

# **Hazardous Waste Management Responsibilities and Cost Allocation**

## **PURPOSE**

The purpose of this procedure is to provide guidance in the following areas:

1. To assure the proper disposition of all types of hazardous materials generated in laboratories, shops or during other operations.
2. To account for hazardous waste when activities in laboratories, shops, or other areas are terminated.
3. To assure all rooms and equipment are decontaminated upon cessation of work activity.
4. Outline how disposal costs are allocated.

Specific information and instruction may be obtained by calling the personnel listed below.

## **DEFINITIONS**

As used in this document, the term “hazardous materials” is intended to cover hazardous waste, low-level radioactive waste (LLRW), regulated and non-regulated biomedical waste, mixed waste (waste containing both chemicals and LLRW) and other waste which may require special disposal or handling procedures.

## **RESPONSIBILITY**

The Environmental Health and Safety Center (EH&S Center) has implemented a comprehensive program for the management of hazardous materials from University operations. The EH&S Center manages the hazardous material disposal program and provides oversight. Each generator of a hazardous material should consider the hazards of the chemicals and gases they use, utilize the least hazardous material practicable, and consider strategies to minimize or eliminate hazardous waste streams.

Fines for non-compliance are the responsibility of the department generating the waste. Costs for waste disposal are allocated as noted below in the “cost allocation” section. Only the Environmental Health and Safety Center is authorized to negotiate hazardous waste disposal contracts on behalf of the University.

## **CONTACT TELEPHONE NUMBERS**

Hazardous Waste, Mixed Waste	Rob Pecarina	515-6863
Biological Waste	Bruce Macdonald	515-6858
Radioactive Waste	Ralton Harris	515-5212

## **COST ALLOCATION**

It is University practice that routine waste removal and disposal charges will be paid by the University and/or college through indirect cost recovery. Routine waste removal and disposal includes chemical wastes, radioactive wastes, and mixed wastes. Large lab cleanouts will be handled as a routine waste stream when waste forms are submitted electronically and disposal can be managed as part of a regular waste pick-up schedule.

Specific costs for “non-routine” services, including all contractor costs, will be billed to the department or college that generates the waste through IDTs immediately upon billing from vendors. “Non-routine” services include material collection from sites outside of Wake County, testing of unknowns, stabilizations, and spill response by contractors. Explosives, compressed gas cylinders, lecture bottles, or other unusual waste are also considered non-routine. Large laboratory or stockroom cleanouts that require contractors or EH&S personnel to complete inventories, or to enter forms into the University chemical waste management system or hazardous waste streams that require time critical disposal, is non-routine waste and will be billed through IDTs. All costs including contract labor and EH&S overtime will be recovered.

## **CHEMICAL DISPOSAL**

Assure that all waste containers are labeled with the name of the chemical. All containers must be securely closed. Leave at least 20% head space in containers for expansion. Hazardous materials must not be sewerred or trashed; they must be collected for disposal in accordance with local, federal, and University guidelines. Check refrigerators, freezers, fume hoods, bench tops as well as storage cabinets for chemical containers when ceasing laboratory operations. Beakers, flasks, evaporating dishes, etc. should be emptied. Determine which chemicals are usable and transfer responsibility for these materials to another party who is willing to take charge of them. Any person accepting responsibility for such material must have a valid safety plan on file with the EH&S Center. If a new user cannot be found, the materials should be disposed.

## **CONTROLLED SUBSTANCES**

Controlled substance permits are issued by the U.S. Drug Enforcement Agency (DEA) and are issued to individual researchers. There is no central record of permit holders. Abandonment of a controlled substance is a violation of DEA regulations by the permittee. Permission to transfer ownership of a controlled substance to another individual must be received from DEA. If controlled substances for which the licensee is unknown are found, contact the EH&S Center. Notify the Department Head of any disposition of controlled substances. There is no easy legal method to dispose of a controlled substance unless the permit is available. Information on the permit is required for regulatory reporting.

## **COMPRESSED GAS CYLINDERS**

Remove gas connections, replace cylinder caps, and return cylinders to suppliers by calling NC State Central Stores 515-2197. Lecture bottles are generally not returnable to the vendor and may need to be disposed of as hazardous waste through the EH&S Center. It is recommended that lecture bottles not be used because of high disposal costs which may be charged back to the waste generator.

## **BIOHAZARDOUS MATERIAL (Also refer to the Biosafety Manual)**

If tissue is held in a liquid preservative, tissue and liquid should be separated. Animal tissue can be disposed of by rendering (large animal parts) or by placing it in a biohazardous waste bag for incineration. Liquid preservative usually needs to be disposed of as a hazardous waste. Do not assume that the preservative can be sewerred.

If an autoclave is available, disinfect waste and dispose in regular trash. It is recommended that orange biohazard bags not be placed in regular trash even if disinfected. If material cannot be decontaminated, place it in a biohazard bag for incineration. Clean incubators, drying or curing ovens, refrigerators and freezers when ceasing operations. If samples need to be saved, locate appropriate person to take responsibility for them.

## **RADIOACTIVE MATERIALS AND RADIATION PRODUCING DEVICES (Also refer to the Radiation Safety Manual)**

The proper termination of projects and disposal of radioactive materials and radiation producing devices is an integral part of the University's Radiation Protection Program. Project termination and waste disposal procedure include:

- Ⓒ Accounting for all materials and devices approved for the project,
- Ⓒ The performance of radiological surveillance to insure that the laboratory or place-of-use is free of any radioactive contamination,
- Ⓒ The removal of any radioactive contamination,
- Ⓒ The removal of all radioactive wastes,
- Ⓒ The deposing and delisting of laboratories and places-of-use, and
- Ⓒ The documentation of the termination activities.

The Radiation Protection Office has established procedures and documentation checklists for the performance of waste disposal and termination activities. The Authorized User In Charge must contact the Radiation Protection Office at 515-2894 to make notification of the pending termination of a project for the use of radioactive materials and/or radiation producing devices as far in advance of the terminations as possible, but not less than 30 days prior to termination.

Transfer of radioactive material and/or radiation producing devices may take place only to another approved project and then only upon approval of the Radiation Protection Office and/or the Radiation Protection Committee.

## **EQUIPMENT DECONTAMINATION**

If laboratory equipment is to be left for the next occupant, clean or decontaminate it before departing the laboratory. If equipment is to be sold or given away, it must be decontaminated by the user. Consult the EH&S Center for recommendations on equipment decontamination. If exhaust or filtration equipment has been used with extremely hazardous substances or organisms, alert the EH&S Center.

If laboratory operations cease and equipment is to be discarded, be aware that capacitors, transformers, mercury switches, mercury thermometers, radioactive sources and chemicals must be removed before disposal. Contact the EH&S Center for assistance.

## **SHARED STORAGE AREAS**

One of the most problematic situations is the sharing of storage units such as refrigerators, freezers, cold rooms, stock rooms, waste collection areas etc., particularly if no one has been assigned to manage the unit. Departing researchers must carefully survey any shared facility in order to locate and appropriately dispose of their hazardous materials.