

3.13. Chemical Spill Response Procedures

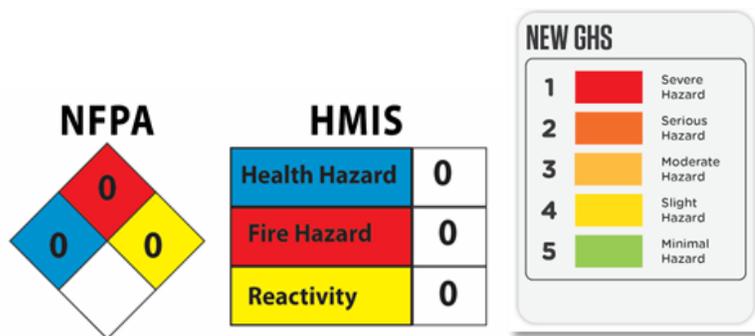
Despite the best efforts of researchers to practice safe science in the laboratory, accidents resulting in the release of chemicals will occur. For this reason, it is essential that laboratory personnel understand the spill response procedure for their campus which may include appropriate procedures and materials to adequately contain and cleanup a spill.

All chemical spills must be reported to your campus IUEHS representative ([see Laboratory Safety Contacts](#)). Environmental Health and Safety will respond to evaluate the release and determine the best course-of-action for the containment and cleanup of the spill.

Do not attempt to clean up spills involving chemicals that are flammable, toxic, corrosive or reactive as indicated on the label or Safety Data Sheet (SDS); or that cause eye or respiratory tract irritation; or chemicals that emit strong, or noxious odors or fumes.

Exceptions for in-house spill response include minor chemical spills, which meet **all** of the following criteria and mercury thermometer spills that are contained in your workspace and for which you have a mercury spill kit:

- Personnel directly involved in the spill that have immediate access to an SDS for the chemical, and the NFPA and/or HMIS ratings are a 0 or 1 for health and fire, and 0 for reactivity, and/or the GHS rating on the label or SDS is a 5 or 4 for health, fire and reactivity and;



- The amount spilled is 500 milliliters or less for liquids or 500 grams or less for solids and;
- The material does not emit strong odors, vapors, fumes or dust that are noxious or irritating to the eyes or respiratory system and;
- The material is not a known to be a carcinogen or strong mutagen, or dangerous for the environment. This information will also be in the SDS along with the HMIS or NFPA ratings and;
- The spill is contained on an impervious surface, and cannot migrate into the environment through drains, soil, ground water or surface water.

3.13.1. Procedures for Spills that Meet the Exception Criteria

The following procedures should be used as a guide to help laboratory personnel design an effective spill control plan for their laboratory (see Section 6.10 *Spill Control Kit* for information on spill kit contents).

If you have contacted IUEHS, the spill meets the above criteria, and the chemical does not pose an immediate risk to health or require respiratory protection:

- Notify other laboratory personnel of the accident.
- Isolate the area. Close laboratory doors and evacuate the immediate area if necessary.

- Remove all ignition sources and establish exhaust ventilation. Vent vapors to outside of building only (open windows and turn on fume hood).
- Choose appropriate personal protective equipment (e.g., goggles, face shield, impervious gloves, lab coat, apron or coveralls, and boots).
- Confine and contain the spill. Cover with appropriate absorbent material. Sweep solid material into a dust pan and place in a sealed plastic container. Decontaminate the area with soap and water after cleanup and place residue in a plastic bag or another sealed plastic container.
- Label the container.
- Contact IUEHS for your respective campus for disposal.

3.13.2. Procedures for Spills that DO NOT Meet the Exception Criteria

Laboratory personnel must not attempt to clean up a hazardous chemical spill of the type and quantity that poses an immediate risk to health, the environment, or those that require respiratory protection. The most senior staff member present at the time of the spill is responsible for ensuring the following procedures are followed and that the spill is reported to IUEHS and emergency responders as necessary.

Follow the chemical spill response (ESCAPE) procedure as follows:

1. **Exit the area** — Immediately after a hazardous chemical is spilled you must exit the area. If the spill occurred in a laboratory and access to the fume hood is not blocked by the spill and/or hazardous vapors are not present in the area then raise the sash on the fume hood and increase the airflow.
2. **Shut the doors and secure the area** — Shut the doors to the area where the spill is located and secure the area if possible. Most laboratories are under negative pressure which will pull air from the hallway into the lab, keeping potentially hazardous vapors from spreading into other areas.
3. **Call 911 from a campus phone or IUPD for your respective campus from a non-campus phone from a safe location and give the following information:**
 - a. Building name
 - b. Room number or location
 - c. Type of incident
 - d. Name of chemical spilled or description of odor if unsure of the chemical
 - e. Estimate of the volume of chemical spilled
4. **Assess the situation** — Determine if the spill is Immediately Dangerous to Life or Health (IDLH). IDLH incidents are those that pose a significant and immediate threat to building occupants due to extreme toxicity, imminent explosion, or other life threatening conditions. These types of incidents are rare. If the spill does not pose a threat to the building occupants then remain outside the entrance to the laboratory until the spill response team arrives. If you determine that the situation is Immediately Dangerous to Life or Health, then proceed to the next step.
5. **Pull the fire alarm** — If the spill poses an immediate danger to the building occupants pull the fire alarm. Activating the fire alarm will evacuate the building occupants and in some locations will also notify the Fire Department. As a precaution dial 911 and give appropriate information to the dispatcher.
6. **Exit the building** — Once the fire alarm has been activated exit the building. Remain at a safe distance from the main entrance of the building. Give your information to the emergency response teams that will be arriving.

3.13.3. Procedures for Chemical Contamination to the Eyes or Body

In the event of chemical contamination to the eyes or body:

1. Remove any contaminated clothing immediately and flush all areas of bodily contact with copious amounts of water. This should take place while someone else makes the appropriate phone calls from a safe location.
2. Ensure that medical assistance is obtained for those injured or exposed (safety shower, medical attention, etc.). Continue to rinse body contact areas with copious amounts of water for at least 15 minutes unless directed otherwise by appropriate emergency medical personnel (Physician, Nurse, Paramedic or Emergency Medical Technician).
3. Visit the designated medical services provider for your campus or the emergency room for medical care and evaluation (see [Section 5.0](#)). If possible, take applicable Safety Data Sheets (SDS) with you.