Georgetown University

Office of Environmental Health and Safety

LM-12 Preclinical Science Building
3900 Reservoir Road N.W.
Washington, D.C. 20057-1431

EH&S
Tel. (202) 687-4712
Fax (202) 687-5046

GUIDELINES FOR LABORATORY RELOCATION OR CLOSE-OUT

Chemical, Biological, and Radioactive Materials

Environmental Health and Safety (EH&S) established these guidelines to assist Principal Investigators (PI) and laboratory groups that will be relocating or closing-out a laboratory at Georgetown University (GU). It is intended to help plan and ensure an incident-free transition. It is impossible to anticipate every situation, however, these guidelines address common issues faced during a lab move. Please think safety first! If you have questions before or during the move, please contact EH&S at 7-4712.

Before a laboratory relocation or close-out, EH&S ***must*** be provided with written notification of the plans to add, delete or relocate laboratory space. The "*Laboratory Relocation Form*" (attached) must be completed by the PI, Authorized User (AU), or Assistant AU, and reviewed by EH&S. A checklist is attached to help guide you through the process. Please note that laboratory postings are to be removed by EH&S staff only!

Hazardous materials such as chemicals, microorganisms, tissues, and radioactive materials must be properly transported or disposed. Disposition of controlled substances requires communication with US Drug Enforcement Agency (DEA) and DC Pharmaceutical Control Division (PCD). This is the primary responsibility of the PI. When the services of EH&S staff or outside contractors are necessary to properly manage hazardous materials at relocation or close-out, the responsible PI or Department will be charged for these services. EH&S is not responsible for costs incurred by PIs or Departments as a result of a lab relocation or close-out.

The laboratory space cannot be re-occupied or renovated until the space has been inspected and posted clear by EH&S. Please consult your laboratory's Chemical Hygiene Plan (CHP)/Lab Safety Guidelines, Biological Safety Manual, and GU Radiation Safety Manual for guidance on GU procedures regarding the transport and storage of hazardous materials.
The PI must complete the following procedures before leaving the university or relocating to a different laboratory space.

I. RADIOACTIVE MATERIALS (RAM):

If the laboratory has been authorized for RAM use, the AU or Assistant AU must:

1. Notify the Radiation Safety Office Staff (RSOS) when a lab is to be relocated at the earliest possible time. Complete "*Laboratory Relocation Form*", and fax (7-5046) or deliver to EH&S.

2. Transfer all radioactive waste to the RSOS during the normal waste hours:
   GUMC (WG-01 The Research Bldg.) - Monday and Thursday, 11:00 to 11:30.
   Reiss Science (Loading Dock) - First Wednesday of the month, 14:30 to 15:00.
   All waste must be disposed of prior to the RSOS survey.

3. **Schedule a pre-move radiation safety survey with the RSOS prior to initiating relocation efforts (i.e. packing or removing equipment). RAM use will be prohibited following this survey.**

4. Properly label and package RAM in preparation for transfer to the new laboratory. **All RAM**

shipments outside of GU (off campus) must be made by RSOS.

5. The new laboratory location must be properly posted by the RSOS immediately after the movers have finished moving equipment into the lab.

6. Schedule Final Radiation Safety Survey.

II. CHEMICALS:

Personnel are allowed to transport chemicals from their current lab to their new location only if the chemicals do not have to be transported over public roads or sidewalks. If transportation of chemicals will require crossing public roads, lab personnel must contact EH&S for assistance in obtaining a licensed transporter to package and deliver the materials. It is strictly prohibited to transport hazardous materials (HazMat) on public roads without following Department of Transportation (DOT) Regulations.

1. Complete the "*Laboratory Relocation Form*" and fax (7-5046) or deliver to EH&S.

2. **For Transporting Chemicals within a Building or Connected Building (on-campus without transporting over public roads):**

   a. Ensure chemical containers are in good condition, properly labeled, sealed, and not leaking.
   b. Separate chemicals into compatible groups and provide separate, labeled secondary containment (sturdy box or bin) for each group. Separating incompatible chemicals must be done to prevent mishaps should an accidental spill or incident occur.
   c. All chemicals must be transported within a rubber pail, rigid box or other secondary containment that protects the chemical container from breakage, and can contain the chemical in case breakage occurs.
   d. Utilize a cart (with a lip) to prevent chemicals from falling off during transport. Do not overload the cart.
   e. Please refer to "Safe Handling & Transport of Dangerous Chemicals" located in GU Medical Center (GUMC) Lab Safety Guidelines.

