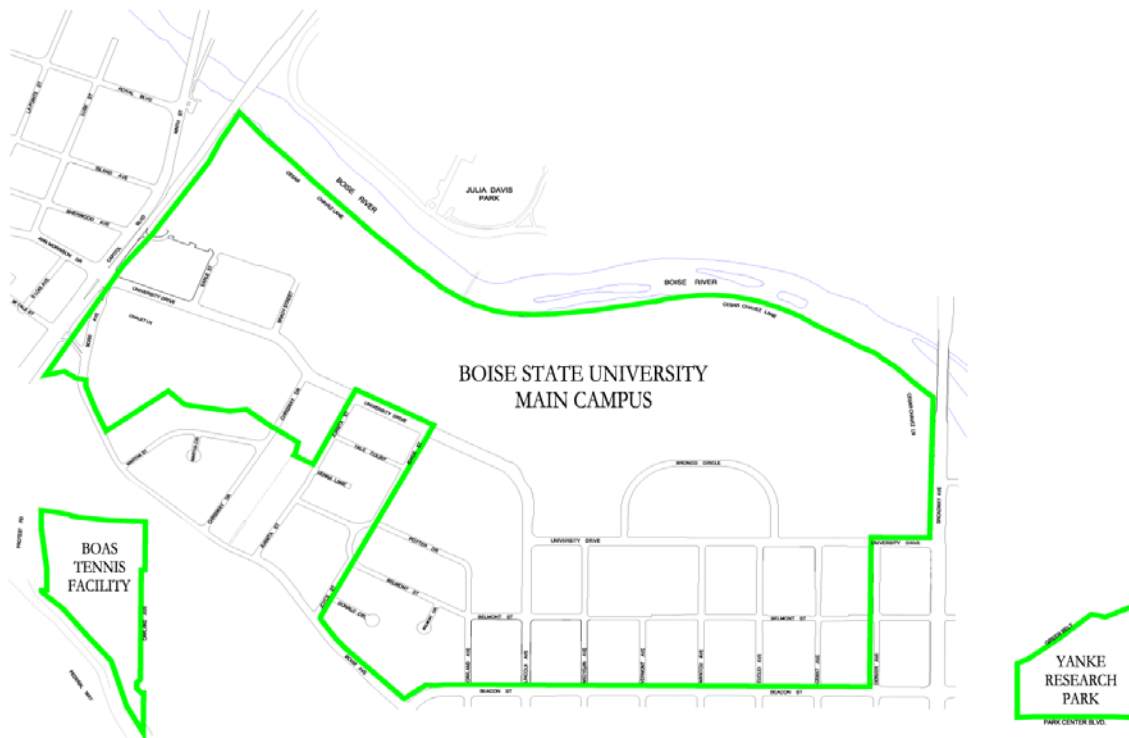
The Plan will be reviewed and recertified by a registered Professional Engineer once every five years and will be amended if such review indicates more effective control and/or prevention technology will significantly reduce the likelihood of a spill event from the site (40 CFR 112.5(b)).

## D. SITE INFORMATION

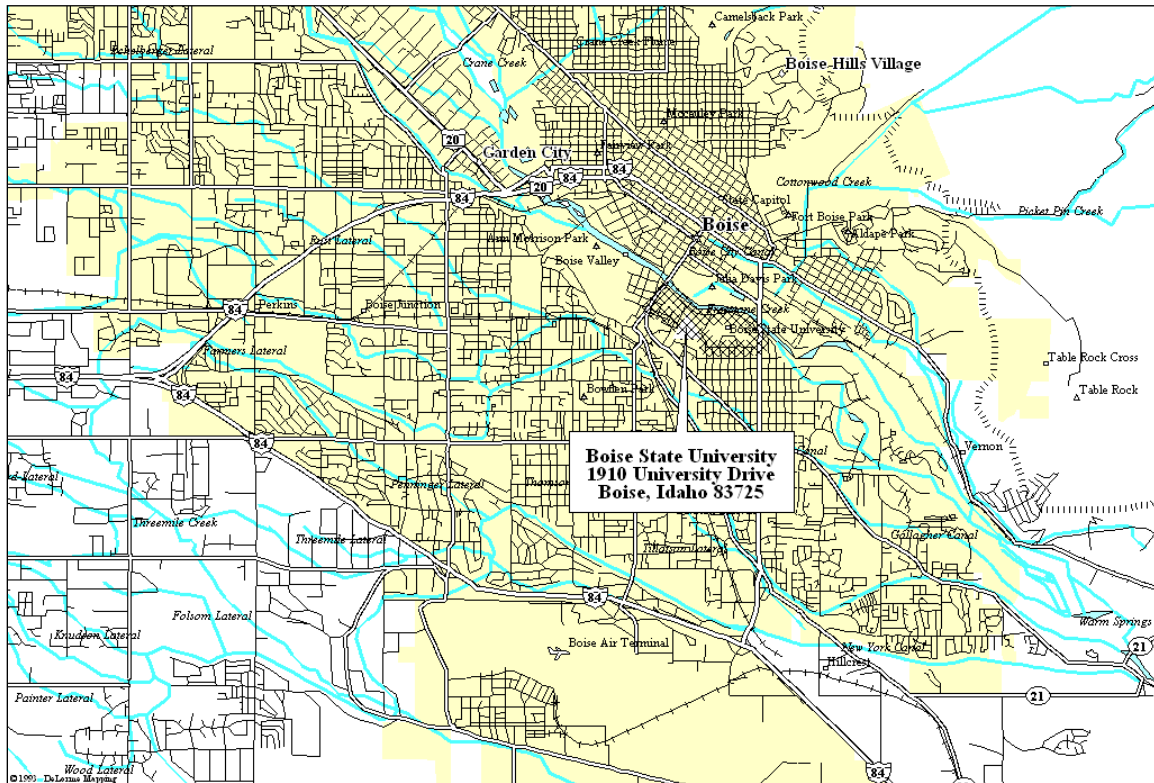
Boise State University's 215-acre main campus is bordered to the north by the Boise River, to the south by Beacon Avenue, to the east by Broadway Avenue, and to the west by Ann Morrison Park with the majority of parcels between Beacon, University and Boise Avenues. Boise State University also maintains and oversees operations at two off site locations. One is the Boas Tennis Complex (10.5 acres) on Highland Avenue and the Yanke Research Park (8 acres) on Parkcenter Boulevard, both of which have impervious surface and drain to either the Boise River or a surface water canal system.

### 1. PHYSICAL LOCATION AND REGIONAL CONDITIONS

Boise State University's main campus is composed of buildings, maintained lawns, landscaped areas, concrete sidewalks, asphalt-paved driveways and parking areas, certain streets, a sports stadium with roof areas and artificial turf.



**FIGURE 1. NEIGHBORHOODS AND STREETS AROUND THE BOISE STATE UNIVERSITY CAMPUS.**



**FIGURE 2. THE BOISE METROPOLITAN AREA.**

## 2. GEOLOGY

As stated in a report completed by the Toothman-Orton Engineering Company, the Soil Survey for Ada County, Idaho identifies two soils within the main campus area. A narrow strip of land located in the area of the Football Stadium and adjacent to the Boise River is identified as containing Moulton fine sandy loam. The remainder of the campus is identified as containing Falk-Moulton-Urban land complex. Both of these types of soil are described as consisting of very deep, poorly drained soils (Toothman-Orton Engineering Co., 1997).

The engineering company found that the ground water elevations in the southern section of the campus would be close to the deeper end of the range of the high water table depths as described in the soil survey for the Falk-Moulton-Urban land complex soils (Toothman-Orton Engineering Co., 1997).

## 3. SPILL HISTORY

No history of reportable quantity spills have been identified for the Boise State University facility.

## **E. SPILL PREVENTION, CONTROLS, AND COUNTERMEASURE PLAN**

All storage containers 55 gallons or greater on the main campus will be listed in the Appendix of this plan. A copy will be retained at the Facilities Operations and Maintenance Building and the Environmental Health, Safety and Sustainability office.

### **1. ABOVEGROUND STORAGE CONTAINERS**

There are numerous aboveground storage containers at the Boise State University main campus. These containers are 55 gallons or greater and hold gasoline, diesel, used cooking oil, used oil, or petroleum-based solvents. The total aboveground storage capacity at Boise State University is 3,325 gallons. The Appendix to this plan contains the quantity, container type, location, status of secondary containment, proximity to drain systems, and contact information of personnel at each location.

#### **GUIDELINES FOR SECONDARY CONTAINMENT**

1. No tank should be used for the storage of oil unless its material and construction are compatible with the material stored and conditions of storage such as pressure and temperature, etc.
2. The main outlet valve on each tank is locked-shut when unattended.
3. Each tank is equipped with a direct-reading gauge.
4. Venting capacity is suitable for the fill and withdrawal rates.
5. Main power switch for pumps (if applicable) is located in a box, which is locked when the pump is unattended.
6. A dike or secondary containment surrounds the tank assembly. Its volume (height vs. area) is computed based on a single largest tank and allowance is made for all additional tank displacement volumes below the dike height (estimated spill liquid level) plus sufficient freeboard to allow for precipitation. A drain valve shall be located at the lowest point within the secondary containment enclosure and it connects to a normally closed gate valve outside the secondary containment.
7. Drainage of rainwater from the secondary containment into an approved effluent discharge is acceptable only if inspection of the run-off rainwater ensures compliance with applicable state and federal water quality standards and will not cause a harmful discharge as defined in 40 CFR 110.3.
8. The discharge valve is opened and resealed following drainage under responsible supervision.
9. New and old tanks should, as far as practical, be fail-safe engineered or installed to avoid spills.



10. Visible oil leaks which result in a loss of oil from tank seams, gaskets, rivets and bolts sufficiently large enough to cause the accumulation of oil in diked or containment areas should be promptly corrected.
11. All aboveground valves and piping should be subjected to regular examinations by operating personnel at which time the general condition of items, such as flange joints, expansion joints, valve glands and bodies, catch pans, pipe supports, locking valves, and metal surfaces should be assessed. In addition, periodic pressure testing may be warranted for piping in areas where facility drainage is such that a failure might lead to a spill event.
12. Records of inspections and drainage events will be kept on file with this Plan.

## 2. UNDERGROUND STORAGE TANKS

There are no active underground storage tanks at the Boise State University main campus or satellite locations.

## 3. HYDRAULIC LIFT SYSTEMS

There are seventy- one hydraulic lifts/elevators servicing the Boise State main campus. The aggregate quantity of hydraulic oil in these tanks is 4,800 gallons. The Appendix to this plan contains information on the quantity, container types, location, and numbers of contact personnel from the facility. The oil in these systems is considered operational oil and is therefore exempt from the SPCC secondary containment rules.

## 4. GENERATORS

There are ten diesel generators on campus. All generators have a tank within a tank. The Appendix to this plan contains the quantity, container type, location, status of their secondary containments, proximity to drain systems, and phone numbers of personnel to contact at each facility. Total capacity is 3,856 gallons.

## 5. TRANSFORMER OIL

There are fifty nine total transformers located on the Boise State main campus and satellite locations. The total transformer oil capacity for the identified transformers is 15,550 gallons. The Appendix to this plan contains the identification, location, size, description and oil capacity, and owner. Transformers owned by Idaho Power Company are not incorporated in the calculated aggregate oil volume. Idaho Power and Boise State University maintain responsibility for responding and cleaning up any potential transformer oil spills for which each owns.

## 6. SECURITY MEASURES

All handling, processing, and storing of oil should be fully fenced, and entrance gates should be locked and / or guarded when the facility is unattended.

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

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

Facility lighting should be commensurate with the type and location of the facility. Consideration should be given to discovery of spills occurring during hours of darkness, both by operating personnel, if present, and by non-operating personnel (the general public, local and campus police, etc.) and prevention of spills occurring through acts of vandalism. In addition to physical containment, we have police and university security officers on 24-hour, 7 days a week patrol. All generators have audible alarms immediately reported to the police substation.

## **F. SITE DRAINAGE AND STORMWATER MANAGEMENT**

### **1. SURFACE DRAINAGE**

The University main campus is generally flat. There is a northwesterly down slope to the Boise River. The surface topography does not naturally determine individual drainage basins. Storm water mostly discharges to separate outfalls to the Boise River or infiltrates with no downstream surface discharge. The Ada County Highway District drainage system also receives piped storm water from the Administration Visitor parking lot on the south side of the Administration building.

Storm runoff from paved driveways, parking lots, and building roofs is carried through a piped drainage system to eight separate outfalls to the Boise River. Most of the river outfalls are below the most recently measured high water levels for the river. Some of the outfalls have flap gates installed to keep the river from back flowing into the drainage system during periods of high water. Finally, four of the outfalls have structures that separate and remove small amounts of oil and sediment before the water is released into the Boise River.

Fifteen constructed infiltration systems receive storm runoff from parking and driveway areas. One parking area discharges to the ACHD drainage system in University Drive is carried to the Drainage District No. 3 main drain. Some of University Drive runoff is carried in an ACHD drainage system and then discharged to the campus piped drainage system and then to the Boise River. Storm water from campus expansions on the south side of University Drive, such as buildings and surface parking lots, are carried on-site to grass areas or to infiltration systems.

A map of the wastewater drainage system on campus is available at the Environmental Health, Safety and Sustainability office (426-3943) and at the Facilities, Operations, and Management office (426-3156).

## 2. OTHER MIGRATION ROUTES

The Boise State University campus is irrigated by a gravity ditch and a piped pressure irrigation system. Irrigation water is diverted to the campus through a pump station on the north side of the Student Union Building. Surplus water is diverted to the drainage system and discharged to the Boise River. This system is a combined system carrying both irrigation and storm water.

## G. PERSONNEL TRAINING

### SPILL PREVENTION TRAINING

Training is provided for the operating personnel in regards to:

- Responsibilities for compliance of this plan and are trained to perform duties that would prevent the release of oil or any hazardous substances.
- Familiarity with this plan, emergency response procedures, equipment, systems, and safety data sheets (SDS / MSDS) for the products stored onsite.
- The Environmental Health, Safety and Sustainability office offers online and in-person training and maintains documentation for these personnel.
- Contractors and other transient personnel shall be instructed or made aware of the spill prevention measures plan upon entering the site by the appropriate Boise State University building or facility personnel and /or their agents.

Tank truck drivers loading or unloading materials at the site shall adhere to the following guidelines in 40CFR 112.7(h):

- No tank or container is to be filled without checking the reserve in the container.
- Remain with the vehicle at all times while loading/unloading.
- Drain the loading/unloading lines to the storage tank and close the drain valves before disconnecting said lines and make sure a drain pan or other appropriate containment device is located under the connections.
- Inspect the vehicles before departure to be sure all loading/unloading lines have been disconnected and all drain and vent valves are closed.
- Immediately report any leakage or spillage, regardless of the quantity spilled.

## H. EMERGENCY PROCEDURES/SPILL RESPONSE

### 1. GENERAL

Under the Federal Oil Pollution Prevention regulation, facilities under compliance must prepare and implement a plan to prevent any discharge of oil into navigable waters or adjoining shorelines of the United States. The geographical and locational aspects of the

facility determine reasonable discharge of oil into or upon navigable waters or adjoining shorelines. Falling under the umbrella of navigable waters include streams, ponds and ditches (perennial and intermittent), storm or sanitary sewers, wetlands, mudflats, sand flats, farm drain tiles, etc. Elemental to an effective response are procedures that would reduce the number and severity of an oil spill and would prevent oil from posing a serious threat to human health and the environment.

Boise State University is responsible for properly instructing their personnel in the operation and maintenance of equipment to prevent the discharges of oil and applicable pollution control laws, rules and regulations. Boise State University should schedule and conduct annual spill prevention briefings for their operating personnel to assure adequate understanding of the SPCC Plan for the facility. Such briefings should highlight and describe known spill events or failures, malfunctioning components, and recently developed precautionary measures as well as new equipment installations or modifications to storage, transfer, or containment systems. All Personnel performing emergency response should have the basic skills necessary to safely and effectively manage the on-scene operations involving uncontrolled release of dangerous chemicals. Those individuals who respond offensively to hazardous materials incidents not as Haz-Mat experts, but rather to protect people, the environment, property and equipment from exposure by properly approaching the point of the release in order to plug, patch or otherwise stop the release, should have the knowledge necessary to safely respond to and assess the hazards involved in a chemical emergency and to make the necessary notifications. Training shall be functional in nature according to job tasks for both supervisory and non-supervisory operational personnel. The knowledge and skill levels are identified in the federal regulations 29 CFR 1910.120(q)(6)(iii) and NFPA 472, *Standard for Professional Competence of Responders to Hazardous Materials Incidents*, 1997 Edition and the United States Coast Guards (USCG) Training Elements for Oil Spill Response, to the extent applicable to facility operations, or another response training program acceptable to the Boise State University SPCC Coordinator.

## 2. DISCOVERY OF RELEASE

The person discovering a release of material from a container, tank, or operating equipment should initiate certain actions immediately, including:

- 1) Get away from the spill,
- 2) Identify what you saw,
- 3) Dial 911,
- 4) Seal off area and alert others,
- 5) Look for injuries,
- 6) Identify the hazards,
- 7) Prepare a plan of action,
- 8) Identify proper equipment and materials for cleanup,
- 9) Contain the spill,
- 10) Clean-up the spill,
- 11) Document everything (photos, notes, witnesses, people contacted, etc.).

- a. **Extinguish any sources of ignition.** Until the material is identified as nonflammable and noncombustible, all potential sources of ignition in the area should be removed. Vehicles should be turned off. If the ignition source is stationary, attempt to move spilled material away from ignition source. Avoid sparks and movement that could create static electricity.
- b. **Identify the material released.** Consult Safety Data Sheets (SDS), which provide the information for proper identification of the characteristics of the released material. SDS for materials stored may be found in the Appendix to this Plan.
- c. **Attempt to stop the release at its source. Assure that no danger to human health or safety exists.** Simple procedures (turning valves, plugging leaks, etc.) may be attempted by the discoverer if there are no health or safety hazards and there is a reasonable certainty of the origin of the leak. Care should be taken to remain out of the spilled product while stopping the release.
- d. **Initiate spill notification and reporting procedure.** Report the incident immediately to the University Security 426-6911. If there is an immediate threat to human life (e.g. a fire in progress or fumes overcoming workers), an alarm should be sounded to evacuate the building, which will initiate a fire department response. Request the assistance of the fire department's hazardous materials response team if an uncontrollable spill has occurred and/or if the spill has migrated beyond the site boundaries.

### 3. CONTAINMENT OF A RELEASE

If material is released outside a containment area, it is critical that the material be contained as quickly as possible. Action to be conducted may include:

- a. **Attempt to stop the release at the source.** If the source of the release has not been found, if special protective equipment is necessary to approach the release area, or if assistance is required to stop the release, a fire department response should be initiated by dialing 911 or contacting the University Security office at 426-6911. University Security will then notify the appropriate department or agencies. Boise State University personnel should be available to guide the fire department's efforts.
- b. **Contain the material released into the environment.** Following proper safety procedures, the spill should be contained by appropriate absorbent materials and dikes using shovels and brooms. Consult applicable SDS for material compatibility, and environmental precautions.
- c. **Recover or cleanup the material spilled.** As much material as possible should be recovered and reused where appropriate. Material that cannot be reused must be discarded as hazardous waste. Liquids absorbed by solid materials shall be shoveled into open top drum, or if the size of the spill warrants, into a roll-off container. When drums are filled after a cleanup, the drum lids shall be secured and the drums shall be appropriately labeled identifying the contents, the date of the spill/cleanup, and the site name and location. Combining non-compatible materials can cause potentially dangerous chemical and/or physical reactions or

- may severely limit disposal options. Compatibility information can be found on the material safety data sheets.
- d. **Cleanup of the spill area.** Surfaces that are contaminated by the release shall be cleaned using an appropriate substance or water. Cleanup water must be minimized, contained and properly disposed. Occasionally, porous materials (such as wood, soil, or oil-dry) may be contaminated; such materials will require special handling for disposal.
  - e. **Decontaminate tools and equipment used in cleanup.** Even if dedicated to cleanup efforts, tools and equipment that have been used must be decontaminated before replacing them in the spill control kit.
  - f. **Notification and reports to outside agencies.** The SPCC Coordinator shall determine if a reportable spill has occurred and shall make all necessary notifications. Verbal notification to government agencies and emergency planning committees shall be executed, if necessary. In all cases where verbal notification is given, a confirming written report shall be sent to the same entity.
  - g. **Arrange for proper disposal of any waste materials.** The waste material from the cleanup must be characterized by the Boise State University Environmental Health, Safety and Sustainability office. Representative sampling and analysis may be necessary to make this determination. The waste must be transported and disposed of in compliance with all applicable laws and regulations.
  - h. **Review the SPCC Plan.** Appropriate personnel including management and specially trained in-house personnel or consultants shall review spill response efforts, notification procedures, and cleanup equipment usage to evaluate their adequacy during the episode. Where deficiencies are found, the plan shall be revised and amended.

#### 4. INTERNAL REPORT

A report should be prepared by the department head describing the incident including how the incident happened, who was present, where specifically the event occurred, the date and time the event happened, and what actions were taken. The report should also include input on future prevention of releases for the location.

#### 5. SPILL, FIRE, AND SAFETY EQUIPMENT

Portable fire extinguishers are located throughout the University, are well marked, and are easily accessible. Records are kept on all fire equipment in service, and regular testing is performed in accordance with established procedures.

#### 6. LIAISON WITH LOCAL AUTHORITIES

Copies of this plan will be submitted to the local fire department, police department, Idaho Department of Environmental Quality, local hospital and spill control contractors as requested or needed by them. In addition, familiarization sessions will be held with personnel from these organizations, as they feel necessary. It is important that personnel

responding to an emergency are familiar with chemicals used, the possibilities for release of hazardous materials, and the location of the fire equipment such as hydrants, etc.

## 7. CONTINGENCY PLAN

Contingency Plans are considered reactive in nature and generally describe after-the-fact actions and can be expected to mitigate the effects of a spill after it occurs. Therefore, preventative systems must be given first priority considerations. Spills from facilities where positive containment devices and systems are practical and effective such as dikes, retaining walls, curbing, spill diversion ponds, sumps, etc. fall into the category of prevention systems. Only where “impracticability” to provide positive containment can be clearly demonstrated, does the facility have the option to take the “contingency plan” approach. Impracticability to provide positive containment alludes mainly to those cases where severe space limitations may preclude installation of structures or equipment to prevent oil from reaching water. Justifying impracticability on the basis of financial considerations is difficult because the required commitment of manpower, equipment, and materials to expeditiously control, remove, and disperse spilled oil would not normally offer any significant economic value.

Testing and inspection of the pollution prevention equipment and systems at the facility should be conducted by the SPCC Coordinator or equipment operators on a scheduled basis commensurate with the complexity, conditions and circumstances of the facility or other appropriate state or federal regulations. Inspection records, signed by the appropriate supervisor or inspector, will be kept for three years and made a part of this Plan.

## I. REPORTING PROCEDURES/EMERGENCY REPORTING CONTACTS

In the event of an accidental spill, the Boise State employee discovering the release will contact the University Security 426-6911 or 911 as soon as possible after the incident has occurred. Contact preference is in the order listed. If spill discharge to surface water is imminent, emergency agencies should be notified as described below.

### 1. INTERNAL REPORTING

In the event of a spill, the following internal contacts shall be made:

<b>Name</b>	<b>Telephone Number</b>
<b>University Security (non-emergency)</b>	<b>(208) 426-6911</b>
<b>Fire Dept. (non-emergency)</b>	<b>(208) 377-7351</b>
<b>Environmental Health, Safety and Sustainability</b>	<b>(208) 863-8024</b>

### 2. REPORTING TO OUTSIDE AGENCIES

After the SPCC Coordinator has been notified, he/she will conduct reporting to outside agencies, if necessary. If a spill threatens to reach an off-site waterway, and the spill cannot be contained and recovered by Boise State University personnel, then the following contacts shall be made by the SPCC Coordinator:

**Emergency Response:** To report a spill or accident involving oil, gas, hazardous materials, anthrax, or explosives, contact the state Communication Center. The Center will activate Idaho's Emergency Response Network, which consists of state and local agencies (including designated DEQ field personnel), and, if necessary, federal agencies. In the event of a leaking transformer, report incident immediately to Idaho Power Company dispatch. The following information shall be communicated when reporting to outside agencies:

- Name, title, telephone number, and address of reporter,
- Name, telephone number, and address of the site/spill,
- Time, type, and amount of material involved,
- Extent injuries/illnesses, if known,
- Possible hazards to human health and environment,
- Any body of water involved,
- The cause of accident/spill, and
- The action taken or proposed by the site/personnel.

#### **Primary Contacts**

Idaho Department of Environmental Quality (Incident Response Division)	(800) 632-8000 or (208) 846-7610
National Response Center	(800) 424-8802
Idaho Power Company (for leaking transformers)	(208) 388-5180

#### **Secondary Contacts**

United States Environmental Protection Agency - Region X	(800) 424-4EPA
Boise Fire Department	426-6911
Boise Police Department	426-6911
Ada County Emergency Medical Services	426-6911

#### **Spill Control Contractors/Consultants**

Materials Testing & Inspection, Inc. (Consultant)	(208) 376-4748
Specialty Environmental Services (Contractor)	(208) 327-9977 (208) 863-4667



Master Environmental (Contractor)

(208) 888-7979

## **J. SITE INSPECTION**

All tanks and associated equipment must be inspected for malfunctions, deteriorations, or operator errors that may cause or lead to spills of oil or hazardous substances. Someone familiar with the tank system shall conduct the inspection at least once per month, at a minimum. A written record of inspections will be kept on file and retained for a period of three years. Inspections for aboveground storage containers shall be conducted in accordance with a protocol established by the Environmental Health, Safety and Sustainability, Facilities Operations and Maintenance and/or consulting engineering firm. AST inspections shall include:

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 or other damage to piping;
  - e. Evidence of stored material seepage from valves or seals; and
  - f. Localized dead vegetation.
  
4. Check dike or berm system for:
  - a. Level of precipitation in dike/available capacity,
  - b. Operational status of drainage valves,
  - c. Dike or berm permeability,
  - d. Debris,
  - e. Erosion,
  - f. Permeability of the earthen floor or diked area, and
  - g. Location/status of pipes, inlets, drainage beneath tanks, etc.
  
5. Check secondary containment for:
  - a. Cracks,
  - b. Discoloration,
  - c. Presence of spilled or leaked material (standing liquid),
  - d. Corrosion, and
  - e. Valve conditions.
  
6. Check retention and drainage ponds for:
  - a. Erosion,
  - b. Available capacity,
  - c. Presence of spilled or leaked material,
  - d. Debris, and
  - e. Stressed vegetation.

# The Spill Prevention, Control, and Countermeasure Plan of Boise State University

## Site Specific Information

**University name:**

Boise State University

**Type of University:**

Boise State University is a public institution that is a fully accredited member of the Northwest Association of Schools and Colleges.

**University Address:**

1910 University Drive, Boise, Idaho 83725

**University Mailing Address:**

Boise State University  
Environmental Health, Safety and Sustainability  
1910 University Drive, MS 1826  
Boise, Idaho 83725-1826

**University President:**

Dr. Bob Kustra. Telephone: (208) 426-1491. E-mail address: [bobkustra@boisestate.edu](mailto:bobkustra@boisestate.edu)

**Spill Prevention, Control, and Countermeasure Coordinator:**

Sarah Hansen, Environmental Health Specialist and Sustainability Coordinator,  
Environmental Health, Safety and Sustainability  
Telephone: (208) 426-3943. E-mail address: [sarahhansen@boisestate.edu](mailto:sarahhansen@boisestate.edu)

**Alternate SPCC Coordinator:**

Roy Miller, Associate Director, Facilities Operations and Maintenance  
Telephone: (208) 426-1518. E-mail address: [rmiller@boisestate.edu](mailto:rmiller@boisestate.edu)

## **APPENDIX**

Management Approval / P.E. Review & Certification

Inventories

Safety Data Sheets

Facility Maps

EPA – 40 CFR 112

Management Approval / P.E. Review & Certification

Environmental Services    
  Geotechnical Engineering    
  Construction Materials Testing    
  Special Inspections

### Management Approval and Designated Person (40 CFR 112.7)

Boise State University (BSU) is committed to preventing discharges of oil to navigable waters and the environment, and to maintaining the highest standards for spill prevention control and countermeasures through the implementation and regular review and amendment to the Plan. This SPCC Plan has the full approval of BSU management. BSU has committed the necessary resources to implement the measures described in this Plan.

The Facility Manager 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.

