Section 9 - Emergency Preparedness and Response

Contents

A. BEFORE AN EMERGENCY ........................................................... 9-2
   1. Planning and Prevention...................................................... 9-2
      a. Accident Prevention .......................................................... 9-2
      b. Hazards Assessment /Risk Minimization ........................... 9-3
      c. Fire and Explosion Prevention ......................................... 9-3
      d. Spill Prevention ............................................................. 9-3
      e. Earthquake ....................................................................... 9-4
      f. Gas Leaks and Unknown Odors ......................................... 9-4
      g. Utility Outages: Pre-planning and Mitigation ................... 9-4
      h. Unattended Operations and Floods .................................... 9-5
      i. Inclement Weather ............................................................. 9-6
      j. Security Issues ................................................................. 9-6
      k. Field Operations ............................................................... 9-7
   2. Spill, First Aid and Disaster Kits ........................................... 9-7
      a. Chemical Spill Kits ........................................................... 9-7
      b. Mercury Spill Kits ............................................................ 9-8
      c. Biological Spill Kits ........................................................... 9-8
      d. First Aid Kits ..................................................................... 9-8
      e. Disaster Kits ...................................................................... 9-9

B. RESPONSE TO SPECIFIC INCIDENTS / ACCIDENTS ......................... 9-9
   1. Accidents Causing Serious Personal Injury or Exposure ........... 9-9
      a. Chemical Exposure ............................................................ 9-9
      b. Reporting .......................................................................... 9-10
      c. Medical Treatment Reports .............................................. 9-10
   2. Fires and Explosions ............................................................... 9-10
   3. Spills .................................................................................... 9-10
      a. Documentation and Process Improvement ......................... 9-11
      b. Mercury Spills .................................................................. 9-11
   4. Earthquake Response ............................................................. 9-11
   5. Gas Leaks or Other Odors ...................................................... 9-11
      a. Natural Gas Leaks ............................................................. 9-11
      b. Unusual Odors ................................................................... 9-12
   6. Utility Outage ....................................................................... 9-12
      a. Electrical Failure Procedures ............................................ 9-12
      b. HVAC/Fume Hood Failure Procedures ............................... 9-13
   7. Laboratory Floods .................................................................. 9-13
8. Inclement Weather ................................................................. 9-14
9. Intruders, Suspicious Packages and Demonstrators ............... 9-14

Tables
Table 9-1  General Purpose Chemical Spill Kit Contents ............... 9-7
Table 9-2  Mercury Spill Kit Contents ........................................ 9-8
Table 9-3  Typical First Aid Kit Contents ................................... 9-8

A. BEFORE AN EMERGENCY
This section describes emergency guidelines and requirements for laboratory operations. It supplements emergency procedures described in other documents, including your Departmental Health and Safety Plan, your building Emergency Evacuation and Operations Plan, and the UW Emergency Response Management Plan.

Principal Investigators must prepare laboratory personnel for emergencies such as injuries, fires or explosions, chemical spills, floods, power failures and earthquakes. To prepare for an emergency, laboratory personnel should plan, obtain response kits and materials, and practice responses. New employees must be informed about laboratory emergency procedures as part of their new employee orientation. All staff should participate in periodic drills and exercises, including “table top” discussions, to keep knowledge current and interest fresh.

1. Planning and Prevention
Emergency response on the Seattle campus is provided by the University of Washington Police Department and Seattle Fire Department. Local fire and police departments respond at Bothell, Tacoma, and off-site locations. EH&S will provide liaison with these organizations and provide advice, but each laboratory is responsible for accident prevention, and preparing for laboratory emergencies.

a. Accident Prevention
Help to prevent emergencies in laboratories and minimize the effects of an emergency by doing the following:
1) Post emergency phone numbers and the Emergency Procedures for Laboratories flip chart
2) Identify the locations of emergency equipment on a floor plan; make sure all staff know the locations of the equipment such as a spill kit
3) Know locations of shutoffs for equipment including electrical, gas, and water
4) Train personnel to retrieve MSDSs/SDSs for laboratory chemicals
5) Separate incompatible chemicals
6) Frequently dispose of chemical wastes, and clean out unneeded chemicals and surplus or dispose of unneeded items
7) Ensure electrical wires and equipment are in good condition
8) Discuss accidents and near misses to prevent future accidents
9) Complete the laboratory inspection checklist periodically
10) Discuss safety topics periodically in staff meetings

b. Hazards Assessment /Risk Minimization
When a new experiment or process is in development, assess possible hazards and identify ways to reduce risks. This is the responsibility of the Principal Investigator (with assistance from the Chemical Hygiene Officer if other than the Principal Investigator.) However, laboratory personnel are more likely to comply with the experimental procedures when they are involved with their development, and they may provide good perspective too.

