

***TEMPLE UNIVERSITY
ENVIRONMENTAL HEALTH &
RADIATION SAFETY***

***LABORATORY VACANCY OR
RELOCATION GUIDE***

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Table of Contents

I. Introduction	3
EHRIS Contact Information • EHRIS Resources	
II. Notification & Inspection Process	4
Notify EHRIS • Complete Laboratory Clearance Form • Schedule a Laboratory Clearance Inspection • Other University Notifications	
III. Shared Storage Areas	6
IV. General Laboratory Cleanup	6
V. Laboratory Equipment	7
Laboratory Equipment Relocation or Disposal • Surplus Equipment • Computer & Electronic Surplus Recycling • Liquid-Nitrogen Line Freezers	
VI. Biological	9
Biohazard Contamination • Biological Select Agent & Toxin (BSAT) • Biological Waste Materials • Biological Safety Cabinets	
VII. Chemical	10
Chemical Contamination • Internal Relocation of Chemicals • External Relocation of Chemicals • Chemical Waste Disposal • Compressed Gas Cylinders	
VIII. Controlled Substances	13
IX. Radiation	13
Radioactive Contamination • Radioactive Materials	
X. Lasers	14
XI. Transportation Requirements & Logistics	15
Moving Equipment and Non-Hazardous Items • Moving Hazardous Materials	

I. Introduction

The proper transfer or disposal of hazardous materials is required whenever a Principal Investigator (PI) or researcher with assigned laboratory space leaves the University or changes location within the University.

Laboratories within Temple University (TU) must be left in a suitable state for new occupants or renovation activities. The vacating Principal Investigator, Researcher, and Department are responsible for ensuring the decontamination of laboratory surfaces, equipment, electronics and the proper recycling and disposal of all chemical, biological, and radioactive materials.

Laboratory space cannot be re-occupied, nor renovation work started until the space has been inspected and cleared by EHRs. Once clearance is completed, the [Laboratory Clearance Form](#) will be posted conspicuously in the laboratory.

The vacating Principal Investigator (PI), Researcher, and Department must complete the following procedures before the laboratory space is cleared by EHRs. Failure to follow the procedures provided in this guide or additional guidance provided by EHRs may result in unnecessary cost that may be charged back to the PI, Researcher, or Department.

EHRs Contact Information

Web pages and contact information for specific issues are listed throughout this guide. See the [EHRs website](#) for a list of contact information by topic.

Environmental Health & Radiation Safety (EHRs)
Pharmacy-Allied Health Building
3307 N. Broad Street, Room B-49
Philadelphia, PA 19140
Phone: (215) 707-2520
E-mail address: ehrs@temple.edu
Website: www.temple.edu/ehrs

EHRs Resources

EHRs offers training, consultation and information regarding laboratory safety. The [EHRs website](#) has a variety of safety information and resources. EHRs provides resources and

guidance for researchers to stay safe and in compliance with local, state and federal regulations and policies at all TU campuses and facilities. However, specific policies and procedures may vary by location.

II. Notification & Inspection Process

Notify EHRS

The Principal Investigator, Researcher, and/or Department must notify EHRS by completing the [Lab Vacancy/Relocation Notification Form](#) at least 30 days in advance if:

- a laboratory is relocating on-campus or to a different Temple campus;
- a laboratory is closing down; or
- a researcher within their laboratory group is departing

Advanced notification is necessary to ensure the safe and proper disposal and decontamination and hazardous materials within the laboratory. An EHRS representative will contact you and provide additional instruction and/or schedule a preliminary visit to the lab.

Complete a Laboratory Clearance Form

- Refer to the information and guidance in this guide to ensure that vacated laboratories are free of hazards and all relocation/close out requirements are completed.
- All activity involving hazardous materials should stop as soon as possible. Some elements of the process may take several days to several weeks to thoroughly complete.
- Print and complete the [Laboratory Clearance Form](#) once you have completed all the required activities and to schedule a Laboratory Clearance inspection.
- **A [Laboratory Clearance Form](#) is required for each individual laboratory that will be relocated or closed-out.**

Schedule a Laboratory Clearance Inspection

Once you have completed all items on the [Laboratory Clearance Form](#), and all the hazardous materials have been removed, sign the form and submit it to ehrs@temple.edu

An EHRS representative will contact you to make arrangements for the clearance inspection. The [Laboratory Clearance Form](#) must be submitted at least 5 business days in advance of any planned/scheduled closure.

Have the [Laboratory Clearance Form](#) ready to go over with the EHRS representative who will conduct your clearance inspection. EHRS will attempt to assist in any instances where a clearance is not able to be completed due to potential deadlines or failure of a PI, researcher or department to complete the required tasks. The PI, Researcher, or Department may be charged for any cost incurred under these circumstances.

