Moving and/or Exit Procedures for Laboratories

rev. 2023-1211

Background Information

This document provides guidance on procedures for moving or exiting laboratory space(s) where procedures have been performed or there has been storage of potentially hazardous materials.

Potentially Hazardous Materials may include but are not limited to:

- Infectious agents (viral, bacterial, fungal)
- Recombinant or synthetic nucleic acid materials (ex: plasmids with inserts, viral vectors)
- Human or infected animal blood, fluids, cells, and tissues.
- Human blood, blood products, fluids, tissues, cell lines
- Toxins of biological origin (ex: cholera toxin, tetrodotoxin, botulinum neurotoxin)
- Corrosive, acutely toxic, sensitizing, oxidizing, flammable, or reactive experimental chemicals
- Radionuclides, Radiation producing equipment
- Laboratory equipment that has been used in conjunction with the above listed materials

IN ORDER TO RECEIVE CLEARANCE FROM THE DEPARTMENT OF RESEARCH SAFETY, THE FOLLOWING PROCEDURES MUST BE COMPLETED.

Procedures

I. Determine what hazardous materials are currently housed in your laboratory, and of these, determine which of these materials will be moved to your new location, transferred to another investigator, or disposed.

A. If any biohazardous, chemical or radioactive materials will be shipped off campus, all appropriate DOT/IATA regulations must be followed. Please contact Environmental Management (859) 323-6280 for information on shipping requirements.

B. Some materials may be moved between UK laboratories using appropriate primary and secondary containers.

1. Primary containers.
    a. Seal the agent in a leak-proof primary container. Typically, this is the vial or container in which the agent is stored.
    b. Small or delicate items should also be placed in a sealed, plastic zip-top style bag.
2. Secondary containers.
    a. Place primary container in the secondary container.
    b. Secondary container should be of a leak-proof and shatter proof design capable of containing contents if dropped in transit.
    c. Thin or non-reinforced Styrofoam containers are NOT appropriate for use as secondary containers. These types of containers are not shatter-proof.
    d. Ensure the outside of secondary container is devoid of contamination of hazardous materials before removing from the lab space. If the originating lab

possesses biohazardous materials, disinfect the outside of the secondary container with a 10% bleach solution followed by water or 70% ethanol to remove bleach residue[1].

e. Label secondary container with a universal biohazard sticker or radioation symbol/sticker, if transporting these materials. See the end of this document for examples of these symbols.

3. Transport secondary container to new location.
   a. Do not wear gloves while transporting the secondary container. Disinfection of the outer surface of the container removes the need for gloves.
   b. Choose appropriate transport path.
      i. Avoid high traffic areas and areas where patients are present.
      ii. Use freight elevators.
      iii. Minimize transport outside of buildings.
4. Remove the primary container and place in new storage location.
5. Disinfect inside and outside of secondary container if needed, based on transported contents.

II. No hazardous materials, waste, or contaminated equipment may be left in the laboratory. Please ensure that all hazardous materials and waste remaining in the laboratory are properly decontaminated and disposed of via E-trax ticketing/pickup, autoclaving or chemical disinfectant approved for the agent(s) in use.

A. Check in cold rooms, freezers, and refrigerators for materials that could easily be forgotten. Old samples, chemicals, materials from past staff and students or inherited samples must be either disposed or moved. These pieces of equipment, if remaining behind in the lab space, must be emptied, and will be checked before clearance is issued by Research Safety.
B. Disposal of preserved specimens may require special handling since the preservative is usually a hazardous chemical. If the tissues/organs are small (mouse size organs) and not easily recognizable, the entire vial may be treated as chemical waste. However, larger human organs must be separated from the liquid preservative and disposed into red bag waste and the liquid collected as chemical waste. Please contact the office of Environmental Management (859) 323-6280 for disposal of either red bag or chemical waste.
C. Disposal of radioactive materials requires notification to and pickup by the Radiation Safety Team. Please contact the Radiation Safety team at (859) 323-6276.
D. All Sharps materials should be collected into an approved secure lidded sharps container and disposed through E-trax/Environmental Management (859) 323-6280.

III. Clean and decontaminate all work surfaces including bench tops, doors, and cabinet handles. If the laboratory had biohazardous materials in use, decontamination shall be performed with freshly prepared 10% bleach solution followed by water or 70% ethanol to remove bleach residue.[1]

IV. Decontaminate all equipment that has been used in conjunction or contaminated with hazardous materials. Any equipment that has been labeled with the universal biohazard or radiation symbol must be inspected by and cleared by Research Safety representatives.

