

APPENDIX A ENVIRONMENTAL REGULATIONS

COMPLIANCE

Compliance with environmental laws and pollution control standards is necessary within the United States and its territories. AR 200-1 provides policy for complying with the existing laws and regulations. At bulk fuel facilities, the major area of environmental concern centers on the handling and storage of petroleum products. There are several environmental requirements that relate directly to fuel operations and facilities. All bulk fuel personnel shall be familiar with reporting requirements, equipment, and training needs that support environmental concerns.

CLEAN WATER ACT

The CWA requires state and federal regulators to enter into programs designed to prevent, reduce, or eliminate pollution of navigable waters of the United States. The Water Quality Improvement Act of 1974 governs the discharge of oil into navigable waters. The CWA also requires the immediate reporting to the USCG of all POL spills to the waters of the United States. On 11 December 1973, the EPA published regulations to prevent pollution of U.S. waters by oil coming from onshore and offshore facilities not related to transportation. These regulations are identified in Title 40, Code of Federal Regulations, Part 112 (40 CFR, Part 112), and became effective on 10 January 1974.

OIL POLLUTION ACT OF 1990

The OPA of 1990 consolidates and changes existing laws that govern prevention, oil spill liability, and preparedness and cleanup. The law affects pipelines, vessels, oil rigs, piers, and terminals (on shore) that transport, handle, or store crude oil and petroleum products. Many new and important provisions that will affect the DOD fuel facilities are contained in the act, including increased liability for oil spills, more comprehensive oil spill contingency plans, training and drill requirements, better response capability and tougher enforcement. Also, the OPA has strengthened the role of three separate federal agencies: The USCG, the EPA, and the U.S. Department of Transportation (Research and Special Programs Administration).

SPILL PREVENTION CONTROL AND COUNTERMEASURE PLAN

The SPCCP is designed to help prevent the discharge of oil. A spill contingency plan is developed based on guidance from the commander or the local base commander and the EPA. An outline of a typical contingency plan is provided in Figure A-1. The plan addresses responsibilities and procedures for containing and cleaning up spills. The following items must be addressed in the SPCCP:

- Oil is defined as petroleum products, including gasoline, kerosene, jet fuel, fuel oil, sludge, oil refuse, and oil mixed with wastes other than dredged soil.
- An SPCCP is valid for 3 years, if no changes are made to the plan or the facility.
- Coast Guard, EPA, or RSPA approval is required.
- “Worst case” scenario must be addressed.
- Response capability must be documented.
- EPA Regional Administrator must be notified of spills IAW local SOPs.
- The SPCCP and facility Spill Response Plan must be available for inspection at the facility.
- The appropriate regulatory agency must be notified in the event of a spill.

Oil Spill Contingency Plan Outline
<p>I. BACKGROUND</p>
<p>A. Inventory of petroleum products handled. B. Identification of most likely areas where a spill could occur. C. Types of operations that could result in a spill. D. Location of biological, recreational, or other sensitive areas. E. Spill responsibilities assigned by the local commander and EPA. F. Inventory and location of spill clean-up equipment and materials.</p>
<p>II. SPILL PLAN(S)</p> <p>A. Spill reporting procedures. B. Telephone numbers for key points of contact and fire department. C. Spill containment and clean-up procedures for possible scenarios including personnel resources requirements.</p> <p style="padding-left: 40px;">(1) Type of product spilled. (2) Size of spill. (3) Location of spill. (4) Time of spill. (5) Weather conditions.</p> <p>D. Disposal procedures for product and clean-up materials. E. Public affairs coordination.</p>
<p>III. SUPPORT</p> <p>A. Procedures for obtaining spill equipment and material. B. Spill equipment maintenance program. C. Training. D. Contacts for specialized assistance.</p>

Figure A-1. Outline of a Typical Contingency Plan

Regulations require the preparation and implementation of an SPCCP for all nontransportation-related facilities that have discharged, or could reasonably discharge, into U.S. navigable waters, or the adjoining shorelines. The SPCCP must also be reviewed and certified by a registered professional engineer for oil storage facilities with a total above ground storage capacity of more than 1,320 gallons, or an underground storage capacity of 42,000 gallons or more, and located on or near navigable waters (which is almost any body of water or continuous stream).