Authorized Facility Representative (facility response coordinator): Stacy Pearson  
 Signature: [Handwritten Signature]  
 Title: VPFA  
 Date: 10/22/2013

### Professional Engineer Certification (40 CFR 112.3(d))

The undersigned Registered Professional Engineer is familiar with the requirements of Part 112 of Title 40 of the *Code of Federal Regulations* (40 CFR part 112) and has visited and examined the facility, or has supervised examination of the facility by appropriately qualified personnel. The undersigned Registered Professional Engineer attests that this Spill Prevention, Control, and Countermeasure Plan has been prepared in accordance with good engineering practice, including consideration of applicable industry standards and the requirements of 40 CFR part 112; that procedures for required inspections and testing have been established; and that this Plan is adequate for the facility. [40 CFR 112.3(d)]

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

[Handwritten Signature]  
Signature

David Cron  
Name

Materials Testing & Inspection  
Company

8715  
Professional Engineer Registration Number

General Manager  
Title

10-2-13  
Date



## Inventories

<b>Boise State Aboveground Storage Tanks (ASTs)</b>					
Rev. 04/2013					
<b>Volume (gal)</b>	<b>Container Type</b>	<b>Location (Name, number)</b>	<b>Security</b>	<b>2° Containment</b>	<b>Phone</b>
2000	Metal tank-unleaded gas	FO&M yard (053)	Fenced & locked	Yes	426-1409
150	Metal Tank-diesel	Landscape Services (070)	Fenced & locked	Yes	426-1485
250	Metal tank-used oil	Vehicle Maintenance (009)	Fenced & locked	Yes	426-3592
<b>2400</b>					

<b>Boise State Cooking Oil, used</b>					
Rev. 04/2013					
<b>Volume (gal)</b>	<b>Container Type</b>	<b>Location (Name, number)</b>	<b>Security</b>	<b>2° Containment</b>	<b>Phone</b>
55	Drum	North side of Culinary Arts (075)	None	No	
160	Tank	Rear/South side of ILC (235)	None	No	426-1676
325	Tank	South side of SUB (032)	None	Yes	426-1676
<b>540</b>					

<b>Boise State Generators</b>					
Rev. 04/2013					
<b>Volume (gal)</b>	<b>Container Type</b>	<b>Location (Name, number)</b>	<b>Security</b>	<b>2° Containment</b>	<b>Phone</b>
510	tank w/in a tank	Business Building (034)	Yes	Yes	426-1403
366	tank w/in a tank	Education Building (071)	Yes	Yes	426-1403
1000	tank w/in a tank	Environmental Research (267)	Yes	Yes	426-1403
173	tank w/in a tank	Interactive Learning Center (235)	Yes	Yes	426-1403
336	tank w/in a tank	Micron Business (298)	Yes	Yes	426-1403
180	tank w/in a tank	Micron Engineering Center (101)	Yes	Yes	426-1403
366	tank w/in a tank	Science building (072)	Yes	Yes	426-1403
600	tank w/in a tank	Stueckle Skyboxes (264)	Yes	Yes	426-1403
25	tank w/in a tank	Taco Bell Arena (015)	Yes	Yes	426-3833
300	tank	Yanke Family Research Park (289)	Yes	Yes	426-1403
<b>3856</b>					



<b>Boise State Oil, Used</b>					
Rev. 04/2013					
<b>Volume (gal)</b>	<b>Container Type</b>	<b>Location (Name, number)</b>	<b>Security</b>	<b>2° Containment</b>	<b>Phone</b>
110	2 drums, used oil	Caven-Williams inside storage (234)	Locked indoors	Yes	426-1090
165	3 drums (motor oil)	Vehicle Maintenance Room 109 (009)	Locked indoors	Yes	426-3592
110	2 drums	Heat Plant outside (006)	Locked	Yes	426-1518
<b>385</b>					

<b>Boise State Elevators/Lifts</b>				
Rev. 04/2013				
<b>Volume (gal)</b>	<b>Room</b>	<b>Location (Name, number)</b>	<b>Drain</b>	<b>Phone</b>
106	56A	Administration	None	426-1409
119	Stair 2	Albertsons Library	4' SS	426-1409
119	Stair 2	Albertsons Library	1' SS	426-1409
42	126A	Albertsons Library	None	426-1409
72	106	Applied Technology	None	426-1409
NA	Roof	Barnes Towers		426-1409
NA	Roof	Barnes Towers		426-1409
82	Vault 128 (in	Business	8.5' SS	426-1409
82	Mechanical Rm)	Business	13'SS	426-1409
56	Laundry Rm	Chaffee Hall	11' SS	426-1409
100	136	Communications	None	426-1409
56	Basement	Driscoll Hall		426-1409
NA	105 Downstairs	Education	10'SS	426-1409
NA	105 Downstairs	Education	2'SS	426-1409
NA	105 Downstairs	Education	6'SS	426-1409
97	124	Engineering Technology	None	426-1409
103	116	Engineering Technology	None	426-1409
81	109	Extended Studies	None	426-1409
	1110	Harry Morrison Civil Eng.		426-1409
81	144	Health/Science Riverside	None	426-1409
		Interactive Learning Ctr.		426-1409

		Interactive Learning Ctr.		426-1409
		John B. Keiser Hall		426-1409
75	134	Kinesiology	6'SS	426-1409
103	161	Liberal Arts	None	426-1409
24	128A	Math-Geology	None	426-1409
106	Basement	Math-Geology	None	426-1409
159	120	Micron Engineering Center	None	426-1409
257	120	Micron Engineering Center	None	426-1409
94	Auxiliary (left)	Morrison Center	23' SS	426-3315
94	Auxiliary (right)	Morrison Center	23' SS	426-3315
94	Custodial	Morrison Center	23' SS	426-3315
94	Academic	Morrison Center	23' SS	426-3315
167	A004	Morrison Center (Stage)	NA	426-3326
	Pit	Morrison Center (Stage)		426-3326
238	111	Multipurpose	None	426-1409
185	111	Multipurpose	None	426-1409
170	(Outside in)	Parking Structure #1	None	426-4277
170	(1st floor garage)	Parking Structure #1	None	426-4277
	(1st floor garage)	Parking Structure #2	None	426-4277
141	RC 215	Student Rec Center	NA	426-3833
106	165B	Science Nursing	None	426-1409
106	165B	Science Nursing	None	426-1409
106.5	SN 165B	Science/Nursing		426-1409
106.5	SN 165B	Science/Nursing		426-1409
95	106B	Simplot Micron Center	12"SS	426-1409
95	SM 106B	Simplot/Micron		426-1409
95	East Entry	Stadium East	None	426-1409
95	West Entry	Stadium West	None	426-1409
	Under Construction	Stadium Press Box		426-1409
	Freight	Student Union		426-1683
103	NE Corner	Student Union	NA	426-1683
	Near bookstore	Student Union		426-1683
101	Info. Desk	Student Union	17' SS	426-1683
89	sub-floor	Taco Bell Arena (Lobby 1)	11' SS	426-3829
146	sub-floor	Taco Bell Arena (Lobby 1)	11' SS	426-3829
40	Athl Trng	Taco Bell Arena (PRECO)	NA	426-3829
31	1560	Taco Bell Arena (Aux.gym)	NA	426-3829
17.5		Taco Bell Arena east side	12.75' SS	426-3829
		Taylor Hall		447-1078
70	Across from elevator	Technical Services	None	426-1409

		University Squares-A		447-1078
		University Squares-B		447-1078
		University Squares-C		447-1078
		University Squares-D		447-1078
		University Squares-E		447-1078
		University Squares-F		447-1078
		University Squares-G		447-1078
	Dock lift	Interactive Learning Center		426-1409
	Dock lift	Taco Bell Arena		426-1931
4769.5				

### Boise State Transformers

Rev. 07/2013

All Owned by Idaho Power Co. except those identified in the Notes field

Volume (gal)	Device	Location (Name, number)	Notes
430	BSU10	Towers (039)	
159	BSU11	Irrigation Pump (013)	South of Morrison Center
330	BSU12	Morrison Center (013)	Loading dock
400	BSU13	Morrison Center (013)	Loading dock
221	BSU14	Stadium East Sports Med. (165)	
266	BSU15	Stadium East Field Lights (035)	
418	BSU16	Stadium West (035)	
324	BSU17	Stadium West Field Lights (035)	
355	BSU18	Varsity Center/Coaches Complex (036)	
120	BSU19	Diesel Shop (052)	
250	BSU20	Culinary Arts/Maintenance Shop (075/009)	
235	BSU21	Academic/Career Services (028)	
217	BSU22	Brady Street Garage (104)	
251	BSU23	Applied Technology (033)	
214	BSU24	Mechanical Technology (056)	
387	BSU25	SE corner	
251	BSU26	Bronco Gym (025)	
324	BSU27	Student Union (Main) (032)	
414	BSU28	Science (072)	
100	BSU29	Business (034)	
99.5	BSU29	Business (034)	
99.5	BSU29	Business (034)	

160	BSU30	Mathematics (024)	
85	BSU31	Administration (004)	
<55	BSU32	Liberal Arts (030)	Not subject to SPCC
355	BSU33	Heat Plant (006)	
268	BSU34	Special Events Center (062)	
<55	BSU35	Hemingway Center (005)	Not subject to SPCC
261	BSU36	Communication (011)	
295	BSU37	Albertsons Library (027)	
190	BSU39	Administration (004)	
355	BSU40	Taco Bell Arena (015)	
435	BSU41	Taco Bell Arena (015)	
145	BSU42	Chaffee Hall (031)	
<55	BSU43	Morrison Hall (020)	Not subject to SPCC
66	BSU44	Driscoll Hall (021)	
150	BSU45	Kinesiology Annex (P.E.) (037)	
335	BSU46	Simplot/Micron (016)	
257	BSU47	Mathematics (024)	
250	BSU48	Campus School ( 007)	
235	BSU49	Student Union (Addition)	
219	BSU51	Chaffee Hall (031)	
350	BSU52	Taco Bell Arena (015)	Morrison/Driscoll Cooling
261	BSU54	Taco Bell Arena (015)	
261	BSU55	Taylor Hall (152)	
261	BSU56	Taylor Hall (152)	
330	BSU57	Caven Williams Sports Complex (234)	
460	BSU58	Interactive Learning Center (235)	
350	BSU59	Student Union (Addition) (032)	
328	BSU60	Student Union (Addition) (032)	
250	BSU61	Arguinchona Basketball Complex (015)	
332	BSUT180	Micron Business and Economics Building (298)	
237	BSUT300	Lincoln Avenue Garage (255)	
334	BSUT305	Rec Center - Aquatic Center (102)	
330	BSUT315	Engineering/Micron Engin. Center (029/101)	
330	BSUT317	Civil Engineering (100)	
547	BSUT320	Environmental Research Building(267)	
418	BSUT350	Norco Building (259)	
410		Football Complex (332)	Owned by Boise State University
15550			

**SAFETY DATA SHEETS**



# Material Safety Data Sheet

## SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

### Chevron Hydraulic Oil AW

**Product Use:** Hydraulic Oil

**Product Number(s):** CPS255673, CPS255674, CPS255675

**Synonyms:** Chevron Hydraulic Oil AW ISO 32, Chevron Hydraulic Oil AW ISO 46, Chevron Hydraulic Oil AW ISO 68

#### Company Identification

Chevron Products Company  
a division of Chevron U.S.A. Inc.  
6001 Bollinger Canyon Rd.  
San Ramon, CA 94583  
United States of America  
www.chevronlubricants.com

#### Transportation Emergency Response

CHEMTREC: (800) 424-9300 or (703) 527-3887

#### Health Emergency

Chevron Emergency Information Center: Located in the USA. International collect calls accepted. (800) 231-0623 or (510) 231-0623

#### Product Information

email : lubemsds@chevron.com  
Product Information: (800) LUBE TEK

## SECTION 2 COMPOSITION/ INFORMATION ON INGREDIENTS

COMPONENTS	CAS NUMBER	AMOUNT
Highly refined mineral oil (C15 - C50)	Mixture	70 - 100 %wt/wt

## SECTION 3 HAZARDS IDENTIFICATION

### IMMEDIATE HEALTH EFFECTS

**Eye:** Not expected to cause prolonged or significant eye irritation.

**Skin:** Contact with the skin is not expected to cause prolonged or significant irritation. Contact with the skin is not expected to cause an allergic skin response. Not expected to be harmful to internal organs if absorbed through the skin. High-Pressure Equipment Information: Accidental high-velocity injection under the skin of materials of this type may result in serious injury. Seek medical attention at once should an accident like this occur. The initial wound at the injection site may not appear to be serious at first; but, if left untreated, could result in disfigurement or amputation of the affected part.

**Ingestion:** Not expected to be harmful if swallowed.

**Inhalation:** Not expected to be harmful if inhaled. Contains a petroleum-based mineral oil. May cause respiratory irritation or other pulmonary effects following prolonged or repeated inhalation of oil mist at airborne levels above the recommended mineral oil mist exposure limit. Symptoms of respiratory irritation may include coughing and difficulty breathing.

#### SECTION 4 FIRST AID MEASURES

**Eye:** No specific first aid measures are required. As a precaution, remove contact lenses, if worn, and flush eyes with water.

**Skin:** No specific first aid measures are required. As a precaution, remove clothing and shoes if contaminated. To remove the material from skin, use soap and water. Discard contaminated clothing and shoes or thoroughly clean before reuse.

**Ingestion:** No specific first aid measures are required. Do not induce vomiting. As a precaution, get medical advice.

**Inhalation:** No specific first aid measures are required. If exposed to excessive levels of material in the air, move the exposed person to fresh air. Get medical attention if coughing or respiratory discomfort occurs.

**Note to Physicians:** In an accident involving high-pressure equipment, this product may be injected under the skin. Such an accident may result in a small, sometimes bloodless, puncture wound. However, because of its driving force, material injected into a fingertip can be deposited into the palm of the hand. Within 24 hours, there is usually a great deal of swelling, discoloration, and intense throbbing pain. Immediate treatment at a surgical emergency center is recommended.

#### SECTION 5 FIRE FIGHTING MEASURES

Leaks/ruptures in high pressure system using materials of this type can create a fire hazard when in the vicinity of ignition sources (eg. open flame, pilot lights, sparks, or electric arcs).

##### **FIRE CLASSIFICATION:**

OSHA Classification (29 CFR 1910.1200): Not classified by OSHA as flammable or combustible.

**NFPA RATINGS:** Health: 0 Flammability: 1 Reactivity: 0

##### **FLAMMABLE PROPERTIES:**

**Flashpoint:** (Cleveland Open Cup) 170 °C (338 °F) Minimum

**Autoignition:** No data available

**Flammability (Explosive) Limits (% by volume in air):** Lower: Not Applicable Upper: Not Applicable

**EXTINGUISHING MEDIA:** Use water fog, foam, dry chemical or carbon dioxide (CO<sub>2</sub>) to extinguish flames.

##### **PROTECTION OF FIRE FIGHTERS:**

**Fire Fighting Instructions:** This material will burn although it is not easily ignited. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus.

**Combustion Products:** Highly dependent on combustion conditions. A complex mixture of airborne solids, liquids, and gases including carbon monoxide, carbon dioxide, and unidentified organic compounds will be evolved when this material undergoes combustion.

#### SECTION 6 ACCIDENTAL RELEASE MEASURES

**Protective Measures:** Eliminate all sources of ignition in vicinity of spilled material.

**Spill Management:** Stop the source of the release if you can do it without risk. Contain release to prevent further contamination of soil, surface water or groundwater. Clean up spill as soon as possible, observing precautions in Exposure Controls/Personal Protection. Use appropriate techniques such as applying non-combustible absorbent materials or pumping. Where feasible and appropriate, remove contaminated soil. Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations.

**Reporting:** Report spills to local authorities and/or the U.S. Coast Guard's National Response Center at (800) 424-8802 as appropriate or required.

## SECTION 7 HANDLING AND STORAGE

**Precautionary Measures:** DO NOT USE IN HIGH PRESSURE SYSTEMS in the vicinity of flames, sparks and hot surfaces. Use only in well ventilated areas. Keep container closed.

**General Handling Information:** Avoid contaminating soil or releasing this material into sewage and drainage systems and bodies of water.

**Static Hazard:** Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary but may not, by themselves, be sufficient. Review all operations which have the potential of generating and accumulating an electrostatic charge and/or a flammable atmosphere (including tank and container filling, splash filling, tank cleaning, sampling, gauging, switch loading, filtering, mixing, agitation, and vacuum truck operations) and use appropriate mitigating procedures. For more information, refer to OSHA Standard 29 CFR 1910.106, 'Flammable and Combustible Liquids', National Fire Protection Association (NFPA 77, 'Recommended Practice on Static Electricity', and/or the American Petroleum Institute (API) Recommended Practice 2003, 'Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents'.

**Container Warnings:** Container is not designed to contain pressure. Do not use pressure to empty container or it may rupture with explosive force. Empty containers retain product residue (solid, liquid, and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death. Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner or disposed of properly.

## SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

### GENERAL CONSIDERATIONS:

Consider the potential hazards of this material (see Section 3), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

### ENGINEERING CONTROLS:

Use in a well-ventilated area.

### PERSONAL PROTECTIVE EQUIPMENT

**Eye/Face Protection:** No special eye protection is normally required. Where splashing is possible, wear safety glasses with side shields as a good safety practice.

**Skin Protection:** No special protective clothing is normally required. Where splashing is possible, select protective clothing depending on operations conducted, physical requirements and other substances in the



workplace. Suggested materials for protective gloves include: 4H (PE/EVAL), Nitrile Rubber, Silver Shield, Viton.

**Respiratory Protection:** No respiratory protection is normally required.

If user operations generate an oil mist, determine if airborne concentrations are below the occupational exposure limit for mineral oil mist. If not, wear an approved respirator that provides adequate protection from the measured concentrations of this material. For air-purifying respirators use a particulate cartridge. Use a positive pressure air-supplying respirator in circumstances where air-purifying respirators may not provide adequate protection.

**Occupational Exposure Limits:**

Component	Agency	TWA	STEL	Ceiling	Notation
Highly refined mineral oil (C15 - C50)	ACGIH	5 mg/m3	10 mg/m3	--	--
Highly refined mineral oil (C15 - C50)	OSHA Z-1	5 mg/m3	--	--	--

Consult local authorities for appropriate values.

**SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES**

Attention: the data below are typical values and do not constitute a specification.

**Color:** Yellow

**Physical State:** Liquid

**Odor:** Petroleum odor

**pH:** Not Applicable

**Vapor Pressure:** <0.01 mmHg @ 37.8 °C (100 °F)

**Vapor Density (Air = 1):** >1

**Boiling Point:** >315°C (599°F)

**Solubility:** Soluble in hydrocarbon solvents; insoluble in water.

**Freezing Point:** Not Applicable

**Density:** 0.87 kg/l @ 15°C (59°F) (Typical)

**Viscosity:** 28.8 mm<sup>2</sup>/s @ 40°C (104°F) Minimum

**SECTION 10 STABILITY AND REACTIVITY**

**Chemical Stability:** This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

**Incompatibility With Other Materials:** May react with strong acids or strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.

**Hazardous Decomposition Products:** None known (None expected)

**Hazardous Polymerization:** Hazardous polymerization will not occur.

**SECTION 11 TOXICOLOGICAL INFORMATION**

**IMMEDIATE HEALTH EFFECTS**

**Eye Irritation:** The eye irritation hazard is based on evaluation of data for similar materials or product components.

**Skin Irritation:** The skin irritation hazard is based on evaluation of data for similar materials or product components.

**Skin Sensitization:** The skin sensitization hazard is based on evaluation of data for similar materials or product components.

**Acute Dermal Toxicity:** The acute dermal toxicity hazard is based on evaluation of data for similar

materials or product components.

**Acute Oral Toxicity:** The acute oral toxicity hazard is based on evaluation of data for similar materials or product components.

**Acute Inhalation Toxicity:** The acute inhalation toxicity hazard is based on evaluation of data for similar materials or product components.

**ADDITIONAL TOXICOLOGY INFORMATION:**

This product contains petroleum base oils which may be refined by various processes including severe solvent extraction, severe hydrocracking, or severe hydrotreating. None of the oils requires a cancer warning under the OSHA Hazard Communication Standard (29 CFR 1910.1200). These oils have not been listed in the National Toxicology Program (NTP) Annual Report nor have they been classified by the International Agency for Research on Cancer (IARC) as; carcinogenic to humans (Group 1), probably carcinogenic to humans (Group 2A), or possibly carcinogenic to humans (Group 2B). These oils have not been classified by the American Conference of Governmental Industrial Hygienists (ACGIH) as: confirmed human carcinogen (A1), suspected human carcinogen (A2), or confirmed animal carcinogen with unknown relevance to humans (A3).

**SECTION 12 ECOLOGICAL INFORMATION**

**ECOTOXICITY**

This material is not expected to be harmful to aquatic organisms. The ecotoxicity hazard is based on an evaluation of data for the components or a similar material.

**ENVIRONMENTAL FATE**

**Ready Biodegradability:** This material is not expected to be readily biodegradable. The biodegradability of this material is based on an evaluation of data for the components or a similar material.

**SECTION 13 DISPOSAL CONSIDERATIONS**

Use material for its intended purpose or recycle if possible. Oil collection services are available for used oil recycling or disposal. Place contaminated materials in containers and dispose of in a manner consistent with applicable regulations. Contact your sales representative or local environmental or health authorities for approved disposal or recycling methods.

**SECTION 14 TRANSPORT INFORMATION**

The description shown may not apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods Regulations, for additional description requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.

**DOT Shipping Description:** PETROLEUM LUBRICATING OIL, NOT REGULATED AS A HAZARDOUS MATERIAL FOR TRANSPORTATION UNDER 49 CFR

**IMO/IMDG Shipping Description:** PETROLEUM LUBRICATING OIL; NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORT UNDER THE IMDG CODE

**ICAO/IATA Shipping Description:** PETROLEUM LUBRICATING OIL; NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORT UNDER ICAO TI OR IATA DGR

## SECTION 15 REGULATORY INFORMATION

<b>EPCRA 311/312 CATEGORIES:</b>	1. Immediate (Acute) Health Effects:	NO
	2. Delayed (Chronic) Health Effects:	NO
	3. Fire Hazard:	NO
	4. Sudden Release of Pressure Hazard:	NO
	5. Reactivity Hazard:	NO

### REGULATORY LISTS SEARCHED:

01-1=IARC Group 1	03=EPCRA 313
01-2A=IARC Group 2A	04=CA Proposition 65
01-2B=IARC Group 2B	05=MA RTK
02=NTP Carcinogen	06=NJ RTK
	07=PA RTK

No components of this material were found on the regulatory lists above.

### CHEMICAL INVENTORIES:

All components comply with the following chemical inventory requirements: AICS (Australia), DSL (Canada), EINECS (European Union), ENCS (Japan), IECSC (China), KECI (Korea), PICCS (Philippines), TSCA (United States).

### NEW JERSEY RTK CLASSIFICATION:

Under the New Jersey Right-to-Know Act L. 1983 Chapter 315 N.J.S.A. 34:5A-1 et. seq., the product is to be identified as follows: PETROLEUM OIL (Hydraulic oil)

### WHMIS CLASSIFICATION:

This product is not considered a controlled product according to the criteria of the Canadian Controlled Products Regulations.

## SECTION 16 OTHER INFORMATION

**NFPA RATINGS:** Health: 0 Flammability: 1 Reactivity: 0

**HMIS RATINGS:** Health: 1 Flammability: 1 Reactivity: 0  
(0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme, PPE:- Personal Protection Equipment Index recommendation, \*- Chronic Effect Indicator). These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association (NFPA) or the National Paint and Coating Association (for HMIS ratings).

### LABEL RECOMMENDATION:

Label Category : INDUSTRIAL OIL 1 - IND1

**REVISION STATEMENT:** This revision updates the following sections of this Material Safety Data Sheet: 1,2,9,16

**Revision Date:** FEBRUARY 16, 2012

### ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:

TLV - Threshold Limit Value	TWA - Time Weighted Average
STEL - Short-term Exposure Limit	PEL - Permissible Exposure Limit

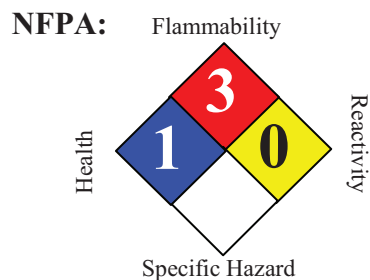
	CAS - Chemical Abstract Service Number
ACGIH - American Conference of Governmental Industrial Hygienists	IMO/IMDG - International Maritime Dangerous Goods Code
API - American Petroleum Institute	MSDS - Material Safety Data Sheet
CVX - Chevron	NFPA - National Fire Protection Association (USA)
DOT - Department of Transportation (USA)	NTP - National Toxicology Program (USA)
IARC - International Agency for Research on Cancer	OSHA - Occupational Safety and Health Administration

Prepared according to the OSHA Hazard Communication Standard (29 CFR 1910.1200) and the ANSI MSDS Standard (Z400.1) by the Chevron Energy Technology Company, 100 Chevron Way, Richmond, California 94802.

**The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.**

# Safety Data Sheet

## Gasoline, Unleaded



### SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

<b>Product name</b>	:	Gasoline, Unleaded			
<b>Synonyms</b>	:	Blend of Highly Flammable Petroleum Distillates, Regular, Mid-Grade, Premium, 888100008809			
<b>SDS Number</b>	:	888100008809	<b>Version</b>	:	1.1
<b>Product Use Description</b>	:	Fuel			
<b>Company</b>	:	For: Tesoro Refining & Marketing Co. 19100 Ridgewood Parkway, San Antonio, TX 78259			
<b>Tesoro Call Center</b>	:	(877) 783-7676	<b>Chemtrec (Emergency Contact)</b>	:	(800) 424-9300

### SECTION 2. HAZARDS IDENTIFICATION

**Classifications** :

- Flammable Liquid – Category 1 or 2 depending on formulation.
- Aspiration Hazard – Category 1
- Carcinogenicity – Category 2
- Specific Target Organ Toxicity (Repeated Exposure) – Category 2
- Specific Target Organ Toxicity (Single Exposure) – Category 3
- Skin Irritation – Category 2
- Eye Irritation – Category 2B
- Chronic Aquatic Toxicity – Category 2

**Pictograms** :



**Signal Word** : **Danger**

**Hazard Statements**

Extremely flammable liquid and vapor.  
 May be fatal if swallowed and enters airways – do not siphon gasoline by mouth.  
 Suspected of causing blood cancer if repeated over-exposure by inhalation and/or skin contact occurs.  
 May cause damage to liver, kidneys and nervous system by repeated and prolonged inhalation or skin contact. Causes eye irritation. Can be absorbed through skin.  
 May cause drowsiness or dizziness. Extreme exposure such as intentional inhalation may cause unconsciousness, asphyxiation and death.  
 Repeated or prolonged skin contact can cause irritation and dermatitis.

Harmful to aquatic life.

### Precautionary statements

#### Prevention

- : Obtain special instructions before use.
- Do not handle until all safety precautions have been read and understood.
- Keep away from heat, sparks, open flames, welding and hot surfaces.
- No smoking.
- Keep container tightly closed.
- Ground and/or bond container and receiving equipment.
- Use explosion-proof electrical equipment.
- Use only non-sparking tools (if tools are used in flammable atmosphere).
- Take precautionary measures against static discharge.
- Wear gloves, eye protection and face protection (as needed to prevent skin and eye contact with liquid).
- Wash hands or liquid-contacted skin thoroughly after handling.
- Do not eat, drink or smoke when using this product.
- Do not breathe vapors.
- Use only outdoors or in a well-ventilated area.

#### Response

- : In case of fire: Use dry chemical, CO<sub>2</sub>, water spray or fire fighting foam to extinguish.
- If swallowed: Immediately call a poison center, doctor, hospital emergency room, medical clinic or 911. Do NOT induce vomiting. Rinse mouth.
- If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- If in eye: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- If skin or eye irritation persists, get medical attention.
- If inhaled: Remove person to fresh air and keep comfortable for breathing. Get medical attention if you feel unwell.

#### Storage

- : Store in a well ventilated place. Keep cool. Store locked up. Keep container tightly closed. Use only approved containers. Some containers not approved for gasoline may dissolve and release flammable gasoline liquid and vapors.

#### Disposal

- : Dispose of contents/containers to approved disposal site in accordance with local, regional, national, and/or international regulations.

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No.	Weight %
Gasoline, natural; Low boiling point naphtha	8006-61-9	10 - 30%
Toluene	108-88-3	10 - 30%
Xylene	1330-20-7	10 - 30%
Ethanol; ethyl alcohol	64-17-5	0-8.2%
Trimethylbenzene	25551-13-7	1 - 5%
Isopentane; 2-methylbutane	78-78-4	1 - 5%

Naphthalene	91-20-3	1 - 5%
Benzene	71-43-2	Less than 1.3%
Pentane	109-66-0	1 - 5%
Cyclohexane	110-82-7	1 - 5%
Ethylbenzene	100-41-4	1 - 5%
Butane	106-97-8	1 - 20%
Heptane [and isomers]	142-82-5	0.5 - 0.75%
N-hexane	110-54-3	0.5 - 0.75%

#### SECTION 4. FIRST AID MEASURES

<b>Inhalation</b>	: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek medical attention immediately.
<b>Skin contact</b>	: In case of contact, immediately flush skin with plenty of water. Take off contaminated clothing and shoes immediately. Wash contaminated clothing before re-use. Contaminated leather, particularly footwear, must be discarded. Note that contaminated clothing may be a fire hazard. Seek medical advice if symptoms persist or develop.
<b>Eye contact</b>	: Remove contact lenses. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Seek medical advice if symptoms persist or develop.
<b>Ingestion</b>	: Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Obtain medical attention.
<b>Notes to physician</b>	: Symptoms: Dizziness, Discomfort, Headache, Nausea, Kidney disorders, Liver disorders. Aspiration may cause pulmonary edema and pneumonitis. Swallowing gasoline is more likely to be fatal for small children than adults, even if aspiration does not occur.

