

Clemson University Laboratory Closeout Guidelines

The purpose of this document is to provide guidance to Clemson University researchers on laboratory closeout policies and procedures. These guidelines apply to laboratories where hazardous materials have been used or stored (to include laboratories, darkrooms, chemical storage rooms, etc.). Guidelines for proper disposal or relocation of chemical, biological, and radiological materials are included. For further information or clarification on lab closeout policies and procedures, contact [Occupational and Environmental Safety \(OES\)](#).

Requirements:

- OES should be notified as soon as possible when it is determined that a laboratory or research space is to be vacated or occupancy transferred.
- The vacating faculty member (or representative) and department chair shall complete and sign the [Laboratory Closeout Form](#) and submit it to OES prior to requesting a closeout inspection.
- Prior to vacating the laboratory or research space, OES shall conduct a closeout inspection to ensure that all materials have been removed and the space is properly decontaminated.
- All chemicals, biological materials, radiological materials, lab equipment, etc. shall be removed from the space and properly disposed of or ownership transferred.
- All compressed gas cylinders shall be returned to the vendor or ownership properly transferred.
- All lab surfaces (to include benchtops, shelves, cabinets, fume hoods, floors, etc.) shall be decontaminated using a detergent solution.
- All hazardous waste (chemical, biological, and / or radiological) shall be declared for disposal to the Hazardous Materials Manager (and / or Radiation Safety Officer) at least 2 weeks prior to vacating the space.
- All research equipment shall be removed from the space, the ownership transferred, or transported to a new storage location.
- Transportation of hazardous materials must comply with appropriate regulations. No transport of hazardous materials via personal vehicle is permitted. Contact the [Hazardous Materials Manager](#) for guidance on proper transport of hazardous materials.

Department Chairs are responsible for ensuring all guidelines for the closeout of laboratories and the disposal of hazardous materials are followed. Failure to observe to these guidelines can result in the department being held financially responsible for all costs incurred for the safe management and disposal of hazardous material and decontamination.

1. Laboratory decontamination

All laboratory surfaces shall be decontaminated using a detergent solution (commercially available cleaning products used according to manufacturer's instructions). Such surfaces include benchtops, shelving units, cabinets, floors, fume hoods, sinks, etc. Any surfaces that are heavily contaminated with hazardous materials (i.e. discover a spilled chemical in a cabinet, etc.) should be treated as a chemical spill and OES consulted. No residue should be visible on lab surfaces.

All laboratory equipment (to include glassware, apparatuses, instruments, tubing, etc.) that is to be relocated or taken to surplus shall be decontaminated prior to being removed from the space. Personnel taking ownership of laboratory equipment should inspect the equipment for cleanliness prior to accepting ownership. It is recommended that a written record of transfer be maintained by both parties and the relevant department.

2. Hazardous material disposal or transfer

All hazardous materials (chemicals, biological agents, hazardous waste) shall be removed from the laboratory prior to vacating the space. All hazardous materials being transferred to a new location must be transported according to hazardous materials shipping / transport regulations. **No transport of hazardous materials via personal vehicle is permitted.** Contact the [Hazardous Materials Manager](#) for assistance.

Chemicals and hazardous waste

All chemical containers being transferred to a new location or owner should be inspected for container integrity. All containers shall have appropriate labels in place. Chemical inventories should be updated following transfer or disposal.

Hazardous waste (to include solid and liquid chemical waste, biohazardous and infectious waste, biohazard sharps waste, etc.) shall be declared for waste pickup a minimum of 2 weeks prior to the final closeout inspection. All waste shall be collected, labeled, and stored according to the hazardous waste guidelines.

Compressed gas cylinders should have their cylinder caps in place and returned to the appropriate vendor. If ownership of the cylinder is to be transferred, contact the appropriate vendor for ownership transfer and transport to the new location.

If DEA controlled substances are to be disposed of or transferred contact the [Hazardous Materials Manager](#) for instructions.

Biological materials

For laboratories conducting biological or infectious materials research:

- No biological material shall be left in the lab unless being transferred to another researcher that will subsequently be taking over the lab. All of these items must be disclosed to the new researcher or department representative and confirmation of this should be given to the [Biological Safety Officer \(BSO\)](#). All biological materials not transferred shall be disposed of as biological waste.
- All infectious waste must be disposed of properly.
- ***All select agents must be declared to the Responsible Official (RO) and the Biological Safety Officer. These must not be transferred to another researcher without the consent of the RO and the BSO.***
- Transfer of biological materials shall comply with the Biological Materials Transport Policy (Appendix C of the Biosafety Manual).
- All surfaces and equipment must be decontaminated with an EPA List E disinfectant such as 0.5% sodium hypochlorite.
- All biohazard stickers and signs must be removed from entrances and equipment unless the stickers and signs will be used by the next researcher. Approval to leave these in place must be obtained from the BSO.