A. Clean inside and outside of equipment with soap and water.
B. Wipe down inside and outside of equipment. Biohazardous materials requires wipe down with a suitable disinfectant appropriate for the agent(s) in use and which is specified on the

laboratory's Institutional Biosafety Committee (IBC) registration. For radioactive materials, consult the Radiation Safety Team at (859) 323-6276.

C. Below you will find specific decontamination information for common laboratory equipment.

1. Refrigerators/Freezers
    a. Clean out refrigerator and defrost freezer if present.
    b. Triage contents to reduce what is to be moved or disposed.
    c. Refrigerators and freezers must be emptied of all contents.
2. Incubators and water baths
    a. These must be drained of all standing water including water in water-jacketed incubators.
3. Liquid nitrogen dewars
    a. Remove contents of dewar.
    b. Allow any remaining liquid nitrogen to evaporate from dewar in a well- ventilated area.
4. Biological Safety Cabinets (BSC)
    a. Remove all contents from the BSC.
    b. Wipe down inside and outside exposed surfaces with a disinfectant solution such as 10% bleach solution followed by water or 70% ethanol to remove bleach residue. At no time should the user attempt to access the inner mechanical system of the BSC.
    c. In certain cases, BSCs may need to be decontaminated by a certified contractor prior relocation or use by the next laboratory occupant. If you are exiting a laboratory that contains a BSC, please contact the Biosafety team at (859) 257-1073 one month prior to your exit date to allow for sufficient time to schedule any additional required decontamination.
5. Chemical Fume Hoods (CFH)
    a. Remove all contents from the CFH and ensure surface is cleared of any debris.
    b. If the inside of the CFH is free from spills, clean the inside working surface and sash with soap and water. Dry with paper towels.

V. When you have completed the procedures described above, please email labsafety@uky.edu to schedule required the Lab Clearance audit and any remaining equipment clearance. This audit documents the space as cleared of all hazards and is required of all research science laboratories before relinquishing occupation of a lab space. An example of the Research Safety lab clearance form can be found at the end of this document. **PLEASE NOTE:** PPD HOUSECLEANING STAFF SHALL NOT BE PERMITTED TO DEEP CLEAN THE SPACE PRIOR TO DOCUMENTATION OF THE CLEARANCE OF HAZARDOUS MATERIALS.

VI. Please note that lab exits may involve other departments within Environmental Health and Safety (EHS), depending on the scope of work and materials in use.

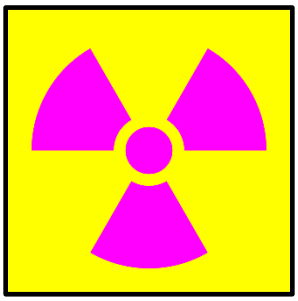
A. Disposal of radioactive waste or equipment that contains a radioactive source (for example, liquid scintillation counters, gas chromatographs) should be coordinated through **Radiation Safety (859) 323-6276.**
B. Oils must be removed from pumps, capacitors, power supplies, or other oil-filled equipment. For assistance with analysis of the oil and assistance with oil disposal contact **Environmental Management (859) 257-3285**.

Additional Notes

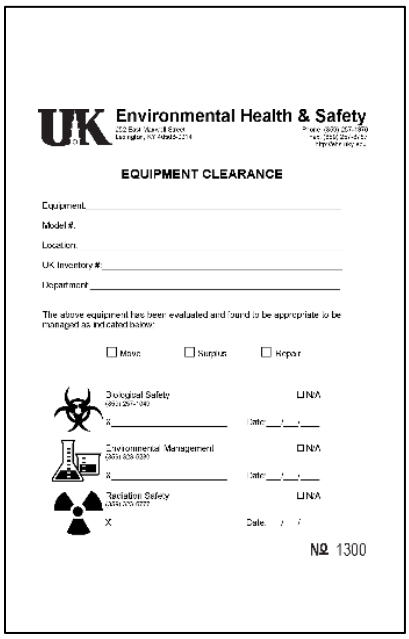
A 10% bleach solution followed by water or 70% ethanol to remove bleach residue is the most commonly recommended disinfectant at UK. Appropriate contact time for 10% bleach is 15-20 minutes. However, laboratory personnel should choose a disinfectant that is approved for the agent(s) of use in their

laboratory. Information on the approved method of disinfection for your agent(s) can be found in the Primary Investigator's approved UK Institutional Biosafety Committee Registration Form.

