IC11. OUTDOOR PROCESS EQUIPMENT OEPRATIONS AND MAINTENANCE

BEST MANAGEMENT PRACTICES (BMP)

A BMP is a technique, measure, or structural control that is used for a given set of conditions to improve the quality of the stormwater runoff in a cost-effective manner.[1] The minimum required BMPs for this activity are outlined in the box to the right. Implementation of pollution prevention/good housekeeping measures may reduce or eliminate the need to implement other more costly or complicated procedures. Proper employee training is key to the success of BMP implementation.

MINIMUM BEST MANAGEMENT PRACTICES

Pollution Prevention/Good Housekeeping

- Conduct activities indoors and/or under covered areas.
- Inspect equipment regularly.
- Stencil storm drains.

Training

- Train employees on these BMPs, stormwater discharge prohibitions, and wastewater discharge requirements.
- Provide ongoing employee training in pollution prevention.

The BMPs outlined in this fact sheet target the following pollutants:

TARGETED CONSTITUENTS	
☑	Sediment
	Nutrients
	Floatable Materials
☑	Metals
	Bacteria
☑	Oil and Grease
☑	Organics and Toxicants
	Pesticides
	Oxygen Demanding

Provided below are specific procedures associated with each of the minimum BMPs along with procedures for additional BMPs that should be considered if this activity takes place at a facility located near a sensitive waterbody. In order to meet the requirements for medium- and high-priority facilities, the owners/operators must select, install, and maintain appropriate BMPs on site. Since the selection of the appropriate BMPs is a site-specific process, the types and numbers of additional BMPs will vary for each facility.

1. **Alter activities to prevent exposure of pollutants to stormwater.**
   - Perform activities during dry periods.
   - Move activities indoors.
   - Replace toxic materials with benign materials.
2. **Cover process equipment/area with a permanent roof.**
3. **Design process area to prevent stormwater run-on.**
   - Grade and/or berm the area to prevent run-on.
   - Position roof downspouts to direct stormwater away from the area.

[1] EPA *Preliminary Data Summary of Urban Stormwater Best Management Practices*

4. **Design process area to contain spills.**
   - Place equipment on an impervious surface or install a drip pan under potential leak points.
   - Construct a berm around the process equipment to contain spills.
   - Install drains connected to the public sewer or the facility's process wastewater system within these contained areas. **DO NOT** discharge to a public sewer until contacting the local sewer authority to find out if pretreatment is required. If discharge to the sanitary sewer is not allowed, pump water to a tank and dispose of properly.
5. **Inspect equipment regularly.**
   - Conduct regular and frequent inspection of equipment for leaks, malfunctions, staining on and around equipment, and other evidence of leaks.
   - Develop a standard methodology for reporting inspection results.
   - Develop a procedure for taking action on items in the report, responding to leaks, cleaning up spills, and completing repairs to prevent future leaks.
6. **If possible, eliminate or reduce the amount of hazardous materials and waste by substituting non-hazardous or less hazardous material.**
   - Use non-caustic detergents instead of caustic cleaning for parts cleaning.
   - Use a water-based cleaning service and have tank cleaned. Use detergent-based or water-based cleaning systems in place of organic solvent degreasers.
   - Replace chlorinated organic solvents with non-chlorinated solvents. Non-chlorinated solvents like kerosene or mineral spirits are less toxic and less expensive to dispose of properly. Check list of active ingredients to see whether it contains chlorinated solvents.
   - Choose cleaning agents that can be recycled.
7. **Recycle wastes whenever possible.**
   - Recycling is always preferable to disposal of unwanted materials.
   - Separate wastes for easier recycling. Keep hazardous and non-hazardous wastes separate, do not mix used oil and solvents, and keep chlorinated solvents separate from non-chlorinated solvents.
   - Label and track the recycling of waste material (e.g., used oil, spent solvents, batteries). Purchase recycled products to support the market for recycled materials.

TRAINING

1. **Train employees on these BMPs, stormwater discharge prohibitions, and wastewater discharge requirements.**
2. **Train employees on proper spill containment and cleanup.**
   - Establish training that provides employees with the proper tools and knowledge to immediately begin cleaning up a spill.
   - Ensure that employees are familiar with the site's spill control plan and/or proper spill cleanup procedures.
   - BMP IC17 discusses Spill Prevention and Control in detail.
3. **Establish a regular training schedule, train all new employees, and conduct annual refresher training.**
4. **Use a training log or similar method to document training.**

STENCIL STORM DRAINS

Storm drain system signs act as highly visible source controls that are typically stenciled directly adjacent to storm drain inlets. Stencils should read *NO DUMPING DRAINS TO OCEAN*.

REFERENCES

California Storm Water Best Management Practice Handbook. Industrial and Commercial. 2003. www.cabmphandbooks.com

California Storm Water Best Management Practice Handbooks. Industrial/Commercial Best Management Practice Handbook. Prepared by Camp Dresser & McKee, Larry Walker Associates, Uribe and Associates, and Resources Planning Associates for Stormwater Quality Task Force. March 1993.

Model Urban Runoff Program: A How-To Guide for Developing Urban Runoff Programs for Small Municipalities. Prepared by City of Monterey, City of Santa Cruz, California Coastal Commission, Monterey Bay National Marine Sanctuary, Association of Monterey Bay Area Governments, Woodward-Clyde, and Central Coast Regional Water Quality Control Board. July 1998 (Revised February 2002 by the California Coastal Commission).

For additional information, contact:

City of Laguna Niguel
Community Development
30111 Crown Valley Parkway
Laguna Niguel, CA 92677
949.362.4300
code@cityoflagunaniguel.org