Final clearance will not be given until all decontamination and hazardous material removal is complete. Once clearance is completed, the [Laboratory Clearance Form](#) must be posted conspicuously on laboratory front door. [Laboratory Clearance Forms](#) are valid for 45 business days after each EHRS has granted final clearance.

Other University Notifications

Laboratories within Temple University may have been utilized for work involving biohazardous materials, controlled substances, laser, human subjects or animal subjects which required special registrations and approvals. The vacating Principal Investigator, researcher and Department are responsible for:

- Terminating active IBC protocols or updating existing protocols to reflect new location.
- Terminating active IACUC protocols or updating existing protocols to reflect new location.
- Notified ULAR and made arrangements for all animals currently on protocols.

Contact the [Office for Vice President for Research](#) (OVPR) for additional information.

III. Shared Storage Areas

Shared storage areas include storage units such as stock rooms, walk-in refrigerators, contact temperature rooms, shared refrigerators, freezers, flammable liquid cabinets, waste collection area, etc.

They are of special concern if more than one person manages the area. Carefully inspect any shared facility in order to locate and properly dispose of the hazardous materials for which that PI, researcher, or department is responsible.

IV. General Laboratory Cleanup

- All laboratory areas must be thoroughly cleaned to assure removal of all hazardous residues.
- All surfaces where hazardous materials have been used or stored must be washed with detergent and water including bench tops, cabinets, drawers, and floors.
- Decontaminate accessible surfaces of furniture and other items to be removed from the laboratory.
- Remove all bench coats and disposable liners/covers from work surfaces and dispose of appropriately depending on hazard type.
- Empty and properly dispose of material from all drawers, cabinets, and chemical fume hoods.
- Properly clean laboratory bench tops, cabinets, drawers, floors and chemical fume hood surfaces (preferably with soap and water).
- Wear appropriate personal protective equipment (PPE) for the materials being handled.
- Collect all broken glass, sharps, and other laboratory waste and dispose of properly.
- After the lab is empty and clean, run water into sinks and floor drains to fill traps.

Important: Never abandon unwanted or damaged equipment or hazardous materials in the lab or hallways.

V. Laboratory Equipment

Laboratory Equipment Relocation or Disposal

Equipment (e.g. refrigerators, freezers, ovens, incubators, centrifuges, biological safety cabinets, etc.) that has been used with hazardous material must be decontaminated before it can be discarded, moved, repaired, or recycled. Complete the [Equipment Clearance Form](#) and email to ehrs@temple.edu. An [Equipment Clearance Form](#) is required for each individual piece of equipment.

Follow the procedure below before laboratory equipment is cleared:

- Remove all contents from laboratory equipment (e.g., chemicals, media, glassware, etc.).
- Remove all bench coat and disposable liners/covers from equipment and dispose of properly.
- Decontaminate all surface of contamination-prone equipment, e.g. refrigerators, freezers, incubators, water baths, biological safety cabinets, and centrifuges with appropriate disinfectant.
- Freezers which have been used for the storage of biological materials must be unplugged and defrosted.
- The refrigerants (e.g. Freon) from any refrigeration equipment (refrigerators, freezer) must be properly recovered by Facilities Management or an authorized vendor prior to disposal.
- Incubators and water baths must be drained of all standing water, including water inside the jacket.

- When discarding laboratory equipment, all capacitors, transformers, mercury switches and mercury thermometers must be removed by appropriate personnel before discarding.

Equipment cannot be discarded, moved, repaired, or recycled until the equipment has been inspected and cleared by EHRS. Once clearance is completed, the [Equipment Clearance Form](#) must be posted conspicuously on the piece of equipment. [Equipment Clearance Forms](#) are valid for 30 business days after EHRS has granted final clearance.

Contact EHRS at 215-707-2520 for assistance if the equipment cannot be effectively decontaminated.

Surplus Equipment

The [Temple University Surplus Program](#) is responsible for removing items that are no longer in active use. Contact Surplus to arrange for the disposal of equipment that has been effectively decontaminated and cleared by EHRS.

All equipment disposed of through Surplus must be decontaminated, cleared by EHRS and have all hazard warning labels removed prior to transfer to Surplus.

Computer & Electronic Surplus Recycling

All electronics (including, but not limited to, central processing units, monitors, keyboard, printers, televisions, and scanners) must be separated from general trash and placed into a designated area for collection by the [Computer Recycling Center](#). The designated area must be under the direct control of the generators (no hallway storage). All electronics must be clearly labeled with a dated, removable sign reading “To be recycled by CRC”. Contact the Computer Recycling Center if you have questions about removing or recycling electronic equipment.

