



Minnesota
STATE COLLEGES
& UNIVERSITIES

Hazardous Waste Compliance Awareness For Faculty and Staff

Important information for campus employees generating, handling or storing hazardous waste

- I. Hazardous Waste
 - A. Materials being used for their intended purpose are not waste; the material becomes waste when a decision is made to dispose of it.
 - B. Minnesota Pollution Control Agency (MPCA) administers hazardous waste programs within Minnesota, under Environmental Protection Agency (EPA) oversight. In addition, seven counties (in the Twin Cities metro area) administer hazardous waste programs under MPCA oversight.
 - C. MPCA licenses facilities that generate hazardous waste. Generator responsibilities are determined by weight and type of waste generated in a specified period, usually within a month. Storage limits and accumulation time limits for waste vary depending on the generator size. Most MnSCU campuses are “Very Small Quantity Generators” (VSQG) and are subject to fewer training and reporting requirements. “Large Quantity Generators” (LQG) are subject to more extensive requirements.
 - D. The Resource Conservation and Recovery Act (RCRA), 42 U.S.C. §§6901-6992k, is the federal law which establishes the overarching standards for handling waste. RCRA and its implementing regulations dictate:
 - Waste evaluation procedures;
 - Waste minimization;
 - Storage and labeling of hazardous waste;
 - Safe handling; and
 - Recordkeeping. Our college / university is required to document employee training on hazardous waste handling, storage, and accumulation, as well as maintain the training records. These records must be easily accessible during an inspection by the regulatory agency, either the MPCA or county. Training must be completed before an employee handles waste. Regulatory agencies verify adequacy of training records and levy fines for both lack of training and / or lack of documentation that training was provided.
- II. Definition of “Hazardous Waste:” waste is considered hazardous for one of three reasons.
 - A. It is “Characteristic” – displays one of six hazardous characteristics; or
 - B. it is “Listed” – appears on one of the four lists in Minnesota Hazardous Waste Rules; or
 - C. it contains more than 50 parts per million (ppm) polychlorinated biphenyls (PCBs).

III. “Characteristic” Hazardous Waste

A. Federal classifications and codes

Ignitable	<ul style="list-style-type: none"> • Ignitable, compressed gases • Liquid with flashpoint < 1400F • Solids, other than gases, that may cause fire through friction, absorption of moisture, or spontaneous chemical changes 	D001
Oxidizer	<ul style="list-style-type: none"> • Oxidizers and organic peroxides 	D001
Corrosive	<ul style="list-style-type: none"> • Aqueous solutions with a pH of less than or equal to 2 or greater than or equal to 12.5 	D002
Reactive	<ul style="list-style-type: none"> • Unstable and readily undergo violent change • Can react violently or form potentially explosive mixtures with water • Readily capable of detonation or explosive decomposition • Generates toxic gases, vapors or fumes when mixed with water • It is a forbidden DOT explosive. • Cyanide or sulfide-bearing waste that can produce toxic gases when mixed with pH conditions between 2 and 12.5 (sodium cyanide, potassium cyanide, gold cyanide, lead sulfide, sodium sulfide, silver sulfide) 	D003
Toxic	<ul style="list-style-type: none"> • These are specific metals, pesticides, organic compounds and herbicides. • “Heavy” metals • Testing shows if hazardous constituent can be leached out of a sample 	D004 – D043

B. Additional waste classifications (Minnesota)

Toxicity	i.e., Lethal Dose (LD) 50 <500 parts per million (ppm)	MN01
Lab packs		MN02
PCBs		MN03
Used Oil		MN04

- IV. “Listed” Hazardous Wastes:** a “listed” waste is one that appears on one of the EPA or MPCA’s four lists – F, K, P and U Lists.
- A.** Hazardous waste from non-specific sources. This means the waste comes from different processes or sources within a certain industry or different industries. Examples include paint and thinners, some brake and carburetor cleaners, vapor degreasing and dry cleaning solvents, distillation bottoms, electroplating baths, sludges, related wastes and waste water treatment sludge. F-list: F001 – F028
 - B.** Hazardous waste from specific sources. Examples include specific industry process waste such as wood preserving; manufacture of pesticides, inks and organic pigments; explosives; petroleum refining; and iron and steel industries. K-list: K001 – K136
 - C.** Some waste types are defined as “acutely hazardous” because they can be fatal to humans, even in small doses. Examples include toxic chemical products or spill residues (unused or unusable). P-list: P001 – P122
 - D.** U-list (U001 – U359) wastes, although harmful, are not as toxic as P-listed waste. To be P- or U-listed, the P or U chemical must either comprise 100 percent of the waste or be the sole active ingredient. U-listed wastes include discarded commercial chemical products, manufacturing chemical intermediates, or off-specification commercial chemical products.
- V. Responsibilities of MnSCU Campuses as Generators of Hazardous Waste**
- A.** A college or university that is a hazardous waste generator must determine if a waste is regulated and if the waste falls into one of three statutorily defined categories: excluded, listed, or characteristic, either by testing the waste or by applying knowledge. If a waste is determined to be listed or characteristic, the waste is deemed a hazardous waste.
 - B.** A generator must identify all the waste streams generated in its facility.
 - C.** A generator must ensure that all hazardous wastes are disposed of properly. Hazardous waste must not be disposed in drains, the regular trash / garbage, or carried outside the facility by students, faculty or staff. Rather, the waste is to be transported by a licensed hazardous waste transporter specified on the facility’s hazardous waste manifest. A hazardous waste manifest is a multi-page shipping document that must accompany off-site shipments of hazardous waste. Within the college and university, only authorized personnel may sign the hazardous waste manifest.
- VI. Labeling Requirements**
- When the hazardous waste is placed in a container, the container must be marked with
- the words “Hazardous Waste;”
 - a clear description of the type of waste; and
 - the date (called “Accumulation Start Date”) the waste collection is initiated.

