CHAPTER 1
Environmental and Emergency Response Planning



This chapter summarizes:

- *The importance of spill prevention*
- *Emergency Response Plans that must be in place before a spill occurs*
- *Preliminary spill mitigation strategies*

1.1 Spill Prevention

It's important to prevent spills of petroleum products for many reasons: petroleum product spills can damage the environment, waste valuable product, cause financial harm, and increase liability.

To prevent spills, facility employees should be trained to understand the potential for releases at each work process and to respond effectively should a **release** occur. See *Chapter 10, Training*, for training requirements.

To understand when and how an unexpected release of product could happen, you have to think about a variety of factors and conditions, many of which are preventable. Some of the more common potential causes of spills include:

- Miscommunication
- Not understanding standard operating procedures (SOPs)
- Complacency or being tired or ill
- Working hastily or while distracted
- Equipment breakdown and malfunctions
- Weather conditions such as earthquakes, floods, or thunderstorms

Some of the actions to eliminate spills at your facility include:

- Participating in the training program
- Requiring documentation that clearly identifies responsible personnel for each fuel movement
- Reviewing and updating SOPs regularly
- Reviewing log entries related to spill prevention (for example, gauging log)
- Integrating spill prevention in your daily activities
- Monitoring spill prevention activities associated with each transfer operation (for example, checking valve line-ups)
- Talking to other employees about actions to avoid "near miss" incidents
- Performing routine maintenance
- Maintaining fencing, complying with badging requirements, and securing key pieces of equipment (for example, securing pumps and valves in the off or locked position when not attended)

The Law Says

- *You may be required to prepare one or more Emergency Response Plans for accidental releases of oil or hazardous substances (see Exhibit 1–1).*
- *Emergency Response Plans may be combined into one plan (sometimes called an Integrated Contingency Plan) with an index cross-referencing the various regulatory requirements (61 FR 28642).*
- *Your response plans must be reviewed and may require recertification by a licensed professional engineer, when there are changes in facility design, operations, maintenance, personnel, or procedures that affect the likelihood of a release or the response measures taken (40 CFR 112.3).*

1.2 General Emergency Response Plan Requirements

Most material storage sites have the potential to cause environmental harm if an accident occurs. Accidents can be avoided through emergency preparedness planning. Your facility's emergency preparedness planning should include identifying potential hazards and providing instructions for employees in the event of an emergency.

Important elements of an Emergency Response Plan include emergency contact information, initial response procedures, recovery operations, incident termination and follow-up actions, and training.

- *Emergency contact information* includes key contact numbers for the facility, fire department, relevant environmental regulators, local water supply and sewerage contacts, and specialized cleanup contractors. Each facility should designate a key contact for the Emergency Response Plan development and maintenance, such as a facility **emergency response coordinator** or qualified individual (QI).
- *Initial response procedures* should include general information about emergency alarms, evacuation procedures, and emergency reporting. You also should include specific information about what to do in the event of a release, fire, or other hazard.
- *Recovery operations* include the activities that follow the initial emergency stage. Directions about damage assessment, spill cleanup, utilities restoration, emergency procurement, employee relations, and public relations go in this section of the Emergency Response Plan.
- *Incident termination and follow-up actions* noted in the Emergency Response Plan should discuss the demobilization of response resources and the timely maintenance and/or replacement of emergency response equipment that was deployed. In addition, procedures for accident investigation, written follow-up reports, and emergency plan review should be outlined in this section.
- *Training* is key to making the Emergency Response Plan an effective document (see *Chapter 10, Training)*. All staff and contractors working at the facility should be made aware of the plan and should know their role if an emergency occurs. Exercises or drills need to be conducted to familiarize staff with the operation of the plan and to test its effectiveness.

1.3 Regulation-Specific Emergency Response Plans

Several federal regulations require facilities to prepare Emergency Response Plans for responding to releases of petroleum products and hazardous substances. *Exhibit 1–1* lists the Emergency Response Plans described in this chapter, and *Appendix 1-1* summarizes the applicability of each regulation in more detail.

Your facility may be required to have other emergency plans in accordance with Occupational Safety and Health Administration (OSHA) regulations, such as:

- Emergency Action Plans and Fire Prevention Plans
- Process Safety Management (PSM) Plans for highly hazardous materials, such as flammable liquids and gases
- Emergency Response Plans and Site Safety Plans for cleanup operations

This *Environmental Guide* does not summarize the OSHA standards, so you may wish to review the requirements in Title 29 of the *Code of Federal Regulations*, Part 1910 (29 CFR 1910), Sections 38, 119, and 120, to determine if you need to prepare any of these plans.

Remember to check with your state and local emergency planning agencies as they may have specific requirements in addition to the federal requirements. You may need to submit any changes to your Emergency Response Plan to your community fire department, **local emergency planning committee (LEPC)**, and possibly nearby hospital.

EXHIBIT 1–1
Emergency Response Plans

Emergency Response Plans Under the Oil Pollution Act of 1990 (OPA 90)		
Characteristics of Site	**Emergency Response Plan Required**	**Regulation**
Fuel storage tanks	U.S. Environmental Protection Agency (EPA) Spill Prevention, Control and Countermeasure Plan	40 CFR 112.7
Fuel storage tanks	EPA Facility Response Plan (FRP)	40 CFR 112.20
Marine terminal facilities that transfer fuel to and from vessels	U.S. Coast Guard (USCG) Marine Transportation-Related (MTR) FRP	33 CFR 154
Onshore pipelines	Pipeline and Hazardous Materials Safety Administration (PHMSA) Response Plan	49 CFR 194
Oil transportation	PHMSA Response Plan	49 CFR 130
Other Plans		
Hazardous waste containers and tanks	EPA Hazardous Waste Preparedness and Prevention and Contingency Plan	40 CFR 262, 264, and 265
Chemical and gas storage tanks	EPA Risk Management Plan	40 CFR 68
Sites with industrial activity and fueling	EPA Stormwater Pollution Prevention Plan (SWPPP)	40 CFR 122.26
Bulk petroleum transportation on highways	U.S. Department of Transportation (DOT) Basic and Comprehensive Response Plans	49 CFR 130
Hazardous materials transportation on highways	DOT Emergency Response Information and Security Plan requirements	49 CFR 172
Facilities that handle extremely hazardous substances (EHSs) and hazardous substances	EPA Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) Emergency Response Notification	40 CFR 355

1.4 Combining Several Plans into One Plan

Guidance published in the *Federal Register* (FR) on June 5, 1996 (and corrected on June 19, 1996) gives you the option to prepare one comprehensive emergency response planning document covering the regulatory requirements set forth by the EPA, USCG, U.S. Department of the Interior (DOI), DOT, and OSHA. EPA and the other agencies recognized the challenges in maintaining several plans and issued this guidance to help you consolidate your plans into one plan called an Integrated Contingency Plan. Preparing an Integrated Contingency Plan, as opposed to several independent plans, is an option.

1.5 Plans Under OPA 90

The **Oil Pollution Act of 1990 (OPA 90)** changed and strengthened existing regulations on spill prevention and preparedness. In response to OPA 90, several federal agencies establish emergency response requirements for:

- Fuel storage tanks
- Marine terminal facilities that transfer fuel to and from vessels
- Onshore pipelines
- Oil transportation

1.5.1 Fuel Storage Tanks

Fuel storage tank design, installation, and operation can be regulated by several agencies as discussed in *Chapter 3,Underground Storage Tanks* and *Chapter 4, Aboveground Storage Tanks and Containers*. The primary Emergency Response Plans required for fuel storage tanks consist of the **Spill Prevention, Control, and Countermeasure (SPCC) Plan** and the **Facility Response Plan** (**FRP**), both of which are based on the quantity of fuel stored and/or the relative risk of a fuel spill entering a surface water body as described below.

1.5.1.1 Does Your Facility Need an SPCC Plan?

The Clean Water Act (CWA) requires any facility that manufactures, stores, or uses oil to have a plan in place to respond to oil spills that may contaminate the nation's waterways. Specifically, an SPCC Plan is required if your facility has either:

- A total aboveground oil storage capacity of over 1,320 gallons in 55-gallon containers or larger; or
- A total buried or underground storage capacity of over 42,000 gallons; and
- A location and proximity to **navigable waters** that cause a reasonable expectation for discharge of **harmful quantities** of oil into navigable waters (for example, streams, lakes), wetlands, or shorelines.

When determining the applicability of the SPCC rules, the presence of constructed features, such as drainage control structures, dikes, and equipment that might prevent, contain, hinder, or restrain the flow of oil, should not be used to conclude that a discharge won't reach navigable waters or shorelines. You must assume constructed features are not present when making your determination. Harmful quantities of oil are defined as discharges that violate water quality standards or cause a film, sheen, or discoloration of the water surface or shoreline. In

What Is Oil?