#### SECTION 5. FIRE-FIGHTING MEASURES

<b>Suitable extinguishing media</b>	: SMALL FIRES: Any extinguisher suitable for Class B fires, dry chemical, CO <sub>2</sub> , water spray or fire fighting foam. LARGE FIRES: Water spray, fog or fire fighting foam. Water may be ineffective for fighting the fire, but may be used to cool fire-exposed containers. Keep containers and surroundings cool with water spray.
<b>Specific hazards during fire fighting</b>	: Extremely flammable liquid and vapor. This material is combustible/flammable and is sensitive to fire, heat, and static discharge.
<b>Special protective equipment for fire-fighters</b>	: Firefighting activities that may result in potential exposure to high heat, smoke or toxic by-products of combustion should require NIOSH/MSHA- approved pressure-demand self-contained breathing apparatus with full facepiece and full protective clothing.

**Further information** : Isolate area around container involved in fire. Cool tanks, shells, and containers exposed to fire and excessive heat with water. For massive fires the use of unmanned hose holders or monitor nozzles may be advantageous to further minimize personnel exposure. Major fires may require withdrawal, allowing the tank to burn. Large storage tank fires typically require specially trained personnel and equipment to extinguish the fire, often including the need for properly applied fire fighting foam. Exposure to decomposition products may be a hazard to health. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray to cool unopened containers. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

## SECTION 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions** : Evacuate personnel to safe areas. Ventilate the area. Remove all sources of ignition. Response and clean-up crews must be properly trained and must utilize proper protective equipment (see Section 8).

**Environmental precautions** : Discharge into the environment must be avoided. If the product contaminates rivers and lakes or drains inform respective authorities.

**Methods for cleaning up** : Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations.

## SECTION 7. HANDLING AND STORAGE

**Precautions for safe handling** : Keep away from fire, sparks and heated surfaces. No smoking near areas where material is stored or handled. The product should only be stored and handled in areas with intrinsically safe electrical classification.

Hydrocarbon liquids including this product can act as a non-conductive flammable liquid (or static accumulators), and may form ignitable vapor-air mixtures in storage tanks or other containers. Precautions to prevent static-initated fire or explosion during transfer, storage or handling, include but are not limited to these examples:

- (1) Ground and bond containers during product transfers. Grounding and bonding may not be adequate protection to prevent ignition or explosion of hydrocarbon liquids and vapors that are static accumulators.
- (2) Special slow load procedures for "switch loading" must be followed to avoid the static ignition hazard that can exist when higher flash point material (such as fuel oil or diesel) is loaded into tanks previously containing low flash point products (such as gasoline or naphtha).
- (3) Storage tank level floats must be effectively bonded.

For more information on precautions to prevent static-initated fire or explosion, see NFPA 77, Recommended Practice on Static Electricity (2007), and API Recommended Practice 2003, Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents (2008).

**Conditions for safe storage, including incompatibilities** : Keep away from flame, sparks, excessive temperatures and open flame. Use approved containers. Keep containers closed and clearly labeled. Empty or partially full product containers or vessels may contain explosive vapors. Do not pressurize, cut, heat, weld or expose containers to sources of ignition. Store in a well-ventilated area. The storage area should comply with NFPA 30 "Flammable and Combustible Liquid Code". The cleaning of tanks previously containing this product should follow API Recommended Practice (RP) 2013 "Cleaning Mobile Tanks In Flammable and Combustible Liquid Service" and API RP 2015 "Cleaning Petroleum Storage Tanks".



Reports suggest that government-mandated ethanol, if present, may not be compatible with fiberglass gasoline tanks. Ethanol may dissolve fiberglass resin, causing engine damage and possibly allow leakage of explosive gasoline.

Keep away from food, drink and animal feed. Incompatible with oxidizing agents. Incompatible with acids.

No decomposition if stored and applied as directed. Emergency eye wash capability should be available in the near proximity to operations presenting a potential splash exposure. Store only in containers approved and labeled for gasoline.

## SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### Exposure Guidelines

List	Components	CAS-No.	Type:	Value
OSHA	Benzene	71-43-2	TWA	1 ppm
		71-43-2	STEL	5 ppm
		71-43-2	OSHA_ACT	0.5 ppm
OSHA Z1	Xylene	1330-20-7	PEL	100 ppm 435 mg/m3
	Ethanol; Ethyl alcohol	64-17-5	PEL	1,000 ppm 1,900 mg/m3
	Naphthalene	91-20-3	PEL	10 ppm 50 mg/m3
	Cyclohexane	110-82-7	PEL	300 ppm 1,050 mg/m3
	Ethylbenzene	100-41-4	PEL	100 ppm 435 mg/m3
	Heptane [and isomers]	142-82-5	PEL	500 ppm 2,000 mg/m3
	N-hexane	110-54-3	PEL	500 ppm 1,800 mg/m3
ACGIH	Toluene	108-88-3	TWA	50 ppm
	Xylene	1330-20-7	TWA	100 ppm
		1330-20-7	STEL	150 ppm
	Ethanol; Ethyl alcohol	64-17-5	TWA	1,000 ppm
	Trimethylbenzene	25551-13-7	TWA	25 ppm
	Isopentane; 2-Methylbutane	78-78-4	TWA	600 ppm
	Naphthalene	91-20-3	TWA	10 ppm
		91-20-3	STEL	15 ppm
	Benzene	71-43-2	TWA	0.5 ppm
		71-43-2	STEL	2.5 ppm
	Pentane	109-66-0	TWA	600 ppm
	Cyclohexane	110-82-7	TWA	100 ppm
	Ethylbenzene	100-41-4	TWA	100 ppm
100-41-4		STEL	125 ppm	
Heptane [and isomers]	142-82-5	TWA	400 ppm	
	142-82-5	STEL	500 ppm	

	N-hexane	110-54-3	TWA	50 ppm
<b>Engineering measures</b>	: Use adequate ventilation to keep gas and vapor concentrations of this product below occupational exposure and flammability limits, particularly in confined spaces. Use only intrinsically safe electrical equipment approved for use in classified areas.			
<b>Eye protection</b>	: Safety glasses or goggles are recommended where there is a possibility of splashing or spraying. Ensure that eyewash stations and safety showers are close to the workstation location.			
<b>Hand protection</b>	: Gloves constructed of nitrile or neoprene are recommended. Consult manufacturer specifications for further information.			
<b>Skin and body protection</b>	: If needed to prevent skin contact, chemical protective clothing such as of DuPont TyChem®, Saranex or equivalent recommended based on degree of exposure. Flame resistant clothing such as Nomex ® is recommended in areas where material is stored or handled.			
<b>Respiratory protection</b>	: A NIOSH/ MSHA-approved air-purifying respirator with organic vapor cartridges or canister may be permissible under certain circumstances where airborne concentrations are or may be expected to exceed exposure limits or for odor or irritation. Protection provided by air-purifying respirators is limited. Refer to OSHA 29 CFR 1910.134, ANSI Z88.2-1992, NIOSH Respirator Decision Logic, and the manufacturer for additional guidance on respiratory protection selection. Use a NIOSH/ MSHA-approved positive-pressure supplied-air respirator if there is a potential for uncontrolled release, exposure levels are not known, in oxygen-deficient atmospheres, or any other circumstance where an air-purifying respirator may not provide adequate protection.			
<b>Work / Hygiene practices</b>	: Emergency eye wash capability should be available in the near proximity to operations presenting a potential splash exposure. Use good personal hygiene practices. Avoid repeated and/or prolonged skin exposure. Wash hands before eating, drinking, smoking, or using toilet facilities. Do not use as a cleaning solvent on the skin. Do not use solvents or harsh abrasive skin cleaners for washing this product from exposed skin areas. Waterless hand cleaners are effective. Promptly remove contaminated clothing and launder before reuse. Use care when laundering to prevent the formation of flammable vapors which could ignite via washer or dryer. Consider the need to discard contaminated leather shoes and gloves.			

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	: Clear to straw colored liquid
<b>Odor</b>	: Characteristic hydrocarbon-like
<b>Odor threshold</b>	0.5 - 1.1 ppm
<b>pH</b>	: Not applicable
<b>Melting point/freezing point</b>	About -101°C (-150°F)
<b>Initial boiling point &amp; range</b>	Boiling point varies: 30 – 200°C (85 – 392°F)
<b>Flash point</b>	< -21°C (-5.8°F)
<b>Evaporation rate</b>	: Higher initially and declining as lighter components evaporate
<b>Flammability (solid, gas)</b>	: Flammable vapor released by liquid

<b>Upper explosive limit</b>	7.6 %(V)
<b>Lower explosive limit</b>	1.3 %(V)
<b>Vapor pressure</b>	345 - 1,034 hPa at 37.8 °C (100.0 °F)
<b>Vapor density (air = 1)</b>	Approximately 3 to 4
<b>Relative density (water = 1)</b>	0.8 g/mL
<b>Solubility (in water)</b>	Negligible
<b>Partition coefficient (n-octanol/water)</b>	2 – 7 as log Pow
<b>Auto-ignition temperature</b>	Approximately 250°C (480°F)
<b>Decomposition temperature</b>	Will evaporate or boil and possibly ignite before decomposition occurs.
<b>Kinematic viscosity</b>	0.64 to 0.88 mm <sup>2</sup> /s range reported for gasoline
<b>Conductivity (conductivity can be reduced by environmental factors such as a decrease in temperature)</b>	: Hydrocarbon liquids without static dissipater additive may have conductivity below 1 picoSiemens per meter (pS/m). The highest electro-static ignition risks are associated with "ultra-low conductivities" below 5 pS/m. See Section 7 for sources of information on defining safe loading and handling procedures for low conductivity products.

## SECTION 10. STABILITY AND REACTIVITY

<b>Reactivity</b>	: Vapors may form explosive mixture with air. Hazardous polymerization does not occur.
<b>Chemical stability</b>	: Stable under normal conditions.
<b>Possibility of hazardous reactions</b>	Can react with strong oxidizing agents, peroxides, alkaline products and strong acids. Contact with nitric and sulfuric acids will form nitroresols that can decompose violently.
<b>Conditions to avoid</b>	: Avoid high temperatures, open flames, sparks, welding, smoking and other ignition sources. Avoid static charge accumulation and discharge (see Section 7).
<b>Hazardous decomposition products</b>	: Ignition and burning can release carbon monoxide, carbon dioxide and non-combusted hydrocarbons (smoke).

## SECTION 11. TOXICOLOGICAL INFORMATION

<b>Skin contact</b>	: Irritating to skin. Can be partially absorbed through skin.
<b>Eye contact</b>	: Irritating to eyes.
<b>Ingestion</b>	: Aspiration hazard if liquid is inhaled into lungs, particularly from vomiting after ingestion. Aspiration may result in chemical pneumonia, severe lung damage, respiratory failure and even death. Ingestion may cause gastrointestinal disturbances, including irritation, nausea, vomiting and diarrhea, and central nervous (brain) effects similar to alcohol intoxication. In severe cases, tremors, convulsions, loss of consciousness, coma, respiratory arrest and death may occur.

**Inhalation and further information**

Acute toxicity of benzene results primarily from depression of the central nervous system (CNS). Inhalation of concentrations over 50 ppm can produce headache, lassitude, weariness, dizziness, drowsiness, over excitation. Exposure to very high levels can result in unconsciousness and death.

Repeated over-exposure may cause liver and kidney injuries. Components of the product may affect the nervous system.

IARC has determined that gasoline and gasoline exhaust are possibly carcinogenic in humans. Inhalation exposure to completely vaporized unleaded gasoline caused kidney cancers in male rats and liver tumors in female mice. The U.S. EPA has determined that the male kidney tumors are species-specific and are irrelevant for human health risk assessment. The significance of the tumors seen in female mice is not known. Exposure to light hydrocarbons in the same boiling range as this product has been associated in animal studies with effects to the central and peripheral nervous systems, liver, and kidneys. The significance of these animal models to predict similar human response to gasoline is uncertain.

This product contains benzene. Human health studies indicate that prolonged and/or repeated overexposure to benzene may cause damage to the blood-forming system (particularly bone marrow), and serious blood disorders such as aplastic anemia and leukemia. Benzene is listed as a human carcinogen by the NTP, IARC, OSHA and ACGIH.

**Component:**

<b>Gasoline, natural; Low boiling point naphtha</b>	8006-61-9	<p><u>Acute oral toxicity:</u> LD50 rat Dose: 18.8 mg/kg</p> <p><u>Acute inhalation toxicity:</u> LC50 rat Dose: 20.7 mg/l Exposure time: 4 h</p> <p><u>Skin irritation:</u> Classification: Irritating to skin. Result: Mild skin irritation</p> <p><u>Eye irritation:</u> Classification: Irritating to eyes. Result: Moderate eye irritation</p>
<b>Toluene</b>	108-88-3	<p><u>Acute oral toxicity:</u> LD50 rat Dose: 636 mg/kg</p> <p><u>Acute dermal toxicity:</u> LD50 rabbit Dose: 12,124 mg/kg</p> <p><u>Acute inhalation toxicity:</u> LC50 rat Dose: 49 mg/l Exposure time: 4 h</p> <p><u>Skin irritation:</u> Classification: Irritating to skin. Result: Mild skin irritation Prolonged skin contact may defat the skin and produce dermatitis.</p> <p><u>Eye irritation:</u> Classification: Irritating to eyes. Result: Mild eye irritation</p>
<b>Xylene</b>	1330-20-7	<p><u>Acute oral toxicity:</u> LD50 rat Dose: 2,840 mg/kg</p> <p><u>Acute dermal toxicity:</u> LD50 rabbit Dose: ca. 4,500 mg/kg</p> <p><u>Acute inhalation toxicity:</u> LC50 rat Dose: 6,350 mg/l Exposure time: 4 h</p> <p><u>Skin irritation:</u> Classification: Irritating to skin. Result: Mild skin irritation</p>

Repeated or prolonged exposure may cause skin irritation and dermatitis, due to degreasing properties of the product.

Eye irritation: Classification: Irritating to eyes.

Result: Mild eye irritation

**Ethanol; Ethyl alcohol**

64-17-5

Acute oral toxicity: LD50 rat

Dose: 6,200 mg/kg

Acute dermal toxicity: LD50 rabbit

Dose: 19,999 mg/kg

Acute inhalation toxicity: LC50 rat

Dose: 8,001 mg/l

Exposure time: 4 h

Skin irritation: Classification: Irritating to skin.

Result: Mild skin irritation

Prolonged skin contact may cause skin irritation and/or dermatitis.

Eye irritation: Classification: Irritating to eyes.

Result: Mild eye irritation

Mild eye irritation

**Naphthalene**

91-20-3

Acute oral toxicity: LD50 rat

Dose: 2,001 mg/kg

Acute dermal toxicity: LD50 rat

Dose: 2,501 mg/kg

Acute inhalation toxicity: LC50 rat

Dose: 101 mg/l

Exposure time: 4 h

Skin irritation: Classification: Irritating to skin.

Result: Mild skin irritation

Eye irritation: Classification: Irritating to eyes.

Result: Mild eye irritation

Carcinogenicity: N11.00422130

**Benzene**

71-43-2

Acute oral toxicity: LD50 rat

Dose: 930 mg/kg

Acute inhalation toxicity: LC50 rat

Dose: 44 mg/l

Exposure time: 4 h

Skin irritation: Classification: Irritating to skin.

Result: Mild skin irritation

Repeated or prolonged exposure may cause skin irritation and dermatitis, due to degreasing properties of the product.

Eye irritation: Classification: Irritating to eyes.

Result: Risk of serious damage to eyes.

**Pentane**

109-66-0

Acute oral toxicity: LD50 rat

Dose: 2,001 mg/kg

Acute inhalation toxicity: LC50 rat

Dose: 364 mg/l

Exposure time: 4 h

Skin irritation: Repeated or prolonged exposure may cause skin irritation and dermatitis, due to degreasing properties of the product.

Eye irritation: Classification: Irritating to eyes.

Result: Mild eye irritation

**Cyclohexane**

110-82-7

Acute dermal toxicity: LD50 rabbit

Dose: 2,001 mg/kg

Acute inhalation toxicity: LC50 rat

Dose: 14 mg/l

Exposure time: 4 h

		<p><u>Skin irritation</u>: Classification: Irritating to skin. Result: Skin irritation</p> <p><u>Eye irritation</u>: Classification: Irritating to eyes. Result: Mild eye irritation</p>
<b>Ethylbenzene</b>	100-41-4	<p><u>Acute oral toxicity</u>: LD50 rat Dose: 3,500 mg/kg</p> <p><u>Acute dermal toxicity</u>: LD50 rabbit Dose: 15,500 mg/kg</p> <p><u>Acute inhalation toxicity</u>: LC50 rat Dose: 18 mg/l Exposure time: 4 h</p> <p><u>Skin irritation</u>: Classification: Irritating to skin. Result: Mild skin irritation</p> <p><u>Eye irritation</u>: Classification: Irritating to eyes. Result: Risk of serious damage to eyes.</p>
<b>Heptane [and isomers]</b>	142-82-5	<p><u>Acute oral toxicity</u>: LD50 rat Dose: 15,001 mg/kg</p> <p><u>Acute inhalation toxicity</u>: LC50 rat Dose: 103 g/m<sup>3</sup> Exposure time: 4 h</p> <p><u>Skin irritation</u>: Classification: Irritating to skin. Result: Skin irritation Repeated or prolonged exposure may cause skin irritation and dermatitis, due to degreasing properties of the product.</p> <p><u>Eye irritation</u>: Classification: Irritating to eyes. Result: Mild eye irritation</p>
<b>N-hexane</b>	110-54-3	<p><u>Acute oral toxicity</u>: LD50 rat Dose: 25,000 mg/kg</p> <p><u>Acute dermal toxicity</u>: LD50 rabbit Dose: 2,001 mg/kg</p> <p><u>Acute inhalation toxicity</u>: LC50 rat Dose: 171.6 mg/l Exposure time: 4 h</p> <p><u>Skin irritation</u>: Classification: Irritating to skin. Result: Skin irritation</p> <p><u>Eye irritation</u>: Classification: Irritating to eyes. Result: Mild eye irritation</p> <p><u>Teratogenicity</u>: N11.00418960</p>

**Carcinogenicity**

<b>NTP</b>	:	Naphthalene (CAS-No.: 91-20-3) Benzene (CAS-No.: 71-43-2)
<b>IARC</b>	:	Gasoline, natural; Low boiling point naphtha (CAS-No.: 8006-61-9) Naphthalene (CAS-No.: 91-20-3) Benzene (CAS-No.: 71-43-2) Ethylbenzene (CAS-No.: 100-41-4)
<b>OSHA</b>	:	Benzene (CAS-No.: 71-43-2)
<b>CA Prop 65</b>	:	WARNING! This product contains a chemical known to the State of California to cause birth defects or other reproductive harm. Toluene (CAS-No.: 108-88-3)

Benzene (CAS-No.: 71-43-2)

**SECTION 12. ECOLOGICAL INFORMATION**

**Additional ecological information** : Keep out of sewers, drainage areas, and waterways. Report spills and releases, as applicable, under Federal and State regulations.

**Component:**

<b>Toluene</b>	108-88-3	<p><u>Toxicity to fish:</u> LC50 Species: Carassius auratus (goldfish) Dose: 13 mg/l Exposure time: 96 h</p> <p><u>Acute and prolonged toxicity for aquatic invertebrates:</u> EC50 Species: Daphnia magna (Water flea) Dose: 11.5 mg/l Exposure time: 48 h</p> <p><u>Toxicity to algae:</u> IC50 Species: Selenastrum capricornutum (green algae) Dose: 12 mg/l Exposure time: 72 h</p>
<b>Ethanol; Ethyl alcohol</b>	64-17-5	<p><u>Toxicity to fish:</u> LC50 Species: Leuciscus idus (Golden orfe) Dose: 8,140 mg/l Exposure time: 48 h</p> <p><u>Acute and prolonged toxicity for aquatic invertebrates:</u> EC50 Species: Daphnia magna (Water flea) Dose: 9,268 - 14,221 mg/l Exposure time: 48 h</p>
<b>Isopentane; 2-Methylbutane</b>	78-78-4	<p><u>Toxicity to fish:</u> LC50 Species: Oncorhynchus mykiss (rainbow trout) Dose: 3.1 mg/l Exposure time: 96 h</p> <p><u>Acute and prolonged toxicity for aquatic invertebrates:</u> EC50 Species: Daphnia magna (Water flea) Dose: 2.3 mg/l Exposure time: 96 h</p>
<b>Naphthalene</b>	91-20-3	<p><u>Toxicity to algae:</u> EC50 Species: Dose: 33 mg/l Exposure time: 24 h</p>
<b>Pentane</b>	109-66-0	<p><u>Acute and prolonged toxicity for aquatic invertebrates:</u> EC50 Species: Daphnia magna (Water flea) Dose: 9.74 mg/l Exposure time: 48 h</p>
<b>Cyclohexane</b>	110-82-7	<p><u>Acute and prolonged toxicity for aquatic invertebrates:</u> EC50 Species: Daphnia magna (Water flea) Dose: 3.78 mg/l Exposure time: 48 h</p>

<b>Heptane [and isomers]</b>	142-82-5	<u>Toxicity to fish:</u> LC50 Species: Carassius auratus (goldfish) Dose: 4 mg/l Exposure time: 24 h  <u>Acute and prolonged toxicity for aquatic invertebrates:</u> EC50 Species: Daphnia magna (Water flea) Dose: 1.5 mg/l Exposure time: 48 h
<b>N-hexane</b>	110-54-3	<u>Toxicity to fish:</u> LC50 Species: Pimephales promelas (fathead minnow) Dose: 2.5 mg/l Exposure time: 96 h  <u>Acute and prolonged toxicity for aquatic invertebrates:</u> EC50 Species: Daphnia magna (Water flea) Dose: 2.1 mg/l Exposure time: 48 h

### SECTION 13. DISPOSAL CONSIDERATIONS

**Disposal** : Dispose of container and unused contents in accordance with federal, state and local requirements.

### SECTION 14. TRANSPORT INFORMATION

#### CFR

Proper shipping name : Petrol  
 UN-No. : 1203  
 Class : 3  
 Packing group : II

#### TDG

Proper shipping name : Gasoline  
 UN-No. : UN1203  
 Class : 3  
 Packing group : II

#### IATA Cargo Transport

UN UN-No. : UN1203  
 Description of the goods : Gasoline  
 Class : 3  
 Packaging group : II  
 ICAO-Labels : 3  
 Packing instruction (cargo aircraft) : 364  
 Packing instruction (cargo aircraft) : Y341

#### IATA Passenger Transport

UN UN-No. : UN1203  
 Description of the goods : Gasoline  
 Class : 3



Packaging group : II  
 ICAO-Labels : 3  
 Packing instruction (passenger aircraft) : 353  
 Packing instruction (passenger aircraft) : Y341

**IMDG-Code**

UN-No. : UN 1203  
 Description of the goods : Gasoline  
 Class : 3  
 Packaging group : II  
 IMDG-Labels : 3  
 EmS Number : F-E S-E  
 Marine pollutant : No

**SECTION 15. REGULATORY INFORMATION**

OSHA Hazards : Flammable liquid  
 Highly toxic by ingestion  
 Moderate skin irritant  
 Severe eye irritant  
 Carcinogen

TSCA Status : On TSCA Inventory

DSL Status : . All components are on the Canadian DSL list.

SARA 311/312 Hazards : Fire Hazard  
 Acute Health Hazard  
 Chronic Health Hazard

**CERCLA SECTION 103 and SARA SECTION 304 (RELEASE TO THE ENVIROMENT)**

The CERCLA definition of hazardous substances contains a "petroleum exclusion" clause which exempts crude oil, fractions of crude oil, and products (both finished and intermediate) from the crude oil refining process and any indigenous components of such from the CERCLA Section 103 reporting requirements. However, other federal reporting requirements, including SARA Section 304, as well as the Clean Water Act may still apply.

California Prop. 65 : WARNING! This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Toluene 108-88-3  
 Benzene 71-43-2

**SECTION 16. OTHER INFORMATION**Further information

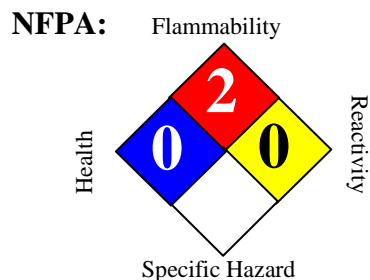
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Revision Date : 08/09/2012

6, 8, 10, 12, 14, 16, 64, 68, 91, 112, 306, 1092, 1106, 1500, 1570, 1571, 1651, 1652, 1654, 1700, 1701, 1702, 1710, 1711, 1714, 1726, 1729, 1730, 1732, 1733, 1826, 1848, 1880, 1950

# Safety Data Sheet

## Diesel Low Sulfur (LSD) and Ultra Low Sulfur Diesel (ULSD)



### SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

<b>Product name</b>	: Diesel Low Sulfur (LSD) and Ultra Low Sulfur Diesel (ULSD)		
<b>Synonyms</b>	: CARB Diesel, 888100004478		
<b>MSDS Number</b>	888100004478	<b>Version</b>	2.31
<b>Product Use Description</b>			
<b>Company</b>	For: Tesoro Refining & Marketing Co. 19100 Ridgewood Parkway, San Antonio, TX 78259		
<b>Tesoro Call Center</b>	(877) 783-7676	<b>Chemtrec (Emergency Contact)</b>	(800) 424-9300

### SECTION 2. HAZARDS IDENTIFICATION

<b>Classifications</b>	Flammable Liquid – Category 3 Skin Irritation – Category 2 Eye Irritation – Category 2B Aspiration Hazard – Category 1 Carcinogenicity – Category 2 Acute Toxicity - Inhalation – Category 4 Chronic Aquatic Toxicity – Category 2
<b>Pictograms</b>	
<b>Signal Word</b>	<b>Danger</b>
<b>Hazard Statements</b>	Flammable liquid and vapor. May be fatal if swallowed and enters airways – do not siphon diesel by mouth. Causes skin irritation. Causes eye irritation. Suspected of causing skin cancer if repeated and prolonged skin contact occurs. Suspected of causing cancer in the respiratory system if repeated and prolonged over-exposure by inhalation occurs. May cause damage to liver, kidneys and nervous system by repeated and prolonged inhalation.

Toxic if inhaled.  
May cause drowsiness or dizziness by inhalation.  
Toxic to aquatic life with long lasting effects.

**Precautionary statements****Prevention**

Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
Keep away from heat, sparks, open flames, welding and hot surfaces.  
No smoking.  
Keep container tightly closed.  
Ground and/or bond container and receiving equipment.  
Use explosion-proof electrical equipment.  
Use only non-sparking tools if tools are used in flammable atmosphere.  
Take precautionary measures against static discharge.  
Wear gloves, eye protection and face protection as needed to prevent skin and eye contact with liquid.  
Wash hands or liquid-contacted skin thoroughly after handling.  
Do not eat, drink or smoke when using this product.  
Avoid breathing vapors or mists.  
Use only outdoors or in a well-ventilated area.

**Response**

In case of fire: Use dry chemical, CO<sub>2</sub>, water spray or fire fighting foam to extinguish.  
If swallowed: Immediately call a poison center, doctor, hospital emergency room, medical clinic or 911. Do NOT induce vomiting. Rinse mouth.  
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.  
If in eye: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
If skin or eye irritation persists, get medical attention.  
If inhaled: Remove person to fresh air and keep comfortable for breathing. Immediately call or doctor or emergency medical provider. See Section 4 and Section 11 for medical treatment information.

**Storage**

Store in a well ventilated place. Keep cool. Store locked up. Keep container tightly closed. Use only approved containers.

**Disposal**

Dispose of contents/containers to approved disposal site in accordance with local, regional, national, and/or international regulations.

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Component	CAS-No.	Weight %
Fuels, diesel, No 2; Gasoil - unspecified	68476-34-6	100%
Nonane	111-84-2	0 - 5%
Naphthalene	91-20-3	0 - 1%

1,2,4-Trimethylbenzene	95-63-6	0 - 2%
Xylene	1330-20-7	0 - 2%
Sulfur	7704-34-9	15 ppm maximum

#### SECTION 4. FIRST AID MEASURES

<b>Inhalation</b>	: Move to fresh air. Give oxygen. If breathing is irregular or stopped, administer artificial respiration. Seek medical attention immediately.
<b>Skin contact</b>	: Take off all contaminated clothing immediately. Wash off immediately with soap and plenty of water. Wash contaminated clothing before re-use. If skin irritation persists, seek medical attention immediately.
<b>Eye contact</b>	: Remove contact lenses. Rinse thoroughly with plenty of water for at least 15 minutes. If symptoms persist, seek medical attention.
<b>Ingestion</b>	: Do not induce vomiting without medical advice. If a person vomits when lying on his back, place him in the recovery position. Seek medical attention immediately.
<b>Notes to physician</b>	: Symptoms: Dizziness, Discomfort, Headache, Nausea, Disorder, Vomiting, Lung edema, Liver disorders, Kidney disorders. Aspiration may cause pulmonary edema and pneumonitis.