Liquid-Nitrogen Line Freezers

The vendors supplying liquid nitrogen recommend that liquid nitrogen-line freezers be drained to a minimum level (to sustain freezing of cells) before relocating. Liquid nitrogen freezers must be moved by the moving company, and the vendor should be scheduled to refill the freezers as soon as possible at the new location.

VI. Biological

Determine if any biological materials (including human and animal tissues, microorganisms and cultures, recombinant DNA and biological select agents and toxins) are usable and if you or anyone at Temple would like to keep them. Document transfer of responsibility for any identified materials to a party willing to accept them. Properly dispose of any biological materials that are not being kept or transferred.

Biohazard Contamination

- Disinfect all work surfaces and biosafety cabinets. Contact EHRS if you have any questions regarding decontamination.
- Complete an [Equipment Clearance Form](#) for any equipment that may have come into contact with biohazardous materials.
- If tissue was stored in a refrigerator or freezer: Defrost, clean and disinfect any refrigerator or freezer after it has been emptied. Use an appropriate disinfectant.

Biological Select Agent and Toxin (BSAT)

- Decontaminate or autoclave any BSAT as appropriate before being destroyed (according to the appropriate SOP) and notify EHRS.
- Contact Biological Safety Officer (BSO) before transferring any amount of BSAT to another investigator at Temple University. The recipient PI has to be approved by IBC to use the particular BSAT in his/her laboratory.

Biological Waste Materials

- Place sharps (e.g. syringes, Pasteur pipettes, serological pipettes, razor blades, etc.) in a Sharps Container and properly dispose.
- Dispose of all solid media and supplies in red bags as biohazardous waste.
- Dispose of all other potentially biohazardous waste in red bags as biohazardous waste.

- Decontaminate all liquid media by autoclaving or by treating for 30 minutes with a bleach solution (final concentration to be 10%) before drain disposal.
- Autoclave all semi-solid media with microbial growth (including agar plates) before final disposal.

Biological Safety Cabinets

If the Biological Safety Cabinet (BSC) is not being moved or the contaminated inner space will not be opened, a surface decontamination with an appropriate disinfectant is sufficient.

If the BSC is to be moved, do the following:

- Contact EHRS to determine if the new location is acceptable.
- Remove the contents from the cabinet.
- Disconnect tissue culture media vacuum flask.
- Decontaminate all accessible surfaces with an appropriate disinfectant.
- A certified contractor must decontaminate the BSC if it is being relocated to a different room or a location outside of the building.
- Re-certify the BSC using a certified contractor when a BSC is relocated.

VII. Chemical

Chemical Contamination

- Remove bench coats, disposable liners, and covers from work surfaces and fume hoods.
- Cut any visible contamination (i.e. stains) from disposable material and bag it separately for hazardous waste disposal.

- Discard the remaining uncontaminated material in the regular trash.
- Decontaminate thoroughly any visible chemical contamination.
- Contact EHRS if there are any special circumstances or challenges regarding chemical usage that could make the clearance process more difficult.
- Notify EHRS if **perchloric acid** has been used in the chemical fume hood.
- Complete an [Equipment Clearance Form](#) for equipment that may have come into contact with hazardous chemicals.

Internal Relocation of Chemicals

Trained lab personnel are permitted to transport chemical from their current laboratory to the new laboratory in the same building (i.e. no transporting on sidewalks or across streets). Lab personnel must contact EHRS to discuss transportation procedures including cart usage, secondary containment, and chemical segregation. Upon relocation, the CEMS chemical inventory for the laboratory must be updated.

If the lab does not wish to move the chemicals, the lab can utilize the procedure for External Relocation of Chemicals (see below). The laboratory and/or department is responsible for the cost of the outside contractor.

External Relocation of Chemicals

Chemical moves to external locations must be transported by a hazardous material hauler approved by the U.S. Department of Transportation. EHRS has agreements with vendors to provide this service. However, all related chemical move costs are the responsibility of the laboratory and/or department.

In order to utilize these services, lab personnel are required to:

- Remove all laboratory chemical from shelves, cabinets and place them in a central location. Label the central location “Chemicals to be moved.”
- The vendor will prepare all paperwork necessary for the chemical move.

- Upon relocation, update the chemical inventory.

Chemical Waste Disposal

Determine if any chemicals are usable and if anyone at Temple would like to keep them. Document transfer of responsibility for any identified chemicals to a party willing to accept them. All chemical waste must be managed according to Temple University waste disposal procedures.

