



Issue Date: March 23, 2011

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Approved By: Manager, Environmental Health & Safety

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1.0 PURPOSE

The purpose of this plan is to outline closeout procedures to be followed by departments in order for the Chemical Control Centre to properly remove or relocate hazardous materials during a laboratory closure or relocation.

2.0 SCOPE

This procedure applies to laboratories at the University of Windsor that are relocating or closing an area that requires the relocation or disposal of hazardous materials by the Chemical Control Centre.

3.0 DEFINITIONS

CCC: Chemical Control Centre

HMIS: Hazardous Materials Information System

HMT: Hazardous Materials Technician

MSDS: Material Safety Data Sheet

PI: Principal Investigator

QPIC: Qualified Person in Charge – Controlled Substances

RSO: Radiation Safety Officer

4.0 RESPONSIBILITIES

PI's/Department Heads:

- Contact CCC prior to laboratory closure or relocation to ensure ample time to arrange for proper disposal and/or packing of hazardous materials by HMT;
- Provide full inventory of hazardous materials to be relocated with MSDS's to HMT;
- Provide full inventory of hazardous materials to be disposed of with MSDS's to HMT;
- Any regulatory action or fines resulting from an inappropriate management or disposal of hazardous materials shall be the responsibility of the Principal Investigator;
- PI's who do not prepare chemicals for disposal according to the procedures may be charged for costs incurred by the CCC to remove these materials. For example, unknown chemical identification, or abandonment of hazardous materials; and
- If a Principal Investigator is unsure of proper disposal procedures, it is his/her responsibility to contact the CCC.

CCC/Hazardous Materials Technician:

- Review provided inventories to determine materials required for proper packaging or disposal;
- Visit laboratories to assist with closure or relocation plans;
- Perform final inspection of laboratory prior to closure and complete Hazardous Materials Closeout Check-List Form (Appendix 1); and
- Remove contaminated/hazardous materials from equipment, for example mercury switches.



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5.0 REFERENCE DOCUMENTS

University of Windsor's Hazardous Materials Disposal Guide

University of Windsor's Biological Safety Program (on website at www.uwindsor.ca/safety)

University of Windsor's Radiation Safety Program (on website at www.uwindsor.ca/safety)

Hazardous Materials Closeout Check-List Form

6.0 PROCEDURE

In order for the HMT to remove hazardous materials from the laboratory, the following outlined procedures shall be completed when the Principal Investigator (PI) or other responsible individual leaves the University of Windsor or transfers to a different laboratory:

Chemicals

- (1) Check all storage areas (i.e., fume hoods, store rooms, cabinets), common service areas, refrigerators, and freezers for chemicals.
- (2) Determine which chemicals will be relocated and complete inventory.
- (3) To prepare chemicals for disposal:
 - Label all containers with the name of the chemical (abbreviations are not acceptable).
 - Securely close all containers. Open containers (i.e. uncapped flasks or jars) are not acceptable.
 - Remove the chemicals or residues from beakers, flasks, evaporating dishes, etc, rinse with appropriate solvent and clean.
 - An updated inventory of the chemicals scheduled for re-use must be available.
 - Current MSDS's must be available and HMIS records must be updated.
 - Chemical disposal must be completed before the laboratory is vacated.

Gas Cylinders

- (1) Close the gas valves
- (2) Remove gas connection from the equipment
- (3) Fasten the cylinder caps
- (4) Return all gas cylinders to the CCC.

Please ensure that the cylinder status tag reflects the current state of the cylinder: Full, In-Service or Empty.



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Biological Hazards: Animal Tissues

- (1) If tissue is stored in a liquid preservative, separate the tissue and liquid
- (2) Bag and seal the tissue in a biohazard bag or red biohazard pail and place in the appropriate freezer.
- (3) Liquid preservatives such as formalin should be disposed of as hazardous waste. Fasten the cylinder caps.
- (4) Defrost and clean refrigerators and freezers once they are empty. Disinfect with 10% bleach solution.
- (5) Check all shared refrigerators, freezers, cold rooms and other storage areas to ensure all your experimental materials have been properly disposed of.
- (6) Update HMIS inventory records

Microorganisms and Cultures

- (1) Locate all stored microorganisms or cultures in the freezers, incubators, refrigerators and cold rooms.
- (2) Autoclave or disinfect to inactivate liquid cultures and culture plates prior to disposal.
- (3) Clean all laboratory areas that contained microorganisms including freezers, refrigerators, cold rooms, and incubators, and disinfect with 10% bleach.
- (4) Update HMIS inventory records.

Contact the HMT with any questions regarding the disposal of microorganisms and cultures.

Controlled Substances

The person having custody of the controlled substance must dispose of outdated, surplus, no longer intended for use, and waste controlled substances according to regulations.

If disposing of controlled substances, collect all necessary paperwork (record of the acquisition, use and disposal log). The use and disposal logs shall include:

- (1) Name of the substance.
 - (2) Number of units or total volume of each commercial container.
 - (3) Number of commercial containers of each substance.
 - (4) Expiration date and lot numbers of the containers.
 - (5) Name, address and registration number of the source from which the containers were received.
- Notify the CCC of pending lab closeouts. Present the QPIC with a list of controlled substances that are intended to be disposed of or transferred. Arrange for pickup and disposal of controlled substances. Please allow ample time for this process.
 - Update HIMS inventory records.
 - Abandonment or improper management of a controlled substance is a violation of the permit.



