

EMERGENCY ACTION PLAN

FOR THE

IRA A. FULTON COLLEGE OF ENGINEERING

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Purpose

This plan has been developed for the Brigham Young University Ira A. Fulton College of Engineering and establishes actions that need to be taken for the following events:

- Active Shooter
- Bomb Threat
- Building Fire
- Chemical Spill or Release
- Earthquake
- Medical Emergency
- Power Outage
- Riot or Public Disturbance
- Tornado or Severe Weather

Duties of Employees in the College

All college personnel (employees and students) are to take the following actions when evacuating a college building due to an emergency:

1. Evacuate according to this plan (don't hide in an office)
2. If you are the last person to leave a room, then turn the light(s) off and close the door;
3. Without endangering yourself, as you evacuate assist children & disabled individuals;
4. Upon evacuating a building meet at one of the designated areas for your particular building. Designated meeting areas are identified at the end of this plan

Wait at the designated area until a representative from your Department, the college Dean's Office, Risk Management, or Fire Department dismisses you.

Faculty Members

1. At the beginning of each semester/term review all appropriate emergency evacuation procedures for the areas you work in with your students and employees.

Department Chairs/Directors

College management ensures the following:

1. An adequate number of Evacuation Wardens are assigned to help facilitate emergency evacuation drills from assigned floors of buildings, as assigned;

2. Evacuation Wardens understand their responsibilities. Note: the college Health & Safety Officer is happy to meet with the wardens to review their responsibilities if desired; and
3. Proper communication occurs with those involved and campus officials as necessary.

Evacuation Wardens

Evacuation Wardens perform the following duties:

1. During evacuation drills check assigned areas of buildings to ensure individuals have evacuated properly;
2. During drills make sure fire doors and curtains in assigned areas have closed properly;
3. After sweeping their assigned area following a drill, evacuate and report findings to the college Health & Safety Officer; and
4. Following an actual emergency, gather information from individuals congregated at the designated area to account for individuals participating in the evacuation. Then relay information pertaining to missing individuals and the situation to the Emergency Responders and college management (e.g. what caused the emergency)

Critical Shutdown Procedures

Some situations require certain pieces of equipment to be shut down properly before vacating an area to help prevent the emergency situation from becoming worse. These situations are known as critical shut down situations and require critical shutdown procedures. When such a need exists it is the responsibility of the supervisor of the work being performed to make sure critical shutdown procedures are developed and individuals are properly trained. The procedures are to be documented in lab Standard Operating Procedures (SOPs), and specific training must also be documented.

Procedures to Account for All Individuals

Individuals who vacate relay information regarding missing individuals to Evacuation Wardens at their designated areas, then the Wardens relay the information they have gathered regarding missing individuals and the situation to emergency responders and college management.

Communication

Emergency services are summoned by dialing 911. Phones are not to be used for non-emergency calls during an emergency. Doing so can result in too much communication traffic and prevent critical calls from being made.

Students, supervisors and other employees may be able to receive information regarding the status of an emergency and the recovery process from the following resources:

- Verbally (if already onsite)
- Radio (KBYU 89.1 or 89.5 AM – for campus wide emergencies)
- Y Alert (university police notification system)
- E-mail
- Twitter
- Phone
- Signage
- Commercial radio or television
- Messenger
- Police

Evacuation

Building evacuation is required in the event of a fire, any chemical release that affects the entire building, and following an earthquake (see earthquake section for details).

Follow the safest shortest evacuation route while exiting a building. Evacuation routes are posted in corridors of the Clyde Building, Crabtree Building, and Snell Building. The evacuation routes should be followed unless an unsafe condition blocks the path. If this occurs, then follow the next shortest route. Individuals need to familiarize themselves with the location of exits when entering an unfamiliar building.

