



West Virginia University®

ENVIRONMENTAL HEALTH & SAFETY

LABORATORY CLOSEOUT PROCEDURE

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WEST VIRGINIA UNIVERSITY

LABORATORY CLOSEOUT PROCEDURE

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Purpose and Applicability

Proper handling of materials such as biohazards/infectious materials, chemicals, controlled substances, hazardous materials, laboratory animals, microorganisms, and radionuclides and the proper decontamination of laboratory spaces and equipment are crucial for preventing unnecessary hazards and exposures for those individuals who must enter a vacated space. These hazards are amplified when materials are not labeled or left unidentified for the individuals who must dispose of them. Abandoning such hazards can cause a financial burden in identification, disposal costs, and potential fines to WVU departments.

This procedure identifies the responsible parties and the tasks associated with the proper decommissioning or relocation of existing laboratories at WVU for reasons that may be due to a Principal Investigator leaving the institution, relocating or terminating research activities in a laboratory, or a scheduled renovation project. **The responsibility for proper management status of a laboratory lies with the Principal Investigator to whom the laboratory is assigned.** All laboratory rooms, chemical storage areas, or areas where hazardous equipment or materials are used or stored must be cleared and decontaminated prior to vacating the laboratory. The steps outlined below can help to ensure a safe and smooth transition.

This procedure applies to all inhabitants of and other responsible parties for laboratories, shops, and other academic and research facilities, rooms, areas and spaces in which environmental, health and safety hazards exist. This procedure should be followed at a minimum and applies to all WVU campuses.

Contact information for key offices that can help address safety concerns or questions:

Environmental Health and Safety	(304) 293-3792
Biosafety Officer	(304) 293-7157
Radiation Safety Office	(304) 293-3413
Office of Laboratory Animal Research	(304) 293-2721
Office of Technology Transfer	(304) 293-7539

I. RECOMMENDED TIMELINE

A. 90 Days Before Departure

1. Send notification of the intended move out plan and date to:
 - a. Department Chair
 - b. Dean
 - c. Environmental Health and Safety
 - d. Other offices as required based on existing hazards in the space
2. Begin laboratory close out preparations for the following time critical close out steps:
 - a. Disposal of biological, chemical, controlled substance and radioactive waste
 - b. Decontamination of equipment
 - c. Moving arrangements for equipment
 - d. Proper disposition of animals, carcasses, and/or tissue samples as required by applicable regulations
 - e. Forward internal training documentation to the department chairperson as necessary
3. Meet with appropriate offices as necessary to develop plans for proper handling, removal, transfer, disposal and decommissioning of hazardous materials and specialized equipment in the space.

B. 30 Days Before Departure

1. Review all laboratory spaces to ensure all unknown materials have been identified and no new unknowns have been created.
 - a. Seek guidance from Environmental Health and Safety and other required offices to ensure a safe transfer and removal of hazardous materials and otherwise.
2. Make arrangements for the return of gas cylinders to the appropriate vendor.
3. Ensure all who assist with lab close out activities wear appropriate personal protective equipment for the materials being handled.

4. Have proper spill kits and broken glass containers ready and available.
5. Post any required warning signs pertinent to the lab close out process.
6. Continue follow-up on the status of time critical close out steps listed above.
7. Package and move lab items only during normal business hours so staff will be available to provide assistance if a spill or incident occurs.

C. **Move Out Day**

1. Only move lab items during normal business hours so staff will be available to provide assistance if a spill or incident occurs.
2. Revisit the lab space after everything is removed to ensure:
 - a. No biological/infectious, chemical, controlled substance, hazardous material, radioactive or other substances have been left behind.
 - b. All equipment has been decontaminated and is indicated as such
 - c. All keys have been returned to the appropriate personnel and electronic lock operators have been notified

