

## **Guidelines for Laboratory Closure**

### **Introduction**

These guidelines are to facilitate the process of laboratory closure when an investigator is vacating, relocating, or renovating a lab space. Laboratories covered by this guideline handle chemicals, biohazardous materials covered under a Biosafety permit issued by the EHS Biosafety Group or radioactive materials covered under a Radiation permit issued by the EHS Radiation Safety Group. These guidelines outline procedures to ensure that the laboratory closure is conducted in accordance with health, safety and environmental regulations and standards.

### **Responsibilities**

#### Department Head

The Department Head must ensure that all principal investigators and laboratory technicians in their department are aware of and comply with this guideline. The Department Head must notify the Office of Environmental Health and Safety if a principal investigator is leaving the University, transferring a laboratory to another location, performing renovation to lab space or closing down a laboratory. The Department Head will be responsible for any cleanup costs, regulatory actions or fines resulting from non-compliance with this guideline.

#### Principal Investigator (PI) or Laboratory Supervisor

The Principal Investigator must follow these guidelines in order to leave the laboratory in a condition which is safe for the next occupant, or for construction/renovation workers. The Principal Investigator or designate must ensure the proper disposal of all hazardous materials used in the laboratory. The Principal Investigator or designate shall provide any information on location and/or equipment uses related to chemical, biological, radioactive and physical hazards. The Principal Investigator or designate shall maintain a detailed report outlining the closure activities for the lab space. In the event of a closure with multiple PIs one individual shall be assigned these responsibilities as the designate of all the PIs.

#### Property Manager

Upon being contacted regarding a laboratory renovation the Property Manager shall contact the Office of Environmental Health and Safety to confirm they are aware of the project.

#### Office of Environment Health and Safety (EHS)

Upon being notified of the laboratory closure, EHS shall ensure that the laboratory conditions and hazards are reviewed with the PI or designate prior to any work or removal being done.

EHS shall assist the PI or designate in following this guideline to ensure the closure is performed.

EHS will make available specialized Safety Officers to assist and direct the PI or designate.

#### Environmental Protection Services (EPS)

The EPS, as part of EHS, will act as the lead contact for the lab closure for notifications and laboratory surveys.

The EPS shall ensure the proper and safe disposal of any waste chemicals, biohazardous materials and radioactive materials.

The EPS will appoint one staff member as the EPS Closure Specialist for each project.

#### EHS Director

The EHS Director ensures that controllable risks associated with lab closure are minimized.

The EHS Director becomes involved in large and/or complicated closures.

The EHS Director will investigate any issues of non-compliance.

#### Biosafety Officer (BSO)

The BSO, as part of EHS, is responsible for issuing permits and permit changes for laboratories using biological agents.

The BSO will advise the PI or designate of proper methods to decontaminate equipment and lab space used for working with biological agents.

The BSO will confirm with existing PI that the lab space is decontaminated to acceptable levels.

#### Radiation Safety Officer (RSO)

The RSO, as part of EHS, is responsible for issuing permits and permit changes for laboratories using radioactive materials.

The RSO will assist the PI or designate in meeting the criteria to decommission a lab space which was working under a Radioisotope Permit.

The RSO will confirm PI that the lab space is decontaminated to acceptable levels.

#### Lab Chemical Safety Specialist (LCSS)

For laboratories with hazardous chemicals, if there is concern of contamination either in work spaces and/or fume hoods, the LCSS, from EHS, will perform Risk Assessments to determine steps needed to reduce exposure including decontamination requirements for work spaces.

### **Process and Timing**

**The Department Head must notify the EPS of a planned lab closure or renovation no fewer than four weeks in advance of the planned closure or renovation. EPS will assign an EPS Closure Specialist.**

#### Four Weeks prior to Closure

A survey of the Laboratory can be carried out by the EPS Closure Specialist and the PI involved or designate.

In the event of a large or complicated closure the EHS Director should be contacted for coordination (ie. More than one PI with multiple lab spaces).

If renovations are involved for the closure then the Property Manager should be involved in the initial survey.

Any concerns that arise about the timeline or procedures will be reviewed with the Co-ordinator, Hazardous Waste Management well in advance of the action steps.

#### Two Weeks prior to Closure

The PI or designate shall circulate a list of all hazards involved in the closure to the EPS Closure Specialist, his/her Department Head and the Property Manager.

The EPS Closure Specialist shall involve the appropriate Safety Officer for the hazards and permits related to the laboratory space (Biosafety Officer, Radiation Safety Officer or Lab Chemical Safety Specialist)

The EPS Closure Specialist must be advised of any equipment or resources to be offered to other PIs at the University. The EPS will advise the appropriate Safety Officer of any transfer involving biohazardous or radioactive materials.

