

# EMERGENCY RESPONSE GUIDE FOR LABORATORIES

## EMERGENCY NUMBERS:

Environmental Health and Safety (EH&S)  
412-268-8182

Radiation and Biological Safety  
412-268-8405

University Police  
412-268-2323



**Carnegie Mellon University**  
Environmental Health & Safety

# TABLE OF CONTENTS

HAZARDOUS MATERIAL PERSONAL EXPOSURES	2
CHEMICAL SPILLS	3
RADIATION SPILLS	4
BIOLOGICAL SPILLS	5
AUTOMATED EXTERNAL DEFIBRILLATORS (AEDS)	6
BUILDING EVACUATION INSTRUCTIONS	7
LABORATORY FIRES	8

# HAZARDOUS MATERIAL PERSONAL EXPOSURES

## RADIOLOGICAL SPILL ON BODY

- Remove any contaminated clothing and place in yellow bag.
- Wash contaminated area with WARM soap and water.
- Contact EH&S at 8-8182 and University Police at 8-2323.

## CHEMICAL SPILL ON BODY

- Flood exposed area with running water for at least 15 minutes using safety shower or drench hose.
- Remove contaminated clothing and shoes while in shower.
- Contact EH&S at 8-8182 and University Police at 8-2323.
- MSDS should accompany injured person for medical treatment.

## BIOLOGICAL SPILL ON BODY

- Remove any contaminated clothing.
- Wash contaminated area thoroughly with soap and water.
- Contact EH&S at 8-8182 and University Police at 8-2323.

## HAZARDOUS MATERIAL IN EYE

- Rinse eyeball and under eyelids with water using eye wash for 15 minutes.
- Hold eyelids open to ensure thorough washing.
- Contact EH&S at 8-8182 and University Police at 8-2323.

# CHEMICAL SPILLS

A small volume and low hazard chemical spill is one that does not pose a health threat beyond those associated with the chemical's normal handling. **A small volume is defined as being within the capacity of the lab's spill kit.** All other spills are considered large volume and/or high hazard.

## SMALL VOLUME AND LOW HAZARD SPILL

- ALERT people in the immediate area of the spill.
- AVOID breathing vapors from the spill.
- WEAR protective clothing and gloves when addressing spill.
- CONFINE spill to a small area.
- USE the appropriate spill kit.
- COLLECT the residue, place in labeled container and dispose of as hazardous waste.
- CLEAN the spill area.

vs.

## LARGE VOLUME AND/OR HIGH HAZARD SPILL

- ALERT people in the immediate area of the spill.
- ATTEND to your own needs first and then assist injured or contaminated people.
- CONTROL the spread of contamination if safe to do so. Keep people away from the location.
- STOP work, turn off equipment, close doors as you exit.
- EVACUATE to a safe location.
- CONTACT EH&S at 8-8182 and University Police at 8-2323.
- REMAIN safely in the area to inform emergency responders of:
  - Number and extent of injured people
  - Name(s) of chemicals involved, and volume
  - Hazards associated with the material(s)

# RADIATION SPILLS



Stop the spill or leak. Upright containers.



Warn: Alert Others in the area.



Isolate: Limit access to contaminated area and assemble all potentially contaminated persons in the closest non-contaminated area to wait for Radiation Safety.



Minimize your exposure following:

- Time
- Distance
- Shielding

## CONTACT

**Radiation Safety Office: 412-268-8405 and**

**University Police: 412-268-2323**

Prevent the spread of radioactive contamination beyond the area by confining movement of personnel until they have been monitored by Radiation Safety.

# BIOLOGICAL SPILLS

A minor spill is one that does not pose a health threat beyond that associated with the normal handling of the microorganisms; a major spill involves any material that is infectious via inhalation.

## MINOR SPILL

- ALERT people in the immediate area of the spill.
- WEAR protective clothing and gloves when addressing spill.
- REMOVE broken glass with forceps or scoop and place in a rigid, puncture resistant container.
- PLACE paper towels soaked in 10% bleach directly on the spill and apply for 20 minutes.
- WIPE the area clean and discard towels in biohazard waste bag. Repeat as needed.
- DISCARD the spill clean-up material and contaminated PPE in biowaste container.
- WASH hands thoroughly.
- REPORT the incident to a supervisor.

vs.

