## Waste Management

1. **Purpose**

The purpose of this written program is to serve as a guide to the proper handling, organization, and storage of waste and scrap materials to minimize the potential impact on the environment.

1. **Responsibility**

Senior management shall:

* Provide the resources, guidance, equipment, communication, and enforcement necessary to protect the environment and ensure compliance with this policy.

Supervisors shall:

* Estimate the waste that will be generated prior to work being performed so that the need for containers and waste removal can be determined.
* Coordinate with the project site or owner to ensure proper disposal of wastes or scrap materials.
* Ensure that hazardous waste in their work areas is properly identified, segregated, collected, stored and disposed.
* Ensure that no chemicals are abandoned in place due to personnel retirement, termination of employment, graduation, or other reason for departure.

All personnel shall:

* Comply with all elements of this program to prevent environmental harm and noncompliance.
* Identify, segregate, collect, and properly store or dispose of controlled wastes.
* Immediately report leaks, releases, and chemical emergencies.

Environmental, Health and Safety (EHS) Department shall:

* Assist supervisors, managers, and other employees to implement and maintain the elements of this policy.
* Oversee management and disposal of hazardous waste.
* Ensure that a waste minimization program is implemented.
* Respond to spills and releases as needed.

1. **Determining Hazardous Waste**

Each waste product must be determined as either hazardous or non-hazardous. Safety Data Sheets (SDS) contain information stipulating the hazardous components of a product, unless the manufacturer is claiming proprietary status of the formula. In this case, the manufacturer must be contacted for a hazardous or non-hazardous status of the product. If the hazardous contents of the material are known, then no sampling is required.

In the event a material has been accumulated and its waste classification is not known, the substance must be identified before it can be shipped for disposal.

If a waste is non-hazardous, disposal should follow established State procedures for non-hazardous waste. Non-hazardous waste can be thrown in any receptacle EXCEPT for the receptacles that are labeled "Hazardous Waste."

Once a determination has been made that a chemical waste meets the EPA definition of hazardous waste, it is then required to comply with U.S. EPA and State hazardous waste regulations pertaining to the accumulation, storage, labeling, inspection, and disposal of hazardous waste.

If there is any question about whether a material should be classified as hazardous, the EHS Department should be contacted for guidance.

1. **Hazardous Waste Handling**

Employees shall be instructed on the proper disposal method for wastes. Before handling any known or suspected hazardous waste, employees shall refer to the SDS if available to determine what type of personal protective equipment and special handling considerations are required for the particular material they will be handling. If the waste is known to be hazardous but no SDS is available, protective equipment must still be utilized.

The EHS Department should be consulted for guidance relative to the appropriate equipment to be utilized. Under no circumstances shall employees handle hazardous waste without proper personal protective equipment.

1. **Hazardous Waste Storage**

Once a product has been classified as hazardous waste, special provisions for storage are required prior to removal for disposal:

* Choose a central area for waste storage and label with a sign saying "Satellite Accumulation Area". It is the responsibility of the department supervisor to ensure that waste accumulation areas under their supervision are maintained in accordance with applicable rules and regulations.
* Storage containers of hazardous waste must be properly labeled to include:
  + Hazardous waste label (with accumulation start date).
  + Characteristic label (ignitable, corrosive, toxic, reactive).
  + Special instructions for handling (if applicable).
  + The date waste(s) were first added.
* For those containers with mixtures, a breakdown of the substances by percentage or volume is required. This component is critical to proper disposal.
* Any hazardous waste container with "unknowns" must be reported to the EHS Department promptly so that characterization can be performed and the waste can be managed correctly and safely.
* Waste may only be stored in leak proof sealable containers which are compatible with the material. SDS’s will provide this compatibility information.
* Waste must be compatible with other wastes in the same container. The exterior of the container must be free of chemical contamination.
* Store containers of incompatible waste apart from each other (i.e., keep Oxidizers away from Flammable Solvents). Also, consider safe temperature storage requirements (e.g., do not store in direct sunlight).
* DO NOT put hazardous wastes into sinks, drains, dumpster, or other trash receptacles.
* Containers shall be kept closed during accumulation, except when transferring waste to or from the container.
* Keep open flame and ignition away from chemicals, especially hazardous waste and chemical containers. No smoking rules apply.
* Do not overfill hazardous waste containers. Two inches headspace should be allowed for any expansion while waste is in storage.
* All chemical spills and/or releases must be cleaned up properly and safely. Call the EHS Department to report all spills and releases immediately.
* All hazardous waste is required to be held in the generating location for subsequent pick-up and disposal.
* The EHS department is responsible for coordinating the disposal of hazardous waste.

1. **Universal Waste Management**

Batteries - Alkaline batteries can be disposed of in the trash. Other batteries which contain hazardous metals such as mercury, lead, silver, and cadmium must be handled and disposed of by the EHS Department.

Mercury Containing Devices - Many types of equipment contain elemental mercury. Equipment must be free of mercury devices before it is recycled or discarded. Mercury containing devices must be managed and disposed of by EHS Department. Examples include:

* Heating and air conditioning thermostats.
* Tilt switches used in silent light switches.
* Pressure gauges, displacement / plunger relays.
* Flow meters.
* Sump pump float switches.
* Thermometers, monometers.

Fluorescent Light Tubes - Fluorescent light tubes may be hazardous waste. Do not dispose of fluorescent light tubes into the trash. Place the used fluorescent light tube in its original box for proper disposal. The boxes should be sealed, marked with the words "Used Lamps" and the number of tubes marked on the top of the box. Call the EHS Department to dispose of the boxes of fluorescent light tubes.

Aerosol Cans – Segregate aerosol cans by their general chemistry (call the EHS Department for assistance with classifying and labeling aerosol cans). Label the container in the manner indicated by the EHS Department (e.g., whether the aerosol cans contains chlorofluorocarbons (CFCs), flammable material, pesticides, or is an inert material). If the aerosol can does not contain CFCs, a flammable warning, or a listing of pesticides, the aerosol can is considered inert.

1. **Waste Minimization**

**Source Reduction**

The most desirable method of waste minimization is source reduction. This is any activity that reduces or eliminates the generation of chemical hazardous waste at the source. Good materials management, substitution or less hazardous materials, and good shop procedures can accomplish this. Examples include:

* Date chemical containers when received so that older ones will be used first.
* Purchase chemicals in the smallest quantities needed.
* Label all chemical containers to prevent the generation of unknowns.
* Eliminate the use of acid or base cleaning solutions altogether, and use nonhazardous solutions such as Alconox.
* Standardize materials so that left over products can be used at other locations.

**Recycling**

The second most desirable approach is recycling and waste should be recycled whenever possible. When a waste material is used for another purpose, treated and reused in the same process, or reclaimed for another process, it is considered recycling. Examples include:

* Purchase compressed gas cylinders only from manufacturers who will accept empty cylinders.
* Do not contaminate used oil with solvents because this prevents the oil from being recycled.
* Re-circulate unused or excess chemicals within the department (ask the EHS Department for assistance).
* Return excess chemicals to the distributor.

1. **Training**

Employees shall be instructed on the proper disposal method for wastes. This may include general instruction on disposal of non-hazardous wastes, trash, or scrap materials. If wastes are classified as hazardous, employees shall be trained to ensure proper disposal.