

***2.9) Emergency Procedures**

During the course of normal laboratory operations there is always the potential for an emergency situation to arise. Emergencies can be the result of Hazardous Materials spills/releases, malfunctioning equipment, fire, and/or personal injury/need for medical assistance. In the event of an emergency, the appropriate action must be implemented. This may include evacuation of the facility if necessary. Internal communication is very important because it is essential that all employees know how to act and react during an emergency. It is necessary that written emergency action procedures be developed and that all employees be trained and participate in drills. All accidents, regardless of severity, must be reported and investigated.

***2.9.1) Responsibilities of the Authorized Laboratory Supervisor/Departmental Safety Coordinator/Department Chair**

The Authorized Laboratory Supervisor, Unit Safety Coordinator or Dept. Chair shall:

*2.9.1.1) Develop and post laboratory-specific or department-specific emergency procedures. EHS shall provide assistance as requested. This shall be based upon the pre-planning described in 2.9.4 below.

*2.9.1.2) Appropriately train all laboratory users/occupants in these procedures.

*2.9.1.3) Perform sufficient drills to acquaint all laboratory users/occupants with the procedures to be followed. (Records shall be kept of drills including an evaluation of performance and follow-up remedial actions when indicated.)

*2.9.1.4) Report accidents to EHS and, if injuries that require treatment are involved, to Human Resources, and conduct appropriate investigations.

Note: Serious work-related injuries must be treated at Lawrence Memorial Hospital. If emergency treatment is required, go to LMH Emergency Room. If it is not an emergency, call the LMH Occupational Health Clinic at 749-6467 to schedule an appointment. A 1101-A accident report must be sent to KU Human Resources.

*2.9.2) Responsibilities of Authorized Users, Authorized Occupants, and other Personnel/Students

Authorized Users, Authorized Occupants, and all other Department Personnel/Students shall:

*2.9.2.1) Be trained in the applicable emergency procedures.

*2.9.2.2) Participate in drills when those are initiated.

*2.9.2.3) Follow the emergency procedures during drills and during actual emergencies.

*2.9.3) General Emergency Procedures

All individuals shall follow the basic requirements of this section. (If an action has already been effectively taken, repetition is not required. Ensuring that all affected individuals are notified and take action is a cooperative venture.)

Occupants shall:

*2.9.3.1) Notify other individuals in the lab of the emergency situation.

If necessary, alert facility/building occupants by activating building alarm system. Contact Kansas University Police Department (911) and inform of situation/need for emergency assistance.

*2.9.3.2) Evacuate the laboratory, closing doors behind you (verify the evacuation of all occupants).

Take any quick, obvious and low risk actions that would minimize the consequences of the emergency.

If building alarm is activated, leave building/facility through the nearest, safe emergency exit. Do not use elevators! Provide assistance to those who may need it.

*2.9.3.3) Assemble outside the lab in the designated safe area. (All individuals to remain in the assembly area until released.)

If evacuating to the outside, assemble at a safe location upwind from the facility. Check to make sure all personnel, students and visitors are accounted for. Keep everyone together, and do not allow re-entry into facility until it has been cleared by KUPD. Segregate any individuals who may be contaminated with Hazardous Materials.

*2.9.3.4) Report to Emergency Services Field Command. Person who reported incident or who has knowledge about the emergency should immediately report to the Emergency Services Field Command Post. Initially this would be the first responding KUPD officer identified.

*2.9.4) Emergency Preplanning and Preparation

Laboratory supervisors and Hazardous Materials/Radiation Generating Device users must prepare for potential laboratory emergencies by proper preplanning and preparation. The following factors are to be considered:

Authorized Laboratory Supervisors shall:

*2.9.4.1) Review the nature of the activities/operations to be conducted in order to identify potential hazards (i.e. know the hazardous properties of the materials/Radiation Generating Devices being used and quantities present in the lab).

*2.9.4.2) Identify locations where these emergencies could arise.

