

**ADVISORY NO. 7.0: UNIVERSITY OF CINCINNATI
WASTE MANAGEMENT PROGRAM**

The following elements are presented for the purpose of implementing a **WASTE REDUCTION** program, which strives to minimize the **WASTE GENERATED** and still perform the functions effectively in respective fields:

- **Perform a Waste Audit:** What are the wastes generated by a process, experiment or treatment? Where and how is a process, treatment or experiment being done?
- **Examination of Housekeeping:** Creating adequate safe storage and handling techniques using appropriate containers and proper dispensing of supplies and resources can reduce spillage, waste and oversupply.
- **Material Substitution:** Replace a hazardous material where possible with a less hazardous more easily disposed or treatable one.
- **Equipment Redesign:** Sometimes processes, **not** the product are the cause of contamination or pollution. Equipment upgrade should be planned.
- **Recycling and Reuse:** On-site and off-site recovery options may be available. Distillation, and absorption, filtration, or electrolysis may be possibilities.
- **Waste Exchanges:** There can be on-site and off-site exchanges between departments, labs, colleges, etc.
- **Detoxification:** Chemical neutralizations, biological (microbiological) treatment, and thermal (incineration and wet oxidation) may be possibilities.
- **Reduction of Scale:** Micro level experimentation. Microtechnologies, micro scale glassware, flow and transfer systems based on small internal diameter tubing, more sensitive spectrometers.
- **Purchasing Criteria:** Deal with vendors who will recycle, e.g., gas cylinders. Purchase only quantities needed (volume for your dollar does not necessarily equate to savings when disposal costs are high).
- **Control Reagents or Materials That Deteriorate:** Shelf life should not be exceeded. Date and monitor materials. Peroxides, water reactive chemicals and pyrophoric chemicals should not remain in laboratories. **LABORATORY DESTRUCTION PROCEDURES SHOULD BE USED IN THESE CASES.**
- **Preplanning experiments, treatments and processes** to identify hazardous waste by-products should be a part of the project.
- **Planning for Recapitalization of Facilities** to accommodate new research, heating, ventilation, air conditioning, stack emissions, mechanical and utility core infrastructure should be emphasized in all new design and construction.

Every University Community member has a part to play in reducing hazardous waste generation and raising the quality of life in support of the University of Cincinnati's Policy Statement on Safety and Environmental Health at the University of Cincinnati.