Under the Clean Water Act (CWA), the definition of oil includes oil of any kind and any form, such as petroleum and non-petroleum oils. Many substances are easily recognizable as oils, including gasoline, diesel, jet fuel, kerosene, and crude oil. Many other substance are considered oils but may not be easily recognized as "oil," including mineral oil; the oils of vegetable, seed, and animal origin; synthetic oil; and oil refuse.

addition, EPA requires facilities with the potential to affect certain natural resources to prepare an SPCC Plan.

The SPCC Plan must address petroleum, oils, and lubricants (POL) in containers and tanks 55 gallons or greater in size. This includes oil-filled equipment, such as hydraulic systems for pumps, compressors, and other rotating equipment; gear boxes; machining coolant systems; heat transfer systems; transformers; and other equipment containing oil solely to enable the operation of the device. It also includes oil/water separators, mobile refuelers, and loading and unloading racks. Loading racks are areas physically developed and piped for bulk loading and unloading of tank cars or tank trucks; locations that use a single hose connection or standpipe do *not* meet the definition of loading rack.

Permanently closed containers and onboard bulk storage containers that are used primarily to power the movement of a motor vehicle (that is, a **motive power container**) are not included in the total aboveground oil storage capacity for an SPCC Plan.

The total underground oil storage capacity for an SPCC Plan *does not* include the oil storage capacity of a facility tank that is subject to all of the technical requirements in the underground storage tank (UST) regulations (40 CFR 280) or all of the technical requirements of a state program approved under 40 CFR 281.

Vessels and **transportation-related** onshore facilities are regulated by USCG and DOT, as described later in this chapter, and are not required to develop an SPCC Plan in accordance with 40 CFR 112.

Don't Forget...

Some states have requirements that go beyond the SPCC Plan requirements (for example, they add hazardous materials to the plan). Contact your state agency to determine their additional requirements, if any. Any additional state requirements should be documented in the SPCC Plan.

1.5.1.2 EPA Requirements of SPCC Plans

The SPCC Plan is a written, site-specific document describing how a facility's operation complies with 40 CFR 112. The purpose of the plan is to specify procedures, methods, and equipment to prevent and control spills. The SPCC Plan must describe discharge prevention structures, such as secondary containment; proper operation and maintenance at the facility; adequate training of facility personnel; and spill response procedures. The requirements for SPCC Plans (40 CFR 112.7) include:

- Plan review log
- Full management approval and commitment of resources
- Description of physical layout of facility, including oil storage, drainage and containment features, and locations of spill response materials
- Detailed facility diagram showing location and contents of each container, tanks, oil-filled equipment, buried tanks managed under UST regulations, transfer stations, and piping
- Routine operational procedures to prevent spills
- Procedures to respond to spills, including contact list, waste disposal procedures, spill reporting requirements (unless an FRP under 40 CFR 112.20 is in place)
- Evaluation of potential equipment failures and direction, rate of flow, and total quantity of oil that could be discharged

- Description of general secondary containment features (for example, facility stormwater drainage), including design and operating procedures
- Bulk storage container management, including contents, sized secondary containment, management and drainage of diked areas, integrity testing of containers, engineering controls such as high-level shutoff devices and liquid level alarm devices
- Inspections and testing of equipment
- Training
- Security
- Facility tank car and tank truck loading and unloading rack procedures
- Description of facility transfer operations, piping management, pumping, and facility process
- Requirements for mobile and portable containers
- Requirements for piping and piping supports
- SPCC Plan review and amendment requirements and recordkeeping requirements
- Professional certification

EPA has published the *SPCC Guide for Regional Inspectors,* which addresses what should be in an SPCC Plan. See *Section 1.10, for more information*.

1.5.1.3 SPCC Plan Certification

The original SPCC Plan developed for a facility and subsequent technical amendments must be reviewed and certified by a Professional Engineer (PE) licensed in the state where the facility is located. The SPCC Plan must be revised whenever a change occurs in facility design, construction, operation, or maintenance that affects the likelihood of an oil release. For example, if you add new storage tanks, remove tanks, modify existing piping systems, or relocate loading racks, the SPCC Plan must be revised and recertified. *Exhibit 1–2* lists additional SPCC Plan requirements.

EXHIBIT 1–2
SPCC Plan Requirements

- Be kept on-site.
- Describe training for all employees involved in oil-handling operations.
- Be certified by a registered Professional Engineer (PE).
- Provide a site map showing oil containers, equipment, and pipelines.
- Conform with all SPCC requirements in 40 CFR 112.
- Include inspection, testing procedures, and results.
- Discuss spill prevention practices.
- Discuss spill history.
- Illustrate the direction of flow in the event of a major spill or rupture.
- Be reviewed every 5 years by management.
- Be amended and recertified by a PE for technical modifications.

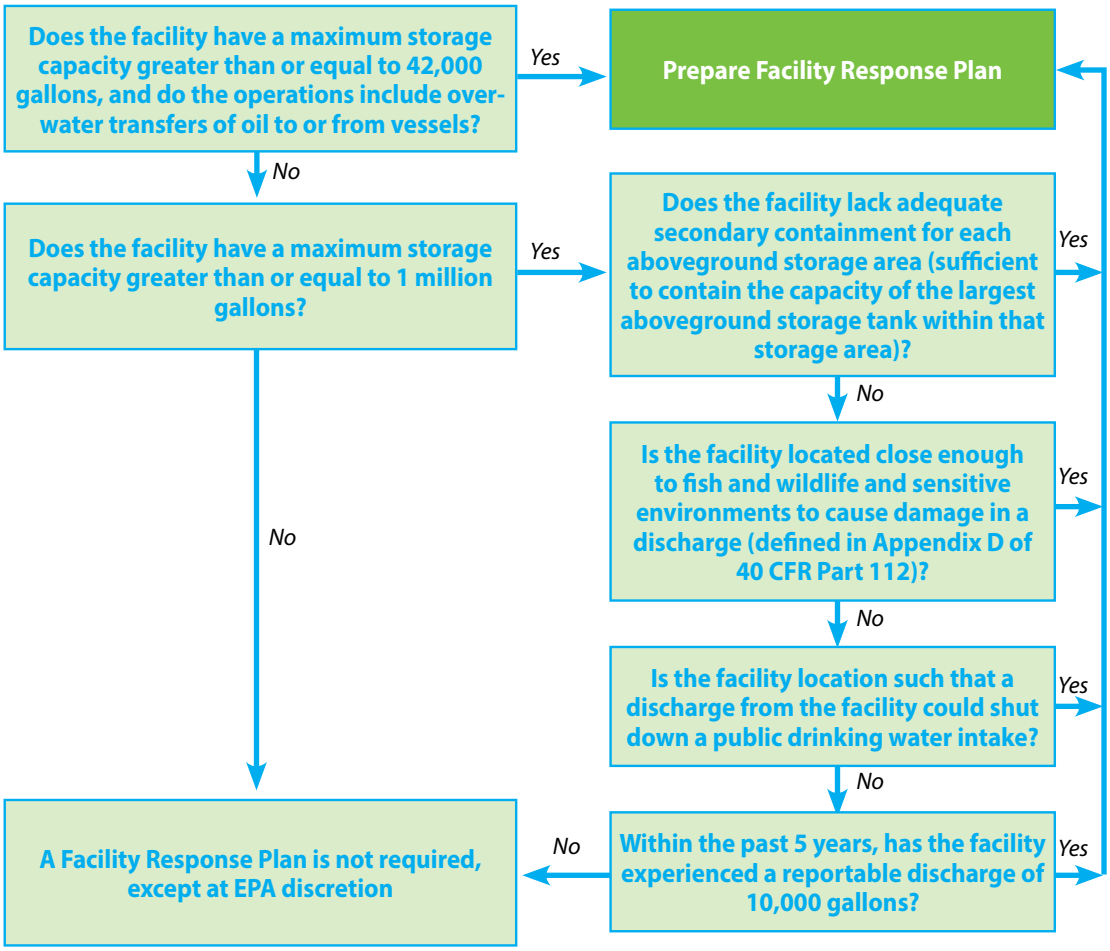
A documented review of the plan must occur every 5 years. Documentation of the review can be performed by the facility and does not necessarily require a licensed PE. However, a PE certification is required if there are technical amendments to the SPCC Plan as an outcome of the review. Administrative changes to the plan don't need to be certified.