II. **RESPONSIBILITIES**

- A. **Chemical Hygiene Officers (CHOs)** will provide proper guidance for the close-out requirements for vacating laboratories.
- B. **Environmental Health and Safety (EHS)** will provide proper guidance and recommendations for Principal Investigators and Departments throughout the process of cleaning up a laboratory for clearance purposes. EHS may need to arrange for the disposition of surplus materials and waste.
- C. **Departments** are responsible for ensuring that all Principal Investigators follow these guidelines and EHS recommendations. Departments are responsible for the condition and appropriate handling of all laboratory spaces including materials, supplies, and equipment that a Principal Investigator leaves behind.
- D. **Principal Investigators (PIs)** are responsible for following these guidelines and EHS recommendations to ensure that laboratories are left in a suitable condition. PIs will work with EHS and CHOs to ensure the proper relocation and disposition of hazardous materials and/or waste in the laboratory. PIs will inform **Building Supervisors and/or Building Emergency Coordinators** of a planned relocation or need to decommission a laboratory so that building emergency plans can be updated.
- E. **Facilities Services personnel and Outside Contractors** must not work in laboratories that have not been cleared by Department, Principal Investigators, and/or EHS.

III. **GENERAL CONSIDERATIONS**

- A. Inform the CHO and EHS at least 90 days prior to the planned relocation or need to decommission a laboratory so safety concerns and hazards can be addressed. Inform the building supervisor and/or building emergency coordinator so building emergency plans can be updated.
- B. When cleaning up a laboratory, be considerate of the next occupants (custodial staff, maintenance workers, and new laboratory staff). Ensure all items are removed from the lab (or scheduled to be removed), including items in drawers, cabinets, fume hoods, refrigerators, freezers, etc.
- C. Communicate the existence of any surplus equipment, tables, bookshelves and other materials or supplies to the Department Chair, the Chemical Hygiene Officer and/or designee.
- D. While moving, no equipment, boxes or other materials may be stored in hallways, stairwells, or other egress points used in the event of a fire or other emergency. Items must not accumulate in the hallway and all items in the hallway must be removed by the end of each day. No hazardous materials (chemical, biological, or radiological) may be left unattended in the hallways at any time.
- E. If relocating a laboratory, evaluate the new space to be sure it meets the needs of the research activities to be conducted.
- F. When relocating a laboratory, identify the location of the emergency eyewash stations and safety showers, fire extinguishers and other safety equipment before bringing hazardous materials into the space. If this safety equipment is unavailable, immediately contact EHS. Wait until any safety deficiencies are corrected before moving into the new space.

- G. Do not block access to emergency eyewashes and safety showers at any time. Do not stack boxes under or around emergency eyewashes or safety showers, even on a temporary basis.
- H. If relocating a laboratory that includes the use of fume hoods, keep in mind that fume hoods come in a variety of designs with varying functions. Become familiar with the specifications of fume hoods in a new laboratory prior to conducting any work. Contact EHS for fume hood inspections or to assess the function of fume hoods for specific research needs. Access the [EHS Laboratory Fume Hood/Canopy Use and Maintenance Program](http://ehs.wvu.edu/laboratory-and-research-safety) at <http://ehs.wvu.edu/laboratory-and-research-safety>.
- I. If relocating a laboratory, update the Chemical Hygiene Plan, SDS file and standard operating procedures.
- J. Contact EHS to submit your [chemical inventory](#) and request a proper 704 door posting. For more information see <http://www.ehs.wvu.edu/laboratory-and-research-safety/hazardous-materials/chemical-inventory>.
- K. At the completion of the move, return all keys to the old space appropriate personnel and provide contact information to the CHO, Department Chair or Building Supervisor in case questions arise pertaining to the vacated space. Notify department or college electronic lock operators for spaces with electronic locks.
- L. Report to the departmental contact the relocation of any equipment with a capital asset inventory tag so the capital asset inventory can be updated.

