

## **HAZARDOUS MATERIALS**

## HAZARDOUS MATERIALS HANDLING AND DISPOSAL PROCEDURES

The following information and guidelines for the handling, storing and disposing of hazardous materials on the campus have been established to protect the health and ensure the safety of students, faculty and staff.

The Occupational Safety and Health Act of 1970 (OSH Act) is the regulatory vehicle that ensures that the safety of workers, in firms larger than ten employees, is addressed. It sets standards of safety that help prevent injury or sickness among workers. The key factors of the OSH Act are regulating employee exposure and informing workers of the potential dangers of certain materials.

Hazardous material and hazardous waste are defined as follows:

*Hazardous Material:* Any identified chemical capable of causing physical hazard (flammable or explosive) or a health hazard (irritant or corrosive) that is currently in use or stored for use within an appropriate/authorized period.

*Hazardous* Waste: A solid or liquid material that is intrinsically, or has become hazardous due to a combination of or use of hazardous material and has been designated to be either thrown away or stored until quantity or time parameters require disposal. The State EPA defines waste hazardous if it has certain properties that could pose dangers to human health and the environment after it is discarded. The waste also possesses certain characteristics, such as: ignitability, corrosivity, reactivity or toxicity.

Due to the seriousness of issues associated with hazardous materials, and waste, the Occupational Safety and Health Administration legislated the "Hazard Communication Standard" (HCS). The HCS is commonly known at the "Right to Know" law and required chemical manufacturers and importers to provide information in regard to the possible hazards of their products. As of 2012, the HCS was aligned with the "Globally Harmonized Standard" (GHS) and is now known as the "Right to Understand" law. This standard specifies that certain information should be included on labels of hazardous chemicals, as well as, changed the language from Material Safety Data Sheets (MSDS) to Safety Data Sheets (SDS). SDS provide

users with information about the chemicals substances within a product, safe handling procedures, first aid instructions for exposure, and clean up procedures to be used when the product is accidently spilled or released. Additionally, the SDS must follow a specific format to create a document that is more easily understood. A SDS is delivered with the initial shipment of a product or when the SDS is modified.

Employers are required to have a Safety Data Sheet for each hazardous chemical that they stock for current or anticipated future use. The SDSs are to be posted and easily identified. Two copies are requested from suppliers, as copies of all SDS are centrally filed in the Maintenance and Operations Department and also kept at the user locations. These copies must be maintained and readily accessible to employees during all work shifts. Additionally, the college has an online database of SDS sheets.

Along with SDS, manufacturers and importers of chemicals must also clearly list the hazards of their products on container labels. Specific warnings must be used instead of general warnings (i.e. specific = "poisonous," general = "harmful if swallowed").

Chemical manufacturers and importers will be required to provide a label that includes a harmonized signal word, pictogram, and hazard statement for each hazard class and category. Precautionary statements must also be provided. Employers are required to label secondary containers of chemicals with the contents and appropriate description of hazards.

The U.S. Environmental Protection Agency (EPA) focuses on pollution prevention. The Pollution Prevention Act of 1990 promotes an integrated environmental ethic, stressing pollution prevention. The goal is to prevent pollution before it becomes a problem.

The California EPA regulates activities related to pollution prevention and waste minimization. Research and educational institutions have unique waste management problems. Waste volume is not large, but the diversity of wastes is considerable. Differing wastes are generated in chemistry, biology, geology, physics, psychology, arts, printing, maintenance, custodial and photography environments. All of these diverse wastes must be handled properly.

All hazardous waste generators are responsible for the safe cradle-to-grave management of any hazardous waste they may generate. The best way to manage the waste problem is to prevent waste when possible. Some EPA waste-reducing practices are:

- Microscale experiments
- Increase use of instrumentation and alternative teaching methods
- Substitute less toxic/hazardous compounds and/or perform different experiment
- Pre-weigh chemicals
- Reuse or recycle spent solvent
- Onsite distillation and reuse
- Segregate waste streams
- Segregate precious metal wastes
- Provide a designated safe facility for waste storage
- Label incoming chemicals

- Maintain labels
- Develop a running inventory of unused reagent chemicals for use by other labs.

You may generally be able to tell if your waste is hazardous by reviewing container labeling, Safety Data Sheet (SDS), or the EPA Hazardous Waste Regulations.

If you are uncertain about whether a waste product is hazardous, you may contact the California State EPA Office for assistance. Information can also be found online at: http://www.oehha.ca.gov/

The State's hazardous waste rules have differing requirements for the management of hazardous waste depending on the quantity of waste generated each calendar month. The District must maintain a current Environmental Health Permit under which it operates and must maintain a current Hazardous Materials Business Emergency Plan and Inventory. Both are maintained in the Maintenance and Operations Office and are available for view during business hours.

In order to remove hazardous waste off the premises, the waste must be properly packaged and labeled. The College contracts with an outside source to analyze, certify, package and label our drums and containers, as required by the U.S. Department of Transportation (USDOT). The contractor is responsible for transporting the waste to a facility that is permitted by Cal/EPA or Federal EPA to accept the waste. Each time that hazardous waste is removed from the premises, a Hazardous Waste Manifest must be created.

The hazardous waste manifest is a special shipping document that must be used for the transport of hazardous waste. The manifest must accompany the waste wherever it goes. Each handler of the waste must sign the manifest and keep one copy. Once the waste reaches its final destination, the owner of that facility returns a copy of the manifest to the College to confirm that the waste arrived. The College copy can be found in the Maintenance and Operations Department.

Note: The College is responsible for its hazardous waste at all times until acceptance by the final disposal site organization. It is the responsibility of the Maintenance and Operations Department to ensure that the, properly permitted, contractor establishes a complete documentation trail and complies with all regulations governing hazardous waste handling, transport, and disposal.

## Reference: Title 8, Section 340 et seq.

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