#### SECTION 5. FIRE-FIGHTING MEASURES

<b>Suitable extinguishing media</b>	: SMALL FIRES: Any extinguisher suitable for Class B fires, dry chemical, CO <sub>2</sub> , water spray or fire fighting foam. LARGE FIRES: Water spray, fog or fire fighting foam. Water may be ineffective for fighting the fire, but may be used to cool fire-exposed containers. Keep containers and surroundings cool with water spray.
<b>Specific hazards during fire fighting</b>	: Fire Hazard Do not use a solid water stream as it may scatter and spread fire. Cool closed containers exposed to fire with water spray.
<b>Special protective equipment for fire-fighters</b>	: Wear self-contained breathing apparatus and protective suit. Use personal protective equipment.
<b>Further information</b>	: Exposure to decomposition products may be a hazard to health. Isolate area around container involved in fire. Cool tanks, shells, and containers exposed to fire and excessive heat with water. For massive fires the use of unmanned hose holders or monitor nozzles may be advantageous to further minimize personnel exposure. Major fires may require withdrawal, allowing the tank to burn. Large storage tank fires typically require specially trained personnel and equipment to extinguish the fire, often including the need for properly applied fire fighting foam.

#### SECTION 6. ACCIDENTAL RELEASE MEASURES

<b>Personal precautions</b>	: Evacuate nonessential personnel and remove or secure all ignition sources. Consider wind direction; stay upwind and uphill, if possible. Evaluate the direction of product travel, diking, sewers, etc. to contain spill areas. Spills may infiltrate subsurface soil and groundwater; professional assistance may be necessary to determine the extent of subsurface impact. Ensure adequate ventilation. Use personal protective equipment.
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- Environmental precautions** : Carefully contain and stop the source of the spill, if safe to do so. Protect bodies of water by diking, absorbents, or absorbent boom, if possible. Do not flush down sewer or drainage systems, unless system is designed and permitted to handle such material. The use of fire fighting foam may be useful in certain situations to reduce vapors. The proper use of water spray may effectively disperse product vapors or the liquid itself, preventing contact with ignition sources or areas/equipment that require protection. Discharge into the environment must be avoided. If the product contaminates rivers and lakes or drains inform respective authorities.
- Methods for cleaning up** : Take up with sand or oil absorbing materials. Carefully shovel, scoop or sweep up into a waste container for reclamation or disposal - caution, flammable vapors may accumulate in closed containers. Response and clean-up crews must be properly trained and must utilize proper protective equipment (see Section 8).

## SECTION 7. HANDLING AND STORAGE

- Precautions for safe handling** :
- Keep away from fire, sparks and heated surfaces. No smoking near areas where material is stored or handled. The product should only be stored and handled in areas with intrinsically safe electrical classification.
  - Hydrocarbon liquids including this product can act as a non-conductive flammable liquid (or static accumulators), and may form ignitable vapor-air mixtures in storage tanks or other containers. Precautions to prevent static-initated fire or explosion during transfer, storage or handling, include but are not limited to these examples:
    - (1) Ground and bond containers during product transfers. Grounding and bonding may not be adequate protection to prevent ignition or explosion of hydrocarbon liquids and vapors that are static accumulators.
    - (2) Special slow load procedures for "switch loading" must be followed to avoid the static ignition hazard that can exist when higher flash point material (such as fuel oil or diesel) is loaded into tanks previously containing low flash point products (such gasoline or naphtha).
    - (3) Storage tank level floats must be effectively bonded.
- For more information on precautions to prevent static-initated fire or explosion, see NFPA 77, Recommended Practice on Static Electricity (2007), and API Recommended Practice 2003, Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents (2008).
- Conditions for safe storage, including incompatibilities** :
- Keep away from flame, sparks, excessive temperatures and open flame. Use approved containers. Keep containers closed and clearly labeled. Empty or partially full product containers or vessels may contain explosive vapors. Do not pressurize, cut, heat, weld or expose containers to sources of ignition. Store in a well-ventilated area. The storage area should comply with NFPA 30 "Flammable and Combustible Liquid Code". The cleaning of tanks previously containing this product should follow API Recommended Practice (RP) 2013 "Cleaning Mobile Tanks In Flammable and Combustible Liquid Service" and API RP 2015 "Cleaning Petroleum Storage Tanks".
  - Emergency eye wash capability should be available in the near proximity to operations presenting a potential splash exposure.
- Keep away from food, drink and animal feed. Incompatible with oxidizing agents. Incompatible with acids.

## SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Exposure Guidelines**

List	Components	CAS-No.	Type:	Value
OSHA Z1	Xylene	1330-20-7	PEL	100 ppm 435 mg/m3
	Naphthalene	91-20-3	PEL	10 ppm 50 mg/m3
ACGIH	Diesel Fuel	68476-30-2	TWA	100 mg/m3
	Xylene	1330-20-7	TWA	100 ppm
		1330-20-7	STEL	150 ppm
	Naphthalene	91-20-3	TWA	10 ppm
		91-20-3	STEL	15 ppm
	Nonane	111-84-2	TWA	200 ppm

- Engineering measures** : Use adequate ventilation to keep gas and vapor concentrations of this product below occupational exposure and flammability limits, particularly in confined spaces. Use only intrinsically safe electrical equipment approved for use in classified areas.
- Eye protection** : Safety glasses or goggles are recommended where there is a possibility of splashing or spraying.
- Hand protection** : Gloves constructed of nitrile, neoprene, or PVC are recommended. Consult manufacturer specifications for further information.
- Skin and body protection** : If needed to prevent skin contact, chemical protective clothing such as of DuPont TyChem®, Saranex or equivalent recommended based on degree of exposure. The resistance of specific material may vary from product to product as well as with degree of exposure.
- Respiratory protection** : A NIOSH/ MSHA-approved air-purifying respirator with organic vapor cartridges or canister may be permissible under certain circumstances where airborne concentrations are or may be expected to exceed exposure limits or for odor or irritation. Protection provided by air-purifying respirators is limited. Refer to OSHA 29 CFR 1910.134, ANSI Z88.2-1992, NIOSH Respirator Decision Logic, and the manufacturer for additional guidance on respiratory protection selection. Use a NIOSH/ MSHA-approved positive-pressure supplied-air respirator if there is a potential for uncontrolled release, exposure levels are not known, in oxygen-deficient atmospheres, or any other circumstance where an air-purifying respirator may not provide adequate protection.
- Work / Hygiene practices** : Emergency eye wash capability should be available in the near proximity to operations presenting a potential splash exposure. Use good personal hygiene practices. Avoid repeated and/or prolonged skin exposure. Wash hands before eating, drinking, smoking, or using toilet facilities. Do not use as a cleaning solvent on the skin. Do not use solvents or harsh abrasive skin cleaners for washing this product from exposed skin areas. Waterless hand cleaners are effective. Promptly remove contaminated clothing and launder before reuse. Use care when laundering to prevent the formation of flammable vapors which could ignite via washer or dryer. Consider the need to discard contaminated leather shoes and gloves.

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance</b>	Clear to straw colored liquid								
<b>Odor</b>	Characteristic petroleum or kerosene-like odor								
<b>Odor threshold</b>	0.1 - 1 ppm typically reported								
<b>pH</b>	Not applicable								
<b>Melting point/freezing point</b>	Gel point can be about -15°F; freezing requires laboratory conditions								
<b>Initial boiling point &amp; range</b>	154 - 372 °C (310° - 702 °F)								
<b>Flash point</b>	38°C Minimum for #1 Diesel, 52°C Minimum for #2 Diesel								
<b>Evaporation rate</b>	Higher initially and declining as lighter components evaporate								
<b>Flammability (solid, gas)</b>	Flammable vapor released by liquid								
<b>Upper explosive limit</b>	6.5 %(V)								
<b>Lower explosive limit</b>	0.6 %(V)								
<b>Vapor pressure</b>	< 2 mm Hg at 20 °C								
<b>Vapor density (air = 1)</b>	> 4.5								
<b>Relative density (water = 1)</b>	0.86 g/mL								
<b>Solubility (in water)</b>	0.0005 g/100 mL								
<b>Partition coefficient (n-octanol/water)</b>	> 3.3 as log Pow								
<b>Auto-ignition temperature</b>	257 °C (495 °F)								
<b>Decomposition temperature</b>	Will evaporate or boil and possibly ignite before decomposition occurs.								
<b>Kinematic viscosity</b>	1 to 6 mm <sup>2</sup> /s range reported for No.1 or No.2 diesel at ambient temperatures								
<b>Conductivity (conductivity can be reduced by environmental factors such as a decrease in temperature)</b>	<table border="0"> <tr> <td>Diesel Fuel Oils at terminal load rack:</td> <td>At least 25 pS/m</td> </tr> <tr> <td>Ultra Low Sulfur Diesel (ULSD) without conductivity additive:</td> <td>0 pS/m to 5 pS/m</td> </tr> <tr> <td>ULSD at terminal load rack with conductivity additive:</td> <td>At least 50 pS/m</td> </tr> <tr> <td>JP-8 at terminal load rack:</td> <td>150 pS/m to 600 pS/m</td> </tr> </table>	Diesel Fuel Oils at terminal load rack:	At least 25 pS/m	Ultra Low Sulfur Diesel (ULSD) without conductivity additive:	0 pS/m to 5 pS/m	ULSD at terminal load rack with conductivity additive:	At least 50 pS/m	JP-8 at terminal load rack:	150 pS/m to 600 pS/m
Diesel Fuel Oils at terminal load rack:	At least 25 pS/m								
Ultra Low Sulfur Diesel (ULSD) without conductivity additive:	0 pS/m to 5 pS/m								
ULSD at terminal load rack with conductivity additive:	At least 50 pS/m								
JP-8 at terminal load rack:	150 pS/m to 600 pS/m								

## SECTION 10. STABILITY AND REACTIVITY

<b>Reactivity</b>	: Vapors may form explosive mixture with air. Hazardous polymerization does not occur.
<b>Chemical stability</b>	Stable under normal conditions.
<b>Possibility of hazardous reactions</b>	Can react with strong oxidizing agents, peroxides, acids and alkalies. Do not use with Viton or Fluorel gaskets or seals.
<b>Conditions to avoid</b>	Avoid high temperatures, open flames, sparks, welding, smoking and other ignition sources. Avoid static charge accumulation and discharge (see Section 7).
<b>Hazardous decomposition products</b>	Ignition and burning can release carbon monoxide, carbon dioxide, non-combusted hydrocarbons (smoke) and, depending on formulation, trace amounts



of sulfur dioxide. Diesel exhaust particulates may be a lung hazard (see Section 11).

## SECTION 11. TOXICOLOGICAL INFORMATION

<b>Inhalation</b>	: Vapors or mists from this material can irritate the nose, throat, and lungs, and can cause signs and symptoms of central nervous system depression, depending on the concentration and duration of exposure.
<b>Skin contact</b>	Skin irritation leading to dermatitis may occur upon prolonged or repeated contact. Liquid may be absorbed through the skin in toxic amounts if large areas of skin are repeatedly exposed. Long-term, repeated skin contact may cause skin cancer.
<b>Eye contact</b>	Eye irritation may result from contact with liquid, mists, and/or vapors.
<b>Ingestion</b>	Harmful or fatal if swallowed. Do NOT induce vomiting. This material can irritate the mouth, throat, stomach, and cause nausea, vomiting, diarrhea and restlessness. Aspiration hazard if liquid is inhaled into lungs, particularly from vomiting after ingestion. Aspiration may result in chemical pneumonia, severe lung damage, respiratory failure and even death.
<b>Target organs</b>	Central nervous system, Eyes, Skin, Kidney, Liver
<b>Further information</b>	Studies have shown that similar products produce skin cancer or skin tumors in laboratory animals following repeated applications without washing or removal. The significance of this finding to human exposure has not been determined. Other studies with active skin carcinogens have shown that washing the animal's skin with soap and water between applications reduced tumor formation. Repeated over-exposure may cause liver and kidney injury. IARC classifies whole diesel fuel exhaust particulates as carcinogenic to humans (Group 1). NIOSH regards whole diesel fuel exhaust particulates as a potential cause of occupational lung cancer based on animal studies and limited evidence in humans.

### Component:

<b>Fuels, diesel, No 2; Gasoil - unspecified</b>	68476-34-6	<u>Acute oral toxicity:</u> LD50 rat Dose: 5,001 mg/kg
		<u>Acute dermal toxicity:</u> LD50 rabbit Dose: 2,001 mg/kg
		<u>Acute inhalation toxicity:</u> LC50 rat Dose: 7.64 mg/l Exposure time: 4 h
		<u>Skin irritation:</u> Classification: Irritating to skin. Result: Severe skin irritation
		<u>Eye irritation:</u> Classification: Irritating to eyes. Result: Mild eye irritation
<b>Nonane</b>	111-84-2	<u>Acute oral toxicity:</u> LD50 mouse Dose: 218 mg/kg
		<u>Acute inhalation toxicity:</u> LC50 rat Exposure time: 4 h
<b>Naphthalene</b>	91-20-3	<u>Acute oral toxicity:</u> LD50 rat Dose: 2,001 mg/kg
		<u>Acute dermal toxicity:</u> LD50 rat Dose: 2,501 mg/kg

Acute inhalation toxicity: LC50 rat  
Dose: 101 mg/l  
Exposure time: 4 h

Skin irritation: Classification: Irritating to skin.  
Result: Mild skin irritation

Eye irritation: Classification: Irritating to eyes.  
Result: Mild eye irritation

Carcinogenicity: N11.00422130

1,2,4-Trimethylbenzene 95-63-6

Acute inhalation toxicity: LC50 rat  
Dose: 18 mg/l  
Exposure time: 4 h

Skin irritation: Classification: Irritating to skin.  
Result: Skin irritation

Eye irritation: Classification: Irritating to eyes.  
Result: Eye irritation

Xylene 1330-20-7

Acute oral toxicity: LD50 rat  
Dose: 2,840 mg/kg

Acute dermal toxicity: LD50 rabbit  
Dose: ca. 4,500 mg/kg

Acute inhalation toxicity: LC50 rat  
Dose: 6,350 mg/l  
Exposure time: 4 h

Skin irritation: Classification: Irritating to skin.  
Result: Mild skin irritation  
Repeated or prolonged exposure may cause skin irritation and dermatitis, due to degreasing properties of the product.  
Eye irritation: Classification: Irritating to eyes.  
Result: Mild eye irritation

### Carcinogenicity

NTP Naphthalene (CAS-No.: 91-20-3)

IARC Naphthalene (CAS-No.: 91-20-3)

OSHA No component of this product which is present at levels greater than or equal to 0.1 % is identified as a carcinogen or potential carcinogen by OSHA.

CA Prop 65 WARNING! This product contains a chemical known to the State of California to cause cancer.  
naphthalene (CAS-No.: 91-20-3)

## SECTION 12. ECOLOGICAL INFORMATION

**Additional ecological information** : Keep out of sewers, drainage areas, and waterways. Report spills and releases, as applicable, under Federal and State regulations.

### Component:

Diesel 68476-34-6 Toxicity to fish:  
LC50  
Species: Jordanella floridae  
Dose: 54 mg/l

Exposure time: 96 h

Toxicity to crustacea:Species: Palaemonetes pugio  
TLm (48 hour) = 3.4 mg/l**SECTION 13. DISPOSAL CONSIDERATIONS****Disposal** : Dispose of container and unused contents in accordance with federal, state and local requirements.**SECTION 14. TRANSPORT INFORMATION****CFR**Proper shipping name : DIESEL FUEL  
UN-No. : UN1202 (NA 1993)  
Class : 3  
Packing group : III**TDG**Proper shipping name : DIESEL FUEL  
UN-No. : UN1202 (NA 1993)  
Class : 3  
Packing group : III**IATA Cargo Transport**UN UN-No. : UN1202 (NA 1993)  
Description of the goods : DIESEL FUEL  
Class : 3  
Packaging group : III  
ICAO-Labels : 3  
Packing instruction (cargo aircraft) : 366  
Packing instruction (cargo aircraft) : Y344**IATA Passenger Transport**UN UN-No. : UN1202 (NA 1993)  
Description of the goods : DIESEL FUEL  
Class : 3  
Packaging group : III  
ICAO-Labels : 3  
Packing instruction (passenger aircraft) : 355  
Packing instruction (passenger aircraft) : Y344**IMDG-Code**UN-No. : UN 1202 (NA 1993)  
Description of the goods : DIESEL FUEL  
Class : 3  
Packaging group : III  
IMDG-Labels : 3

EmS Number : F-E S-E  
Marine pollutant : No

**SECTION 15. REGULATORY INFORMATION**

: **CERCLA SECTION 103 and SARA SECTION 304 (RELEASE TO THE ENVIROMENT)**  
The CERCLA definition of hazardous substances contains a "petroleum exclusion" clause which exempts crude oil. Fractions of crude oil, and products (both finished and intermediate) from the crude oil refining process and any indigenous components of such from the CERCLA Section 103 reporting requirements. However, other federal reporting requirements, including SARA Section 304, as well as the Clean Water Act may still apply.

TSCA Status : On TSCA Inventory

DSL Status : All components of this product are on the Canadian DSL list.

SARA 311/312 Hazards : Fire Hazard  
Acute Health Hazard  
Chronic Health Hazard

SARA III US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 313 Toxic Chemicals (40 CFR 372.65) - Supplier Notification Required

<u>Components</u>	<u>CAS-No.</u>
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Xylene	1330-20-7
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1,2,4-Trimethylbenzene	95-63-6
------------------------	---------

Naphthalene	91-20-3
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PENN RTK US. Pennsylvania Worker and Community Right-to-Know Law (34 Pa. Code Chap. 301-323)

<u>Components</u>	<u>CAS-No.</u>
-------------------	----------------

Nonane	111-84-2
--------	----------

Naphthalene	91-20-3
-------------	---------

1,2,4-Trimethylbenzene	95-63-6
------------------------	---------

xylene	1330-20-7
--------	-----------

Fuels, diesel, No 2; Gasoil - unspecified	68476-34-6
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MASS RTK US. Massachusetts Commonwealth's Right-to-Know Law (Appendix A to 105 Code of Massachusetts Regulations Section 670.000)

<u>Components</u>	<u>CAS-No.</u>
-------------------	----------------

Xylene	1330-20-7
--------	-----------

1,2,4-Trimethylbenzene	95-63-6
------------------------	---------

Naphthalene	91-20-3
-------------	---------

Nonane	111-84-2
--------	----------

NJ RTK US. New Jersey Worker and Community Right-to-Know Act (New Jersey Statute Annotated Section 34:5A-5)

<u>Components</u>	<u>CAS-No.</u>
-------------------	----------------

Nonane	111-84-2
--------	----------

Naphthalene	91-20-3
1,2,4-Trimethylbenzene	95-63-6
Xylene	1330-20-7
Fuels, diesel, No 2; Gasoil - unspecified	68476-34-6

California Prop. 65 : WARNING! This product contains a chemical known to the State of California to cause cancer.

Naphthalene 91-20-3

## SECTION 16. OTHER INFORMATION

### Further information

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

10/29/2012

1153, 1250, 1443, 1454, 1814, 1815, 1866, 1925

ALL-FLEET® PLUS SAE 15W-40  
DIESEL ENGINE OIL VV388

**1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING**

Ashland	Regulatory Information Number	1-800-325-3751
P.O. Box 2219	Telephone	614-790-3333
Columbus, OH 43216	Emergency telephone number	1-800-ASHLAND (1-800-274-5263)
Product name	ALL-FLEET® PLUS SAE 15W-40 DIESEL ENGINE OIL	
Product code	VV388	
Product Use Description	No data	

**2. HAZARDS IDENTIFICATION**

**Emergency Overview**

Appearance: liquid

CAUTION! MAY BE HARMFUL IF SWALLOWED. PROLONGED OR REPEATED CONTACT MAY DRY THE SKIN AND CAUSE IRRITATION AND BURNS. MAY CAUSE EYE, SKIN AND RESPIRATORY TRACT IRRITATION.

**Potential Health Effects**

**Routes of Exposure**

Inhalation, Skin contact, Eye Contact, Ingestion

**Eye Contact**

Unlikely to cause eye irritation or injury.

**Skin Contact**

May cause mild skin irritation. Prolonged or repeated contact may dry the skin. Symptoms may include redness, burning, drying and cracking of skin, and skin burns.

**Ingestion**

Swallowing small amounts of this material during normal handling is not likely to cause harmful effects. Swallowing large amounts may be harmful.

**Inhalation**

ALL-FLEET® PLUS SAE 15W-40  
DIESEL ENGINE OIL VV388

It is possible to breathe this material under certain conditions of handling and use (for example, during heating, spraying, or stirring). Breathing small amounts of this material during normal handling is not likely to cause harmful effects. Breathing large amounts may be harmful. Symptoms are not expected at air concentrations below the recommended exposure limits, if applicable (see Section 8.).

**Aggravated Medical Condition**

Preexisting disorders of the following organs (or organ systems) may be aggravated by exposure to this material: skin, lung (for example, asthma-like conditions)

**Symptoms**

Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include: stomach or intestinal upset (nausea, vomiting, diarrhea), irritation (nose, throat, airways), pain in the abdomen

**Target Organs**

No data

**Carcinogenicity**

This material is not listed as a carcinogen by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP), or the Occupational Safety and Health Administration (OSHA).

**Reproductive Hazard**

There are no data available for assessing risk to the fetus from maternal exposure to this material.

**Other Information**

No data

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

<b>Components</b>	<b>CAS-No.</b>	<b>Concentration</b>
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC	64742-54-7	>=60-<100%

**4. FIRST AID MEASURES**

**Eyes**

ALL-FLEET® PLUS SAE 15W-40  
DIESEL ENGINE OIL VV388

If symptoms develop, move individual away from exposure and into fresh air. Flush eyes gently with water while holding eyelids apart. If symptoms persist or there is any visual difficulty, seek medical attention.

### **Skin**

Remove contaminated clothing. Wash exposed area with soap and water. If symptoms persist, seek medical attention. Launder clothing before reuse.

### **Ingestion**

Seek medical attention. If individual is drowsy or unconscious, do not give anything by mouth; place individual on the left side with the head down. Contact a physician, medical facility, or poison control center for advice about whether to induce vomiting. If possible, do not leave individual unattended.

### **Inhalation**

If symptoms develop, move individual away from exposure and into fresh air. If symptoms persist, seek medical attention. If breathing is difficult, administer oxygen. Keep person warm and quiet; seek immediate medical attention.

### **Notes to Physician**

**Hazards:** No information available.

**Treatment:** No information available.

## **5. FIRE-FIGHTING MEASURES**

### **Suitable Extinguishing Media**

water spray, dry powder, foam, carbon dioxide (CO<sub>2</sub>)dry chemical, foam, carbon dioxide (CO<sub>2</sub>)

### **Hazardous Combustion Products**

carbon dioxide and carbon monoxide, oxides of sulfur, nitrogen and phosphorus, various hydrocarbons

### **Precautions for Fire-Fighting**

Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively. Wear full firefighting turn-out gear (full Bunker gear), and respiratory protection (SCBA). DO NOT direct a solid stream of water or foam into hot, burning pools of liquid since this may cause frothing and increase fire intensity. Frothing can be violent and possibly endanger any firefighter standing too close to the burning liquid.



ALL-FLEET® PLUS SAE 15W-40  
DIESEL ENGINE OIL VV388

**Flammability Class for Flammable Liquids**  
Combustible Liquid Class IIIB

## **6. ACCIDENTAL RELEASE MEASURES**

### **Personal Precautions**

For personal protection see section 8. Spills of this material are very slippery.

### **Environmental Precautions**

Prevent run-off to sewers, streams or other bodies of water. If run-off occurs, notify proper authorities as required, that a spill has occurred.

### **Methods for Cleaning Up**

Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Stop spill at source, dike area of spill to prevent spreading, pump liquid to salvage tank. Remaining liquid may be taken up on sand, clay, earth, floor absorbent, or other absorbent material and shoveled into containers.

### **Other Information**

Notify the proper authorities as required that a spill has occurred. Comply with all applicable federal, state, and local regulations.

## **7. HANDLING AND STORAGE**

### **Handling**

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed.

### **Storage**

Store in a cool, dry, ventilated area.

## **8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

### **Exposure Guidelines**

ALL-FLEET® PLUS SAE 15W-40  
DIESEL ENGINE OIL VV388

### General Advice

These recommendations provide general guidance for handling this product. Personal protective equipment should be selected for individual applications and should consider factors which affect exposure potential, such as handling practices, chemical concentrations and ventilation. It is ultimately the responsibility of the employer to follow regulatory guidelines established by local authorities.

### Exposure Controls

Not required under normal conditions of use. However, if unusual operating conditions exist, then provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below PEL/TLV(s).

### Eye Protection

Not required under normal conditions of use. However, if misting or splashing conditions exist, then safety glasses or chemical splash goggles are advised.

### Skin and Body Protection

Not normally required. However, wear resistant gloves such as nitrile rubber to prevent irritation which may result from prolonged or repeated skin contact with product. Wear normal work clothing covering arms and legs.

### Respiratory Protection

Not required under normal conditions of use. However, if oil mists are generated above recommended PEL/TLV of 5 mg/m<sup>3</sup>, then a NIOSH-approved respirator is advised in absence of proper environmental control. (See your industrial hygienist.)

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical state</b>	liquid
<b>Form</b>	No data
<b>Colour</b>	No data
<b>Odour</b>	No data
<b>Boiling point/range</b>	No data
<b>pH</b>	No data
<b>Flash point</b>	424.99 °F / 218.33 °C
<b>Evaporation rate</b>	No data
<b>Explosion limits</b>	No data
<b>Vapour pressure</b>	No data
<b>Vapour density</b>	No data
<b>Density</b>	0.880 g/cm <sup>3</sup> @ 60.1 °F / 15.6 °C

ALL-FLEET® PLUS SAE 15W-40  
DIESEL ENGINE OIL VV388

	7.4 lb/gal @ 60.1 °F / 15.6 °C
<b>Solubility</b>	No data
<b>Partition coefficient (n-octanol/water)</b>	No data
<b>Autoignition temperature</b>	No data

## 10. STABILITY AND REACTIVITY

### Stability

Stable

### Conditions to Avoid

excessive heat

### Incompatible Products

strong oxidizing agents

### Hazardous Decomposition Products

carbon dioxide and carbon monoxide, oxides of sulfur, nitrogen and phosphorus, zinc oxide, various hydrocarbons

### Hazardous Reactions

Product will not undergo hazardous polymerization.

### Thermal Decomposition

No data

## 11. TOXICOLOGICAL INFORMATION

### Acute Oral Toxicity

DISTILLATES (PETROLEUM),  
HYDROTREATED HEAVY  
PARAFFINIC

LD 50 Rat: 15 g/kg

### Acute Inhalation Toxicity

### Acute Dermal Toxicity

ALL-FLEET® PLUS SAE 15W-40  
DIESEL ENGINE OIL VV388

DISTILLATES (PETROLEUM),  
HYDROTREATED HEAVY  
PARAFFINIC

LD 50 Rabbit: 5 g/kg

## 12. ECOLOGICAL INFORMATION

### Aquatic Toxicity

#### Acute and Prolonged Toxicity to Fish

No data

#### Acute Toxicity to Aquatic Invertebrates

No data

### Environmental Fate and Pathways

No data

## 13. DISPOSAL CONSIDERATIONS

**Waste Disposal Methods** Dispose of in accordance with all applicable local, state and federal regulations. For assistance with your waste management needs - including disposal, recycling and waste stream reduction, contact Ashland Distribution's Environmental Services Group at 800-637-7922.

## 14. TRANSPORT INFORMATION

Dangerous goods descriptions (if indicated above) may not reflect package size, quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

## 15. REGULATORY INFORMATION

### California Prop. 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects or any other harm.

ALL-FLEET® PLUS SAE 15W-40  
DIESEL ENGINE OIL VV388

**SARA Hazard Classification** Acute Health Hazard

**SARA 313 Component(s)**

ZINC COMPOUNDS 1.4863%

**OSHA Hazards** Moderate skin irritant

	<b>Health</b>	<b>Flammability</b>	<b>Reactivity</b>	<b>Other</b>
<b>HMIS</b>	1*	1	0	
<b>NFPA</b>	1	1	0	

**16. OTHER INFORMATION**

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This MSDS has been prepared by Ashland's Environmental Health and Safety Department (1-800-325-3751).

ALL-CLIMATE® SAE 5W-30  
MOTOR OIL VV177

**1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING**

Ashland	Regulatory Information Number	1-800-325-3751
P.O. Box 2219	Telephone	614-790-3333
Columbus, OH 43216	Emergency telephone number	1-800-ASHLAND (1-800-274-5263)

Product name	ALL-CLIMATE® SAE 5W-30 MOTOR OIL
Product code	VV177
Product Use Description	No data

**2. HAZARDS IDENTIFICATION**

**Emergency Overview**

Appearance: liquid

CAUTION! MAY CAUSE RESPIRATORY TRACT IRRITATION. MAY BE HARMFUL IF SWALLOWED. MAY CAUSE EYE IRRITATION. PROLONGED OR REPEATED CONTACT MAY DRY THE SKIN AND CAUSE IRRITATION AND BURNS.

**Potential Health Effects**

**Routes of Exposure**

Inhalation, Skin absorption, Skin contact, Eye Contact, Ingestion

**Eye Contact**

Can cause eye irritation. Symptoms include stinging, tearing, redness, and swelling of eyes.

**Skin Contact**

Can cause skin irritation. Symptoms may include redness and burning of skin, and other skin damage.

**Ingestion**

This material can get into the lungs during swallowing or vomiting. This results in lung inflammation and other lung injury.

**Inhalation**

ALL-CLIMATE® SAE 5W-30  
MOTOR OIL VV177

Symptoms are not expected at air concentrations below the recommended exposure limits, if applicable (see Section 8.).

