**Laboratory and Research Area Closeout Guidelines**

**For Intra-Campus Moves**

If you are unsure about any aspect of moving your laboratory and research area, including planning, preparation, packing, or waste disposal, please ask questions! If you have any health and safety related concerns pertaining to vacating your old laboratory and research area, or occupying a new one, contact EHS. Your safety officer may also be able to help you smooth out logistic problems.

**Closeout Process Overview**

1. Three months before you move, or as soon as reasonably possible, review the following *Laboratory and Research Area Closeout Checklist*. It covers general points to help you safely and efficiently move lab materials and vacate your old lab(s).
2. Email EHS ([ehslabsafety@psu.edu](file:///C%3A%5CUsers%5CAXH57%5CDocuments%5CLab%20Safety%5CLab%20Close%20Out%20Forms%5Cehslabsafety%40psu.edu)) and your department safety officer to schedule a tour of your lab(s).
3. After the tour, EHS will help you address identified safety issues. As a team, we will jointly develop a closeout plan customized to your lab(s). We will agree upon target dates for critical process steps.
4. When you know the exact date of your move, notify EHS to schedule a *Laboratory and Research Area Closeout Certification*. This is the final step to closing out your lab(s).

**Laboratory and Research Area Closeout Checklist**

General

* Hazardous materials, including, biological, chemical, or radioactive materials, will not be moved in compromised containers. This is one of the major causes of spills. Ensure all containers are free from cracks and chips.
* Due to Department of Transportation requirements, it is imperative that EHS be notified if any hazardous materials, biological or chemical, will be transported in any type of vehicle. All motor-vehicle transport of radioactive material must be approved in advance by EHS. This notification should be made as soon as possible so there is sufficient planning time if special arrangements are necessary.
* Unwanted or broken equipment, such as refrigerators, freezers, incubators, centrifuges, vacuum pumps, etc., may be discarded through Lion Surplus. Equipment that could possibly be contaminated with biological, chemical, or radioactive materials MUST be decontaminated and checked first. Any equipment that may contain oils or refrigerants MUST be drained prior to disposal. At University Park, draining of oils and refrigerants is done by OPP. Campus maintenance and operations is responsible for this at other Commonwealth Campus locations.
* Check beneath hoods, in shared labs and equipment, and in freezers, refrigerators, or cold rooms for biological, chemical, or radioactive materials that might easily be left behind.
* Look for old supplies from past researchers. Many labs have inherited chemicals that must also be identified and disposed of before moving to a new location.
* This is also a good time to clean out old, broken, or unneeded lab supplies, including broken glassware.
* Equipment, such as biosafety cabinets, glove boxes, centrifuges, ovens, laminar flow hoods, etc., must be decontaminated prior to being moved. Decontamination is the responsibility of the lab. Contact EHS if you are unsure of the appropriate way to decontaminate a piece of equipment.
* All surfaces and equipment in the lab(s) will need to be disinfected, cleaned, or decontaminated to assure that no biological, chemical, or radioactive contamination remains.

Chemical

* Assess all the chemicals in your lab(s). Disposal or transfer of certain chemicals, such as DEA controlled substances, must be planned well ahead of time. Unknown, highly reactive, or expired materials, such as peroxide formers, can be extremely dangerous to move. Determine which materials will still be used in active research projects and will be transferred to your new space. Plan to dispose of any unwanted chemicals or chemicals that you know will not be used in future research projects.
* All chemicals that will not be transferred to your new laboratory must be disposed of through EHS. NEVER dispose of any chemicals by pouring them into sinks or other drains, by evaporating them in hoods, or placing in the regular trash.
* Chemical waste will NOT be transported to your new lab location. All chemical waste must be disposed of through EHS. If you know you will need additional waste containers, EHS may be able to supply them to your new location.
* Identify chemicals that may need special handling or containers to be moved, such as compressed gas cylinders, poison inhalation hazards, air reactive chemicals, and DEA controlled substances. Transport of these chemicals will be addressed in your lab’s close out plan.
* If you find unlabeled or unclearly labeled containers, make sure to relabel them with full chemical name, not formula, as soon as they are located. Unlabeled chemicals will not be moved. If you cannot identify the material, attached a green tag, mark it as “unknown”, and place it in your satellite accumulation area for disposal.
* Mercury and mercury containing equipment, including mercury thermometers, pose special risks during moves. Labs are strongly encouraged to dispose of mercury thermometers through EHS as chemical waste prior to moving unless alternatives absolutely will not suffice.
* Gas cylinders and lecture bottles that are no longer used should be returned to General Stores or the manufacturer. You may be paying a demurrage charge for cylinder rental while the cylinder is in your possession. Cylinders that cannot be returned to General Stores or the manufacturer must be disposed of as chemical was through EHS.
* Tubing and regulators connected to corrosive or hazardous compressed gas cylinders should be detached using safe procedures such as purging and venting to a hood or ventilated area. Contact EHS for assistance or direction on this process.
* Prior to leaving the old lab location, tubing and regulators must be removed from all gas cylinders. Caps must also be placed on the cylinder, whether they are being moved to your new location or being returned to General Stores or the manufacturer.