*2.9.4.3) Be familiar with the locations of emergency equipment, supplies, building alarms, and evacuation routes.

*2.9.4.4) Make available appropriate emergency equipment/supplies in the lab (or nearby) before initiating Hazardous Materials/Radiation Generating Device activities/operations. These include:

a) Safety Showers and Eyewashes See section 3.7.2 & 3.7.3

b) Fire Extinguishers and Fire Blanket See section 3.7.4.

c) First Aid Kit See section 3.7.5.

d) Spill Control/Cleanup Kit See section 3.7.7.

*2.9.5) Medical Emergencies See also 2.9.1.4 above.

*2.9.5.1) Serious Injury/Emergency Medical Assistance

Personnel, students or visitors shall:

a) Contact KUPD (911) immediately and identify need for emergency medical assistance. Provide information as asked by the Dispatcher.

b) Assist injured person only if properly trained to administer first aid.

Otherwise, keep injured person still and calm. Keep unnecessary individuals away. Do not move the injured person unless it is necessary to prevent his/her exposure to further harm. However, individuals shall not endanger themselves.

c) Protect themselves and others from any injured person's blood/body fluids and from any hazards that may have caused the injury.

d) Notify individuals in adjacent areas of any potential hazards.

Authorized Laboratory Supervisor shall:

e) Complete the appropriate accident/injury reports, conduct an accident investigation, and initiate corrective action(s).

*2.9.5.2) Minor Injury/Non-Emergency Medical Assistance See also 2.9.1.4 above.

Personnel, students, or visitors may:

a) Handle minor injuries by self-treatment. (However administer first aid only if properly trained to do so. Otherwise, contact KUPD(911) for emergency medical assistance.)

Personnel, students, or visitors shall:

b) Protect themselves and others from the injured person's blood/body fluids and from any hazards that may have caused the injury.

Personnel, students, or visitors should:

c) Seek proper medical attention.

[Note 1]: Students should go to Watkins Health Center. If it is closed, Students should go to the Lawrence Memorial Hospital Emergency Room.

[Note 2]; University employees must go to Lawrence Memorial Hospital for on-the-job injuries requiring medical treatment.

Authorized Laboratory Supervisors shall:

d) Complete the appropriate accident/ injury reports, conduct an accident investigation, and initiate corrective action(s).

*2.9.6) Fire Emergencies

Fires are a possible emergency in the laboratory setting. In the event of a fire:

Laboratory users/occupants shall:

- *2.9.6.1) Assist any person in immediate danger to safety, but only if it can be accomplished without risk to themselves.
- *2.9.6.2) Activate the building alarm system so that other individuals in the facility/building can begin evacuation.
- *2.9.6.3) Contact KUPD (911) to report the fire.
- *2.9.6.4) If the fire is small, use a nearby extinguisher to control and extinguish it, but only if trained in using fire extinguishers. If the initial extinguishing attempt does not succeed, evacuate the area. (Do not go after more extinguishers or back into the fire area.)
- *2.9.6.5) Not attempt to fight fires that are large, are out of control, or may be in the presence of a toxic atmosphere.
- *2.9.6.6) Evacuate the area or building immediately. Close doors behind you as you leave. Do not use elevators!
- *2.9.6.7) Evacuate a building immediately if the facility alarm is sounding.
- *2.9.6.8) Assemble at a pre-determined meeting area. Supervisor is responsible for taking roll and accounting for all laboratory users/occupants/visitors.
- *2.9.6.9) Not re-enter the building without permission of KUPD.
- *2.9.6.10) Report all fires to the KU Police Department so that the appropriate investigations may be made, if necessary.

2.9.7) Hazardous Material Spills/Releases

Spills/releases of Hazardous Materials are also a possible emergency in the laboratory environment. The proper response action is dependent upon the hazard and quantity of material spilled/released. All spills need to be reported to your supervisor immediately.

