

Name: Laboratory Decommissioning Program		
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Introduction

The health and safety of the Portland State University (PSU) research community is the driving force for the Laboratory Decommissioning Program through Environmental Health & Safety (EHS). The Program is to be utilized in a remodel or laboratory decommissioning project to ensure waste removal and equipment decommissioning prior to reoccupancy. When laboratories are vacated by the laboratory assigned personnel and/or Faculty Lead (in some cases this may be the Principal Investigators (PI's)) and prior to reassignment for new research at the University, EHS will work in cooperation with the assigned department managing the space to coordinate the removal of surplus equipment, excess chemicals, biological specimens, sharps, radioactive materials, and a variety of waste materials. To reduce the hazard exposures to those entering the spaces (cleaning staff, contractors, new occupants, etc.) the following Laboratory Decommissioning Program shall be implemented.

Periodic changes/updates are made to this program as needed. Persons assigned laboratory space and department chairs are responsible to adhere to this program. EHS will design, construct, implement, and oversee the program.

I. GENERAL PRINCIPLES

- A. This program is applicable for all research laboratories and auxiliary spaces serving laboratories. This program provides requirements for the removal of non-fixed materials when a user or researcher vacates laboratory space. These can include:
 - a. Leaving PSU;
 - b. Moving to another building or location;
 - c. Relocating to another laboratory within the same building; or
 - d. Moving out of an off-campus location.
- B. The first step in initiating a laboratory decommissioning is for the person assigned to the laboratory or department chair to contact EHS to formally give notice of the intent to decommission a laboratory.
- C. The department chair must assemble a meeting with all appropriate stakeholders (see below) to discuss the specific issues that need to be addressed in the space and make sure that all parties are aware of their responsibilities. This initial meeting should result in a general plan for the process and a timeline for completion that is agreeable to all parties.
- D. When laboratories are vacated, ALL chemicals, radioactive materials, biological materials, sharps, wastes, and equipment must be removed and disposed of through University approved waste systems/methods.
- E. ALL non-fixed pieces of laboratory equipment must be decontaminated prior to removal and tagged as such before being placed back into service, stored in another location, recycled, or disposed of by Facilities or an outside vendor (see Appendix 1).
- F. ALL working surfaces and storage locations must be properly decontaminated and cleaned. Depending upon the materials used in the lab, an approved disinfectant is required for biological materials, appropriate methods for radiological materials, and soap and water for chemical and all other general areas.
- G. Vacated labs must undergo an EHS supervised and approved decommissioning, or 100% of the actual cleanup cost will be billed to that department. Further, departments may face penalties such as a loss of access to the space or loss of the right to conduct research using hazardous chemicals.
- H. EHS will conduct a final decommissioning inspection to ensure that all areas are properly cleaned to the expectation of this program. EHS staff can be reached at (503-725-5269).

II. DEFINITIONS

- A. **Laboratory Decontamination:** The removal of chemicals, drugs, sharps, biological materials, radioactive substances, supplies, papers/records, non-fixed equipment, and the sanitation (removal of contamination) from surfaces. Labs in a decontaminated condition do not pose a recognized hazard to staff, visitors, or contractors.
- B. **Approved Laboratory Decommissioning:** An inspection/audit of a lab by EHS staff to verify the removal of all chemicals, drugs, sharps, biological materials, radioactive substances, supplies, papers/records, non-fixed equipment, and surfaces have been adequately cleaned to remove contamination, so the space can be reused by other lab staff or undergo renovations by contractors.
- C. **Conditional Laboratory Decommissioning:** An inspection/audit of a lab by EHS staff where one or more conditions are still present in a lab but it/they do not pose a hazard to staff or contractors in their present situation.

