LABORATORY SAFETY FACT SHEET # 32

Be Prepared for Power Failures

Extended power outages can affect the campus, or individual buildings. For updates about a power failure, contact your building coordinator (e.g. MSO), or Department Safety Rep. Listen to KCSB FM – 91.9 radio for updates. Should the campus experience an extended electrical outage, the Emergency Operations Center at the Environmental Health and Safety building will activate to manage the campus response.

Emergency Lighting and Power

Building emergency lighting provides enough illumination for a safe exit. The lighting will either be battery-powered, or run off an emergency generator. Battery-run units should last a couple of hours, but may fail sooner. Some campus buildings have emergency generators, but what is powered varies by building. They typically only power emergency exit lighting, life safety systems and laboratory exhaust. Electrical outlets in labs that are on an emergency generator are typically red in color.

Data Backup

Back up your computer files regularly so as not to lose data when the power goes off suddenly. Use an Uninterruptible Power Supply (UPS) for critical machines such as servers.

Power Failure in Laboratories

Before Power Fails

- Be sure the after-hours contact information on your lab door placard is up-to- date. Ideally, these individuals should be knowledgeable about all of the laboratory's major operations, particularly those that are hazardous/sensitive to power outages.
- Put essential equipment on emergency power circuits if available. Contact Facilities Management - they may be able to provide additional service capacity, along with a small number of portable units that may be available to keep critical operations going during power interruptions.
- Make a list of equipment that must be reset or restarted once power returns. Keep instructions for doing so in a nearby place. Hazardous processes that operate unattended should be programmed to shut down safely during a power failure and not restart automatically when power returns.
- Identify an emergency source of dry ice if you have items that must be kept cold. Refrigerators and freezers will maintain their temperature for several hours if they are not opened. **Do not use dry ice in walk-in refrigerators or other confined areas** because hazardous concentrations of carbon dioxide gas will accumulate.

While the Power is Off

- Shut down experiments that involve hazardous materials or equipment which automatically restart when power is available.
- Make sure that experiments are stable and do not create uncontrolled hazards such as dangerous vapors in a non-functioning fume hood.
- Check fume hoods. Stop any operations that may be emitting hazardous vapors. Cap all chemical containers that are safe to cap, and then close the fume hood sashes. Leave the room and contact EH&S if you notice any odors or physical symptoms.
- Check equipment on emergency power. In some cases, it may take 20 to 30 seconds for the emergency power to activate after a power failure.
- Disconnect equipment that runs unattended, and turn off unnecessary lights and equipment. This will reduce the risk of power surges and other unforeseen problems that could result when the power comes on unexpectedly.
- Check items stored in cold rooms and refrigerators. You may need to transfer vulnerable items to equipment served by emergency power.

When the Power Returns

- Reset/restart/check equipment. In particular, check that the air flow of your fume hood. Often, hoods will not automatically restart.
- If a refrigerator or freezer fails to restart, keep the door closed until it has been repaired and returns to a safe working temperature.
- Contact EH&S for assistance with any spill cleanup or disposal issues.

Other Emergency Planning Tips

Take this opportunity to review your lab and building emergency procedures before a power failure strikes. In particular, your *Department Emergency Operations Plan* will provide building-specific emergency response and evacuation information. Contact your Department Safety Rep to review. However, at minimum, every worker must know: **emergency exit routes from the building, and the locations of the following relative to their work area: building Emergency Assembly Point, nearest fire extinguishers, nearest fire alarm pull station, lab emergency shower/eyewash and first-aid kit.** If unsure, talk to your supervisor, or Department Safety Rep, or EH&S.