IV. CHEMICALS

- A. Be sure all chemical containers are properly labeled with the complete chemical name and associated hazards at a minimum. Be sure all containers are sealed.
- B. Only move the chemicals that will be or are expected to be used for research in the near future to a new facility. The Principal Investigator should include the CHO when reallocating any chemicals. These chemicals shall be entered into the chemical inventory of the new owner, who is responsible for updating and sharing the inventory with the CHO and EHS. Any chemicals that cannot or will not be used in the new facility shall be disposed of properly. Contact EHS for the proper disposal procedures and significant laboratory cleanout assistance.
- C. DO NOT move any containers of chemical wastes to a new facility. Contact EHS for proper [chemical and hazardous waste disposal](http://www.ehs.wvu.edu/environmental/waste-management/hazardous-waste-disposal-form) procedures at <http://www.ehs.wvu.edu/environmental/waste-management/hazardous-waste-disposal-form>. EHS can provide assistance with making waste determinations.
- D. All unknown chemicals must be identified or at minimum fingerprinted with pH, inorganic/organic, oxidizer, presence of heavy metals, etc.
- E. Only trained personnel may move chemicals. Any highly toxic, highly hazardous or reactive chemicals should only be moved by staff who have received special training. A safe practice involves using a "buddy system" while moving chemicals in the event of a spill or other emergency.
- F. **To ship hazardous materials to another institution, contact the certified DOT/IATA shipper in your department.** When packaging chemicals, use a packing material (i.e., vermiculite, ground corn cobs, shipping peanuts, cardboard, absorbent clay, etc.) that is compatible with the chemicals to prevent bottle breakage during transport. Only place chemicals that are compatible with each other in the same container and do not overload containers of chemical bottles. Follow all applicable DOT packing and shipping requirements.
- G. When moving chemicals to another laboratory, it is best to use carts with lips or trays to prevent containers from being knocked over. Other items that are useful for safely handling chemicals during transport include rubber bottle carriers, trays, buckets, five gallon pails or other forms of secondary containment, spill kit, fire extinguisher, and a mobile phone or other two-way communication device.
- H. When moving chemicals, wear appropriate personal protective equipment such as safety glasses (splash goggles for corrosives), lab coat, close-toed shoes or boots, and appropriate gloves. Do not place incompatibles on the same cart. Remember to remove gloves when touching door knobs, latches and elevator buttons. If possible, avoid using passenger elevators. If you must use a passenger elevator, ask passengers not involved in the chemical transport to catch the next available elevator.
- I. When unloading and unpacking chemicals in a new laboratory, remember to segregate and store chemicals according to hazard class.

- J. Chemicals spilled during travel should be cleaned up right away with a spill kit. If chemicals are spilled outside, then contact EHS immediately.
- K. **Controlled substances**
1. All controlled substances shall be kept under lock and key in a substantially constructed cabinet or safe until disposed, transferred or relocated. Arrange to keep all controlled substance records for at least three years.
 2. Transferring ownership of a controlled substance to another licensed individual must be recorded in writing. If controlled substances are relocated, the DEA must be notified in writing of their new location.
 3. If a controlled substance is transferred to another licensed individual, their name, address and DEA registration number must be recorded in the continuing record for the substance along with the date and number of units transferred. Records must be maintained by the original and new owners.
 4. The responsibility for disposal of controlled substances belongs to the registrant. Download the Controlled Substance Transfer Form located at <http://www.ehs.wvu.edu/environmental/waste-management/controlled-substance-disposal-form>. Complete the form and e-mail it to EHS_Chemicals@mail.wvu.edu with the subject line "Controlled Substance Form." EHS will contact your point of contact regarding the next scheduled disposal event. You must be present on the day items will be disposed. If this is not possible, then properly transfer the substance to another registrant, who will then add the substance to his or her inventory and be responsible for disposal.
- L. **Orphaned Substances**
1. During the moving process, if you find a controlled substance that is not yours, contact EHS immediately at 304-293-3792 or 304-293-7953. EHS and UPD will secure the substance and seek DEA approval for destruction.

V. COMPRESSED GAS CYLINDERS

- A. Ensure all compressed gas cylinders are properly labeled, marked full or empty and are properly secured until while arrangements are being made for their removal or disposal. Do not leave behind compressed gas cylinders: return gas cylinders to the supplier or move them to a common cylinder storage area according to departmental procedures.
- B. Make arrangements with the supplier for the removal of any compressed gas cylinders that will no longer be used, or for any empty cylinders. Contact EHS at EHS_Chemicals@mail.wvu.edu if assistance is needed with the removal of non-returnable cylinders, small lecture bottles and map gases.
- C. Remove the regulator and replace the safety cap over the cylinder valve before moving any compressed gas cylinders. Only use an appropriate cylinder handcart to move compressed gas cylinders. Do not attempt to "roll" cylinders from one area to another.
- D. Compressed gas cylinders containing highly toxic or highly reactive gases should only be moved by staff with special training in the use and hazards of these materials.
- E. After moving compressed gas cylinders, immediately secure them with a strap or chain. Do not leave compressed gas cylinders unsecured for any period of time, even temporarily. Any new gas distribution systems, using metal or plastic tubing, must be pressure tested (leak tested) before use. Each cylinder must either be capped if being stored or have a regulator attached if it is in use.

