



X^L Insurance

Spill Prevention, Control, and Countermeasure (SPCC) Plans & Facility Response Plans (FRPs)



Introduction

Worldwide every day there are reports of hazardous material and oil spills to land, inland waters, and coastal waters. While some of these are smaller releases to land that don't leave an owner's property boundary, other spills impacting surface waters are often catastrophic events that demand immediate large-scale responses. This paper provides background on the regulatory history of oil spill regulation, outlines regulatory applicability, and presents best practices for developing and effectively implementing Spill Prevention, Control and Countermeasure (SPCC) Plans and Facility Response Plans (FRPs).

Owners and operators of all types and sizes of facilities can have exposures related to oil release risks. Even small oil spills can require significant time and extensive resources to clean-up. Larger releases may also result in litigation and claims related to property damage, bodily injury, and natural resource damages. This is when pollution liability insurance can be a real asset.

Spill remediation and restoration costs can be significant, not to mention the costs of lost petroleum product and business interruption. When impacts to soil and groundwater or sensitive environments like wetlands are also involved, the consequences can be even more costly, requiring multi-year clean-ups with detailed regulatory reporting needed to achieve closure. Legal liability and/or regulatory agency penalties can result in significant unplanned expenses that can threaten a company's financial solvency and divert attention from a firm's core business.



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Spill Prevention & Response Benefits

Spill prevention benefits go way beyond regulatory compliance. At a minimum, SPCC Plans can prevent loss of valuable products, whether its crude oil, petroleum-based fuels, or other oil product derivatives. Preventing spills also protects nearby ecosystems and other receptors from environmental harm. Depending on migration pathways, oil spills have the potential to spread beyond the facility's boundaries, affecting neighboring properties, waterways, and communities. Preventing a release or controlling the extent of a release can avoid liabilities incurring legal defense expense and requiring compensation of affected parties.

Prevention measures may include engineering controls, regular inspections, routine maintenance of storage vessels, piping, pumps, and employee training. Also, identifying spill containment strategies in advance during the planning process can facilitate more efficient responses. These prevention efforts can ultimately help avoid costs associated with containment, recovery, remediation, and waste disposal, which can quickly escalate at large spill sites.

Despite robust plans and procedures, accidents will happen. When they do, a SPCC Plan or FRP should provide for appropriate equipment and resources to help respond promptly and effectively to minimize the impact of spills. Coordinated response efforts by trained individuals can help minimize bodily injury and property damage exposures.

Oil spills can pose health hazards to workers, businesses, and nearby residents. Inhalation of vapors, direct contact with oil, and slips and falls on contaminated surfaces can lead to third party bodily injury claims. Additionally, property damage can occur when oil discharges off-site, seeps into buildings, or damages infrastructure. This can include private property or natural resources held in the public trust (flora, fauna, groundwater, surface water, land, etc.). Permanent or temporary damage or loss of use often results in natural resource damage claims and regulatory penalties.

SPCC Plan Applicability

USEPA and states with primacy for oil spill prevention regulations require facilities to develop a SPCC Plan based on certain criteria related to the storage quantity and type of petroleum products at a site. The key factors that trigger the need for an SPCC Plan include:

- Non-transportation-related operations;
- Aboveground oil storage capacity of more than 1,320 U.S. gallons or a completely buried oil storage capacity greater than 42,000 U.S. gallons; and
- Locations that could reasonably be expected to discharge oil to navigable waters or adjoining shorelines in quantities that may be harmful.

(Note storage containers with less than 55 gallons of oil are not included in the 1,320-gallon threshold capacity calculation. Note also that USEPA & USCG recently revised 40 CFR 120 and 33 CFR 328, respectively to better define "navigable waters.")

SPCC Plan requirements apply to a wide range of industries that handle, store, or distribute oil and oil-based products; however, the key regulated industries include, but are not limited to:

- **Oil and Gas Exploration and Production:** locations involved in oil and gas extraction, drilling, production, and refining.
- **Petroleum Storage and Distribution:** bulk storage tank facilities storing and distributing refined petroleum products, such as gasoline, diesel, jet fuel, and heating oil.
- **Chemical Manufacturing:** industries handling oil-based chemicals or using oil products as feedstocks.
- **Transportation-related facilities:** sites including trucking terminals, pipelines, and rail yards with oil storage.
- **Manufacturing:** certain manufacturing processes involve the use and storage of oil-based materials for operations & maintenance.
- **Electric Utilities:** power generation facilities using petroleum product as a fuel source or coolant.