- D. **Laboratory (lab):** A laboratory is defined as a place equipped for experimental study in a science or engineering department and used for testing and analysis using relatively small quantities of chemicals, biologicals, and/or radiological agents. Laboratories include, but are not limited to, research labs, chemical storage locations, waste storage locations, animal procedure rooms, student teaching labs, instrumental/laser labs, environmental rooms, art studios, or makerspaces, and associated locations used to house/store research and or testing materials from labs. Locations that include but are not limited to music labs, sound labs, and computer labs are NOT considered labs under this program.
- E. **Laboratory Assigned Personnel:** An individual designated by a department who is primarily responsible for the operations and research within the laboratory space, who shall be the primary point of contact for starting up and closing down/decommissioning the laboratory.
- F. **Faculty Lead:** An individual, in the context of lab decommissioning, which can include a Principal Investigator (PI) and a co-Principal Investigator (co-PI) and/or a Radioactive Material Permit Holder or any other faculty/staff person of authority assigned to the laboratory space, designated by the department chair or unit leader to oversee a university/department/college laboratory facility renovation.
- G. **Facility Renovation:** A renovation is defined as a change in the physical environment of a lab that could include the removal or installation of walls, doors, cabinets, benches, fume hoods, etc. Repairs or replacement in kind are considered general maintenance activities.
- H. **Clean Out/Cleaned:** The removal of all possible contamination by use of detergents or disinfectants.

III. RESPONSIBILITIES

- A. **Deans, Directors, Department Heads**
 - a. Ensure that the Faculty Lead using biological, chemical, radioactive, and/or all other hazardous materials are aware of and follow the procedures in this program.
 - b. See section III.C for additional responsibilities.
- B. **Laboratory Assigned Personnel/Faculty Leads**
 - a. The Faculty Lead/Laboratory Assigned Personnel is to notify their department, and the EHS Radiation Safety Officer (RSO) when they will be leaving the University or relocating within the University.
 - b. For many protocols and programs, prior authorization through specific committees may be necessary prior to relocation or departure. For example, cancelling biosafety protocols and communicating non-renewal with the Institutional Biosafety Committee (IBC).
 - c. The Faculty Lead/Laboratory Assigned Personnel is to take specific safety measures before leaving or relocating when transferring chemicals to another location and/or disposing of chemicals that are no longer needed.
 - i. EHS should be contacted for specific chemical disposal questions.
 - ii. All chemicals must be removed from the laboratory
 - 1. EHS requires the disposal of all unwanted chemicals prior to the actual move date. The Faculty Lead/Laboratory Assigned Personnel or the designated individual must complete a hazardous waste tag for each chemical container for disposal and place the tag on the container. The hazardous waste disposal process must then be used to notify EHS for a

- pick up. For large quantities of chemicals, allow up to 60 days for the pickup.
2. Those chemicals to be moved to another lab within the University must be re-assigned and transferred to the new location. Please contact EHS for assistance.
- d. All chemical shipments to off-site locations must be transported in accordance with US Department of Transportation requirements by licensed vendors. EHS will consult and advise with shipment of chemicals to off-site locations.
 - e. The Faculty Lead/Laboratory Assigned Personnel is to take specific measures before leaving/relocating for the transfer of biological agents and/or animal tissues.
 - i. All biologically active materials being transported to off-site locations must abide with US Department of Transportation and IATA Shipping regulations.
 - ii. The University's Biological Safety Officer (BSO) must be contacted for appropriate disposal or shipping regulations.
 - f. The Faculty Lead/Laboratory Assigned Personnel must take specific measures before leaving a laboratory for the transfer or disposal of radioactive materials. These measures include:
 - i. Notifying the EHS RSO **60 days** prior to leaving.
 - ii. Surveying and decontaminating all areas where radioactive materials were used or stored. Equipment in which radioactive materials were used/stored shall be surveyed and decontaminated. The surveys shall be documented in the laboratory logbook and Appendices 1 and/or 2.
 - iii. Transferring any remaining radioactive materials to another PSU Permit Holder with EHS RSO approval, or making arrangements for disposal. Arrangements can be made through the EHS RSO should there be a need to ship radioactive materials and/or radioactive equipment to an off-site location.
 - iv. Removing and destroying all labels indicating the presence of radioactivity.
 - v. Reconciling the radioactive materials inventory in the logbook.
 - vi. Canceling dosimetry badges, if appropriate.
 - g. All labs and storage areas and working surfaces are to be cleaned with an appropriate detergent, disinfectant, or decontamination agent based on those materials used in the lab. This includes, but is not limited to approved disinfectants, or soap and water.
 - h. Chemical and/or biological storage equipment (corrosive cabinets, flammable liquid storage cabinets, incubators, refrigerators, freezers, etc.) and non-fixed lab equipment (centrifuges, cryostats, incubators, sonicators, etc.) are to be emptied and cleaned/disinfected prior to being moved or disposed. After the appropriate decontamination activity is completed, remove applicable warning label(s) and attach a copy of the Equipment Decontamination Form (see Appendix 1) to the piece of equipment/apparatus. If the form is not completed and posted on the equipment, it may be assumed that the equipment was not cleaned and may delay moving, repairing, renovation, and disposal activities.
 - i. All chemicals, equipment, wastes, etc. must be removed from the chemical fume hood countertop and the hood's support cabinet and the countertop and cabinet cleaned to remove gross contamination. Personnel should schedule work involving the use of a

