

OBJECTIVES

- Proper spill prevention and control techniques and procedures
 - Spill Control Materials
 - Reporting
- Implement and conduct activities to reduce pollutants from spills
 - Training
 - Planning and Actions
- Documentation
- Pollution Prevention
- Inspections
- Contaminated soil/materials

DESCRIPTION

Spills and leaks, if not properly controlled, can adversely impact receiving waters. Due to the type of work or the materials involved, many activities that occur either at a facility or as a part of a field program have the potential for accidental spills and leaks. Proper spill response planning and preparation will lead to spill prevention and control, and can enable employees to effectively respond to problems when they occur and minimize the discharge of pollutants to the environment.

CONSIDERATIONS

Spill Prevention and Control is a complement to most BMP Fact Sheets. It is a source control measure that should be considered for any Best Management Practice where spills or leaks can occur, and cause harm or damage to the environment or receiving waterways.

A Spill Prevention Control and Countermeasure Plan (SPCC) is required for facilities that are subject to the oil pollution regulations specified in Part 112 of Title 40 of the Code of Federal Regulations or if they have a storage capacity of 10,000 gallons or more of petroleum. (Health and Safety Code 6.67)

An initial Spill Prevention Response Plan (Plan) and any future updates, which address the requirements described in Chapter 9 of the act (35 P. S. § § 6021.901— 6021.904) and the corresponding chapter, shall be submitted to the DEP for aboveground storage tank facilities with an aggregate above ground storage capacity greater than 21,000 gallons. A current copy of the Plan shall be readily available at the facility at all times.

If a Spill Response Plan is developed, clearly identify the persons responsible for implementing the plan. Outline notification protocols, safety measures, and address federal and state regulations.

If a spill or leak discharges into the storm sewer, monitor and test downstream to assess any impacts or additional remediation that may be needed.

When collecting information for building the Municipal Inventory List, assess facilities and programs against federal and state requirements for outlining spill response protocols. Such protocols may include pre-plan testing and testing as during a spill response event.

Costs associated with Spill Prevention Control can vary widely and should be considered extensively when developing and implementing a Spill Control Plan.

RECOMMENDATIONS AND PROTOCOLS

For the objectives listed, the following represent further recommendations and protocols for spill prevention and control:

Spill Control Materials

- Identify locations for the placement of spill control stations. Such areas include vehicle/equipment fueling locations, storage locations, and waste storage locations. Stations would include a variety of kits relative to the station's purpose (i.e. control drums, absorbent pads, chemical neutralizers, etc.)
- Identify locations for placement of spill control kits. Such locations include municipal vehicles or on municipal equipment.
- Spill Control materials include, but are not limited to: chemical neutralizers, drip diverters, pans (for oil drips), pipe repair materials, absorbent pads, particulate absorbents, gels, sealing bags/wraps, rags, brooms, and containment devices

Pollution Prevention

- General Monitoring
- Develop and implement a Spill Response and Control Plan (or similar title). Such a plan should address, but not limited to: description of facilities and activities, personnel, material handling procedures, response protocols, and control materials.
- Material handling procedures should be clearly defined for pollution prevention. Such procedures should address, but not limited to: recycling, material transfer protocols, designated handling areas.
- Do not hose off areas with water where spills were contained and cleaned up
- Consider substituting products where efficient or applicable.
- Keep inlet protection materials readily available in case a spill response requires "isolating" or protecting an inlet from a spill.
- Reduce the potential for pollutants into storm drains by stroing away from such drains, or protecting such drains from run-off.

Documentation

- See "Documentation" section within this fact sheet for more information

Reporting

- Establish notification protocols for reporting observed spills or leaks
- Federal regulations require that any oil spill into a water body or onto an adjoining shoreline be reported to the National Response Center (NRC) at 800-424-8802 (24-hour line)
- For recordkeeping purposes, a report (Event Record) should include, but not limited to: date and time of incident/observation, weather conditions, cause of spill or leak (if known), response procedures implemented, follow-up actions, and persons/entities notified.

Training

- See BMP Fact Sheet GH-1, Employee Training and Education for more

BMP Fact Sheet: GH-10 Spill Prevention and Control

information

- Training regarding spills and prevention control should be conducted on a regular basis. Focus should be provided on spill prevention and control when training is conducted for other BMPs where spills or leaks can occur
- Training should include field exercises

Inspections

- See "Inspections and Measurements" section within this fact sheet

Planning and Actions

- Locate spill control materials in readily accessible areas and ensure all municipal employees understand where the locations are and how to use.
- If a Spill Response Plan is developed, ensure it is easily accessible
- Consider leak detection devices and diversion berms in handling areas for potential spills or leaks.
- Perform preventative maintenance on tanks, pumps, valves, or any similar equipment
- Post spill response procedures in activity areas
- Develop a notification protocol system and outline through a plan the follow-up procedures for a spill or leak.

