Disposal Procedures for Regulated Wastes

Each department at Stephen F. Austin State University is responsible for the disposal of their hazardous waste and should budget appropriately. All SFASU departments should report any waste to the Environmental Health, Safety and Risk Management Department. SET Environmental Inc. has a standing contract to dispose all the hazardous waste generated from Stephen F. Austin State University. The Environmental Health, Safety, and Risk Management Department will assist all departments with the removal and disposal process of departmental hazardous waste and should always be contacted whenever hazardous waste is being generated. Each department should follow the removal and disposal guidelines outlined in this manual.

Step-By-Step Instructions

Before disposing of hazardous waste:

1. Determine if you can reuse or recycle this waste in your laboratory. If so, there is no need to dispose of the material.

2. If you have unopened or uncontaminated containers in a usable form, you should attempt to find another user. This will avoid the cost of disposal, the environmental impact of disposal, and needless cost to another user incurred through the purchase of new chemicals. The Environmental Health, Safety and Risk Management Department can assist you in this process.

3. The following are some of the criteria to decide if a substance is waste: spent material, unusable because it doesn’t meet its required specifications, past its expiration date, unlabeled, has been unlabeled for more than 10 days, abandoned, a container that once held chemicals, unwanted and intended to be discarded or recycled.

4. Determine if a chemical is an “extremely hazardous” waste. Check the list of known hazardous and extremely hazardous substances provided in the Appendix. If the chemical is in the listed wastes, follow appropriate directions.

5. If a substance is not an extremely hazardous waste, determine if it is “hazardous waste”. If you answer NO to all the questions below, your chemical waste is not a hazardous waste. If you answer YES to any of the questions below, your chemical is hazardous chemical waste. Follow the storage and disposal guidelines outlined in this manual.

For empty containers that once held hazardous chemical wastes, read How to Dispose of Empty Hazardous Materials Containers. Dispose of nonhazardous waste according to its type:

- **Solids** can go in the regular trash. DO NOT attempt to dissolve powders or salts and dispose of them in a drain.
- **Liquids** can be poured down a drain, but may first require neutralizing or other conditioning.
- **Does the waste consist of solid reagent chemicals** in a manufacturer's container?

- **Is the waste ignitable?**
  - Is the flashpoint less than or equal to 140°F or 60°C?
  - Can the waste cause fire at standard temperature and pressure through friction, absorption of moisture, or spontaneous chemical changes?
  - Is the waste an ignitable compressed gas?
  - Is the waste an oxidizer?
  - Will it release oxygen when reacting with another chemical?
  - Will it react with organic materials such as oils, greases, solvents, paper, cloth, wood, etc., to ignite?

- **Is the waste corrosive?**
  - Is it a liquid with pH less than or equal to 2, or greater than or equal to 12.5?
  - Is it a solid with pH less than or equal to 2, or greater than or equal to 12.5 when mixed with an equal weight of water?
  - Will it aggressively corrode steel?
  - Will it destroy living tissue?

- **Is the waste reactive?**
  - Is it normally unstable or subject to violent change?
  - Does it react violently with water by forming potentially explosive mixtures or toxic gases, vapors, or fumes?
  - Is it a cyanide- or sulfide-bearing waste that can create toxic gases, vapors, or fumes when exposed to pH conditions between 2 and 12.5?
  - Can it detonate or explode when decomposing at standard temperature and pressure, when subjected to a strong initiating source, or when heated under confinement?

- **Is the waste toxic? (Toxicity measures apply to all species.)**
  - Does it have an acute oral LD50 less than 2,500 milligram per kilogram?
  - Does it have an acute dermal LD50 less than 4,300 mg/kg?
  - Does it have an acute inhalation LC50 less than 10,000 ppm as a gas or vapor?
  - Does it have an acute aquatic 96-hour LC50 less than 500 milligrams per liter?
  - Has the material shown through experience or testing to pose a hazard to human health or the environment because of its carcinogenicity (carcinogen, mutagen, and teratogen), acute toxicity, chronic toxicity, bio-accumulative properties, or persistence in the environment?
6. Many hazardous wastes are still hazardous at very low concentrations (less than 1%). Contact the EHS&RM at 468-6034/468-4532 for assistance in determining if your low-concentration waste is hazardous.

7. Separate solids and liquids. All liquids must be free of solid material and or sludge to facilitate consolidation, recycling and proper disposal. If solids cannot be separated from liquids, the identification and quantity of the solid component must be listed on the container. Every effort should be made to separate solids and liquids.

8. Consolidate similar wastes. Effort should be made by the waste generator to consolidate same-type waste into as few containers as possible.

9. Make sure containers are compatible with the material inside and if not, perform a transfer to a new container. Containers must be leak free, have a tight cap, and be clean on the outside. Stoppers and corks are not acceptable. Containers must be no more than 90% full.

10. Label all waste containers. Make sure containers are marked with: a) the words "HAZARDOUS WASTE” b) use the guidelines described in the manual to fill out the label.

11. Segregate all the waste appropriately. Refer to the SFA Laboratory Manual and SFA Waste Manual for proper information on compatibility between chemicals. Contact EHS&RM for further assistance at 468-6034/468-4532.

12. Fill out the hazardous materials tag appropriately. Tear off the bottom portion and mail it to Environmental Health, Safety and Risk Management. The address is printed on the backside of every waste tag. Campus mail will take no more than 2 days to deliver the waste tag. Fill out and mail the waste tag at least 3 days before the container is full.