3. **For Chemical Disposal (waste or chemicals no longer needed):**

   a. Never dump hazardous chemicals down drains or discard in the trash. Call Safety and Environmental Management (SEM) at 7-1970 for assistance.
   b. All chemical waste containers must be clearly labeled to indicate the contents of the container (the constituents of each container must equal 100%). For additional labels contact EH&S.
   c. Do not fill containers to the top (leave at least 2" at the top). All waste must be in closed, and non-leaking containers.
   d. Complete the "*Pickup Request for Spent/Used Chemicals*" form (attached), or the "*Pickup Request for Usable/Recyclable Chemicals*" form. Fax the forms to SEM at 7-8426 and call SEM (7-1970) to schedule a chemical pickup.
   e. For additional information please refer to "Management of Laboratory Waste" located in GUMC Lab Safety Guidelines.

   Remember: Mercury or products containing mercury are hazardous materials!

4. Empty all flasks, beakers, etc. of all chemicals or chemical residue. Remove all chemicals from refrigerators, freezers, laboratory hoods, and storage cabinets. Do not leave any chemicals in the laboratory!

5. **Schedule a final EH&S safety survey (7-4712).**

III. BIOLOGICAL MATERIALS:

1. Fax an inventory of biological agents, microorganisms, or tissue to EH&S at 7-5046.

2. Complete *"Laboratory Relocation Form"* and fax (7-5046) or deliver to EH&S.

3. **Packing and Moving Biological Materials within a Building or Connected Building**:

Properly package biological materials (etiologic agents, human and animal tissues, blood, blood components, and other body fluids), in preparation for transfer to the new laboratory.

Note: achieve maximum protection against accidental exposures by packaging in both primary and secondary containers.

a. Primary containers (test tubes, vacutainers, IV bags, or culture flasks) must be tightly sealed to prevent leakage. Utilize plastic containers whenever possible.
b. Place primary container in sealed secondary container, with absorbent material between the primary and secondary container suitable for the volume transported.
c. If dry ice is needed, the secondary container should be placed in an outer container, with the dry ice placed between the secondary and tertiary container (never place dry ice in a sealed container).
d. Labeling: Identify containers with the international Biohazard symbol. Both primary and secondary containers should be labeled with the biological name, name and phone number of the PI. Labels must be legible.

Label Color:
Fluorescent orange or orange red with lettering or symbols in a contrasting color.

4. **For packing and shipping Biological Materials outside of GU (off campus)**, contact EH&S for assistance with IATA and DOT regulations.

5. Decontaminate/disinfect all surfaces and equipment (incubators, refrigerators, centrifuges, freezers, etc.). For guidance refer to the GU Bloodborne Pathogens Policy. Complete the "*Certification of Decontamination Form*" and submit to EH&S.

6. **For Disposing of Biohazardous/Infectious Materials**:

a. Decontaminate all biohazardous liquids by autoclaving or adding 10 ml sodium hypochlorite to 100 ml biohazardous liquid (1:10) before drain disposal. Allow 10-20 minutes of contact time for disinfection to occur.
b. Autoclavable waste must be placed in orange bags and properly autoclaved before disposal (See Appendix G in the GUMC Lab Safety Guidelines).
c. **Pathological** waste must be disposed as red bag waste. Contact EH&S (7-4712).
d. **Sharps** (syringes, Pasteur pipettes, razor blades, etc.) must be disposed of in an impervious, red, plastic sharps container. Contact EH&S (7-4712).

IV. CONTROLLED SUBSTANCES:

US DEA and DC PCD issue permits to individual researchers (PhDs) but they consider Georgetown University as the owner of all CS used for research at the institution. Researchers are considered custodians of the CS, and are responsible for the maintenance and use within the permit requirements. Abandonment, transport or re-location of the CS to another institution is a violation of the CS permit under which it was obtained.

1. Researchers must notify the PCD Representative of their intention to surrender for destruction or to transfer CS. Permission to dispose of or transfer CS to another individual within Georgetown University must be granted by DC PCD.
2. Researchers must provide EH&S and the Department Chair with a copy of the CS inventory/log before departing the institution. Researchers may only transfer CS to another faculty member who has been permitted by the PCD to receive such substances.

   Note: It is unlawful to remove CS from the institution and/or to ship CS outside of the Institution.

V. GAS CYLINDERS:

1. **For Transporting Gas Cylinders within a Building or Connected Building**:

   a. Remove connections and regulators from all compressed gas cylinders and attach safety caps.
   b. Secure the compressed gas cylinders to a gas cylinder cart.
   c. Do not leave cylinders unattended or unsecured.
   d. Never move a cylinder by rolling it across the floor.
   e. Never bang cylinders against each other or another object.

