

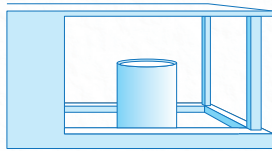
Environmentally Responsible Best Management Practices (BMP)



Outside Container Storage and Waste Disposal

This BMP applies to facilities that have containers located outdoors used to temporarily store materials. The following practices are recommended to prevent contact between the container and stormwater runoff.

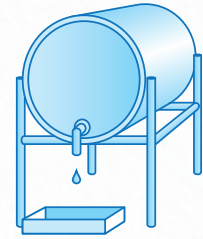
- 1 Install a paved floor with curbing to contain spills of materials and contaminated stormwater. The curb should be high enough to contain the volume of the largest tank plus additional volume for rainfall accumulation. A reasonable approximation



is 110% or more of the largest storage tank, depending on the amount of rainfall reaching the site.

- 2 Drains must remain closed, and containment should be emptied of rainwater as needed
- 3 Cover the storage area or bring the containers indoors. The containers should have covers to prevent rainfall from percolating through the stored materials. Waste liquid piles should be covered with tarpaulins or roofed structures that are large enough to keep rainfall out of the perimeter.
- 4 Prevent mixing of chemicals in case of a spill by segregating incompatible or reactive materials in separate containment areas.
- 5 Install overfill protection on storage tanks and drums, and install guard rails around tanks and pipes to prevent damage from vehicles.

- 6 For containers which are accessed for removal of a liquid chemical by employees, install the paved, curbed and covered area described in **1** and **2**. Place a drip pan under the container spout.



- 7 Prevent unauthorized persons from accessing storage containers and causing spills. For example, lock storage buildings and use lockable drum lids. Also, provide warning signs, such as **DANGER - HAZARDOUS MATERIALS** and **AUTHORIZED PERSONNEL ONLY**, etc.
- 8 Inspect containers each month for deterioration and leaks. Check the covers and lids of containers to make sure they are securely fastened.
- 9 If the material stored is a "hazardous waste," you must comply with any and all local, state and federal regulations and requirements not mentioned in this BMP.
- 10 Maintain properly stocked spill control kits throughout the facility at locations where accidental discharges have a potential to occur.
- 11 Inspect dumpsters for leaks.
- 12 Have a written policy approved by company.
- 13 Should not be located in front of downspouts or near areas prone to flooding.

Materials frequently stocked:

- | | |
|--------------------------------|-------------|
| ✓ Accumulated Food Wastes | ✓ Paints |
| ✓ Grease (animal or vegetable) | ✓ Oils |
| ✓ Used Batteries | ✓ Solvents |
| ✓ Waste Materials | ✓ Rock Salt |

For more questions on hazardous material and disposal:
visit msdlouky.org or call (502) 587-0603



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Loading and Unloading Materials

This BMP applies to facilities that load and unload materials stored in containers, as well as direct liquid or gas transfers from tanks. The loading and unloading of materials should be done where spills and residual materials from the cleanup can be discharged to the sanitary sewer or to an on-site wastewater treatment system after receiving appropriate approval from MSD.

If materials are transferred outdoors, the following precautions should be taken to prevent stormwater contamination:

- 1 Use loading docks with overhangs or door skirts to enclose the end of the trailer when transferring from a truck. Curbs or berms should be installed to keep out stormwater runoff. Keep spill kit materials available for rapid spill cleanup.



- 2 For tanker truck transfer to aboveground or underground storage tanks, pave and slope the floor of the transfer area to a secondary containment system to prevent leaks from spills. The paved area must be suitable for the type of liquid being transferred. For example, gasoline will

slowly dissolve asphalt, thus concrete is the appropriate surface. Use drip pans under hose connections, hose reels and filter nozzles.

