



University of South Alabama Waste Minimization Plan

Hazardous waste minimization is a national policy specifically mandated by the U.S. Congress in a 1984 amendment to the National Hazardous Waste law, the Resource Conservation and Recovery Act (RCRA) [“H.R. 3129 — 98th Congress: Hazardous Waste Reduction Act of 1983]. The University of South Alabama, as a generator of hazardous waste, must do its best to integrate pollution prevention into experimental design and laboratory management. Consistent with national, state and local regulations, the University of South Alabama Safety & Environmental Compliance Department policy states that chemical waste will be minimized through efficient and appropriate use of all resources. Waste minimization procedures include source reduction and environmentally sound recycling. Reducing hazardous wastes at the source or recycling materials will benefit the University by reducing both the disposal costs and the liability associated with hazardous waste management.

Waste minimization activities are grouped into four broad categories:

- Redistribution of useable chemicals
- Substitution of less hazardous materials
- Procedural changes to minimize generation of hazardous wastes
- Improved laboratory management practices

Redistribution of Useable Chemicals

The USA Safety & Environmental Compliance Department, when possible, re-distributes unwanted, useable chemicals from one laboratory to another instead of disposing of the materials as hazardous waste. Inter- and Intra-departmental chemical exchanges are encouraged to help control waste disposal costs and saves important departmental and grant funds.

Substitution of Less Hazardous Materials

Minimization of hazardous waste can be achieved by the substitution of less hazardous materials in laboratory experiments, Maintenance, Central Plant and Construction operations whenever possible. This also has the collateral advantage of improving worker safety in these areas. For example, laboratories at USA have substituted bio-degradable Scintillation Cocktails for Xylene/Toluene basntproducts and have replaced Chromium/Sulfuric Acid basntcleaning solutions with non -Chromium (enzymes-

Procedural Changes

Waste can be minimized by implementing procedural changes such as:

- Use of micro-scale procedures or simply scale down the magnitude of laboratory and classroom experiments (Chemistry Department)
- Distill solvents for re-use (Re-distillation unit at USA University Hospital Histology Department)
- Source segregation of halogenated, chlorinated solvents from organic, non-chlorinated solvents
- Source segregation of highly toxic materials (cyanides, heavy metals, etc.) from less toxic materials
- Do not mix hazardous waste with non-hazardous waste materials.
- Purchase gas lecture cylinders from companies that will recycle them when empty.

Laboratory Management Practices

Good laboratory management can go a long way toward avoiding unnecessary waste generation. Order only the quantity of materials which you anticipate using. Many chemicals have a limited shelf life; especially true for peroxide-forming and reactive chemicals. One person should be the ordering for a laboratory to avoid duplicate ordering of materials. A chemical inventory that is kept updated (required by the Safety Department on a yearly basis) can help eliminate the ordering of unneeded chemicals. The sharing of excess chemicals with other members of your