

# **Guidelines and Procedures for Maintenance and Decommissioning of Laboratory Ventilation Equipment**

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The following serve as guidance to assist users in the maintenance and safe decommissioning of their laboratory ventilation equipment. These guidelines are not intended to be all inclusive as each laboratory may have unique hazards that must be addressed. As such, maintenance and decommissioning of laboratory ventilation equipment should always be a collaborative process between EHS and the user. Refer to the Maintenance and Decommissioning Policy for Laboratory Ventilation Equipment for UA policies governing maintenance and safe decommissioning of laboratory ventilation equipment.

### **Requirements for the User**

#### **A. Inspection Requirements**

Refer to the [Chemical Fume Hood Management Plan](#) for guidance on maintenance of fume hood equipment

Daily inspections of biological safety cabinets include the following:

- No hazardous materials used or stored in the cabinet.
- All lighting is functional and on during use.
- Raise sash and verify that ventilation is active and working.
- Remove any obstructions to the front, side, or rear return air grilles.
- Wipe with non-pitting solution and dispose of waste at end of each use.
- All biological waste is disposed of in appropriate red biological hazard bags.

Daily inspections of glove boxes include the following:

- Check the condition of the gloves. Look for holes, areas of discoloration representing compromised integrity, and the connection to the exterior.
- Inspect the condition of the window, paying special attention to the area where the window is connected to the rest of the box.
- Perform a vacuum pump inspection and ensure that all lines are in good condition and that the oil (if applicable) has been changed recently.
- Inspect vacuum pump exhaust oil-mist filter and ensure it is still within operating parameters.
- If the box is equipped with a solvent scrubber and solvent delivery system, ensure that the scrubber cartridges are within operating parameters.
- All pressure gauges and indicators are functioning and are within acceptable ranges.

#### **B. Procedures for Decommissioning of Laboratory Ventilation Equipment**

##### *Chemical Fume Hoods (CFH) and Glove Boxes (GB)*

- All waste, trash, and chemical containers must be removed from inside the fume hood. These items must be properly disposed.
- All surfaces must be decontaminated with a disinfectant and properly cleaned.
- Depending upon the materials used within the fume hood, specifically Perchloric acid and/or Hydrofluoric, decontamination may be performed by a third-party vendor/external contractor; if this is the case, please allow 30-day lead time. Otherwise, decontamination may be performed by Laboratory personnel or EHS staff (where an hourly fee will be assessed.)

- The CFH/GB must be completely empty, and all surfaces must be clean and work ready.
- If the CFH/GB was exposed to radioactive material, refer to the guidelines for decontamination of radioactive materials in the Laboratory Decommissioning Policy.
- Refer to the [Chemical Fume Hood Management Plan](#) for information related to fume hood surveys, inspections and energy conservation requirements related to fume hood usage.
- If the CFH/GB was exposed to radioactive materials, refer to the guidelines for decontamination of radioactive materials in the UA Laboratory Decommissioning Policy and supplemental documents.

EHS will affix a decommissioning tag to the chemical fume hood or glove box once the above criteria have been met.

#### Biological Safety Cabinets (BSC)

- Be aware of hazards associated with handling, packing and moving items, and wear the appropriate personal protective equipment for the materials being handled.
- All waste from inside the BSC must be removed and properly disposed. Refer to the Laboratory Decommissioning Policy for guidelines on proper disposal of biological waste.
- For BSC that are to remain in location, all surfaces must be decontaminated with a disinfectant. The BSC should be completely empty and all surface clean and work ready.
- For BSCs to be removed from the laboratory space, decontamination must be performed by a third-party vendor/external contractor. In this case, notify EHS promptly and allow 30-day lead time.
- If the BSC was exposed to radioactive materials, refer to the guidelines for decontamination of radioactive materials in the UA Laboratory Decommissioning Policy and supplemental documents

EHS will affix a decommissioning hazard tag to the BSC once the above criteria have been met.

#### Other Laboratory Ventilation Equipment

- Decontaminate all surfaces of clean benches, laminar air flow equipment, snorkels and cabinets with disinfectant.
- If any of the equipment was exposed to radioactive material, refer to the guidelines for decontamination of radioactive materials in the Laboratory Decommissioning Policy and supplemental documents