

Industrial Wastewater: Wet or Chemical Labs Best Management Practices

Department: Environmental Protection

Program: Industrial Wastewater

Owner: Program Manager, Darrin Gambelin

Authority: ES&H Manual, Chapter 43, Industrial Wastewater

Industrial wastewater best management practices (BMPs) are guidelines that minimize the impact of activities that potentially contribute contaminants to the sanitary sewer. Most of these guidelines reflect practices already implemented at SLAC as prudent practices or as ES&H requirements.

The following BMPs apply to wet or chemical laboratories and are intended to protect water quality.

Drain Protection

- Seal floor drains where chemicals are used or stored. Provide a floor drain stopper if the drain cannot be sealed.
- Protect the lab's safety shower drain with a temporary plug or covered sump.

Chemical Storage

These BMPs apply to chemical storage. For additional detailed information on how to properly store hazardous materials, see Chapter 40, "Hazardous Materials".¹

- Store chemicals on low shelves or under countertops, on textured rubber mats whenever possible.
- Store chemicals behind protective barriers at least 1/5 the height of the tallest container.
- Never store chemicals above a sink.
- Keep flammable chemicals in an approved fire-proof cabinet.
- Do not leave chemical cabinet doors unlatched.
- Never store incompatible chemicals together. Avoid accidental mixing.

Chemical Disposal

These BMPs apply to chemical disposal. For detailed information on how to properly dispose of hazardous materials, see Chapter 17, "Hazardous Waste".²

- Collect and segregate hazardous waste for proper disposal
- Use signage and training to inform employees that hazardous material or hazardous waste is never discharged directly to the sewer. Signs above sinks have been effective.

1 *SLAC Environment, Safety, and Health Manual* (SLAC-I-720-0A29Z-001), Chapter 40, "Hazardous Materials", http://www-group.slac.stanford.edu/esh/hazardous_substances/haz_materials/policies.htm

2 *SLAC Environment, Safety, and Health Manual* (SLAC-I-720-0A29Z-001), Chapter 17, "Hazardous Waste", http://www-group.slac.stanford.edu/esh/environment/hazardous_waste/policies.htm

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- If you are not certain if a material is permitted to be poured down a drain, ask your environmental and safety coordinator or contact the industrial wastewater program manager.
- Dispose of mop water appropriately. If you expect a hazardous component based on operational knowledge, contact the Environmental Protection Department for characterization. If the mop water contains hazardous components, contact the Waste Management Group (WM) for proper disposal.

Secondary Containment

- Provide secondary containment for all hazardous chemicals and hazardous waste, including countertop flasks and squirt bottles.
- Keep secondary containment clean and dry.
- Never use a sink as secondary containment.

Spill Control

These BMPs apply to spill control. For additional information on how to handle spills, see Chapter 16, “Spills”.³

- Clean up spills whenever they occur.
- Keep a well stocked, accessible spill kit in the area. Make sure you have spill-control supplies for the type of materials you use and store.
- Ensure that employees are trained in SLAC emergency response procedures in the event of an accidental discharge or spill.

3 *SLAC Environment, Safety, and Health Manual* (SLAC-I-720-0A29Z-001), Chapter 16, “Spills”, <http://www-group.slac.stanford.edu/esh/environment/spills/policies.htm>