USEPA provides an SPCC Plan exemption for the following facilities:

- Facilities not expected to have a discharge to navigable waters based on the site geography/topography
- Facilities subject to US Department of Transportation (DOT) rules (i.e., transportation-related operations)
- Facilities or parts of facilities exclusively used for wastewater treatment
- Facilities with completely buried oil storage tank capacity of 42,000 gallons or less (note underground storage tanks (USTs) regulated by USEPA under 40 CFR 280 are not included in capacity calculations)

Note construction sites with temporary storage are generally exempt from SPCC Plan requirements; however, if they store more than 1,320 gallons of fuel or petroleum products, a plan may be required. Regardless, as a best management practice secondary containment and impact protection is recommended for petroleum storage areas at construction sites.



FRP Applicability

A subset of SPCC-regulated facilities may also be subject to Facility Response Plan (FRP) requirements if they could reasonably be expected to cause “substantial harm.” This is often the case for facilities with transportation-related operations regulated by USCG and DOT. FRPs are similar to SPCC Plans but are designed to demonstrate a facilities’ preparedness to respond to a worst-case oil discharge. FRP applicability is based on facilities that can be expected to cause “substantial harm” or “significant or substantial harm”.



“Substantial Harm” facilities include:

- total oil storage capacity >42,000 gallons and transfers oil over water to/from vessels; or
- has a total oil storage capacity > 1 million gallons and meets one of the following conditions:
 - does not have sufficient secondary containment for each aboveground storage area
 - is located within a distance that a discharge could cause injury to fish, wildlife, and sensitive environments;
 - is located within a distance that a discharge would shut down a public drinking water intake; or
 - has had a reportable discharge within past of five years >100 gallons.

Facilities that meet the above criteria must self-identify as being regulated under the FRP rule and submit a certified plan to the local USEPA regional office.



“Significant and Substantial Harm”

facilities include those designated by the USEPA Regional Administrator (RA) that must submit FRPs for USEPA review and approval. In addition to the substantial harm criteria, other factors considered by USEPA under this facility designation include:

- type of transfer operations
- tank age
- oil storage capacity
- secondary containment (or lack thereof)
- proximity to sensitive environments and drinking water intakes
- spill history/frequency; and,
- other factors including potential impacts on public health.



FRPs are also now required for onshore, non-transportation related facilities that could be expected to cause substantial harm from the release of CWA hazardous substances. Facilities may self-identify or can be identified by the USEPA Regional Administrator on a case-by-case basis. The key factors that trigger the need for a CWA hazardous substance FRP include:

- Maximum onsite quantity of any CWA hazardous substance > 1,000 times USEPA “Reportable Quantity” (RQ) as per 40 CFR 117.3); and
- Within 0.5 mile of navigable water or conveyance to navigable water; and
- Meet one or more of the following substantial harm criteria:
 - Ability to cause injury to fish wildlife and sensitive environments
 - Ability to adversely impact a public water system
 - Ability to cause injury to public receptors
 - Reportable discharge of hazardous substance above the RQ within five years that reached a navigable water.

Worst case release scenarios are also required to consider adverse weather conditions and extreme weather events driven by climate change.

NOTE: Regulated facilities are required to submit Hazardous Substance FRPs within 36 months of the effective date of the 40 CFR 118 final rule (i.e., 3/28/27). This rulemaking is not applicable to marine transportation related facilities, nor has a proposed USCG regulation been finalized.

Plan Preparation - Content & Format

The USEPA provides extensive guidance on applicability and content of SPCC Plans and FRPs. Vessels and transportation-related onshore facilities are regulated by USCG and DOT and are not required to develop an SPCC Plan; however, some facilities will need to meet both planning requirements. USEPA acknowledges that although SPCC Plans and FRPs are different and should be maintained as separate documents, some sections of these plans may be the same. USEPA does not expect any two plans to look alike. Large facility complexes may choose to develop a single response plan with a set of core elements for all regulating agencies and separate sections for non-transportation and transportation-related operations.

