

Laboratory Check-Out Procedures for Departing Researchers¹

I. Purpose

The intent of this program is to ensure that all hazardous materials used in laboratories and hazardous waste generated by researchers are disposed of properly when a research faculty, staff or student leaves Montana Tech. Proper disposition of hazardous materials is the responsibility of the principal investigator or researcher and ultimately becomes the responsibility of the department. Proper disposition of hazardous materials is required whenever a responsible individual leaves Montana Tech or transfers to a different laboratory.

If improper management of hazardous materials occurs, the responsible department will be charged for any analytical and/or disposal costs associated with those materials.

Any regulatory action or fines resulting from improper management or disposal of hazardous materials will be the responsibility of the generating department.

II. Closeout Procedures for Hazardous Materials in Laboratories

The responsible individual must complete the following steps. The check-out sheet must be completed and signed and will be kept on file in the Office of Environmental Health and Safety.

A. Chemicals

1. Ensure that all containers of chemicals are labeled with the name of the chemicals and other required information. See *The Hazard Communication Plan* for details.
2. All containers must be securely closed.
3. Beakers, flasks, evaporating dishes, etc. should be emptied.
4. Hazardous chemical waste must not be put down the sewer or in the trash; it must be turned over to EH&S (Environmental, Health and Safety) for proper disposal.
5. Check refrigerators, freezers, fume hoods and bench tops as well as storage cabinets for chemical containers.
6. Determine which chemicals are useable or should be retained and transfer responsibility for these materials to another party who is willing to take charge of them. If a new user cannot be found, the materials should be properly disposed of.
7. All other materials should be prepared for disposal. Refer to the Hazardous Waste Management section of the *Chemical Hygiene Plan*. This process can take some time and should be started at least a month before departure from the laboratory. Contact EH&S for the *Montana Tech Hazardous Materials Manifest* form which must be completed for any hazardous waste that will be transferred to EH&S. Contact EH&S for transfer of materials to the hazardous waste storage room.

¹ A researcher or "responsible individual" can include faculty, staff, guest-researchers, post-doctoral, graduate and undergraduate students.

8. Any containers whose contents cannot be identified must be analyzed before disposal can take place. The generator is responsible for arranging and paying for analysis of unknowns. Some analyses can be done on campus; others must be sent to certified laboratories. EH&S will provide assistance if needed.
 9. Notify Department Head and EH&S when a laboratory is ready for inspection.
- B. Gas Cylinders
1. Remove gas connection, replace cylinder caps, and return cylinders to suppliers or transfer responsibility to another party.
 2. If cylinders are non-returnable, contact EH&S.
- C. Microorganisms and Cultures
1. If an autoclave is available, decontaminate waste and dispose in regular trash.
 2. If materials cannot be decontaminated, place in biohazard bag for incineration.
 3. Clean incubators, drying or curing ovens, refrigerators and freezers.
 4. If samples need to be saved, locate appropriate person to take responsibility for them and notify Department Head.
- D. Controlled Substances
1. Controlled substance permits are issued by U.S. Drug Enforcement Agency (DEA) and are issued to individual researchers.
 2. Abandonment of a controlled substance is a violation of the DEA permit under which it was held.
 3. If the responsible individual wishes to transfer ownership of the controlled substance to another person, he or she must obtain permission for the DEA office, Diversion Investigator Department, in Denver, (303) 705-7300.
 4. If controlled substances are found for which the licensee is unknown, contact DEA at the above number. In most instances, if the controlled substance is to be disposed of, local law enforcement will assist with the disposal.
 5. Notify Department Head and DEA on disposition of controlled substances.
- E. Animal Tissue
1. If the tissue is held in liquid preservative, tissue and liquid should be separated.
 2. Contact EH&S for disposal instructions for animal tissues.
 3. Liquid preservative usually needs to be disposed as a hazardous waste. Do not assume that the preservative can be put down the drain. Contact EH&S for assistance.
 4. Defrost and clean refrigerators and freezers.
 5. If samples or specimens need to be saved, locate appropriate person to take responsibility for them and notify Department Head.
- F. Radioactive Materials
1. Prior to close out of a radioactive materials use area and/or radioactive materials use permit, the department and the authorized permit holder are responsible to assure that the following steps have been completed:

- a. Package all radioactive materials (stock vials, sealed sources, lead containers/shields and wastes) and label them appropriately² for pickup as radioactive waste or for transfer to another permitted use area.
- b. Prior to removal or disposal of empty uncontaminated containers to unrestricted areas, remove or deface the radioactive materials label or otherwise clearly indicate that the container no longer contains radioactive materials.
- c. Prior to transfer, notify the Radiation Safety Officer (RSO) (4463) to obtain authorization for the transfer and to assure the new use area is properly posted and permitted by the RSO.
- d. Arrange for pickup of all radioactive wastes through the RSO (4463).
- e. Following removal of all radioactive wastes and stock materials, perform a contamination survey of all former storage and use areas within the laboratory or under the permit to be closed out. NOTE: Areas of potential residual contamination include refrigerators and freezers, centrifuges, water baths, hoods, sinks, floor areas under waste containers, etc. Also, if there are contaminated areas or equipment in the laboratory, they must be decontaminated. A follow-up survey must be made of the decontaminated areas and the results included in the above survey.
- f. Provide the Department Head and the RSO with a copy of the final contamination survey.
- g. Schedule the Radiation Safety closeout survey with the RSO (4463). Do not allow further use of the room until the RSO closeout survey is complete and the radiation caution door posting is removed.
- h. If the permit holder fails to satisfactorily complete the above steps, the Department will be responsible for the completion of (or payment of costs to complete) the required closeout steps. The department is responsible for immediate notification of the RSO if the above steps have not been completed.

G. Equipment

1. If laboratory equipment is to be left for the next occupant, clean or decontaminate it before departing the laboratory. If exhaust or filtration equipment has been used with extremely hazardous substances or organisms, alert EH&S and Physical Facilities.
2. If laboratory equipment is to be discarded, be aware that capacitors, circuit boards, transformers, mercury switches, mercury thermometers, radioactive sources and chemicals must be removed before disposal.
3. Equipment potentially contaminated with radioisotopes should be surveyed by the RSO (4463).

H. Shared Storage Areas

1. One of the most problematic situations is the sharing of storage units such as refrigerators, freezers, cold rooms, stock rooms, waste collection areas, etc., particularly if no one has been assigned to manage the unit. Departing researchers must carefully survey any shared facility in order to locate and appropriately dispose of their hazardous materials.

² Each container of licensed materials must have a clearly visible label with the words "CAUTION, RADIOACTIVE MATERIAL" or "DANGER, RADIOACTIVE MATERIAL." The label must also provide sufficient information such as radionuclide(s) present, an estimate of the quantity of radioactivity, the date for which the activity is estimated, radiation levels, kinds of materials, and mass enrichment.

III. Regulatory Impact

Mishandling of hazardous materials can result in citations, fines, and/or loss of right to use hazardous materials. Fines are paid by the department incurring them.

Reviewed December 2015

Termination of Laboratory Use Check-Out List

Name _____ Title _____

Room # & Building _____

Chemicals

Date Completed or N/A

- Check all cabinets, benches, fume hoods, refrigerators, etc. _____
- Evaluate all chemicals and label all containers _____
- Transfer responsibility of chemicals to: _____
- Evaluate all samples and label all containers _____
- Transfer responsibility of samples to: _____
- Prepare chemical waste for shipment. Submit *Montana Tech Hazardous Materials Manifest* form to EH&S _____
- Confirm that hazardous waste has been removed _____
- Clean laboratory surfaces _____

Gas Cylinders

- Return to supplier. For non-returnable cylinders, contact EH&S _____
- Or transfer responsibility to: _____

Microorganisms and Cultures

- Autoclave waste _____
- Disposed of waste in proper manner _____
- Clean incubators, ovens, and refrigerators _____
- Transfer responsibility of samples to: _____

Controlled Substances

- Contact U.S. Drug Enforcement Agency regarding status of permit _____
- Arrange for disposal by calling EH&S _____

Animal Tissue

- Dispose of tissue. Method _____
- Dispose of preservative. Method _____
- Clean refrigerators and freezers _____
- Transfer responsibility of samples to: _____

Equipment

- Clean or decontaminate equipment to be left in place _____
- Contact EH&S regarding disposal of equipment _____

Shared Storage Areas

- Check all shared storage areas for hazardous materials _____

Department Sign-Off

Researcher Signature _____

Date _____

Department Head Signature _____

Date _____

EH&S Director Signature _____

Date _____

Account to be in charge for disposal _____