Retrieval of Critical Items from a Secured Building

If critical item(s) have been left in an evacuated building then retrieval will be performed by working through either University Police, Risk Management, or the college Dean's office. These authorized groups will defer to the Authority Having Jurisdiction where Provo Fire Department or another such group has legal control of the site. In either case items are only to be retrieved if permission is granted and the conditions of retrieval are satisfied

EMERGENCY RESPONSE ACTIONS

Active Shooter

To survive an active shooter incident one must develop a **survival mindset** and a **course of action**. According to information found on the University Police website a survival mindset is a protective shield comprised of three components:

- Awareness
- Preparation
- Rehearsal

A course of action may include any or all of the following:

- **Figure out** the situation
- **Get out** to a safer area if you can
- **Call out** to the police
- **Hide out** if you are unable to get out
- **Keep out** the shooter by blocking doorways etc.
- **Spread out** (do not huddle together) and quietly develop a plan of action
- **Take out** the shooter. Assume the shooter's intentions are lethal and be prepared to do whatever it takes (survival mindset) to neutralize the threat.

Shots Fired, an on-line video, explains the aforementioned concepts in detail. To view this video, go to <http://police.byu.edu/> and click on the Shots Fired link.

Flashpoint is an on-line video regarding violence awareness. Awareness plus action equals prevention. To view this video, go to <http://police.byu.edu/> and click on the Flashpoint link.

Bomb Threat

If you receive a suspicious package or envelope:

- Do not shake or empty the contents;
- Leave the package where it is - do not touch it; and
- Contact University Police (801-422-2222)
- If you are directed to leave the area, take your personal belongings (e.g. purse, lunch box, book bag, etc.) with you so they won't have to be searched.

Bomb Threats: Most bomb threats will be received by a telephone call to a faculty or staff member in the building. If you receive a bomb threat by phone, collect as much information as possible from the caller. Consider gathering information such as that indicated on the Bomb Threat checklist which is located near the end of this plan. After gathering the information contact University Police (422-2222) relay the information. Also, notify the supervisor of the individual(s) for which the bomb threat is targeted and the Dean's office (422-4327).

Immediate arbitrary evacuation upon initial receipt of a bomb threat is not recommended unless the caller indicates that detonation of the bomb is imminent, in which case the building fire alarm should be triggered to initiate an evacuation. The recommended approach is to have individuals examine their work areas for strange or suspicious items and then report any suspicious items to the University Police Department (422-2222). Individuals **MUST NOT TOUCH** any suspicious items.

If a suspicious item is found (e.g. abandoned backpack or package) and it is thought to present an imminent threat then activate the automated building fire alarm system by pulling the handle of a fire alarm pull station and evacuate.

Building Fire

If a fire occurs in a building you are in then do one of the following as appropriate:

1. If the building fire alarm system has activated, then evacuate;
2. If the building is equipped with a functional automatic fire detection system, but it has not activated, pull the nearest pull station handle (see image below) and evacuate; or



3. If the building doesn't have a functional automated fire alarm system then begin yelling "Fire", and continue to do so as you evacuate the building.

Do not use an elevator when evacuating.

As you evacuate, approach closed doors with caution. If the door has a window, peer through the window to ascertain conditions on the other side. If the door does not have a window, make sure you briefly touch the door to feel if it is hot. Remember - while evacuating NEVER OPEN A HOT DOOR - a fire on the other side could blast through with tremendous force and heat. Do not attempt to go back to obtain personal items.

NEVER enter a building that is in alarm

Chemical Spill or Release

Do not approach an unknown chemical spill or release - rather head away from them and call University Police (422-2222). This applies whether you are on campus outdoors or indoors. If you are outdoors, then head up-wind.

AREA OF CHEMICAL USE - Before using a toxic liquid or gas, laboratories must determine what the affected area would be should the liquid or gas be accidentally released. An affected area is the area where the released material could be present in airborne concentrations that would be harmful or cause panic. If a release could affect more than the lab where the substance is used, then the work must be revised (e.g. scaled down) so that the only affected area is contained within the lab where the substance is used.

If you need help determining the affected area, then contact Risk Management (422-4468) or the college Health & Safety Officer (801-422-6589) for help

CORRIDORS & BUILDING AREAS OUTSIDE THE LAB – The primary response to a chemical release of a toxic chemical that occurs in a corridor or area outside a lab in a building is to trigger the fire alarm and evacuate the building. However, this would also potentially expose people to a life threatening situation depending upon the characteristics of the substance released. Therefore, when quantities of toxic substances are being transported, would cause an emergency situation should they be released, then it is absolutely necessary that:

LABORATORIES USING CHEMICALS MUST ENSURE THEY TAKE EVERY PRACTICAL MEASURE AND ENSURE A RELEASE DOES NOT OCCUR OUTSIDE THEIR LAB

This means gas coffins or other such measures are necessary as needed.