A facility may self-certify the SPCC Plan under certain circumstances, such as having all on-site oil storage capacity in containers or tanks less than 5,000 gallons or a facility with an infrequent spill history and low total storage capacity. Specifics are found at 40 CFR 112.6; some states do not allow self-certifications, so check with your states.

1.5.1.4 Does Your Facility Need an EPA Facility Response Plan?

In response to OPA 90, EPA requires an FRP for fuel storage tanks based on worst-case oil discharge scenarios. According to 40 CFR 112.20(f), your facility needs to prepare an FRP if it is either a **substantial harm facility** or a **significant and substantial harm facility** (as defined in *Appendix 1-2*). Refer to *Exhibit 1–3* to determine if your facility is required to prepare an FRP. If your facility is required to prepare an FRP, it must be submitted to the appropriate regional EPA office. If you do not need to prepare an FRP, you must complete the certification in *Appendix 1-2* and include it in your SPCC Plan or Integrated Contingency Plan.

EXHIBIT 1–3
Facility Response Plan Preparation Requirements



1.5.1.5 Requirements of EPA Facility Response Plan

An EPA FRP requires that you have personnel and equipment available, by contract or other means, to remove a worst-case oil discharge. The plan must include descriptions of the training, equipment testing, unannounced drills, self-inspection reviews, and response actions to be carried out. It also must include:

- Immediate source control and containment measures
- Capabilities and duties of response personnel
- Information to give to response personnel if there is a spill
- Description of response equipment and location

The FRP also covers evacuation plans, drainage plan diagrams, hazard evaluations, worst-case scenarios, discharge detection systems, and security systems (see 40 CFR 112.20 for more detail).

1.5.2 Marine Facilities that Transfer Fuel to and from Vessels

The USCG regulates vessels, deepwater ports, and the transfer of oil or hazardous material in bulk to and from vessels. The MTR facility rules in 33 CFR 154 apply to onshore or offshore facilities that accommodate vessels with capacities of 250 barrels (about 10,500 gallons) or more. Additional regulations for transferring oil and hazardous materials between vessels and facilities are in 33 CFR 156.

1.5.2.1 Does Your Facility Need a USCG MTR Facility Response Plan?

Your facility needs an MTR FRP if it has pipelines or hoses to transfer fuel to or from barges or ships. This includes permanent and mobile waterfront facilities (for example, tank cars and tank trucks). It also includes facilities that the Captain of the Port (COTP) determines may pose substantial harm to the environment by discharging oil into navigable waters or onto shorelines (see *Appendix 1-2*). *Exhibit 1–4* lists some of the MTR FRP requirements.

You should routinely inspect response equipment, such as containment booms, skimmers, and vessels and keep records of the inspection. If your facility elects to hire an oil spill removal organization (OSRO) to provide emergency resources, the contract must be referenced in the FRP, and it needs to identify the OSRO's committed personnel and equipment available and response times. Note that facilities that could reasonably be expected to cause significant and substantial harm to the environment and non-inland facilities that handle **Group I through IV petroleum oils** must be able to provide aerial surveillance tracking of the spilled oil slick should there be a spill. In addition, those facilities storing or handling Group I through IV petroleum oils must provide dispersant response, firefighting, and shoreline cleanup resources or OSROs as described in the FRP. You need to review your MTR FRP annually and submit updated plans to the COTP every 5 years and when there are substantial changes to the facility's configuration.

EXHIBIT 1–4
MTR Facility Response Plan Requirements

- Identify a QI and an alternate person who is familiar with the FRP and who can be reached 24 hours a day.
- Include a prioritized list of people to notify if there is an oil spill.
- Contain spill mitigation procedures (from the most probable discharge scenario to the worst-case discharge scenario). The procedures must detail the responsibilities of facility personnel by job title.
- Describe response activities, including your plan to have personnel begin a response effort and supervise response resources until a qualified person arrives.
- List environmentally and economically sensitive areas and the personnel and equipment available to protect these areas.
- Include disposal plans to handle all recovered oil and contaminated debris from a spill.
- Contain other items, such as training and drill procedures, list of contacts, available response equipment, communication plans, operations-related information, and plan review and update procedures.

Along with an MTR FRP, you also must have an oil and hazardous material operations manual. The operations manual describes your operating procedures and how your facility meets the equipment requirements outlined in 33 CFR 154 and 156, including:

- Types of products you transfer, their hazards, and procedures for transferring products
- Names and phone numbers for emergency personnel
- Emergency shutdown systems, communication systems, containment equipment, and firefighting equipment

Your operations manual needs to be submitted to the COTP. After review and acceptance by the COTP, a certificate indicating USCG approval (called a Certificate of Adequacy) needs to be included in the manual. For complete information, see 33 CFR 154 Subpart B.

1.5.2.2 Preventive Booming for Marine Transfers

A boom is a temporary floating barrier used to contain an oil spill. Sometimes **booming** is used to prevent a spill from spreading uncontrollably (such as when fuel is being transferred from one vessel to another). This is called prebooming or preventive booming.

No federal regulations require preventive booming, but deploying booms and other oil recovery devices after a discharge is required as described in your response plans and applicable interagency plans, such as Regional Contingency Plans and Area Contingency Plans. DLA Energy practices preventive booming when required to do so by state or local laws and according to the following "do not" guidelines:

- Do not boom during transfers of **non-persistent fuels** (highly volatile), such as gasoline, unless ordered by the USCG. (Although **dispersion** is safer than booming, you can boom very small amounts if there is enough fire equipment. Only boom persistent, **heavy-end** or high-flashpoint products.)

Don't Forget...

You should always boom to protect environmentally sensitive areas that could be hurt by a spill from your facility according to state or local laws and the "do not" guidelines.

- Do not use fixed booms in swift currents (1.5 knots or greater) where fuel is deflected over the top or under.
- Do not boom in situations you think are unsafe.

Some states (such as New Jersey and California) have laws requiring prebooming in certain situations. For example, in California, you must boom before beginning a marine fuel transfer and completely encircle water near any parts of the vessel or dock where oil may spill, as required by the California Department of Fish and Game, Office of Spill Prevention and Response (Title 14 California Code of Regulations, Sections 800 through 845). The USCG COTP may require prebooming in your location. Check with your local USCG and other state and local agencies for their requirements.

1.5.3 Onshore Pipelines

In response to OPA 90, DOT published response plan requirements for onshore pipelines through its **Pipeline and Hazardous Materials Safety Administration (PHMSA)** Office of Pipeline Safety. DOT regulates the transportation of natural gas, petroleum, and other hazardous materials by pipeline, tank trucks, and railcars. The requirements in 49 CFR 194 apply to onshore pipeline facilities (sometimes called transportation-related facilities) consisting of any equipment, facility, or building used in the transport of oil. For instance, this includes the pipeline, pumps, delivery stations, and **breakout tanks**.

In addition, refer to *Chapter 5, Piping and Pipelines* for information about requirements for pipeline operation, maintenance manuals, and public awareness programs.

1.5.3.1 Does Your Facility Need a PHMSA Pipeline Response Plan?

Every onshore pipeline facility needs to prepare a Pipeline Response Plan unless the pipelines have an outside nominal diameter of less than 6 inches, are less than 10 miles long, *and*:

- You have not had a release of over 1,000 barrels in the past 5 years.
- You have not had at least two reportable releases in the past 5 years.
- You meet specific requirements for electric-resistance-welded pipe.
- You are not near or are unlikely to adversely affect navigable waters, public drinking water intakes, or environmentally sensitive areas.

Your initial Pipeline Response Plan must be submitted to PHMSA or your state agency if they require greater spill protection than the DOT (see 49 CFR 194 for more detail).

Exhibit 1–5 lists a few of the PHMSA Pipeline Response Plan requirements.

EXHIBIT 1–5
PHMSA Pipeline Response Plan Requirements

- List procedures, resources, and equipment for responding to a worst-case spill (including contractors, if any, that you expect to play a role in response activities).
- Include training and equipment testing procedures and types of drills.
- List names, addresses, and phone numbers of your QI and responsible regulatory agencies.
- Describe immediate notification procedures.
- Include methods of detecting spills and cleanup procedures.
- Review and update plans at least every 5 years.

1.6 Other Response Plans

In addition to OPA 90, other regulations require spill response plans. The other plans applicable to fuel facilities may consist of:

- Clean Air Act (CAA) Risk Management Plans (RMPs) to prevent accidental releases of dangerous chemicals
- Contingency plans for hazardous waste generators
- SWPPPs for runoff control
- DOT plans for transporting fuel on roadways and railroads

These response plans are summarized in this chapter. Federal agencies must give proper consideration to the environment prior to undertaking major actions that could significantly affect the environment (such as construction, repair, maintenance, operations, training, testing, and contract conditions). The **National Environmental Policy Act (NEPA)** requires federal agencies to integrate environmental reviews into their project planning and decision-making processes. Refer to *Chapter 13, NEPA Process and Resource Planning*, for more information about the NEPA process and cultural and natural resource planning.

