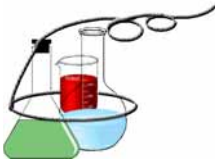

Idaho Chemical Roundup

Waste Management and Disposal at Schools

Idaho's hazardous waste requirements

All businesses generate waste. Some generate hazardous waste. Like every business, schools are required to determine whether or not each waste is hazardous, track the amount of hazardous waste they generate, and ensure that all wastes are properly disposed of according to federal, state, and local requirements.

The Idaho Department of Environmental Quality (DEQ) can help answer questions about specific wastes and requirements.

What is waste?

Waste is any material (solid, liquid, or contained gas) that is discarded by being abandoned (disposed, burned, or incinerated), recycled or reused, or is considered inherently "waste-like". If you can't use it, don't want it, and can't find someone else who wants to use it as is, it's waste.

Hazardous wastes are wastes that can pose a substantial or potential hazard to human health or the environment when improperly managed. Many common wastes that you have always handled may be classified as hazardous such as some types of cleaners or pesticides, fluorescent lights, or batteries.

There are two types of hazardous waste:

Characteristic: Hazardous wastes that exhibit one or more of the characteristics of toxicity, ignitability (burns easily), corrosivity (highly acidic or basic), or reactivity (explosive, etc.).

Listed: Hazardous wastes that appear on any of four specific lists issued by the U.S. Environmental Protection Agency (EPA). These wastes may be solid, semi-solid, or liquid. Some that are extremely hazardous, such as certain pesticides that can be fatal to humans in small doses, are called acute hazardous wastes.

Examples of hazardous wastes found in school laboratories include:

Corrosives
Acids with pH less than 2 and bases with pH over 12.5.

Oxidizers
No-longer-needed solid nitrates, chromates, permanganates, nitrites, chlorates, perchlorates, persulfates.

Reactives
Water and air reactive compounds, cyanides, and sulfides.

Ignitables
Chemicals and wastes with flash points under 140 degrees Fahrenheit. To find out the flash point of a specific chemical, check the Material Safety Data Sheet (MSDS). If you don't have an MSDS, contact your chemical supplier or search online for the chemical name and MSDS. A 37% formaldehyde solution is an example of an ignitable hazardous waste.

Toxics
If the waste contains over 0.1% of these solvents or is over 0.1 molar concentration of these metals, it is a hazardous waste: Arsenic, barium, cadmium, mercury, chromium, lead, selenium, and silver (common in photographic fixer solution).

If the waste contains over 0.1% of these solvents, it is a hazardous waste: benzene, carbon tetrachloride, chlorobenzene, chloroform, cresol, dichlorobenzene, dichloroethane, dichlorethylene, methyl ethyl keytone, pyridine, and trichloroethylene.

Acute hazardous wastes
Unused stores of the following chemicals are examples of acutely hazardous wastes: arsenic trioxide, beryllium powder, barium cyanide, copper cyanide, nickel cyanide, potassium cyanide, silver cyanide, sodium cyanide, zinc cyanide, 2,4-dinitrophenol, endothall, epinephrine, nicotine, sodium azide, strychnine, and vanadium pentoxide.

The list above is not exhaustive. Other potentially hazardous wastes found in schools include: other lab chemicals; paints, thinners, and varnishes; cleaners; pesticides and yard chemicals; computers/electronics; fluorescent light bulbs; batteries; mercury thermostats, thermometers, and blood pressure cuffs; medicines; and shop fluids (motor oil, solvents, paints).

What regulations apply to my school? What is my generator status?

Schools must comply with regulations regarding the management, transport, and disposal of hazardous waste. These requirements are dependent on the school's generator status, which is determined by the amount of hazardous waste stored and generated schoolwide each calendar month. Teachers should work with school administration and facility manager to keep apprised of the schools current generator status and applicable requirements. These requirements can affect the way chemicals and chemical wastes are managed in the classroom.

