

Hazardous Waste Management at Austin Peay State University

Identification

The first step in appropriately managing hazardous waste is to determine if you have a hazardous waste. Before something can be a hazardous waste, it must be a waste. A waste is defined by the EPA as discarded material, inherently waste-like material, speculative accumulation, and use constituting disposal. How do you know if something is a waste?

Consider the following:

- (1) Is it in good condition and labeled appropriately?
- (2) Is it currently legal for use in the U.S.?
- (3) Has anyone used it in the last 2 or 3 years?
- (4) Will anyone use it in the next 2 or 3 years?

If you answered yes to all 4 questions, then you do not have a waste nor a hazardous waste.

A Hazardous waste can be a solid, liquid, gas, or sludge that meets the definition of a characteristic or listed hazardous waste. The following categories are not hazardous waste: Sewage, Radioactive Waste, Regular Trash, and Biological Waste.

Characteristic Hazardous Wastes

Waste solids, liquids, containerized gases, or sludges that exhibit any of the following characteristics are defined as characteristic hazardous wastes:

- 1) Ignitability - a flash point < 140 degrees Fahrenheit.
- 2) Corrosivity – Having a pH < 2 or > 12.5.
- 3) Reactivity – Water-reactive, pyrophoric, shock sensitive, generates sulfides or cyanides.
- 4) Toxicity – Specific listed chemicals including Arsenic, Benzene Cadmium, Tetrachloroethylene, Silver, etc.

Much of this information can be found on the Material Safety Data Sheet (MSDS).

Listed Hazardous Wastes

The USEPA has already predetermined that certain wastes are hazardous, and these hazardous wastes have been incorporated into published lists.

The “EPA Codes by Chemical Name” document on the APSU EHS website is a useful resource for looking up listed Hazardous Wastes.

- K-Listed Hazardous Wastes: K-listed hazardous wastes are source-specific wastes that are generated by specific industries such as iron and steel production facilities. K-listed hazardous wastes are not likely to be found in a laboratory.
- F-Listed Hazardous Wastes: F-listed hazardous wastes are non-specific source wastes that are generated by particular industrial processes that can occur in various industries. Industrial processes that generate F-listed hazardous wastes include wood preservation, electroplating and other metal finishing processes, and processes that generate waste solvents.
- P- and U-Listed Hazardous Wastes: The P- and U-listed hazardous wastes are pure and commercial grade formulations of specific unused chemicals that are considered wastes. Unused chemicals may be considered wastes because they are no longer needed, they are spilled, or they are off-specification. A complete list of the P & U listed wastes may be found on EPA's website [here](#).

Acutely Toxic Hazardous Wastes

Certain listed hazardous wastes are considered to be acutely toxic to human health and the environment and are further defined as "acute hazardous wastes." Acute hazardous wastes include F-, K-, and P-listed hazardous wastes described above.

Listed Hazardous Wastes in Laboratories

P- and U-listed hazardous wastes are the most likely listed hazardous wastes to be found in laboratories.

Also, spilled chemicals and absorbent materials used to clean the spill should be disposed of as hazardous waste. Please note that the term "chemical" includes items containing chemicals such as acrylamide gels, paints, solvents, degreasers, glues, varnishes, and disinfectants, in addition to stock chemicals and chemical solutions used in laboratory processes.

Storage

Once a hazardous waste has been identified, it must be managed in accordance with local, state, and federal requirements.

- Make sure incompatible materials are separated.
- Contents must be compatible with container.
- Do not store waste in active hoods.
- Waste containers must have secondary containment. A shallow tray may suffice. The secondary containment must be able to hold 110% of the volume of the largest waste container.

- Containers must be closed AT ALL TIMES unless waste is being added to the container.

Labeling and Signage

- Every waste container must have a Hazardous Waste label. See the APSU EHS website for the label template. The hazardous waste label may be printed on Avery 6878 labels or printed on cardstock and tied on to the waste container with wire or a zip tie. Be sure to fill out all of the information on the label. Be sure to leave the Date Ended blank until the waste container is full.
- Every label must include the words “Hazardous Waste” and include a description of the contents.
- All waste accumulation areas must have a sign indicating that it is a Satellite Accumulation Area. A printable sign is available on the APSU EHS website.
- Every Satellite Accumulation Area sign must have an emergency contact listed with phone number.

Satellite Accumulation Areas

- Satellite Accumulation Area is the area (typically room) where the hazardous waste is generated.
- Can accumulate up to 55 gallons of hazardous waste or 1 quart of acutely hazardous waste.
- Must be designated with sign.

Disposal

When your hazardous waste container is full, complete the hazardous waste pickup form (available on the APSU EHS website) and submit it to the EHS Manager via e-mail or send form to the Physical Plant.

Empty containers can be placed in the general trash, except when it held an acutely hazardous waste. The containers should be defaced of any chemical or hazardous waste labels and the cap should be removed prior to disposal as regular trash. An empty container that has held an acute hazardous waste must be triple rinsed using a solvent (which might be water) capable of removing the acute hazardous waste prior to disposal of the container as regular trash. Each rinsing should be performed with an amount of solvent equal to approximately 5 percent of the volume of the container. The rinsate must be collected and disposed of as hazardous waste.

Contact Information

If you need help determining if a waste is a hazardous waste, contact the EHS Director Carl Gerhold at 6103 or e-mail gerholdc@apsu.edu.