

Chapter 9: MAINTENANCE AND INSPECTION PROGRAM

The College has established a maintenance and inspection program to ensure that ventilation systems and emergency safety equipment are functioning properly and that laboratory working conditions meet established standards. The maintenance and inspection program will focus on all laboratories, especially facilities known to be using extremely hazardous chemicals including known and potential carcinogens, acutely toxic, reproductive toxins, allergens, and others types of hazards.

Maintenance Programs

General Ventilation

General ventilation performance in laboratories will be evaluated by Buildings & Grounds twice a year to ensure that:

- Fresh air is provided at a rate of 8-14 room-air changes per hour to all laboratories in which hoods are used;
- Fresh air is provided at a rate of 6 room-air changes per hour to all storage rooms;
- All exhaust air from laboratories and storage rooms is vented to the outdoors and not recirculated;
- Centralized heating, ventilation and cooling systems that serve laboratories will also be maintained. This includes the following activities:
 - filters are changed or cleaned;
 - water is frequently checked for biological growth;
 - condensate pans are cleaned regularly.

Local Exhaust Systems: Fume Hoods

The fume hood maintenance program comprises the following elements

Fan(s) check:

- Check bearings for overheating (grease as required);
- proper tensioning of belt drives;
- proper rotation of the fan wheel. Fan rotation may become accidentally reversed during repair or alterations. Fans move a fraction of their rated capacity when operating backwards;
- removal of dust/grime accumulations in the fan assembly.

Ductwork Check:

- The ducting will be inspected to ensure that joints are intact and there are no holes in the system.

Visual Inspection of Hood:

- The hood will be checked for signs of corrosion, or other indications of needed repair.

Emergency Eyewash and Deluge Showers

Deluge showers are tested annually by B&G and EH&S. Eyewashes are tested at the same time, and are flushed weekly by lab personnel. Inspection tags are updated during inspection. Any problems discovered during testing are immediately reported and repaired.

Fire Extinguishers

All fire extinguishers will be inspected (monthly by B&G, annually by a fire extinguisher maintenance contractor) and maintained in accordance with FDNY requirements to ensure that they are properly charged in the event of a fire. In addition, B&G will also be responsible for hydrostatic testing of extinguishers (every 6 years by an outside fire extinguisher maintenance contractor).

Mechanisms for Employees to Report Malfunctioning Equipment

Any faculty- or staff member may report malfunctioning fume hoods or other emergency/safety equipment to B&G through a Work Order, and/or by contacting EH&S (x8978, x8988) personnel.

Laboratory Inspections

Routinely scheduled laboratory inspections serve a number of purposes such as:

- providing in-house inspectors with the opportunity to become familiar with procedures and chemicals used in labs;
- allowing for routine exchange and discussion between inspectors and laboratory personnel;
- identifying unsafe work conditions and practices;
- providing the basis for setting priorities and targeting efforts;
- providing a measurement of compliance with the OSHA Laboratory Standard and applicable state and local regulations.

The Laboratory Audit Form (Appendix A) covers all aspects of laboratory safety. The Laboratory Audit Form includes specific items in the areas of lab infrastructure and engineering controls, portable emergency/safety equipment, work practices of lab personnel, chemical storage, lab postings, housekeeping, hazardous waste management, etc.

EH&S personnel will conduct biannual inspections of laboratories for unsafe conditions and practices as well as test key safety equipment to ensure its proper functioning. Information on inspection procedures and inspection findings are shared with all members of the Chemical Hygiene Committee.

Before inspections, a copy of the chemical inventory and a description of basic operations conducted in a lab will be provided by the PI/laboratory supervisor to the Chemical Hygiene Committee.

Inspection Reports and Report Presentations

The CHO and/or members of the Committee will write inspection reports identifying problems needing immediate attention, and those that are of a lesser priority. Inspection results will be discussed with departmental Chairs, laboratory employees and laboratory supervisors and Principal Investigators, including follow-up to correct any issues.

Routine Inspection by Laboratory Employees

Lab Safety training for laboratory employees includes participation in self-guided quarterly inspections of their own laboratory. Each inspection will focus on one or two particular areas of the laboratory environment (e.g. emergency preparedness, fume hoods and personal protective equipment, chemical storage, etc.) and after each inspection, a list of needed corrections will be drawn up. These inspection results will serve as interim monitors of safety between the biannual inspections made by the Chemical Hygiene Committee.

Follow-up Measures

As a routine policy, the second inspection of the year will focus on laboratories in which corrections should have been made, either by laboratory employees or by management. All serious and potentially serious laboratory safety and/or health problems will be brought to the attention of the Chemical Hygiene Committee and a schedule of corrective steps and time frame will be drawn up by the Committee.