Biological

* Assess all of the biological materials (recombinant DNA, microorganisms, cells and cell lines, tissues, organs, body fluids, plants, insects, and any biologically-derived or -contaminated media, etc.) in your lab and determine which materials will be transferred to your new lab or to another Penn State PI. Plan to dispose of unwanted materials as you normally would during the course of experimentation.
* If you will be cleaning out a large amount of biological waste for autoclaving, work with your facility coordinator and EHS to ensure that there will be sufficient containers, and that autoclaved waste is picked up in a timely fashion. Remember, individual biological waste bags should weigh 20 pounds or less.

Radiological

* Separate any rad/biological, chemical/biological, or rad/chemical mixed waste from other wastes. Be sure that the mixed wastes are addressed in inventories for inclusion in waste disposal planning.
* Usable radioactive materials you do not plan to use for continuing research may be transferred to another PI approved for radioisotope use. The transfer must be approved by EHS.
* All radioactive materials that will not be transferred MUST be disposed of through EHS.
* Contact EHS for planning and assistance on packing and moving licensed radiation sources.
* Contact EHS to schedule a radiation close out survey for your old lab(s).

Looking ahead

* All biological safety cabinets must be certified again after the move to ensure filter integrity. Make arrangements for this work in advance to allow contractors to meet your schedule.
* Have damaged equipment (i.e., frayed wires, missing guard) scheduled for repair during the move, thereby accomplishing the repair during downtime.
* Work with EHS to ensure your chemical inventory has been transferred within CHIMS (Chemical Inventory Management System) to your new location.
* Contact EHS to schedule posting of your new lab for biological or radiological materials.

**Thirty Days Before You Move**

1. Review your lab(s) again to be sure all unknown materials have been identified and no new ones have been created while preparing to vacate the lab(s). It is productive to repeat this step of the close out process, because identifying and disposing of "unknowns" is a major cost item in laboratory close outs.
2. Seek assistance from EHS in planning the removal or safe transfer to your new lab of any materials that may need special handling or containers (compressed gas cylinders, poison inhalation hazards, air reactive chemicals, and DEA controlled substances) as identified during the chemical inventory assessment.
3. Follow-up on the status of time critical close out plan steps such as: chemical and radioactive waste collection, special equipment moving arrangements, posting of your new laboratory for biological or radioactive materials, etc.
4. No equipment used for radioactive material should be moved with external removable contamination present. You and your radiation workers can perform wipe and meter surveys to assure this for smaller items. The Radiation Protection Office will provide this service for major pieces of equipment including freezers and refrigerators. Contact EHS to arrange this service.
5. Depending on the scale of the move, such as when whole buildings are vacated for demolition, there may be designated waste collection events. You should use this opportunity to get rid of old, unwanted chemicals. Smaller moves, or single lab moves, may not have this available. You must work with EHS to ensure timely removal of chemical waste.

**At Moving Time**

1. EHS will complete, with the PI or a lab designate, the *Laboratory and Research Closeout Certification* after the move has occurred.
2. Have boxes, plastic bags, and containers for broken glass, etc., ready and available before you begin. Spill clean-up materials should be available at the time of the move in case there is a spill while packing or unpacking.
3. Wooden boxes and secondary containment will be provided for packing and transporting chemicals. OPP is responsible for moving these materials. NEVER transport hazardous materials in a personal vehicle.
4. Package and move lab items only during normal business hours (8:00 a.m. - 5:00 p.m.) so staff will be available to help if there is a spill or accident.
5. Biological, chemical, and radioactive materials must be transported in secondary containment (even when just moving a few doors down the hall).
6. Wear appropriate personal protective equipment (PPE) for the materials being handled (safety glasses or goggles, lab coat, gloves, closed-toe shoes, etc.).
7. Never transport hazardous materials alone or in personal vehicles.
8. Revisit your old lab space. Have any materials been left? Are any hazardous materials left in your old lab?
9. Lock your lab, when you are through moving out and return your key to your facility coordinator.

**Your New Lab**

1. Have boxes, plastic bags, and containers for broken glass, etc., ready and available before you begin unpacking. Spill clean-up materials should be available while unpacking in case there is a spill.
2. Make sure any required warning signs including Laboratory Information Door Signs, Laboratory Emergency Contact Information, and signs for radioactive materials, biohazard, etc. are posted in your new lab location.
3. Review the location of safety showers, eyewashes, fire extinguishers, and all available means of exit from laboratories and the building for your new location. This should also include the designated meeting site for your new building.
4. Update your lab’s Unit Specific Plan and SOPs as needed to address the new locations of safety equipment (i.e. eye wash, safety shower, fire extinguishers).