



## General MSU Waste Management Information SOP 19.2

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Waste management procedures in the Morgan State University

### I. Purpose

These SOPs detail the policies and procedures related to general waste management.

### II. Scope

Handling and disposal of waste generated during laboratory experiments must be conducted in accordance with University policies.

### II. Definitions

Users are defined as faculty, staff or students who use the facility to conduct various research or facility maintenance procedures. Visitors are defined as individuals who are not regular users of the facility.

The Resource conservation and recovery act (RCRA) governs the management of hazardous wastes. To be considered a hazardous waste, a material first must be classified as a solid waste (40 CFR §261.2). EPA defines solid waste as garbage, refuse, sludge, or other discarded material (including solids, semisolids, liquids, and contained gaseous materials). If a waste is considered solid waste, it must then be determined if it is hazardous waste (§262.11).

Wastes are defined as hazardous by EPA if they are specifically named on one of four lists of hazardous wastes located in Subpart D of Part 261 (F, K, P, U) or if they exhibit one of four characteristics located in Subpart C of Part 261 (characteristic wastes).

### III. Requirements and Procedures

1. **Municipal Solid Waste (MSW)** is not regulated for special disposal and can be placed into a general waste dumpster. Examples include regular **animal bedding**, office waste, and any general waste that is commonly disposed of in a general trash can for pick up by Building Services.
  - a. Recyclable materials should be separated from this material and placed into the nearest recycling bin.

- b. Users and visitors are responsible for depositing their waste in the nearest appropriate trash can or general front load dumpster, as appropriate.
  - c. Vivarium staff will be responsible for removing trash generated by the vivarium and depositing them in the nearest appropriate dumpster. Staff are also responsible for closing the lid or door to the dumpster after depositing material inside.
  - d. If recyclables require pick up, contact MSU Recycling at 443-885-3825
2. **Universal Waste** consists of batteries, pesticides, mercury-containing equipment, lamps, or PCB-containing lamp ballasts.
- a. **Rechargeable and specialty batteries** are collected by the Recycling Department, located off of Cold Spring Lane in the Washington Service Center Annex, in trailer #1. Contact the Recycling Center at 443-885-3825 for collection information.
  - b. **Alkaline batteries** are to be placed, with their terminals taped to prevent fires, at the nearest paper recycling station for collection. Alkaline battery disposal is not currently regulated, but recycling is encouraged.
3. **Remaining Universal Waste**
- a. It is unlikely that vivarium users will be handling the remaining types of universal waste. If disposal of these items is required, contact OSHE at [oshe@morgan.edu](mailto:oshe@morgan.edu).
  - b. **Rodent bedding is bagged in a dark plastic trash can and taken out and disposed of as regular trash as this is not considered hazardous waste.**
4. **Recyclable Materials** can be diverted from disposal in a landfill and accepted by the MSU Recycling Program. Vivarium users are responsible for placing recyclables in the appropriate receptacle. Any material contaminated with animal waste or soiled bedding will be placed in a dumpster as regular trash and not be recycled. Materials currently collected under this program include, but are not limited to, the following:
- a. Metal including aluminum, steel, copper, tin, and brass. Small quantities, including soda or tin cans, can be deposited in the universal beverage collection bins located throughout grounds.
  - b. Cardboard should be flattened and placed in the trash by the exit door. In addition, numerous cardboard collection containers are located around grounds, including near the washroom 115 outside. Container lids should be closed when not in use.
  - c. Electronics including CDs and DVDs, cell phones and chargers, used inkjet cartridges, tapes, jewel cases, computers, printers, and TVs. Small electronics can be deposited at the recycling location on grounds, while Recycling should be contacted for larger or specialty items.
  - d. Plastics includes all numbered plastic (#1-7) such as coffee cup lids, yogurt cups, plastic bottles and caps, plastic bags, and plastic wrap. Small quantities can be deposited in the universal collection bins located throughout the campus. Toxic substance containers, such as motor oil or antifreeze, are not permitted. Toxic substance containers should be placed in hazardous waste collection areas for pick up by Triumvirate

(see item 1.4 below). Styrofoam is not permitted. Styrofoam should be placed in general waste.

