
**ADVISORY 7.1.1: LABORATORY FACULTY, STAFF, AND STUDENT
 DEPARTURE PROCEDURES**

The purpose of this advisory is to provide departure procedures for faculty, staff, and students who work in University laboratories. Hazardous materials management responsibility is a regulated activity in any organization. Both Environmental Protection Agency (EPA) and Occupational Safety and Health Administration (OSHA) regulations address issues of contamination, exposure, and disposal.

Material tracking is an integral part of a facility hazardous materials management program. Faculty, staff, or students who are leaving the University (or are moving to a new location within UC) are accountable for the hazardous materials in their current workspace. Unnecessary costs are borne by others within the University when lab personnel leave without cleaning out their lab space and arranging for proper disposition of hazardous materials. Testing and analysis to identify the contents of unknown or unlabeled containers increases disposal costs. Improper container labeling is a violation of the OSHA Hazard Communication Standard and the EPA Resource Conservation and Recovery Act (RCRA) hazardous waste regulations. **Therefore, no removal, transportation, or disposal can legally be initiated until the materials are identified.**

Laboratory equipment abandoned by exiting personnel also has disposal costs associated with its removal. Abandoned equipment must be decommissioned (decontaminated) and purged of any regulated materials prior to disposal.

Development of a departure procedure for all laboratory personnel and staff who have responsible authority over the purchase and use of regulated materials will help eliminate time-consuming and costly remediation activities. To assist department heads and business managers in this endeavor, the following list of items should be addressed during the departure procedure.

- 1) All chemicals and other hazardous materials must be accounted for prior to leaving the University or transferring to another location within UC. Hazardous materials that have been claimed by others must be properly labeled. Transfer of possession must include a Material Safety Data Sheet for the material.
- 2) All **chemicals** targeted for disposal must be [properly identified and labeled](#) (see Advisory 7.3 – Management of Chemical Wastes).
- 3) All **compressed gas cylinders** must be returned to the supplier/manufacturer or claimed by other staff at UC. Gas cylinders claimed by others must be properly labeled and transfer of possession must include a Material Safety Data Sheet.

Matheson Gas Cylinders (call Wright Brothers at 731-2222)
Liquid Carbonic Cylinders (call Prax-Air at 821-2192)
AGA Gas Cylinders (call 563-9400)
BOC Gases (call Airgas Puritan at 721-5614)
BOC Industrial Gases (call 771-5777)

- 4) Materials that are biohazards (blood, blood product, tissues, needles, syringes, etc.) must be properly identified and [labeled for disposal](#) (see Advisory 10.1 – Legislation Regarding Infectious Waste Management/Disposal). **Biohazard materials** claimed by others must be properly labeled before transfer of possession.

- 5) **Laboratory equipment** that is inoperable or unwanted must be properly decommissioned. Some laboratory equipment contains hazardous materials that must be removed prior to disposal. Refrigerators (freon), transformers (PCBs), radiation counting equipment (lead), and manometers (mercury) are a few examples. Contact Environmental Health & Safety for assistance at 556-4968. For items with radiation labels and/or contamination, contact Radiation Safety at 558-4110. Refrigerators, freezers, and other equipment used for chemical, biological, or radiological materials must be decontaminated/decommissioned prior to disposal (see Appendix A).
- 6) **Biological Safety Cabinets** must be decommissioned prior to departing or moving the cabinet. This must be completed by a contractor certified to perform this task. Contact Environmental Health and Safety at x-64968 for an updated list of vendors.
- 7) All **lab benches and work surfaces** must be decontaminated prior to departing.
- 8) Laboratories that are **radiation** use labs must be decommissioned prior to the departure of the authorized users (AU's). Contact the [Radiation Safety Office](#) at 558-4110 for information concerning decommissioning procedures.
- 9) Personnel leaving the University and who have participated in a University-provided medical surveillance program must schedule an exit physical and contact University Health Services at 584-4457.
- 10) The Principal Investigator, with assistance from a EH&S representative if requested, will complete the attached **Laboratory Clearance Checklist** that begins on the next page. The checklist will be signed by the principal investigator and the chair or director of the department or administrative unit after which the lab will be considered safe for reuse by another investigator. The completed and signed Clearance Checklist will be kept on file in the department and EH&S.

Responsibility for the hazardous materials management program involves the Department Head, Principal Investigator, faculty, supervisor, and staff. The departing individual's immediate supervisor (or advisor for students) has the responsibility for ensuring that the above-listed items are addressed so that the new occupant is not left having to bore the cost of identifying and disposing of chemicals and other regulated materials.

