

## Laboratory Close-Out Guidelines

The Principal Investigator (PI) is responsible for leaving laboratories in proper condition for re-occupancy or renovation. The PI is responsible for ensuring the disinfection of equipment and counters, movement of equipment from the lab for surplus, repair, or relocation, and disposal of chemical, biological, and radioactive waste materials prior to vacating the space.

Departments are responsible for ensuring all Principal Investigators follow these guidelines. Items left behind by vacating Investigators will become the responsibility of the Department.

Laboratory space cannot be re-occupied nor renovation work started until the space has been inspected and cleared by the Office of Research Safety (ORS).

It is recommended that research activities cease one to two weeks prior to transition in order to provide adequate time for preparation and execution of lab close out.

### Procedures

#### 1. Notification

- Notify the [Office of Research Safety](#) (202-994-8258) at least 30 days prior to vacating the laboratory. ORS will conduct a pre- inspection of the space with the Principal Investigator or his/her representative to identify all chemical, physical, biological and radiological hazards present
- Contact the [Office of Environmental Health & Safety](#) (202-994-4347) for chemical and biological waste disposal at least 15 days prior to vacating the laboratory.
- All protocols approved by the Institutional Biosafety Committee (IBC) for which the departing investigator is designated as the PI must be terminated. Request termination of IBC protocol in writing to the [IBC Chair](#) least 15 days prior to vacating the laboratory.
- If radioactive material is used in the laboratory, the [Radiation Safety Office](#) (202-994-2630) must be contacted, to coordinate its removal, transfer, or disposal and to schedule the final survey and de-certification at least 30 days prior to vacating the laboratory.

2. Clean the laboratory following the guidelines listed below.

3. Fill out the Laboratory Close-out checklist and contact ORS.

4. An ORS representative will inspect the laboratory and sign the checklist

## The laboratory must be cleaned according to the following guidelines:

<p>Ultra low temperature (-80o C) freezers used for storage during lab relocations do not have to be emptied prior to moving if the contents will not shift during the move. Freezers must be locked.</p>
<p>Microorganisms stored within the freezer must be secured within primary and secondary containment. Secondary containment must be leak-proof and labeled with a biohazard sticker. If transporting organisms classified as Risk Group 2 or greater, a biohazard sign label must be posted on the freezer with the agent's name and PI's contact information.</p>
<p>Refrigerators must be emptied before moving. All interior and exterior surfaces must be cleaned with soap and water and a 10% bleach freshly prepared solution. Exterior surfaces (doors and handles) must be wiped down with 10% bleach freshly prepared. The doors must be locked or taped shut for the move.</p>
<p>Remove any absorbent covering and tape from all lab surfaces, including fume hood surfaces. If contaminated with hazardous materials dispose of the materials appropriately.</p>
<p>Empty and properly dispose of all materials from all drawers, cabinets, and fume hoods. Wipe down the surfaces of the fume hoods and cabinets where chemicals were stored.</p>
<p>Ensure that all micro tubes, pipette tips, glass Pasteur pipettes, etc., that may be lying on the floor under equipment or in corners are properly disposed before vacating the lab.</p>
<p>Make sure all broken glass and other glass waste is put in labeled, rigid containers.</p>
<p>Place all disposable sharps (needles, syringes, blades, scalpels, etc.) in puncture resistant sharps boxes. Close shut and dispose of with biohazardous waste.</p>
<p>Check cold rooms, freezers, and refrigerators for biological agents that could easily be forgotten. Old samples from past staff and students or inherited samples must be either disposed or marked for moving to the new location. Items left behind by vacating Investigators will become the responsibility of the Department Chair.</p>
<p>Properly dispose of all biological waste. Dispose of all solid media, supplies and waste in biohazardous waste boxes. Live cells, cultures, frozen stocks, etc. must be autoclaved or chemically inactivated with freshly prepared 10% bleach for 30 minutes prior to disposal</p>
<p>Decontaminate all liquid biohazard waste by adding bleach to a final concentration of 10% by volume and allowing it 30 minutes of contact time before disposal down the drain with copious amounts of water.</p>
<p>Decontaminate all work surfaces with freshly prepared 10% bleach. Allow 30 minutes of contact time prior to rinsing with 70% ethanol.</p>
<p>Place all disposable sharps (needles, syringes, blades, scalpels, etc.) in puncture resistant sharps boxes. Close shut and dispose of with biohazardous waste.</p>
<p>Equipment Decontaminate surfaces of contamination prone equipment (e.g., refrigerators, incubators, water baths, centrifuges, etc.). Even old or damaged equipment that will not be moved to the new location needs to be completely decontaminated Incubators and water baths must be drained of all standing water, including water inside the jacket.</p> <ol style="list-style-type: none"><li>1. Put on appropriate personal protective equipment. At a minimum, gloves and safety glasses should be worn.</li><li>2. Spray an EPA-registered disinfectant on the equipment. In most cases, a freshly Laboratory Close-Out 3 Revised: 01/10/2017 prepared 1:10 bleach solution should be used to disinfect biological agents.</li><li>3. Allow disinfectant to remain on the equipment for the appropriate contact time (30 minutes).</li><li>4. Completely remove (by wiping with a towel) the disinfectant from the equipment.</li></ol>