Information about hazards and controls are available in the product SDS/MSDS, from colleagues and from EH&S (call 206-543-7388 or email uwcho@u.washington.edu for advice.)

c. Fire and Explosion Prevention
To prevent and minimize the effects of fires and explosions, do the following when using flammable, reactive, or explosive materials:

1) Determine if a non-flammable substitute for your material is available
2) Use a minimum amount of the material at any one time
3) Maintain proper clearances for aisles, eyewashes, emergency showers, and underneath and around sprinkler heads
4) Close fume hood sashes when they are not in use
5) Keep containers closed
6) Practice good housekeeping, such as recycling empty cardboard boxes and disposing of unnecessary or outdated chemicals
7) Have the appropriate fire extinguisher available for the materials in use
8) Wear fire-resistant lab coats instead of plastic
9) If using chemicals in a closed system, frequently check that connections are tight
10) Use chemicals and reaction systems in a ventilated enclosure such as a fume hood
11) Reduce or eliminate open flames and spark-producing equipment
12) Use a refrigerator/freezer designed to store flammable materials
13) Use barriers that provide adequate protection from an explosion
14) Consider if utility outages would increase risks while using the material
15) Anticipate that intermediates and wastes can be flammable or explosive
16) Use appropriate containers and locations to accumulate wastes
17) Train staff as to the chemicals, their hazards and precautions. Document the training. Exercise responses occasionally.

d. Spill Prevention
Laboratory supervisors should identify chemicals likely to spill during common laboratory procedures as well as during emergency events, such as earthquakes and fires. The procedures for cleaning spills in a laboratory should be included in the SOPs developed for each of the laboratory’s processes (see Section 6 of this manual). Pay special attention to additional precautions that may be desirable for pyrophoric, water reactive,
and oxidizing chemicals, and those that may generate toxic gases if a reaction were to occur.

Chemicals should be acquired in small quantities for ease of handling and to limit the amount spilled if a container ruptures. Chemicals should be transported between rooms in a tub or bottle carriers designed to prevent breakage and to hold the contents in case of breakage.

All laboratories should have a chemical spill cleanup kit appropriate for the chemicals in the lab.

e. **Earthquake**

Laboratory personnel should be familiar with actions to take during an earthquake. In addition to general procedures such as DROP, COVER and HOLD ON, personnel should know the proper procedures for laboratory evacuation, chemical spills cleanup, and accessing SDSs/MSDSs for emergency response personnel.

Heavy or hazardous items that could topple over and create a hazard or block emergency exits must be secured to the walls or floor. These items include shelving units, equipment racks, and file cabinets taller than 4 feet, distillation units, gas cylinders, and cryogenic dewars. Anchors for these items must be secured to the walls or floor by Facilities Services. Two straps are recommended for items such as compressed gas cylinders due to the likelihood that they will fall over during an earthquake if only one strap is used.

Shelves holding chemical containers must have a two-inch tall lip or protective restraint devices to prevent chemical containers from being thrown off the shelf. Cabinets used to store chemical containers should have a closure device to prevent the door from being shaken open.

f. **Gas Leaks and Unknown Odors**

All staff need to know what gases and volatile chemicals in their laboratory may produce an odor. Identify contents of pipes, hoses or gas lines with labels. Staff should know the location of control valves used to shut off gas flow. Discuss previous incidents with odors as well as possible odors from adjacent laboratories during staff meetings if they are issues.

g. **Utility Outages: Pre-planning and Mitigation**

1) To pre-plan for utility failure, consider the utilities laboratory operations depend on and determine if interruptions are unacceptable. Utility outages that can affect laboratory operations include:

   - Electrical power systems
   - Backup power system or switching systems
   - Compressed air systems
   - Ventilation systems (fume hoods, biological safety cabinets, etc.)
   - Natural gas system
   - Supplied gas systems (medical air, O2, N2O, N2, EtO, etc.)
   - Vacuum systems
   - Potable water systems (loss or contamination)
   - Non-potable water systems (loss or contamination)
   - Sewage systems
   - Heating systems
2) Actions that can be taken beforehand to mitigate the effects of shutdowns on laboratory operations include:

- Maintain backup (split) samples at another location
- Maintain records at another location
- Use emergency power circuits (if available) only for equipment that needs it
- Install devices to improve services, such as water filters for potable water and surge protectors or Uninterruptible Power Systems for electrical power
- Plan the steps that need to be taken to safely shut the process(es) down and start it (them) up again
- Plan what actions would be needed to prevent uncontrolled reactions
- Contract for emergency supplies and services. For example, if refrigerators or freezers are used for specimens, locate a source for dry ice and liquid nitrogen freezers in case of electrical failure.
- Connect incubators, refrigerators and freezers to battery powered automatic phone dialing systems or alarm monitoring services which detect power interruptions and alert the designated person. Being alerted to an outage does not solve the problem but it can give employees extra time to react.
- Develop procedures for card reader doors and other security systems that typically have a four-hour battery backup and procedures to communicate changes to normal access routes if necessary
- Have flashlights in areas that do not have emergency lighting and periodically check their condition
- Be aware of the various alarm systems and the appropriate responses to them (including fire alarms, ventilation system alarms, fume hood low flow alarms, gas leak detection systems.)
- Advise staff that communication channels set up for other disaster situations (adverse weather) will be used during long-term power outages
- Maintaining good habits for safe chemical use, such as keeping containers closed
- Conduct periodic trainings, drills or exercises.

h. **Unattended Operations and Floods**

Avoid leaving operations or experiments unattended. Post on the door to the room the name and phone number of the person responsible for the operation in case of emergency. In addition, identify the chemicals in use and post clear directions for shutdown so that an untrained person could shut down the operation during an emergency.

In general, to avoid failures in equipment while no one is in the lab, maintain and operate equipment properly. Replace damaged equipment and electrical cords. Do not use extension cords for hooking up to electrical power; use strip outlets if your cord does not reach the outlet. Check equipment periodically.
Water should never be left running unattended. Water can flood into the floor below your laboratory; in fact, this happens too often. If it is necessary to have water running unattended, install a commercially available water flow device that sets off an alarm if a leak occurs or use a shutoff valve that kicks in if the water level rises too high. Use copper tubing with proper fittings or Tygon tubing, which is less likely to become brittle than rubber tubing. If using tubing, make sure the ends are tightly connected and tied tight. Anchor outlet hoses into sinks or drains.

Do not leave open flames unattended.

i. **Inclement Weather**

Plan for inclement weather, including lightning, heavy snow, hail or ice storms, high winds, heavy rainfall, flooding, and even high heat loads, depending on the laboratory’s location.

Staff must have an emergency kit on campus and should have emergency kits at home. Laboratory-specific planning should include determining how communications between separated staff will occur and determining what procedures may be affected. If an activity must continue on a daily basis, such as an experiment or caring for research animals, devise a contingency plan for inclement weather. Consider who could travel to the laboratory and provide the necessary service. Realize that certain roads and building entrances that you usually use may not be available.

Plan for these events by considering the following beforehand:

1) How to protect personnel.
2) How to shut down experiments in a timely manner or safely continue experiments in emergency conditions.
3) How to protect experimental results and essential materials.
4) How to protect equipment and supplies from the weather.

j. **Security Issues**

Plan for ways to avoid and respond to violence, vandalism, suspicious people and suspicious packages. Laboratories can be targets for such activities. Related information is available on the EH&S and the Office of Emergency Management web sites.

In general, laboratory security can be improved if all staff:

1) Know all entry points
2) Keep doors closed and locked when the lab is unoccupied
3) Wear identification badges
4) Never allow a stranger to enter the lab
5) Do not leave out materials which may be attractive to thieves
6) Properly dispose of hazardous agents which are no longer needed

Depending on the materials in use in the laboratory, higher levels of controls may need to be implemented. These controls may include using codes to identify certain materials and securing them inside the laboratory with access by only designated personnel.