SPCC Plans

Each SPCC Plan, while customized to the facility it covers, must include certain standard elements to ensure compliance with oil pollution prevention regulations. SPCC Plan standard elements include the following:

- Facility diagram and description of the facility
- Oil discharge predictions
- Appropriate secondary containment or diversionary structures
- Facility drainage
- Site security
- Facility inspections
- Requirements for bulk storage containers including inspections, overfills, and integrity testing
- Transfer procedures and equipment (including piping)
- Requirements for qualified oil-filled operational equipment
- Loading/unloading rack requirements and procedures for tank cars and tank trucks
- Brittle fracture evaluations for aboveground field constructed tanks/containers
- Personnel training and oil discharge prevention briefings
- Recordkeeping requirements
- Five-year plan review
- Management approval
- Plan certification (by a Professional Engineer (PE) or in certain cases, self-certified by the facility owner/operator)

USEPA has published “A Facility Owner/Operator’s Guide to Oil Pollution Prevention” which provides additional guidance and is available on their oil spill prevention home page. [Oil Spill Prevention and Preparedness Regulations | US EPA](#)

A key element of both SPCC Plans and FRPs are routine, documented inspections of tanks and bulk containers, secondary containment areas, and response equipment. As a Best Practice, any deficiencies identified should be corrected immediately.

FRPs

The format suggested by USEPA and required elements for FRPs include:

- Coversheet
- Emergency Action Plan – in addition to serving as a planning document, this is the most critical portion of the plan and is required to be easily accessible and stand-alone section of the overall plan
- Facility Information – name, type, location, and owner & operator information
- Emergency Response Information – required notifications, personnel, equipment (list, location, deployment, testing), and evacuation plans
- Hazard Analysis – hazard and vulnerability identification, potential spill analysis, spill history
- Spill Scenarios – must include small, medium and worst-case discharges
- Discharge Detection – description of personnel detection procedures and automatic detection equipment
- Implementation Plan – details for response actions, containment/drainage and disposal
- Self-Inspections, Drills & Exercises, and Response Training – must include descriptions & records;
- Facility Diagrams – include site plan, drainage, and evacuation routes
- Security Controls – fences, lighting, alarms, guards, emergency cut-off valves, locks etc.
- References and Acronyms List

[40 CFR 112 Appendix F](#) provides more detailed guidance on the suggested FRP format and content along with sample information tables and forms. Note additional USEPA guidance on preparation of Hazardous Substance FRPs under 40 CFR 118 has not yet been provided.

Plan Certification, Review & Implementation



SPCC Plans and FRP Plans must be periodically reviewed to ensure they reflect material changes in facility operations or infrastructure that can increase site exposures. Under the current regulations, SPCC plans must be certified by a Professional Engineer (PE), and must be reviewed every 5 years.

It is strongly recommended that facilities work with a PE who has experience with SPCC preparation and knowledge of the SPCC regulations. Part of the review and certification process includes the PE or an agent of the PE completing a site visit to inspect the facility. A PE re-certification is only required for technical changes to the plan. Non-technical changes (i.e., name changes) are not required to be re-certified.

USEPA SPCC regulations include an option for plan self-certification in lieu of a PE certification for facilities that store less than 10,000 gallons of oil. USEPA has established Tier I and Tier II self-certification criteria depending on whether they have a tank exceeding 5,000 gallons as well as their spill history over the past one to three years. Tier I facilities are generally smaller in scale, but must meet more stringent requirements, while Tier II facilities have larger capacities and can self-certify in accordance with more flexible criteria.

Tier I facility owners or operators must personally conduct the site inspection (vs. an agent) and follow a prescribed USEPA SPCC Plan template. Tier II facilities have more flexibility in implementing alternative engineering controls and contingencies (i.e., environmental equivalence and impracticability determinations); however, these plan sections must still be reviewed and certified by a PE. Alternative measures are most often associated with secondary containment provisions.

USEPA provides a detailed template for owners and operators to develop a self-certified SPCC Plan. [Tier I Qualified Facility SPCC Plan Template | US EPA](#)

Training and Drills

A key element for effective implementation of any environmental, health and safety program is to ensure personnel are provided with relevant training on their responsibilities. Employees should be trained on the key elements of SPCC Plans and FRPs. This includes both proactive inspection and prevention protocols as well as response resources and procedures. Outside response organizations and resources should also be made familiar with the facility and site-specific response protocols.