1.6.1 Risk Management Plans

The CAA Amendments of 1990 Section 112(r) established the chemical accident prevention provisions and EPA-published, corresponding regulations in 40 CFR 68, generally known as the RMP. These rules apply to a facility that stores or uses greater than a specified **threshold quantity (TQ)** of 1 of 77 air toxic or 63 flammable chemicals on the **regulated substances** list, regardless of the facility size.

Flammable substances *used as fuel or held for sale as fuel at a retail facility* are not subject to this regulation. However, flammable fuels used as a feedstock or held for sale as fuel at wholesale distribution facilities and bulk storage terminals are still covered. A retail facility is a facility where more than half of the income is obtained from direct sales to end users or where more than half of the fuel sold, by volume, is sold through a cylinder exchange program.

1.6.1.1 Does Your Facility Need a Risk Management Plan?

The type and quantity of chemicals that you handle will determine whether you must report them. For example, if you have the following chemicals in excess of the quantities shown in *Exhibit 1–6* and the propane is not used as fuel, then you must develop and implement a risk management program.

EXHIBIT 1–6
Select Chemicals and Threshold Quantities from 40 CFR 68.130

Chemical	Threshold Quantity
Propane	10,000 pounds (lb) (a 2,500-gallon water capacity tank)
Chlorine	2,500 lb
Ammonia (anhydrous)	10,000 lb
Hydrazine	15,000 lb

Note that this isn't the complete list, and the listed chemicals may be present in a mixture. At least 140 chemicals (and corresponding TQs) that are considered to pose the greatest hazard to public health in the environment in the event of a release are listed in 40 CFR 68.130. You need to check the list of regulated substances and TQs to determine if your facility is required to submit an RMP. You may want to limit the quantity of CAA-regulated substances present on-site to below TQs to avoid having to prepare an RMP. Even if the quantity is limited to below TQs, the *general duty clause* obligations must be satisfied (see further details in *Section 1.6.1.2*).

The intent of this rule is to focus on flammable substances with the potential to be involved in vapor cloud explosions. Flammable substances with a National Fire Protection Association (NFPA) flammability hazard rating of less than 4 are exempt from threshold determinations. Typically, jet fuel and gasoline have an NFPA rating of less than 4, so you don't need to consider these chemicals in your threshold determinations.

Transportation facilities, such as pipelines and associated activities that are already subject to 49 CFR 192, 193, and 195, are exempt from the RMP requirements of the CAA. Transportation containers, such as tank trucks or rail cars carrying regulated substances above TQs, are also exempt while in transit (under active shipping papers). This means the container has to be attached to the truck or locomotive to be exempt. If the container is detached, then EPA considers the container to be serving as a storage container, and an RMP is required.

1.6.1.2 What is the General Duty Clause?

The *general duty clause* is a performance-based authority reflecting the congressional intent that the owners and operators of stationary sources and facilities have the primary responsibility for preventing chemical accidents. Sections 113 and 114 of the CAA provide EPA with the jurisdiction to implement and enforce the *general duty clause*.

Facilities that store and use extremely hazardous substances (EHSs) in quantities less than the TQ must satisfy the general duty clause requirements; however, they are exempt from the RMP regulation. The *general duty clause* in Section 112(r)(1) of the CAA imposes the following primary obligations on the owners and operators of stationary sources who have EHSs at their facilities:

- Identify hazards that may result from accidental releases using appropriate techniques

- Design and maintain a safe facility, taking the steps necessary to prevent releases
- Minimize the consequences of accidental releases that occur

1.6.1.3 Requirements of a Risk Management Plan

Facilities regulated by this rule must implement procedures designed to reduce the possibility of accidental releases of hazardous material. Depending on the risk posed by a given facility, one of three levels of an RMP is required (see 40 CFR 68 for more details). For instance, the RMP may need to include a hazard assessment, prevention program, emergency response program in addition to a 5-year accident history, and a management system to implement the program elements. *Exhibit 1–7* lists additional requirements for an RMP.

Plans for existing facilities were required to be submitted electronically to EPA by June 21, 1999, followed by an updated submission every 5 years, or when your facility becomes subject to these requirements. EPA will make the RMP available to state and local officials involved in planning for and responding to chemical emergencies. The public can see a summary of the non-sensitive information.

Facilities with RMPs must conduct and document compliance audits at least every 3 years. The purpose of the audit is to verify that emergency response procedures and underlying safety programs adequately meet the regulations.

EXHIBIT 1–7
Risk Management Plan Requirements

- Review the facility's chemicals, processes, and equipment.
- Document a 5-year history of releases.
- Develop standard operating procedures.
- Include a hazard assessment of the likelihood of accidental releases.
- Present the potential consequences of releases under worst-case and alternate scenarios.
- Describe an accidental release prevention program.
- Discuss emergency response procedures.
- Describe employee training procedures and safety audits.

1.6.2 Hazardous Waste Contingency Plans

The **Resource Conservation and Recovery Act (RCRA)** requires that if you accumulate hazardous waste on-site at your facility (referred to as being a **generator**), you must establish procedures and take precautions to prevent accidental releases. The regulations for generators in 40 CFR 262 require that both **large quantity generators (LQGs)** and **small quantity generators (SQGs)** of hazardous waste comply with the preparedness and prevention requirements of 40 CFR 262. LQGs also need to comply with contingency plan and emergency procedure regulations. See *Appendix 1-1* for the references to these requirements. **Very small quantity generators (VSQGs)** generate no more than 100 kilograms (kg) of hazardous waste, no more than 1 kg of acute hazardous waste (AHW), and no more than 100 kg of any AHW-contaminated debris in a calendar month. Special requirements for VSQGs are listed in 40 CFR 262.14. VSQGs are not required to meet the emergency planning requirements for hazardous waste (but may be required to have an emergency plan under other regulations).

See *Chapter 7, Hazardous and Recycled Waste*, for more about the requirements for LQGs, SQGs, and VSQGs.

1.6.2.1 Does Your Facility Need a Hazardous Waste Contingency Plan?

LQGs and SQGs are required to prepare for possible emergencies in several ways. For instance, they must have emergency communication systems and equipment for the type of hazardous waste handled. These include:

- A telephone, radio, or alarm system available where hazardous waste is handled to contact facility personnel and request emergency assistance from police, community fire department, or state authorities
- Portable fire extinguisher or fire control equipment
- Water volume and pressure to adequately supply automatic sprinklers, hoses, or sprays
- Spill control equipment (such as absorbent booms and mats, buckets, or mops)
- Decontamination equipment (such as brushes or buckets)

Both LQGs and SQGs are required to have an Emergency Coordinator at the facility or on call (24 hours) to ensure emergency procedures are performed in case of an emergency. Your QI often serves as the Emergency Coordinator for hazardous waste requirements.

LQGs must have a written emergency response plan called a Hazardous Waste Contingency Plan to identify measures to be performed in the event of a fire, explosion, or release of hazardous waste. Refer to *Exhibit 1–8* for a summary of Hazardous Waste Contingency Plan requirements.

Congress was concerned that full regulation of SQGs might be economically burdensome, so it reduced some of the regulatory requirements for SQGs. For example, SQGs are *not* required to prepare a formal written contingency plan but are required to post the following information next where hazardous waste is generated, handled, and stored:

- The name and phone number of the Emergency Coordinator (or QI)
- The telephone number of the fire department
- The location of fire extinguishers, spill control equipment, and alarm systems

EXHIBIT 1–8
Hazardous Waste Contingency Plan Requirements

- Provide information about the type, quantity, and location of hazardous waste generated at the facility.
- List the name and emergency phone numbers of all persons qualified to act as emergency coordinator (usually your QI). This list must be kept up to date.
- Describe the responsibilities of the emergency coordinator (or QI) and response procedures for various emergencies, such as waste spills, fires, and explosions.
- Provide a list and map of emergency, spill control, and decontamination equipment along with a description of the capabilities of such equipment.
- Describe arrangements made with local police, fire departments, hospitals, and contractors along with state and local emergency response teams.
- Include an evacuation plan and procedures.

Copies of the Hazardous Waste Contingency Plan must be submitted to all state and local organizations that could be involved in an emergency action. This includes the fire and police departments, the state and local emergency response teams, and hospitals. You should update the Hazardous Waste Contingency Plan immediately when there are changes to the facility, waste generation, staff, or procedures that affect the plan. The Emergency Coordinator at LQG facilities must also submit an incident report to EPA within 15 days of any hazardous waste spills.