<p>5. Spray the equipment with 70% ethanol (v/v, diluted in water).</p> <p>6. Print out a “Decontamination Certification” form. Sign, date, and affix the form to the equipment.</p>
<p>Biological Safety Cabinets (BSC)</p> <p>a) Disinfect and remove the contents of the biological safety cabinet.</p> <p>b) Disconnect the tissue culture vacuum flask and decontaminate by adding bleach to a final concentration of 10% and allowing it to sit 30 minutes before disposal down the drain.</p> <p>c) Disinfect all accessible surfaces within the biological safety cabinet with 10% bleach freshly prepared before disposal. Allow 30 minutes of contact time prior to rinsing with 70% ethanol.</p> <p>d) Laboratory personnel are NOT permitted to perform or certify the decontamination of a biological Safety cabinet (BSC) that is being moved. A vendor must be contacted to conduct the decontamination process and certify decontamination of the BSC prior to moving it. The BSC must be re-certified before use.</p>
<p>All biological materials must be transported within GWU utilizing primary and secondary containment. The primary and the secondary containers must be leak proof. The secondary container must contain enough absorbent material to absorb the entire contents of all the primary containers within. The outside of the secondary container must have the biohazard symbol label with the name of the PI and the new laboratory room number. Only laboratory personnel must move these packages.</p>
<p>All laboratory chemicals must be inventoried and segregated by class and compatibility in preparation for close-out. All chemical containers are to be labeled with the chemical name or a best description of the compound. Unknown chemicals shall be identified and appropriately designated for waste disposal.</p>
<p>Chemicals designated as waste must be removed at least one week prior to final close- out. Disposal of hazardous chemicals into sinks or drains is <b>STRICTLY PROHIBITED</b>.</p>
<p>Make sure that compressed gas cylinders remain properly secured in the old location prior to transport or disposal. Chemical fume hoods must be empty of all chemicals and equipment/materials. Interior surfaces of the hood shall be wiped down with a mild detergent/water solution.</p>
<p>Remove regulators from all compressed gas cylinders, replace the protective cap, and ensure proper labeling of the cylinder. Make sure that cylinders remain properly secured in the old location prior to transport or disposal. Prior to relocating cylinders, ensure the new location has adequate facilities to properly secure the cylinders upon arrival.</p>
<p>All sink traps must be bleached and flushed with water (use 1 cup of concentrated bleach, wait 20 minutes, then flush thoroughly with water)</p>
<p>Package all Radioactive Materials (RAM) that can be disposed of as RAM waste and request a RAM waste pickup.</p>
<p>The PI must perform a final radiation survey of all laboratory areas, equipment and furniture to ensure that no contamination is present and provide this information to the Radiation Laboratory Close-Out 4 Revised: 01/10/2017 Safety Officer (RSO).</p>
<p>Ensure that all personnel have returned their dosimeter badges to the RSO.</p>
<p>Once the lab has been completely emptied the RSO will perform a final exit survey. Upon determination that the lab is clean the RSO will generate a letter documenting that the lab is safe for renovation, reuse, or demolition.</p>