VI. BIOHAZARDOUS MATERIALS

- A. All items determined by protocol review from the WVU Institutional Biosafety Committee (IBC) or the Biosafety Officer to be biohazardous are to be managed as such. All biological materials must be transferred to an investigator listed on you IBC protocol, or with their own IBC protocol, for safekeeping or disposal. Seek guidance from the **Biosafety Officer (304-293-7157)**.
- B. All biohazardous materials must be removed from the laboratory. Before moving to the new facility, contact the Biosafety Officer to dispose of all biohazardous waste.
- C. All biohazardous materials must be properly packaged and only moved by properly trained laboratory staff. Non-laboratory personnel (including moving company staff) or untrained laboratory personnel are not permitted to move biohazardous materials.

- D. All potentially contaminated equipment and surfaces such as bench tops, fume hoods, storage cabinets and drawers (both inside and outside), shelving, refrigerators, freezers, incubators, and the outside of large equipment that is scheduled to be moved by a moving company, must be thoroughly decontaminated. Please be considerate of the health and safety of future occupants by thoroughly cleaning up any potentially hazardous (chemical, biological, and radiological) contamination.
- E. Make arrangements to ship biohazardous materials per DOT/IATA regulations.
- F. Ensure all sharps are placed in a sharps container and disposed of properly.
- G. Keep in mind that certain types of research, such as that with recombinant DNA and some pathogens, may need to have prior approval or registration at a new facility prior to the scheduled move.
- H. All small animal tissues are bio-hazardous waste and should be disposed of in a biohazard bag and removed as infectious waste. Large animal tissue disposal is also regulated by the Biosafety Officer, and you should call for instructions on these items.
- I. All animal tissues fixed in Ward Safe, Caro Safe and any other non-hazardous fixative should be considered bio-hazardous waste. All free liquids should be removed and the solids properly packaged in proper shipping containers or discarded as infectious medical waste. This also includes animal tissues fixed in formaldehyde.
- J. All Human Blood and tissue, animal blood and bedding potentially contaminated with a pathogenic microbe, and any wastes from recombinant DNA experiments, are biohazardous waste and should be disposed of in a biohazard bag and removed as infectious waste.
- K. All non-controlled pharmaceuticals should be disposed of via the Environmental Health and Safety hazardous waste disposal form. Vaccines and enzymes are removed as infectious medical waste.
- L. All filters and apparatuses that have been used to filter or contain human blood and tissue, recombinant DNA, or pathogenic microbes are bio-hazardous waste and should be disposed of in a biohazard bag and removed as infectious waste.
- M. All needles, scalpels and any other sharp items that could be defined as “Medical Waste” should be placed in an appropriate sharps container and disposed of as infectious medical waste.
- N. If a biosafety cabinet will be relocated to the new facility, thoroughly decontaminate both the inside and outside of the cabinet. Biosafety cabinets which were used for Biosafety Level 2 (BSL2) or higher agents must have a complete gaseous decontamination of the cabinet performed. Outside companies can provide this service. Spraying and wiping the inside with a disinfectant is not acceptable with these cabinets, because the HEPA filter needs decontaminated.
- O. If any biosafety cabinet, regardless of BSL, is moved to a new location, it needs to be re-certified by an outside company once in the new lab.
- P. Before the move, make arrangements to temporarily store properly labeled frozen and refrigerated materials in another approved laboratory refrigerator and freezer. Laboratory refrigerators and freezers must be emptied, thawed and decontaminated before relocating them to a new space.

VII. RADIOACTIVE MATERIALS

NOTE: Radioactive materials are possessed and used by WVU personnel under the authority of a radioactive materials license. This license restricts possession and use of radioactive materials to qualified personnel (OI/ARU) at discrete locations (authorized places of use), which are approved by the WVU Radiation Safety Committee and the Radiation Safety Officer.

If, for any reason, radioactive materials are removed from the authorized place of use, or if the PI/ARU should separate from WVU, certain steps must be taken to return the previously authorized use area to an unrestricted area, free of radioactive materials or radioactive contamination. All of the following steps must be coordinated through the **Radiation Safety Office (304-293-3413)**, which requires advanced notification.