OF NOTE: A toxic gas monitoring system is present in the Clyde Building and another in the Engineering Research Lab (ERL). Not every room in these buildings is equipped with toxic gas monitoring, but those that are have warning lights, audible alarms, and signage. The signage provides direction as to what to do should the alarms be activated. There are low and high level alarm settings. A yellow light signifies a low level alarm. And a red light signifies a high level alarm. Individuals can respond to correct a situation causing a low level alarm, but must vacate the affected area if a high level alarm is triggered. University Police (801-422-2222) can be notified to contact Risk Management during off hours. Risk Management will in turn contact the necessary individuals to gather information.

Laboratories **MUST** make sure they keep their lab door(s) closed to ensure their lab remain negative pressure relative to the surrounding corridors. *Note: there are other measures in place to prevent the buildup and accumulation of toxic gas in laboratories using compressed toxic gases. These measures include use of automated shutoff valves, use of gas cabinets, and backup power for the ventilation system.*



Signs near each light tower remind people what to do



Earthquake:

Prepare your work area before an earthquake occurs. Luckily, most of what you need to do to prepare your work area(s) involves standard lab safety principles and common sense.

As applicable, take the following precautions before an earthquake occurs:

1. Ensure you have backup copies of important information stored offsite.
2. Locate heavy objects on or near the floor; or secure them to the building structure.
3. Secure storage cabinets, shelving, etc. to prevent them from tipping over or moving in front of doorways and other critical paths.
4. Consider flying glass and falling object hazards in your area, and take measures to minimize the risk associated with both.
5. Latch storage cabinets.
6. Store chemicals securely and properly according to compatibility and manufacturer storage recommendations. *Note: some chemicals may need to be stored in refrigerators or freezers that are provided with backup emergency power.*
7. Minimize the volume of chemicals stored.
8. Use flexible hose connections when possible to convey gases and liquids.

In the event of an earthquake:

- Remain calm

- Position yourself under cover next to a sturdy object in a pre-selected location you have deemed the safest choice (away from glass & falling debris)
- Cover your head
- If you are outdoors stay away from glass, power lines, and telephone poles.

When an earthquake occurs remain in the facility until the tremors are over, then follow the earthquake response checklist found at the end of this document unless there is a fire or the building appears to be unstable in which case evacuate. Once you are outdoors don't re-enter a building until cleared to do so by Risk Management, Physical Facilities, and the college Dean's office. Do not flush toilets until told it is ok to do so because sewer lines may not be intact.

Medical Emergency

An emergency may occur that necessitates immediate first aid and/or subsequent medical attention. BYU Emergency Medical Services are equipped to handle breathing and other lifesaving problems, and have trained resuscitation teams.

By choice, as a "good Samaritan" you may provide first aid or CPR to a victim.

There are AED's (defibrillators) located in some buildings across campus. Only use an AED if you have been properly trained, and your training is current. They have been placed for the use of emergency responders.

Dial 911 immediately if there is a medical emergency. This will save time and could save the victims life.

Electrical Emergency

Smoking / Sparking - If machines, equipment, power cords etc. begin to smoke or spark then, if safe to do so, immediately shut off the source of electricity by unplugging it, or turning off the breaker switch or cutoff switch. If there is a fire, then follow the emergency procedures related to a fire. DO NOT re-energize the circuit until Physical Facilities investigates the incident (you'll need to call them). They will help you determine whether the issue was caused by facility wiring or if there is a problem with a particular piece of equipment or machinery. Before having the circuit re-energized, make sure all safety issues have been adequately addressed.

Electrocution / Shock – If someone is being shocked / electrocuted make sure you don't add another victim. You should respond by doing the following:

1. **Assess** the situation to make sure you and others are not in danger, and to identify the source of the electricity. If you or others are in danger, then relocate yourselves so you are not in danger.