If a spill occurs, the appropriate EPA Regional Administrator will be given the following information IAW local SOPs:

- Name of facility.
- Name(s) of the owner or operator of the facility.
- Location of the facility.
- Date and year of initial facility operation.
- Maximum storage or handling capacity of the facility and normal daily throughput.
- Description of the facility, including maps, flow diagrams, and topographic maps.

- A complete copy of the SPCCP with any amendments.
- The cause(s) of such spill(s), including a failure analysis of the system or subsystem in which the failure occurred.
 - The corrective actions and countermeasures taken, including an adequate description of equipment repairs and/or replacements, and the cost involved.
 - Additional preventive measures taken or contemplated to reduce the possibility of recurrence.
 - Other information, as the Regional Administrator may reasonably require, pertinent to the plan or spill event.

EMERGENCY RESPONSE ACTIONS

Other federal and state regulations exist which prohibit the discharge of petroleum products into the environment (such as soil, ground water, and surface waters). If a spill occurs, the following steps must be taken immediately:

Step One. Stop the Spill. Prevent a further release of fuel to the environment by shutting off valves in a leaking pipeline, removing product from a leaking storage vessel, or taking other measures as needed.

Step Two. Contain the Spill. To contain a spill, construct berms around the area, use absorbent materials to soak up the spill, use containment boom on surface water spills, excavate cutoff trenches. For handling JP-4 and other volatile fuel spills on water, divert and contain the fuel away from structures and try to remediate as soon as possible. Because many of the petroleum products handled at government fuel facilities are ignitable, there should be no smoking, open flames, or equipment with magneto-sparked engines, catalytic converters, or equipment which might otherwise produce sparks or static electricity in the vicinity of the spill site. Also, many fuels may cause skin irritation, dizziness, fainting, or even death, and therefore should be handled with caution.

Step Three. Report the Spill. Personal safety is more important than environmental protection. If there is a threat to life or health, the local fire department should be the first official agency notified. The appropriate regulatory agency must be notified immediately. A list of agencies and phone numbers for reporting various types of spills should be included in all exercise plans and LOIs. Information that may be requested when the spill is reported is included in Figure A-2, page A-4. To protect a downstream public or water supply in the event of a spill, call the appropriate public works department or plant manager to have them shut down the intake valves. Report spills into or upon the navigable waters of the United States or adjoining shores to: U.S. Coast Guard, Washington, DC, National Response Center, 24-hour (800) 424-8802 or (202) 267-2675. See Figure A-2 for spill reporting information.

Step Four. Clean Up the Spill. After stopping and containing the spill, recover the spilled product and remediate the impacted soil, ground water, and/or surface water. Because Government facilities often do not have the necessary equipment, resources, or experience to access and remediate the impacted areas, obtain a spill response contractor through the Defense Fuel Region as quickly as possible to expedite the cleanup to reduce the spread of contamination.

Step Five. Notify the Defense Fuel Region. Once the Defense Fuel Region has been notified of the spill, they will notify DFSC that will then make arrangements to have a remediation contractor brought to the site, if needed. Regional contracts have been set up through DFSC to expedite the remediation process for DFSC facilities. Under the terms of the contracts, the remediation contractor must have a knowledgeable project manager on site within 24 hours of being notified. The facility Quality Surveillance Representative, the facility engineer, or POL officer should cooperate with the environmental contractor in providing any information requested to expedite the cleanup process.