The PI, with the assistance of the department, should determine policies to increase security. All staff must be periodically reminded of these policies.
k. **Field Operations**

Plan for emergencies that may occur during field operations, it is desirable to write a safety plan. Take into account the remoteness of the operation and the risks associated with the activities. Minimum considerations include:

1) Become knowledgeable about potential threats in the area
2) Determine access to first aid, CPR and medical response and have a first aid kit available
3) Determine communications to be used in case of emergency
4) Devise alternative plans for inclement weather
5) Develop checklists to ensure necessary supplies and equipment are brought to the site
6) The UW no longer offers a field trip insurance program for students. Students should check their insurance coverage before participating in lab activities.

2. **Spill, First Aid and Disaster Kits**

Purchase emergency kits appropriate for your laboratory. Inspect them routinely (i.e., semi-annually and after use) to make sure they are complete and ready for response.

a. **Chemical Spill Kits**

Many safety equipment providers offer spill cleanup supplies or kits. To purchase a UW specific general-purpose spill kit through EProcurement, visit the EH&S page at [https://www.ehs.washington.edu/epo/spills/vwr_ordering_spills.shtm](https://www.ehs.washington.edu/epo/spills/vwr_ordering_spills.shtm) for instructions. This general-purpose kit is also available for purchase through either BioChemistry Stores (Health Sciences J-014) or Chemistry Stores (Bagley Hall 036) under part number 4227. Table 9-1 identifies the components of the UW specific general-purpose spill kit. Each lab should tailor their kit to their specific operations.

**Table 9-1  General Purpose Chemical Spill Kit Contents**

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Absorbent</td>
<td>Five spill pads, universal for acid, base, oil, solvents</td>
</tr>
<tr>
<td>Neutralizer</td>
<td>One 64 oz. box baking soda for neutralizing acids</td>
</tr>
<tr>
<td>Brush, dustpan</td>
<td>One snap together dust pan and whisk broom</td>
</tr>
<tr>
<td>Plastic bags</td>
<td>Four 18 x 30, yellow hazardous material heavy duty waste bags</td>
</tr>
<tr>
<td>Plastic drum</td>
<td>One 5-gallon re-useable screw top plastic drum to store kit supplies and hold bagged spill waste</td>
</tr>
<tr>
<td>Goggles</td>
<td>One chemical splash protection goggles</td>
</tr>
<tr>
<td>Impervious gloves</td>
<td>One pair Silvershield gloves (multi-layer construction, impervious to most chemicals)</td>
</tr>
<tr>
<td>Lightweight gloves</td>
<td>Eight pairs of Microgrip powder-free nitrile gloves, various sizes</td>
</tr>
<tr>
<td>Forms</td>
<td>EH&amp;S Chemical Collection Request and hazardous waste labels</td>
</tr>
</tbody>
</table>
b. **Mercury Spill Kits**

Many safety providers offer Mercury spill kits. To purchase the UW specific Mercury Spill Kit through EProcurement, visit the EH&S page [https://www.ehs.washington.edu/epo/spills/vwr_ordering_spills.shtm](https://www.ehs.washington.edu/epo/spills/vwr_ordering_spills.shtm) for specific instructions. The kit may also be purchased at either BioChemistry Stores (Health Sciences J-014) or Chemistry Stores (Bagley Hall 036). Table 9-2 lists the contents of the Mercury Spill Kit are listed below:

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scraper</td>
<td>One plastic scraper</td>
</tr>
<tr>
<td>Syringe</td>
<td>One 1 cc syringe to aspirate visible mercury droplets</td>
</tr>
<tr>
<td>Amalgamating powder</td>
<td>One package, Hg-Absorb powder to amalgamate micro-droplets</td>
</tr>
<tr>
<td>Sponge</td>
<td>One sponge to wipe surfaces after using Hg-Absorb powder</td>
</tr>
<tr>
<td>Plastic bag</td>
<td>One 9 x 12 reseal-able bag for waste (holds kit contents)</td>
</tr>
<tr>
<td>Gloves</td>
<td>One pair, Nitrile gloves, large size</td>
</tr>
<tr>
<td>Forms</td>
<td>Chemical Collection Request and hazardous waste labels</td>
</tr>
</tbody>
</table>

Table 9-2  Mercury Spill Kit Contents

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c. **Biological Spill Kits**


d. **First Aid Kits**

First aid supplies must be readily accessible to employees while working in the lab. The size of a first aid kit can be related to the number of people who may use the kit, as shown in the following table (Table 9-3, Typical First Aid Kit Contents). Each laboratory must establish procedures to assure that first aid kits remain stocked.