**Aggravated Medical Condition**

Preexisting disorders of the following organs (or organ systems) may be aggravated by exposure to this material: skin, lung (for example, asthma-like conditions)

**Symptoms**

Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include: stomach or intestinal upset (nausea, vomiting, diarrhea), irritation (nose, throat, airways), pain in the abdomen

**Target Organs**

No data

**Carcinogenicity**

This material is not listed as a carcinogen by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP), or the Occupational Safety and Health Administration (OSHA).

**Reproductive Hazard**

There are no data available for assessing risk to the fetus from maternal exposure to this material.

**Other Information**

No data

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

<b>Components</b>	<b>CAS-No.</b>	<b>Concentration</b>
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC	64742-54-7	>=70-<80%
HYDROTREATED LIGHT PARAFFINIC DISTILLATE	64742-55-8	>=15-<20%

**4. FIRST AID MEASURES**

**Eyes**

ALL-CLIMATE® SAE 5W-30  
MOTOR OIL VV177

If symptoms develop, move individual away from exposure and into fresh air. Flush eyes gently with water while holding eyelids apart. If symptoms persist or there is any visual difficulty, seek medical attention.

### **Skin**

Remove contaminated clothing. Wash exposed area with soap and water. If symptoms persist, seek medical attention. Launder clothing before reuse.

### **Ingestion**

Seek medical attention. If individual is drowsy or unconscious, do not give anything by mouth; place individual on the left side with the head down. Contact a physician, medical facility, or poison control center for advice about whether to induce vomiting. If possible, do not leave individual unattended.

### **Inhalation**

If symptoms develop, move individual away from exposure and into fresh air. If symptoms persist, seek medical attention. If breathing is difficult, administer oxygen. Keep person warm and quiet; seek immediate medical attention.

### **Notes to Physician**

**Hazards:** No information available.

**Treatment:** No information available.

## **5. FIRE-FIGHTING MEASURES**

### **Suitable Extinguishing Media**

water spray, dry powder, foam, carbon dioxide (CO<sub>2</sub>)

### **Hazardous Combustion Products**

carbon dioxide and carbon monoxide, oxides of sulfur, nitrogen and phosphorus, various hydrocarbons

### **Precautions for Fire-Fighting**

Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively. Wear full firefighting turn-out gear (full Bunker gear), and respiratory protection (SCBA). DO NOT direct a solid stream of water or foam into hot, burning pools of liquid since this may cause frothing and increase fire intensity. Frothing can be violent and possibly endanger any firefighter standing too close to the burning liquid.



ALL-CLIMATE® SAE 5W-30  
MOTOR OIL VV177

**Flammability Class for Flammable Liquids**  
Combustible Liquid Class IIIB

## 6. ACCIDENTAL RELEASE MEASURES

### Personal Precautions

For personal protection see section 8. Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.

### Environmental Precautions

Prevent spreading over a wide area (e.g. by containment or oil barriers). Do not let product enter drains. Do not flush into surface water or sanitary sewer system.

### Methods for Cleaning Up

Keep in suitable, closed containers for disposal. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

### Other Information

Notify the proper authorities as required that a spill has occurred. Comply with all applicable federal, state, and local regulations.

## 7. HANDLING AND STORAGE

### Handling

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed.

### Storage

Store in a cool, dry, ventilated area. Store in a cool, dry, ventilated area.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### Exposure Guidelines

**HYDROTREATED LIGHT  
PARAFFINIC DISTILLATE**

**64742-55-8**

ACGIH

time weighted average

5 mg/m<sup>3</sup>

Mist.

ALL-CLIMATE® SAE 5W-30  
MOTOR OIL VV177

ACGIH	Short term exposure limit	10 mg/m3	Mist.
ACGIH NIC	time weighted average	0.2 mg/m3	Inhalable fraction.

### General Advice

These recommendations provide general guidance for handling this product. Personal protective equipment should be selected for individual applications and should consider factors which affect exposure potential, such as handling practices, chemical concentrations and ventilation. It is ultimately the responsibility of the employer to follow regulatory guidelines established by local authorities.

These recommendations provide general guidance for handling this product. Personal protective equipment should be selected for individual applications and should consider factors which affect exposure potential, such as handling practices, chemical concentrations and ventilation. It is ultimately the responsibility of the employer to follow regulatory guidelines established by local authorities.

### Exposure Controls

Not required under normal conditions of use. However, if unusual operating conditions exist, then provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below PEL/TLV(s).

### Eye Protection

Wear chemical splash goggles when there is the potential for exposure of the eyes to liquid, vapor or mist.

### Skin and Body Protection

Not normally required. However, wear resistant gloves such as nitrile rubber to prevent irritation which may result from prolonged or repeated skin contact with product. Wear normal work clothing covering arms and legs.

### Respiratory Protection

Not required under normal conditions of use. However, if oil mists are generated above recommended PEL/TLV of 5 mg/m3, then a NIOSH-approved respirator is advised in absence of proper environmental control. (See your industrial hygienist.)

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	liquid
Form	No data
Colour	No data
Odour	No data

ALL-CLIMATE® SAE 5W-30  
MOTOR OIL VV177

<b>Boiling point/range</b>	No data
<b>pH</b>	No data
<b>Flash point</b>	409.98 °F / 209.99 °C
<b>Evaporation rate</b>	No data
<b>Explosion limits</b>	No data
<b>Vapour pressure</b>	No data
<b>Vapour density</b>	No data
<b>Density</b>	0.856 g/cm <sup>3</sup> @ 60.1 °F / 15.6 °C 7.29 lb/gal @ 60.1 °F / 15.6 °C
<b>Solubility</b>	No data
<b>Partition coefficient (n-octanol/water)</b>	No data
<b>Autoignition temperature</b>	No data

## 10. STABILITY AND REACTIVITY

### Stability

Stable.

### Conditions to Avoid

excessive heat

### Incompatible Products

strong oxidizing agents

### Hazardous Decomposition Products

carbon dioxide and carbon monoxide, oxides of sulfur, nitrogen and phosphorus, zinc oxide, various hydrocarbons

### Hazardous Reactions

Product will not undergo hazardous polymerization.

### Thermal Decomposition

No data

## 11. TOXICOLOGICAL INFORMATION

### Acute Oral Toxicity

ALL-CLIMATE® SAE 5W-30  
MOTOR OIL VV177

DISTILLATES (PETROLEUM),  
HYDROTREATED HEAVY  
PARAFFINIC

LD 50 Rat: 15 g/kg

### **Acute Inhalation Toxicity**

### **Acute Dermal Toxicity**

DISTILLATES (PETROLEUM),  
HYDROTREATED HEAVY  
PARAFFINIC

LD 50 Rabbit: 5 g/kg

## **12. ECOLOGICAL INFORMATION**

### **Aquatic Toxicity**

#### **Acute and Prolonged Toxicity to Fish**

No data

#### **Acute Toxicity to Aquatic Invertebrates**

No data

### **Environmental Fate and Pathways**

No data

## **13. DISPOSAL CONSIDERATIONS**

**Waste Disposal Methods** Dispose of in accordance with all applicable local, state and federal regulations. For assistance with your waste management needs - including disposal, recycling and waste stream reduction, contact Ashland Distribution's Environmental Services Group at 800-637-7922.

## **14. TRANSPORT INFORMATION**

Dangerous goods descriptions (if indicated above) may not reflect package size, quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

## **15. REGULATORY INFORMATION**

ALL-CLIMATE® SAE 5W-30  
MOTOR OIL VV177

**California Prop. 65**

WARNING! This product contains a chemical known in the State of California to cause cancer.

CADMIUM  
ARSENIC  
LEAD

WARNING! This product contains a chemical known in the State of California to cause birth defects or other reproductive harm.

CADMIUM  
LEAD

**SARA Hazard Classification** Acute Health Hazard

**SARA 313 Component(s)**

**OSHA Hazards** Moderate skin irritant  
Moderate eye irritant

	<b>Health</b>	<b>Flammability</b>	<b>Reactivity</b>	<b>Other</b>
<b>HMIS</b>	1*	1	0	
<b>NFPA</b>	1	1	0	

**16. OTHER INFORMATION**

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This MSDS has been prepared by Ashland's Environmental Health and Safety Department (1-800-325-3751).

ALL-CLIMATE® SAE 5W-20  
MOTOR OIL VV174

**1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING**

Ashland	Regulatory Information Number	1-800-325-3751
P.O. Box 2219	Telephone	614-790-3333
Columbus, OH 43216	Emergency telephone number	1-800-ASHLAND (1-800-274-5263)

Product name	ALL-CLIMATE® SAE 5W-20 MOTOR OIL
Product code	VV174
Product Use Description	No data

**2. HAZARDS IDENTIFICATION**

**Emergency Overview**

Appearance: liquid

CAUTION! MAY CAUSE RESPIRATORY TRACT IRRITATION. MAY BE HARMFUL IF SWALLOWED. PROLONGED OR REPEATED CONTACT MAY DRY THE SKIN AND CAUSE IRRITATION AND BURNS.

**Potential Health Effects**

**Routes of Exposure**

Skin contact, Inhalation, Eye Contact, Ingestion

**Eye Contact**

Unlikely to cause eye irritation or injury.

**Skin Contact**

May cause mild skin irritation. Prolonged or repeated contact may dry the skin. Symptoms may include redness, burning, drying and cracking of skin, and skin burns.

**Ingestion**

This material is not likely to be swallowed.

**Inhalation**

It is possible to breathe this material under certain conditions of handling and use (for example, during heating, spraying, or stirring). Breathing small amounts of this material during normal handling is not likely to cause harmful effects. Breathing large

ALL-CLIMATE® SAE 5W-20  
MOTOR OIL VV174

amounts may be harmful. Symptoms are not expected at air concentrations below the recommended exposure limits, if applicable (see Section 8.).

**Aggravated Medical Condition**

Preexisting disorders of the following organs (or organ systems) may be aggravated by exposure to this material:., skin, lung (for example, asthma-like conditions)

**Symptoms**

Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include:., stomach or intestinal upset (nausea, vomiting, diarrhea), irritation (nose, throat, airways)

**Target Organs**

No data

**Carcinogenicity**

This material is not listed as a carcinogen by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP), or the Occupational Safety and Health Administration (OSHA). Used motor oil has been shown to cause skin cancer in laboratory animals continually exposed by repeated applications. Avoid prolonged or repeated skin contact.

**Reproductive Hazard**

There are no data available for assessing risk to the fetus from maternal exposure to this material.

**Other Information**

No data

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

<b>Components</b>	<b>CAS-No.</b>	<b>Concentration</b>
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC	64742-54-7	>=80-<90%

**4. FIRST AID MEASURES**

**Eyes**

ALL-CLIMATE® SAE 5W-20  
MOTOR OIL VV174

If symptoms develop, immediately move individual away from exposure and into fresh air. Flush eyes gently with water for at least 15 minutes while holding eyelids apart; seek immediate medical attention.

### **Skin**

Remove contaminated clothing. Wash exposed area with soap and water. If symptoms persist, seek medical attention. Launder clothing before reuse.

### **Ingestion**

Seek medical attention. If individual is drowsy or unconscious, do not give anything by mouth; place individual on the left side with the head down. Contact a physician, medical facility, or poison control center for advice about whether to induce vomiting. If possible, do not leave individual unattended.

### **Inhalation**

If symptoms develop, move individual away from exposure and into fresh air. If symptoms persist, seek medical attention. If breathing is difficult, administer oxygen. Keep person warm and quiet; seek immediate medical attention.

### **Notes to Physician**

**Hazards:** No information available.

**Treatment:** No information available.

## **5. FIRE-FIGHTING MEASURES**

### **Suitable Extinguishing Media**

Water mist, carbon dioxide (CO<sub>2</sub>), dry chemical

### **Hazardous Combustion Products**

carbon dioxide and carbon monoxide

### **Precautions for Fire-Fighting**

Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively. Wear full firefighting turn-out gear (full Bunker gear), and respiratory protection (SCBA). DO NOT direct a solid stream of water or foam into hot, burning pools of liquid since this may cause frothing and increase fire intensity. Frothing can be violent and possibly endanger any firefighter standing too close to the burning liquid.

### **Flammability Class for Flammable Liquids**



ALL-CLIMATE® SAE 5W-20  
MOTOR OIL VV174

Combustible Liquid Class IIIB

## **6. ACCIDENTAL RELEASE MEASURES**

### **Personal Precautions**

For personal protection see section 8. Eliminate all ignition sources (flares, flames including pilot lights, electrical sparks). Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Stop spill at source. Prevent from entering drains, sewers, streams or other bodies of water. Prevent from spreading. If runoff occurs, notify authorities as required. Pump or vacuum transfer spilled product to clean containers for recovery. Absorb unrecoverable product. Transfer contaminated absorbent, soil and other materials to containers for disposal.

### **Environmental Precautions**

Prevent run-off to sewers, streams or other bodies of water. If run-off occurs, notify proper authorities as required, that a spill has occurred.

### **Methods for Cleaning Up**

Absorb liquid on vermiculite, floor absorbent, or other absorbent material and transfer to hood.

## **7. HANDLING AND STORAGE**

### **Handling**

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed.

### **Storage**

Store in a cool, dry, ventilated area. Keep containers closed when not in use. Do not store near extreme heat, open flame, or sources of ignition.

## **8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

### **Exposure Guidelines**

### **General Advice**

ALL-CLIMATE® SAE 5W-20  
MOTOR OIL VV174

These recommendations provide general guidance for handling this product. Personal protective equipment should be selected for individual applications and should consider factors which affect exposure potential, such as handling practices, chemical concentrations and ventilation. It is ultimately the responsibility of the employer to follow regulatory guidelines established by local authorities.

### **Exposure Controls**

Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below TLV(s).

### **Eye Protection**

Chemical splash goggles in compliance with OSHA regulations are advised; however, OSHA regulations also permit other type safety glasses. Consult your safety representative.

### **Skin and Body Protection**

To prevent repeated or prolonged skin contact, wear impervious clothing and boots.

### **Respiratory Protection**

If workplace exposure limit(s) of product or any component is exceeded (see exposure guidelines), a NIOSH-approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH respirators (negative pressure type) under specified conditions (see your industrial hygienist). Engineering or administrative controls should be implemented to reduce exposure.

## **9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Physical state</b>	liquid
<b>Form</b>	No data
<b>Colour</b>	No data
<b>Odour</b>	No data
<b>Boiling point/range</b>	No data
<b>pH</b>	No data
<b>Flash point</b>	354 °F / 179 °C
<b>Evaporation rate</b>	No data
<b>Explosion limits</b>	No data
<b>Vapour pressure</b>	0.0012 hPa @ 68 °F / 20 °C
<b>Vapour density</b>	No data
<b>Density</b>	0.8555 g/cm <sup>3</sup> @ 60.01 °F / 15.56 °C

ALL-CLIMATE® SAE 5W-20  
MOTOR OIL VV174

	7.15 lb/gal @ 60.00 °F / 15.56 °C
<b>Solubility</b>	No data
<b>Partition coefficient (n-octanol/water)</b>	No data
<b>Autoignition temperature</b>	No data

## 10. STABILITY AND REACTIVITY

### Stability

Stable.

### Conditions to Avoid

### Incompatible Products

strong oxidizing agents

### Hazardous Decomposition Products

carbon dioxide and carbon monoxide

### Hazardous Reactions

Product will not undergo hazardous polymerization.

### Thermal Decomposition

No data

## 11. TOXICOLOGICAL INFORMATION

### Acute Oral Toxicity

DISTILLATES (PETROLEUM),  
HYDROTREATED HEAVY  
PARAFFINIC

LD 50 Rat: 15 g/kg

### Acute Inhalation Toxicity

### Acute Dermal Toxicity

ALL-CLIMATE® SAE 5W-20  
MOTOR OIL VV174

DISTILLATES (PETROLEUM),  
HYDROTREATED HEAVY  
PARAFFINIC

LD 50 Rabbit: 5 g/kg

## 12. ECOLOGICAL INFORMATION

### Aquatic Toxicity

#### Acute and Prolonged Toxicity to Fish

No data

#### Acute Toxicity to Aquatic Invertebrates

No data

### Environmental Fate and Pathways

No data

## 13. DISPOSAL CONSIDERATIONS

**Waste Disposal Methods** Destroy by liquid incineration. Contaminated absorbent may be deposited in a landfill in accordance with local, state and federal regulations. For assistance with your waste management needs - including disposal, recycling and waste stream reduction, contact Ashland Distribution's Environmental Services Group at 800-637-7922.

## 14. TRANSPORT INFORMATION

Dangerous goods descriptions (if indicated above) may not reflect package size, quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

## 15. REGULATORY INFORMATION

### California Prop. 65

WARNING! This product contains a chemical known in the State of California to cause cancer.

CADMIUM

ALL-CLIMATE® SAE 5W-20  
MOTOR OIL VV174

ARSENIC  
LEAD  
BENZENE

WARNING! This product contains a chemical known in the State of California to cause birth defects or other reproductive harm.

CADMIUM  
LEAD  
BENZENE

**SARA Hazard Classification** Acute Health Hazard

**SARA 313 Component(s)**

**OSHA Hazards** Moderate skin irritant

	<b>Health</b>	<b>Flammability</b>	<b>Reactivity</b>	<b>Other</b>
<b>HMIS</b>	1	1	0	
<b>NFPA</b>	1	1	0	

## **16. OTHER INFORMATION**

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This MSDS has been prepared by Ashland's Environmental Health and Safety Department (1-800-325-3751).

## Facility Maps

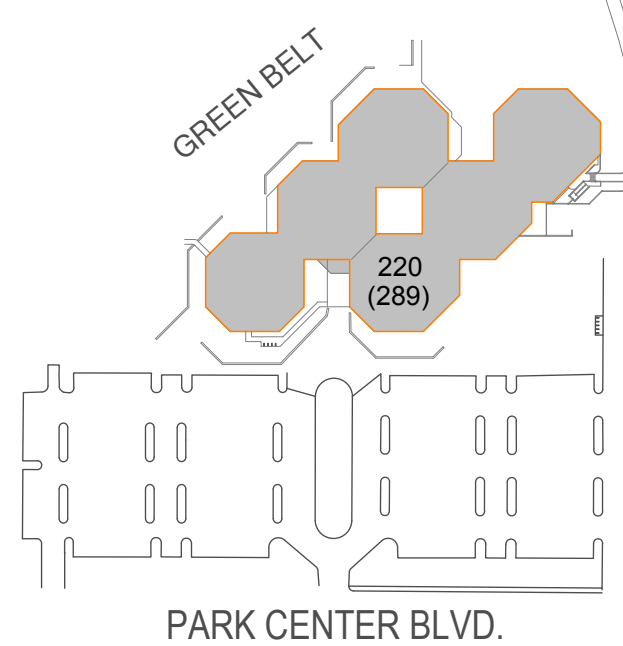
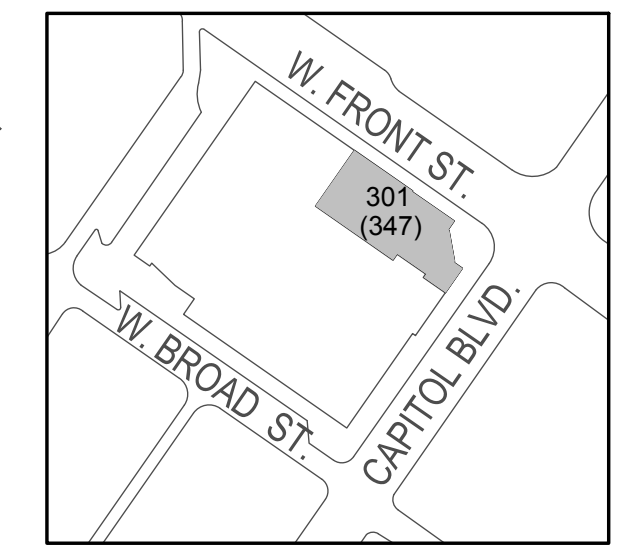
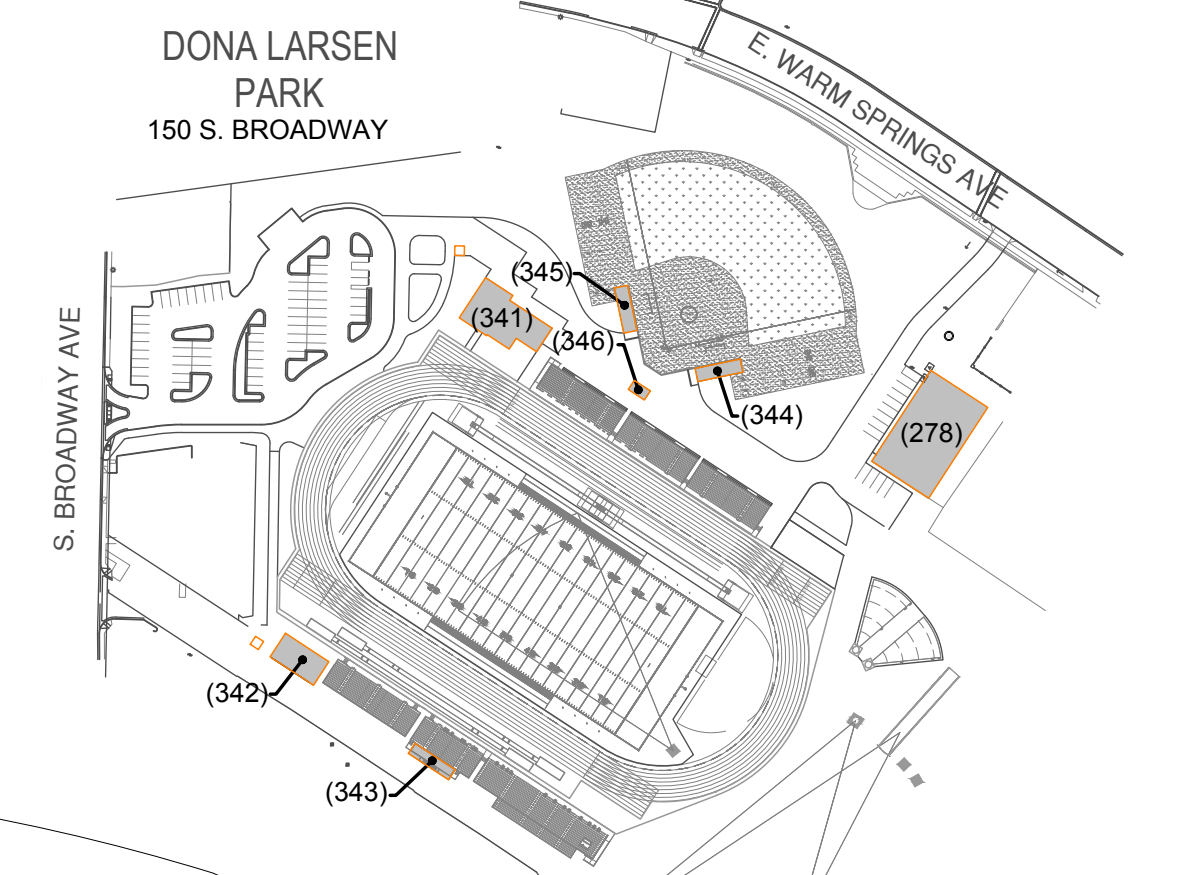
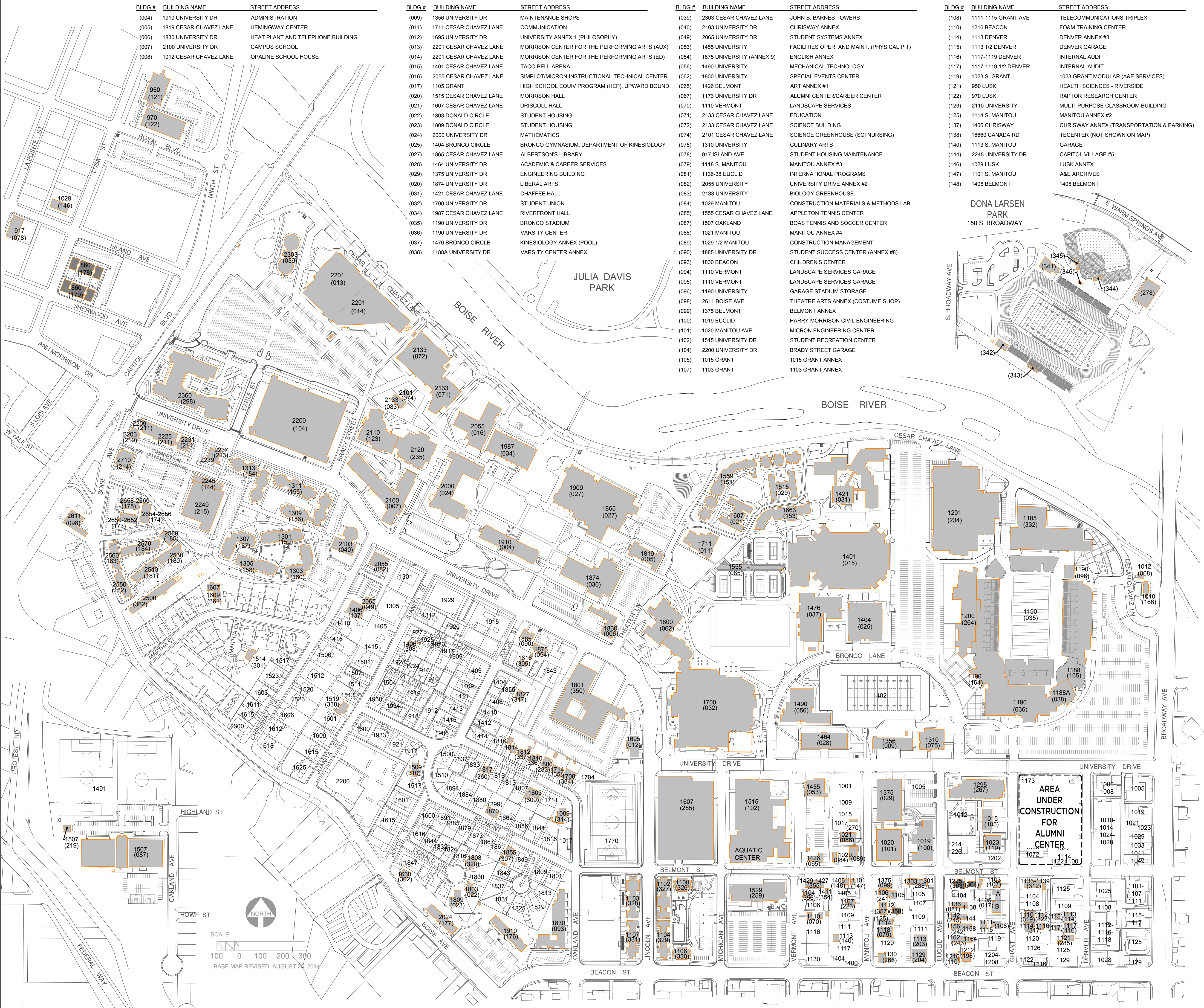
BLDG #	BUILDING NAME	STREET ADDRESS
(004)	1910 UNIVERSITY DR	ADMINISTRATION
(005)	1819 CESAR CHAVEZ LANE	HEMINGWAY CENTER
(006)	1830 UNIVERSITY DR	HEAT PLANT AND TELEPHONE BUILDING
(007)	2100 UNIVERSITY DR	CAMPUS SCHOOL
(008)	1012 CESAR CHAVEZ LANE	OPALINE SCHOOL HOUSE

BLDG #	BUILDING NAME	STREET ADDRESS
(009)	1356 UNIVERSITY DR	MAINTENANCE SHOPS
(011)	1711 CESAR CHAVEZ LANE	COMMUNICATION
(012)	1695 UNIVERSITY DR	UNIVERSITY ANNEX 1 (PHILOSOPHY)
(013)	2201 CESAR CHAVEZ LANE	MORRISON CENTER FOR THE PERFORMING ARTS (AUX)
(014)	2201 CESAR CHAVEZ LANE	MORRISON CENTER FOR THE PERFORMING ARTS (ED)
(015)	1401 CESAR CHAVEZ LANE	TACO BELL ARENA
(016)	2055 CESAR CHAVEZ LANE	SIMPLOT/MICRON INSTRUCTIONAL TECHNICAL CENTER
(017)	1105 GRANT	HIGH SCHOOL EQUIV PROGRAM (HEP), UPWARD BOUND
(020)	1515 CESAR CHAVEZ LANE	MORRISON HALL
(021)	1607 CESAR CHAVEZ LANE	DRISCOLL HALL
(022)	1803 DONALD CIRCLE	STUDENT HOUSING
(023)	1809 DONALD CIRCLE	STUDENT HOUSING
(024)	2000 UNIVERSITY DR	MATHEMATICS
(025)	1404 BRONCO CIRCLE	BRONCO GYMNASIUM, DEPARTMENT OF KINESIOLOGY
(027)	1865 CESAR CHAVEZ LANE	ALBERTSON'S LIBRARY
(028)	1464 UNIVERSITY DR	ACADEMIC & CAREER SERVICES
(029)	1375 UNIVERSITY DR	ENGINEERING BUILDING
(020)	1874 UNIVERSITY DR	LIBERAL ARTS
(031)	1421 CESAR CHAVEZ LANE	CHAFFEE HALL
(032)	1700 UNIVERSITY DR	STUDENT UNION
(034)	1987 CESAR CHAVEZ LANE	RIVERFRONT HALL
(035)	1190 UNIVERSITY DR	BRONCO STADIUM
(036)	1190 UNIVERSITY DR	VARSIITY CENTER
(037)	1476 BRONCO CIRCLE	KINESIOLOGY ANNEX (POOL)
(038)	1188A UNIVERSITY DR	VARSIITY CENTER ANNEX