## Laboratory Closeout Checklist

<b>Principal Investigator</b>		<b>Phone</b>	
<b>Department</b>			
<b>Laboratory Address</b>			
<b>Email Address</b>			

	Inspection Date		
	YES	NO	N/A
<b>Check the box that is applicable:</b>			
All biohazards have been disposed of properly			
Cultures, stocks, and other potentially infectious materials have decontaminated			
Incubators, drying or curing ovens, refrigerators, freezers, and lab surfaces are clear and decontaminated			
Biosafety cabinet(s), tissue culture hoods and glove boxes are decontaminated			
Chemicals inventoried, labeled and segregated			
Waste chemicals removed			
Chemical storage areas are clean, w/surfaces wiped down and free of chemicals			
Radioactive isotopes and waste returned to the ORS			
Radiation dosimetry badges returned to ORS			
Final lab RAM contamination survey of all laboratory areas, equipment and furniture complete and submitted to ORS			
RSO Clearance complete			
Fume hoods empty and cleaned			
Broken/ uncontaminated glassware removed or disposed in glass waste box			
All sink traps have been bleached and flushed with water			
Hazard identification signs/labels removed			
Hazard identification signs/labels removed			
Other/comments:			

Principal Investigator		Date	
ORS Representative		Date	

# LABORATORY OR EQUIPMENT DECONTAMINATION CERTIFICATION

1. I certify that the rooms or equipment listed below, previously used by my laboratory, have been emptied of biological and chemical materials.
  - **Room Number:** \_\_\_\_\_
  - **Equipment:** \_\_\_\_\_
  
2. The surfaces of these rooms/equipment have been decontaminated (if equipment: inside and outside) with: (specify decontaminants and percentages, (i.e. 10% bleach, be freshly made up, followed by 70% ethanol).
  
3. All chemicals contained within the rooms or equipment have been removed or drained and collected for proper disposal including, but not limited to:
  - Oil – If the equipment contains a pump or other oil reservoir, oil must be drained and collected as Hazardous Waste in the laboratory’s Accumulation Area. Contact Health and Safety for assistance.
  - Mercury – If there is a thermometer or other device inside or associated with the equipment or space the device must be removed and collected as Hazardous Waste in the laboratory’s Accumulation Area. Contact Health and Safety for assistance.
  - Refrigerant Gas – If the equipment involved cooling and relied on refrigerant gas, this gas must be removed prior to disposal Facilities Management must be contacted as only licensed mechanics can perform this service.
  - Lead Shielding – If the equipment used lead as a shielding agent, this material must be removed prior to disposal. Contact ORS to assist in lead removal.
 Yes\_\_\_\_\_ No\_\_\_\_\_ N/A\_\_\_\_\_
  
4. If the space or equipment contained or was used with any radioactive material (isotopes, sealed sources, etc.), the laboratory personnel have decontaminated the area and equipment. Radiation Safety has been contacted, has surveyed the equipment, and has certified it free of detectable radioactive contamination and arranged for the removal of any lead shielding.
   
 Yes\_\_\_\_\_ No\_\_\_\_\_ N/A\_\_\_\_\_
  
5. All sink traps (including those in Fume hoods) have been bleached and flushed with water (use 1 cup of concentrated bleach, wait 20 minutes, then flush thoroughly with water):
   
 Yes\_\_\_\_\_ No\_\_\_\_\_ N/A\_\_\_\_\_
  
6. Does equipment contain fluid (water, antifreeze, etc.): Yes\_\_\_\_\_ No\_\_\_\_\_

Principal Investigator: (print)		Phone Ext.:	
Signature:		Date:	
Dept.: Bldg.:			
Decontaminated By:		Date:	