- A. Notify Radiation Safety as soon as the intent to vacate is known, preferably 90 days in advance.
- B. Make arrangements with the Radiation Safety Office to remove all radioactive materials including waste from the laboratory. All radioactive material disposals and/or transfers shall be coordinated through the Radiation Safety Office.
- C. Conduct contamination surveys (GM and/or Wipe) prior to removing trash. Remove all trash from the space, including empty containers, papers, and disposable materials. Remove all lab matting, absorbents or chucks from all benches and cabinets, and empty all drawers. If materials are contaminated, dispose of them in radioactive waste, otherwise items can be disposed of in regular trash. If more radioactive waste containers are needed, contact the Radiation Safety Office.

- D. Radiation fume hoods must be empty of all radioactive equipment and materials. Interior surfaces of the hood must be wiped down with a soap and water solution.
- E. Conduct contamination survey of the laboratory and decontaminate areas, as necessary.
NOTE: Areas of potential residual contamination may include refrigerators and freezers, centrifuges, water baths, hoods, sinks, floor areas under waste containers, etc. Prior to defrosting a freezer conduct contamination survey and, if contaminated, coordinate decontamination efforts with the RSD.
- F. Do not remove any of the signs, stickers, or postings. The Radiation Safety Office will remove them after final inspection.
- G. If the laboratory is being vacated because the researcher is leaving WVU, the following additional steps must be taken:
 - 1. Usage records, including Survey Records, must be updated, finalized and submitted to the Radiation Safety Office.
 - 2. Waste disposal records must also be finalized and turned in.
 - 3. All radioactive material waste containers must be removed/picked up by the Radiation Safety Office.
 - 4. Personnel dosimeters must be returned to the Radiation Safety Office.
 - 5. Termination bioassays must be performed, if applicable.

For more information refer to the Radiation Safety Manual for Research Applications and the Radiation Safety website: <http://www.hsc.wvu.edu/rsafety/>

Radioactive materials, contaminated equipment, or equipment that is capable of producing ionizing radiation may be transferred to another facility which is licensed to possess such materials by the U.S Nuclear Regulatory Commission or by another agreement state. The transfer of licensed materials shall be under the direction of the Radiation Safety Office. Prior to shipment/transfer of the material, the Radiation Safety Office must have a current copy of the radioactive materials license that authorizes the Institution, facility, or individual who will be in receipt of any licensed material prior to shipment from the university.

VIII. DECOMMISSIONING FACILITIES AND EQUIPMENT

- A. Specific roles and responsibilities for decommissioning activities include:
 - 1. EHS roles and responsibilities:
 - a. Provide technical guidance and recommendations.
 - b. Advise on decontamination and hazardous chemical waste disposal.
 - c. Assist with compliance regarding laws, regulations, policies and guidelines.
 - d. Provide continual support of project decommissioning as new information is obtained.
 - e. Perform or review appropriate risk assessment.
 - 2. Research staff roles and responsibilities:
 - a. Provide advice on needs, concerns and issues with lab decommissioning to EHS and/or CHO.
 - b. Provide to EHS historical use of biohazardous materials, radioactive materials and hazardous chemical usage for decontamination analysis.
 - c. Identify and label materials (both biological and chemical) and maintain an up-to-date inventory.
 - d. Segregate chemicals in accordance to the compatibility and pack them into a sturdy container/box for transportation. EHS can provide information and assistance with segregation of chemicals, proper packaging of hazardous chemicals, and regulations involving transport of these materials.
 - e. Clean work and storage surfaces with soap and water, effectively decontaminating the space.
 - f. Identify biological/chemical contaminated area(s) that cannot be cleaned by researchers and work with EHS to facilitate decontamination of the area(s).
 - g. Additional guidance on decommissioning procedures can be found in the ANSI standard – Z9.11-2016 – Laboratory Decommissioning.
 - h. Laboratory must be certified as contamination free by the Radiation Safety Office, the Biosafety Office and/or CHO as applicable.
 - i. Contact EHS with additional questions or information.
- B. Laboratory renovations may require more formal decommissioning procedures of both facilities and equipment depending on the extent of renovation and the past use of the room and/or facility.