In addition, a quick reference guide of the contingency plan must be submitted by LQGs to local emergency response teams. The quick reference guide must contain the following eight elements:

1. Types and names of hazardous waste and associated hazards
2. Estimated maximum amounts of hazardous wastes
3. Hazardous wastes requiring unique and/or special treatment
4. Map showing where hazardous wastes are generated, accumulated, or treated at the facility
5. Map of facility and surroundings to identify routes of access and evacuation
6. Location of water supply
7. Identification of on-site notification systems
8. Name of Emergency Coordinator(s) or listed staffed position(s) and 24/7 emergency telephone number(s)

The quick reference guide must be updated whenever the contingency plan is amended, and these documents must be submitted to the emergency response teams.

1.6.3 Stormwater Pollution Prevention Plans

Stormwater is rain runoff or snow melt from roofs, roads, and paved areas, including around aboveground storage tanks (ASTs) in containment dikes and other exposed areas. The runoff may pick up pollutants along the way and discharge into nearby waterways. In 1990, EPA began regulating stormwater under the National Pollutant Discharge Elimination System (NPDES) program in 40 CFR 122.26. EPA established the SWPPP requirements to ensure that facilities keep raw materials, products, and wastes from contaminating stormwater runoff.

1.6.3.1 Does Your Facility Need a Stormwater Pollution Prevention Plan?

Certain transportation-related facilities regulated by DOT, such as bulk fuel terminals and pipelines, that have vehicle maintenance shops and equipment-cleaning operations are required to obtain a stormwater permit. See *Chapter 9, Wastewater and Stormwater* for more details on permit requirements. Stormwater discharges from transportation facilities (generally identified by Standard Industrial Classification [SIC] codes 40, 41, 42, 43, 44, 45, and 5171) may be required to prepare an SWPPP. Note that most environmental regulations have migrated from SIC codes to North American Industry Classification System (NAICS) codes; however, the federal stormwater regulations still use SIC codes (40 CFR 122.26). The equivalent NAICS codes are 481, 482, 483, 484, 485, 486, 488, 56211, 71393, 45431, and 4227.

A SWPPP is needed for construction projects that disturb 1 or more acres of land. Examples of disturbing land are clearing, grading, excavating, and stockpiling of soil and fill materials.

Check with your state water quality agency for stormwater management requirements (see *Appendix E* for a list of state contacts). Many state water quality regulations are more stringent than the federal regulations and may require you to prepare a SWPPP.

1.6.3.2 Requirements of a Stormwater Pollution Prevention Plan

The plan must identify a pollution prevention team; identify the facility's potential sources of stormwater pollution; develop and implement **best management practices (BMPs)** to reduce pollutants in stormwater runoff; and develop inspection, monitoring, and maintenance procedures for the selected BMPs.

A description of BMPs or stormwater management controls must be included in the SWPPP. For example, BMPs consist of but are not limited to:

- Keeping the facility in a clean and orderly manner
- Developing a preventive maintenance program for facility equipment to reduce drips and spills
- Minimizing contamination of stormwater from fueling areas by using drains, roofs, and overfill protection
- Using drip pads and absorbent materials for vehicle and equipment maintenance activities
- Inspecting storage areas, cleaning areas, fueling areas, and maintenance areas quarterly
- Training employees on their responsibility for stormwater management
- Identifying spill prevention and response procedures

The SWPPP must include a detailed site map showing facility attributes that affect stormwater. For a more detailed description of SWPPP components, see *Chapter 9, Wastewater and Stormwater.*

1.6.4 Transporting Fuel on Roadways and Railroads

The DOT shipping requirements for hazardous materials in 49 CFR 171 through 180 supplemented these requirements and established spill response planning requirements in 49 CFR 130 for bulk petroleum shipments on highways and railways. The purpose of these requirements is to ensure that personnel are trained, and equipment is available to respond to a spill. DOT wants procedures in place so that notification and cleanup of a spill occur as quickly as possible. It requires one of the following:

- A Basic Response Plan for bulk shipments of petroleum oil (tank trucks, railroad tank cars, or portable tanks) with a capacity of 3,500 gallons or more

-or-

- A Comprehensive Response Plan for bulk shipments of petroleum and non-petroleum oil (such as vegetable oil or turpentine) in packaging equal to or greater than 1,000 barrels or 42,000 gallons

The Basic Response Plan should address spill response procedures, availability of response personnel and equipment, and people and agencies to notify in the event of a spill. The plan must be prepared by the carrier and retained on file at the transporter's dispatch office.

The Comprehensive Response Plan must address the requirements for the basic plan and provide additional information. The Comprehensive Response Plan also needs to:

- Address various spill scenarios and responses, including fire and explosions, and the worst-case discharge of all the contents
- Identify the QI who can be contacted while the shipment is in transit
- Describe training, equipment testing, and unannounced drills for responding to spills

The Comprehensive Response Plan must be submitted by the carrier to the Federal Railroad Administrator for tank cars or to the Federal Highway Administrator for cargo tanks.

In addition to these specific plans, DOT requires that any person shipping hazardous materials (including oils) have emergency response information immediately available at all times (49 CFR 172 Subpart G). This information includes basic description and technical name of the hazardous material, immediate hazards to health, risks of fire or explosion, immediate precautions to take in the event of an accident or incident, immediate methods for handling fires, initial methods for handling spills or leaks in the absence of fire, and preliminary first aid measures. Many shippers and transporters keep the *Emergency Response Guidebook* as a handy reference containing this information. See *Section 1.10, For More Information.*

DOT also requires that any person offering hazardous materials for shipment (that must be placarded) have a written Security Plan (49 CFR 172 Subpart I). Although not specifically an environmental response plan, Security Plans must assess the potential risks associated with hazardous materials, such as flammable liquids, that will be offered for shipment and during shipment and must address measures to keep hazardous materials secure. Information in a Security Plan should include measures that:

- Confirm information provided by job applicants who may have access to hazardous materials
- Address the risk that unauthorized persons may gain access to the hazardous materials
- Address the security risks to the hazardous materials en route from shipment origin to destination

A vulnerability assessment is often conducted while developing the Security Plan to identify potential threats and reduce risks. Employee training and emergency response planning are critical components for effectively addressing security risks.

Did You Know?

The used oil from one oil change can contaminate 1 million gallons of fresh water—a year's supply for 50 people!

1.7 Interagency Response

When a release or spill occurs, DLA Energy or its response contractors, site operations personnel, the local fire and police departments, and the local emergency response personnel provide the first line of defense. If needed, a variety of other agencies stand ready to support, assist, or take over response operations if an incident is beyond local capabilities. The rules in 40 CFR 300, *National Oil and Hazardous Substance Pollution Contingency Plan*, establish a unified interagency command structure for managing responses to releases from federal, state, and local governments that may be activated during spill response actions. This regulation establishes roles and responsibilities for the National Response Center, the National Response Team, the National Strike Force, the Environmental Response Team, Regional Response Teams, area committees, and on-scene coordinators (OSCs). It also defines the objectives, authority, and scope of Federal Contingency Plans, including the National Contingency Plan, Regional Contingency Plans, and Area Contingency Plans. If a spill is reported to the National Response Center (see *Chapter 2, Incident and Spill Reporting*), the OSC determines whether agency involvement is warranted for the cleanup and protection of public health.

1.8 Preliminary Spill Mitigation Strategies

Spilled oil and fuel immediately begin to migrate and weather, breaking down and changing their physical and chemical properties. As these processes occur, the oil threatens water quality, habitat, and aquatic organisms. Preventing oil spills is the best strategy for avoiding potential damage to human health and the environment. The following subsections will help you develop the emergency response procedures needed for the plans previously described in this chapter, and they primarily focus on spills that reach surface waters.

1.8.1 Assessment of Spills

If you have an oil and/or fuel spill from storage tanks, you must begin emergency measures. A quick cleanup can lessen environmental damage and lower total cleanup costs.

The assessment of initial spill conditions serves an important role in developing an effective cleanup strategy. It is important to note the following information when assessing a spill:

- Type and amount of oil and/or fuel spilled
- Behavior of the spilled oil and/or fuel
- Spill trajectories and persistence
- Current and forecast weather

For those spills reaching navigable waters, the following additional information is important:

- Wave and tidal influences
- Shoreline characteristics and resources at risk

As the information above is collected, cleanup strategies can be developed and revised as conditions change to protect resources at risk.