- e. White Paper includes any white paper such as printer/copy paper, notebook paper, and spiral bound notebooks. Paper can be deposited in any white paper recycling bin or box or in the appropriate box in the building and or lab.
- f. . Mixed Office Paper includes colored paper, newspaper, magazines, envelopes, phone books, post-it notes, and index cards. Paper can be deposited in any mixed paper recycling bin or box or in the appropriate box in any paper recycling bin.

## 5. Hazardous Waste

- a. Chemical waste that is regulated as “hazardous waste” is defined by EPA in either of two ways:
- b. Waste that has certain hazardous characteristics (referred to as characteristic waste) or
- c. Waste that is on certain lists of chemicals (referred to as listed waste).
- d. **Examples of hazardous waste include paraformaldehyde, xylene and sodium azide.**
- e. The RCRA characteristic hazardous waste is a solid waste that exhibits at least one of four characteristics: ignitability, corrosivity, reactivity, and toxicity.
- f. A waste is determined to be a hazardous waste if it is specifically listed on one of four lists (F-list, K-list, P-list, or U-list) found in 40 CFR 261 Subpart D.
- g. No chemicals shall be placed in domestic waste containers (dumpsters, trash cans, etc.), poured down drains, rinsed down sanitary sewers or in any other way released into the environment. Hazardous waste includes, but is not limited to, laboratory reagents, solvents, non-latex paints, fuels, photographic chemicals, corrosives, poisons, pesticides, pump oils, electrical equipment containing oils, heating oils, refrigerants, water treatment chemicals such as descaling agents or any compressed gases.
- h. Hazardous waste should not be placed in areas accessible by the public (e.g. hallways, restrooms, stairways, outside buildings, loading docks, parking lots or in open motor vehicles) or areas that may be subject to temperature extremes.
- i. Hazardous Waste will be collected in satellite accumulation areas. Once hazardous waste containers are full, Triumivrate Environmental will pick up the waste for disposal.
- j. Additional details on hazardous waste disposal are presented in the Chemical Waste SOP. Contact [oshe@morgan.edu](mailto:oshe@morgan.edu) and [laura.odonnell@morgan.edu](mailto:laura.odonnell@morgan.edu) for disposal information.

**5.1 Hazardous Waste List.** Wastes in the BSSC Vivarium are classified under the P list and the U list. **The P list and the U list (Discarded Commercial Chemical Products) -** These two lists are similar in that both list pure or commercial grade formulations of certain specific unused chemicals as hazardous. Both the P list and U list are codified in 40 CFR §261.33. A P or U waste code may be applicable, provided that the material is an unused commercial chemical product (CCP). A CCP is a substance that consists of the commercially pure grade of the chemical, any technical grades of the chemical, and all formulations in which the chemical is the sole active ingredient (§261.33(d)).

The **P-List** contains about 239 acutely toxic substances, with 135 different waste codes. This is because some waste codes will span several substances.

Arsenic	P012	veterinary medicine, severe parasitic diseases
Arsenic Trioxide	P012	chemotherapy
Chloropropionitrile	P027	pharmaceutical synthesis
Cyanide Salts	P030	laboratory
Epinephrine	P042	emergency allergy kits, eye surgery, cardiac arrest
<b>U-List</b> wastes are all toxic. The full list of wastes found on both the P-List and U-List can be found here: 40 CFR §261.33. Five examples of the wastes on this list include:		
Acetone	U002	solvent in pharmaceutical formulations
Acetyl Chloride	U006	cholesterol testing
Acrylonitrile	U009	pharmaceutical manufacturing
Aniline	U012	pharmaceutical manufacturing
Azaserine	U015	antifungal, antineoplastic

## 6. Annual Review of Procedure/Training

Supervisors are responsible for reviewing this procedure at least once each year with all vivarium staff members and visitors using the vivarium.

Retrieved from

<https://www.hazardouswasteexperts.com/rcra-listed-wastes-toxic-acutely-toxic-or-merely-hazardous/>

<https://waste.zendesk.com/hc/en-us/articles/211677238-What-is-a-RCRA-hazardous-waste>