<table>
<thead>
<tr>
<th>Required Items</th>
<th># People</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 - 5</td>
</tr>
<tr>
<td>Absorbent gauze 2'x6'</td>
<td>0 pk</td>
</tr>
<tr>
<td>Adhesive bandages 1&quot;</td>
<td>1 bx</td>
</tr>
<tr>
<td>Bandage compress 4&quot;</td>
<td>1 pk</td>
</tr>
<tr>
<td>Eye dressing</td>
<td>0 pk</td>
</tr>
<tr>
<td>Scissors and tweezers</td>
<td>1 pk</td>
</tr>
<tr>
<td>Triangle bandages</td>
<td>1 pk</td>
</tr>
<tr>
<td>Antiseptic soap/pads</td>
<td>1 pk</td>
</tr>
<tr>
<td>Kling bandage 4&quot;</td>
<td>1 dz</td>
</tr>
</tbody>
</table>

Table 9-3  Typical First Aid Kit Contents
The kit contents may vary depending on particular laboratory situations.
For example, laboratories using hydrofluoric acid must stock calcium gluconate gel in case of skin contact with the hydrofluoric acid. The gel should be kept in the first aid kit (but it could be kept in a spill kit or another location close to the work area and known by all personnel). The gel has a relatively short shelf life of six months so the PI/laboratory supervisor needs to replace it periodically. (See [http://www.ehs.washington.edu/manuals/focus/hf.pdf](http://www.ehs.washington.edu/manuals/focus/hf.pdf) for additional details about procuring the gel from a local vendor.)

e. **Disaster Kits**

### B. RESPONSE TO SPECIFIC INCIDENTS / ACCIDENTS

Emergencies occur in a range of severity. Minor incidents such as an insignificant spill, or such as a scratch treated by applying a “band aid,” do not need a major response. All personnel need to know what to do in case of a major emergency.

1. **Accidents Causing Serious Personal Injury or Exposure**
   For an accident causing serious personal injury, call 911 for emergency response as soon as possible while conducting the following first aid responses as appropriate. Do not remove equipment involved in the accident and do not move it unless necessary to provide aid to the victim(s) or to prevent further damage or injury. Depending on the seriousness of the injuries, a formal accident investigation may be required in compliance with Washington State Department of Labor and Industries regulations (Washington Administrative Code, WAC 296-800-320).

   a. **Chemical Exposure**
      If a hazardous chemical is in someone’s eyes, flush eyes for at least 15 minutes in the eyewash, holding the victim’s eyelids open. Call 911 as soon as possible.

      If a toxic or corrosive chemical is on someone’s skin, flush area affected for at least 15 minutes. If necessary, use the safety shower and remove contaminated apparel. (For hydrofluoric acid, when calcium gluconate treatment is available, instead flush skin for five minutes and immediately apply the calcium gluconate. For more details, see the HF example Standard Operating Procedure.) Call 911 as soon as possible.

      If a person is exposed to a toxic material in the air, remove the person to fresh air and call 911 as soon as possible. Do not re-enter an area that may still be contaminated.

      All personnel in the laboratory should be able to retrieve an MSDS/SDS for any hazardous chemical in the laboratory so they can bring it to the emergency room. Transporting the victim by ambulance is recommended.
Contact the Occupational Health Nurse at UW Campus Health Services (206-685-1026) if there is a concern about possible long-term health effects from a workplace exposure.

b. Reporting
After immediate, emergency actions have been taken, report the accident or incident to the work area supervisor, department administrator, or other designated department contact as soon as possible. If the accident results in a fatality or hospitalization, also report the accident immediately to EH&S at 206-543-7262. After routine office hours, EH&S can be contacted via the UW Police Department at 206-685-UWPD (8973). If the accident involved a University vehicle, it must be reported immediately to the UW Police Department at 911 or 206-685-UWPD (8973), and to UW Fleet Services using the procedures found in the vehicle’s glove compartment.

