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**LAB DECOMMISSIONING GUIDELINES****Table of Contents**

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**LAB DECOMMISSIONING GUIDELINES**

## 1.0 Introduction

### 1.1 Purpose

The purpose of this document is to provide direction and guidance for proper laboratory closure (including relocations within campus) and decommissioning of all Emory University laboratories or other related areas.

- Proper closure/decommissioning prepares a laboratory to be called “Safe and Compliant”.
- Proper laboratory closure:
  - Ensures that the vacated space is in a stable and known condition, safe for individuals unfamiliar with the laboratory to enter.
  - Reduces disposal costs associated with unwanted and unknown hazardous materials.
  - Encourages sustainability through redistribution of unwanted, useable laboratory equipment and supplies.

**Ultimate responsibility for preparing a laboratory to be Safe and Compliant lies with departmental management.**

**The following activities must be completed when a laboratory is vacated.**

## 2.0 General Guidelines

- Package and move lab items only during normal business hours so Emergency staff will be available to help if there is a spill or accident.
- Arrange for heavy equipment to be transported for you.
  - Call Staging or the project vendor.
  - Never transport hazardous materials alone.
- Wear appropriate personal protective equipment for the material being handled.
- Researchers/Lab occupants are responsible for notifying EHSO of a move to a new lab space or laboratory closure.
- Researchers must terminate and/or transfer all protocols and radioactive isotope authorizations (if applicable).
- Perform basic surface and visible decontamination of all assigned laboratory spaces.
  - Cold rooms.
  - Stock rooms.
  - Waste collection areas.
  - Dark rooms.
  - Equipment rooms.
  - All laboratory equipment (e.g. freezers and refrigerators).
- An Equipment Hazard Tag should be affixed to the equipment to be moved when decontamination is complete.
  - Guidance on Hazard Tag.
- Each PI has the responsibility to remove ALL hazardous substances from their assigned laboratory space(s).
  - Guidelines for Chemical Waste Management.
- In the event of an employee exposure or spill (chemical, biological or radiological).
  - Call EHSO at (404) 727-2888 (24 hours a day, 7 days a week).

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- Just In Time – Guide to Campus Emergencies.

### 3.0 Cleanup and Decontamination

- All hazardous waste must be identified and properly disposed of.
  - Identify the types of waste that are present in each of these areas.  
Some examples of the types of lab waste include:
    - Chemical Waste.
    - Radiological Waste.
    - Pharmaceutical Waste.
    - Biological/ Biohazardous Waste.
    - Sharps.
    - E-Waste (ex: DVDs, CDs, Data cards, Laptops, Hard Drives, Monitors, etc.).
    - Glassware.
    - Gas Cylinders.
    - Aerosol Cans.
    - Oils/Lubricants.
    - Universal Waste (Batteries--excluding alkaline batteries, Pesticides, Lamps, Mercury containing materials).
- Emory Hazardous Waste disposal guidelines MUST be followed and are available on the EHSO website:
  - Chemical Waste: Guidelines for Chemical Waste Management.
  - Biological Waste: Emory University Biosafety Manual.
  - Radiological Waste: Emory University Radiation Safety Manual.
- All areas of chemical and biological agent use or storage must be cleaned. This includes but is not limited to:
  - Bench tops.
  - Chemical storage cabinets.
  - Chemical fume hoods.
  - Biological safety cabinets.
  - Laboratory shelves.
  - Ovens.
  - Incubators.
  - Refrigerators.
  - Freezers.
- If applicable, the radioactive materials use area decommissioning process must be completed. Please refer to the Emory University Radiation Safety Manual.
- EHSO should be called to complete laboratory closure. After verification, EHSO will sign and post the Laboratory Safe and Compliant Certification.
- Unwanted, useable items (lab equipment, lab supplies, chemical reagents, etc.) in good condition.
  - All useable chemical reagents and lab equipment and supplies can be transferred to another investigator in the same department.
  - If unable to transfer these items, then contact the appropriate EHSO Building Liaison to assist in redistribution.
  - All lab equipment must be cleaned by lab occupants and a hazard tag affixed prior to transfer.