At a minimum, the following procedures must be followed:

- Complete and keep hazardous waste tags/labels on all chemical waste containers. Hazardous waste labels are available free of charge by contacting EHRS.
- Keep all chemical waste in an appropriate container (i.e. screw type lid). Keep the container closed at all times.
- Keep an area of the laboratory or other points of waste generation designated for chemical waste only and label it with the Chemical Waste Satellite Accumulation Area poster available from EHRS.
- Place chemically contaminated sharps (e.g. syringes, Pasteur pipettes, serological pipettes, razor blades, etc.) in a Sharps Container and properly dispose.
- Complete the [Chemical Waste Collection Request Form](#) on the EHRS website

If the lab does not wish to follow the procedures above, the lab can utilize an outside contractor for disposal. Chemical disposal must be conducted by a University approved contractor and coordinated through EHRS. EHRS has agreements with vendors to provide this service. However, all related chemical move costs are the responsibility of the laboratory.

Compressed Gas Cylinders

Disposal of Compressed Gas Cylinders

Remove regulator and replace the valve stem cap. Return gas cylinders to the supplying vendor. Contact EHRS for non-returnable cylinders. The lab is responsible for the cost of disposal by an outside contractor.

Relocating Compressed Gas Cylinders

When laboratory relocations require crossing public road, compressed gas cylinders (including Liquid Nitrogen Cylinders) must be transferred by the supplying vendor. Contact the appropriate vendor to arrange the move.

VIII. Controlled Substances

The U.S. Drug Enforcement Agency (DEA) issues controlled substance registrations to individual researchers. Abandonment of a controlled substance is a violation of the DEA permit under which it was held.

EHRS is not authorized to remove and/or dispose of any DEA controlled substance.

Permission to transfer a registration for a controlled substance to another individual must be approved and documented by the DEA.

Relocation of controlled substance inventories to any new campus location or to a new research institution is prohibited unless the DEA are notified first.

IX. Radiation

Radioactive Contamination

- Perform and document a meter survey and wipe tests of all work surfaces and equipment to confirm decontamination. Contact EHRS if non-removable contamination is found.

- Complete an [Equipment Clearance Form](#) for equipment that may have come into contact with radioactive materials.

Radioactive Materials

Authorized radioactive material permit holders are responsible for notifying EHRS for their authorized location changes that would affect their permit, such as departure from the University, changes of personnel authorized as users under their permit, and changes in authorized inventory including, purchase, disposal and transfers.

All radioactive waste, lead pigs, lead bricks, sheeting, and radioactive sources from equipment must be properly transferred or disposed of. A final contamination survey must be performed.

X. Lasers

Laser Authorized User/ PI have an obligation to ensure the safe and responsible disposition of their unneeded, but potentially dangerous, Class 3B and Class 4 lasers. The PI is **required** to notify EHRS/ Laser Safety Officer of any Class 3B or Class 4 laser or laser system being:

- Relocated or, transferred to another Temple University Principal Investigator.
- Sold or transferred to another institution.
- Sent for disposal.

Selling or Transferring a Class 3B or Class 4 Laser

It is the Laser Authorized User/PI's responsibility to determine if a laser can be reused internally at Temple University or at another institute. When selling a laser, the laser owner must comply with the following provisions.

- Contact EHRS before selling or transferring a Class 3B or 4 laser.
- The laser must be unmodified and in out-of-the-box condition from the manufacturer, except for signs of aging.

- The laser can only be sold to other institutions or industrial firms with the provision that EHRS contact the buyer's Laser Safety Officer and inform them of the purchase.
- Class 1-3R embedded Class 3B or 4 lasers such as **laser cutters** can be resold if the safety features are still functioning. If applicable the filter inside the extractor must be disposed of as hazardous waste. Contact EHRS for help in determining the waste stream for the filter.

Disposing of a Class 3B or Class 4 Laser

For laser disposal, the owner must complete the following tasks:

- Remove all hazardous chemicals if applicable and complete a chemical waste pickup request if needed.
- If the laser was used with biologicals or radioactive materials refer to the previous sections for decontamination procedures.
- Render the laser inoperable by cutting power cords, destroying keys, etc.
- Fill the equipment the clearance form and submit to the laser safety officer for approval.

XI. Transportation Requirements & Logistics

Moving Equipment and Non-Hazardous Items

The PI, researcher, or department may choose to hire an outside moving company or use internal University resources, such as Facilities Management to pack and/or move equipment and non-hazardous materials such as glassware, books and computers. **Moving companies (unless properly licensed by the United States Department of Transportation) and TU Facilities Management are not authorized to move hazardous materials.**

Equipment cannot be discarded, moved, repaired, or recycled until the equipment has been inspected and cleared by EHRS. Refer to Section V in this document (Laboratory Equipment) above for additional information.

Moving Hazardous Materials

EHRM must be notified in advance of any planned movement, transportation or shipment of hazardous materials from your laboratory. EHRM will assist you in ensuring that you meet federal and state regulations and requirements concerning packaging, labeling and transportation. Any hazardous material hauler or vendor must be approved by the U.S. Department of Transportation.

The movement or transportation of hazardous materials in personal or University owned vehicles is prohibited unless pre-approved by EHRM.