

In this issue of the Environmental Health and Safety (EHS) Listserv – February 7, 2024

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1. Be Ready for an Emergency at Work

Your department/facility/area should have an Emergency Action Plan to facilitate and organize employer and employee actions during workplace emergencies. Well-developed emergency plans and proper employee training, such that employees understand their roles and responsibilities within the plan, will result in fewer and less severe employee injuries and less collateral damage to ongoing research or facilities due to emergencies.

Putting together an emergency action plan that deals with specifics of your work site/building is not difficult. It involves describing how employees should respond to different types of emergencies, considering your specific work site layout, structural features, and emergency systems. Emergency action plans should be reviewed at least once a year and more often, if necessary, to reflect changes in personnel or other specific attributes of the area/facility.

The UNL Safety At Nebraska Emergency Preparation website (<https://safety.unl.edu/preparation>) contains a template in addition to other useful preparedness information. While the template is designed for developing a **Building Emergency Action Plan**, it can readily be modified to develop a facility or area-specific emergency action plan.

All workers should be familiar with the emergency action plan, including how they will be notified of an emergency, at least two safe routes of escape from the building, and where they can shelter-in-place, if needed. In an emergency people tend to freeze, so they need to know what to do without having to think about it—that means training. If workers have additional roles to play in an emergency, such as shutting down equipment or assisting disabled co-workers, they must be trained in those duties as well. In addition to regular review/retraining, make sure that all new workers are trained on the emergency action plan as part of their onboarding.

Do you know where to find your department/area/facility's Emergency Action Plan? Have you reviewed the plan in the last 6-12 month? Now is the time.

Resources

- Building/Department Emergency Action Plan Template
<https://safety.unl.edu/doc/Template%20Building%20Emergency%20Action%20Plan.pdf>
- EHS (Safe Operating Procedure) SOP **Emergency Preparedness**
<https://ehs.unl.edu/sop/emergency-preparedness>
- EHS web-based training **Emergency Preparedness** web-based training
<https://ehs.unl.edu/web-based-training#EP>

2. Locate and Maintain Your AED

An AED (Automatic External Defibrillator) is a smart, portable device that can be used to help heart attack victims. Because of their simple design, verbal cues, and ease of operation, AEDs can be safely used by a member of the general public.

An AED contains a power pack and two electrodes. The electrodes are applied to strategic locations on the chest of the victim and the power pack delivers a shock when a button is pushed. If effective, the shock restores normal electrical rhythm to the heart. An AED will not deliver a shock unless it first detects an abnormal heart rhythm.

To use an AED, you need to:

- A. **Know the location of the nearest AED in your workspace.** Like fire extinguishers and other fixtures, we often walk past AEDs and don't really notice them. In the event of an emergency, it is important to be able to quickly retrieve an AED for use.
- B. **Ensure routine maintenance is completed.** Batteries are one of the most important parts of an Automatic External Defibrillator (AED) system. To make sure an AED will work properly in an emergency, periodically check batteries as directed by the manufacturer to make sure batteries are in working condition. Replace the batteries when needed. The manufacturer will provide additional maintenance instructions, such as periodic replacement of electrodes and pads.
- C. **Know how to properly dispose of AED batteries.** AED batteries contain heavy metals such as mercury, lead, cadmium, and nickel which must be properly disposed. Complete and submit a

Hazardous Materials Collection Tag for disposal through Environmental Health and Safety.

If it becomes necessary to discard the entire AED unit, contact EHS for pickup and disposal of the device by completing/submitting a Hazardous Materials Collection Tag.

Resources

- EHS SOP **Automatic External Defibrillators**
<https://ehs.unl.edu/sop/s-AED.pdf>
- *How Often Should A Defibrillator Be Serviced?* | AED USA. (n.d.). AED USA Knowledge. https://www.aedusa.com/knowledge/how-often-should-a-defibrillator-be-serviced/?utm_source=google
- EHS SOP **Battery Disposal** <https://ehs.unl.edu/sop/s-batterydisposal.pdf>
- EHS SOP **Hazardous/Radioactive Material Collection Procedures** https://ehs.unl.edu/sop/s-chem_collection_procedures.pdf