The USEPA Oil Pollution Prevention regulations include requirements for personnel training and related discharge prevention procedures (40 CFR 112.7). USEPA outlines the following requirements:

- 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.
- Designate a person at each applicable facility who is accountable for discharge prevention and who reports to facility management.
- 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” or failures, malfunctioning components, and any recently developed precautionary measures.

Emergency response drills, both table-top and hands-on, are also a best management practice. Effective spill prevention and response training is essential to prepare personnel for proactively identifying potential problems and ensuring a prompt, efficient, and safe response to spill incidents.

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Spill Reporting and Response

Spill response and cleanup is broadly addressed by the Federal Emergency Management Agency (FEMA) under the National Response Framework (NRF), which outlines a systematic approach to all types of disasters, including hazardous material spills. On a national level, the National Response Team (NRT), an interagency group of 15 Federal departments and agencies, has been established to coordinate emergency preparedness and response to large scale oil and hazardous pollution incidents. The NRT works with federal, state, tribal, and local authorities in accordance with the NCP, which is designed to provide the organizational structure and response framework to protect public health and welfare related to environmental emergencies. Decisions to engage additional resources, often begin when responsible parties report releases to the National Response Center (NRC), a centralized reporting center staffed 24 hours per day by the USCG.

The SPCC rule has established threshold quantities of oil ranging from one gallon to 1,000 gallons that require reporting; however, any release of oil (or hazardous substance) to surface water is generally reportable to regulatory agencies. If a discharge of oil reaches navigable waters, adjoining shorelines or creates a visible sheen, it must be reported to the NRC, or if not practicable to the USEPA regional office. The USCG serves as the lead oversight agency for spills in coastal waters and deepwater ports, while USEPA serves as the lead for releases to land and inland waterways. In addition to spill reporting to these agencies, facility owners & operators may also have reporting obligations to state and local agencies and organizations. Contact information for appropriate authorities (and response resources) should be easy to find in any spill response plan. The criteria for reporting and the release details required should also be clearly defined.

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SPCC Plans and FRPs require owners & operators to develop spill response capabilities, which can be a mix of internal and external personal and equipment. Under OPA, USCG introduced the concept of Oil Spill Removal Organizations (OSROs) to provide emergency spill assessment, response and product recovery/transfer support for large releases. SPCC Plans and FRPs do not require facilities to use approved OSROs; however, they often collaborate or rely on OSROs. These entities must demonstrate the expertise, experience and equipment necessary to effectively respond to an oil spill incident on behalf of a company or agency. OSROs are generally response-ready contractors that have met strict requirements and maintain oil spill containment and recovery equipment that is inspected and regulated by the USCG.

There are many private consultants and environmental contactors that facilities can engage to provide on-call spill response services. Facilities can also engage in local industry consortiums to pool resources. Agreements must be in place and responsibilities well understood prior to an accidental release. Owners & operators should vet retained companies and organizations to ensure they have appropriate experience and insurance coverages. Finally, it cannot be understated that employee spill response training should be provided that includes guidance on when and how to engage the appropriate resources – including the NRC and other regulatory agencies.

Conclusion

Developing spill prevention and response plans and periodically reviewing their effectiveness is not only a regulatory requirement for most bulk oil storage and transfer facilities, but it just makes good business sense for so many reasons. There has been a long history of catastrophic oil spill releases around the world, and studies have proven that more effective planning reduces the frequency and severity of these events. Facilities that manage other hazardous substances with the potential to cause substantial harm to the environment can also benefit from formal facility response planning efforts.

Facility inspections and prevention protocols can help identify potential problems before they occur. When an emergency occurs, a well written, readily available, and easy to follow response plan can be a critical resource. Employee training on responsibilities, reporting, response actions and available resources is also critical. Mock spill scenarios and drills can help employees and outside partners respond in a more methodical and efficient manner.

As part of a sound risk management programs, facility owners and operators should retain pollution liability insurance and ensure that any response partners have appropriate contractors pollution liability insurance coverage. Despite the best prevention and planning efforts, when a spill happens, and they will happen, insurance risk transfer solutions can deliver relief from claims handling and legal defense expenses, while minimizing third party liabilities, cleanup expense, and regulatory obligations.

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