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## 4.0 Chemical Reagents

- Chemical reagents must be securely closed and boxed according to compatibility. Contact EHSO for guidance on transportation of chemicals to your new laboratory. Call (404) 727-5922 or email [chemwaste@emory.edu](mailto:chemwaste@emory.edu).
- Chemical waste containers must be labeled with EHSO Chemical Waste Label and Chemical Waste Inventory must be completed.
- EHSO must be contacted to schedule a chemical waste pick-up. Call (404) 727-5922 or email [chemwaste@emory.edu](mailto:chemwaste@emory.edu).
- Unwanted chemicals that are still usable must be boxed according to compatibility and separated from chemical waste. This can be picked-up at the same time as the chemical waste. Do not label unwanted chemicals with the EHSO Chemical Waste Label.

## 5.0 Radioactive Materials

- The responsible Sr. Health Physicist must be contacted as soon as possible.
- Radioactive Waste must be disposed of through EHSO. Guidance for packaging and disposing of radioactive waste are available on the EHSO website in the Emory University Radiation Safety Manual.
- Lab personnel must wipe down fume hood work surfaces, sinks, bench tops and equipment where radioisotopes were used.
- Lab personnel must remove radioactive labels, stickers, and tape from all facility equipment, refrigerators, sinks, and hoods following decontamination.
- For laboratory closures, all dosimeter badges, survey meters, radioactive sealed sources, and isotope inventory must be returned to EHSO.

## 6.0 Controlled Substances

- Controlled Substances must be disposed of according to Federal Regulations.
- Drug disposal must be conducted through a Reverse Distributor.
- DEA and GA Board Pharmacy will require a change of address. Please visit the DEA website and the State Board of Pharmacy website for more information:
  - DEA Website: [DEA Forms](#).
  - State Board of Pharmacy website: <https://qbp.georgia.gov/>.
- For additional information refer to [Controlled Substance Policy & Procedures](#).

## 7.0 Biological Agents

- Biological materials must be transported in a leak proof primary container and securely positioned in a secondary leak proof container (ex: ice chest or cooler). Secondary containers must be clearly labeled with Biohazard symbol.
- Biological materials stored in freezers and refrigerators must be secured.
- Freezers may be moved with samples inside but must be prepared by laboratory staff for transport. Staff should ensure that samples are packed into non-breakable containers (plastic, metal or cardboard).
- All voids within the freezer should be filled with packing material to prevent the contents from shifting during transit. The outside of the freezer should be decontaminated prior to moving it out of the laboratory.
- Equipment must be locked or securely closed. The hazard tag must be affixed by lab occupants.

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- Biohazardous waste must be disposed of through Stericycle.
- EHSO must be contacted for decontamination of Biological Safety Cabinets, Laminar Flow Hoods, and Glove Boxes prior to removal from lab.
- Transportation and shipment of biological materials off-campus must be done according to national transportation rules. Contact Research Safety for specific shipment requirements at (404) 727-5922.
- Laboratories moving off campus that need to transport biological or infectious samples should:
  - Use a moving company to transport the samples **or**
  - Pack and ship the samples through a shipping company (i.e., FedEx, DHL, UPS).
- If the lab uses a moving company to transport their samples, the company must be Department of Transportation (DOT) certified to transport biological and infectious material and have a method for refrigerating samples during transport.
- If the lab ships their samples through a shipping company, the person who packs the samples must have taken Shipment of Infectious Agents and Biological Materials Training within the past two years and pack the samples according to DOT and IATA regulations.