BLDG #	BUILDING NAME	STREET ADDRESS
(039)	2303 CESAR CHAVEZ LANE	JOHN B. BARNES TOWERS
(040)	2103 UNIVERSITY DR	CHRISWAY ANNEX
(049)	2085 UNIVERSITY DR	STUDENT SYSTEMS ANNEX
(053)	1455 UNIVERSITY	FACILITIES OPER. AND MAINT. (PHYSICAL PIT)
(054)	1875 UNIVERSITY (ANNEX 9)	ENGLISH ANNEX
(056)	1490 UNIVERSITY	MECHANICAL TECHNOLOGY
(062)	1800 UNIVERSITY	SPECIAL EVENTS CENTER
(065)	1426 BELMONT	ART ANNEX #1
(067)	1173 UNIVERSITY DR	ALUMNI CENTER/CAREER CENTER
(070)	1110 VERMONT	LANDSCAPE SERVICES
(071)	2133 CESAR CHAVEZ LANE	EDUCATION
(072)	2133 CESAR CHAVEZ LANE	SCIENCE BUILDING
(074)	2101 CESAR CHAVEZ LANE	SCIENCE GREENHOUSE (SCI NURSING)
(075)	1310 UNIVERSITY	CULINARY ARTS
(078)	917 ISLAND AVE	STUDENT HOUSING MAINTENANCE
(079)	1118 S. MANITOU	MANITOU ANNEX #3
(081)	1136-38 EUCLID	INTERNATIONAL PROGRAMS
(082)	2055 UNIVERSITY	UNIVERSITY DRIVE ANNEX #2
(083)	2133 UNIVERSITY	BIOLOGY GREENHOUSE
(084)	1029 MANITOU	CONSTRUCTION MATERIALS & METHODS LAB
(085)	1555 CESAR CHAVEZ LANE	APPLETON TENNIS CENTER
(087)	1507 OAKLAND	BOAS TENNIS AND SOCCER CENTER
(088)	1021 MANITOU	MANITOU ANNEX #4
(089)	1029 1/2 MANITOU	CONSTRUCTION MANAGEMENT
(090)	1885 UNIVERSITY DR	STUDENT SUCCESS CENTER (ANNEX #8)
(093)	1830 BEACON	CHILDREN'S CENTER
(094)	1110 VERMONT	LANDSCAPE SERVICES GARAGE
(095)	1110 VERMONT	LANDSCAPE SERVICES GARAGE
(096)	1190 UNIVERSITY	GARAGE STADIUM STORAGE
(098)	2611 BOISE AVE	THEATRE ARTS ANNEX (COSTUME SHOP)
(099)	1375 BELMONT	BELMONT ANNEX
(100)	1019 EUCLID	HARRY MORRISON CIVIL ENGINEERING
(101)	1020 MANITOU AVE	MICRON ENGINEERING CENTER
(102)	1515 UNIVERSITY DR	STUDENT RECREATION CENTER
(104)	2200 UNIVERSITY DR	BRADY STREET GARAGE
(105)	1015 GRANT	1015 GRANT ANNEX
(107)	1103 GRANT	1103 GRANT ANNEX

BLDG #	BUILDING NAME	STREET ADDRESS
(108)	1111-1115 GRANT AVE	TELECOMMUNICATIONS TRIPLEX
(110)	1216 BEACON	FOAM TRAINING CENTER
(114)	1113 DENVER	DENVER ANNEX #3
(115)	1113 1/2 DENVER	DENVER GARAGE
(116)	1117-1119 DENVER	INTERNAL AUDIT
(117)	1117-1119 1/2 DENVER	INTERNAL AUDIT
(119)	1023 S. GRANT	1023 GRANT MODULAR (A&E SERVICES)
(121)	950 LUSK	HEALTH SCIENCES - RIVERSIDE
(122)	970 LUSK	RAPTOR RESEARCH CENTER
(123)	2110 UNIVERSITY	MULTI-PURPOSE CLASSROOM BUILDING
(125)	1114 S. MANITOU	MANITOU ANNEX #2
(137)	1406 CHRISWAY	CHRISWAY ANNEX (TRANSPORTATION & PARKING)
(138)	16660 CANADA RD	TECENTER (NOT SHOWN ON MAP)
(140)	1113 S. MANITOU	GARAGE
(144)	2245 UNIVERSITY DR	CAPITOL VILLAGE #5
(146)	1029 LUSK	LUSK ANNEX
(147)	1101 S. MANITOU	A&E ARCHIVES
(148)	1405 BELMONT	1405 BELMONT

BLDG #	BUILDING NAME	STREET ADDRESS
(152)	1559 CESAR CHAVEZ LANE	DAVID S. TAYLOR HALL
(153)	1663 CESAR CHAVEZ LANE	JOHN H. KEISER HALL
(154)	1313 S. CHRISWAY DR.	UNIVERSITY SUITES - SELWAY (A)
(155)	1311 S. CHRISWAY DR.	UNIVERSITY SUITES - PAYETTE (B)
(156)	1309 S. CHRISWAY DR.	UNIVERSITY SUITES - CLEARWATER (C)
(157)	1307 S. CHRISWAY DR.	UNIVERSITY SQUARE - D
(158)	1305 S. CHRISWAY DR.	UNIVERSITY SQUARE - E
(159)	1301 S. CHRISWAY DR.	UNIVERSITY SQUARE - F
(160)	1303 S. CHRISWAY DR.	UNIVERSITY SQUARE - G
(164)	1190 UNIVERSITY	ALLEN NOBLE HALL OF FAME
(165)	1188 UNIVERSITY	IDAHO SPORTS MED INSTITUTE
(166)	1010 CESAR CHAVEZ LANE	CHRIST CHAPEL
(173)	2650-2652 BOISE AVE	UNIVERSITY HEIGHTS A
(174)	2654-2656 BOISE AVE	UNIVERSITY HEIGHTS B
(175)	2658-2660 BOISE AVE	UNIVERSITY HEIGHTS C
(176)	1910-1980 BOISE AVE	UNIVERSITY MANOR APARTMENTS - A
(177)	2000-2024 BOISE AVE	UNIVERSITY MANOR APARTMENTS - B
(178)	860 SHERWOOD	UNIVERSITY PARK APARTMENTS - A (NORTH)
(179)	860 SHERWOOD	UNIVERSITY PARK APARTMENTS - B (SOUTH)
(180)	2530 W BOISE AVE	UNIVERSITY VILLAGE APARTMENTS - A
(181)	2540 W BOISE AVE	UNIVERSITY VILLAGE APARTMENTS - B
(182)	2550 W BOISE AVE	UNIVERSITY VILLAGE APARTMENTS - C
(183)	2560 W BOISE AVE	UNIVERSITY VILLAGE APARTMENTS - D
(184)	2570 W BOISE AVE	UNIVERSITY VILLAGE APARTMENTS - E
(185)	2580 W BOISE AVE	UNIVERSITY VILLAGE APARTMENTS - F
(198)	1212 BEACON	NETWORK SERVICES
(203)	1113 S. EUCLID	EUCLID ANNEX #2
(204)	1129 S. EUCLID	EUCLID ANNEX #3
(210)	2203 UNIVERSITY DR	CAPITOL VILLAGE #2 (KITCHEN / VENTURE COLLEGE)
(211)	2209, 2225, 2231 UNIVERSITY DR	CAPITOL VILLAGE #3 (BIRD OBSERV. / UNIV. ADV.)
(213)	2237-2239 UNIVERSITY DR	CAPITOL VILLAGE #4 (EMERITUS GUILD)
(214)	2710 BOISE AVE	CAPITOL VILLAGE #1
(215)	2249 UNIVERSITY	CAPITOL VILLAGE #6 (FINE ARTS / VIVARIUM)
(219)	1507 OAKLAND	SOCCER FIELD RESTROOM/CONCESSION BLDG
(223)	1107 MANITOU	MANITOU ANNEX
(234)	1201 CESAR CHAVEZ LANE	CAVEN-WILLIAMS SPORTS COMPLEX
(235)	2120 UNIVERSITY DRIVE	INTERACTIVE TEACHING & LEARNING CENTER
(238)	1301 - 1303 W. BELMONT ST	BELMONT ST ANNEX
(241)	1106 - 1108 MANITOU	1106 - 1108 MANITOU ANNEX
(242)	1156-1158 EUCLID	1156-1158 EUCLID ANNEX
(243)	1162-1164 EUCLID	1162-1164 EUCLID ANNEX
(245)	1142-1144 EUCLID	1142-1144 EUCLID ANNEX
(255)	1607 W. UNIVERSITY DRIVE	LINCOLN AVENUE GARAGE
(259)	1529 W. BELMONT ST	NORCO BUILDING, SCHOOL OF NURSING, UNIVERSITY HEALTH SERVICES
(264)	1200 UNIVERSITY	STUECKLE SKY CENTER
(266)	1130 S. MANITOU	MANITOU ANNEX
(267)	1295 UNIVERSITY DRIVE	ENVIRONMENTAL RESEARCH BUILDING
(270)	1017 MANITOU AVE.	WASTE MATERIALS STORAGE BUILDING
(278)	150 S. BROADWAY AVE.	DONA LARSEN PARK - TRACK STORAGE
(285)	1121 S. DENVER	DENVER ANNEX
(289)	220 PARK CENTER BLVD	RON & LINDA YANKE FAMILY RESEARCH PARK
(298)	2360 UNIVERSITY DRIVE	MICRON BUSINESS & ECONOMICS BUILDING (COBE)
(326)	1100 LINCOLN AVENUE	LINCOLN TOWNHOUSES - TAMARACK HOUSE (F)
(327)	1102 LINCOLN AVENUE	LINCOLN TOWNHOUSES - HAWTHORNE HOUSE (D)
(328)	1103 LINCOLN AVENUE	LINCOLN TOWNHOUSES - JUNIPER HOUSE (B)
(329)	1104 LINCOLN AVENUE	LINCOLN TOWNHOUSES - CEDAR HOUSE (E)
(330)	1106 LINCOLN AVENUE	LINCOLN TOWNHOUSES - ASPEN HOUSE (G)
(331)	1107 LINCOLN AVENUE	LINCOLN TOWNHOUSES - SPRUCE HOUSE (C)
(332)	1185 CESAR CHAVEZ LANE	GENE BLEYMAIER FOOTBALL CENTER
(341-346)	150 S. BROADWAY AVE	DONA LARSEN PARK OUTBUILDINGS
(347)	301 S. CAPITOL BLVD.	BOISE STATE UNIVERSITY AT CAPITOL AND FRONT
(348)	960 BROADWAY (LEASE)	UNIVERSITY PLAZA (NOT SHOWN ON MAP)
(350)	1801 UNIVERSITY DR.	1801 UNIVERSITY DRIVE ANNEX
(352)	5475 W. GAGE ST.	5475 W. GAGE STREET (NOT SHOWN ON MAP)



BLDG #	ABBREV.	OWN/ LEASE	BUILDING NAME	BUILDING ADDRESS
004	ADMN	O	Administration	1910 UNIVERSITY
005	HEMG	O	Hemingway Center	1819 CESAR CHAVEZ LANE
006	HTPT	O	Heat Plant and Telephone Building	1830 UNIVERSITY
007	CMPS	O	Campus School	2100 UNIVERSITY
008	OPAL	O	Opaline School House	1012 CESAR CHAVEZ LANE
009	MAIT	O	Maintenance Shops	1356 UNIVERSITY
011	COMB	O	Communication	1711 CESAR CHAVEZ LANE
012	UNX1	O	1695 University Annex	1695 UNIVERSITY
013	MORA	O	Morrison Ctr for Performing Arts (Aux.)	2201 CESAR CHAVEZ LANE
014	MORR	O	Morrison Ctr for the Performing Arts (Ed.)	2201 CESAR CHAVEZ LANE
015	TBLA	O	Taco Bell Arena	1401 CESAR CHAVEZ LANE
016	SMTC	O	Simplot/Micron Instructional Technical Center	2055 CESAR CHAVEZ LANE
017	HEPU	O	High School Equiv Program (HEP), Upward Bound	1105 GRANT
020	MORH	O	Morrison Hall	1515 CESAR CHAVEZ LANE
021	DRIS	O	Driscoll Hall	1607 CESAR CHAVEZ LANE
022	SH01	O	1803 Donald Circle, Student Housing	1803 DONALD CIRCLE
023	SH02	O	1809 Donald Circle, Student Housing	1809 DONALD CIRCLE
024	MB	O	Mathematics	2000 UNIVERSITY
025	BGYM	O	Bronco Gymnasium - Department of Kinesiology	1404 BRONCO LN
027	ALBR	O	Albertsons Library	1865 CESAR CHAVEZ LANE
028	ACCS	O	Academic and Career Services	1464 UNIVERSITY
029	ENGR	L	Engineering Building	1375 UNIVERSITY
030	LART	O	Liberal Arts	1874 UNIVERSITY
031	CHFH	O	Chaffee Hall	1421 CESAR CHAVEZ LANE
032	SUB	O	Student Union	1700 UNIVERSITY
033	APPT	O	Applied Technology	1402 UNIVERSITY
034	BUSN	O	Business	1987 CESAR CHAVEZ LANE
035	STDM	O	Bronco Stadium	1190 UNIVERSITY
036	VARC	O	Varsity Center (Simplot Center for Athletic Excellence)	1190 UNIVERSITY
037	KINX	O	Kinesiology Annex (Pool)	1476 BRONCO LN
038	BRFT	L	Bronco Football Complex	1188A UNIVERSITY
039	JBBT	O	John B. Barnes Towers	2303 CESAR CHAVEZ LANE



040	CHX1	O	Chrisway Annex	PLOT
049	SSAX	O	Student Systems Annex	2065 UNIVERSITY DR
052	DESL	O	Diesel Technology	1319 BRONCO LN
053	FACM	O	Fac. Operation and Maintenance (Physical Pit)	1455 UNIVERSITY
054	ENGX	O	English Annex	1875 UNIVERSITY (ANNEX 9)
056	METB	O	Mechanical Technology	1490 UNIVERSITY
061	DNX2	O	Denver Annex 2	1025 DENVER AVE
062	SPEC	O	Special Events Center	1800 UNIVERSITY
065	ARTX	O	Art Annex #1	1426 BELMONT
066	INAX	O	Institutional Assessment	1023 DENVER AVE
067	ALUM	L	Alumni Center/Career Center	1173 UNIVERSITY DR
068		O	1119 Grant Annex	1119 GRANT
070	LAND	O	Landscape Services	1110 VERMONT
071	EDUC	O	Education	2133 CESAR CHAVEZ LANE
072	SCNC	O	Science Building	2133 CESAR CHAVEZ LANE
073	BUST	L	Bunting Storage	4503 FEDERAL WAY
074	SCGR	O	Science Greenhouse (Sci Nursing)	2101 CESAR CHAVEZ LANE
075	CULI	O	Culinary Arts	1310 UNIVERSITY
078	SHMA	O	Student Housing Maintenance	917 ISLAND ST
079	MNX3	O	Manitou Annex #3	1118 S. Manitou
081	EUC4	O	Euclid Annex #4	1136-38 EUCLID
082	GATE	O	Gateway Center	2055 UNIVERSITY
083	BIGR	O	Biology Greenhouse	2133 UNIVERSITY
084	CSTL	O	Const. Materials & Methods Lab	1029 MANITOU
085	APTC	O	Appleton Tennis Center	1555 CESAR CHAVEZ LANE
087	BOTC	O	Boas Tennis and Soccer Ctr.	1507 OAKLAND
088	MNX4	L	1021 Manitou Annex	1021 MANITOU
089	CSTM	O	Construction Management	1029 MANITOU
090	STSC	O	Student Success Ctr. (Annex #8)	1885 UNIVERSITY DR
093	CHLC	O	Childrens Ctr.	1830 BEACON
094	LSG1	O	Landscape Serv. Garage	1110 VERMONT
095	LSG2	O	Landscape Serv. Garage	1110 VERMONT
096	GAR3	O	Garage Stadium Storage	1190 UNIVERSITY
098	TARX	O	Theatre Arts Annex (Costume Shop)	2611 BOISE AVE

099	BLX1	O	1375 Belmont Annex	1375 BELMONT
100	HML	O	Harry Morrison Civil Engineering	1019 EUCLID
101	MEC	O	Micron Engineering Center	1020 MANITOU AVE
102	REC	O	Student Recreation Center	1515 UNIVERSITY
104	BSGR	O	Brady Street Garage	2200 UNIVERSITY
105	EXSD	O	Extended Studies Ctr.	1015 GRANT
107	BSHA	O	Basque Studies & History Annex	1103 GRANT
108	TELE	O	Telecommunications Triplex	1111-1113-1115 GRANT - MC
110	FACT	O	FO&M Training Center	1216 BEACON
113	MNX1	O	1117 Manitou Annex	1117 MANITOU
114	DNX3	O	1113 Denver Annex	1113 DENVER
115	GAR5	O	1113 Denver Garage	1113 1/2 DENVER (GARAGE)
116	IARM	O	Internal Audit/Risk Management	1117-1119 DENVER (DUPLEX)
117	GAR4	O	Internal Audit/Risk Management	1117-1119 1/2 DENVER (GARAGE)
119	AESA	O	Grant Modular, 1023 S. Grant	1023 S. GRANT
121	HSRV	O	Health Sciences - Riverside	950 LUSK
122	RAPT	O	Raptor Research Center	970 LUSK
123	MPCB	O	Multi-Purpose Classroom Building	2110 UNIVERSITY
125	MNX2	O	Manitou Annex #2	1114 S. Manitou
137	CHX2	O	1406 Chrisway Annex	1406 CHRISWAY
138	TECC	O	TECenter (Technology and Entrepreneurial Center)	16660 CanAda Road - WC
140		O	Garage	1113 S. MANITOU
143	TRAK		Idaho Center Sports Center	16200 Can-Ada Rd, Nampa, ID
144	CPV5	O	Capitol Village #5	2243 UNIVERSITY DR
146	LUX1	L	1029 Lusk Annex	1029 LUSK
147	AEAR	O	A&E Archives	1101 S. MANITOU
148		O	1405 Belmont	1405 BELMONT
152	DSTH	O	David S. Taylor Hall	1559 CESAR CHAVEZ LANE
153	JHKH	O	John H. Keiser Hall	1663 CESAR CHAVEZ LANE
154	SELW	O	University Suites - "Selway Suites"	1313 S. Chrisway
155	PAYT	O	University Suites - "Payette Suites"	1311 S. Chrisway
156	CWTR	O	University Suites - "Clearwater Suites"	1309 S. Chrisway
157	USQ7	O	University Square - D	1307 S. Chrisway Drive
158	USQ5	O	University Square - E	1305 S. Chrisway Drive

159	USQ1	O	University Square - F	1301 S. Chrisway Drive
160	USQ3	O	University Square - G	1303 S. Chrisway Drive
164	ANHF	O	Allen Noble Hall of Fame	1190 University Drive
165	ISMI		Idaho Sports Med Institute	1188 University Drive
166	CHCP		Christ Chapel	1010 Cesar Chavez Ln
173	UHAA	O	University Heights Apartments - A	2650-2652 BOISE AVE
174	UHAB	O	University Heights Apartments - B	2654-2656 BOISE AVE
175	UHAC	O	University Heights Apartments - C	2658-2660 BOISE AVE
176	UMAA	O	University Manor Apartments - A	1910-1980 BOISE AVE
177	UMAB	O	University Manor Apartments - B	2000-2024 BOISE AVE
178	UPAA	O	University Park Apartments - A (N)	860 SHERWOOD
179	UPAB	O	University Park Apartments - B (S)	860 SHERWOOD
180	UVAA	O	University Village Apartments - A	2530 W BOISE AVE
181	UVAB	O	University Village Apartments - B	2540 W BOISE AVE
182	UVAC	O	University Village Apartments - C	2550 W BOISE AVE
183	UVAD	O	University Village Apartments - D	2560 W BOISE AVE
184	UVAE	O	University Village Apartments - E	2570 W BOISE AVE
185	UVAF	O	University Village Apartments - F	2580 W BOISE AVE
198	NETS	O	Network Services	1212 S. BEACON AVE
203	EUX2	O	Euclid Annex #2	1113 S. Euclid
204	EUX3	O	Euclid Annex #3	1129 S. Euclid
210	CPV2	O	Capitol Village #2	2203 University
211	CPV3	O	Capitol Village #3	2209 University
213	CPV4	O	Capitol Village #4	2237-2239 University
214	CPV1	O	Capitol Village #1	2710 Boise Ave
215	CPV6	O	Capitol Village #6	2249 University
216		L	CGISS Lease	515 Highland St
219		O	Soccer Field Restroom/Concession Bldg	1507 Oakland
223			1107 Manitou Annex	1107 Manitou Ave
234	CWSC		Caven-Williams Sports Complex	1201 CESAR CHAVEZ LANE
235	ILC	O	Interactive Teaching & Learning Center	2120 University Drive
238		O	1301 - 1303 W. Belmont St Annex	1301 - 1303 W. Belmont St
241			1106 - 1108 Manitou Annex	1106 - 1108 Manitou
242			1156-1158 Euclid Annex	1156-1158 Euclid

243			1162-1164 Euclid Annex	1162-1164 Euclid
245	EUX1		1142-1144 Euclid Annex	1142-1144 Euclid
247		L	1350 W. Victory Road	1350 W. Victory Road
248	BSP1	L	Bronco Shop - at Boise	778 W. Broad, Ste. 7130
255	LAGR	O	Lincoln Avenue Garage	1607 University Drive
258		L	Access Mini Storage - BSU Radio	3462 E. Amity Rd. Boise, ID 83716
259	NNHS	O	Norco Building: Nursing Department, University Health Services	1529 BLEMONT STREET
261			821 W. State	821 W. State
264	SSC	O	Stueckle Sky Center	1200 University
266			1130 S. Manitou	1130 S. Manitou
267	ERB		Environmental Reseach Building	1295 UNIVERSITY DRIVE
270	WMSB	O	Waste Materials Storage Bldg.	1311 S. Bronco LN
276			1107 Euclid	1107 Euclid
278	DLPA	O	Dona Larsen Park - Track & Field Equipment Building	150 South Broadway
281		O	1020 Grant	1020 Grant
283		O	1800 Potter	1800 Potter
285	DNX1	O	1121 S. Denver	1121 Denver
287		O	1100, 1114, 1122 Belmont	1100 - 1122 Belmont
289	YFRP	O	Ron and Linda Yanke Family Research Park	220 Park Center Blvd
290		O	1030-1032, 1050-1052, 1070-1072 S. Grant	1022 Grant Ave
291		O	Metal Building 8'x8'x10'	Ellen Dee Mountain near Contact, NV
292		O	Softball Storage Building 10x12	Mtn Cove Softball Field
298	MBEB		Micron Business and Economics Building	2360 University Dr
299		O	1870 Belmont	1870 Belmont
301		O	1514 S Martha Cir	1514 S Martha Cir
302		O	1630 S. Joyce	1630 S. Joyce
305		O	1816 Yale	1816 Yale
306		O	1827 Yale	1827 Yale
307		O	1855 Belmont	1855 Belmont
308		O	1406 S. Juanita	1406 S. Juanita
309		O	1803 W. Potter	1803 W. Potter
310		O	1509 S. Joyce	1509 S. Joyce
312		O	1133-1139 W. Belmont	1133-1139 W. Belmont
313		O	1111 S. Euclid	1111 S. Euclid

314		O	1009 S. Oakland	1009 S. Oakland
315		L	Bookstore Distribution Center	515 W. McGregor
316		L	Boise State Center on Main (Alaska Building)	1020 Main St.
317		O	1114-1116 S. Grant	1114-1116 S. Grant
318			Ellen Dee Mountain	Ellen Dee Mountain
319		O	1110 S. Grant	1110 S. Grant
320		O	1808 Donald Circle	1808 Donald Circle
322		O	1112 Grant	1112 Grant
323		L	Nampa Bronco Shop	1219 N. Galeria Dr., Nampa, ID
324		L	BSU Meridian Center (Extended Studies)	2950 Magic View Drive, Suite 188
325		L	Twin Falls Bronco Shop	
326	TMRK	O	The Lincoln Townhouses - "Tamarack House"	1100 Lincoln Avenue
327	HWTN	O	The Lincoln Townhouses - "Hawthorne House"	1102 Lincoln Avenue
328	JNPR	O	The Lincoln Townhouses - "Juniper House"	1103 Lincoln Avenue
329	CEDR	O	The Lincoln Townhouses - "Cedar House"	1104 Lincoln Avenue
330	ASPN	O	The Lincoln Townhouses - "Aspen House"	1106 Lincoln Avenue
331	SPRC	O	The Lincoln Townhouses - "Spruce House"	1107 Lincoln Avenue
332	GBFC	O	Gene Bleymaier Football Center	1185 Cesar Chavez Lane
334		O	1708 Potter	1708 Potter
335		O	1714 Potter	1714 Potter
336		O	1810 Potter	1810 Potter
337		O	1812 Potter	1812 Potter
338		O	1519 Juanita	1519 Juanita
339		L	Center for Advanced Energy Studies (CAES)ISU, Battelle	955 University Blvd, Idaho Fall 83814
340		L	Bronco Shop Meridan	3143 East Magic View Drive, Eagle View Plaza, Suite 120, Meridian,Idaho 83642
341	DLPB	O	Dona Larsen Park - North Restroom	150 South Broadway
342	DLPC	O	Dona Larsen Park - South Restroom	150 South Broadway
343	DLPD	O	Dona Larsen Park - Football Pressbox	150 South Broadway
344	DLPE	O	Dona Larsen Park - East Softball Dugout	150 South Broadway
345	DLPF	O	Dona Larsen Park - West Softball Dugout	150 South Broadway
346	DLPG	O	Dona Larsen Park - Softball Pressbox	150 South Broadway
347	BODO	O	301 S. Capitol Blvd.	301 S. Capitol Blvd.
349			Fine Arts Building	

350		O	University Christian Church	
351		O	1814 W. Potter Dr.	1814 W. Potter Dr.
906		O	KBSJ Radio 100' Transmitter Tower Antenna & support equipment	

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EPA – 40 CFR 112

## **PART 112—OIL POLLUTION PREVENTION**

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

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

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

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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.



## § 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.

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

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

(2) Interstate waters;

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

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

*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.

*Wetlands* means those areas that are inundated or saturated by surface or groundwater at a frequency or duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include playa lakes, swamps, marshes, bogs, and similar areas such as sloughs, prairie potholes, wet meadows, prairie river overflows, mudflats, and natural ponds.

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

[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]

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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).

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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.

[73 FR 74302, Dec. 5, 2008, as amended at 74 FR 58810, Nov. 13, 2009]

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## § 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.



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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.

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### **§ 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]



## 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.

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## **Appendix B to Part 112—Memorandum of Understanding Among the Secretary of the Interior, Secretary of Transportation, and Administrator of the Environmental Protection Agency**

### PURPOSE

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

### BACKGROUND

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

### RESPONSIBILITIES

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

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

## EFFECTIVE DATE

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

## LIMITATIONS

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

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

## MODIFICATION AND TERMINATION

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

Dated: November 8, 1993.

Bruce Babbitt,

*Secretary of the Interior.*

Dated: December 14, 1993.

Federico Peña,

*Secretary of Transportation.*

Dated: February 3, 1994.

Carol M. Browner,

*Administrator, Environmental Protection Agency.*

[59 FR 34102, July 1, 1994]

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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.

