



DECOMMISSIONING A LABORATORY AFTER THE UNEXPECTED DEPARTURE OF A PRINCIPAL INVESTIGATOR

Introduction

This section describes a decommissioning plan to be followed in the event of an unanticipated sudden departure of a principal investigator (PI) from the university. The goal of this plan is to have a laboratory decommissioned within one semester so the space can ready before new faculty arrives. Effective implementation of this plan will help minimize the decommissioning costs. Payment for the decommissioning costs will be negotiated with the applicable college or unit.

Research laboratory space often contains significant amounts of commercial chemical products in the original vendor labeled containers and/or research sample containers / chemicals in secondary containers. The containers may or may not be labeled in a way that the contents can be easily identified.

1. Labeled sample containers / secondary chemical containers are containers that are clearly labeled with the contents or have other descriptors, such as a chemical formula, that a knowledgeable chemist or subject matter expert can use to identify the contents.
2. Unlabeled sample containers / secondary chemical containers are containers with no label or containers not labeled in a way that a third party can easily identify the contents.

Decommissioning Process

To aid in the redistribution or disposal of the chemicals and research materials containers must be initially inventoried and segregated into a few broad categories.

Department faculty, staff and graduate students with knowledge of the research program should be used to do the primary work of identifying, inventorying and segregating the chemicals and samples into the broad categories outlined below. A senior PI or faculty member, with similar research experience, should be appointed by the Department Head to oversee the process for the department.

If feasible, the responsible Department Head should reach out to the faculty, staff or researcher who was previously responsible for laboratory space to see if they would be willing to come back and help with identification of unlabeled samples. Compensation and travel expenses may be required to obtain cooperation.

EHS&RM Hazardous Waste Program will provide guidelines to department staff on how to segregate chemically compatible wastes into the different waste categories needed for disposal.

Initially chemicals and research materials should be divided into three different groups; 1) vendor-labeled chemical product, 2) labeled, identifiable research samples and chemicals in secondary containers and 3) unknown, unlabeled research samples or chemicals.

1. Vendor-labeled Commercial Chemical Products (in the primary, original shipping container)

These materials should be inventoried and segregated into two groups; A) usable product and B) unusable or unwanted product.

A. Usable Chemical Products

These materials should be inventoried and

- i. Redistributed to other PIs or to a department stockroom (if applicable), or
- ii. Stored in place and transferred to new faculty scheduled to be hired, or
- iii. Resold to a third party company that buys / sells small quantity chemicals (option is under investigation), or
- iv. Moved into Category B for disposal if none of the other options are acceptable.

B. Unusable or Unwanted Commercial Chemical Products (expired, open or otherwise unusable)

These materials should be inventoried then disposed through either

- i. EHSRM Hazardous Waste Management Program (limited capacity), or
- ii. Third party hazardous waste contractor.

2. Labeled / Identifiable Research Samples and Chemicals in Secondary Containers

A. These materials should be sorted / segregated into compatible waste types by knowledgeable department staff and bulked into small, individual bulk waste containers provided by EHSRM.

3. Unknown / Unlabeled Research Samples

A. A third party hazardous waste contractor will be brought in to handle any remaining samples and other chemicals that can't be identified.

Segregation of Waste Sample Chemicals for Disposal

In regards to segregation of waste sample chemicals for disposal, recommendations follow:

1. The most important step is identifying and keeping separate any high hazard sample chemicals. NMSU waste contractor considers the below chemicals to be high hazards:
 - A. Air/Water Reactive Compounds
 - B. Cyanide/Sulfide Compounds
 - C. Explosive Compounds
 - D. Peroxide Forming Chemicals
 - E. Mercury Compounds

Keep each of the above types of higher hazard chemicals separate from all others.

2. If samples can be determined to be non-reactive, they may be grouped according to the below hazard categories:
 - A. Flammable Compounds
 - B. Oxidizing Compounds
 - C. Acidic Organic Compounds
 - D. Acidic Inorganic Compounds
 - E. Basic Organic Compounds
 - F. Basic Inorganic Compounds
 - G. Toxic Organic Compounds
 - H. Toxic Inorganic Compounds
3. A brief simple example: The PI left behind fifty, 25mL sample vials containing solid organic ruthenium compounds that are not reactive, flammable, oxidizing, or corrosive. All of these vials could be placed in one four liter, open mouth waste container with lid and labeled with one Hazardous Waste Tracking Form "Sample Vials Containing Solid Organic Ruthenium Compounds- Toxic". Recommend placing all the vials in together whole, do not recommend opening and mixing sample chemicals.
4. EHS&RM can provide empty waste containers to place compatible sample vials into. Identify how many and what size containers are needed. Often, four liter, open mouth plastic jars would work well. Contractor prefers "small charges" of unusual items going into their incinerators for safety purposes.
5. Most important is grouping similar sample vials together and providing a basic, general description of their constituents/hazards. Ultimately, the disposal contractor will over pack all of these chemicals into larger containers ranging from 5-55 gallons in size with similar hazardous chemicals. They will then be transported in the back of a standard tractor-trailer over many miles on public roads and ultimately they will be placed into an incinerator for final disposal. It is important we safely segregate by hazard category the sample vials so they can be safely driven and appropriately disposed.
6. For additional information, contact EHS&RM Hazardous Waste Management at 575-646-3327.