In this issue of the Environmental Health and Safety (EHS) Listserv – February 9, 2022

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1. Do You Have an Up-to-date Emergency Action Plan?

To be ready for an emergency 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 during 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, taking into account your specific work site layout, structural features, and emergency systems.

The UNL Emergency Planning and Preparedness website contains a template as noted in Resources below. Assistance and a fillable version is available upon request from Mark Robertson, UNL Emergency Management Director (preparedness@unl.edu). While the template is designed for developing a ***Building Emergency Action Plan***, it can readily be modified to develop a facility or specific area emergency action plan.

Does your department/area/facility already have an Emergency Action Plan? 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.

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.

Resources

- Emergency Planning & Preparedness: Building Emergency Action Plan https://emergency.unl.edu/doc/Template%20Building%20Emergency%20Action%20Plan.pdf
- EHS ***Emergency Preparedness*** Safe Operating Procedures https://ehs.unl.edu/sop/emergency-preparedness
- EHS ***Emergency Preparedness*** web-based training https://ehs.unl.edu/web-based-training#EP

2. What You Need to Know About AEDs

An AED (Automatic External Defibrillator) is a smart, portable device that can be used to treat 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.

Do you know the location of the nearest AED in your workplace? Like fire extinguishers and other fixtures, we often walk right by 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.

To assure AEDs will be functional in an emergency situation, routine maintenance is required. Batteries are one of the most important parts of an Automatic External Defibrillator (AED) system. To make sure an AED will work perfectly in an emergency situation, periodically check batteries as directed by the manufacturer to make sure they are in good working condition and replace the batteries when needed. The manufacturer will provide additional maintenance instructions, such as periodic replacement of electrodes and pads.

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.

When discarding of the entire AED unit, contact EHS for pickup and disposal of the device by completing/submitting a Hazardous Materials Collection Tag.

Resources

- ***Automatic External Defibrillators*** Safe Operating Procedure (SOP) https://ehs.unl.edu/sop/s-AED.pdf
- 08/22/2013, Posted on. "Portable Defibrillators Need Regular Maintenance to Prevent Failures." *Sudden Cardiac Arrest Foundation*, 22 Aug. 2013, www.sca-aware.org/sca-news/portable-defibrillators-need-regular-maintenance-to-prevent-failures
- ***Battery Disposal*** SOP https://ehs.unl.edu/sop/s-batterydisposal.pdf
- ***Hazardous/Radioactive Material Collection Procedures*** SOP https://ehs.unl.edu/sop/s-chem_collection_procedures.pdf

3. NEW Radiation Safety Training

Radiation Safety training at UNL is undergoing significant changes. Persons newly seeking authorization to work with open-source radioactive material must take three separate training courses, two of which are online. Prior training for previously authorized open-source users is still valid. This new training methodology applies to new users.

- The first course in the required series is **Radiation Safety Basic Training**. This web-based course covers basic radiation fundamentals, safety principles, regulations, and roles/responsibilities of stakeholders.

- Upon successful completion of the initial course, workers must take a second web-based training module, **Radiation Safety Open-Source Training**.

- Upon successful completion of the second training module, the final requirement is completion of an Instructor-Led practical training with Radiation Safety Staff to demonstrate selected skills. Registration for this final training module can be accomplished by contacting the Radiation Safety Office (402.472-4925 or rso@unl.edu).

The "Radiation Training & Experience History and Personal Dosimetry" survey form that is required before beginning training, and the Declaration of Pregnancy form (for use if applicable) are now available on the Forms/Checklist area of the EHS website under the heading Radiation Safety.

Resources

- EHS Instructor-Led Training https://ehs.unl.edu/training
- Radiation Safety Forms https://ehs.unl.edu/forms

4. Grain Bin Safety Week

Grain bin safety week, February 20-26, 2022, is a collaborative effort with industry leaders and agricultural professionals. Grain Bin Safety Week was Initially created by Nationwide to raise awareness about grain bin dangers, provide education and share best safety practices. Working around grain bins presents unique and serious hazards about which farm workers must be constantly vigilant.

Following are some major hazards and mitigation strategies:

- **Hazardous atmosphere (oxygen deficiency, toxic gases, allergens).** Store only adequately dried grain to reduce spoilage. Keep insect/animal infestations to a minimum. Regularly clean bin. Observe all restricted entry requirements, including testing of the atmosphere prior to entry.

- **Fire/Explosion.** Accumulations of grain dusts can create flammable/explosive atmospheres, so make sure ventilation systems are in good working order. Ensure grain dust accumulations are kept to a minimum with regular cleaning, especially near ignition sources. Ensure electrical connections meet code requirements.

- **Falls.** Working at heights in and around a grain bin poses a fall hazard. When performing tasks at elevated heights, fall protection is required.

- **Electrocution.** This hazard is often overlooked. An auger may come into contact with overhead wires while being moved. Poles to dislodge crusted grain might contact overhead lines unless care is taken.

