A. PURPOSE

Emergency drench equipment is used to minimize the effects of personal exposures to hazardous materials and is integral to emergency response efforts where hazardous materials are used or stored. This policy ensures that emergency drench equipment is provided in accordance with Occupational Safety and Health Administration (OSHA) regulations and New York City Fire Department (FDNY) requirements and is available for use when a hazardous materials exposure occurs in a laboratory or laboratory support space.

B. APPLICABILITY/SCOPE

This policy applies to all Columbia University laboratories where hazardous materials are used or stored.

C. DEFINITIONS

1. Capital Projects Management (CPM): Typically the department responsible for new laboratory construction and renovation at the respective campus. At the Columbia University Medical Center (CUMC) campus, CPM is responsible for new laboratory construction and renovation within Columbia University owned spaces. In spaces leased to Columbia University by New York-Presbyterian Hospital (NYPH), new laboratory construction and renovation may be managed by either CUMC CPM or NYPH CPM.

2. Emergency Drench Equipment: devices, including overhead emergency showers, eyewashes, and eye-face wash/drench hose combination units that are designed to provide flushing water to bodily areas of chemical exposure.

3. Eyewash: A device used to provide fluid to irrigate and flush the eyes.

4. Facilities: The department responsible for operations and maintenance at the respective campus.

5. Eye-Face Wash/Drench Hose Combination Unit: A device consisting of a flexible hose connected to a flushing fluid supply and used to provide fluid to irrigate and flush the eyes, face and body areas.

6. Hazardous Material: A chemical, biological, or radioactive material used in a laboratory that could potentially harm people, property, or the environment.

7. Overhead Emergency Shower: A device specifically designed and intended to deliver flushing fluid in sufficient volume to cause that fluid to cascade over the entire body.

8. Personal Protective Equipment (PPE): Equipment worn to minimize exposure to a variety of hazards.

9. Public Safety: The department responsible for campus security and coordinating emergency response efforts at the respective campus.

D. PROCEDURES

1. Provision of Emergency Drench Equipment
Emergency drench equipment installations must be consistent with the Columbia University Guidelines for Laboratory Design, Appendix IV – Eye-Face Wash/Drench Hose and Overhead Emergency Shower.

a. Overhead Emergency Shower or Eye-Face Wash/Drench Hose Combination Unit

An overhead emergency shower or eye-face wash/drench hose combination unit must be available inside the laboratory or within 25 feet of the laboratory entrance wherever greater than 5 gallons of corrosive or flammable liquids are used or stored.

b. Eyewash

An eyewash must be available inside the laboratory or laboratory support space wherever hazardous materials are used or stored.

2. Use of Emergency Drench Equipment

Emergency drench equipment is designed to minimize the effects of exposure to a hazardous material that has come into contact with the affected person’s eyes or skin.

a. Overhead Emergency Shower or Eye-Face Wash/Drench Hose Combination Unit

Overhead emergency showers and eye-face wash/drench hose combination units are intended to minimize the effects of exposure to a hazardous material that has come into contact with the affected person’s skin. In the event of an exposure, affected personnel must:

1. Immediately remove contaminated PPE or clothing while proceeding to the nearest overhead emergency shower or eye-face wash/drench hose combination unit.

2. Activate the overhead emergency shower or eye-face wash/drench hose combination unit and rinse the affected part of their body for no less than 15 minutes.

3. Seek medical attention following exposure to any hazardous material.

b. Eyewash

Eyewash stations are intended to minimize the effects of exposure to a hazardous material that has come into contact with the affected person’s eyes. In the event of an exposure, affected personnel must:
1. Immediately remove contact lenses or protective eyewear while proceeding to the nearest eyewash station.

2. Activate the eyewash station and ensure hands-free operation of the eyewash station.

3. Hold eyelids open while positioning eyes into the flushing streams and flush eyes for no less than 15 minutes.

4. Seek medical attention following exposure to any hazardous material.

3. Inspection, Testing, and Maintenance of Emergency Drench Equipment

Emergency drench equipment must remain unobstructed at all times. Objects, including those on wheels, may not be positioned in a way that would obstruct immediate access to emergency drench equipment.

a. Overhead Emergency Shower

Overhead emergency showers must be inspected to ensure proper functionality on an annual basis by Facilities. Additionally, overhead emergency showers must be inspected following any interruption to the plumbed water supply.

b. Eyewash or Eye-Face Wash/Drench Hose Combination Unit

Eyewash and eye-face wash/drench hose combination units must be inspected and activated to ensure proper functionality on a weekly basis by laboratory personnel. Proper function is generally characterized by immediate availability of clear running water and a flushing stream that would simultaneously flush both eyes. Eyewash units that do not function properly must be reported to Facilities for repair.

E. RESPONSIBILITIES

1. Capital Projects Management (CPM)

Responsible for the installation of emergency drench equipment during new laboratory construction or renovation as consistent with the Columbia University Guidelines for Laboratory Design, Appendix IV – Eye-Face Wash/Drench Hose and Overhead Emergency Shower.

2. Facilities

Responsible for ensuring proper functionality of overhead emergency showers in accordance
with section D.3. of this policy and for maintenance necessary to maintain the proper operation of emergency drench equipment.

3. Principal Investigator or Designee

Responsible for informing laboratory personnel of the locations and proper operation of emergency drench equipment. Laboratory locations with emergency drench equipment must be documented in the Laboratory Assessment Tool & Chemical Hygiene Plan (LATCH). Responsible for maintaining unobstructed access to emergency drench equipment and inspecting emergency drench equipment in accordance with section D.3. of this policy.

4. Laboratory Personnel

Responsible for utilizing emergency drench equipment when necessary and reporting emergency drench equipment activations to Public Safety.

5. Environmental Health & Safety

Responsible for periodically reviewing this policy, for ensuring the policy reflects applicable regulatory requirements, and for providing general training on the proper use and inspection of emergency drench equipment to laboratory personnel.

F. EMERGENCY CONTACTS

1. Public Safety

Public Safety must be notified when emergency drench equipment is activated in conjunction with a hazardous materials exposure.

Morningside and Nevis: (212) 854-5555
Medical Center: (212) 305-7979
Lamont-Doherty Earth Observatory (LDEO): (845) 365-8822

2. Facilities

Facilities must be notified when emergency drench equipment is not functioning properly or has not been inspected in accordance with section D.3. of this policy.

Morningside and Nevis: (212) 854-2222
Medical Center: (212) 305-4357
Lamont-Doherty Earth Observatory (LDEO): (845) 365-8822

G. CROSS REFERENCES
https://www1.columbia.edu/sec/cu/ehrs/ProjectManager.html

H. MEDICAL SURVEILLANCE

N/A

I. RECORDKEEPING

1. Overhead Emergency Shower Annual Inspection

The month and year of the inspection and initials of the inspector must be recorded in a conspicuous location at each overhead emergency shower.

2. Overhead Emergency Shower Inventory

An overhead emergency shower inventory is maintained by Facilities at the respective campus.

J. APPENDICES

N/A
K. FORMS

1. Example Inspection Tag

![Example Inspection Tag](image)

L. REFERENCES

1. 29 CFR 1910.151 Medical services and first aid

2. New York City Fire Code Section 2706.9 Safety showers


M. ACKNOWLEDGMENTS