

Hazardous Waste Satellite Accumulation Areas

Best Management Practices for the Handling, Minimization, and Disposal of Hazardous Chemicals

This fact sheet provides an overview of hazardous chemical management at the *Insert name of facility* and incorporates Smithsonian, federal, state and local requirements. The goal is to help you make informed, responsible decisions on how you purchase, use, store and dispose of chemicals at SI. The Office of Safety Health and Environmental Management (OSHEM) provides support to the Smithsonian community to help ensure safe chemical handling practices. Should you require additional training on the handling of Hazardous Waste please, call (202) 633-2530

Prudent Chemical Management

The use of hazardous chemicals is necessary in science, education and research. The use of potentially hazardous chemicals is vital to the operation and maintenance of this facility.

Hazardous chemicals can be divided into four general categories:

- ***Corrosives***
- ***Flammables***
- ***Reactives***
- ***Toxics***

In most cases, the immediate or obvious health hazard resulted in the chemical's classification. However, "Toxics" typically refers to chemicals with acute or chronic health effects that may not be immediately apparent. Some chemicals can fall into more than one of these four categories

General Principles for Managing Potentially Hazardous Chemicals Do Your Part.....

- Only purchase what you can reasonably expect to use during a 6 month period.
- Purchase containers in the smallest practical size. Although the per-amount cost may be greater, significant savings are realized in reduced disposal costs and safer storage.
- When possible, buy what you specifically need. It is often possible to buy pre-made products or reagents.
- Rotate your chemical inventory. Indicate the date received and the date opened. Pay particular attention to expiration dates.
- OSHEM best management practices require a hazardous material inventory review and justification at least every three years.
- Read labels and Material Safety Data Sheets (MSDS). Manufacturers supply much of what you need to know about the safe use and storage of a chemical.
- Glass breaks! Buy chemicals in plastic containers or shatter resistant plastic coated bottles.
- Peroxide forming compounds should be disposed of if not used within a year.
- Read the National Safety Council data sheet "Recognition and Handling of Peroxidizable Compounds" for specific information on peroxide forming compounds

Attachment 11

- Keep all chemical containers off floors, carts and electrical equipment. Pay close attention to floor drains, sinks and other environmental receptors.
- Store corrosive, flammable and reactive chemicals below eye level. This simple task greatly reduces the likelihood of something falling from above and breaking.
- Cabinets with doors are safer locations than open shelves for hazardous chemicals.
- For safely carrying hazardous chemicals, place the original container into a secondary container. A bottle carrier or bucket will help reduce the likelihood of a break or spill and contain any contents should something happen.
- Be especially careful with reactive chemicals. Obtain and read the Material Safety Data Sheet for each reactive chemical that you may have or may work near.
- Avoid placing any chemical container in direct sunlight, underneath a sink or near a heat source.
- Never place volatile, toxic or flammable chemicals in unapproved refrigerators.
- For your safety, always wear personal protective equipment (eye/face protection, appropriate gloves and lab coat) and appropriate attire when handling hazardous chemicals. “Appropriate attire” does not include shorts, sandals and other garments that leave skin unprotected!
- Always wash your hands after removing gloves and before leaving the laboratory.

The identification and disposal of unlabeled chemical containers is very expensive; please label all containers with the following information. This includes any stock or working solutions.

- ✓ *Name of chemical or stock solution*
- ✓ *Date made (mm/dd/yyyy)*
- ✓ *Your initials and department*
- ✓ *Hazard warning if applicable*

Follow all waste disposal guidelines provided by your Supervisor and Hazardous Waste Coordinator!

It is highly recommended that you institute a label awareness campaign at your facility. As a Hazardous Waste Coordinator you may put up flyers, suggest that each Supervisor ask the questions on the container management checklist once a month, or suggest that each employee check the containers in their work area every Monday upon returning to work. These are easily accomplished tasks that take only a few minute.