Example Forms and Signs



RADIATION



UK Environmental Health & Safety

EQUIPMENT CLEARANCE

Equipment:

Model #:

Location:

UK Inventory #:

Department:

The above equipment has been evaluated and found to be appropriate to be managed as indicated below:

☐ Move ☐ Surplus ☐ Repair

Biological Safety ☐N/A

X _____ Date: __/__/__

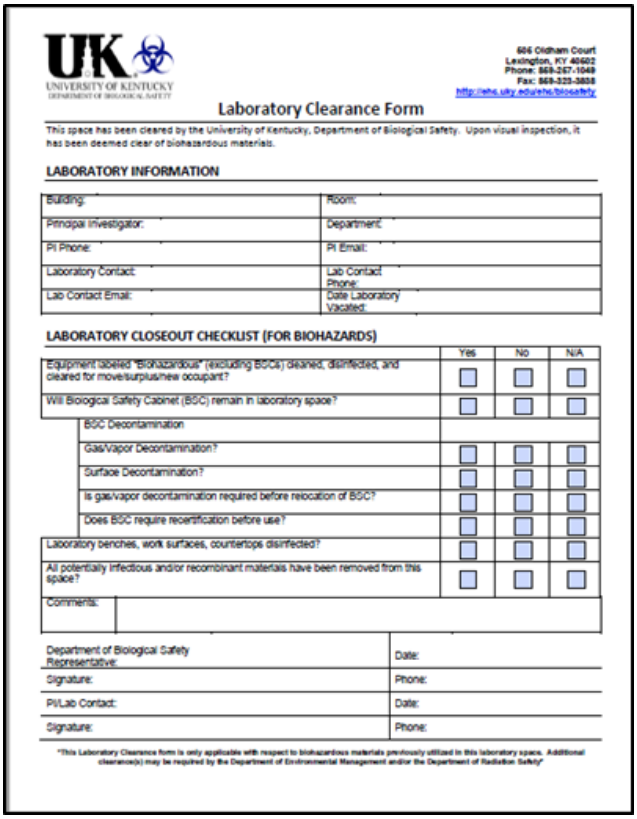
Environmental Management ☐N/A

X _____ Date: __/__/__

Radiation Safety ☐N/A

X Date: / /

№ 1300



UK UNIVERSITY OF KENTUCKY

606 Oldham Court
Lexington, KY 40502
Phone: 859-257-1049
Fax: 859-323-3838
http://ehs.uky.edu/ehs/biosafety

Laboratory Clearance Form

This space has been cleared by the University of Kentucky, Department of Biological Safety. Upon visual inspection, it has been deemed clear of biohazardous materials.

LABORATORY INFORMATION

Building:	Room:
Principal Investigator:	Department:
PI Phone:	PI Email:
Laboratory Contact:	Lab Contact Phone:
Lab Contact Email:	Date Laboratory Vacated:

LABORATORY CLOSEOUT CHECKLIST (FOR BIOHAZARDS)

	Yes	No	N/A
Equipment labeled "Biohazardous" (excluding BSCs) cleaned, disinfected, and cleared for move/surplus/new occupant?	☐	☐	☐
Will Biological Safety Cabinet (BSC) remain in laboratory space?	☐	☐	☐
BSC Decontamination			
Gas/Vapor Decontamination?	☐	☐	☐
Surface Decontamination?	☐	☐	☐
Is gas/vapor decontamination required before relocation of BSC?	☐	☐	☐
Does BSC require recertification before use?	☐	☐	☐
Laboratory benches, work surfaces, countertops disinfected?	☐	☐	☐
All potentially infectious and/or recombinant materials have been removed from this space?	☐	☐	☐
Comments:			

Department of Biological Safety Representative:	Date:
Signature:	Phone:
PI/Lab Contact:	Date:
Signature:	Phone:

This Laboratory Clearance form is only applicable with respect to biohazardous materials previously utilized in this laboratory space. Additional clearance(s) may be required by the Department of Environmental Management and/or the Department of Radiation Safety