Generators fall into three categories:

- Conditionally Exempt Small Quantity Generator (CESQG)
- Small Quantity Generator (SQG)
- Large Quantity Generator (LQG)

Most schools probably fall into the CESQG category, but if your school is involved in a large maintenance project, disposing of old computers, or conducting a lab cleanup, it could land in the higher category by generating over 220 pounds of hazardous waste or 2.2 pounds of acutely hazardous waste in a single month, causing it to become a small or large quantity generator for that month.

If your school is unsure of its status, contact DEQ regional office. (see numbers below)

As a CESQG, what are my requirements?

Keep track of wastes by identifying all hazardous wastes generated and determining the total amount generated and stored on site each month.

Limit on-site storage of hazardous wastes to no more than 2,200 pounds or 2.2 pounds of acute hazardous waste at any time.

Properly dispose of hazardous wastes. Ensure that all hazardous wastes are delivered to an approved municipal solid waste landfill, a permitted hazardous waste facility, or a facility that beneficially uses, reuses, legitimately recycles, or reclaims the waste. Teachers should track the hazardous wastes generated in the classroom and work with facility managers on proper disposal options.

As a SQG or LQG, what are my requirements?

Small and large quantity generators are subject to more stringent requirements such as obtaining an EPA identification number, and additional recordkeeping and training requirements. Schools can contact DEQ for a list of these requirements.

How do I get rid of my wastes?

As a CESQG, a school has several options to dispose of hazardous waste. Teachers should work with facility managers to determine the best option for the school.

Reuse or recycle. Prior to disposal see if the chemical can be used by another different department or returned to the vendor for resale or recycling.

Use a hazardous waste management company. Disposal through a reputable hazardous waste management company is a best practice for waste that cannot be reused or returned to a vendor. This helps assure the waste is treated and disposed of in a method that meets environmental requirements. Check to see

that the company has an EPA identification number allowing it to transport hazardous waste. For every shipment from your school, request a manifest which is a document that records where your waste went. Hazardous waste is always the responsibility of the facility that generated it. If questions arise, good documentation is your record of management efforts.

Down the drain. Disposal of chemicals down the drain may result in fire, chemical reactions, and corrosion within the plumbing system and may be illegal. Generators may be able to legally dispose of certain chemical wastes down a drain if several conditions are met. These include:

1. The drain must go to a publicly owned treatment works (POTW). A POTW is run by a city, county, or special district, and is regulated under the Clean Water Act. Not all drains discharge into POTWs.
2. Obtain permission from the POTW operator. Some chemicals may interfere with the operation of a treatment system and may be prohibited by the operator. In addition, large releases of flammable or ignitable chemicals may pose a hazard to workers at the plant or along the system. Explosions have occurred when water line workers using soldering torches have hit a concentration of flammable chemicals poured down a drain.
3. Identify any pretreatment requirements the POTW may require. For example, chemicals like formaldehyde may need to be deactivated prior to disposal.
4. Even if permission is granted by the POTW, do not pour chemicals down the drain indiscriminately. Two incompatible chemicals poured one after the other could react.

Never pour chemicals or chemical wastes into a septic system as the chemicals can interfere with the operation of that system and can pollute the groundwater.

To a landfill. As a CESQG, it may be legal to dispose of some wastes at your local landfill, with permission of the landfill. Always check prior to disposal for any restrictions or special requirements.

Small and large quantity generators must dispose of wastes according to more stringent regulations. If your school is or becomes a small or large quantity generator, contact DEQ for assistance.

Questions? For information about hazardous waste requirements, contact the Department of Environmental Quality at (208) 373-0502 or visit www.deq.idaho.gov. Contact your local DEQ regional office at:

Boise	373-0550
Coeur D'Alene	769-1422
Idaho Falls	528-2650
Lewiston	799-4370
Pocatello	236-6160
Twin Falls	736-2190

This fact sheet includes summaries of some Idaho regulations pertaining to waste and is not intended to be all-inclusive. Detailed requirements are outlined in the Rules and Standards for Hazardous Waste (IDAPA58.01.05) http://www2.state.id.us/adm/adminrules/rules/idapa58/0105.pdf.