- 3 For railcar transfers, use drip pans at locations where spills may occur as in 2. A drip pan system should also be used within the rails to collect spills from tank cars.
- 4 Coast Guard covers marine transfers. These regulations cover spill response, spill prevention at marine facilities and spill prevention for vessels. (33 CFR Titles 153, 154 and 155)
- 5 Ensure that staff are present during material transfers both to prevent spills, and to clean up the spills immediately if they occur. The personnel and contractors should be properly trained in spill containment methods including the use of sorbent material, gelling agents and vacuum and pump systems.
- 6 Examine loading and unloading areas for dust, vapors or stains to determine if materials are being lost during these operations. Check vehicles and equipment for leaks and repair them promptly, and clean up any spills or leaks to the ground as soon as possible.
- 7 Maintain properly stocked spill control kits throughout the facility at locations where accidental discharges have a potential to occur.
- 8 Maintain your Hazardous Materials Use and Spill Prevention Control Plan (HMPC).
- 9 Immediately notify "9-1-1" whenever a release of a hazardous material occurs

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Vehicle and Equipment Washing

Washwater from vehicle and equipment activities contains a variety of contaminants which can harm aquatic life and the quality of surface water bodies. These contaminants include detergents, degreasing chemicals, oils, suspended solids, heavy metals, organics, acids and caustics. Discharge of surface water (streams, lakes, etc.) is not permitted.

Options for disposal of washwater include:

- 1 Wash your vehicles at a commercial vehicle washing station or carwash with an approved disposal system.
- 2 Install a washing system that recycles all washwater.
 - Recycling systems remove oils and solids from washwater.
 - Installation of a wash system will require submittal of plans and approval from MSD. Call 587-0603 for additional information.
- 3 Install an approved wash pad and discharge to the sanitary sewer system.
- 4 Contract with a mobile washer who collects the washwater and discharges it into the sanitary sewer system. Note: the discharge of washwater from mobile washing activities to the storm sewer system/ storm drain is strictly prohibited.
- 5 Discharging washwater or wastewater from commercial vehicles to the sanitary sewer;
 - Requires installation of an oil/water separator.
 - Does not require a wastewater discharge permit from MSD but does require a plumbing plan submittal to MSD. The plan must include an oil/water separator.



▶ Did You Know?

Washwater contains a variety of contaminants which can harm aquatic life!

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▶ Environmentally Responsible Best Management Practices (BMP)



Outside Storage of Raw Materials and Intermediate Products, By-Products or Finished Products

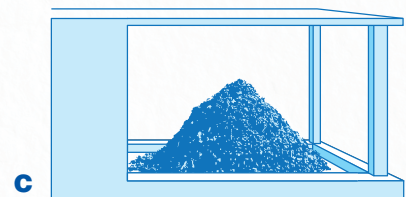
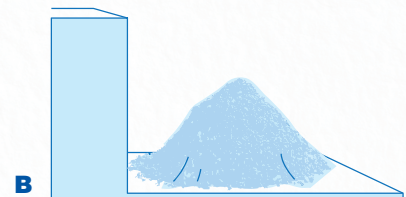
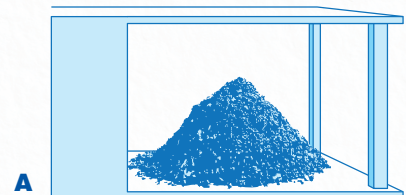
This BMP applies to facilities that store raw or finished materials and products used in manufacturing or processing on their site.

Materials frequently stockpiled:

- | | |
|---------------------------------|----------------|
| ✓ Sand | ✓ Gravel |
| ✓ Topsoil | ✓ Wood Chips |
| ✓ Metal Products | ✓ Animal Waste |
| ✓ Building Products | ✓ Rock Salt |
| ✓ Finished or Saleable Products | |

Select from the following practices those which would be appropriate for the type of material stored outdoors and exposed to stormwater runoff:

- A** Build a covered area with a paved floor. While this may be an expensive option, it may prove cheaper than treating contaminated runoff.
- B** Place a temporary plastic film or sheeting over the material and secure the edges. This is an economical choice for smaller quantities, or temporary storage (less than 2 weeks).
- C** Pave a new storage area and install a drainage system to collect stormwater runoff.
 - Slope the paved area to minimize pooling and surround the perimeter with curbing.
 - Minimize the use of catch basins which can clog with material.
- D** If runoff passes into the soil beneath an existing storage area, there could be contamination of groundwater. A lip on storage area may be needed around an existing storage area to both collect and divert excess runoff as outlined in **C**. Excess runoff should not be directed into a surface water (stream, lake, etc.).



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