All faculty, staff, students and visitors are required to report an accident or incident using the online accident reporting system within 24 hours of the incident or accident if a person was injured or property damage occurred. Also report any on-the-job incident that barely missed causing an injury or illness or property damage. The online system is available at http://www.ehs.washington.edu/ohsoars/index.shtm.

c. Medical Treatment Reports
An employee who seeks medical treatment for a work related injury or illness must submit a State of Washington Accident Report Form, which is initiated by the health care provider. Also, notify UW Risk Management at 206-543-0183. More information is available at http://f2.washington.edu/treasury/riskmgmt/wc.

2. Fires and Explosions
In the event of a fire or explosion, activate the alarm system and evacuate as soon as possible. You may attempt to use an appropriate fire extinguisher to fight the fire if it is easily extinguished (i.e., smaller than a trashcan), you have been trained within the last year on how to use a fire extinguisher and you have a clear exit.

If a person’s hair or clothing is on fire, smother the flames with a coat or by having the person roll on the floor. Call 911 and provide first aid. Assist to evacuate as needed. Remain in contact with emergency responders.

Report all fires and explosions immediately. Even if the fire was small, contained and readily extinguished by laboratory personnel, and you did not call 911, immediately report the incident to the University Police on the Seattle campus at 206-685-UWPD (8973). At UW Bothell, call the UW Bothell Public Safety Department at 425-352-5222. At UW Tacoma, call the Campus Safety Services at 253-692-4416.

If you are uncertain about calling 911, the best course of action is to call 911 and let the dispatch operator assist in deciding a proper response.

Submit an accident report on the online accident reporting system on the EH&S web site at http://www.ehs.washington.edu/ohsoars/index.shtm.

3. Spills
Your response to a spill depends on the danger it poses. Immediately assess the situation to determine if anyone has been exposed and to assess whether clean-up is within the laboratory staff’s capabilities. Guidance is available on the “Emergency Procedures for Laboratories” flip chart. Chemical spills advice is available on the EH&S web page https://www.ehs.washington.edu/epo/spills/chemspills.shtm.
a. **Documentation and Process Improvement**

After the incident, fill out an accident report (on the EH&S Web site at [http://www.ehs.washington.edu/ohs/oars/index.shtm](http://www.ehs.washington.edu/ohs/oars/index.shtm)) with your supervisor. Replace used clean-up materials. Determine if additional or other types of cleanup materials would be desirable. Also, discuss as a group what could have been done differently. Document any changes by updating the applicable Standard Operating Procedure(s).

b. **Mercury Spills**

Mercury spills are one of the most common spill calls received by EH&S. All departments using mercury should replace their mercury devices if at all feasible. If a mercury spill occurs, prevent others from entering the area, and take care not to contaminate materials such as shoes. Refer to the EH&S web page [https://www.ehs.washington.edu/epo/spills/hgspills.shtm](https://www.ehs.washington.edu/epo/spills/hgspills.shtm) for detailed guidance.

4. **Earthquake Response**

Drop, Cover, and Hold On! Take shelter under a workbench or other protective cover until the earth movement stops. Afterwards, if safe to do so, shut down any procedures that may be underway and cap any open containers. Aid injured if you are able. Determine if you need to evacuate the work area. When evacuating, take keys, emergency kits, etc. because you may not be allowed to re-enter until the building has been assessed for hazards. Try to note the extent of building damage while evacuating. Assemble at the Evacuation Assembly Point. Await further instructions. Do not re-enter the building until it has been assessed for structural damage by trained personnel and re-entry is authorized by University officials. For further information about earthquake safety, see guidelines on the EH&S web page: [http://www.ehs.washington.edu/fsoemerprep/earthquake.shtm](http://www.ehs.washington.edu/fsoemerprep/earthquake.shtm) and the UW Emergency Management web page: [http://www.washington.edu/emergency/](http://www.washington.edu/emergency/).