Contaminated soil/materials

- Contaminated materials can still pollute through discharge or exposure to run-off. Assure contaminated materials are properly stored (and ultimately disposed of).

DOCUMENTATION

Proper documentation practices are essential for any municipal SWMP to show compliance with the Clean Water Act, NPDES, and generally the requirements of the permit issued to allow discharges through the defined MS4. As with all sections of an MS4 permit, all documentation should be centralized.

For spill prevention and control, templates are provided within the BMP manual to assist the municipality with documentation compliance. Training can be specific to spill prevention and control. However, inspections and other associated record templates are considered complementary as other BMP Fact Sheets will outline the necessity for monitoring and addressing leaks and spills. The templates can be used for compliance; however, the following documents are recommended as a minimum for compliance:

- **Training Record:** This document is used to provide record of a training event or session relative to spill prevention and control. For other training exercises where spill prevention and control should be considered, indicate the topic was reviewed.
- **Training and Education Log:** Enter a completed training record for spill prevention and control into the log.
- **Spill Response and Control Plan**
- **Event Record:** If a discharge is observed, an event record should be executed that also outlines response and remediation procedures. An Event Record for a discharge should be more detailed than a normal Event Record as outlined above in this fact sheet.

- **Activity Record:** Record any activities associated with improving or addressing spill response controls and procedures.
- **Inspection Record:** Complete an inspection based on the recommendations in the section titled "INSPECTIONS AND MEASUREMENTS" or as outlined in your SWMP.
- **Inspection, Event, and Activity Log:** Enter an inspection, activity, or event record into the log.
- **Municipal Yard Map:** Organize and complete a municipal yard map (including locations of interior building features). Identify the locations of spill response kits or stations on the map. Place a copy of the map within your SWMP documentation.

INSPECTIONS AND MEASUREMENTS

Frequency of inspections for spills and leaks is recommended as follows:

- *All Inspections:* For all inspections conducted, observations should include signs of spills and leaks. At the same time, spill response kits and stations should be reviewed to assure proper materials are readily available, and in good working order.

Essentially, every inspection should include reviews for spills, discharges, or leaks.

Items that should be reviewed during an inspection for spill control and prevention:

Integrity of storage containers: replace leaking or cracked containers

Evidence of leaks: isolate and clean-up leaks; replace leaking containers

Cleanliness: Sweep and remove debris or trash

Inventory: assure inventory matches records and is accounted for

Tarps or plastic sheets (if applicable): repair or replace torn or damaged tarps or plastic sheets

Contaminated soils/materials (if applicable): inspect contaminated soil stockpiles and materials until proper disposal. Assure contaminated soil stockpiles are intact and no run-on or run-off is observed

Storage layout: assure containers and materials are neatly stored and as recommended by the manufacturer

Collection devices: Assure collection devices (i.e. drip pans) are properly placed and no leaks are observed from such devices.

Miscellaneous: observe and correct any signs of corrosion, pest damage, or other observed item that may result in leaking containers, spills, and so on

Spill Prevention and Control Materials: Replace used or defunct spill clean-up materials

Measurement of effectiveness can be calculated in several ways. The recommended measurement is a ratio of total spills/leaks observed/encountered versus successful spill control. Successful spill control means the spill was contained in a timely manner, cleaned up, and no discharge (non-stormwater discharges, and so on) was observed or measured. Self-identify a tracking mechanism for collecting such data. Repetitive training geared towards spill prevention and response is generally viewed as a successful tool for effectiveness as well.

SOURCES

U.S. Environmental Protection Agency Pollution Prevention/Good Housekeeping for Municipal Operations information at <http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm?>

FedCenter Hazardous Materials Storage at
<http://www.fedcenter.gov/assistance/facilitytour/labs/hazmat/>

The Pennsylvania Code for Facility Operations and Spill Response Plan at
<http://www.pacode.com/secure/data/025/chapter245/s245.512.html>

California Stormwater Quality Association, Municipal Stormwater Best Management Practice Handbook (2004 edition) at <http://www.cabmphandbooks.com/Municipal.asp>

Boulder, Colorado Spill Response Standard Operating Procedure at
<http://www.bouldercolorado.gov/www/pace/government/documents/SpillPreventionCleanupandReportingSOP.pdf>

The Pennsylvania Department of Environmental Protection at
http://www.depweb.state.pa.us/portal/server.pt/community/dep_home/5968