Laboratory areas with a Biosafety Permit must complete the Laboratory Exit/Renovation/Decommissioning Form for Biological Agents

(<http://www.ehs.utoronto.ca/Assets/ehs+Digital+Assets/ehs3/Biosafety/Decommissioning+Bio-Chemical+Lab.pdf>) while communicating the project to their Biosafety Officer in EHS.

Radioisotope Permit laboratories must communicate, in writing the proposed changes to the Radiation Safety Officer in EHS and follow the procedures for decommissioning the lab space

(<http://www.ehs.utoronto.ca/services/radiation/drl.htm>)

Should concerns arise because of the chemicals used in the lab space or fume hoods in the past the Lab Chemical Safety Specialist will be contacted by the EHS representative to perform a Risk Assessment.

#### Just before Closure

The PI or designate will place completed Chemical Waste labels on all chemical containers that are to be picked up as waste by EPS.

([http://www.ehs.utoronto.ca/resources/wmindex/wm5\\_2.htm](http://www.ehs.utoronto.ca/resources/wmindex/wm5_2.htm)).

All gas cylinders should be returned to the supplier prior to the closure and gas cylinders that cannot be returned must be reported to EPS for disposal approval

(<http://www.ehs.utoronto.ca/services/environmental/gascyl displ.htm>).

Biowaste must be sealed, labeled and segregated before contacting EPS for disposal ([http://www.ehs.utoronto.ca/resources/wmindex/wm5\\_1.htm](http://www.ehs.utoronto.ca/resources/wmindex/wm5_1.htm)).

Radioactive waste must be properly labeled and any additional unused supplies segregated before contacting EPS for disposal

([http://www.ehs.utoronto.ca/resources/wmindex/wm5\\_3.htm](http://www.ehs.utoronto.ca/resources/wmindex/wm5_3.htm)).

The PI or designate should contact Campus Moving to schedule the removal of any hazard free equipment, recyclables or refuse after the hazardous materials are removed but before the final closure (<http://www.fs.utoronto.ca/movers.htm> ). The PI or designate must place “Safe-to-remove” tags ([http://www.fs.utoronto.ca/Assets/Facilities+Digital+Assets/Facilities+and+Services/Facilities+Digital+Assets/Recycling\\_Grounds\\_Movers/Safety+Tag.pdf](http://www.fs.utoronto.ca/Assets/Facilities+Digital+Assets/Facilities+and+Services/Facilities+Digital+Assets/Recycling_Grounds_Movers/Safety+Tag.pdf)) on any laboratory equipment that Campus Movers are expected to transport either for disposal, recycling or relocating.

#### Closure (when lab has been vacated)

The PI or designate and EPS Closure Specialist will survey the lab space at time of the closure to confirm all hazards have been removed and handled properly and safely.

The PI or designate will notify Department Head and Property Manager that the laboratory is ready for renovations or new occupant.

Caretaking should be contacted regarding full and appropriate cleaning of the vacated space.

The PI or designate shall send copies of his/her detailed closure report to the Department Head, Property Manager and the EPS Closure Specialist.

#### After Closure (when space is reoccupied)

The Department Head, responsible for the area, should notify EHS when a new principal investigator will be occupying the lab space to initiate approval of relevant permits.

This notification must be done before any further renovations or moving in takes place.

#### Contact Information

Environmental Health and Safety	416-978-4467
EHS Director	416-978-5943
EPS Closure Specialists	416-978-4821
Biosafety Services	416-978-3981
Lab Chemical Safety	416-978-4335
Radiation Protection Services	416-978-2028
Environmental Protection Services	416-978-7000
Chemical Waste	416-978-4821
Biological Waste	416-946-3473
Radioactive Waste	416-978-2050
Property Management	416-978-2331
Property Management UTM	905-828-5376
Property Management UTSC	416-287-7579
Caretaking	416-978-2314
Caretaking UTM	905-828-5293
Caretaking UTSC	416-287-7587