5. **Gas Leaks or Other Odors**

a. **Natural Gas Leaks**

1) Natural gas leaks are a potential cause of explosions. Natural gas contains an odorant that enables recognition even at low concentrations. If you smell natural gas in the laboratory, do the following:

- Turn off all sources of ignition (open flames, electrical equipment.)
- Check laboratory gas outlets for open valves.
- Call Facilities Services (see phone numbers in Appendix F) to have the location of the gas leak identified.

2) For strong, widespread and/or quickly worsening odor:

- Pull the emergency alarm at a pull station.
- Turn off all sources of ignition (open flames, electrical equipment).
- Close the emergency gas valve for your floor or area if one exists.
- Evacuate the building immediately and go to your assembly area.
- If your assembly area is downwind of the building, move to an alternate assembly area up wind at least 300 feet from the building.
- Do not return to an evacuated building unless told to do so by the on-scene authority (fire department, police department or other personnel).
• Submit an accident report on the online accident reporting system at http://www.ehs.washington.edu/ohsoars/index.shtm.

b. Unusual Odors
Check with co-workers to determine if they are doing something to produce an odor. If a leaking gas cylinder is suspected, handle it as described in Section 2.G.8.d. If an immediate source cannot be found in the laboratory, check the hallway and adjacent laboratories to determine if the odor is widespread or if the source is obvious.

Try to relate the odor to possible causes – such as whether it smells like a sewer, or rotting food, or over-heating electronics, or a distinct chemical. If the source is obvious, take action if possible to eliminate the cause or control the odor, such as taking a chemical reaction off the benchtop and putting it into a working fume hood.

If the odor isn’t immediately found but appears to be appreciably stronger in one location, there is likely a source nearby, which can be a dried sink drain or floor drain (if a sewer-like or chemical-like odor), a chemical process gone wrong (if a rotting or unknown chemical odor), over-heating electronics (if devices are over-heating), or a chemical spill or a leaking process (if a distinct chemical). There are an unlimited number of potential sources, but familiarity with the lab’s activities should help narrow the possibilities.

Additional general information about indoor air quality is available on the EH&S web site at http://www.ehs.washington.edu/ohs/iaq.shtm.

6. Utility Outage
The safety of you and those around you is the first consideration during a utility outage. Remain calm. Assess the situation; if conditions seem dangerous, evacuate the area while assisting others to evacuate. Do not re-enter the building until competent authority has determined it is safe to do so.

If the situation does not seem dangerous, notify your supervisor or the building coordinator of the failure, shut off work in progress that could cause hazards, close containers and fume hood/biosafety cabinet sashes, and return hazardous material containers to their proper storage locations. Some utility failures may have insignificant impact on your operations and you can safely continue work as determined by you and your department/supervisor. Note: emergency lighting systems are meant to provide light for exiting, not routine work.

If the failure appears likely to last for a long period, follow your health and safety plan and directions of your department/supervisor. Keep refrigerator and freezer doors closed for as long as possible and implement backup procedures as necessary, such as obtaining dry ice to keep specimen refrigerators cold. When systems return to normal operation, immediately assess the work area (even on weekends if that is when service is restored) for any hazards that may be present, such as electric devices (heaters, ovens, centrifuges, etc.) left on when the outage occurred.

a. Electrical Failure Procedures
1) Assess the extent of the outage in your area.
2) On a UW campus, report the outage to Facilities Services (see phone numbers in Appendix F). If in a leased facility off-campus, report the outage to the servicing electrical utility and to the building owner.
3) Help co-workers in darkened work areas move to safe locations.
4) Implement pre-planned response actions, as necessary. Do not treat the outage as “business as usual.”
5) If practical, secure current experimental work, then move it to a safe location.
6) Close any open containers of hazardous materials.
7) Close sashes on fume hoods and biological safety cabinets.
8) If you move chemicals on carts between floors, get assistance. Hazardous spills are a significant risk during transport.
9) Keep lab refrigerators or freezers closed throughout the outage.
10) Unplug personal computers, non-essential electrical equipment, and appliances.
11) Open windows for additional light and ventilation (during mild weather).
12) If you are asked to evacuate your building, secure any hazardous materials work and leave the building.
13) To obtain information about a prolonged outage, listen to service announcements in the local media or call the service provider.
14) Release personnel during an extended outage if directed to do so by the department director.
15) When power is restored, immediately assess the affected area for potentially hazardous situations, such as devices left “on.” This is also required if power is restored at a time that the facility would be normally unoccupied.