- **Entanglement.** Unguarded augers, PTOs, and other moving parts present an entanglement hazard, as does the sweep auger inside the bin. Ensure all equipment is properly guarded, avoid loose-fitting clothes, and do not operate the sweep auger while inside the bin.

- **Engulfment/Entrapment.** While loading/unloading operations present an obvious engulfment/entrapment hazard, stored grain itself is also dangerous. Air pockets can shift and cause stored grain to flow like a liquid. Do not enter grain bins during active loading/unloading. Entry in the presence of grain should be conducted only when there is no alternative and then only while observing the following:

    - Grain is less than waist deep and applicable lockout/tagout procedures have been implemented to prevent grain addition, removal, or other movement.

- The atmosphere in the bin is not hazardous, adequate ventilation has been established, and no work to be conducted in the bin has the potential to create a hazardous atmosphere.
- A co-worker is present outside of the bin, verbal communication is maintained, and the co-worker has a readily available means of summoning emergency help.

According to Nationwide, 60% of documented grain entrapments between 1962 and 2019 were fatal. Review EHS **Confined Space Awareness** and **Lockout/Tagout (LO/TO) for Machines & Equipment** web-based training, as well as **Lockout/Tagout for Machines & Equipment** Safe Operating Procedure to develop your safety plan. Help yourself and those you are working with prevent injury or death while working with grain handling and storage.

Resources

- EHS ***Grain Bin Safety*** SOP https://ehs.unl.edu/sop/s-grain_bin_safety.pdf
- "Grain Bin Safety Week." *AgriSafe Network*, 19 July 2021, https://www.agrisafe.org/event/grain-bin-safety-week/
- "Resources." *Stand Up 4 Grain Safety (Resources)*, Alliance - An OSHA Cooperative Program, 4 Jan. 2022, https://standup4grainsafety.org/resources/
- NFU (National Farmers Union) Farm Safety video series https://www.youtube.com/playlist?list=PL0B_GIRKHw4tDAy8-Pn_w-8_7g8okjCA-

5. Work Safely in the Office

Do you consider safety in your workday at the office? The quick answer is "Yes, of course." But do you really or do you think there aren't any hazards associated with working in an office? Following are a few hazards leading to injury and common to office work:

- **Falls or being struck by an object.** Clutter and loose wires, especially crossing a walkway, can lead to trips/falls. Items placed on an upper shelf can fall.

- **Ergonomics.** Pay attention to location of computer components so your body is properly positioned for optimal monitor viewing and reduced stress while sitting long periods of time.

- **Lifting and carrying.** Remember to use proper lifting technique, lifting with your legs not your back. Do not attempt to lift by yourself items that

are heavy, awkwardly shaped or where the contents can move around. For those items get help and use a cart.

- **Body care: Eyes, Hands, Legs.** If working with any chemicals in the office or sharp items take care to use proper technique and protective equipment. Maintain awareness of your body in relation to equipment.

- **Electrical and Fire Safety.** Be sure all electrical equipment is in working order and used correctly. For example, damaged cord or plugs, plugging one power strip into another or into an extension cord, using extension cords for permanent wiring all present a fire hazard. Know emergency procedures for your work area, including the location of exits.

A day in the office may not seem hazardous, however injuries do occur to workers in an office setting. There are a number of checklists available at the site listed in the Nimonik resource below to help improve safety in your office so everyone goes home uninjured at the end of the day.

Resources

- "Top 5 Office Safety Topics: Nimonik Environment, Health & Safety and Quality Compliance." *Nimonik Environment, Health & Safety and Quality Compliance | Comprehensive Compliance*, 27 Jan. 2021, https://nimonik.com/2015/05/top-5-office-safety-topics/
- EHS Safe Operating Procedures (SOPs)
  - General Electrical Safety https://ehs.unl.edu/sop/s-electricalsafety.pdf
  - Slips, Trips, Falls – Reducing Risk and Avoiding Injury https://ehs.unl.edu/sop/s-slips_trips_falls.pdf
  - Cart and Hand Truck Safety https://ehs.unl.edu/sop/s-cart_hand_truck_safety.pdf
  - General Material Handling/Safe Lifting https://ehs.unl.edu/sop/s-gen_safe_lifting.pdf
  - Ergonomics Considerations for Offices https://ehs.unl.edu/sop/s-ergo_office.pdf
  - Safety Audit Guidelines for Offices, Conference Rooms and Similar Locations https://ehs.unl.edu/sop/s-SAG_offices_confrooms_similar_loc.pdf

6. Are We Helping YOU with Your Safety Needs?

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. By taking a few moments to complete the survey (http://ehs.unl.edu/survey), you will be helping us to identify areas where we might need to focus our attention.

In order to effectively evaluate potential areas for improvement, please provide specific information or examples and your name and contact information. 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 outside the parameters of this survey.

THINK SAFETY – DON'T LEARN BY ACCIDENT!

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