SPILL REPORTING INFORMATION

Spill discovery time: _____ Date: _____

Weather conditions/sea state: _____

Material spilled: _____

Amount Spilled: _____

Size of slick/area affected: _____

Location and source of spill: _____

Environmental damage/nearby freshwater terrain: _____

Cause/circumstance of spill: _____

Existing/potential hazards (fire, explosions): _____

Personal injuries or fatalities: _____

Corrective action being taken/timetable for control, containment, cleanup: _____

Any other unique/unusual circumstances: _____

Name, address, phone number of person who discovered spill: _____

Name of supervisor/manager in charge: _____

Contacts:

Agency	Date	Time	Person
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Figure A-2. Spill Reporting Information

ASSESSMENT AND REMEDIATION

In the petroleum industry, the strategy for a comprehensive assessment and remediation is straightforward--the quicker the cleanup, the less the spread of contaminants. Therefore, assessment activities should be completed in a timely manner so that a remediation system may be designed and installed before significant migration of the contaminant plume occurs. Before a site can be remediated, the vertical and horizontal extent of contamination must be defined.

The Defining Method

The defining method used depends on the type of spill. For a surface spill, the method for defining the extent of contamination is by visual inspection and shallow soil sampling. For a subsurface spill, the method for defining the extent of contamination is through the installation of ground water monitoring wells.

Corrective Action

The cleanup of a subsurface spill can be a very slow, time-consuming process; therefore, long-term (several years) monitoring and operation of the remedial action system will likely be required. Once the extent of the contamination has been defined, more corrective action technologies can be selected and implemented. The type of technology selected is based on site-specific information such as:

- Volatility of the spilled product
- Type of media impacted (clay soil, sands, surface water, or ground water)
- Size of containment plume
- Cleanup goals.

PREVENTIVE BOOMING POLICY

DFSC practices preventive booming whenever state or local regulations dictate. DFSC follows this guidance:

- Transfers of nonpersistent fuels such as JP-4 and gasoline must not be boomed unless ordered by the Coast Guard.
- Fixed boom will not be required in the areas of swift current (1.5 knots or greater) when fuel will be deflected over the top or under the boom.
- Do not boom in situations deemed unsafe.

California

The state of California implemented a preventive booming regulation on 21 November 1992 and began enforcement on 21 December 1992. The state has concluded that most spills occur during bunkering operations; however, a significant amount of fuel is spilled in California waters during loading and unloading operations from tankers and naval oilers. The state further determined that preventive booming is good environmental policy to contain such spills and should be exercised to the greatest extent practicable. Thus, the state regulation requires a boom to be deployed, before initiating a fuel transfer, to encircle the vessel to contain any fuel spilled in the water. Now, terminals must either contract for the booming services or provide the personnel to deploy and retrieve boom during fuel transfer operations. Preventive booming is not required at DOD facilities in situations deemed unsafe or where impractical or ineffective. Preventive booming is not required in the following situations:

- Nonresistant fuels, such as JP-4 and gasoline should not be boomed due to the presence of explosive vapor. In this case, dispersion is the best solution as it allows the fuel to evaporate. Only persistent POL products (heavy ends and relatively high flash points) must be boomed.

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- Fixed boom will not be required for marine transfer operations where the current is greater than or equal to 1.5 knots for at least 180 days of the year. Fixed booms will not effectively contain spills in such areas; the fuel will slide under or over the top of the boom.
- The state requires trained personnel standing by in a boat with adequate boom ready to deploy.

Other States

Until California implemented a preventive booming regulation, it was only a matter of local policy whether to boom. California perceived that spills occur most often in bunkering operations. However, preventive booming during all pier fuel transfer operations, when practical and safe, provides an added measure of assurance. Spills that are immediately contained in a congested harbor are easier to clean up and they provide for accurate identification of the spiller. Although preventive booming is required for transfer involving persistent products (crude and heavy oils) in Alaska and is proposed for Maine, there is no requirement to boom light-grade fuels in any other state. The requirement for preventive booming, which affects marine fuels transfer operations at wharf or pier facilities throughout the state of California, may be under consideration for adoption by the EPA, the Coast Guard, and other states.