fume hood to allow adequate time to disassemble active chemical research apparatus before cleaning these areas.

- j. Biological safety cabinets (BSCs) must be decontaminated before moving or disposing of the unit.
 - i. **PLEASE NOTE:** All BSCs must be re-certified by an approved outside vendor once settled in its new location and before being used. This is to ensure the filter or blower was not damaged or dislodged during the moving process. Costs associated with recertification are paid by the department, lab, or in large renovation costs.
 - k. All lab apparatus must be removed from the lab. All papers, rags, empty bottles, boxes, glassware, plasticware, etc. are to be properly removed/disposed of prior to vacating the lab.
 - l. All compressed gas cylinders are to be removed and sent back to the supplier or chemistry stockroom prior to the decommissioning of the laboratory. If relocating, all compressed gas cylinders must be capped and transported appropriately to the new location using an approved cylinder cart. If leaving the University or relocating to another building, the Faculty Lead is to contact the gas vendor to have the company's gas cylinders removed/returned/relocated.
 - m. The Faculty Lead will be responsible for all problems discovered and identified during the decommissioning process. A final approval will not be granted until all issues have been corrected, unless a conditional approval has been granted.
 - n. Construction and/or demolition crews will not be allowed to enter the areas until the laboratory decommissioning has been approved by EHS and signage has been posted on the outer door of all the spaces.
- C. Research Assistant/ Laboratory Manager/ Post-Doctoral/ Graduate Student(s)
- a. The Research Assistant/ Laboratory Manager/ Post-Doctoral/ Graduate Students are under the supervision of the Laboratory Assigned Personnel/PI/Supervisor of their specific department.
 - b. The Research Assistant/ Laboratory Manager/ Post-Doctoral/ Graduate Student(s) is to take specific safety measures before leaving or relocating when transferring chemicals to another location and/or disposing of chemicals that are no longer needed.
 - i. EHS should be contacted for specific chemical disposal questions.
 - ii. All chemicals must be removed from the laboratory
 - 1. EHS requires the disposal of all unwanted chemicals prior to the actual move date. The Laboratory Assigned Personnel/PI/Supervisor or the designated individual must complete a hazardous waste tag for each chemical container for disposal and place the tag on the container. The hazardous waste disposal process must then be used to notify EHS for a pick up. For large quantities of chemicals, allow up to 60 days for the pickup.
 - 2. Those chemicals to be moved to another lab within the University must be re-assigned and transferred to the new location. Please contact EHS for assistance.