- C. Useable laboratory equipment that has been thoroughly cleaned may remain in place. Broken equipment with capital asset tags should be sent out as surplus after it is decontaminated. Surplus may not receive decontaminated items without EHS's approval. Contact EHS to provide a Decontamination Certificate and sticker for the desired surplus equipment.
- D. Some equipment may have export restrictions on how it can be disposed. For questions contact the WVU Office of Technology Transfer at 304-293-7539.
- E. All refrigerators in the laboratory must be emptied, cleaned, defrosted and decontaminated.
- F. All decommissioned spaces must be certified as contamination free by the Radiation Safety Officer, Biosafety Officer and/or CHO as applicable.
- G. After removing all chemicals and waste from the old facility, ensure all spills have been cleaned up and all potentially contaminated surfaces have been thoroughly cleaned with water and detergent. This includes bench tops, fume hoods, storage cabinets, drawers (both inside and outside), shelving and the outside of large equipment that is scheduled to be moved by a moving company. No chemicals should be left in an unused lab for any reason.
- H. Clean out refrigerators and freezers, ensuring they are defrosted. For contents that will be relocated, arrange for shipping with a licensed mover. If contents will remain in the department, then make arrangements to transfer ownership. Please keep in mind the next immediate occupants of the laboratory may be custodians and maintenance workers. Please be considerate of their health and safety by thoroughly cleaning up any potentially hazardous (chemical, biological, and radiological) contamination.
- I. Areas and materials of concern for decommissioning and general housekeeping of facilities and equipment include, but are not limited to:
 - 1. Batteries – Label the used battery and date; Submit a Waste Disposal Request Form
 - 2. Bench tops and other work surfaces – wiped down and decontaminated
 - 3. Broken glass – collected and placed in a designated broken glass container
 - 4. Chemical and biological contamination and/or spills – contained, cleaned up properly, and areas decontaminated
 - 5. Computer – contact Information Technology Services for proper removal
 - 6. Excess chemicals (not expired, in good condition) – contact CHO and/or department for redistribution
 - 7. [Fluorescent light bulbs](#) – spent bulbs collected, placed in a box marked “Used Lamps” and date; Submit a Waste Disposal Request Form
 - 8. Fume hoods – cleaned out and wiped down
 - 9. Gas cylinders and lecture bottles – contact supplier, CHO, and/or EHS for reallocation or proper disposal
 - 10. Lab equipment – decontaminated regardless of whether it will be disposed of, or left for the next occupant
 - 11. Lead shielding – decontaminated
 - 12. Mercury sources – sink traps, thermometers, switches, etc. – contact EHS for removal, contact CHO if being left for next occupant or for reallocation
 - 13. PCBs – window caulking, transformers, ballasts, etc. – contact EHS for decontamination
 - 14. Perchloric acid hoods – decontaminated, contact EHS for assistance with decontamination
 - 15. Reaction chambers – decontaminated, contact EHS for assistance with decontamination
 - 16. RCRA heavy metals – for proper disposal and decontamination submit a Waste Disposal Request Form
 - 17. Storage cabinets – cleaned out and wiped down
 - 18. Unknown chemicals – identify if possible or fingerprint (pH, inorganic/organic, oxidizer, presence of heavy metals, etc.), contact EHS for disposal
 - 19. Vacuum pumps - decontaminated

IX. Laboratory Closeout Checklist

This checklist is designed to guide laboratory personnel safely through decommissioning procedures in the event that laboratory operations are moved or discontinued. In addition to the items in the checklist, please also consider the following:

- Review this form with your CHO and/or EHS 60 days prior to vacating the laboratory, room or area so that arrangements can be made for moving, cleaning, decontamination, and disposal.
- Use appropriate personal protective equipment when cleaning, decontaminating, when handling hazardous materials, and when handling waste.
- If some items must be retained until research is defended, clearly mark them with the discard date and initials.
- Ensure that hazardous materials and their locations remain secure. Movers must be trustworthy and reliable. Do not leave hazardous materials unattended or unsecured in hallways, loading areas, and vehicles.
- Be sure to clean and decontaminate areas outside the lab such as cold rooms, hallway freezers, and common storage areas. If these areas will no longer be used, remove all materials, including chemicals and biologicals.

