



Delaware State University

University Area Responsible: Risk and Safety Management

Policy Number and Name: 7-22: Laboratories Closeout

Approval Date: 7/28/11

Reviewed: 7/26/2013

Revisions: 8/13/2013

Related Policies and Procedures: 7-31: Hazardous Waste Material Handling, 7-32: Hazardous Waste Disposal Policy

1. Purpose

The purpose of this Policy is to outline proper closeout procedures for Research and Clinical laboratories.

2. Policy and Procedures

The following hazards require completion of the outlined procedures when the Principal Investigator (PI) or other responsible individual leaves Delaware State University or transfers to a different laboratory:

2.1 Chemicals

- 2.1.1 Check all storage areas (i.e., fume hood cabinets, store rooms, cabinets), common service areas, refrigerators, and freezers for chemicals.
- 2.1.2 Determine which chemicals are usable and transfer responsibility for these materials to another investigator who is willing to take charge of them, or contact the Office of Environmental Health and Safety (EHS) at 302-857-7095. The materials should be disposed of according to University Policy for hazardous waste disposal (7-32) and EHS guidelines. **Hazardous chemicals must not be disposed in the sink or as regular waste; they must be collected for disposal.**
- 2.1.3 If you are moving to another laboratory within campus, it is your responsibility to properly pack and label all your chemicals and transfer them in a safe manner. If you transfer them via public streets you must comply with the Department of Transportation (DOT) regulations by contracting out with a properly licensed outside vendor to prepare chemicals for disposal:
 - 2.1.3.1 Ensure that all containers are labeled with the name of the chemical (abbreviations are not acceptable!).
 - 2.1.3.2 Securely close all containers.
 - 2.1.3.3 Remove the chemicals or residues from beakers, flasks, evaporating dishes, etc, rinse with appropriate solvent and clean.
 - 2.1.3.4 An updated inventory of the chemicals scheduled for re-use must be available.
 - 2.1.3.5 A Chemical Waste Disposal Form must be completed and submitted to EHS before the laboratory is vacated.

2.2 Gas Cylinders

- 2.2.1 Close the gas valves.
- 2.2.2 Remove gas connections from the equipment.
- 2.2.3 Fasten the cylinder caps.
- 2.2.4 Return all gas cylinders.

2.3 Biological Hazards: Animal and Human Tissues

- 2.3.1 If tissues or carcasses have been stored in liquid preservatives such as formalin, the liquid compounds must be separated and disposed as hazardous waste as per University policy. Contact EHS at 302-857-7095 with any questions on disposing of liquid preservatives.
- 2.3.2 Bag and seal the tissue and carcasses in a red bio-hazardous waste bag. Any tissue that is radioactive must be disposed of as radioactive waste.
- 2.3.3 Place bags in the appropriate carcasses freezer at RMSB. Tissues will be incinerated.
- 2.3.4 All refrigerator, freezer and cold rooms must be emptied, defrosted and cleaned once they are empty. Disinfect with 10% bleach solution or any approved disinfectant.
- 2.3.5 If any tissues are to be saved, identify an investigator who will take responsibility for them. Check all shared refrigerators, freezers, cold rooms and other common storage areas to ensure all your experimental materials have been properly disposed.

2.3.6 Contact the EHS at 302-857-7095 with any questions regarding the disposal of biomedical waste.

2.4 Microorganisms and Cultures

2.4.1 Locate all stored microorganisms cultures in the freezers, incubators, refrigerators and cold rooms.

2.4.2 Autoclave liquid cultures for 20 minutes or treat them with bleach over night and then pour down the drain, running water for 5 minutes afterward.

2.4.3 Place culture plates into biological waste bags and then autoclave.

2.4.4 Remove all unwanted microorganisms stored in the freezers and place the vials in biological waste bags and then autoclave for at least 20 minutes. Microorganisms stored in glass containers should be placed into the plastic biological waste containers before autoclaving.

2.4.5 Place microorganisms that are to be used by another investigator into containers labeled with the name of this investigator and transfer to his or her freezer storage space. The investigator receiving these microorganisms takes responsibility for them.