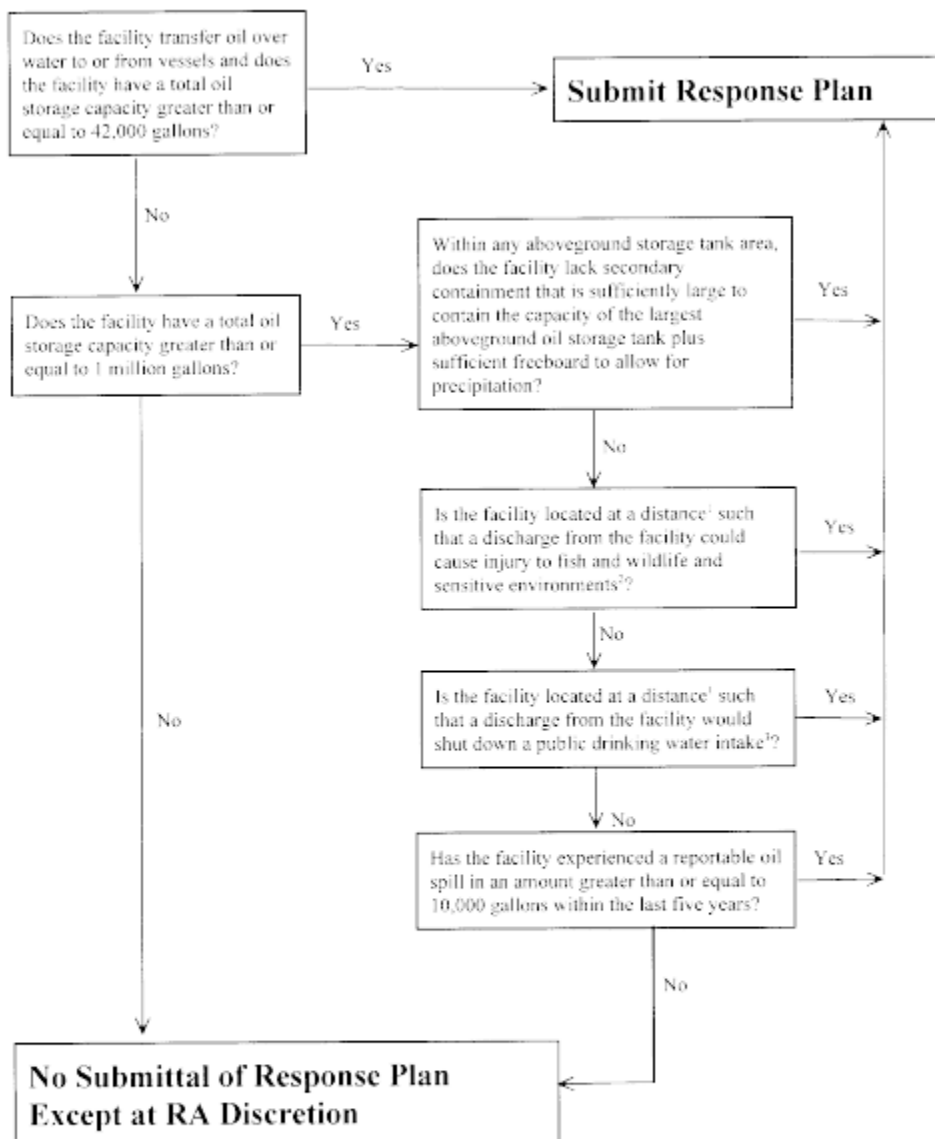
### 4.0 REFERENCES

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

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

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

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

## 2.0 Oil Transport on Moving Navigable Waters



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

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

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

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

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

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

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

$v = 1.48 / n \times r^{2/3} \times s^{1/2}$ ; 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

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**

<b>Operating areas</b>	<b>Substantial harm planning time (hrs)</b>
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:

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

$$v = [1.5 / 0.035] \times (13.33)^{2/3} \times (1.3 \times 10^{-4})^{1/2}$$

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

(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.

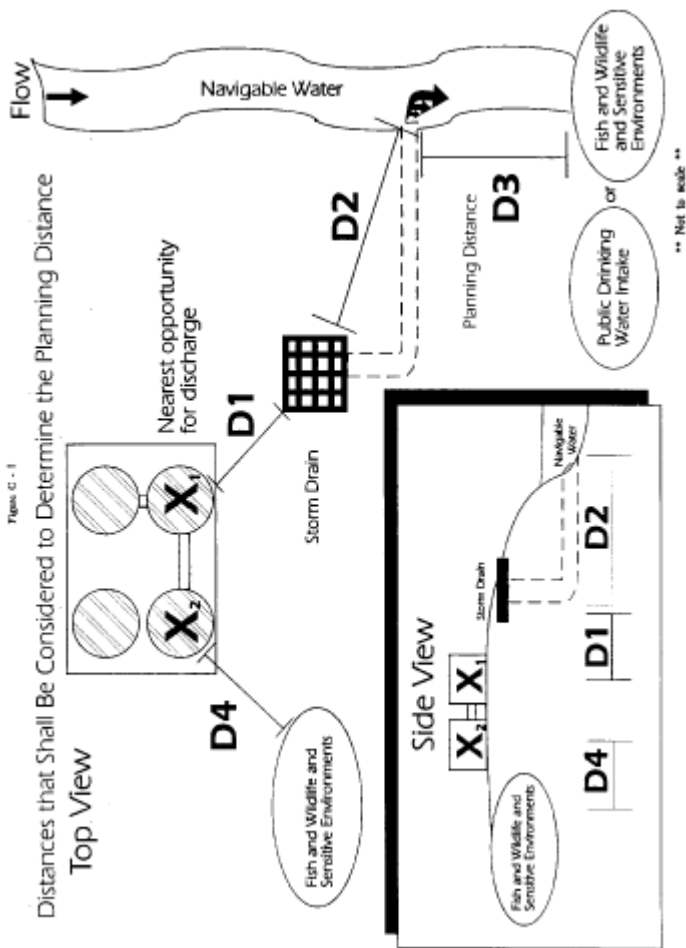
D4=Distance from the nearest opportunity for discharge,  $X_2$ , to fish and wildlife and sensitive environments not bordering navigable water.

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-1 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 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  $\geq 1$ ), 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  $\times$  rate of well.

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

Production volume=45 days  $\times$  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)  $\times$  (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)]  $\times$  (rate of well)  $\times$  (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)]  $\times$  (rate of well)  $\times$  (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)  $\times$  (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. 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

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

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

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

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

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

5.7 In addition to oil spill recovery devices, a facility owner or operator shall identify sufficient quantities of boom that are available, by contract or other approved means as described in § 112.2, to arrive on-scene within the specified response times for oil containment and collection. The specific quantity of boom required for collection and containment will depend on the facility-specific information and response strategies employed. A facility owner or operator shall, as appropriate, also identify sufficient quantities of oil containment boom to protect fish and wildlife and sensitive environments. For further description of fish and wildlife and sensitive environments, see Appendices I, II, and III to DOC/NOAA’s “Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments” (see

appendix E to this part, section 13, for availability), and the applicable ACP. Refer to this guidance document for the number of days and geographic areas ( *i.e.*, operating environments) specified in Table 2 and Table 6 of this appendix.

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

#### *6.0 Determining Effective Daily Recovery Capacity for Oil Recovery Devices*

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

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

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

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

where:

R—Effective daily recovery capacity;

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

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

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

6.2.3 For belt or 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).

$267 \text{ gpm} = 381 \text{ barrels per hour (bph)}$

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

(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.

$220 \text{ gpm} = 314 \text{ bph}$

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

(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 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:  $21,000,000 \text{ gallons} \times 0.2 \times 2.0 = 8,400,000 \text{ gallons}$  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)

<b>Inland Operating Area</b>	<b>Tier 1</b>	<b>Tier 2</b>	<b>Tier 3</b>
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:

$21,000,000 \text{ gallons} \times 0.65 \times 2.0 = 27,300,000 \text{ gallons}$  or 650,000 barrels

10.5.5 The facility owner or operator shall, as appropriate, also identify or contract for quantities of boom identified in the response plan for the protection of fish and wildlife and sensitive environments within the area potentially impacted by a worst case discharge from the facility. For further description of fish and wildlife and sensitive environments, see Appendices I, II, and III to DOC/NOAA's "Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments," (see Appendix E to this part, section 13, for availability) and the applicable ACP. Attachment C-III to Appendix C provides a method for calculating a planning distance to fish and wildlife and sensitive environments and public drinking water intakes that may be adversely affected in the event of a worst case discharge.

10.6 The procedures discussed in sections 10.6.1 through 10.6.3 of this appendix must be used to determine appropriate response resources for facilities with Group C oils.

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

- (1) Sonar, sampling equipment, or other methods for locating the oil on the bottom or suspended in the water column;
- (2) Containment boom, sorbent boom, silt curtains, or other methods for containing the oil that may remain floating on the surface or to reduce spreading on the bottom;
- (3) Dredges, pumps, or other equipment necessary to recover oil from the bottom and shoreline;
- (4) Equipment necessary to assess the impact of such discharges; and
- (5) Other appropriate equipment necessary to respond to a discharge involving the type of oil handled, stored, or transported.

10.6.2 Response resources identified in a response plan for a facility that handles, stores, or transports Group C oils under section 10.6.1 of this appendix shall be capable of being deployed on scene within 24 hours of discovery of a discharge.

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

10.7 The procedures described in sections 10.7.1 through 10.7.5 of this appendix must be used to determine appropriate response plan development and evaluation criteria for facilities that handle, store, or transport animal fats and vegetable oils. Refer to section 11 of this appendix for information on the limitations on the use of chemical agents for inland and nearshore areas.

10.7.1 An owner or operator of a facility that handles, stores, or transports animal fats and vegetable oils must provide information in the response plan that identifies:

- (1) Procedures and strategies for responding to a worst case discharge of animal fats and vegetable oils to the maximum extent practicable; and
- (2) Sources of the equipment and supplies necessary to locate, recover, and mitigate such a discharge.

10.7.2 An owner or operator of a facility that handles, stores, or transports animal fats and vegetable oils must ensure that any equipment identified in a response plan is capable of operating in the geographic area(s) ( *i.e.*, operating environments) in which the facility operates using the criteria in Table 1 of this appendix. When evaluating the operability of equipment, the facility owner or operator must consider limitations that are identified in the appropriate ACPs, including:

- (1) Ice conditions;
- (2) Debris;
- (3) Temperature ranges; and
- (4) Weather-related visibility.

10.7.3. The owner or operator of a facility that handles, stores, or transports animal fats and vegetable oils must identify the response resources that are available by contract or other approved means, as described in § 112.2. The equipment described in the response plan shall, as appropriate, include:

(1) Containment boom, sorbent boom, or other methods for containing oil floating on the surface or to protect shorelines from impact;

(2) Oil recovery devices appropriate for the type of animal fat or vegetable oil carried; and

(3) Other appropriate equipment necessary to respond to a discharge involving the type of oil carried.

10.7.4 Response resources identified in a response plan according to section 10.7.3 of this appendix must be capable of commencing an effective on-scene response within the applicable tier response times in section 5.3 of this appendix.

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

#### *11.0 Determining the Availability of Alternative Response Methods*

11.1 For chemical agents to be identified in a response plan, they must be on the NCP Product Schedule that is maintained by EPA. (Some States have a list of approved dispersants for use within State waters. Not all of these State-approved dispersants are listed on the NCP Product Schedule.)

11.2 Identification of chemical agents in the plan does not imply that their use will be authorized. Actual authorization will be governed by the provisions of the NCP and the applicable ACP.

#### *12.0 Additional Equipment Necessary to Sustain Response Operations*

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

12.2 A facility owner or operator shall evaluate the availability of adequate temporary storage capacity to sustain the effective daily recovery capacities from equipment identified in the plan. Because of the inefficiencies of oil spill recovery devices, response plans must identify daily storage capacity equivalent to twice the effective daily recovery capacity required on-scene. This temporary storage capacity may be reduced if a facility owner or operator can demonstrate by waste stream analysis that the efficiencies of the oil recovery devices, ability to decant waste, or the availability of alternative temporary storage or disposal locations will reduce the overall volume of oily material storage.

12.3 A facility owner or operator shall ensure that response planning includes the capability to arrange for disposal of recovered oil products. Specific disposal procedures will be addressed in the applicable ACP.

#### *13.0 References and Availability*

13.1 All materials listed in this section are part of EPA's rulemaking docket and are located in the Superfund Docket, 1235 Jefferson Davis Highway, Crystal Gateway 1, Arlington, Virginia 22202, Suite 105 (Docket Numbers SPCC-2P, SPCC-3P, and SPCC-9P). The docket is available for inspection between 9 a.m. and 4 p.m., Monday through Friday, excluding Federal holidays.

Appointments to review the docket can be made by calling 703-603-9232. Docket hours are subject to change. As provided in 40 CFR part 2, a reasonable fee may be charged for copying services.

13.2 The docket will mail copies of materials to requestors who are outside the Washington, DC metropolitan area. Materials may be available from other sources, as noted in this section. As provided in 40 CFR part 2, a reasonable fee may be charged for copying services. The RCRA/Superfund Hotline at 800-424-9346 may also provide additional information on where to obtain documents. To contact the RCRA/Superfund Hotline in the Washington, DC metropolitan area, dial 703-412-9810. The Telecommunications Device for the Deaf (TDD) Hotline number is 800-553-7672, or, in the Washington, DC metropolitan area, 703-412-3323.

### 13.3 Documents

(1) National Preparedness for Response Exercise Program (PREP). The PREP draft guidelines are available from United States Coast Guard Headquarters (G-MEP-4), 2100 Second Street, SW., Washington, DC 20593. (See 58 FR 53990-91, October 19, 1993, Notice of Availability of PREP Guidelines).

(2) "Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments (published in the FEDERAL REGISTER by DOC/NOAA at 59 FR 14713-22, March 29, 1994.). The guidance is available in the Superfund Docket (see sections 13.1 and 13.2 of this appendix).

(3) ASTM Standards. ASTM F 715, ASTM F 989, ASTM F 631-99, ASTM F 808-83 (1999). The ASTM standards are available from the American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959.

(4) Response Plans for Marine Transportation-Related Facilities, Interim Final Rule. Published by USCG, DOT at 58 FR 7330-76, February 5, 1993.

**TABLE 1 TO APPENDIX E—RESPONSE RESOURCE OPERATING CRITERIA**

<b>Oil Recovery Devices</b>				
<b>Operating environment</b>	<b>Significant wave height <sup>1</sup></b>			<b>Sea state</b>
Rivers and Canals	≤ 1 foot			1
Inland	≤ 3 feet			2
Great Lakes	≤ 4 feet			2-3
Ocean	≤ 6 feet			3-4
<b>Boom</b>				
<b>Boom property</b>	<b>Use</b>			
	<b>Rivers and canals</b>	<b>Inland</b>	<b>Great Lakes</b>	<b>Ocean</b>
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		
Sustainability of on-water oil recovery	3 days			4 days		
Oil group <sup>1</sup>	Percent natural dissipation	Percent recovered floating oil	Percent oil onshore	Percent natural dissipation	Percent recovered floating oil	Percent oil onshore
1—Non-persistent oils	80	10	10	80	20	10
2—Light crudes	40	15	45	50	50	30
3—Medium crudes and fuels	20	15	65	30	50	50
4—Heavy crudes and fuels	5	20	75	10	50	70

<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**

	<b>Tier 1</b>	<b>Tier 2</b>	<b>Tier 3</b>
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**

<b>Spill location</b>	<b>Rivers and canals</b>			<b>Nearshore/Inland/Great Lakes</b>		
	<b>3 days</b>			<b>4 days</b>		
<b>Sustainability of on-water oil recovery</b>	<b>Percent natural loss</b>	<b>Percent recovered floating oil</b>	<b>Percent recovered oil from onshore</b>	<b>Percent natural loss</b>	<b>Percent recovered floating oil</b>	<b>Percent recovered oil from onshore</b>
<b>Oil group <sup>1</sup></b>						
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**

<i>Oil Group</i> <sup>1</sup> :	
Group A	1.0

<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.

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 style="width: 100%; height: 20px;" type="text"/>	<input style="width: 100%; height: 20px;" type="text"/>	<input style="width: 100%; height: 20px;" 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 style="width: 100%; height: 20px;" type="text"/>	<input style="width: 100%; height: 20px;" type="text"/>	<input style="width: 100%; height: 20px;" 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 style="width: 100%; height: 20px;" type="text"/>	<input style="width: 100%; height: 20px;" type="text"/>	<input style="width: 100%; height: 20px;" 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.



Attachment E-1 Example --  
Worksheet to Plan Volume of Response Resources  
for Worst Case Discharge - Petroleum Oils

Part I Background Information

Step (A) Calculate Worst Case Discharge in barrels (Appendix D) 170,000  
(A)

Step (B) Oil Group<sup>1</sup> (Table 3 and section 1.2 of this appendix) 4

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
10	50	70
(D1)	(D2)	(D3)

Step (E1) On-Water Oil Recovery  $\frac{\text{Step (D2)} \times \text{Step (A)}}{100}$  85,000  
(E1)

Step (E2) Shoreline Recovery  $\frac{\text{Step (D3)} \times \text{Step (A)}}{100}$  119,000  
(E2)

Step (F) Emulsification Factor (Table 3 of this appendix) . . . . . 1.4  
(F)

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

Tier 1	Tier 2	Tier 3
0.15	0.25	0.40
(G1)	(G2)	(G3)

<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.

Attachment E-1 Example (continued) --  
 Worksheet to Plan Volume of Response Resources  
 for Worst Case Discharge - Petroleum Oils

Part II On-Water Oil Recovery Capacity (barrels/day)

Tier 1	Tier 2	Tier 3
17,850	29,750	47,600
Step (E1) x Step (F) x Step (G1)	Step (E1) x Step (F) x Step (G2)	Step (E1) x Step (F) x Step (G3)

Part III Shoreline Cleanup Volume (barrels) . . . . . 166,600  
 Step (E2) x Step (F)

Part IV On-Water Response Capacity By Operating Area  
 (Table 5 of this appendix)  
 (Amount needed to be contracted for in barrels/day)

Tier 1	Tier 2	Tier 3
10,000	20,000	40,000
(J1)	(J2)	(J3)

Part V On-Water Amount Needed to be Identified, but not Contracted for in Advance (barrels/day)

Tier 1	Tier 2	Tier 3
7,850	9,750	7,600
Part II Tier 1 - Step (J1)	Part II Tier 2 - Step (J2)	Part II Tier 3 - Step (J3)

NOTE: To convert from barrels/day to gallons/day, multiply the quantities in Parts II through V by 42 gallons/barrel.

Attachment E-2 --  
 Worksheet to Plan Volume of Response Resources  
 for Worst Case Discharge - Animal Fats and Vegetable Oils

Part I Background Information

Step (A) Calculate Worst Case Discharge in barrels (Appendix D)   
 (A)

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

Step (C) Operating Area (choose one) . . . . .  Near  
 shore/inla  
 nd 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 style="width: 95%; height: 100%; border: none;" type="text"/>	<input style="width: 95%; height: 100%; border: none;" type="text"/>	<input style="width: 95%; height: 100%; border: none;" 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 style="width: 95%; height: 100%; border: none;" type="text"/>	<input style="width: 95%; height: 100%; border: none;" type="text"/>	<input style="width: 95%; height: 100%; border: none;" 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.

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 style="width: 100%; height: 15px;" type="text"/>	<input style="width: 100%; height: 15px;" type="text"/>	<input style="width: 100%; height: 15px;" 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) . . . .

<input style="width: 100%; height: 15px;" type="text"/>
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 style="width: 100%; height: 15px;" type="text"/>	<input style="width: 100%; height: 15px;" type="text"/>	<input style="width: 100%; height: 15px;" 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 style="width: 100%; height: 15px;" type="text"/>	<input style="width: 100%; height: 15px;" type="text"/>	<input style="width: 100%; height: 15px;" 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.

Attachment E-2 Example --  
 Worksheet to Plan Volume of Response Resources  
 for Worst Case Discharge - Animal Fats and Vegetable Oils

Part I Background Information

Step (A) Calculate Worst Case Discharge in barrels  
 (Appendix D) . . . . . 500,000  
(A)

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

Step (C) Operating Area (choose  
 one) X Near  
 shore/Inl  
 and Great  
 Lakes  or  
 Rivers  
 and  
 Canals

Step (D) Percentages of Oil (Table 6 of this appendix)

Percent Lost to Natural Dissipation	Percent Recovered Floating Oil	Percent Oil Onshore
<span style="border: 1px solid black; padding: 2px 20px;">30</span>	<span style="border: 1px solid black; padding: 2px 20px;">20</span>	<span style="border: 1px solid black; padding: 2px 20px;">50</span>
(D1)	(D2)	(D3)

Step (E1) On-Water Oil Recovery  $\frac{\text{Step (D2)} \times \text{Step (A)}}{100}$  100,000  
(E1)

Step (E2) Shoreline Recovery  $\frac{\text{Step (D3)} \times \text{Step (A)}}{100}$  250,000  
(E2)

Step (F) Emulsification Factor  
 (Table 7 of this appendix) . . . . . 2.0  
(F)

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

Tier 1	Tier 2	Tier 3
0.15	0.25	0.40
(G1)	(G2)	(G3)

<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.

Attachment E-2 Example (continued) --  
Worksheet to Plan Volume of Response Resources  
for Worst Case Discharge - Animal Fats and Vegetable Oils (continued)

Part II On-Water Oil Recovery Capacity (barrels/day)

Tier 1	Tier 2	Tier 3
30,000	50,000	80,000
Step (E1) x Step (F) x Step (G1)	Step (E1) x Step (F) x Step (G2)	Step (E1) x Step (F) x Step (G3)

Part III <u>Shoreline Cleanup Volume</u> (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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### 3.0 Acronyms

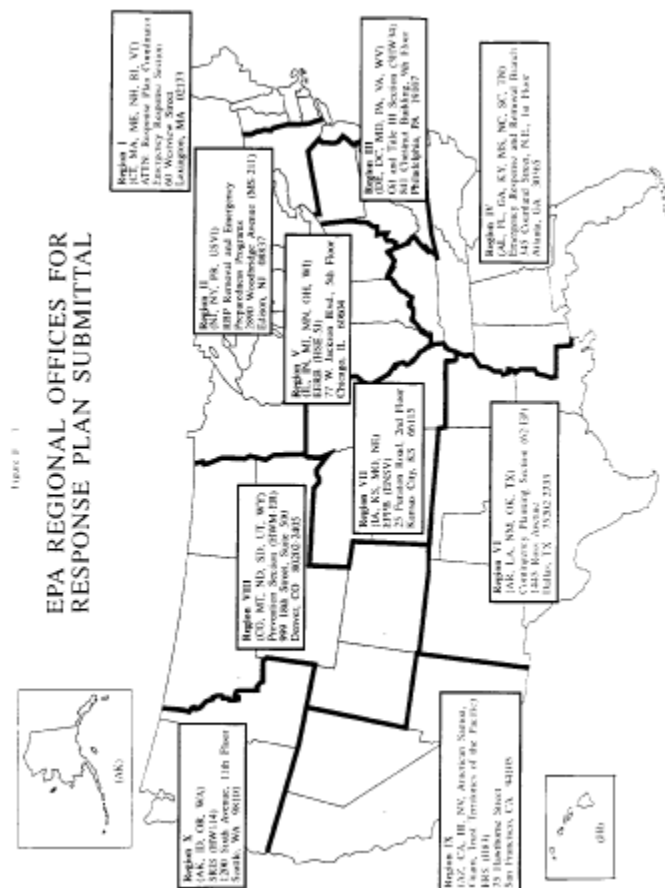
### 4.0 References

#### 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.



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#### 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 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:

<b>Organization</b>	<b>Phone No.</b>
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*

<b>CHRIS Code</b>	<b>Discharged quantity</b>	<b>Unit of measure</b>	<b>Material Discharged in water</b>	<b>Quantity</b>	<b>Unit of measure</b>

*Response Action*

Actions Taken to Correct, Control or Mitigate Incident:

*Impact*

Number of Injuries: \_\_\_ Number of Deaths: \_\_\_\_\_

Were there Evacuations? \_\_\_ (Y/N) Number Evacuated: \_\_\_\_\_

Was there any Damage? \_\_\_ (Y/N)

Damage in Dollars (approximate):

Medium Affected:

Description:

More Information about Medium:

*Additional Information*

Any information about the incident not recorded elsewhere in the report:

*Caller Notifications*

EPA? \_\_\_ (Y/N) USCG? \_\_\_ (Y/N) State? \_\_\_ (Y/N)

Other? \_\_\_ (Y/N) Describe: \_\_\_\_\_

1.3.2 Response Equipment List

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

FACILITY RESPONSE EQUIPMENT LIST

1. Skimmers/Pumps—Operational Status:

Type, Model, and Year:

Type    Model    Year

Number:

Capacity: \_\_\_\_ gal./min.

Daily Effective Recovery Rate:

Storage Location(s):

Date Fuel Last Changed:

2. Boom—Operational Status:

Type, Model, and Year:

Type    Model    Year

Number:

Size (length): \_\_\_\_ ft.

Containment Area: \_\_\_\_ sq. ft.

Storage Location:

3. Chemicals Stored (Dispersants listed on EPA's NCP Product Schedule)

Type	Amount	Date purchased	Treatment capacity	Storage location

Were appropriate procedures used to receive approval for use of dispersants in accordance with the NCP (40 CFR 300.910) and the Area Contingency Plan (ACP), where applicable? \_\_\_\_ (Y/N).

Name and State of On-Scene Coordinator (OSC) authorizing use: \_\_\_\_ .

Date Authorized: \_\_\_\_ .

4. Dispersant Dispensing Equipment—Operational Status: \_\_\_\_ .

Type and year	Capacity	Storage location	Response time (minutes)

--	--	--	--

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: \_\_\_\_



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

<b>Name</b>	<b>Phone <sup>1</sup></b>	<b>Response time</b>	<b>Responsibility during response action</b>	<b>Response training type/date</b>
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: \_\_\_\_\_

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



1.3.5.1 Based on the analysis of the facility, as discussed elsewhere in the plan, a facility-wide evacuation plan shall be developed. In addition, plans to evacuate parts of the facility that are at a high risk of exposure in the event of a discharge or other release must be developed. Evacuation routes must be shown on a diagram of the facility (see section 1.9 of this appendix). When developing evacuation plans, consideration must be given to the following factors, as appropriate:

- (1) Location of stored materials;
- (2) Hazard imposed by discharged material;
- (3) Discharge flow direction;
- (4) Prevailing wind direction and speed;
- (5) Water currents, tides, or wave conditions (if applicable);
- (6) Arrival route of emergency response personnel and response equipment;
- (7) Evacuation routes;
- (8) Alternative routes of evacuation;
- (9) Transportation of injured personnel to nearest emergency medical facility;
- (10) Location of alarm/notification systems;
- (11) The need for a centralized check-in area for evacuation validation (roll call);
- (12) Selection of a mitigation command center; and
- (13) Location of shelter at the facility as an alternative to evacuation.

1.3.5.2 One resource that may be helpful to owners or operators in preparing this section of the response plan is *The Handbook of Chemical Hazard Analysis Procedures* by the Federal Emergency Management Agency (FEMA), Department of Transportation (DOT), and EPA. *The Handbook of Chemical Hazard Analysis Procedures* is available from: FEMA, Publication Office, 500 C. Street, S.W., Washington, DC 20472, (202) 646-3484.

1.3.5.3 As specified in § 112.20(h)(1)(vi), the facility owner or operator must reference existing community evacuation plans, as appropriate.

#### 1.3.6 *Qualified Individual's Duties*

The duties of the designated qualified individual are specified in § 112.20(h)(3)(ix). The qualified individual's duties must be described and be consistent with the minimum requirements in § 112.20(h)(3)(ix). In addition, the qualified individual must be identified with the Facility Information in section 1.2 of the response plan.

#### 1.4 *Hazard Evaluation*

This section requires the facility owner or operator to examine the facility's operations closely and to predict where discharges could occur. Hazard evaluation is a widely used industry practice that allows facility owners or operators to develop a complete understanding of potential hazards and the response actions necessary to address these hazards. *The Handbook of Chemical Hazard Analysis Procedures*, prepared by the EPA, DOT, and the FEMA and the *Hazardous Materials Emergency Planning Guide* (NRT-1), prepared by the National Response Team are good references for conducting a hazard analysis. Hazard identification and evaluation will assist facility owners or operators in planning for potential discharges, thereby reducing the severity of discharge impacts that may occur in the future. The evaluation also may help the operator identify and correct potential sources of discharges. In addition, special hazards to workers and emergency response personnel's health and safety shall be evaluated, as well as the facility's oil spill history.

### 1.4.1 Hazard Identification

The Tank and Surface Impoundment (SI) forms, or their equivalent, that are part of this section must be completed according to the directions below. ("Surface Impoundment" means a facility or part of a facility which is a natural topographic depression, man-made excavation, or diked area formed primarily of earthen materials (although it may be lined with man-made materials), which is designed to hold an accumulation of liquid wastes or wastes containing free liquids, and which is not an injection well or a seepage facility.) Similar worksheets, or their equivalent, must be developed for any other type of storage containers.

(1) List each tank at the facility with a separate and distinct identifier. Begin aboveground tank identifiers with an "A" and belowground tank identifiers with a "B", or submit multiple sheets with the aboveground tanks and belowground tanks on separate sheets.

(2) Use gallons for the maximum capacity of a tank; and use square feet for the area.

(3) Using the appropriate identifiers and the following instructions, fill in the appropriate forms:

(a) Tank or SI number—Using the aforementioned identifiers (A or B) or multiple reporting sheets, identify each tank or SI at the facility that stores oil or hazardous materials.

(b) Substance Stored—For each tank or SI identified, record the material that is stored therein. If the tank or SI is used to store more than one material, list all of the stored materials.

(c) Quantity Stored—For each material stored in each tank or SI, report the average volume of material stored on any given day.

(d) Tank Type or Surface Area/Year—For each tank, report the type of tank (e.g., floating top), and the year the tank was originally installed. If the tank has been refabricated, the year that the latest refabrication was completed must be recorded in parentheses next to the year installed. For each SI, record the surface area of the impoundment and the year it went into service.

(e) Maximum Capacity—Record the operational maximum capacity for each tank and SI. If the maximum capacity varies with the season, record the upper and lower limits.

(f) Failure/Cause—Record the cause and date of any tank or SI failure which has resulted in a loss of tank or SI contents.

(4) Using the numbers from the tank and SI forms, label a schematic drawing of the facility. This drawing shall be identical to any schematic drawings included in the SPCC Plan.

(5) Using knowledge of the facility and its operations, describe the following in writing:

(a) The loading and unloading of transportation vehicles that risk the discharge of oil or release of hazardous substances during transport processes. These operations may include loading and unloading of trucks, railroad cars, or vessels. Estimate the volume of material involved in transfer operations, if the exact volume cannot be determined.

(b) Day-to-day operations that may present a risk of discharging oil or releasing a hazardous substance. These activities include scheduled venting, piping repair or replacement, valve maintenance, transfer of tank contents from one tank to another, etc. (not including transportation-related activities). Estimate the volume of material involved in these operations, if the exact volume cannot be determined.