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Radioactive Materials

- (1) If you are moving to another location on campus you must:
 - Notify the RSO of the new location and get permission to use material at that location BEFORE moving.
 - Provide the RSO with all contamination surveys of all storage and use areas within the lab.
 - Perform a final contamination survey of all storage areas, use areas and equipment within the lab. Decontaminate any contaminated areas or equipment and perform a follow-up survey. Provide a copy of this to the RSO.
- (2) If you are not moving to another location on campus, you must:
 - Reconcile your inventory with the RSO. This means you have to account for each vial of material delivered to your lab.
 - For each piece of equipment with a radiation sticker, inform the RSO the nature of potential contamination including isotope(s) used with that equipment
- (3) If you are moving off campus you may not take any radioactive material with you without consulting the RSO and obtaining permission. This includes counting equipment (liquid scintillation for example) that has embedded sources.
- (4) If you are moving off campus, OR are no longer using radioactive materials, you must inform the RSO with the names of all personnel so he/she may delete dosimetry devices (film badges) or rings as necessary.
- (5) All radioactive dry, solid waste must be "tagged & bagged". All radioactive waste (solid and liquid) must be labeled with the isotope, activity in microcuries, date and name of authorized user. Additionally, liquid waste must be labeled with the name of the compound(s) and contact CCC for disposal.

Equipment and Shared Storage Areas

- (1) Clean and decontaminate all equipment before the lab is closed.
- (2) If the equipment has been used in a radioactive environment, clean and decontaminate all parts of the equipment. Notify the Radiation Safety Officer.
- (3) If the equipment has been used in a biohazardous environment, clean and decontaminate (with 10% bleach solution) all parts of the equipment. Notify Biosafety office.
- (4) If the equipment to be discarded has, circuit boards, transformers, mercury switches, mercury thermometers, radioactive sources, lasers, X-rays and/or Freon refrigerants contact the Hazardous Materials Technician for assistance prior to disposal. The equipment **must be cleaned and decontaminated** prior to contacting HMT.



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- (5) Contact the HMT at with any questions regarding disposing of hazardous materials from shared storage areas, for example, cold rooms, stock rooms, flammable liquid cabinets and waste disposal areas.

7.0 REVISION HISTORY

Date (yyyy/mm/dd)	Revision
2015/06/15	All Sections



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Appendix 1 – Laboratory Closeout Checklist

Laboratory Information

Laboratory to be closed out: Building _____ Room(s) _____

Date laboratory will be vacated: _____

Researcher, Lab coordinator (please print): _____ Dept.: _____

Checklist

	Yes, N/A	Initials
CHEMICALS	-----	-----
Identify all chemicals for disposal		
Label all containers with full chemical name(s)		
Submit surplus list to CCC at least 4 weeks prior to lab closeout		
Clean all laboratory surfaces including hoods		
Confirm that all hazardous waste and surplus chemicals have been removed		
If transferring chemicals to another lab, call CCC for proper procedure		
If chemicals are in CCC inventory system, update records to include disposal information or reflect transfer to another laboratory		
-----	-----	-----
GAS CYLINDERS	-----	-----
Return to CCC		
Identify content of cylinder(s) even if "empty"		
-----	-----	-----
MICOORGANISMS AND CULTURES	-----	-----
Place waste in biohazard bag		
Autoclave waste then over bag for disposal		
Clean all equipment used with above proper disinfectant		
Transfer of active microorganism and cultures to:		
Print Name		
Update inventory records		
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RADIOACTIVE MATERIALS	-----	-----
Package all surplus and waste radionuclides in approved and label waste container		
Complete rad. waste tags and attach to containers		
Call CCC to arrange pickup		
Checklist (continued)	Yes, N/A	Initials
RADIOACTIVE MATERIALS (continued)	-----	-----
Perform contamination survey, decontaminate and re-survey if necessary		
Schedule closeout survey with RSO		
Remove all rad. Signs, stickers, postings, etc.		
Transfer inventory to:		
Print Name		
Prepare rad. Materials for shipment to new location update inventory records		
Return dosimeters and holders to RSO		
Return security keys to RSO		
-----	-----	-----
MIXED HAZARDS	-----	-----
Identify any mixed hazards, call CCC for guidance		
Submit chemical list to CCC		
-----	-----	-----
EQUIPMENT AND LAB FURNITURE	-----	-----
Clean or decontaminate any equipment or furniture to be left in lab		
Call CCC for disposal information regarding contaminated equipment or furniture		
Identify any equipment containing capacitors, PCBs, circuit boards, transformers, mercury switches, mercury thermometers, radioactive sources, lasers, x-rays sources, and/or Freon refrigerant, to CCC		
-----	-----	-----
SHARED STORAGE AREAS	-----	-----
Check all shared areas for hazardous materials		
-----	-----	-----
LAB INSPECTION	-----	-----
Voluntarily request an exit inspection by CCC		



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Department Clearance

Researcher's Agreement

I certify that my staff and I have adequately cleaned out and decontaminated the laboratories under my supervision.

Researcher's Signature

Date

Department Head/Designee

I am aware of the status of the lab(s) being vacated and I understand that I am responsible for the laboratory space and contents of the vacated lab(s).

Department Head's/Designee's Signature

Date

Please return a copy of this form to the Chemical Control Centre.