<b>Laboratory Closure Checklist</b>	<b>X</b>
Notify Office of EHS of impending laboratory closure	
Survey of lab space with EPS Closure Specialist	
Notify Property Manager of impending laboratory closure (if necessary)	
Review laboratory for biological decommissioning with BSO (if permitted)	
Review laboratory for radiation decommissioning with RSO (if permitted)	
Review laboratory for chemical contamination with LCSS	
Materials/equipment/supplies donated to other labs or departments	
Note chemicals for disposal with Disposal Labels	
Return gas cylinders to supplier	
Fume hoods cleared of all materials	
Lab benches, desks, storage cabinets, drawers cleared of all materials	
Department common areas (cold rooms, tissue culture rooms, equipment rooms) cleared of all materials	
Hazardous and/or unwanted chemical waste removed	
Biohazard and sharps waste removed	
Radioactive waste removed	
Safe-to-remove Tags placed on any laboratory equipment	
All equipment/ furniture (not being moved) removed with Campus Moving	
Survey the lab space with EPS Closure Specialist to confirm removal of all hazards	
Confirm Biological Permit decommissioned with BSO	
Confirm Radioisotope Permit decommissioned with RSO	
Remove all hazard or permit signs	
Caretaking contacted for cleaning of lab space	
Notify EHS of new occupant to use laboratory	

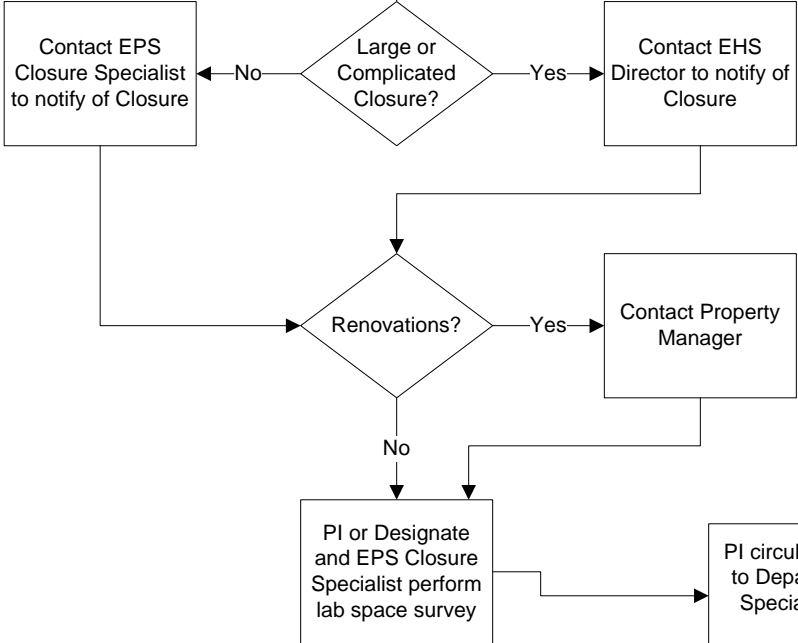
Department Head / Business Officer looking at PI leaving, relocating or renovating lab space

The process of laboratory closure when an investigator is vacating, relocating, or renovating a lab space.

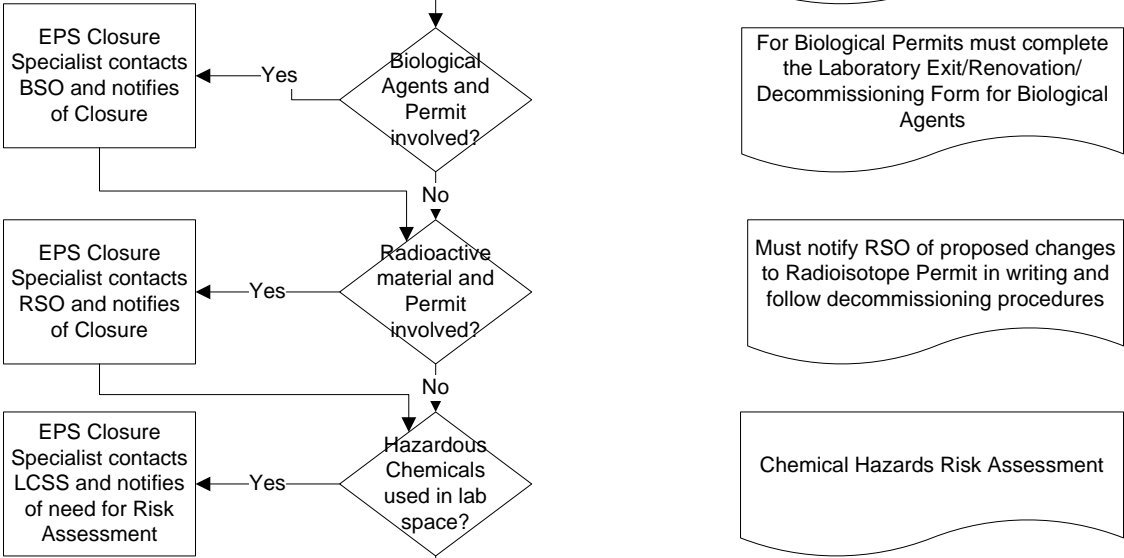
Closure Timeline

Large or complicated closure involves more than one PI with multiple lab spaces.