Procedure	Initial Completed
Gas Cylinders	
Remove regulators and manifolds.	
Cap all cylinders and bottles.	
Return cylinders to stockroom or supplier.	
Submit request to EHS to pick up non-returnable bottles. (EHS_Chemicals@mail.wvu.edu)	
Controlled Substances	
Contact DEA for moving instructions.	
Contact DEA to close or change location of the Controlled Substances License.	
If controlled substances are to be moved, establish procedures to ensure secure transport.	
Disposal of Controlled Substances:	
1. For controlled substances not intended to be used or moved, arrange for transfer to another registrant.	
2. If unable to transfer to another registrant, follow guidance in Section IV. K.	
3. Ensure all controlled substances are securely stored at all times.	
Chemicals	
Ensure all containers are labeled.	
Evaluate and sort chemicals into categories: move, redistribute to others, research materials to preserve, unknowns, and waste.	
Contact EHS for guidance on proper packaging and shipping of chemicals.	
Redistribute usable chemicals to stockrooms and other laboratories.	
Follow organizational procedures for proprietary samples and research materials to preserve.	
Review and investigate unknown materials for clues as to their identity. If not identifiable, contact EHS or waste vendor for hazard categorization services.	
Contact EHS for removal of chemical waste.	
Update chemical inventory records to reflect the disposal or new locations of laboratory chemicals.	
Clean and decontaminate benchtops, furniture, other surfaces, laboratory hoods, storage cabinets, and other fixed equipment. Remove warning stickers. Attach clearance statements to equipment, spaces, etc.	
If mercury may have been spilled in the laboratory's history, verify decontamination with a portable atomic absorption spectrometer with a mercury vapor sensitivity of 2 ng/m ³ .	
Last step: Inspect all lab spaces to verify the removal of all chemicals. Be sure to check all drawers, cabinets, cupboards, refrigerators, etc.	

Procedure	Initial Completed
Microorganisms, rDNA, Animal and Human Tissue	
Ensure all containers are labeled.	
Evaluate and sort biologicals into categories: move, research materials to preserve, and waste.	
Research materials to be preserved need to be dated with a "Discard Date".	
If moving biological materials in liquid nitrogen Dewar flasks, contact certified departmental DOT shipper to move using dry nitrogen shipper.	
Contact Biosafety Office (304-293-7157) for guidance on proper packaging and shipping of other biologicals.	
Follow organizational procedures for preservation of proprietary samples and research materials. Date all materials with date they may be discarded.	
Follow protocol and organizational procedures for on-site disposal of biological material and waste (e.g., disinfect, autoclave)	
Dispose of treated biological waste according to organizational procedures.	
Contact waste vendor for removal of other biological material and waste.	
Update biological inventory records for disposal and new locations.	
For work registered under a current IBC protocol, the protocol must be closed or updated for new location prior to move.	
Clean and disinfect benchtops, furniture, other surfaces, biological safety cabinets, gloveboxes, storage cabinets, and other fixed equipment.	
Remove warning stickers.	
Attach clearance statements to equipment and spaces.	
Dispose of research animal carcasses and tissue per organizational procedures.	
To remove waste with chemical preservatives, submit a Waste Disposal Request form to EHS_Chemicals@mail.wvu.edu .	
Transfer responsibility for samples as needed.	
Radioactive Materials	
Ensure all containers are labeled.	
Evaluate and sort radioactive materials for moving or disposal.	
To move radioactive materials, contact Radiation Safety Office (304-293-3413) for guidance on packaging procedures and arranging shipment.	
Contact Radiation Safety Office to remove radioactive waste.	
Update radioactive material inventory records for disposal and new locations.	
Clean, decontaminate, survey, and wipe-test benchtops, furniture, other surfaces, laboratory hoods, storage cabinets, and other fixed equipment.	
Remove warning stickers.	
Attach clearance statements to equipment and spaces.	
Clean, decontaminate, survey, and wipe-test refrigerators, freezers, and other movable equipment. Remove warning stickers and attach a clearance statement.	
Survey and wipe-test of lead bricks, lead pigs, shielding, and source containers to verify decontamination performed by Radiation Safety Office. Follow organizational procedures for reuse, redistribution, recycling, or disposal.	
If moving materials, ensure that the new location has been approved by Radiation Safety Office before proceeding.	
Submit a request to the Radiation Safety Office to conduct an exit survey of rooms and equipment. Be sure to check all drawers, cabinets, etc.	