2.4.6 Clean all laboratory areas that contained microorganisms including freezers, refrigerators, cold rooms, and incubators, and disinfect with 10% bleach solution.

2.4.7 Contact EHS at 302-857-7095 with any questions regarding the disposal of microorganisms and cultures.

2.5 Controlled Substances - Individuals licensed for working with or having custody of controlled substances must dispose of outdated, surplus, no longer intended for use, and waste controlled substances according to Federal and State regulations.

2.5.1 Controlled substances are the legal responsibility of the registrant under the license through which they were obtained.

2.5.2 If the controlled substances are used or associated with a research protocol using animals and dispensed by Division of Veterinary Resources (DVR), disposal of these controlled substances must be done according to DVR policy. Contact DVR (302-857-7095) with any questions on the handling of these controlled substances.

2.6 Radioactive Materials

2.6.1 If you are moving to another location in the Medical Center you must: (A) Notify the Radiation Safety Officer (RSO) of the new location and get permission to use material at that location BEFORE moving. (B). Provide the RSO with all contamination surveys of all storage and use areas within the lab and with the sink log. (C). 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.

2.6.2 For each piece of equipment with a radiation sticker, inform the RSO the nature of potential contamination including isotope(s) used with that equipment. Insure all survey meters and radiation counters that are Medical Center equipment are turned in. If you are leaving the University, 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. If you are moving to another lab, OR are no longer using radioactive materials, you must inform the RSO with the names of all personnel so he or she may delete dosimetry devices (film badges) as necessary. All radioactive dry, solid waste must be “tagged & bagged”. All radioactive waste (solid and liquid) must be labeled with the isotope, activity in micro curies, date and name of authorized user. Additionally, liquid waste must be labeled with the name of the compound(s).

2.7 Equipment and Shared Storage Areas

2.7.1 Clean and decontaminate all equipment before the lab is closed.

2.7.2 If the equipment has been used in a radioactive environment, clean and decontaminate all parts of the equipment.

2.7.3 If the equipment has been used in a biohazardous environment, clean and decontaminate with the appropriate disinfectant all parts of the equipment.

2.7.4 If the equipment is to be discarded, please note that capacitors, circuit boards, transformers, mercury switches, mercury thermometers, radioactive sources, and Freon refrigerants must be removed **prior** to disposal. However, the equipment **must be cleaned and decontaminated** prior to discarding.

2.7.5 Special Note: Please check all the common service ultra-low freezers, refrigerators, Cold rooms, etc., where you may have samples stored. Please discard all your samples **prior to** lab closure, or transfer to an investigator who will assume responsibility.

2.7.6 Contact EHS at 302-857- 7095 with any questions regarding disposing of hazardous materials from shared storage areas (e.g., cold rooms, stock rooms, flammable liquid cabinets and waste disposal areas).

3. Responsibility

3.1 **The Principal Investigator is the ultimate responsible person for the clean out of any vacated laboratory space.** Any regulatory action or fines resulting from an inappropriate management or disposal of hazardous materials shall be the responsibility of the Principal Investigator and/or the respective department.

3.2 Investigators who do not prepare chemicals for disposal according to the above procedures and University policies will be charged for costs incurred in the preparation, removal and disposal these materials. The Clearance form will not be signed by EHS or assigned department as needed.

3.3 If an Investigator is unsure of proper disposal procedures, it is his/her responsibility to contact EHS at 302-857-7095.

4. References

4.1 Delaware State University’s OFFICE OF ENVIRONMENTAL HEALTH AND SAFETY

4.2 Department of Justice Website with forms for changing addresses, reporting losses, reporting disposal of controlled substances:

http://www.deadiversion.usdoj.gov/online_forms.htm

4.3 Disposal of Controlled Substances:

http://www.deadiversion.usdoj.gov/21cfr_reports/surrend/41/41_instruct.htm

- 4.4 Information on Loss or spillage of controlled substances:**
http://www.deadiversion.usdoj.gov/fed_regs/rules/2003/fr0708.htm
- 4.5 Attachments/Appendix: Chemical Waste Form.**