CONSTRUCTION-RELATED ACTIVITIES

UC renovation and construction staff (Facilities Management Project Services, Construction Management, et al.) and outside contractors should be aware of working in laboratories and other areas where hazardous materials were used, stored and/or left behind. Every effort should be made to contact the previous occupant of the area to handle the labeling, decontamination and disposal of all hazardous materials as is listed above.

Under no circumstances should these materials be moved to a central location, out in the hall, or any other area, without the approval of the UC EH&S office.

Contact Environmental Health and Safety at 556-4968 for assistance.

LABORATORY CLOSE OUT CHECKLIST – HAZARDOUS MATERIALS

GENERAL SAFETY	
<input type="checkbox"/> YES <input type="checkbox"/> N/A	Personnel assigned to laboratory close out activities are trained and proficient in the recognition of hazards and the utilization of the necessary controls to ensure their safety. Individuals assigned this task will have completed at a minimum OSHA Hazard Communications and OSHA Bloodborne Pathogens training.
<input type="checkbox"/> YES <input type="checkbox"/> N/A	Appropriate PPE has been provided by the laboratory to the individuals assigned with laboratory close out activities. This includes at a minimum chemical resistant gloves, eye protection, lab coats and closed toe shoes.
<input type="checkbox"/> YES <input type="checkbox"/> N/A	Purchase sharps containers and broken glass boxes prior to lab close out.
<input type="checkbox"/> YES <input type="checkbox"/> N/A	Dispose of broken glass boxes, non-hazardous materials, and other trash according to the departmental procedures.

CHEMICAL MATERIALS	
<input type="checkbox"/> YES <input type="checkbox"/> N/A	Chemical inventory is current.
<input type="checkbox"/> YES <input type="checkbox"/> N/A	Segregate chemicals by hazard class and based upon whether they will be disposed of or transferred to another research group.
<input type="checkbox"/> YES <input type="checkbox"/> N/A	Lab has current Safety Data Sheets for all chemicals.
<input type="checkbox"/> YES <input type="checkbox"/> N/A	All chemicals targeted for disposal are properly identified and labeled (see Advisory 7.3 – Management of Chemical Wastes).
<input type="checkbox"/> YES <input type="checkbox"/> N/A	All lab benches and work surfaces are cleaned and decontaminated.
<input type="checkbox"/> YES <input type="checkbox"/> N/A	All bench drawers and cabinets are emptied, and all contents are redistributed or disposed of prior to departing.
<input type="checkbox"/> YES <input type="checkbox"/> N/A	Interior and exterior of equipment has been cleaned with soap and water.
<input type="checkbox"/> YES <input type="checkbox"/> N/A	<p>Gas Cylinders:</p> <input type="checkbox"/> All gas cylinders (including lecture bottles) are inventoried and labeled.
	<input type="checkbox"/> All gas cylinders are returned to the supplier/manufacturer or claimed by other staff at UC. Gas cylinders claimed by others must be properly labeled and transfer of possession must include a Material Safety Data Sheet.
	<input type="checkbox"/> All empty cylinders are disposed of.
<input type="checkbox"/> YES <input type="checkbox"/> N/A	<p>Cryogenics:</p> <input type="checkbox"/> All cryogenics are labeled.
	<input type="checkbox"/> Ensure that cryogen tanks are empty and safely depressurized prior to disposal.
<input type="checkbox"/> YES <input type="checkbox"/> N/A	Controlled substances have been disposed of or transferred in accordance with current DEA or Ohio Board of Pharmacy requirements. If unexpected controlled substances are found or if you need any further assistance, contact integrity@uc.edu .

BIOLOGICAL MATERIALS

<input type="checkbox"/> YES <input type="checkbox"/> N/A	Assess your biohazardous or potentially biohazardous materials (recombinant nucleic acids, microorganisms, cell lines, tissues, organs, bodily fluids) and determine which materials will be moved to your new location, transferred to another investigator or disposed.
<input type="checkbox"/> YES <input type="checkbox"/> N/A	<p>If you have an Institutional Biosafety Committee (IBC) protocol, you must submit an amendment to:</p> <ul style="list-style-type: none"> a) Update location. b) Transfer biohazardous materials to another PI. The new PI must have an IBC protocol for the same transferred agents or materials. <p>If leaving UC, and not transferring protocol to another UC researcher, notify the Biosafety Office so your IBC protocol can be deactivated.</p>
<input type="checkbox"/> YES <input type="checkbox"/> N/A	If you are transferring biological materials off campus to another institution, it is imperative that proper Department of Transportation (DOT) / IATA shipping regulations are followed. You must have a current shipping training certification in order to package these items for shipment.
<input type="checkbox"/> YES <input type="checkbox"/> N/A	If you have a large amount of biological material to dispose of, contact the Environmental Health and Safety (EH&S) Office at 513-556-4968 and ask them to deliver biohazard waste bins to your lab for a clean out. When biohazard bins are full complete online disposal request forms to request a pickup.
<input type="checkbox"/> YES <input type="checkbox"/> N/A	Check in cold rooms, freezers, and refrigerators for biohazardous materials that could easily be forgotten. Old samples from former staff or inherited samples must be either discarded or marked for moving to the new location.
<input type="checkbox"/> YES <input type="checkbox"/> N/A	Disposal of preserved specimens may require special handling since the preservative is usually a hazardous chemical. If the tissues/organs are small (mouse size organs) and not easily recognizable, the entire vial may be treated as chemical waste. However, larger organs must be separated from the liquid preservative and disposed into red bag waste and the liquid collected as chemical waste (see EH&S Advisory 7.1.1).
<input type="checkbox"/> YES <input type="checkbox"/> N/A	<p>Sharps:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Place all metal sharps (e.g. needles, razor blades, scalpels) into approved sharps containers. Be careful when cleaning out drawers where loose razor or scalpel blades might be located. <input type="checkbox"/> Place all non-metal sharps (e.g. serological pipets, pipet tips, transfer pipets) into the appropriate leak and puncture proof containers (biohazard or non-biohazard). Ensure that there are no sharp materials (pipet tips) lying on the floor or in areas where equipment was located.
<input type="checkbox"/> YES <input type="checkbox"/> N/A	Dispose of all solid media and supplies as “red bag” waste, if not transferred to the new laboratory.
<input type="checkbox"/> YES <input type="checkbox"/> N/A	All work surfaces, door, drawers and cabinet handles in a BSL1 & BSL2 laboratory must be wiped down with 1-10% freshly prepared household bleach solution or another EPA listed tuberculocidal disinfectant (e.g. Sani-Cloths [®]) before vacating the lab.

<input type="checkbox"/> YES <input type="checkbox"/> N/A	<p>Equipment for use with biological materials</p> <p>Refrigerators: Refrigerators must be emptied of all contents and exterior surfaces (doors and handles) must be wiped down with 1-10% freshly prepared household bleach solution or another EPA listed tuberculocidal disinfectant (e.g. Sani-Cloths) that is effective for the agents used in your research. Attach the completed Equipment Disinfection Notice Form (Appendix A of EH&S Advisory 7.1.1) to the equipment. Freezer sections of refrigerator/freezers may be moved without removing contents of freezer as long as the contents will not shift or break during movement.</p> <p>Freezers: If you are moving within the institution, -80 freezers do not have to be emptied as long as contents will not shift during the move. Freezers must be locked and / or taped shut. Exterior surfaces of freezers (doors and handles) must be wiped down with 1-10% freshly prepared household bleach solution or another EPA listed tuberculocidal disinfectant (e.g. Sani-Cloths). Attach the completed Equipment Disinfection Notice Form (Appendix A of EH&S Advisory 7.1.1) to the freezer. Freezers are only to be moved in the morning so that temperatures can be monitored during the day in case of freezer failure.</p> <p>Incubators and water baths: must be drained of all standing water including water in water-jacketed incubators. Surfaces must be wiped with 1-10% freshly prepared household bleach solution or another EPA listed tuberculocidal disinfectant (e.g. Sani-Cloths) and attach the completed Equipment Disinfection Notice Form (Appendix A of EH&S Advisory 7.1.1) to the equipment.</p> <p>Equipment to be discarded must have <u>all</u> surfaces wiped down, inside and out with freshly prepared household bleach solution or another EPA listed tuberculocidal disinfectant (e.g. Sani-Cloths) and the completed Equipment Disinfection Notice Form (Appendix A of EH&S Advisory 7.1.1) attached to the equipment. It is not acceptable to leave any surface contaminated for equipment to be discarded. It is unacceptable to dispose of equipment in the trash. Arrangements must be made with UC Surplus Management to remove unwanted equipment.</p>
<input type="checkbox"/> YES <input type="checkbox"/> N/A	<p>Biological Safety Cabinets (BSCs)</p> <p><input type="checkbox"/> Wipe down and remove all contents from the biological safety cabinet.</p> <p><input type="checkbox"/> Disinfect all accessible surfaces of the biological safety cabinet with 1-10% freshly prepared household bleach solution or another EPA listed tuberculocidal disinfectant (e.g. Sani-Cloths®). <u>Based on the risk assessment made by the Biosafety Office, BSCs may need to be decontaminated by a certified contractor prior to relocation.</u></p> <p><input type="checkbox"/> YES <input type="checkbox"/> N/A Re-certify any relocated biological safety cabinets before using it in a new location.</p>
<input type="checkbox"/> YES <input type="checkbox"/> N/A	<p>All biohazardous materials must be double packaged before transport within UC. The primary and secondary containers must be leak proof. The secondary container must contain enough absorbent to absorb the entire contents of all the primary containers within. The outside of the secondary container must have the biohazard symbol and the name of the PI and the new laboratory room number. These packages cannot be moved by the movers.</p>

RADIOACTIVE MATERIALS

<input type="checkbox"/> YES <input type="checkbox"/> N/A	Laboratories that are radiation use labs must be decommissioned prior to the departure of the authorized users (AUs). Contact the Radiation Safety Office at 513-558-4110 for information concerning decommissioning procedures.
<input type="checkbox"/> YES <input type="checkbox"/> N/A	Consider transferring ownership of any survey meters. They can be transferred to another Authorized User or donated to the Radiation Safety Office.
<input type="checkbox"/> YES <input type="checkbox"/> N/A	Terminate any active RAM workers in Gamma 2 application.
<input type="checkbox"/> YES <input type="checkbox"/> N/A	Confirm there are no outstanding RAM orders and close out all associated POs in the Gamma 2 application.
<input type="checkbox"/> YES <input type="checkbox"/> N/A	Submit RAM transfer or RAM Waste Pickup requests for any RAM remaining in your possession.
<input type="checkbox"/> YES <input type="checkbox"/> N/A	Sealed and unsealed source inventories are free from RAM.
<input type="checkbox"/> YES <input type="checkbox"/> N/A	<p>Ensure that the lab is in good order including:</p> <ul style="list-style-type: none"> <input type="checkbox"/> cleared drawers, <input type="checkbox"/> cleared lab use benchtops, <input type="checkbox"/> RAM use or storage areas should have complete routine wipes and surveys of all RAM use areas performed by the AU or RW staff prior to contacting the Radiation Safety Office (513-558-4110) for decommissioning.
<input type="checkbox"/> YES <input type="checkbox"/> N/A	Print, complete, sign and submit a completed RS Form 24 to the Radiation Safety Office (contact the Radiation Safety Office).

* The supervisor of the existing Research is responsible for checking and completing these items.

Researcher's Inspection

Signature Date

Supervisor's Inspection:

Signature Date

Environmental Health & Safety Inspection:

(Signed only after all "failed" items Above are corrected)

Signature Date

APPENDIX A

REFRIGERATOR, FREEZER, AND EQUIPMENT DECONTAMINATION

Refrigerators, freezers, and laboratory equipment that have been used for the storage of biological, chemical, and/or radiological materials must be completely emptied and properly decontaminated before discarding. Units that are being moved from laboratories within a building must have the exterior decontaminated prior to moving. ATTACH THE "NOTICE" TO EACH UNIT AFTER IT HAS BEEN CLEANED.

Biological Safety Cabinets (BSC) – refer to item #6 on page 2 for information related to proper decommissioning of BSC.

BIOLOGICAL AGENTS, TISSUES, ETC.

- Use a 10% bleach solution (one part bleach to nine parts water) or other tuberculocidal disinfectant ([EPA List of Disinfectants](#)) and wipe down interior and exterior of the unit.

CHEMICALS/PHARMACEUTICALS/CONTROLLED SUBSTANCES

- Soap and water should be used to clean interior and exterior of the unit.
- Check the Material Safety Data Sheets (MSDS) for compatibility of soap/water (or other cleaning agent) with the items that were stored in the refrigerator/freezer.
- Call 556-4968 (EH&S) for additional information on material compatibility.

RADIOLOGICAL AGENTS

- Contact Radiation Safety at 558-4110 for decontamination procedures.

COMBINATION OF AGENTS

- *Radiological and Chemical or Biological:* Contact Radiation Safety at 558-4110.
- *Chemical and Biological:* use the procedures listed above. Be sure to check for incompatibles prior to cleaning.

After decontaminating the unit, complete an [SE Request Form](#) from Surplus Equipment for final disposition.

Contact Environmental Health and Safety at 556-4968 for additional information.

Tape this page to the unit

NOTICE

This refrigerator/freezer/equipment was properly cleaned in accordance with Appendix A in Environmental Health and Safety advisory 7.1.1

http://ehs.uc.edu/Advisories/Advisory_7_1_1.PDF

Department: _____ *Date:* _____ *Phone #:* _____

Cleaned by: Sign: _____ *Print Name:* _____

Supervisor: Sign: _____ *Print Name:* _____

PLEASE NOTE

**This form must be signed and attached to each unit or
Grounds & Moving may refuse pickup.**