2. If you can safely do so, **disconnect** power to the item that is the source of the electricity that is electrocuting the victim. This may be as simple as disconnecting a power cord by unplugging it, or it could mean opening the circuit by turning of the breaker or cutoff switch.
3. **Call 911** to summon emergency responders ASAP

Downed power line rules to live by:

- Do NOT assume that a downed conductor is safe simply because it is on the ground or it is not sparking.
- Do NOT assume that all coated, weather-proof or insulated wire is just telephone television or fiber-optic cable
- Low-hanging wires still have voltage potential even if they are not touching the ground. So, “don’t touch them.” Everything is energized until tested to be de-energized.
- Never go near a downed or fallen electric power line. Always assume that it is energized. Touching it could be fatal.
- Electricity can spread outward through the ground in a circular shape from the point of contact. As you move away from the center, large differences in voltages can be created.
- Never drive over downed power lines. Assume that they are energized. And, even if they are not, downed lines can become entangled in your equipment or vehicle.
- If contact is made with an energized power line while you are in a vehicle, remain calm and do not get out unless the vehicle is on fire. If possible, call for help.
- If you must exit any equipment because of fire or other safety reasons, try to jump completely clear, making sure that you do not touch the equipment and the ground at the same time. Land with both feet together and shuffle away in small steps to minimize the path of electric current and avoid electrical shock. Be careful to maintain your balance.

https://www.osha.gov/OshDoc/data_General_Facts/downed_electrical_wires.pdf

Remember that power lines don’t automatically turn off. Even if they are not sparking or humming, fallen power lines can kill you if you touch them.

Power Outage

1. In the event of a total or near-total loss of power to the building, it is essential for all building occupants to remain calm, especially if it is dark outside. Offer reassurance to the students and others in your area. Speak in a calm voice and offer appropriate assistance.
2. If it is determined that the loss of power is extensive and may last for an extended period of time, college management will notify the college community by the most expeditious or appropriate method and initiate an orderly evacuation of the building. Remember to collect your cold weather clothing if it is cold outside.
3. Using flashlights, Evacuation Wardens will need to be sure to conduct a thorough search of their assigned area to ensure that everyone has left.

Riot or Public Disturbance

If you observe a riot or public disturbance then you should immediately notify the University Police (422-2222) of the situation, unless they are already present. Be sure to distance yourself from the riot or public disturbance.

Tornado, or Severe Weather

In the event of a tornado or severe weather, the following procedure should be put into effect depending upon whether or not you are in a building, automobile, or in the open outdoors:

In a Building:

Go to the lowest basement floor if you are in a sturdy building. If there is no basement, go to the center of an interior room on the lowest level (closet, interior hallway) away from corners, windows, doors, and outside walls. Put as many walls as possible between you and the outside. Get under a sturdy table and use your arms to protect your head and neck. Do not open windows. http://www.fema.gov/hazard/tornado/to_during.shtm

In an Automobile

If you have time, get out immediately and go to the lowest floor of a sturdy nearby building, unless it is a mobile home. *Note: Mobile homes, even if tied down, offer little protection from tornadoes.* http://www.fema.gov/hazard/tornado/to_during.shtm

Never try to outrun a tornado in urban or congested areas in a car or truck. Instead, leave the vehicle immediately for safe shelter.

In the Open Outdoors

Lie flat in a nearby ditch or depression and cover your head with your hands. Be aware of the potential for flooding.

Do not get under an overpass or bridge. You are safer in a low, flat location.

Note: flying debris from tornadoes causes most fatalities and injuries.
http://www.fema.gov/hazard/tornado/to_during.shtm

TRAINING

Upon hire, all employees are required to review the “Basic Emergency Response” training presentation available YTrain (https://training.byu.edu/online_training_site/ytrain.html click on T-Train under Y-Train dropdown). Supervisors must ensure critical shutdown procedure training is completed by all of their workers participating in relevant work if such training is needed.

To practice evacuation procedures a fire drill will be performed at least once a year for each building in the college. The drill will be coordinated with the Electric Shop, who in turn coordinates with Risk Management, University Police, and Provo Fire. Both Risk Management and University Police act as informants to Provo Fire so that emergency response teams are not sent to the drill.