2.9.7.1) Emergency Hazardous Materials Spills/Release

a) Emergency Hazardous Materials spills/releases are those that are of sufficient hazard to require a response from KUPD, EHS, and the Lawrence Fire Department. A Hazardous Materials spill/release is considered to be an emergency spill/release whenever it:

- Causes personal injury or exposure requiring medical attention.
- Causes a fire hazard.
- Requires the need for special personal protective equipment.
- Contaminates a public area or causes airborne contamination that requires laboratory or building evacuation.
- Cannot be controlled or cleaned up by authorized users.
- Requires prolonged or overnight cleanup.
- Involves an unknown substance.
- Enters the land, water, or air.

b) Emergency Spill/Release Response Procedures:

Personnel, students, or visitors shall:

- Contact KUPD (911) [and EHS at 4-4089, if possible] immediately and identify need for emergency spill assistance. Provide information as asked by the Dispatcher.
- If the spill presents an immediate danger, evacuate the spill area, warn others nearby of the hazard and keep individuals out.
- Protect themselves first. Assist injured individuals only if it can be accomplished without risk to themselves.
- Send someone down to meet the responding agencies.
- If the spill presents a danger to other building occupants, activate the building alarm and evacuate.
- Not operate electrical switches except to de-energize if flammable vapors are present. Turn off or remove heat sources if safe to do so.
- If the spilled substance is an unknown, limit actions to self-protection, KUPD notification(911), isolation of the spill, evacuation and to securing the area.
- Try to control the spread or the volume of the spilled material by absorbents or containment if the spill does not present immediate personal danger.

2.9.7.2) Minor Hazardous Material Spills/Releases

a) Minor Hazardous Material spills/releases are those that do not meet the definition of an emergency spill as described previously and can usually be handled by properly trained and equipped. The following procedures should be used for minor spills/releases:

Authorized Users shall:

- Attend to any individuals who may have been contaminated. If person requires medical attention this is an Emergency Spill.
- Notify persons in immediate area of the spill and evacuate all nonessential individuals.
- Control the spread of the spilled material by absorbents or containment.
- If the spilled material is flammable, turn off ignition sources.
- Avoid skin contact and breathing vapors, mists, fumes, or particles from spilled materials.
- Leave on or establish exhaust ventilation, if safe to do so.
- Contact EHS for assistance and disposal of spilled materials.

The following steps shall ONLY be performed by qualified and appropriately trained individuals.

- Secure appropriate spill cleanup supplies. EHS has positioned small spill kits in every chemical stockroom.
- Don appropriate personal protective equipment.
- Use a neutralizing agent/absorbent mixture on corrosive liquids.
- Other liquids should be absorbed with an appropriate, non-reactive material such as vermiculite, clay, dry sand, paper towels, other spill absorbents. EHS recommends 3M Powersorb Universal Sorbent that is available from Fisher Scientific.
- Collect spilled material and used cleanup supplies into an appropriate container and contact EHS for proper disposal.
- Collect spilled solids in a container for reuse, or disposal by EHS. Be Careful! Sweeping can cause airborne particulates that can be inhaled. If spilled solids are highly toxic, it would be better to clean them up using a HEPA vacuum. Contact EHS for assistance.
- Mop or wipe any contaminated surfaces before reusing.

2.9.7.3) Hazardous Chemical Spills

Follow previous instructions in Part I - Section 2.9.7.1 & 2.9.7.2. Contact EHS (864-4089) for further information or assistance for procedures in handling special types of Hazardous Chemical spills/releases.

2.9.7.4) Biohazard Spills/Releases

Handle biohazard spills/releases in accordance with the procedures in Part III. Contact EHS (864-4089) for further information or assistance.

2.9.7.5) Radioactive Spills/Releases

Handle radioactive spills/releases in accordance with the procedures referenced in Part IV. Contact EHS - Radiation Safety Services (864-4089) for further information or assistance.