3. Electrical Safety in the Office

Throughout most offices there are various wires, outlets, cables, and other electrical equipment that can pose hazards to office workers. Electrical equipment and associated hazards require awareness and vigilance to ensure appropriate use, storage, and maintenance. Improper use can lead to fires, shock, and electrocution. Following are tips to help keep your office area safe:

Extension cords

- Use only a UL- or FM-approved extension cord that is of the proper gauge for the current it will carry and of the shortest length possible.
- Extension cords are for temporary use only and must be plugged into a permanently installed outlet.
- Never run flexible extension cords under carpet or through doorways or walls. Do not attach to walls/floors with staples or clips.
- Inspect extension cords prior to use to ensure there are no cracks or breaks in the insulation, the plug has not pulled away from the cord, and the plug has intact prongs.

Power strips

- Use only UL- or FM-approved power strips and plug power strips into a permanently installed outlet.
- Power strips are designed for low power use only. Anything with a heating element such as coffee or hot pots, toasters, microwaves are not low power. Follow the manufacturer's directions on maximum number of amps for the device.
- In positioning a power strip, do not secure to a surface in a manner that a tool is required to remove the restraint device.

Flexible electrical cords (on equipment)

Do not run the flexible electrical cord of a piece of equipment under carpet or other combustible covers. Covered cords can overheat leading to fire. Covered cords could be damaged by heavy or sharp objects resting on them, moving across them, or dropped on them.

Electrical equipment

Before using any electrical equipment read and become familiar with the contents of the owner's manual, manufacturer's recommendations and precautions for electrical safety including maintenance and service.

General electrical safety

- Immediately remove from service any device or piece of equipment that makes unusual sounds, gives off a strange odor, emits smoke, sparks or feels hot.
- Disconnect equipment being repaired or serviced. Do not stick your hands into opening of electrical equipment.
- Keep walkways free of all electrical cords.
- Keep space in front of electrical panels clear – a minimum of 36-inches by 36-inches.
- Replace any frayed, twisted, cracked or damaged cords.
- Protect all cords with special covers when subject to foot traffic.
- Do not connect multiple extension cords and/or power strips to each other, commonly referred to as "daisy chaining."

Resources

- Safety+Health. (2022, August 22). *Electrical equipment in the office: Do's and don'ts*. Safety+Health. <https://www.safetyandhealthmagazine.com/articles/20873-electrical-equipment-in-the-office-dos-and->

[dents?utm_source=march1st&utm_medium=email&utm_campaign=inThisIssue](#)

- EHS **General Electrical Safety** Safe Operating Procedure
<https://ehs.unl.edu/sop/s-electricalsafety.pdf>
- EHS **General Electrical Safety Awareness** Web-Based Training
<https://ehs.unl.edu/web-based-training#ElectricalSafety>

4. Safety Spotlight – Spill Kits, Door Placards

EHS is shining a “spotlight” on the top 10 safety and compliance deficiencies in 2023. The first two, related to proper waste management, were reviewed in the November 2023 listserv. In December, the spotlight shined on requirements for proper chemical labeling and chemical storage. This month we will look at spill kits, related to both biological and chemical hazards and door placards for potentially hazardous locations.

The "Pre-Planning for and Responding to Chemical Spills" Safe Operating Procedure (SOP) takes a proactive approach to laboratory safety, emphasizing risk assessment before work initiation. It encourages the development of pre-planning strategies, such as creating spill response kits, establishing communication protocols, and providing ongoing training. By fostering a culture of preparedness, this document ensures that laboratories are well-equipped to respond effectively in the event of spills, ultimately contributing to a safer working environment.

The "Spill and Exposure Response for Biohazardous Materials" SOP focuses on immediate actions and proper procedures when dealing with biohazard spills. It offers a step-by-step guide for spill response, outlines necessary personal protective equipment (PPE), and underscores the importance of thorough decontamination. This SOP is invaluable for individuals working with biological materials, providing clear and concise instructions to minimize exposure and contain spills effectively.

The "Door Postings for Potentially Hazardous Locations" SOP discusses key information presented on UNL door postings, hazard symbol explanations, and procedures for creating a new or revised posting through EHS.

By adhering to the guidelines outlined in these SOPs, we actively contribute to an environment where everyone is aware of potential hazards, facilitating informed decision-making, and fostering a culture of safety. Let's continue working together to prioritize safety and well-being in our laboratories.