## MAJOR SPILL

- ALERT everyone in the lab and stop work.
- CONTROL the area by keeping people away and isolate spill if safe to do so.
- EVACUATE all personnel to adjacent area. Avoid breathing aerosols.
- WASH affected areas of exposure and remove contaminated clothing into biohazard waste bag.
- CONTACT EH&S at 8-8182 and University Police at 8-2323.
- REMAIN safely in the area to inform emergency responders of:
  - Number and extent of injured people.
  - Name(s) of agents involved, and volume.
  - Hazards associated with the material(s).

# AUTOMATED EXTERNAL DEFIBRILLATORS (AEDS)

Automated External Defibrillators (AEDs) are devices used on unresponsive persons who have experienced an interruption in the heart's normal rhythm and are not breathing. AEDs are designed to restore the heart's normal rhythm. AEDs can easily and safely be used even by those who have never used one by simply turning the AED on and following the visual and audible prompts.

1. AEDs have been installed at numerous locations throughout campus.
2. Initiate CPR after calling for help (University Police at 412-268-2323).
3. Stay with the person while someone gets the AED.
4. To use an AED, open the case. A recorded voice will direct you step-by-step. You do not need formal training to operate an AED.

## Locations of the AEDs in our major laboratory buildings.

For a complete campus list of AED locations, please go to [www.cmu.edu/ehs/emergency-response/aed-locations.html](http://www.cmu.edu/ehs/emergency-response/aed-locations.html).

### 6555 Penn Avenue

Warehouse side of door from offices

### Doherty Hall

1st floor main hallway, at stairwell entrance off lobby

### Hamerschlag Hall

1st floor across from elevator

### Mellon Institute

Bellefield Avenue side entrance,  
hallway to left of guard desk

### Pittsburgh Technology Center

Main lobby at reception desk

### Porter Hall

A-Level across from main stairwell

### Wean Hall

4th floor by rooms 4787/4708

5th floor left of elevators

# BUILDING EVACUATION INSTRUCTIONS

1. Exit quickly. Take coats, keys and personal items with you, if you can do so safely.
2. Once outside, move away from the building to the assembly area, so you can be accounted for.
3. Do not return to the building when the alarm is turned off. Wait for instructions.
4. If mobility impaired, implement the emergency plan you developed with the Office of Disability Resources. If you don't have an emergency plan, call 412-268-2323.

- Actively participate in emergency drills.
- Follow the instructions that will be given to you by your floor marshal.
- Know at least two evacuation routes for your building, and know your assembly area.
- ALWAYS respond to alarms. Do not assume it is a false alarm. Evacuate the building immediately. (In addition to keeping yourself safe, you should be aware that it is illegal under city ordinance to stay inside a building when the alarm is sounding. You could be assessed a fine of \$1,000 if you do.)
- Take your coat, keys, medication, etc. with you in the event you are not able to get back into the building quickly.
- Do not stop once you are outside the building. Move away from the door and proceed to your designated assembly area. Remain there for further instructions.
- Do not re-enter the building until told to do so by the responding agency (usually the City of Pittsburgh Fire Dept). Remember that silencing an alarm does not mean the building is necessarily safe to re-enter.
- Know how and when to use a fire extinguisher. If you do not know how, contact EH&S (8-8182) for information and training.
- Be prepared to assist disabled co-workers, or workers who may not be fluent in English.
- Do not expect emergency responders to have the time to answer your questions. Stay out of their way and allow them to do their jobs.
- Be familiar with the campus evacuation plan in the event that it becomes necessary to evacuate the campus.



# LABORATORY FIRES

Familiarize yourself with locations of exits, extinguishers and fire alarm pull stations.

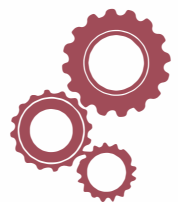
## SMALL FIRES

- Contact the University Police at 8-2323 and EH&S at 8-8182.
- Keep the exit at your back.
- Use the nearest fire extinguisher.
- Pull the pin to break the seal.
- Aim at the base of the fire.
- Squeeze handle grips or trigger.
- Sweep the fire, spraying side-to-side at the base of the flames.
- Ventilate the area after the fire is completely extinguished.

VS.

## LARGE FIRES

- Activate the nearest fire alarm pull station and alert others.
- If safe to do so, assist others who may be in danger. However, do not put yourself at risk.
- Evacuate the area, use stairs and close doors behind you.
- Contact University Police at 8-2323, report location, injuries and other hazards.
- Move away from the building exterior and assemble with floor marshal.
- Inform emergency responders of any hazards, injuries, or locations of persons remaining inside.
- Remain outside the building until cleared for re-entry.



**Carnegie Mellon University**  
Environmental Health & Safety