b. HVAC/Fume Hood Failure Procedures
1) Notify other occupants of the situation.
2) If necessary (e.g., because smoke is coming into the room), evacuate area (and pull fire alarm if the situation is widespread)
3) Notify your supervisor or building coordinator of the situation.
4) Shut down work in progress if safe to do so:
   - Shut off equipment and supplied gases and liquids
   - Close open containers
   - Close sashes on fume hoods, biological safety cabinets
   - Note the step in your process when work was stopped
   - Return specimens to freezer, storage containers, etc.
5) Open windows if staff are to remain in the workplace.
6) If staff remain in the workplace, periodically check on their wellbeing and evacuate if anyone is adversely affected.
7) Prior to re-starting work in the area, review work to identify possible hazards.
8) If the outage caused damage, submit an accident report on the online accident reporting system at http://www.ehs.washington.edu/ohsosars/index.shtml.

7. Laboratory Floods
If your laboratory is flooded, find the source of the water. Shut the water off. If safe, also shut down any equipment that could cause a dangerous electrical situation during a flood. Cover equipment and desks if water is dripping onto them. Then, get help quickly. During work hours, contact your building coordinator. After hours, call UW Police at 911 if on the UW Seattle Campus or Facilities Services emergency numbers (see Appendix F) if at other locations. Also, notify the supervisor, principal investigator or department administrator in charge of the flooding laboratory as soon as possible.
If the water is contaminated by chemicals, call EH&S at 206-543-0467.

The best method to clean up uncontaminated water is by using one water vacuum on the scene of the flood and another on the affected area below. Saturated materials (fabrics and cardboard, for example) need to be dried within 48 hours or will need to be discarded to prevent mold growth.

After the cleanup, submit an accident report on the online accident reporting system at http://www.ehs.washington.edu/ohsoars/index.shtm.

8. Inclement Weather

During thunderstorms, shut off electrical equipment that may be sensitive to voltage fluctuations. For other anticipated weather conditions, which may affect your lab’s operations, take response actions as indicated in your pre-emergency plans.

Do not drive through flooded areas to get to your laboratory if there is a possibility of getting swept off the roadway. Minimize your driving and your lab staff’s driving during heavy snow, ice storms and extreme icing conditions. Listen to the radio (KOMO 1000AM or other more current radio station as listed on the Office of Emergency Management web page or the UW information line at 206-UWS-INFO) for instructions pertaining to University operations and use email and telephones to maintain contact with your department and laboratory staff.

9. Intruders, Suspicious Packages and Demonstrators

Contact your servicing police department immediately to report a suspicious intruder or there is something missing. If a person is acting in a way that indicates he or she may become violent, follow protocols for handling potentially violent situations as set up by the University and department (such as contacting police, using code words and maintaining an exit pathway if possible).

If you find a suspicious package, do not handle it. If you suspect that a package could be explosive, evacuate the area and call 911 from a safe location. If you see wiring, or hear noise coming from the package, the weight of the package is odd for its size, there is liquid or powder leaking from the package, a chemical odor is present, there are odd stains on the package, or there is excessive packaging, this should alert you that it could be explosive.

If you find a suspicious letter or package, do not handle it. Evacuate the area and call 911. For more information, see the US Postal Service Poster on Suspicious Packages online at: http://about.usps.com/posters/pos84.pdf

In case of a demonstration adjacent to your laboratory, do not provoke, obstruct, or get into a verbal altercation with the demonstrators. If necessary, simply move on. Demonstrators are prohibited from blocking free entry to, and exit from, buildings and free movement in public spaces, and disrupting or causing obstacles to regular University activities.

When you leave your office or lab, be sure the door is closed and locked, even if you are just going across the hall “for a minute.” Do not leave items unattended.

If you see anything suspicious or criminal in nature, report it to the police (dial 911). If a disturbance seems threatening, immediately report it to the police (dial 911), alert other personnel in the area of the situation, lock doors and windows, and evacuate if necessary, under direction of the police or your evacuation warden.

In all cases, submit an accident report on the online accident reporting system at http://www.ehs.washington.edu/ohsoars/index.shtm.