1.8.2 Initial Spill Cleanup

A specific strategy for cleaning up a spill generally depends on how much time has elapsed since the spill. If a spill is discovered in the early stages, when the oil and/or fuel is fresh and concentrated near the source, the focus should be on source control, near-source containment, and removal. Source control may mean, if it is safe to do so, closing the leaking valve, patching a leaking tank, or off-loading the leaking tank to prevent further release. If the oil and/or fuel has already spread from the source and potentially threatens sensitive resources and habitats, the focus should be to minimize the spread of oil and/or fuel through containment, prevention of contact with resources at risk, and protection of resources and habitat most vulnerable to long-term oil and/or fuel impacts. Once oil and/or fuel has impacted the shoreline, the focus should shift to cleaning up the shoreline so that the environmental impact to the shoreline is minimized.

A wide variety of techniques exist for containment and cleanup of oil and/ or fuel spills. For instance, immediate cleanup of spills released to the ground, depending on the quantity spilled, might be best managed by excavation, containerization, and off-site transport and disposal at an approved disposal facility. For larger spills, a cost evaluation between on-site or in situ treatment options versus a "dig and haul" approach may be warranted. *Chapter 8, Assessment and Cleanup* describes assessment and cleanup methods. Many of these remediation techniques are used together to achieve the desired outcome.

Exhibit 1–9 lists common techniques used in immediate aquatic oil spill cleanup. *Appendix 1-3* provides a detailed description of each of the common containment and cleanup techniques for spills into water. The use of dispersants and other chemical and biological agents to mitigate oil spills on navigable waters and adjoining shorelines is regulated by the **National Oil and Hazardous Substance Pollution Contingency Plan (NCP or OHSPCP)** in 40 CFR 300 Subpart J, *Use of Dispersants and Other Chemicals*. The EPA maintains a list of dispersants and other chemical or bioremediation products called the **National Contingency Plan (NCP) Product Schedule**. Before using any dispersant or chemical or biological product, be sure it is on the schedule and that you have approval from the federal OSC. **Sorbents** are not included on the schedule and do not need OSC approval.

EXHIBIT 1–9
Common Techniques Used in Oil Spill Cleanup in an Aquatic Environment

Type	Technique
Natural Methods	Natural Attenuation Biodegradation Evaporation Weathering
Physical Methods	Booming Skimming Raking Wiping Pressure washing Tilling In situ burning Sorbents
Chemical Methods	Dispersants or surfactants Demulsifiers Solidifiers Surface film chemicals Biostimulation Oxidation

1.8.3 Disposal of Oil and Oily Debris

Don't wait until an emergency to decide where to send recovered product and debris after a spill. Plan this in advance and include this in your Emergency Response Plan. Some options might include:

- Recycling: Recycling is an excellent disposal option. You can blend waste oils with other fuel oils for burning in asphalt and similar plants.
- In situ burning: In some cases, the best solution is to burn the oil and associated debris in place. Your state or local agency must approve this option.
- Incineration: Although expensive, incineration completely destroys oily wastes. This is done at a commercial treatment facility.
- Landfilling: Restrictions on landfilling free liquids make this option unattractive. Also, transportation and **solidification** costs make landfilling expensive.
- Landfarming: You can spread contaminated soil over large areas of land under controlled conditions and let biodegradation occur. This is a long-term process but an economical one. This may not work for large spills, as a lot of land is required. Your state or local agency may require they approve this option.

1.8.4 Are Oil and Oily Debris Considered Hazardous Waste?

The oil or oily debris you collect for disposal is not listed as a hazardous waste under federal laws and regulations. However, if it is characteristically hazardous according to test results from the **Toxicity Characteristic Leaching Procedure**

(TCLP), it is subject to the hazardous waste requirements found in 40 CFR 261–262 when being disposed instead of recycled (see *Chapter 7, Hazardous and Recycled Waste*).

Regardless of the federal requirements, some states, such as California, have declared waste or used oil and oily debris to be hazardous waste. Be sure to check your state requirements.

1.9 State Requirements

State Requirements

Some states have additional requirements for spill prevention and response that address smaller quantities of oils and oils in slightly different situations or include hazardous materials. For example:

- Washington State requires an operations manual (for Class 1 and 2 facilities), a contingency plan (for Class 1 facilities), an oil transfer response plan (for Class 2 facilities), and a prevention plan (Class 1 facilities) that address various aspects of spill prevention and contingency if a facility is located near a waterway and transfers petroleum products to or from a pipeline or vessel (Washington Administrative Code 173–180 through 184). Washington State also requires a preload or cargo transfer plan and 24-hour notice before a 100-gallon or more transfer from shore to a vessel, with some exceptions.
- Florida has a separate Bureau of Petroleum Storage Systems under the Department of Environmental Protection and has specific contingency plan requirements. These include annual spill response training and annual review of the contingency plan, specific regulations for petroleum contact water (62–740 Florida Administrative Code), AST inspections be performed monthly, and the time between inspections cannot exceed 35 days.
- Michigan requires additional information in a Pollution Incident Prevention Plan (PIPP) under the Part 5 rules (Michigan Administrative Code R324.2001–2009). Required PIPP information includes a list of polluting materials typically on-site during the previous 12 months in quantities above threshold management quantities and procedures for state notification when the PIPP is complete or updated.
- New Jersey has the Discharge Prevention Program, which includes discharge prevention, containment, and countermeasures plans and discharge cleanup and removal plans; for certain facilities, both plans must be reviewed by the state. Most program requirements apply only to facilities that store 20,000 gallons or more of New Jersey-regulated hazardous substances excluding petroleum products or 200,000 gallons of regulated hazardous substances including petroleum products.
- In Texas, the Texas General Land Office (TGLO) is the lead state agency for oil spill prevention and response planning. Coastal facilities must submit a Discharge Prevention and Response Certificate application to the TGLO. A Texas Oil Spill Planning and Response Toolkit is available. Most other environmental requirements are regulated by the Texas Commission on Environmental Quality.

- California requires additional information in the SPCC Plan for facilities that have a single tank exceeding 20,000 gallons or a cumulative storage capacity greater than 100,000 gallons. These facilities must also prepare a storage statement that identifies a contact for the facility and the location, size, age, and content of each tank that exceeds 10,000 gallons in capacity and holds a substance that is at least 5% petroleum. This statement must be submitted to the local Water Quality Control Board every 2 years on or before July 1 (California Health and Safety Codes, Chapter 6.67, Section 25270).

In addition, many states require a spill response plan under their state site remediation regulations. Check with your state and local agencies for their requirements.

For More Information

1.10 For More Information

For Information On…	See…
Spill Plan-Related Agencies	
EPA's oil spill program and resources	*www.epa.gov/oilspill*
EPA's Office of Emergency Management for oil, EPCRA, and RMPs	*www.epa.gov/rmp*
EPA's Office of Emergency Management – Response and Cleanup Technologies	*www2.epa.gov/emergency–response/epas–response–techniques*
DOT's Office of Pipeline and Hazardous Material Safety Administration	(202) 366–4433 *www.phmsa.dot.gov*
Hazardous Materials Information Center	(800) 467–4922 *https://www.phmsa.dot.gov/about-phmsa/offices/office-hazardous-materials-safety*
EPA's Office of Solid Waste and Hazardous Waste Contingency Plans	*www.epa.gov/osw*
The U.S. National Response Team	*https://nrt.org/*
U.S. Coast Guard	*www.uscg.mil*
EPA's Office of Wastewater Management and SWPPPs	*www.epa.gov/owm*
National Oceanic and Atmospheric Administration (NOAA) Office of Restoration and Response	*http://response.restoration.noaa.gov*
Documents and References	
Contents of the DOT Emergency Response Guidebook	*https://www.phmsa.dot.gov/sites/phmsa.dot.gov/files/docs/ERG2016.pdf*
Spanish version of the DOT Emergency Response Guidebook	*https://www.phmsa.dot.gov/sites/phmsa.dot.gov/files/docs/2016GRE.pdf*
SPCC Guide for Regional Inspectors	*www.epa.gov/oil-spills-prevention-and-preparedness-regulations spcc_guidance.htm*

For Information On…	See…
The National Response Team's Integrated Contingency Plan Guidance	61 FR 28642, June 5, 1996, www.gpo.gov/fdsys/pkg/FR-1996-06-05/pdf/96-13712.pdf
NCP Product Schedule – list of dispersants and chemical and biological agents for oil spill mitigation	(202) 260–2342 https://www.epa.gov/emergency-response/national-contingency-plan-subpart-j#schedule
NOAA shoreline emergency response guidelines and publications	http://response.restoration.noaa.gov/publications
NAICS codes	www.census.gov/eos/www/naics

1.11 Action Items

Action Items

Item	Date Started	Date Completed	N/A	Comment(s)
Prepare and update all Emergency Response Plans applicable to your facility.			☐	
Conduct training and practice drills, or your response plan is useless.			☐	
Define the roles of facility response teams, the QI, outside contractors, and local response agencies.			☐	
Orient local response agencies (such as fire department, police, local responders) to your facility and consider giving tours to improve familiarity with your site.			☐	
Make arrangements with an emergency response contractor ahead of time.			☐	
Maintain an inventory of spill response equipment and safety gear (absorbent brooms, buckets, mops, rags, shovels, gloves, boots).			☐	
Routinely check the operations of emergency response equipment (fire extinguishers, alarms, radios, valves).			☐	

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CHAPTER 1
Appendices

Appendix 1–1 Federal Emergency Planning Requirements

Appendix 1–2 Certification for Facilities that Do Not Pose Substantial Harm

Appendix 1–3 Common Cleanup Techniques for Oil Spills into Water

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Appendix 1-1: Federal Emergency Planning Requirements

Agency/Plan Required[1]	Regulation	Media Affected	Facilities Affected	Requirements	Deadlines
U.S. Environmental Protection Agency (EPA)					
RCRA Preparedness and Prevention and Contingency Plan	40 CFR 262.16(b)(8) and (9) 40 CFR 262 Subpart M 40 CFR 279.52(b)	On-site and off-site air, water, and soil	Large and small quantity generators; owners and operators of hazardous waste treatment, storage, and disposal facilities; and facilities that process or re-refine used oil	Plan must minimize hazards to human health and the environment due to explosions, fires, or unplanned releases of hazardous materials to air, surface waters, or soil	Due upon facility startup; must be reviewed annually and updated upon facility or RCRA permit modification
Spill Prevention, Control, and Countermeasure (SPCC) Plan	40 CFR 112.7	On-site and off-site surface water	Petroleum storage facilities that could reasonably be expected to discharge oil into navigable waters or shorelines with oil storage capacity exceeding certain thresholds	SPCC Plan must describe discharge prevention structure, secondary containment, proper operation and maintenance, and personnel training	Must be updated every 5 years or within 6 months of when significant facility changes occur
Stormwater Pollution Prevention Plan (SWPPP)	40 CFR 122.26 Stormwater permits	Stormwater runoff	Applies to construction projects disturbing land greater than 1 acre; Also pertains to certain facilities associated with industrial activity, including bulk terminals with maintenance shops	Plan must describe potential pollution sources that may come in contact with stormwater, good housekeeping measures, training, and response procedures; sampling and analysis may be required; map of drainage areas, erosion, storm sewers, and tank material handling required	Plan due according to stormwater permit conditions
Facility Response Plan (FRP)	40 CFR 112.20–112.21	On-site and off-site surface water	Petroleum storage facilities that transfer fuels over water to or from vessels and have a total oil storage capacity greater than or equal to 42,000 gallons OR have a total oil storage capacity greater than 1 million gallons (with some exceptions)	FRP must describe how the facility will respond to a spill, evaluate equipment and personnel available to respond to releases, and train response teams or contract for response services; it must estimate worst-case releases and include a history of releases	Must be updated within 60 days of when significant facility changes occur
Clean Air Act Risk Management Plan (RMP)	40 CFR Part 68.150	Potential accidental releases into ambient air	Facilities that manufacture, process, use, store, or otherwise handle certain substances in amounts that exceed threshold quantities	Plan must include a list of major hazards associated with the facility, summaries of off-site release scenarios, 5-year significant accidental release history, summary of the facility's emergency response program, a registration form, and certification that the plan is accurate and complete	Initial submission was due by June 21, 1999; must be updated every 5 years or within 6 months after process changes occur

Agency/Plan Required[1]	Regulation	Media Affected	Facilities Affected	Requirements	Deadlines
U.S. Coast Guard (USCG)					
Facility Response Plan	33 CFR 154,Subpart F	Off-site water	Marine transportation facilities that could cause substantial or significant harm to the environment by discharging oil into navigable waters of the U.S. or adjoining shorelines	Similar to the EPA FRP requirements	Initial submittal due when facility is designated as a substantial harm facility by the Captain of the Port (COTP); plans must be reviewed every year; updates necessary within 30 days when facility changes affect the plan
Occupational Safety and Health Administration (OSHA)					
Hazardous waste operations and emergency response plan	29 CFR 1910.120	On-site occupational exposure hazards	Hazardous waste cleanup operations and emergency response operations for releases of hazardous substances	Employers must develop an emergency response plan for employees that could be exposed to safety or health hazards	Must be completed before an emergency response action
Process safety standard and emergency action plan (EAP)	29 CFR 1910.119 29 CFR 1910.38(a)	On-site occupational exposure hazards	Facilities that use certain toxic, reactive, flammable, or explosive chemicals	Employers must perform a process hazard analysis for all covered processes and provide this information to employees; they also must establish and implement an EAP that outlines emergency evacuation procedures, emergency response actions, rescue and medical duties, emergency reporting procedures, and contact names	Initial requirement was due to be completed by May 26, 1997; must be updated every 5 years or upon process changes
Department of Interior Bureau of Safety and Environmental Enforcement (BSEE)					
Oil Spill Response Plan (OSRP)	30 CFR 254	Off-site water	Offshore facilities that explore, drill, produce, store, process, or transport oil	Plan must contain information on oil spill trajectories and plans for protecting environmentally sensitive areas that could be affected; describe available response equipment inspection, testing, and maintenance procedures	Initial submission was due by Feb 19, 1993; plans must be reviewed every 2 years; updates due within 15 days when changes at the facility affect the plan

Agency/Plan Required[1]	Regulation	Media Affected	Facilities Affected	Requirements	Deadlines
U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration (PHMSA)					
Pipeline Response Plan	49 CFR 194	On-site and off-site soil	Onshore oil pipelines that could cause substantial or significant harm to the environment by discharging oil into navigable waters of the U.S. or adjoining shorelines	Plan must address notification procedures, spill detection and mitigation steps, response organization contact, response activities and resources, training procedures, equipment testing, and response team drills	Initial submission was due by Feb 19, 1993; plans must be reviewed every 5 years; updates due within 30 days of when significant changes at the facility affect the plan
Basic Response Plan and Comprehensive Response Plan	49 CFR 130	Off-site air, water, and soil	Highway and railway transportation (and associated loading and unloading) of petroleum and non-petroleum oil in bulk	Facilities offering for transport greater than (>) 3,500 gallons of petroleum, and transporters must have a basic plan describing personnel, equipment, and spill responses; comprehensive response plan for transporting petroleum and non-petroleum oil >42,000 gallons must contain additional information	Basic Plan must be retained at facility offering to transport oil and transporter's dispatch offices and modified when needed; Comprehensive Response Plan must be retained and submitted to the Federal Railroad Administrator or Federal Highway Administrator as appropriate
Hazardous Material Security Plan	49 CFR 172, Subpart I	Off-site air, water, and soil	Each facility that offers certain hazardous materials for transportation or transports in commerce	Take action to reduce security risks by reviewing site conditions, loading and shipment procedures, and en route security	Initial development was due by Sep 25, 2003. Revise and update as necessary

[1]For releases of oil and non-radiological hazardous substances only. Emergency planning requirements of the Superfund Amendments and Reauthorization Act (SARA) are not included because they apply to local and state agencies, not individual facilities.

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Appendix 1-2: Certification for Facilities that Do Not Pose Substantial Harm[1]

Facility Name:

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 (calculated using the appropriate formula in Attachment C–III Appendix C,40 CFR 112 or a comparable formula[2]) 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 (Appendix E of 40 CFR Part 112 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 (calculated using the appropriate formula (Attachment C–III, Appendix C, 40 CFR 112 or a comparable formula[2]) such that a discharge from the facility would shut down a public drinking water intake[3]?

   Yes ☐ No ☐

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

   Yes ☐ No ☐

Certification

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

Name (please type or print) | Signature

Title | Date

[1] To be filed in the SPCC Plan or Integrated Contingency Plan (from 40 CFR 112 Appendix C, Attachment CII).

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

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

Appendix 1-2: Certification for Facilities that Do Not Pose Substantial Harm (continued)

Substantial Harm Versus Significant and Substantial Harm

Substantial Harm Facility (Non-Transportation-Related Facility) (40 CFR 112.20)

Your facility is a Substantial Harm Facility if it:

- Transfers oil over water and has total oil storage capacity of at least 42,000 gallons or
- Has total oil storage capacity of at least 1 million gallons and one of the following is true:
  - Your secondary containment systems are inadequate or
  - You are close enough to fish and wildlife and sensitive environments to cause damage in a discharge or
  - You are close enough to a public drinking water intake to cause a shut–down in a discharge or
  - You had a reportable spill of at least 10,000 gallons in the past 5 years

As a Substantial Harm Facility, you should have prepared a Facility Response Plan by February 18, 1993, and been in compliance by August 18, 1993. Without this plan, your facility cannot store, handle, or transport oil.