(c) The secondary containment volume associated with each tank and/or transfer point at the facility. The numbering scheme developed on the tables, or an equivalent system, must be used to identify each containment area. Capacities must be listed for each individual unit (tanks, slumps, drainage traps, and ponds), as well as the facility total.

(d) Normal daily throughput for the facility and any effect on potential discharge volumes that a negative or positive change in that throughput may cause.

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

<b>Tank No.</b>	<b>Substance Stored (Oil and Hazardous Substance)</b>	<b>Quantity Stored (gallons)</b>	<b>Tank Type/Year</b>	<b>Maximum Capacity (gallons)</b>	<b>Failure/Cause</b>

<sup>1</sup> Tank = any container that stores oil.

Attach as many sheets as necessary.

**HAZARD IDENTIFICATION SURFACE IMPOUNDMENTS (SIs)**

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

<b>SI No.</b>	<b>Substance Stored</b>	<b>Quantity Stored (gallons)</b>	<b>Surface Area/Year</b>	<b>Maximum Capacity (gallons)</b>	<b>Failure/Cause</b>

Attach as many sheets as necessary.

#### 1.4.2 Vulnerability Analysis

The vulnerability analysis shall address the potential effects (i.e., to human health, property, or the environment) of an oil discharge. Attachment C-III to Appendix C to this part provides a method that owners or operators shall use to determine appropriate distances from the facility to fish and wildlife and sensitive environments. Owners or operators can use a comparable formula that is considered acceptable by the RA. If a comparable formula is used, documentation of the reliability and analytical soundness of the formula must be attached to the response plan cover sheet. This analysis must be prepared for each facility and, as appropriate, must discuss the vulnerability of:

- (1) Water intakes (drinking, cooling, or other);
- (2) Schools;
- (3) Medical facilities;
- (4) Residential areas;
- (5) Businesses;
- (6) Wetlands or other sensitive environments; <sup>2</sup>

<sup>2</sup> Refer to the DOC/NOAA "Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments" (See appendix E to this part, section 13, for availability).

- (7) Fish and wildlife;
- (8) Lakes and streams;
- (9) Endangered flora and fauna;
- (10) Recreational areas;
- (11) Transportation routes (air, land, and water);
- (12) Utilities; and

(13) Other areas of economic importance (e.g., beaches, marinas) including terrestrially sensitive environments, aquatic environments, and unique habitats.

#### 1.4.3 Analysis of the Potential for an Oil Discharge

Each owner or operator shall analyze the probability of a discharge occurring at the facility. This analysis shall incorporate factors such as oil discharge history, horizontal range of a potential discharge, and vulnerability to natural disaster, and shall, as appropriate, incorporate other factors such as tank age. This analysis will provide information for developing discharge scenarios for a worst case discharge and small and medium discharges and aid in the development of techniques to reduce the size and frequency of discharges. The owner or operator may need to research the age of the tanks the oil discharge history at the facility.

#### 1.4.4 Facility Reportable Oil Spill History

Briefly describe the facility's reportable oil spill <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 overfill alarms, secondary containment sensors, etc. A discussion of the plans to verify an automated alarm and the actions to be taken once verified must also be included.

### *1.7 Plan Implementation*



In this section, facility owners or operators must explain in detail how to implement the facility's emergency response plan by describing response actions to be carried out under the plan to ensure the safety of the facility and to mitigate or prevent discharges described in section 1.5 of the response plan. This section shall include the identification of response resources for small, medium, and worst case discharges; disposal plans; and containment and drainage planning. A list of those personnel who would be involved in the cleanup shall be identified. Procedures that the facility will use, where appropriate or necessary, to update their plan after an oil discharge event and the time frame to update the plan must be described.

*1.7.1 Response Resources for Small, Medium, and Worst Case 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.

<b>Material</b>	<b>Disposal facility</b>	<b>Location</b>	<b>RCRA permit/manifest</b>
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**

<b>Inspector</b>	<b>Tank or SI#</b>	<b>Date</b>	<b>Comments</b>





- D. Debris;
- E. Erosion;
- F. Permeability of the earthen floor of diked area; and
- G. Location/status of pipes, inlets, drainage beneath tanks, etc.

## 2. Secondary containment

- A. Cracks;
- B. Discoloration;
- C. Presence of spilled or leaked material (standing liquid);
- D. Corrosion; and
- E. Valve conditions.

## 3. Retention and drainage ponds

- A. Erosion;
- B. Available capacity;
- C. Presence of spilled or leaked material;
- D. Debris; and
- E. Stressed vegetation.

The tank inspection checklist presented below has been included as guidance during inspections and monitoring. Similar requirements exist in 40 CFR part 112, subparts A through C. Similar requirements exist in 40 CFR 112.7(e). Duplicate information from the SPCC Plan may be photocopied and inserted in this section.

### *1.8.2 Facility Drills/Exercises*

(A) CWA section 311(j)(5), as amended by OPA, requires the response plan to contain a description of facility drills/exercises. According to 40 CFR 112.21(c), the facility owner or operator shall develop a program of facility response drills/exercises, including evaluation procedures. Following the PREP guidelines (see appendix E to this part, section 13, for availability) would satisfy a facility's requirements for drills/exercises under this part. Alternately, under § 112.21(c), a facility owner or operator may develop a program that is not based on the PREP guidelines. Such a program is subject to approval by the Regional Administrator based on the description of the program provided in the response plan.

(B) The PREP Guidelines specify that the facility conduct internal and external drills/exercises. The internal exercises include: qualified individual notification drills, spill management team tabletop exercises, equipment deployment exercises, and unannounced exercises. External exercises include Area Exercises. Credit for an Area or Facility-specific Exercise will be given to the facility for an actual response to a discharge in the area if the plan was utilized for response to the discharge and the objectives of the Exercise were met and were properly evaluated, documented, and self-certified.

(C) Section 112.20(h)(8)(ii) requires the facility owner or operator to provide a description of the drill/exercise program to be carried out under the response plan. Qualified Individual Notification Drill and Spill Management Team Tabletop Drill logs shall be provided in sections 1.8.2.1 and 1.8.2.2, respectively. These logs may be included in the facility response plan or kept as an annex to the facility response plan. See section 1.3.3 of this appendix for Equipment Deployment Drill Logs.

#### *1.8.2.1 Qualified Individual Notification Drill Logs*

##### Qualified Individual Notification Drill Log

Date:  
Company:  
Qualified Individual(s):  
Emergency Scenario:




1.8.3.2 Discharge Prevention Meetings Logs

DISCHARGE PREVENTION MEETING LOG

Date:

Attendees:

Subject/issue identified	Required action	Implementation date

1.9 Diagrams

The facility-specific response plan shall include the following diagrams. Additional diagrams that would aid in the development of response plan sections may also be included.

(1) The Site Plan Diagram shall, as appropriate, include and identify:

- (A) the entire facility to scale;
- (B) above and below ground bulk oil storage tanks;
- (C) the contents and capacities of bulk oil storage tanks;
- (D) the contents and capacity of drum oil storage areas;
- (E) the contents and capacities of surface impoundments;
- (F) process buildings;
- (G) transfer areas;
- (H) secondary containment systems (location and capacity);
- (I) structures where hazardous materials are stored or handled, including materials stored and capacity of storage;
- (J) location of communication and emergency response equipment;
- (K) location of electrical equipment which contains oil; and



(L) for complexes only, the interface(s) (i.e., valve or component) between the portion of the facility regulated by EPA and the portion(s) regulated by other Agencies. In most cases, this interface is defined as the last valve inside secondary containment before piping leaves the secondary containment area to connect to the transportation-related portion of the facility (i.e., the structure used or intended to be used to transfer oil to or from a vessel or pipeline). In the absence of secondary containment, this interface is the valve manifold adjacent to the tank nearest the transfer structure as described above. The interface may be defined differently at a specific facility if agreed to by the RA and the appropriate Federal official.

(2) The Site Drainage Plan Diagram shall, as appropriate, include:

- (A) major sanitary and storm sewers, manholes, and drains;
- (B) weirs and shut-off valves;
- (C) surface water receiving streams;
- (D) fire fighting water sources;
- (E) other utilities;
- (F) response personnel ingress and egress;
- (G) response equipment transportation routes; and
- (H) direction of discharge flow from discharge points.

(3) The Site Evacuation Plan Diagram shall, as appropriate, include:

- (A) site plan diagram with evacuation route(s); and
- (B) location of evacuation regrouping areas.

#### *1.10 Security*

According to 40 CFR 112.7(g) facilities are required to maintain a certain level of security, as appropriate. In this section, a description of the facility security shall be provided and include, as appropriate:

- (1) emergency cut-off locations (automatic or manual valves);
- (2) enclosures (e.g., fencing, etc.);
- (3) guards and their duties, day and night;
- (4) lighting;
- (5) valve and pump locks; and
- (6) pipeline connection caps.

The SPCC Plan contains similar information. Duplicate information may be photocopied and inserted in this section.

#### *2.0 Response Plan Cover Sheet*

A three-page form has been developed to be completed and submitted to the RA by owners or operators who are required to prepare and submit a facility-specific response plan. The cover sheet (Attachment F-1) must accompany the response plan to provide the Agency with basic information concerning the facility. This section will describe the Response Plan Cover Sheet and provide instructions for its completion.

#### *2.1 General Information*

*Owner/Operator of Facility:* Enter the name of the owner of the facility (if the owner is the operator). Enter the operator of the facility if otherwise. If the owner/operator of the facility is a corporation, enter the name of the facility's principal corporate executive. Enter as much of the name as will fit in each section.

(1) *Facility Name*: Enter the proper name of the facility.

(2) *Facility Address*: Enter the street address, city, State, and zip code.

(3) *Facility Phone Number*: Enter the phone number of the facility.

(4) *Latitude and Longitude*: Enter the facility latitude and longitude in degrees, minutes, and seconds.

(5) *Dun and Bradstreet Number*: Enter the facility's Dun and Bradstreet number if available (this information may be obtained from public library resources).

(6) *North American Industrial Classification System (NAICS) Code*: Enter the facility's NAICS code as determined by the Office of Management and Budget (this information may be obtained from public library resources.)

(7) *Largest Oil Storage Tank Capacity*: Enter the capacity in GALLONS of the largest aboveground oil storage tank at the facility.

(8) *Maximum Oil Storage Capacity*: Enter the total maximum capacity in GALLONS of all aboveground oil storage tanks at the facility.

(9) *Number of Oil Storage Tanks*: Enter the number of all aboveground oil storage tanks at the facility.

(10) *Worst Case Discharge Amount*: Using information from the worksheets in appendix D, enter the amount of the worst case discharge in GALLONS.

(11) *Facility Distance to Navigable Waters*: Mark the appropriate line for the nearest distance between an opportunity for discharge (i.e., oil storage tank, piping, or flowline) and a navigable water.

## *2.2 Applicability of Substantial Harm Criteria*

Using the flowchart provided in Attachment C-I to appendix C to this part, mark the appropriate answer to each question. Explanations of referenced terms can be found in Appendix C to this part. If a comparable formula to the ones described in Attachment C-III to appendix C to this part is used to calculate the planning distance, documentation of the reliability and analytical soundness of the formula must be attached to the response plan cover sheet.

## *2.3 Certification*

Complete this block after all other questions have been answered.

## *3.0 Acronyms*

ACP: Area Contingency Plan

ASTM: American Society of Testing Materials

bbls: Barrels

bpd: Barrels per Day

bph: Barrels per Hour

CHRIS: Chemical Hazards Response Information System

CWA: Clean Water Act

DOI: Department of Interior

DOC: Department of Commerce

DOT: Department of Transportation

EPA: Environmental Protection Agency  
FEMA: Federal Emergency Management Agency  
FR: Federal Register  
gal: Gallons  
gpm: Gallons per Minute  
HAZMAT: Hazardous Materials  
LEPC: Local Emergency Planning Committee  
MMS: Minerals Management Service (part of DOI)  
NAICS: North American Industrial Classification System  
NCP: National Oil and Hazardous Substances Pollution Contingency Plan  
NOAA: National Oceanic and Atmospheric Administration (part of DOC)  
NRC: National Response Center  
NRT: National Response Team  
OPA: Oil Pollution Act of 1990  
OSC: On-Scene Coordinator  
PREP: National Preparedness for Response Exercise Program  
RA: Regional Administrator  
RCRA: Resource Conservation and Recovery Act  
RRC: Regional Response Centers  
RRT: Regional Response Team  
RSPA: Research and Special Programs Administration  
SARA: Superfund Amendments and Reauthorization Act  
SERC: State Emergency Response Commission  
SDWA: Safe Drinking Water Act of 1986  
SI: Surface Impoundment  
SPCC: Spill Prevention, Control, and Countermeasures  
USCG: United States Coast Guard

#### *4.0 References*

CONCAWE. 1982. Methodologies for Hazard Analysis and Risk Assessment in the Petroleum Refining and Storage Industry. Prepared by CONCAWE's Risk Assessment Ad-hoc Group.

U.S. Department of Housing and Urban Development. 1987. Siting of HUD-Assisted Projects Near Hazardous Facilities: Acceptable Separation Distances from Explosive and Flammable Hazards. Prepared by the Office of Environment and Energy, Environmental Planning Division, Department of Housing and Urban Development. Washington, DC.

U.S. DOT, FEMA and U.S. EPA. Handbook of Chemical Hazard Analysis Procedures.

U.S. DOT, FEMA and U.S. EPA. Technical Guidance for Hazards Analysis: Emergency Planning for Extremely Hazardous Substances.

The National Response Team. 1987. Hazardous Materials Emergency Planning Guide. Washington, DC.

The National Response Team. 1990. Oil Spill Contingency Planning, National Status: A Report to the President. Washington, DC. U.S. Government Printing Office.

Offshore Inspection and Enforcement Division. 1988. Minerals Management Service, Offshore Inspection Program: National Potential Incident of Noncompliance (PINC) List. Reston, VA.

#### ATTACHMENTS TO APPENDIX F

#### Attachment F-1—Response Plan Cover Sheet

This cover sheet will provide EPA with basic information concerning the facility. It must accompany a submitted facility response plan. Explanations and detailed instructions can be found in appendix F. Please type or write legibly in blue or black ink. Public reporting burden for the collection of this information is estimated to vary from 1 hour to 270 hours per response in the first year, with an average of 5 hours per response. This estimate includes time for reviewing instructions, searching existing data sources, gathering the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate of this information, including suggestions for reducing this burden to: Chief, Information Policy Branch, Mail Code: PM-2822, U.S. Environmental Protection Agency, Ariel Rios Building, 1200 Pennsylvania Avenue, NW., Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington D.C. 20503.

#### GENERAL INFORMATION

Owner/Operator of Facility:

Facility Name:

Facility Address (street address or route):

City, State, and U.S. Zip Code:

Facility Phone No.:

Latitude (Degrees: North):

degrees, minutes, seconds

Dun & Bradstreet Number: <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- ¼ mile \_\_\_ ¼ - ½ mile \_\_\_ ½ -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 a public drinking water intake? <sup>2</sup>

Yes  
No

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and has the facility experienced a reportable oil spill <sup>2</sup> in an amount greater than or equal to 10,000 gallons within the last 5 years?

Yes  
No

#### CERTIFICATION

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

Signature:

Name (Please type or print):

Title:

Date:

[59 FR 34122, July 1, 1994; 59 FR 49006, Sept. 26, 1994, as amended at 65 FR 40816, June 30, 2000; 65 FR 43840, July 14, 2000; 66 FR 34561, June 29, 2001; 67 FR 47152, July 17, 2002]

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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 measures 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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**II. Record of Plan Review and Amendments**

**Five Year Review (§112.5(b)):**

Complete a review and evaluation of this SPCC Plan at least once every five years. As a result of the review, amend this Plan within six months to include more effective prevention and control measures for the facility, if applicable. Implement any SPCC Plan amendment as soon as possible, but no later than six months following Plan amendment. Document completion of the review and evaluation, and complete the Five Year Review Log in Attachment 1.1. If the facility no longer meets Tier I qualified facility eligibility, the owner or operator must revise the Plan to meet Tier II qualified facility requirements, or complete a full PE certified Plan.

<b>Table G-1 Technical Amendments (§§112.5(a), (c) and 112.6(a)(2))</b>	
This SPCC Plan will be amended when there is a change in the facility design, construction, operation, or maintenance that materially affects the potential for a discharge to navigable waters or adjoining shorelines. Examples include adding or removing containers, reconstruction, replacement, or installation of piping systems, changes to secondary containment systems, changes in product stored at this facility, or revisions to standard operating procedures.	<input type="checkbox"/>
Any technical amendments to this Plan will be re-certified in accordance with Section I of this Plan template. [§ 112.6(a)(2)] [See Technical Amendment Log in Attachment 1.2]	<input type="checkbox"/>

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Table G-4 below identifies the tanks and containers at the facility with the potential for an oil discharge; the mode of failure; the flow direction and potential quantity of the discharge; and the secondary containment method and containment capacity that is provided.

**Table G-4 Containers with Potential for an Oil Discharge**

Area	Type of failure (discharge scenario)	Potential discharge volume (gallons)	Direction of flow for uncontained discharge	Secondary containment method <sup>a</sup>	Secondary containment capacity (gallons)
<b>Bulk Storage Containers and Mobile/Portable Containers<sup>b</sup></b>					
<b>Oil-filled Operational Equipment (e.g., hydraulic equipment, transformers)<sup>c</sup></b>					
<b>Piping, Valves, etc.</b>					
<b>Product Transfer Areas (location where oil is loaded to or from a container, pipe or other piece of equipment.)</b>					
<b>Other Oil-Handling Areas or Oil-Filled Equipment (e.g., flow-through process vessels at an oil production facility)</b>					

<sup>a</sup> Use one of the following methods of secondary containment or its equivalent: (1) Dikes, berms, or retaining walls sufficiently impervious to contain oil; (2) Curbing; (3) Culverting, gutters, or other drainage systems; (4) Weirs, booms, or other barriers; (5) Spill diversion ponds; (6) Retention ponds; or (7) Sorbent materials.  
<sup>b</sup> For storage tanks and bulk storage containers, the secondary containment capacity must be at least the capacity of the largest container plus additional capacity to contain rainfall or other precipitation.  
<sup>c</sup> For oil-filled operational equipment: Document in the table above if alternative measures to secondary containment (as described in §112.7(k)) are implemented at the facility.

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**3. Inspections, Testing, Recordkeeping and Personnel Training (§§112.7(e) and (f), 112.8(c)(6) and (d)(4), 112.9(c)(3), 112.12(c)(6) and (d)(4)):**

<b>Table G-5 Inspections, Testing, Recordkeeping and Personnel Training</b>	
An inspection and/or testing program is implemented for all aboveground bulk storage containers and piping at this facility. [§§112.8(c)(6) and (d)(4), 112.9(c)(3), 112.12(c)(6) and (d)(4)]	<input type="checkbox"/>
The following is a description of the inspection and/or testing program (e.g. reference to industry standard utilized, scope, frequency, method of inspection or test, and person conducting the inspection) for all aboveground bulk storage containers and piping at this facility:	
Inspections, tests, and records are conducted in accordance with written procedures developed for the facility. Records of inspections and tests kept under usual and customary business practices will suffice for purposes of this paragraph. [§112.7(e)]	<input type="checkbox"/>
A record of the inspections and tests are kept at the facility or with the SPCC Plan for a period of three years. [§112.7(e)] [See Inspection Log and Schedule in Attachment 3.1]	<input type="checkbox"/>
Inspections and tests are signed by the appropriate supervisor or inspector. [§112.7(e)]	<input type="checkbox"/>
<b>Personnel, training, and discharge prevention procedures [§112.7(f)]</b>	
Oil-handling personnel are trained in the operation and maintenance of equipment to prevent discharges; discharge procedure protocols; applicable pollution control laws, rules, and regulations; general facility operations; and, the contents of the facility SPCC Plan. [§112.7(f)]	<input type="checkbox"/>
A person who reports to facility management is designated and accountable for discharge prevention. [§112.7(f)]  Name/Title: _____	<input type="checkbox"/>
Discharge prevention briefings are conducted for oil-handling personnel annually to assure adequate understanding of the SPCC Plan for that facility. Such briefings highlight and describe past reportable discharges or failures, malfunctioning components, and any recently developed precautionary measures. [§112.7(f)] [See Oil-handling Personnel Training and Briefing Log in Attachment 3.4]	<input type="checkbox"/>

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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. [§§112.8(b)(1) and 112.12(b)(1)]	<input type="checkbox"/>
Valves of manual, open-and-closed design are used for the drainage of diked areas. [§§112.8(b)(2) and 112.12(b)(2)]	<input type="checkbox"/>
The containers at the facility are compatible with materials stored and conditions of storage such as pressure and temperature. [§§112.8(c)(1) and 112.12(c)(1)]	<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). [§112.6(a)(3)(ii)]	<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: [§§112.8(c)(3) and 112.12(c)(3)]	
<ul style="list-style-type: none"> <li>• Bypass valve is normally sealed closed <span style="float: right;"><input type="checkbox"/></span></li> <li>• Retained rainwater is inspected to ensure that its presence will not cause a discharge to navigable waters or adjoining shorelines <span style="float: right;"><input type="checkbox"/></span></li> <li>• Bypass valve is opened and resealed under responsible supervision <span style="float: right;"><input type="checkbox"/></span></li> <li>• Adequate records of drainage are kept [See Dike Drainage Log in Attachment 3.3] <span style="float: right;"><input type="checkbox"/></span></li> </ul>	
For completely buried metallic tanks installed on or after January 10, 1974 at this facility [§§112.8(c)(4) and 112.12(c)(4)]:	
<ul style="list-style-type: none"> <li>• Tanks have corrosion protection with coatings or cathodic protection compatible with local soil conditions. <span style="float: right;"><input type="checkbox"/></span></li> <li>• Regular leak testing is conducted. <span style="float: right;"><input type="checkbox"/></span></li> </ul>	
For partially buried or bunkered metallic tanks [§112.8(c)(5) and §112.12(c)(5)]:	
<ul style="list-style-type: none"> <li>• Tanks have corrosion protection with coatings or cathodic protection compatible with local soil conditions. <span style="float: right;"><input type="checkbox"/></span></li> </ul>	
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] [§112.8(c)(6) and §112.12(c)(6)(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] [§§112.8(c)(6) and 112.12(c)(6)]	<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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<b>Table G-10 General Rule Requirements for Onshore Facilities</b>	
Storage Container Inspection Schedule in Attachments 3.1 and 3.2] [ <i>§ 112.12(c)(6)(ii)</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]. [ <i>§ 112.8(a)(3)(iii)</i> ]	<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. [ <i>§§ 112.8(c)(10) and 112.12(c)(10)</i> ]	<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] [ <i>§§ 112.8(d)(4) and 112.12(d)(4)</i> ]	<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] [ <i>§§ 112.8(d)(4) and 112.12(d)(4)</i> ]	<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".

<b>Table G-11 General Rule Requirements for Onshore Oil Production Facilities</b>	
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. <i>[§112.9(b)(1)]</i>	<input type="checkbox"/>
Prior to drainage, diked areas are inspected and <i>[§112.9(b)(1)]</i> : <ul style="list-style-type: none"> <li>• Retained rainwater is inspected to ensure that its presence will not cause a discharge to navigable waters <span style="float: right;"><input type="checkbox"/></span></li> <li>• Bypass valve is opened and resealed under responsible supervision <span style="float: right;"><input type="checkbox"/></span></li> <li>• Adequate records of drainage are kept [See Dike Drainage Log in Attachment 3.3] <span style="float: right;"><input type="checkbox"/></span></li> </ul>	
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] <i>[§112.9(b)(2)]</i>	<input type="checkbox"/>
The containers used at this facility are compatible with materials stored and conditions of storage. <i>[§112.9(c)(1)]</i>	<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. <i>[§112.9(c)(2)]</i>	<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] <i>[§112.9(c)(3)]</i>	<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. <i>[§112.9(c)(4)]</i>	<input type="checkbox"/>
Flow-through process vessels and associated components are: <ul style="list-style-type: none"> <li>• 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; <i>[§112.9(c)(2)]</i> and <span style="float: right;"><input type="checkbox"/></span></li> <li>• 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] <i>[§112.9(c)(3)]</i> <span style="float: right;"><input type="checkbox"/></span></li> </ul> <p>Or</p> <ul style="list-style-type: none"> <li>• 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 <span style="float: right;"><input type="checkbox"/></span></li> <li>• 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 <span style="float: right;"><input type="checkbox"/></span></li> <li>• Any accumulations of oil discharges associated with flow-through process vessels are promptly removed; and <span style="float: right;"><input type="checkbox"/></span></li> </ul>	

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<b>Table G-11 General Rule Requirements for Onshore Oil Production Facilities</b>	
<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> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <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> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <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> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <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:	

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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.

<b>Table G-12 General Rule Requirements for Onshore Oil Drilling and Workover Facilities</b>	
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	Plan Amendment		Name and signature of person authorized to review this Plan
	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 2 – Oil Spill Contingency Plan and Checklist**

An oil spill contingency plan and written commitment of resources is required for:

- Flowlines and intra-facility gathering lines at oil production facilities and
- Qualified oil-filled operational equipment which has no secondary containment.

An oil spill contingency plan meeting the provisions of 40 CFR part 109, as described below, and a written commitment of manpower, equipment and materials required to expeditiously control and remove any quantity of oil discharged that may be harmful is attached to this Plan.	<input type="checkbox"/>
--	--------------------------

Complete the checklist below to verify that the necessary operations outlined in 40 CFR part 109 - Criteria for State, Local and Regional Oil Removal Contingency Plans - have been included.

<b>Table G-15 Checklist of Development and Implementation Criteria for State, Local and Regional Oil Removal Contingency Plans (§109.5)<sup>a</sup></b>	
(a) Definition of the authorities, responsibilities and duties of all persons, organizations or agencies which are to be involved in planning or directing oil removal operations.	<input type="checkbox"/>
(b) Establishment of notification procedures for the purpose of early detection and timely notification of an oil discharge including:	
(1) The identification of critical water use areas to facilitate the reporting of and response to oil discharges.	<input type="checkbox"/>
(2) A current list of names, telephone numbers and addresses of the responsible persons (with alternates) and organizations to be notified when an oil discharge is discovered.	<input type="checkbox"/>
(3) Provisions for access to a reliable communications system for timely notification of an oil discharge, and the capability of interconnection with the communications systems established under related oil removal contingency plans, particularly State and National plans (e.g., NCP).	<input type="checkbox"/>
(4) An established, prearranged procedure for requesting assistance during a major disaster or when the situation exceeds the response capability of the State, local or regional authority.	<input type="checkbox"/>
(c) Provisions to assure that full resource capability is known and can be committed during an oil discharge situation including:	
(1) The identification and inventory of applicable equipment, materials and supplies which are available locally and regionally.	<input type="checkbox"/>
(2) An estimate of the equipment, materials and supplies which would be required to remove the maximum oil discharge to be anticipated.	<input type="checkbox"/>
(3) Development of agreements and arrangements in advance of an oil discharge for the acquisition of equipment, materials and supplies to be used in responding to such a discharge.	<input type="checkbox"/>
(d) Provisions for well defined and specific actions to be taken after discovery and notification of an oil discharge including:	
(1) Specification of an oil discharge response operating team consisting of trained, prepared and available operating personnel.	<input type="checkbox"/>
(2) Predesignation of a properly qualified oil discharge response coordinator who is charged with the responsibility and delegated commensurate authority for directing and coordinating response operations and who knows how to request assistance from Federal authorities operating under existing national and regional contingency plans.	<input type="checkbox"/>

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<b>Table G-15 Checklist of Development and Implementation Criteria for State, Local and Regional Oil Removal Contingency Plans (§109.5)<sup>a</sup></b>	
(3) A preplanned location for an oil discharge response operations center and a reliable communications system for directing the coordinated overall response operations.	<input type="checkbox"/>
(4) Provisions for varying degrees of response effort depending on the severity of the oil discharge.	<input type="checkbox"/>
(5) Specification of the order of priority in which the various water uses are to be protected where more than one water use may be adversely affected as a result of an oil discharge and where response operations may not be adequate to protect all uses.	<input type="checkbox"/>
(6) Specific and well defined procedures to facilitate recovery of damages and enforcement measures as provided for by State and local statutes and ordinances.	<input type="checkbox"/>

<sup>a</sup> The contingency plan must be consistent with all applicable state and local plans, Area Contingency Plans, and the National Contingency Plan (NCP).

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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 §§112.6(a)(3)(iii), 112.8(c)(9), 112.9(d)(4), 112.9(b)(2), 112.9(c)(3), 112.9(d)(1), 112.9(d)(4), 112.12(c)(6), and 112.12(d)(4), as applicable.

Date of Inspection	Container / Piping / Equipment	Describe Scope (or cite Industry Standard)	Observations	Name/ Signature of Inspector	Records maintained separately <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/test each shop-built aboveground bulk storage container on a regular schedule in accordance with a recognized container inspection standard based on the minimum requirements in the following table.

<b>Table G-17 Bulk Storage Container Inspection Schedule</b>	
<b>Container Size and Design Specification</b>	<b>Inspection requirement</b>
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.

**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"/>		

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

<b>Table G-19 Oil-Handling Personnel Training and Briefing Log</b>		
<b>Date</b>	<b>Description / Scope</b>	<b>Attendees</b>

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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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