VII. Storing Hazardous Waste

- A.** Volatile materials cannot be permitted to evaporate at any point during storage or accumulation. It is a violation of law to allow waste to evaporate. The college or university could be fined.
- B.** The campus should designate an area, known as the permanent (or central) storage location, for storage of hazardous waste. Hazardous waste must be transported by a licensed transporter to a licensed disposal facility. Hazardous waste must be shipped with the hazardous waste manifest. Maintain the copy of the manifest at your site for three years.
- C.** Within a classroom or a maintenance area, hazardous waste can be stored by designating a container to be a “satellite” accumulation container.
- Satellite accumulation allows a hazardous waste generator to slowly accumulate up to 55 gallons (550 pounds) of hazardous waste (or up to 1 quart of acute hazardous waste).
 - Satellite accumulation containers must either be under the direct control of the operator of the process producing the waste and visually inspected daily or must be inspected weekly (document these inspections).
 - Write on the satellite container the date you first add waste (start date) and the date the container is full (fill date). The storage time clock begins on the fill date.
 - You have three days from the fill date to move the drum to your permanent storage area and 90 to 180 days from this date (depending on your generator size) to move the waste off-site through a licensed transporter.
 - Satellite accumulation may occur at more than one location and you may accumulate more than one waste at a location; however, you may not exceed the limits (55 gallons / 550 pound non-acute waste or 1 quart acute waste).
- D.** Other requirements for hazardous waste containers and storage areas:
1. The container used for storing waste must be compatible with the waste stored in it. Verify the compatibility with your Campus Environmental and Safety Director.
 2. Ensure that the hazardous waste container is closed at all times – except when adding or removing waste. Note: an open funnel in a drum is considered to be an open container by MPCA. All funnels must be designed to lock closed.
 3. Ensure that the wastes are stored separately from incompatible products to avoid inadvertent mixing.
 4. Never mix incompatible wastes.
 5. If waste is stored in metal drums or containers, ensure they are bonded and grounded.

6. Ensure that hazardous waste containers are inspected weekly. Record or document inspection results. Verify or check:
 - the condition of the container for leaks;
 - the floor for cracks, obstructions or trash in the area;
 - the accumulation start date to ensure the drum is shipped by the transporter on time; and
 - the pre-shipment label for completeness and correctness.
7. Ensure that emergency and spill equipment (such as fire extinguisher, sorbent materials, spill containers) are available and stored in or near the permanent hazardous waste storage area.

VIII. Contingency Planning and Emergency Response

Every facility must have a written plan for responding to emergencies that includes policies and procedures. The contingency plan must list:

1. Emergency coordinator (names and phone numbers, alternates and phone numbers)
2. List of emergency equipment available
 - Immediate access to communication equipment
 - Personal protective equipment
 - Firefighting equipment
 - Spill response and decontamination equipment
 - First aid kits, etc.
3. Evacuation procedures – in case of emergency, safe areas for the employees and alternative escape routes. The building plans should include waste storage areas and where equipment is stored.
4. Emergency response – the contingency plan should specify:
 - the amount and type of training for employees – the training needs to include the employee response for evaluating if the spill release would be incidental or emergency and act accordingly; and
 - coordination with the police, fire department, hospitals, emergency response contractor and state / local agencies.
5. Post emergency information (e.g. next to telephones). In case of spills and other emergencies:
 - The name and telephone number of emergency coordinator
 - Telephone number of fire department
 - Location of fire extinguisher, spill control equipment in that area

IX. Additional Resources

Campus Environmental Health and Safety Officer is _____.

Campus Lab Chemical Hygiene Officer is _____.

1. Minnesota Pollution Control Agency
<http://www.pca.state.mn.us/waste/index.html>
2. Hazardous Waste Compliance Guide:
<http://www.pca.state.mn.us/publications/w-hw5-25.pdf>
3. Waste – health care industry:
Minnesota Pollution Control Agency
<http://www.pca.state.mn.us/industry/healthcare.html>
4. Managing waste from health care providers:
<http://www.pca.state.mn.us/publications/w-hw3-34.pdf>
5. Minnesota State Colleges and Universities
Hazardous Waste Management Plan and additional resources:
<http://www.firecenter.mnscu.edu/ehs/environmental/documents/AppendixItoAnnexK.pdf>

Upon request, this publication is available in alternative formats by calling the Minnesota State Colleges & Universities Fire/EMS/Safety Center at:

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