Significant and Substantial Harm Facility (Non-Transportation-Related Facility) (40 CFR 112.20)

Your facility is a Significant and Substantial Harm Facility if it meets the above criteria for a Substantial Harm Facility and EPA decides you are also a Significant and Substantial Harm Facility after reviewing:

- Age of oil storage tanks
- Frequency of past spills at your facility
- Proximity to navigable waters
- Other information, such as the impact a spill from your facility could have on public health

As a pre-existing Significant and Substantial Harm facility, you should have submitted a Facility Response Plan to EPA by February 19, 1995, and officially satisfied EPA that your site has the personnel and equipment to address a worst-case discharge into navigable waters.

Substantial Harm Facility (Marine Transportation-Related Facility) (33 CFR 154)

Your facility is a substantial harm facility if you transfer oil over water in bulk to or from a:

- **Onshore facility** capable of transferring oil to vessels with capacity of 250 barrels (10,500 gallons) or more and deepwater ports
- Mobile facilities capable of transferring oil to or from a vessel with capacity of 250 barrels or more
- A marine-transportation facility designated by the COTP

As a Substantial Harm Marine Transportation-Related Facility, you should submit your Response Plan to the COTP.

Significant and Substantial Harm Facility (Marine Transportation-Related Facility) (33 CFR 154)

The COTP may designate your facility as a Significant and Substantial Harm Marine Transportation-Related Facility based on review of the:

- Type and quantity of oil handled in bulk
- Facility spill history
- Facility age
- Proximity to water supply intake structures

- Proximity to fish and wildlife and sensitive environments

As a Significant and Substantial Harm Marine Facility, your Response Plan must be reviewed and approved by the COTP.

Significant and Substantial Harm Pipeline (49 CFR 194)

A pipeline section can be expected to cause a significant and substantial harm if the pipeline is greater than 6 inches outer diameter and 10 miles long and the line section:

- Released more than 1,000 barrels in the past 5 years or
- Had two or more reportable releases in the past 5 years or
- Is made of electric-resistance welded pipe under specified stress levels or
- Is located within 5 miles of public drinking water intakes or
- Is located within 1 mile of environmentally sensitive areas

Significant and substantial harm pipeline sections must submit separate statements with their Pipeline Response Plan for review and approval by DOT PHMSA.

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Appendix 1-3: Common Cleanup Techniques for Oil Spills into Water

Technique	Description	When to Use
Natural Recovery	No action is taken. Natural processes are allowed to reduce levels of contamination. Long-term monitoring is typically performed to evaluate recovery.	When natural removal rates are fast, contamination is light when cleanup will do more harm than good.
Booming	A floating, physical barrier placed on the water to contain, divert, deflect, or exclude oil.	When preventing oil from contacting sensitive areas. Can be used to assist in removal of floating oil. Not typically used for gasoline spills because of the threat of fire, explosion, or inhalation hazards.
Skimming	Device is placed at the oil and water interface to recover (skim) oil from the water's surface.	When sufficient oil is accessible. Not typically used for gasoline spills because of the threat of fire, explosion, or inhalation hazards.
Barriers and Berms	A physical barrier (other than a boom) placed across an area to prevent oil from passing.	When oil threatens sensitive habitat and other barrier options are not feasible.
Physical Herding	Using water jets, water or air hoses, and propeller wash to dislodge trapped oil and divert to containment and recovery area.	Low current or stagnant water body to herd oil toward recovery devices. High current to divert floating current away from sensitive area.
Manual Oil Removal	Remove surface oil using hands, rakes, shovels, buckets, and scrappers and place in containers.	For stranded oil or heavy oils on water or submerged on the bottom that have formed solid masses that can be picked up manually.
Mechanical Oil Removal	Oil and oiled sediments are collected and removed using mechanical equipment, such as backhoes, graders, and bulldozers.	When large amount of oiled materials must be removed.
Sorbents	Sorbent materials are placed on floating oil or water surface, allowing it to absorb oil, or are used to wipe or dab stranded oil.	Oil is free floating close to shore or stranded onshore. Selection of sorbent varies by oil type.
Vacuum	A vacuum unit is attached via a suction head that recovers free oil.	Oil is pooled against a shoreline concentrating on trenches or trapped in vegetation.
Debris Removal	Manual or mechanical debris removal from the shore or water surface.	Debris is heavily contaminated and provides a potential source of secondary oil release; a visual problem; a source of contamination; other resources in the area (likely to clog skimmers); could cause safety problems to responders.
Sediment Reworking and Tilling	Oiled sediments are tilled and disked using mechanical equipment or manual tools.	On sand to gravel beaches with subsurface oil, where sediment removal is not feasible. Sand beaches when sediment is stained or lightly oiled.
Vegetation Cutting and Removal	Oiled vegetation is cut and picked up and bagged for disposal.	The risk of oiled vegetation contaminating wildlife is greater than the value of the vegetation that is to be cut and there is no less destructive method that removes or reduces the risk to acceptable levels.
Flooding	A perforated pipe or hose placed above the oil shore or bank through which water is pumped and allowed to flow down slope to the water's edge where any oil released is trapped by booms and recovered by skimmers or other equipment.	Heavily oil areas where the oil is still fluid and adheres loosely to the ground and where oil has penetrated into gravel sediments.

Technique	Description	When to Use
Low and High Pressure Ambient and Hot Water Flushing	Water is sprayed at low and high pressures from handheld hoses to lift oil from the ground and float it to the water's edges for recovery. Can use hot water to increase effectiveness.	When oil is stranded onshore or floating in shallow intertidal areas.
Steam Cleaning	Steam or very hot water sprayed with handheld wands at high pressure to remove oil from solid surfaces or artificial structures.	Heavy oil residue must be removed for aesthetic reasons, when hot water flushing is not effective, and no living resources are present.
Sand Blasting	Use of sand blasting equipment to remove heavy residual oil from solid surfaces or man-made structures.	Heavy oil residue must be cleaned for aesthetic reasons, and when steam cleaning is not effective.
Dispersant	Specially formulated products sprayed on oil to chemically disperse (break into small particles) the oil into the water column.	To reduce the impact to sensitive shoreline habitats and animals that use the water surface.
Emulsion-treating Agents	Surfactants that are applied to break up emulsified oil into separate oil and water phases. Can be injected into skimmer reservoir to break the emulsion as it is skimmed from the water.	Where storage capacities are very limited; to separate the recovered emulsified oil and water so that the water can be treated and discharged.
Elasticity Modifiers	A chemical applied onto the oil that turns that oil semisolid but still fluid, thereby increasing skimming rates.	When skimming efficiency is low. Must be used with booming or other physical containment.
Herding Agents	Insoluble chemicals used to collect oil into smaller areas to increase recovery.	Used to push slicks out from under docks and piers where it has become trapped. For protection in low current areas; used to push slicks away from sensitive resources, such as wetlands.
Solidifiers	Chemicals applied to oil that solidify the oil.	Used to immobilize the oil or prevent refloating from the shoreline, penetration into the ground, or further spreading.
Shoreline Cleaning Agents	Chemicals applied to the shoreline to soften or lift weathered or heavy oils to enhance flushing.	When oil has weathered to the point where it cannot be removed using ambient water temperatures and low pressures.
Biostimulation (Nutrient Enrichment)	The addition of nutrients to accelerate the natural rate of oil hydrocarbon degradation.	Any shoreline habitat where access is allowed and nutrients are deficient.
Bioaugmentation (Microbe Seeding)	The addition of specific hydrocarbon-degrading microbes to accelerate the microbial decay of oil.	When there are few naturally occurring hydrocarbon-degrading microbes or those present cannot degrade oil effectively.
In situ Burning	Oil floating on the water surface is collected into slicks and ignited in calm weather conditions. On land, oil can be burned when it is on vegetation, logs, and other combustible debris.	On floating slicks. On land where there is heavy oil neither amenable nor accessible to physical removal and oil must be removed quickly. In wetland and mud habitats.
Source: Adapted from *Characteristics of Response Strategies: A Guide for Spill Response Planning in Marine Environments,* American Petroleum Institute, National Oceanic and Atmospheric Administration, U.S. Coast Guard, U.S. EPA. June 2010.		