## 8.0 Material Transfer Agreements (MTAs)

- Material Transfer Agreements (MTA) are used to transfer materials (generally biological) from one institution to another. An MTA is a contract between the owner of a material and the intended recipient governing the transfer and subsequent use of the material. Exemplary materials include bacteria, cultures, nucleotides, proteins, plasmids, cell lines, transgenic animals, and pharmaceuticals. Since an MTA is a contract that governs the transfer of materials, it also covers issues such as ownership of the transferred materials, modifications and derivatives made by the recipient, limitations on use of the materials, and confidentiality.
- Refer to the following links for guidance on MTAs.
  - EHSO Biological Material Transport and Transfer Tool.
  - Material Transfer Agreement Instructions:
    - Emory University Office of Technology Transfer Forms.

## 9.0 Animal and Human Tissue

- Animal parts, carcasses, excreta, bedding, etc. must be disposed of through Division of Animal Resources (DAR).
- Human tissue specimen must be placed in the appropriate container and disposed of through Stericycle.
- Tissue held in a liquid preservative must be separated from the liquid.
- The preservative may require disposal as hazardous chemical waste.
  - Refer to the Guidelines for Chemical Waste Disposal.

## 10.0 Sharps

- Dispose of ALL needles and syringes (used or unused) in appropriate sharps containers.

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- Dispose of lamps/bulbs, batteries, and mercury containing articles must be done through EHSO.
  - Universal Waste Quick Facts.
  - E-Waste Quick Facts.

**12.0 Gas Cylinders**

- Unwanted gas cylinders must be returned to the vendor.
- Compressed gas cylinders and cryogenic gas cylinders must be relocated by the gas distributor.

**13.0 Asbestos Containing Materials (ACM)**

- Material identified as ACM must be disposed of through EHSO. This includes cementitious lab/table tops, woven heat protection equipment (gloves, hot pads, etc.), older laboratory fume hoods (cementitious panels inside) and ovens.

**14.0 Other Hazardous Material**

- There can be hazardous substances within laboratory equipment.
  - Examples: Freon, lead paint, mercury and PCBs.
- Mercury containing equipment:
  - Manometers, thermometers, barometers, mercury switches.
- PCB Containing Equipment:
  - Diffusion Pumps, transformers.
- Freon Containing Equipment:
  - Refrigerators, freezers, low-temperature chambers.

**15.0 Summary**

- Equipment designated for relocation to the new laboratory and laboratory equipment to be left for the next occupant must be cleaned and an Equipment Hazard Tag hazard tag affixed.
- Equipment disposed of through Surplus Property must be cleaned and defrosted/drained (if necessary) and an Equipment Hazard Tag hazard tag affixed prior to pick-up.
- All biological, chemical and radioactive waste must be disposed of properly prior to vacating research space(s).
- Work surfaces of Chemical Fume Hoods and Biological Safety Cabinets must be decontaminated.
- Decontamination of Biological Safety Cabinets must be scheduled through Emory Express.
- Researchers/ Lab Occupants must perform preliminary clean-out and basic surface and visible decontamination.
- EHSO must then be called to review that the laboratory is ready for staging and Facilities Management to enter.
- EHSO will sign off on the "Certification of Lab as Safe and Compliant – Post Decommissioning" form to the laboratory door after decommissioning is complete.

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- If you have any questions, contact EHSO at (404) 727-5922.

**16.0 References**

- ANSI/AIHA Z9.11- Laboratory Decommissioning Guidelines from NIH.
- Biosafety in Microbiological and Biomedical Laboratories, 5th Edition  
<http://www.cdc.gov/biosafety/publications/bmb15/index.htm>.
- Committee on Prudent Practices for Handling, Storage, and Disposal of Chemicals in Laboratories, Board on Chemical Sciences and Technology, Commission on Physical Sciences, Mathematics, and Applications, National Research Council, 2007. Prudent Practices in the Laboratory: Handling and Disposing of Chemicals, National Academy Press: Washington, D.C.
- EPA Environmental Management System Standard - 40 CFR 262.105 (b)(8)
- OSHA Laboratory Standard 1910.1450 (Occupational Exposure to Hazardous Chemicals in the Lab) - 1910.1450.