Resources

- EHS SOP **Door Postings for Potentially Hazardous Locations**
https://ehs.unl.edu/sop/s-door_posting_1.pdf
- EHS SOP **Biohazard Door Postings** https://ehs.unl.edu/sop/s-bio-door_postings.pdf
- EHS SOP **Pre-Planning for and Responding to Chemical Spills**
https://ehs.unl.edu/sop/s-preplan_respond_spills.pdf
- EHS SOP **Spill and Exposure Response for Biohazardous Materials** https://ehs.unl.edu/sop/s-bio-spill_%26_exposure_response.pdf
- EHS SOP **Cleaning Up Spills of Bloodborne Pathogens**
<https://ehs.unl.edu/sop/s-cleanbbp.pdf>

5. Navigating Black Ice

With recent quantities of snow and ice followed by sunshine/warmer temperatures and days of dense fog, conditions were right for black ice to develop. Black ice is a thin coating of ice on a surface. The ice itself is not black but is visually transparent so it cannot be easily seen. Black ice forms when ice and snow melt and then freezes. It is most prevalent during early morning hours. The condition makes driving, cycling or walking on affected surfaces extremely dangerous. Falls can result in serious injury.

Here are a few tips on how to deal with black ice when walking:

- **Ensure you have proper footwear.** Shoes should have grip and traction. If your shoes have poor traction, you can improve their grip by scuffing the soles.
- **Do the shuffle.** Walk like a penguin! Shuffle your feet to maintain as much contact with the ground as possible. Use handrails where available.
- **Pay attention to surfaces you are about to walk on.** Know where black ice is likely to form. Observe your walking path before you attempt to traverse it and if in doubt take another path.
- **Warm temperatures make black ice more likely/dangerous.** Frozen ground allows black ice to form, in particular on sidewalks and parking lots at the edge of snowbanks where melting water seeps onto the hard surface. With warm temperatures there is a wet layer on the surface of black ice which makes it nearly impossible to traverse safely.

- **Watch for unexpected sources of black ice.** Condensation from vehicle exhaust and melting snow from vehicles can lead to black ice in parking lots. Snow melting on roof and dripping onto sidewalks or parking lots is another source of unexpected black ice areas.
- **Dew and fog can form black ice.** It does not take thawing ice and snow or freezing rain to cause ice formation. The moisture in dew and fog can freeze on the ground causing treacherous underfoot.

Winter is not over yet! Be sure to walk safely in winter conditions and don't let black ice "trip you up."

Resources

- Channel, W. (2016, December 16). What is black ice and why is it so dangerous? | The Weather Channel. *The Weather Channel*.
<https://weather.com/science/weather-explainers/news/black-ice-winter-weather-explainer>
- University of Nebraska–Lincoln. (2014, December 10). *Really obvious: on ice* [Video]. YouTube.
<https://www.youtube.com/watch?v=5Gv6QNZytF8>
- *7 Tips on How to Deal with Black Ice*. (2022, June 24). SafetyLine Lone Worker | Leaders in Work Alone Safety Monitoring.
<https://safetylineloneworker.com/blog/black-ice-winter-safety>

6. Let EHS Help You with Safety

Environmental Health and Safety is committed to excellent customer service and offers a *Customer Satisfaction Survey* as an easy method for the campus community to provide feedback on our services and staff whether negative or positive. By taking a few moments to complete the survey (<https://ehs.unl.edu/customer-satisfaction-survey>), you will be helping us to identify areas where we might need to focus more attention.

To effectively evaluate potential areas for improvement for focus/refocus, please provide specific information or examples and your name and contact information. The Director, Brenda Osthus, follows up on all submissions. We greatly appreciate your participation.

Please feel free to contact Brenda Osthus, EHS Director, at 402.472.4927 or bosthus1@unl.edu if you would rather communicate directly.

7. Revised Program Documentation

The following document has been updated:

➤ **UNL Biosafety Guidelines**

https://ehs.unl.edu/Biosafety_Guidelines.pdf

Updated to revise links, change references to NURamp, describe changes to pathogen inventory submission and protocol termination procedures.

ADOPT SAFETY AS YOUR ATTITUDE – DON'T LEARN BY ACCIDENT!

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