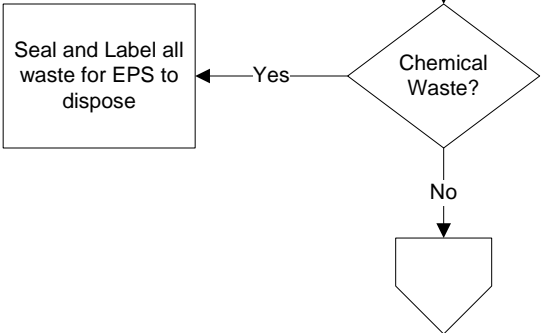
4 Weeks Prior



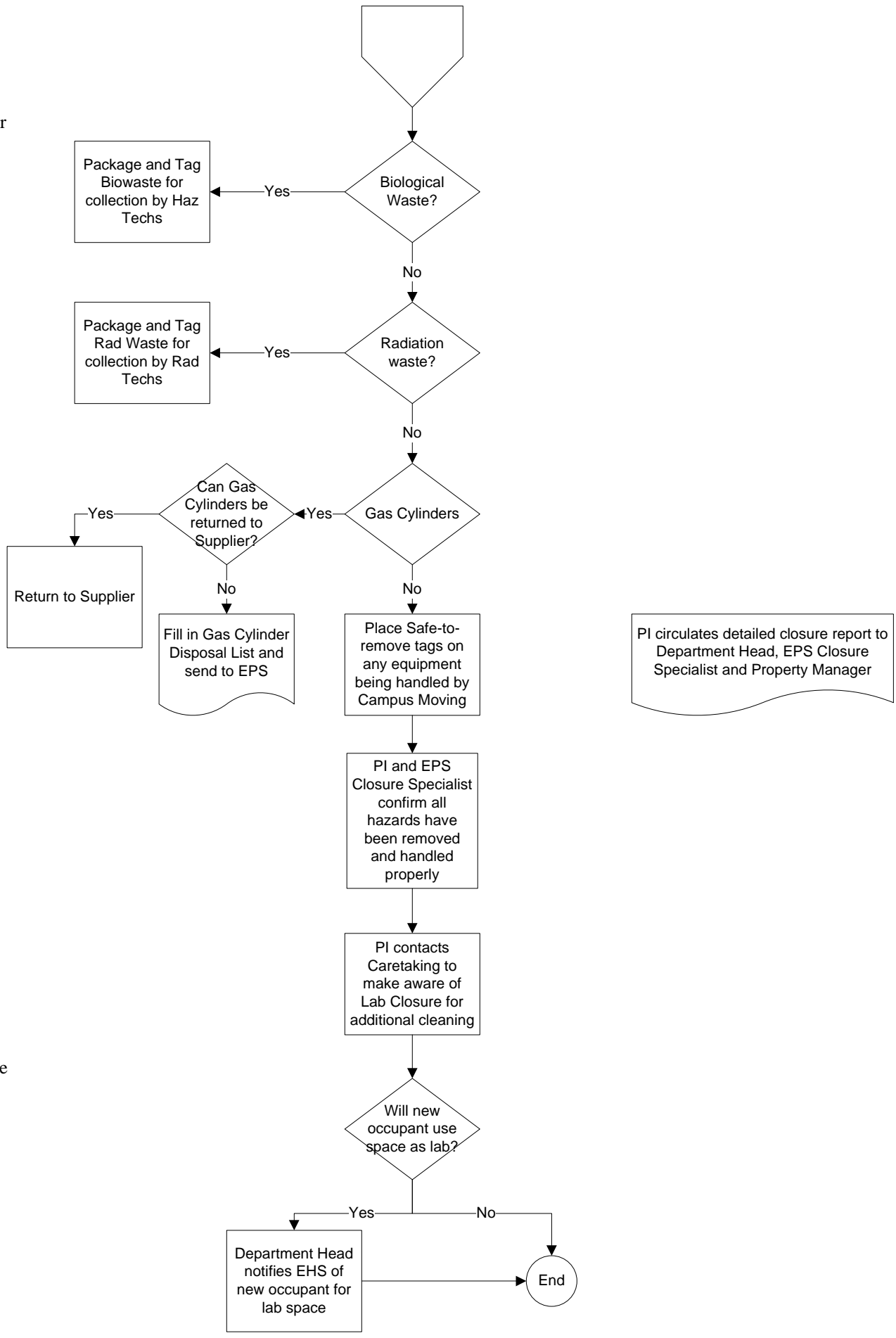
2 Weeks Prior



1 Week Prior



Closure  
Timeline  
1 Week Prior



Closure

After Closure