2. When a PI is closing-out the laboratory, remove gas connections/regulators, attach safety caps, and return cylinders to the supplier. If cylinders are non-returnable, label all non-returnable gas cylinders with a Chemical Container Label (if not otherwise labeled) and contact SEM (7-1970) to schedule pickup.

VI. SHARED STORAGE AREAS:

Shared facilities include storage units such as refrigerators, freezers, cold rooms, stock rooms, tissue culture rooms, flammable liquids cabinets, waste collection areas, etc. These areas are of particular concern. Departing or vacating researchers must carefully inspect any shared facility in order to locate and appropriately dispose of their hazardous materials. Any materials that are unclaimed or not moved by the PI will be confiscated and disposed of by EH&S.

VII. LABORATORY EQUIPMENT RELOCATION/DISPOSAL:

The following procedures must be completed before laboratory equipment will be cleared for relocation or disposal.

1. Remove all contents from laboratory equipment (chemicals, media, cells, etc.).

2. Decontaminate/disinfect all laboratory equipment (i.e. incubators, freezers, refrigerators).

3. Freezers which have been used for biological material storage must be unplugged, defrosted, and disinfected.

4. Incubators and water baths must be drained of all water.

5. For biological safety cabinets (BSC):
   a. If the BSC will be relocated, it must be decontaminated using a certified contractor. The BSC must be recertified after it has been relocated. Contact EH&S for assistance.
   b. If the BSC will not be relocated, a surface decontamination/disinfection is adequate.

6. All laboratory equipment must be inspected by EH&S before disposal or relocation. Contact EH&S (7-4712) to schedule an equipment survey.

7. After EH&S has cleared and posted the laboratory equipment for disposal or relocation, please contact Laboratory Services at 7-1462 to arrange for pick-up.

VIII. GENERAL LABORATORY CLEAN-UP

Laboratories within GUMC must be left in a condition suitable for housekeeping to safely clean the lab or for renovation activities. Therefore laboratory personnel must ensure that all hazardous materials/residues are cleaned/removed. In addition, all research related materials (pipette tips, centrifuge tubes, etc.) must be removed from the laboratory floors/counters. Appropriate personal protective equipment must be used (e.g. gloves, safety glasses, lab coat, etc.) when cleaning laboratory surfaces. The following procedures must be followed:

1. Wash off all laboratory surfaces (counter tops, drawers, cabinets, fume hoods, etc.) on which chemicals were used or stored with warm soapy water.

2. Remove all disposable bench, drawer, and cabinet liners from surfaces and properly dispose of them.

   a. If liner was chemically contaminated, dispose as hazardous waste.
   b. If liner was contaminated with biological/infectious material, dispose as red bag waste.

3. Ensure that all drawers, cabinets, and fume hoods are empty. In addition, remove all posters and shelf labels.

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LABORATORY RELOCATION FORM

Principal Investigator/Authorized User: _____ Date: ___/___/_____
Last First MI

*Authorization Number: _____ Department: _____
(RAM Users Only)

Tel. Numbers: Office: _____ Lab: _____ NetID: _____ Projected Move Date: _____

List all currently assigned lab space where hazardous materials are used or stored, including all Shared Rooms.
Checkmark "Yes" or "No" for each category.

Rooms to be vacated:

Room Type (A-F) (see below)	Bldg.	Room Number(s)	Radiation Use		Chemical Use		Biohazard Use		Lab equipment will be relocated from this room?	
			Yes	No	Yes	No	Yes	No	Yes	No
F										

Rooms to be occupied:

Room Type (A-F) (see below)	Bldg.	Room Number(s)	Radiation Use		Chemical Use		Biohazard Use	
			Yes	No	Yes	No	Yes	No
F								

Room Types:

A. Main Lab(s)
B. Counting Rooms (liquid scintillation or gamma counters)
C. Dark Rooms
D. Equipment Rooms /Tissue Culture Rooms
E. Cold Room/Shared Space
F. Office

***Inactivate Authorization** to use radioactive materials? (check one): NO ☐ YES ☐ Date _____

***Terminate Authorization** to use radioactive materials? (check one): NO ☐ YES ☐ Date _____

_____ _____
Principal Investigator/Authorized User Signature Date

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CERTIFICATION OF DECONTAMINATION

Principal Investigator:_____ Date: ____/____/_____
Building:_____ Office Room Number:_____
Department:_____
Telephone Numbers: Office:_____ Lab:_____ Net ID:_____
Lab Space Change: From *(Bldg. & Rm.#)* _____ To *(Bldg. & Rm.#)* _____

This letter certifies that I _____, have thoroughly decontaminated the surfaces and the below listed equipment (i.e. refrigerators, freezers, incubators, etc.) that may have come in contact with potentially hazardous material following the decontamination procedures as outlined in the Lab Safety Guidelines (10:1 water to bleach solution).

Equipment (Item/Serial #):

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____

NOTE: If relocating a Biological Safety Cabinet outside of the University, your signature indicates that it has been decontaminated as per National Sanitation Foundation Standard #49. This service can be arranged by Laminar Flow Consultants, Inc. @ 703-404-4300.

_____ _____
Principal Investigator Signature Date

Please fax a copy to EH&S at 7-5046

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CERTIFICATION OF CONFORMANCE WITH *GUIDELINES FOR LABORATORY RELOCATION OR CLOSE-OUT*

PRINCIPAL INVESTIGATOR:_____ DATE: _____
BUILDING: _____ LAB NUMBER: _____
DEPARTMENT: _____
TELEPHONE NUMBERS: OFFICE: _____ LAB: _____
LAB SPACE CHANGE: FROM: _____ TO: _____

This letter certifies that I _____**,** have thoroughly reviewed, understand, and will comply with all requirements included in the Guidelines for Laboratory Relocation or Close-Out. The last date of research activities (including animal studies) is ___/___/___. The following provides the dates of completion for the requirements of these Guidelines:

	Requirement	Initials	Date of Completion
I.	**RADIOACTIVE MATERIALS (RAM)**	_____	_____
II.	**CHEMICALS**	_____	_____
III.	**BIOLOGICAL MATERIALS**	_____	_____
IV.	**CONTROLLED SUBSTANCES**	_____	_____
V.	**GAS CYLINDERS**	_____	_____
VI.	**SHARED STORAGE AREAS**	_____	_____
VII.	**LABORATORY EQUIPMENT RELOCATION/DISPOSAL**	_____	_____
VIII.	**GENERAL LABORATORY CLEAN-UP**	_____	_____

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Declaration of Understanding

Guidelines for Laboratory Relocation or Close-Out

PRINCIPAL INVESTIGATOR:_____ DATE: _____

BUILDING: _____ LAB NUMBER: _____

DEPARTMENT:_____ DATE RESEARCH ACTIVITY ENDS:_____

TELEPHONE NUMBERS: OFFICE: _____ LAB: _____

LAB SPACE CHANGE: FROM: _____ TO: _____

SPACE CHANGE FORM RECEIVED: YES ☐ NO ☐

All laboratory personnel intending to package and/or transport laboratory materials must review the Guidelines for Laboratory Relocation or Close-Out. Document that you have reviewed and will comply with the Guidelines. The following items summarize these requirements.

- Chemical containers must be properly labeled and separated by compatibility prior to relocation. (If moving outside of GU, prior EH&S approval must be obtained)
- Aside from unopened culture media and buffers, liquids **will not** be packed in boxes to be relocated. NOTE: Non-hazardous solids may be packed.
- A cart with a lip on all sides will be used by lab personnel to move chemicals **within** buildings.
- All laboratory equipment will be decontaminated using a 10% sodium hypochlorite solution and documented on the ***Certification of Decontamination*** form.
- All mercury-containing thermometers must be collected and released to EH&S prior to relocation/close-out.
- Biological materials must be packaged using both primary and secondary containment.
- Furniture, equipment, and trash must not be placed in hallways or on the loading dock without prior approval from Operations and EH&S.
- All contents of refrigerators must be removed prior to relocation.
- EH&S approval must be obtained prior to moving packed freezers.
- All orange bag waste must be autoclaved.
- All red bag waste (including sharps) must be consolidated for pick up by EH&S.
- Biohazardous liquids must be autoclaved or decontaminated using a 10% sodium hypochlorite solution prior to drain disposal.

- All glassware must be collected in glass disposal boxes with liners.
- Animal waste, cages and associated materials must be returned to the Division of Comparative Medicine prior to relocation/close-out.
- All research related materials (pipette tips, centrifuge, vials, etc.) must be removed from the laboratory floors, counters and cabinets
- Controlled Substances must not be abandoned, transported to another institution or relinquished without prior approval.
- Compressed gas cylinders: a gas cylinder cart must be used to transport within GU. Otherwise, the vendor must remove all cylinders prior to lab move.
- Radioactive Materials

My signature certifies that I have thoroughly reviewed, understand, and will comply with all requirements stated in the Guidelines for Laboratory Relocation or Close-Out. In addition, I declare that the aforementioned conditions shall be met.

PRINT NAME	SIGN	DATE
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		
14.		

Principal Investigator **Date**

LABORATORY RELOCATION INSPECTION REPORT

Environmental Health and Safety Office Room LM-12, Preclinical Science Building 687-4712

EH&S Surveyor:_____ Date Research Discontinued: __/__/__ Inspection Date:__/__/__ Scheduled move date:__/__/__

Department:_____ Lab Supervisor:_____ Building: _____ Current Lab:_____ **New Location (Bldg/Lab):** ____

Investigators vacating GU facilities or relocating within GU are responsible for leaving laboratories in a state suitable for re-occupancy or renovation. The following checklist is used to document the final clearance survey conducted by EH&S.

Note: Written notification of all laboratory relocations must be documented on the "Laboratory Space Change Form" and faxed (7-5046) to EH&S.

I. LAB RELOCATION *WITHIN* GEORGETOWN UNIVERSITY

☐ **Radioactive Materials** ☐ **N/A**

- ❑ All radioactive waste disposed.
- ❑ Pre-move survey completed/results analyzed (RSO).
- ❑ Deposting of equipment (RSO).
- ❑ Posting of new laboratory location (RSO).
- ❑ All radioactive material transferred to new laboratory.
- ❑ Final survey completed/results analyzed (RSO).

☐ **BIOHAZARD** ☐ **N/A**

- ❑ Complete Inventory of biological agents.
- ❑ Proper labeling.
- ❑ Bench coat and disposable liners/covers from work surfaces removed.
- ❑ BSC equipment, and work surfaces decontaminated.
- ❑ Waste Removal.
  - Proper disposal of medical waste, sharps, and sharps containers.
  - Biohazardous waste autoclaved and disposed of properly.
- ❑ Posting of new lab location (EH&S).

☐ **CHEMICAL** ☐ **N/A**

- ❑ "Request for Disposal of Hazardous Chemicals" complete (if needed).
- ❑ All chemical containers properly labeled.
- ❑ Proper packaging and transport of chemicals.
- ❑ Gas cylinders removed.
- ❑ Bench paper and disposable liners/covers from work surfaces removed.
- ❑ Waste chemical inventory completed and faxed to SEM.

☐ **CONTROLLED SUBSTANCES (CS)** ☐ **N/A**

- ❑ Contact was made to DC Pharmaceutical Control Division (jawara.kasimu_graham@dc.gov) one month prior to move date

II. LAB RELOCATION *OUTSIDE* GEORGETOWN UNIVERSITY

□ **Radioactive Materials** ☐ **N/A**

- ❑ All radioactive waste disposed.
- ❑ Pre-move survey completed/results analyzed (RSO).
- ❑ Deposting of equipment (RSO).
- ❑ All RAM stock vials prepared for shipment to new location by RSO.
- ❑ Radiation safety records provided to RSO.
- ❑ Final survey completed/results analyzed (RSO).

☐ **BIOHAZARD** ☐ **N/A**

- ❑ Complete Inventory of biological agents.
- ❑ Proper packaging and transport of Biohazard Materials.
- ❑ BSC equipment, and work surfaces decontaminated.
- ❑ Waste Removal.
  - Proper disposal of medical waste, sharps, and sharps containers.
  - Biohazardous waste autoclaved and disposed of properly.
- ❑ All media and supplies removed from drawers, shelves, and cabinets.
- ❑ Bench coat and disposable liners/covers from work surfaces removed.

☐ **CHEMICAL** ☐ **N/A**

- ❑ "Request for Disposal of Hazardous Chemicals" complete (if needed).
- ❑ All chemical containers properly labeled.
- ❑ Proper packaging and transport of chemicals.
- ❑ Gas cylinders removed (by Vendor).
- ❑ Bench paper/disposable liners-covers from work surfaces removed.
- ❑ Remove all debris from fume hoods and wipe down surface.
- ❑ Waste chemical inventory completed and faxed to SEM.

☐ **CONTROLLED SUBSTANCES** ☐ **N/A**

- ❑ Contact was made to DC Pharmaceutical Control Division (jawara.kasimu_graham@dc.gov) one month prior to move date

☐ GENERAL LAB SAFETY

- ❑ Training records present for CHP & BBP.
- ❑ Area free of trash/debris (drawers emptied of contents).
- ❑ Sharps and sharps containers properly disposed.
- ❑ Post for: RAM_____ BIO_____ CHEM_____
- ❑ Sinks, counters, cabinets, hoods clear.
- ❑ No liquids in unlabeled containers.
- ❑ All freezers/refrigerators emptied.
- ❑ Depost for: RAM_____ BIO_____ CHEM_____