Biological safety cabinets (BSCs) should be disinfected and decontaminated. Consult the Biosafety Officer for information on disinfection procedures. Any instruments or apparatuses that were used with biological or infectious agents should be disinfected using appropriate means prior to disposal or transfer.

For further information contact the [BSO](#).

3. Radioactive materials and radiation producing devices

Radioactive materials are possessed and used by University personnel under the authority of a radioactive materials license issued by the state of South Carolina DHEC Bureau of Radiological Health. This license restricts possession and use of radioactive materials to qualified personnel (*Authorized Users*) at discrete locations (*authorized places of use*), which are approved by the University's Radiation Safety Committee (RSC) and the [Radiation Safety Officer \(RSO\)](#).

If, for any reason, radioactive materials are removed from the authorized place of use, or if the authorized user should separate from the university, certain steps shall be taken in order to return the previously authorized use area to an unrestricted area, free of radioactive materials or radioactive contamination. Prior to close out of a radioactive materials area the following steps shall be taken:

- Notify the RSO as soon as the intent to vacate is known (at least thirty days in advance).
- Make arrangements with the RSO to remove all radioactive materials including waste from the laboratory.
- Conduct a survey of the laboratory and decontaminate any contaminated areas as necessary. Coordinate any decontamination efforts with the RSO. Areas of potential residual contamination may include refrigerators and freezers, centrifuges, water baths, hoods, sinks, floor areas under waste containers, etc.
- Do not remove any of the signs, stickers, or postings. Contact the RSO to schedule a final closeout survey.

If the laboratory is being vacated because the researcher is leaving the University, the following additional steps shall be followed:

- Usage records, including survey records, must be updated, finalized, and submitted to the RSO.
- Waste disposal records must be finalized and submitted.
- All radioactive material waste containers must be collected by the RSO.
- Personnel dosimeters must be returned to the RSO.
- Termination bioassays must be performed if applicable.

Radioactive materials, contaminated equipment, or equipment that is capable of producing ionizing radiation may be transferred to another licensed facility. The transfer of licensed materials shall be under the direction of the RSO. Prior to shipment / transfer of the material, the RSO shall have a current copy of the radioactive materials license that authorizes the institution, facility, or individual to receive licensed material prior to shipment from the university.

Radiation Producing Devices

Possession and use of equipment capable of producing ionizing radiation (x-rays), is also controlled by the South Carolina DHEC. The RSO must be notified prior to removal of x-ray equipment from a laboratory or other authorized place of use.

X-ray machines that are permanently taken out of service or disposed of shall have the x-ray tube removed by the RSO so that the device is incapable of producing ionizing radiation.

Lasers

Laboratories using class 3b and 4 lasers shall notify the RSO of his / her intent to move a laser use area or remove a laser from a laboratory prior to doing so thirty days in advance.

Laboratory Closeout Form

This form shall be completed by the Principal Investigator (or representative) and submitted to OES prior to / when requesting a final closeout inspection. Submit this form to the [Chemical and Lab Safety Manager](#).

Building: _____ Room: _____ Department: _____

Principal Investigator(s): _____

Phone: _____ Email: _____

Lab is relocating: Yes ___ No ___

If so, to: Building _____ Room Number _____

Lab has been re-assigned at this time: ___ Yes ___ No

Lab ownership is being transferred to: _____

Phone number: _____ Email: _____

Chemical Safety

	Yes	No	N/A
Chemical hoods have been cleared of all chemicals and equipment.			
Chemical hoods have been cleaned/decontaminated.			
Was perchloric acid used in any hood/exhaust device in this lab.			
All signs (hazard, caution, etc.) removed where appropriate.			
All chemicals and controlled substances have been removed or disposed according to CU guidelines.			
Gas cylinders have been removed.			
Lab surfaces (shelves, cabinets, benchtops, floors, etc.) have been cleared and cleaned/decontaminated.			
Remaining equipment has been properly cleaned/decontaminated and ownership transferred.			
Refrigerators and freezers cleaned/decontaminated.			
Emergency contact and hazard information changed on lab door(s).			