Procedure	Initial Completed
S h a r p s Sharps include needles, syringes with or without needles, Pasteur pipettes, pipette tips, and broken glass.	
Keep separate sharps that are radioactive, biologically contaminated, and chemically contaminated. Contact EHS or waste vendor for removal.	
M o v e a b l e L a b o r a t o r y E q u i p m e n t Decontaminate movable lab equipment that is to be left in place, moved, sold as surplus, or disposed.	
Units intended for disposal that may contain refrigerants must be evaluated by Facilities Management to determine if refrigerant needs to be removed. This is not necessary for units intended for surplus.	
For refrigerators, freezers, and other movable equipment that may be contaminated with chemicals:	
<ol style="list-style-type: none"> 1. Clean 2. Decontaminate 3. Remove warning stickers 4. Attach a clearance statement 	
For incubators that may be contaminated with biological materials:	
<ol style="list-style-type: none"> 1. Disconnect CO₂ gas feed line 2. Drain water jacket 3. Clean 4. Disinfect 5. Remove warning stickers 6. Attach a clearance statement 	
For refrigerators, freezers, ultracentrifuges, UV boxes, transilluminators, imaging stations, and other movable equipment that may be contaminated with biological materials:	
<ol style="list-style-type: none"> 1. Clean 2. Disinfect 3. Remove warning stickers 4. Attach a clearance statement 	
To move fragile or vibration-sensitive equipment (e.g., balances, confocal microscopes), contact specialized movers.	
For high-pressure liquid chromatographs, disconnect chemical feed and waste lines. If radioactive materials were used, decontaminate and wipe-test. Clean, remove warning stickers, and attach a clearance statement.	
Clean and decontaminate liquid scintillation/gamma counters. Contact Radiation Safety Office to move or ship any external standards. Contact manufacturer to move units.	
For refrigerators, freezers, and other movable equipment that may be contaminated with radioactive materials, clean, decontaminate, survey, wipe-test, remove warning stickers, and attach a clearance statement.	
Prior to sale as surplus laboratory equipment, contact Radiation Safety Office to determine if export controls apply.	
Request removal of lab equipment to be surplus or discarded.	

Procedure	Initial Completed
Empty Containers and Glassware	
For empty containers that held an EPA-regulated acutely hazardous waste, submit a request to EHS_Chemicals@mail.wvu.edu for disposal. http://ehs.wvu.edu/environmental/waste-management/hazardous-waste-disposal-form	
For other empty containers, use practices commonly employed to empty the container (e.g., pouring, draining). If necessary, rinse with an appropriate solvent. Leave the cap off and air dry in a functioning fume hood. Deface the label and follow procedures for disposal.	
Clean glassware if necessary. Redistribute usable glassware to stockrooms and other laboratories.	
Reuse, Redistribute, Recycle	
Contact CHO or department chair to redistribute usable laboratory supplies to other laboratories.	
Contact Office of Sustainability WeCan (304-293-7916) to remove recyclable glass (not pyrex), plastic, electronics, etc.	
Return reusable, decontaminated lab coats to department for redistribution.	
Other	
Notify CHO and EHS when lab is vacated to determine if adjusting ventilation and laboratory hood exhaust fans is necessary.	
Dispose of used gloves, aprons, goggles.	
Pack all files, documentation, books, and publications. Follow department or college procedures for archiving research notebooks and supporting documentation.	
Contact Office of Sustainability or vendor to destroy confidential papers.	
Update emergency information, including external door posting, contact lists, plans, etc.	
Follow organizational security procedures for removing laboratory access.	
Submit a Waste Disposal Request form for the removal of universal waste, batteries, and lamps to EHS_Chemicals@mail.wvu.edu .	

Upon completion of this form and other appropriate assessments, the following individuals certify the cleanliness and appropriate decontamination of _____.

- **Environmental Health and Safety** Signature: _____ Date: _____
Phone Number: _____
E-mail Address: _____
- **Radiation Safety Officer** Signature: _____ Date: _____
Phone Number: _____
E-mail Address: _____
- **Biosafety Officer** Signature: _____ Date: _____
Phone Number: _____
E-mail Address: _____
- **CHO** Signature: _____ Date: _____
Phone Number: _____
E-mail Address: _____

For more information, see Laboratory Decommissioning Standard, ANSI Z9.11 (2016), American National Standards Institute.