Earthquake Response Checklist

Each of these items could be critical for the health and safety of the people in your area and the viability of your research. Please discuss these plans among yourselves and take whatever action is necessary to see that all issues are addressed

During the Disaster

Do not leave the building until the tremors have stopped.

If you are outside, do not attempt to enter a building.

If you are in your car, stop immediately and do not continue to drive unless stopping will create a greater hazard.

After the Disaster – The First Thirty Minutes

- If safe to do so, turn off gas burners.
- Check quickly for fires, fire hazards, electrical hazards, and hazardous chemical releases.
 - If there are any fires, fire hazards, electrical hazards, or hazardous chemical releases then evacuate the building immediately, warning others as you leave. Meet at your designated meeting place.
- Follow any specific procedures your supervisor has developed.
- Account for everyone who was in the lab with you when the earthquake struck.
- Check for injured or physically limited people who might have trouble evacuating the building.
- Take emergency supplies (first aid kit, flashlights, etc.) to your designated meeting location.
- Close the laboratory door as you leave.
- Report crucial items or hazards to the individual in charge at your designated meeting location.
- Proceed to the designated meeting location for your building, if the location is safe.
 - Report crucial items or hazards to the individual in charge at your designated meeting location.

Recovery

Depending on the time and circumstances of the earthquake, you may be asked to stay out of your building for a few minutes to a few days – or indefinitely. Please take measures to plan accordingly

Bomb Threat Checklist

Gender of Caller Male Female

Questions

- 1. When is the bomb going to explode? _____
- 2. Where is it right now? _____
- 3. What does it look like? _____
- 4. What kind of bomb is it? _____
- 5. What will cause it to explode? _____
- 6. Did you place the bomb? _____
- 7. Why? _____
- 8. What is your name? _____
- 9. What is your phone number? _____
- 10. What is your address? _____
- 11. What is your age? _____

Did the caller appear to be familiar with the layout of the facility? Yes No

Callers Voice

- | | | |
|----------------------------------|-----------------------------------|------------------------------------|
| <input type="checkbox"/> Calm | <input type="checkbox"/> Laughing | <input type="checkbox"/> Lisp |
| <input type="checkbox"/> Angry | <input type="checkbox"/> Crying | <input type="checkbox"/> Raspy |
| <input type="checkbox"/> Excited | <input type="checkbox"/> Normal | <input type="checkbox"/> Deep |
| <input type="checkbox"/> Slow | <input type="checkbox"/> Distinct | <input type="checkbox"/> Clearing |
| <input type="checkbox"/> Rapid | <input type="checkbox"/> Slurred | <input type="checkbox"/> Crackling |
| <input type="checkbox"/> Soft | <input type="checkbox"/> Nasal | <input type="checkbox"/> Disguised |
| <input type="checkbox"/> Loud | <input type="checkbox"/> Stutter | <input type="checkbox"/> Familiar |

Did the caller have an accent? _____

Background Sounds

- | | | | | |
|---|--|------------------------------------|---------------------------------------|---------------------------------|
| <input type="checkbox"/> Distant Noises | <input type="checkbox"/> Office Noises | <input type="checkbox"/> Local | <input type="checkbox"/> PA System | <input type="checkbox"/> Static |
| <input type="checkbox"/> Street Noises | <input type="checkbox"/> Motors | <input type="checkbox"/> Machinery | <input type="checkbox"/> Music | <input type="checkbox"/> Clear |
| <input type="checkbox"/> Voices | <input type="checkbox"/> Factory | <input type="checkbox"/> Animal(s) | <input type="checkbox"/> House Noises | <input type="checkbox"/> Booth |

Threat Language

- | | | |
|-----------------------------------|-------------------------------------|--|
| <input type="checkbox"/> Educated | <input type="checkbox"/> Irrational | <input type="checkbox"/> Taped |
| <input type="checkbox"/> Foul | <input type="checkbox"/> Incoherent | <input type="checkbox"/> Message read by caller. |

Call Date: _____

Time of Call: _____

Designated Areas for Evacuation of College Buildings

Designated meeting areas are indicated by each red x in the following images:





