

# Laboratory Closeout and Move Procedure

## Introduction

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Laboratories within the University of Minnesota must be left in a state suitable for new occupants or for renovation activities. The vacating Principal Investigator (PI) and Department are responsible for ensuring the disinfection of equipment and counters, removal of equipment from the lab as surplus, or to be relocated, and disposal of all chemical, biological, and radioactive waste materials prior to vacating the space.

If disposal of hazardous materials at closeout requires removal services from an outside contractor, the responsible department will be charged for this service. Any regulatory action or fines resulting from improper management or disposal of hazardous materials will accrue to the responsible department.

## Responsibilities

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*The Environmental Health and Safety Office (EHSO)* will provide proper guidance for laboratory closeout. EHSO will do a final walk through of the laboratory to be vacated to ensure all items were addressed. This walk-through may include the Departmental Safety Officer (DSO) and/or another Departmental Representative.

*Departments* are responsible for ensuring that all Principal Investigators are aware of and follow these guidelines to ensure laboratory clearance by EHSO. Departments are ultimately responsible (including financially if contractors must be hired) for the proper clearance of laboratory space, chemicals, and equipment of PIs. If items are left behind and the responsible PI cannot be determined, the Department Chair will assume responsibility for the proper closeout of the laboratory. Departments need to notify their DSO of moves and close outs as soon as this information is known to allow them to coordinate the lab close out with the PI and EHSO.

*Principal Investigator(s)* are responsible for the safe operation of their laboratory or laboratories. This includes leaving all these facilities in a clean and safe condition when the premises are vacated. The PI needs to inform their DSO and EHSO Research Safety Specialist of the impending move at least one month before the date.

*Departmental Safety Officer (DSO)* is responsible for providing guidance to the PI and their lab members. The DSO will notify EHSO of the impending move and coordinate a final walk through.

## Procedures

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Complete the following procedures as applicable and fill out the Laboratory Close-out Checklist at the end of this document. Notify the EHSO when the lab is ready for closure. Guidance on factors to consider for temporary lab closures is included in the Lab Hibernation Checklist in [Section 2.9 of the Chemical Hygiene Plan](#).

## Chemicals

- Ensure that all containers of chemicals are labeled with the name of the chemical.
- Confirm that all containers are securely closed.
- Empty all beakers, flasks, evaporating dishes, etc.
- Check refrigerators, freezers, fume hoods and bench tops as well as storage cabinets for chemical containers.
- Hazardous chemical wastes must not be discharged down the drain or placed in the trash; they must be collected for disposal by submitting a pick-up request.
- Wash off all fume hood surfaces, chemical cabinets, and countertops.

### Leaving the University

- Determine which chemicals are in like-new condition and transfer responsibility for these materials to another party who is willing to take charge of them.
- If a new user cannot be found, dispose of the chemicals as hazardous waste. More information is available on the [EHSO Hazardous Waste Webpage](#). This process can require some time and should be started at least a month before departure from the laboratory. Chemical pickup must be completed before the laboratory is vacated.

### Moving to a new campus location

- Segregate hazardous chemicals by the primary hazard class. For example, all flammable liquids should be packaged together; all acids should be packaged together and separate from bases. The following general segregation requirements should be followed:
  - Organic chemicals (flammable liquids/solids) packaged separately from oxidizers
  - Acids packaged separately from bases
  - Acids packaged separately from toxics

- Reactive chemicals (e.g., spontaneously combustible, dangerous when wet, organic peroxides) and highly toxic chemicals (e.g., acutely hazardous substances, particularly hazardous substances) should be packaged separately and not mixed with any other hazard classes.
- Feel free to contact the EHSO for further guidance on segregating hazardous chemicals if necessary.
- Completely enclose chemical containers in sturdy boxes. Large carboys and 5-gallon pails do not need to be placed into boxes.
  - When packaging chemicals into boxes, use cushioning material (e.g., spill pads, vermiculite, cardboard dividers, etc.) to separate the inner containers to prevent glass-on-glass contact.
  - Tape the boxes shut or seal the lids and tape a copy of the box inventory to the box or pail to alert the moving company that these are Hazardous Materials not to be moved by them.
  - Contact the EHSO for assistance moving your chemicals

## Controlled Substances

### Leaving the University

- Dispose of controlled substances following the directions on the [DEHS disposal website](#). Keep the substances locked in the safe until they are picked up for disposal.
- If there are no other controlled substance research laboratories in the same building, the Unit Registrant must send a letter to the [Minneapolis DEA office](#) requesting cancellation of the DEA registration and informing them of the drug disposal. Include in the letter the name of the Unit Registrant, DEA registration number and expiration date, lab/building address, effective date of the cancellation, and Social Security Number of the Unit Registrant.
- If applicable, send unused DEA Form 222 to the Minneapolis DEA office via certified or registered mail. In your cover letter to the DEA, list the unique numbers on Form 222 and save a copy of the letter in your controlled substances records.
- Notify the DEHS Controlled Substances Manager (fritz017@umn.edu) that the laboratory is no longer using controlled substances.

### Moving to a new campus location

- **The new storage site must be approved by the DEA before controlled substances can be relocated**
- Change of address can be requested either via mail or by modifying the registration online at [www.deadiversion.usdoj.gov](http://www.deadiversion.usdoj.gov) and clicking on the “registration changes” link

- By Mail: Letter on University of Minnesota letterhead and signed by the registrant. The letter should include the following information:
  - Registrant name and registration number,
  - Current building name and address,
  - New location building name and address
  - Move Date
  - Local DEA address where the letter should be sent:  
 DEA  
 100 Washington Ave. So.  
 Suite 800  
 Minneapolis, MN 55401

## Gas Cylinders

- Disconnect gas cylinders from regulators and equipment and cap all cylinders.

### Leaving the University

- Return gas cylinders, whether empty or partially filled, to the manufacturer or distributor through which they were purchased. If originally purchased through U Market, contact them at 612-624-4878 to arrange for return of gas cylinders.
- Empty cylinders should be clearly marked as empty to avoid confusion when it comes to return or disposal of the cylinder. Do not vent full or partially used cylinders into fume hoods as a means of disposal.
- In the event it is not possible to return the cylinders, submit the cylinders for waste pickup by following chemical waste disposal procedures. Make sure the cylinders are clearly marked as to contents and valves are properly sealed and capped.

### Moving to a new campus location

- UHS will only move small, non-demurrage cylinders (e.g., lecture bottles).
- Contact compressed gas vendor assistance with moving large cylinders.
- For liquid nitrogen and other cryogen dewars, each lab should contact their vendor for pick-up, relocation, and reconnection in new location.
- Do not label compressed gas cylinders with mover's labels.

## Human and Animal Tissue

### Leaving the University

- If samples must be saved, locate an appropriate researcher to take responsibility for them and tell your Department Head and DSO who will be taking responsibility for them.
- Remove fixed tissue from preservative before disposal.
- Dispose of chemical preservatives as hazardous chemical waste (see Chemical Disposal above).
- Dispose of all human pathological waste through the university's [Bequest Program](#). Call 612-625-1111 for proper procedures.
- Return animal carcasses to Research Animal Resources for disposal.
- Defrost and clean refrigerators and freezers.
- If appropriate biological waste disposal is uncertain, contact the EHSO.

### Moving to a new campus location

- Each lab must empty refrigerators and freezers before their scheduled move time. Place contents into a suitable cooler. Label the refrigerator or freezer with the mover's label and contact EHSO for assistance coordinating your fridge move.
  - ***Note:** An exception may be made for chest and ultra-cold (-80 C) freezers. At the lab's discretion, this equipment may be moved with contents inside. However, it is important that you realize that the equipment will be jostled and possibly tipped to a 45 degree angle. If you choose to have this equipment moved with the contents loaded, it is highly recommended that you secure items so they do not shift during the move.*
- Your coolers will be moved to the new location as quickly as possible, however, EHSO cannot guarantee that the contents will remain at proper temperatures.

## Microorganisms/Cultures, Recombinant DNA, and Toxins of Biological Origin

### Leaving the University

- If samples or stocks must be saved, locate an appropriate researcher to take responsibility for them and tell your Department Head, DSO, and the EHSO who will be taking responsibility for them.
- If microorganism stocks/cultures, recombinant DNA, or biologically derived toxins are moved, destroyed, notify DEHS Biosafety at 626-6002.
- If an autoclave is available to decontaminate biological waste, place all microorganism stocks and culture plates in a clear autoclavable bag and follow the procedures for operating that autoclave.

- For toxins of biological origin, follow approved decontamination procedures as outlined in the [Guidelines for Work with Toxins of Biological Origin](#)
- Decontaminate liquid biological wastes and wipe down all potentially contaminated surfaces according to the procedures outlined in [Biohazards Decontamination & Spill Clean-up](#).
- Clean and decontaminate incubators, drying or curing ovens, refrigerators, and freezers.
- If appropriate biological waste disposal is uncertain, contact the EHSO.

### Moving to a new campus location

- Pack these materials in a leak-proof sealed primary container within a leak-proof sealed secondary container. If the primary container is glass, the secondary container must be a sealed, rigid, non-breakable container.
- Place sufficient absorbent material between the primary and secondary containers to absorb the volume being transported.
- Place a biohazard sticker on the container with the agent name and the name and phone number of contact.
- Someone from the new laboratory location must be on hand to receive these items.

## Radioactive Materials

### Leaving the University

- Package all radioactive materials (stock vials, sealed sources, lead containers/shields, and wastes) and label them in accordance with procedures for pickup as radioactive waste, or for transfer to another permitted use area.
- Prior to the transferring radioactive materials to a new location, notify the RPD (612-626-6002) to obtain authorization for the transfer and to assure that the new use area is properly posted and permitted by RPD.
- Arrange for pickup of all radioactive wastes through Isotrack.
- Following removal of all radioactive wastes and stock materials, perform a contamination survey (and if appropriate a GM instrument survey) of all former storage and use areas within the laboratory to be closed out.
  - *NOTE: Areas of potential residual contamination include refrigerators, freezers, centrifuges, water baths, hoods, sinks, floor areas under waste containers, etc.*
- All contaminated areas or equipment in the laboratory must be decontaminated. A follow-up survey must be made of the decontaminated areas.

- Provide the Department Head, EHSO, and the RPD with a copy of the final contamination survey.
- Schedule the Radiation Safety closeout survey by RPD (612-626-6002). Do not allow further use of room until the RPD closeout survey is complete and the radiation caution door posting is removed by RPD.
- If the permit holder fails to satisfactorily complete the above steps, the Department will be responsible for the completion of (or payment of costs to complete) the required closeout steps. The Department is responsible for immediate notification of the RPD if the above steps have not been completed.

### **Moving to a new campus location**

- Contact the Radiation Protection Division (612-626-6002) for advice on how to properly move radioactive materials.

## **Mixed Hazards**

- Occasionally it is necessary to dispose of materials that contain more than one of these hazards (chemical, radioactive or biological agent) Contact the EHSO for assistance.

## **Equipment**

### **Leaving the University**

- If laboratory equipment is to be left for the next occupant, clean or decontaminate it before departing the laboratory.
- If exhaust or filtration equipment has been used with extremely hazardous substances or organisms, alert the EHSO and 300Facilities Management.
- If laboratory equipment is to be discarded, be aware that mercury thermometers, radioactive sources and chemicals must be removed before disposal. See the [Electronic Waste Site](#) for specific instructions.
- Equipment potentially contaminated with radioisotopes should be surveyed by the EHSO.

### **Shared Storage Areas**

- Departing researchers must carefully survey any shared facility to locate and appropriately dispose of their hazardous materials. Of particular concern are shared 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.





# Laboratory Close-out Checklist

Laboratories to be closed out (Buildings & Rooms): \_\_\_\_\_

<u>Hazardous Material/Procedure</u>	<u>Date Completed or N/A</u>
<b>Shared Storage Areas</b>	
Check all shared storage areas for hazardous materials and remove them.	_____
Clean laboratory surfaces, insides of cabinets and drawers.	_____
Clean refrigerators/freezers.	_____
Clean incubators, ovens, centrifuges and all other equipment.	_____
Clean or decontaminate equipment to be left in place.	_____
<b>Chemicals</b>	
Evaluate all chemicals and label all containers.	_____
Beakers, flasks, etc. should be emptied	_____
Sample vials packaged together	_____
Chemically contaminated labware	_____
Empty containers	_____
Unknowns have been identified	_____
Offer useable materials for redistribution	_____
Submit chemical waste for removal by DEHS's chemical waste division.	_____
Confirm that hazardous waste has been removed.	_____
Transfer responsibility for remaining chemicals to: _____	_____
<b>Controlled Substances</b>	
Submit a completed Controlled Substance Disposal Form to the DEHS's chemical waste division.	_____
Contact U.S. Drug Enforcement Agency regarding permit status.	_____
<b>Gas Cylinders</b>	
Return to supplier. For non-returnable cylinders, submit a request for pickup in Chematix	_____
<b>Animal and Human Tissue</b>	
Dispose of tissue. Method: _____	_____
Dispose of preservative. Method: _____	_____
Transfer responsibility for remaining samples to: _____	_____
<b>Microorganisms/Cultures Recombinant DNA</b>	
Dispose of biohazardous waste appropriately.	_____
Decontaminate equipment used for biohazardous work	_____
Professionally decontaminate the Biosafety cabinet	_____

Toxins of Biological Origin

Method of disposal: \_\_\_\_\_

Transfer responsibility for remaining samples to: \_\_\_\_\_

**Radioactive Materials**

Package all radioactive materials for [disposal and arrange pickup](#). \_\_\_\_\_

Transfer responsibility of remaining stockvials to [check with DEHS's radiation protection division (RPD) first]: \_\_\_\_\_

Perform contamination survey, and resurvey, if necessary. \_\_\_\_\_

Schedule closeout survey by RPD. Date of survey: \_\_\_\_\_

**Mixed Hazards**

Identify and dispose of mixed hazards appropriately. Call DEHs with questions. \_\_\_\_\_

**Department Sign-off**

*By signing, I verify that I have checked all spaces in the facility space mentioned above for hazardous materials.*

Researcher Signature \_\_\_\_\_ Date \_\_\_\_\_

DSO/Department Signature \_\_\_\_\_ Date \_\_\_\_\_

Department Head Signature \_\_\_\_\_ Date \_\_\_\_\_

