

## A. Purpose

The purpose of this policy is ensure the safety of all individuals involved in the process of handling laboratory equipment that may have potentially come in contact with hazardous materials. An Environmental Health & Safety (EH&S) authorized Clearance is required for all contamination-prone laboratory equipment that is being disposed, relocated, repaired or handled by a non-laboratory personnel. Prior to these actions, the equipment must be properly decontaminated by a laboratory personnel, and a completed Clearance Request Form must be sent to EH&S.

## B. Applicability/scope

This policy applies to all laboratories serviced by Columbia University EH&S and Facilities. This includes, Columbia University Medical Center (CUMC), Mary Woodard Lasker Building, New York State Psychiatric Institute (NYSPI), Manhattanville Campus, Morningside Campus (MS), Barnard College, Lamont Doherty Earth Observatory (LDEO) and Nevis Laboratories.

## C. Definitions

1. **Biological Hazard** - microorganisms such as bacteria, viruses and fungi and their associated toxins which have the ability to adversely affect human health.
2. **Clearance Request Form** - document required to be completed in order to verify that an equipment item has been decontaminated. The form must be signed by laboratory personnel and an EH&S staff member prior to removal or handling of the item.
3. **Clearance Sticker** - sticker issued by EH&S which is affixed to an equipment item to qualify it as safe to handle.
4. **Contamination** - the presence of hazardous material on the surface of an equipment item or immediate surrounding area.
5. **Laboratory Equipment** - any equipment in a laboratory that has the potential of coming in contact with hazardous material.
6. **Radioactive Material**- a substance that contains unstable atoms that emit energy in the form of alpha, beta or gamma particles.

## D. Procedures

Upon identifying equipment that is to be discarded or relocated, laboratories should initiate the Clearance process as follows.

1. Decontamination
  - a. All biological, chemical and/or radiological hazards must be removed from the equipment.
  - b. Any equipment that contains a radioactive source or that potentially came into contact with radioactive materials require additional clearance from a Radiation Safety Officer prior to handling (see Clearance for Radiation Shielding Policy in forms section).
  - c. Equipment that have been used in experiments involving biological materials:
    - i. Must be decontaminated with a 10% bleach solution or any other tuberculocidal disinfectant (Quat Plus TB, Virkon-S, Cavicide, Vimoba). If equipment is to be re-used, check manufacturer's brochure to ensure that the cleaner does not damage the equipment.

**EQUIPMENT CLEARANCE**
**Procedure: 5.40**
**Created: 8/30/2016**
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**Revised:**

- ii. If a laboratory is relocating a Biological Safety Cabinet (BSC) within the same building, it must be decontaminated with 10% bleach followed by 70% ethanol.
    - iii. Biological Safety Cabinets being discarded or relocated to another building, require gas decontamination by a specialized vendor.
  - d. In general, other chemically contaminated laboratory equipment can be decontaminated with 70% ethyl alcohol solution, soap and water solution or mild detergent.
- 2. Any equipment that contains oil, refrigerants or liquids (e.g., vacuum pumps, air conditioners or refrigerators), must be properly drained of its contents prior to disposal. In the case of equipment with oils, the owner of the equipment must drain the oil and collect it for disposal through EH&S prior to removal of the equipment. Facilities provides refrigerant recovery at no fee. Request
  - a. A Clearance Request Form must be completed by laboratory personnel to verify that the equipment has been decontaminated.
  - b. Laboratory personnel must place a work request form for removal or relocation through Facilities or external vendor.
- 3. Clearance
  - a. Once a Clearance Request Form is submitted, a member of EH&S will visit the laboratory to inspect the equipment and affix a “Cleared by EH&S” sticker
- 4. Pickup/Removal
  - a. Upon confirmation of decontamination and receipt of work request order, Facilities will provide the necessary services requested. This also applies the arrangements made with other vendors.
- 5. Items that DO NOT require Clearance – the following are general examples of items found in laboratory that DO NOT require Clearance. Note, this list is not all-inclusive:
  - a. Office furniture (desks, chairs, cabinets etc.)
  - b. Electronics (desktops, laptops etc.)

**E. Responsibilities**

- 1. Laboratory personnel
  - a. Remove any contents or hazardous material from equipment.
  - b. Decontaminate equipment and/or furniture and submit Clearance Request Form to EH&S.
  - c. Place work order request with Facilities for removal or relocation.
- 2. Environmental Health and Safety
  - a. Respond to clearance request
  - b. Verify lack of contamination
  - c. Provide signed copy of Clearance Request Form to Facilities.
- 3. Facilities
  - a. Assist laboratory with moving equipment per request.
  - b. Reclaim any refrigerant where applicable.

**F. Emergency contacts**

- 1. Morningside EH&S: (212) 854-8749
- 2. Medical Center EH&S: (212) 305-6780
- 3. CUMC Facilities: (212) 305-HELP
- 4. Morningside Facilities: (212) 854-2222

**G. Medical Surveillance - N/A**

## H. Recordkeeping

Documentation of completed Clearance Request Form will be maintained by EH&S as well as forwarded to the laboratory and Facilities

## I. Appendices - N/A

## J. Forms

1. Clearance Request Form:  
<http://www.ehs.columbia.edu/ClearanceRequestForm.pdf>
2. Facilities work request form:  
<http://www.cumc.columbia.edu/facilities-management/operations/work-order-system>
3. Clearance for Radiation Shielding Policy:  
<http://www.ehs.columbia.edu/ClearanceForRadiationShielding.pdf>

## K. References

1. Columbia University EH&S Laboratory Equipment Clearance:  
<http://www.ehs.columbia.edu/LabEquipClearance.html>
2. Occupational Safety & Health Administration:  
<https://www.osha.gov/SLTC/biologicalagents/index.html>

## L. Acknowledgements - N/A