- c. All chemical shipments to off-site locations must be transported in accordance with US Department of Transportation requirements by licensed vendors. EHS will consult and advise with shipment of chemicals to off-site locations.
- d. The Research Assistant/ Laboratory Manager/ Post-Doctoral/ Graduate Student(s) is to take specific measures before leaving/relocating for the transfer of biological agents and/or animal tissues.
 - i. All biologically active materials being transported to off-site locations must abide with US Department of Transportation and IATA Shipping regulations.
 - ii. The University's Biological Safety Officer (BSO) must be contacted for appropriate disposal or shipping regulations.
- e. The Research Assistant/ Laboratory Manager/ Post-Doctoral/ Graduate Student(s) must take specific measures before leaving a laboratory for the transfer or disposal of radioactive materials. These measures include:
 - i. Notifying the RSO **60 days** prior to leaving.
 - ii. Surveying and decontaminating all areas where radioactive materials were used or stored. Equipment in which radioactive materials were used/stored shall be surveyed and decontaminated. The surveys shall be documented in the laboratory logbook and Appendices 1 and/or 2.
 - iii. Transferring any remaining radioactive materials to another PSU Permit Holder with RSO approval, or making arrangements for disposal. Arrangements can be made through the RSO should there be a need to ship radioactive materials and/or radioactive equipment to an off-site location.
 - iv. Removing and destroying all labels indicating the presence of radioactivity.
 - v. Reconciling the radioactive materials inventory in the logbook.
 - vi. Canceling dosimetry badges, if appropriate.
- f. All labs and storage areas and working surfaces are to be cleaned with an appropriate detergent, disinfectant, or decontamination agent based on those materials used in the lab. This includes, but is not limited to approved disinfectants, or soap and water.
- g. Chemical and/or biological storage equipment (corrosive cabinets, flammable liquid storage cabinets, incubators, refrigerators, freezers, etc.) and non-fixed lab equipment (centrifuges, cryostats, incubators, sonicators, etc.) are to be emptied and cleaned/disinfected prior to being moved or disposed. After the appropriate decontamination activity is completed, remove applicable warning label(s) and attach a copy of the Equipment Decontamination Form (see Appendix 1) to the piece of equipment/apparatus. If the form is not completed and posted on the equipment, it may be assumed that the equipment was not cleaned and may delay moving, repairing, renovation, and disposal activities.
- h. All chemicals, equipment, wastes, etc. must be removed from the chemical fume hood countertop and the hood's support cabinet and the countertop and cabinet cleaned to remove gross contamination. Personnel should schedule work involving the use of a fume hood to allow adequate time to disassemble active chemical research apparatus before cleaning these areas.
- i. Biological safety cabinets (BSCs) must be decontaminated before moving or disposing of the unit.

- i. **PLEASE NOTE:** All BSCs must be re-certified by an approved outside vendor once settled in its new location and before being used. This is to ensure the filter or blower was not damaged or dislodged during the moving process. Costs associated with recertification are paid by the department, lab, or in large renovation costs.
- j. All lab apparatus must be removed from the lab. All papers, rags, empty bottles, boxes, glassware, plasticware, etc. are to be properly removed/disposed of prior to vacating the lab.
- k. All compressed gas cylinders are to be removed and sent back to the supplier or chemistry stockroom prior to the decommissioning of the laboratory. If relocating, all compressed gas cylinders must be capped and transported appropriately to the new location using an approved cylinder cart. If leaving the University or relocating to another building, the PI is to contact the gas vendor to have the company's gas cylinders removed/returned/relocated.
- l. The Faculty Lead will be responsible for all problems discovered and identified during the decommissioning process. A final approval will not be granted until all issues have been corrected, unless a conditional approval has been granted.
- m. Construction and/or demolition crews will not be allowed to enter the areas until the laboratory decommissioning has been approved by EHS and signage has been posted on the outer door of all the spaces.

D. The Department

- a. The department is responsible for verifying that the EHS Staff and/or the RSO have been notified at least 60 days prior to an investigator moving spaces or leaving the University. This can be accomplished by e-mailing EHS-group @ pdx.edu or by phone (503-725-5269) and receiving confirmation from EHS Staff that appropriate assistance is dedicated to the lab decommissioning.
 - i. Work Order System:
 - 1. <https://2fix.psu.ds.pdx.edu/workRequest>
- b. The Department is responsible for any issues or deficiencies not corrected by the Faculty Lead/Laboratory Assigned Personnel. A tiered fee system will be applied to all laboratory decommissioning projects or abandonment. Costs for the laboratory decontamination will come out of that fee and will be paid by that department, with the remaining costs covered in the remodel project budget, if applicable.
 - i. These activities may include but are not limited to: disposal or decontamination of equipment, chemicals, lab benches, drawers, cabinets, samples, and/or all other research or laboratory related hazards identified within the space.
 - ii. The department/unit is responsible to verify items in departmental common spaces belonging to or associated to the Faculty Lead have been removed. This includes locations where chemicals, biologicals, and radiological agents may be stored/kept including corridors, linear equipment rooms, the Freezer Farm, common equipment rooms, environmental rooms, freezers, or any other storage location/method.
 - iii. Departmental administrators should contact other lab personnel in their department to assist in decontamination activities. EHS can be contacted for

possible outside vendors as a possible solution to assist the lab with particular issues.

- iv. If, upon completion of the decontamination of the laboratory the cost was less than the fee assessed for the space, the remaining amount will be returned to the department.

E. Environmental Health and Safety Department

a. EHS Radiation Safety Officer (RSO)

- i. All Permit Holders must contact RSO at least 4 weeks before relocating.
- ii. The Faculty Lead/Laboratory Assigned Personnel will be advised on the necessary requirements and precautions to be taken during transfer of radioactive materials, including Radioactive License Amendment procedures.
- iii. The RSO will collect all radioactive waste containers not being transferred to the new facility.
- iv. Upon completion of a survey and verification of decontamination by the Faculty Lead/Laboratory Assigned Personnel or the department, the RSO will conduct a final confirmatory radiological survey of the facility. The RSO will verify that the equipment used to store or analyze radioactive materials is appropriately decontaminated. The Faculty Lead/Laboratory Assigned Personnel will be notified of the radiological survey results. If contamination is identified, lab personnel will be responsible for any additional decontamination necessary. The laboratory will be reevaluated as necessary until decontamination has been confirmed. For information on equipment decontamination, contact the RSO or refer to the Radiation Safety Program Guide.

b. EHS Staff

- i. The Faculty Lead/Laboratory Assigned Personnel or the department must notify EHS Staff at least 60 days in advance of the planned lab closure. Upon notification by the Faculty Lead/Laboratory Assigned Personnel or the department that the decontamination/clean out is completed, the EHS Staff will schedule an appointment to verify the following activities have occurred:
 1. All chemical and biological materials have been properly removed, disposed and/or stored;
 2. All non-fixed and special in-house equipment/supplies/wastes have been removed; all drawers and cabinets have been emptied, fume hoods are free of materials, and biological safety cabinets have been decontaminated;
 3. All sharps (needles, razor blades, etc.) have been removed from cabinets, drawers and other surfaces and placed into sharps containers; and,
 4. All counter tops have been cleaned to remove gross contamination.
- ii. Upon verification that the required decontamination/clean out is complete, the EHS Staff will complete a Laboratory Decommissioning Form (see Appendix 2). The Laboratory Decommissioning Form will be posted on the outer door to the lab or decommissioned space.
- iii. The Faculty Lead/Laboratory Assigned Personnel will be responsible for any additional actions that may be needed. Upon completion of the additional decontamination activities and a successful evaluation by EHS, the area will be

released for renovation, demolition, construction, and/or reuse to the necessary parties. The Laboratory Decommissioning Form is to remain on the door to the laboratory until the space is occupied.

- c. EHS Hazardous Waste Manager
 - i. The Faculty Lead/Laboratory Assigned Personnel, or the department, must complete a hazardous waste tag(s) for each chemical container for disposal. The lab must notify the EHS Hazardous Materials Manager when the hazardous waste is ready for pickup – preferably through the work order system. The lab staff must take the following actions prior to the removal of any hazardous waste:
 1. Print and place the hazardous waste tag to each container to be removed from the lab. The tag is specific for that container and allows the Hazardous Waste Group to track the container.
 2. Waste containers must be suitable for transport (container compatible with the waste, tight fitting caps, the container not overfilled (3/4 full), and the outside of the containers must be clean).
 3. Additional information regarding the disposal of chemicals is available upon request. However, prior to discarding unwanted chemical(s) that are still viable, please work with your department and/or other departments to arrange for reuse/recycling.
 4. Work Order System:
 - IV. <https://2fix.psu.ds.pdx.edu/workRequest>

F. Facilities and Property Management (FPM) & Campus Projects & Construction (CPC)

- a. For lab renovations, CPC, or FPM may utilize outside construction contractors and/or internal personnel. If a lab has NOT completed the decommissioning process, construction work must not proceed. Failure to notify EHS prior to the start of the construction may delay a project. To avoid delays, the Project Manager or Facilities Supervisor is to:
 - i. Contact EHS to verify a Laboratory Decommissioning has taken place if the required door signage is not present prior to any planned work or demolition.
 - ii. Have the contractors formulate a work plan for the construction project. Although the laboratory spaces have been cleared of any gross contamination, there could be unseen hazards present that could pose a hazard to the contractors. Contractors must utilize appropriate personal protective equipment to minimize potential exposures.
- b. Many FPM Shops are required to perform general maintenance activities in active laboratories. These activities may include, but are not limited to, repairing gas lines, working on plumbing lines, adjusting fume hood controls, removing or adding cabinets, maintenance of HVAC systems, painting, and responding to emergent building issues (leaks, HVAC problems, etc). These activities may not require EHS to perform decommissioning of the space. However, FPM must ask the lab occupants to identify the hazards present in the immediate work location, to have these hazards removed/eliminated from the immediate location and terminate work in the immediate space for the duration of the work. Additionally, it is strongly recommended that FPM employees contact EHS laboratory safety for advice on hazards present in any

laboratory they require access to. For example: Should a repair be needed to unclog a waste (sewer) line at a sink, materials stored in or under the sink must be removed, the floor in front of the cabinet cleaned by the occupants (if visibly contaminated), and the occupants cannot use the sink until repairs are completed. In most cases, FPM will not commence work if the lab area they require access to is not prepared in advance of work starting.

G. Chemical Hygiene Committee

- a. The PSU Chemical Hygiene Committee (CHC) is responsible for reviewing and notifying EHS of any lab decommissioning projects. When necessary CHC can make recommendations for practices in decommissioning the laboratory.
- b. The CHC will review this program and the decommissioning closeout documents generated to ensure the program is being followed and correctly, and make recommendations for improvement.

IV. ASSOCIATED DECOMMISSION COSTS:

- A. There are unforeseen costs associated with any laboratory decommissioning that each department is responsible for. Although EHS does not bill departments for services and staff time, a tiered fee will be applied to any decommissioning project that will cover the disposal of equipment and outside professional services beyond the scope of EHS Staff. The tiered system is determined by the square footage of the laboratory space going through the decommissioning:
- B. Upon notification of lab decommissioning the assessed fees will be required.
- C. Decontamination services of hoods, countertops, equipment
 - a. Assessed fee of \$1500.00 for individual laboratory spaces from 0 – 500sqft.
 - b. Assessed fee of \$3000.00 for individual laboratory spaces from 501sqft and greater.
 - c. If the assessed fee covers all outside professional services and there is a remaining balance, the balance is returned to the department.
 - d. Other “high hazard” classified issues discovered in the process of decommissioning a laboratory space that require specialized contracted services may incur additional costs from the department.

RELATED DOCUMENTS and PROGRAMS:

Radiation Safety:

1. Radiation Safety Program Guide
2. Radioactive Materials Permit Amendment Request Form

Environmental Compliance:

1. Learners Guide to Hazardous Waste Management:

Laboratory Safety:

1. Bloodborne Pathogens Standard
2. Chemical Hygiene Program
3. Contaminated Systems
4. PSU Laboratory Closeout Checklist

TECHNICAL SUPPORT:

Contact the following groups for further information:

8/10/2018

- a. EHS Laboratory Safety and Radiation Safety Officer (Scott Jaqua): For contractor information to decontaminate a biological safety cabinet, for information on biological, chemical, and physical hazard issues, and to schedule a decommissioning survey. Additionally, for radiological site evaluations and radioactive materials disposal or transfers.
- b. Hazardous Waste Group (Tim O'Brien): For issues relating to chemical waste (hazardous waste) disposal.

REFERENCES TO STATE AND FEDERAL REGULATIONS:

Hazard Communication Standard (29 CFR 1910.1200)
The Resource Conservation and Recovery Act (RCRA)
NRC Regulations (10 CFR 20.1404 & 10 CFR 30.4)
Oregon Administrative Rules (Chapter 333, Divisions 100 through 125).
Chemical Hygiene Standard (29 CFR 1910.1450)
Blood Borne Pathogens Program (29 CFR 1910.1030)

Appendix 1

Laboratory Decommissioning and Equipment Clearance Form

Complete this form and affix to your lab equipment for any/all of the following actions:

- Removal for service or maintenance
- Relocation from the area of use
- Equipment designated out-of-service
- Equipment removed for storage, sale, transfer of ownership, or disposal

SECTION 1:

Laboratory Assigned Personnel/PI /Supervisor:

Equipment Item: _____ Department: _____
 Model Number: _____ Building/Room#: _____
 Serial Number: _____

SECTION 2:

Identify contaminants (before cleaning/decontamination has occurred):

___ Chemical ___ Biological ___ Radioactive ___ No hazard YES NO

All materials removed from equipment (Check response)		
All Surfaces cleaned?		
For surfaces cleaned, list the cleaning agent used:		
Surfaces decontaminated ?		
For surface decontamination, list the disinfectant or decontamination agent (s) used:		
Warning signs removed/covered over?		

Record the actions taken for the item identified above: YES NO

Complete this section if radioactive materials were used/stored with this piece of equipment.
 Radiation Safety must be contacted to conduct a survey and the result of the survey entered below:

Radiation safety survey conducted?		
Were all counts MDA ?		
Is there an exception for this item (list, explain)?		

All above actions completed by: _____ Date: _____

I attest that the lab equipment listed above is free of hazardous components and the surfaces have been decontaminated to remove gross contamination of chemical, biological, and radioactivity. It is safe for personnel to service, relocate, or dispose of this item.

Signature, Faculty Lead/Laboratory Assigned Personnel Date

NOTES: ITEMS CONTAINING A REFRIGERANT MUST HAVE THE REFRIGERANT REMOVED BY THE FACILITIES REFRIGERATION SHOP BIOLOGICAL SAFETY CABINETS (BSCs) USED FOR BIOLOGICAL AGENTS MUST BE DECONTAMINATED BY A CERTIFIED OUTSIDE CONTRACTOR.

Appendix 2

Portland State University Laboratory Decommissioning Form

This form is for use and completed by Environmental Health & Safety only. A copy of this document will be posted on the door of laboratories surveyed and will be provided to the Department. This form can be removed after occupancy by the new users.

Lead Faculty:		Building:	
Department:		Room #	
Phone No.:		Date:	

Compliance Activity Survey Findings			
CHECK APPLICABLE BOXES	YES	NO	N/A
Door signage removed			
All compressed gas cylinders have been removed			
All non-fixed equipment removed			
All chemicals have been removed			
Drawers and cabinets are empty and free of contamination			
All work surfaces have been cleaned and are free of contamination			
Radiation Safety Ofc.'s survey found lab free of radioactive contamination			
All biohazards have been removed			
Biosafety Cabinet(s) have been decontaminated by outside vendor			
Fume hood(s) are free of contamination			
General cleanliness & hygiene acceptable			
Other:			

Conditional Lab Decommissioning Approval: YES NO

Conditional Issues:

Lab Decommission Approved: YES NO

Inspector Signature: _____ Date: _____

NOTE: Contractors must establish appropriate work practices to maintain safe working conditions in areas to be renovated. At all times, appropriate PPE must be worn as outlined in the contractor's safe work plan. If additional information is needed, contact PSU EHS at (PHONE#).

New occupants can request additional cleaning services of the laboratory prior to occupancy.

Appendix 3

Identification tags used after decontaminating equipment from labs prior to surplus.

<p style="text-align: center;">CLEARED BY ENVIRONMENTAL HEALTH AND SAFETY</p> <p>Date Cleared: _____</p> <p>Cleared By: _____ -</p> <p style="text-align: center;">Cleared For Chemical, Biological, and Radioactive Material</p> <p style="text-align: center;">Questions? 503-725-5269</p>	
<p style="text-align: center;">CLEARED BY ENVIRONMENTAL HEALTH AND SAFETY</p> <p>Date Cleared: _____</p> <p>Cleared By: _____ -</p> <p style="text-align: center;">Cleared For Chemical, Biological, and Radioactive Material</p> <p style="text-align: center;">Questions? 503-725-5269</p>	

Appendix 4

PSU Laboratory Personnel 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:

- So that arrangements can be made for moving, cleaning, decontamination, and disposal, review this form with PSU's environmental health and safety (EHS) laboratory safety officer (503-725-4312) *at least 60 days* prior to vacating the laboratory.
- Use appropriate personal protective equipment when cleaning, during decontamination, when handling hazardous materials, and when handling waste.
- Ensure that hazardous materials and their locations remain secure.

Procedure	Date Completed
Gas Cylinders	
Remove regulators and manifolds. Cap all cylinders and bottles.	
Return cylinders to chemistry stockroom (chemstrm@pdx.edu) or supplier	
Place a work order to pick up non-returnable bottles.	
Controlled Substances	
Contact the EHS officer or DEA for moving or disposal instructions.	
Chemicals	
Label all containers.	
Evaluate and sort chemicals into categories: move, redistribute to others, research materials to preserve, unknowns, and waste.	
Contact chemistry stockroom (chemstrm@pdx.edu) to redistribute usable chemicals to other laboratories	
Review and investigate unknown materials for clues as to their identity. If not identifiable, contact EHS waste lab manager (503-725-3407)	
Place a work order 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.	
Last step: Inspect all lab spaces to verify the removal of all chemicals. Be sure to check all drawers, cabinets, cupboards, refrigerators, etc.	
Microorganisms, Cultures and rDNA	
Label all containers.	

Evaluate and sort biologicals into categories: move, research materials to preserve, and waste.	
Dispose of treated biological waste by placing a work order	
For registered recombinant DNA work, 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.	
Radioactive Materials	
Label all containers.	
Evaluate and sort radioactive materials for moving or disposal.	
To move radioactive materials, contact EHS radiations safety officer (503-725-5269) for guidance on packaging procedures and arranging shipment.	
Place a work order 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, refrigerators, freezers, and other movable and fixed equipment. Remove warning stickers.	
Survey and wipe-test lead bricks, lead pigs, shielding, and source containers to verify decontamination.	
If moving materials, ensure that the new location has been approved by EHS officer before proceeding.	
Last step: Conduct exit survey of rooms and equipment. Be sure to check all drawers, cabinets, etc. Submit survey results to EHS radiation safety officer.	
Sharps	
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. Place a work order for removal.	
Moveable Laboratory Equipment	
Decontaminate movable lab equipment that is to be left in place, moved, sold as surplus, or disposed of.	
For refrigerators, freezers, ultracentrifuges, UV boxes, transilluminators, imaging stations and other movable equipment that may be contaminated, clean, decontaminate and remove warning stickers.	
For incubators that may be contaminated with biological materials, disconnect the CO ₂ gas feed line, drain water jackets, clean, disinfect and remove warning stickers.	

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.	
Request removal of lab equipment by the surplus department by placing a work order.	
Empty Containers and Glassware	
For empty containers that held an EPA-regulated acutely hazardous waste, triple rinse with a solvent appropriate for removing the waste. Deface the label and recycle or dispose.	
For other empty containers, use practices commonly employed to empty the container (e.g., pouring, draining). Be sure that no more than 3% by weight of the container remains. Deface the label and recycle or disposal.	
Clean glassware if necessary. Redistribute usable glassware to stockrooms and other laboratories by contacting your department's laboratory manager or stockroom personnel.	
Other	
Return reusable lab coats to laundry	
Dispose of used gloves, aprons, goggles, etc. into a grey waste bin (provided by waste lab through the work order system)	
Pack all files, documentation, books, and publications.	
Shred, recycle, or destroy confidential papers.	
Contact your department for removing laboratory access.	

For more information, see Laboratory Decommissioning Standard, ANSI Z9.11 (2008), American National Standards Institute