

**In this issue of the Environmental Health and Safety (EHS) Listserv, February 5, 2013:**

1. Emergency Communications – UNL Alert Register/Re-register NOW
  2. NEW & Revised “Chemical Safety” Safe Operating Procedures
  3. Elements of Creating Safety Cultures in Academic Institutions. #3 Establish a Strong Safety Program
  4. Wear Your Lab Coat!
- 

## **1. Emergency Communication – UNL Alert Register/Re-register NOW**

What's the best way to know when emergency situations and weather closings happen on campus? **UNL Alert!** UNL Alert, maintained by University Police, is the primary method of emergency communication at UNL.

Students, faculty and staff are asked to sign up once again for UNL Alert in a new system. UNL is part of the statewide alert system through Twenty First Century Communication, partly for cost-savings and partly for improved service, according to Owen Yardley, UNL Chief of Police.

The UNL Alert communication system will now send alerts **ONLY** through email and text messages. Sign up/Re-sign up today at: <http://unlalert.unl.edu>. Following is information on the new UNL Alert system:

- **What is UNL Alert?** UNL Alert is a mass notification system that sends text messages and emails to the device and address you designate.
- **Why does UNL Alert exist?** Redundant, overlapping and consistent communication is an important component of any emergency plan. UNL Alert is designed to help facilitate early notification during emergencies. Sending the same messages using multiple modes and methods helps assure that those affected have access to warning messages and alerts to help keep them safe.
- **When will UNL Alert be activated?** UNL Police will determine when UNL Alert will send emergency notices. Weather-related closings will also be announced through UNL Alert.
- **What do I need to do?** Login to the UNL Alert system and enter your contact info for the devices listed.

There is much individuals can do to prepare themselves for emergencies. The Emergency Planning and Preparedness web site contains emergency preparation tips for many types of emergency, as does the EHS **Emergency Preparedness** web-based training and companion Safe Operating Procedure (SOP).

Resources:

- Emergency Planning and Preparedness web site <http://emergency.unl.edu/>
- Web-based training **Emergency Preparedness**  
<http://ehs.unl.edu/training/online>
- **Emergency Planning** SOP [http://ehs.unl.edu/sop/s-emergency\\_planning.pdf](http://ehs.unl.edu/sop/s-emergency_planning.pdf)

### 3. NEW & Revised “Chemical Safety” Safe Operating Procedures

Previous issues of this EHS Listserv have highlighted recent major revisions to the Occupational Health and Safety (OSHA) Hazard Communication and Occupational Exposures to Chemicals Standards. EHS **Chemical Safety** web-based training was updated in response to these changes. Due to the extensive nature of the changes, all UNL employees who use hazardous chemicals should re-take **Chemical Safety** training, now comprised of four units rather than one. The revised training was posted to the EHS web page in July 2012.

EHS has also been raising awareness of the necessity of conducting Risk Assessments. The July, August, September and November 1<sup>st</sup> issues of the EHS Listserv reviewed the various aspects of Risk Assessment and provided lists of resources to assist the campus community with completing this task for their work area.

Now available through the EHS web site are twelve new or significantly revised Safe Operating Procedures to assist with chemical hazard risk assessments. Begin your review with the **Chemical Hazard Assessment and Risk Minimization** SOP. This SOP is supplemented with a number of SOPs related to specific chemical hazard classes (as listed below).

The new and revised SOPs have been incorporated into the EHS Virtual Manual tool. Once created, the Virtual Manual serves as the basic written Chemical Hygiene or Hazard Communication Plan for a specific work group or area. If a supervisor opts not to use the Virtual Manual tool, they are responsible for developing an adequate written Hazard Communication/Chemical Hygiene Plan. In any case, the Virtual Manual or researcher-developed equivalent **MUST** be supplemented with **work/site-specific** procedures/protocols, as appropriate.

Two of the specific chemical hazard class SOPs are significant revisions of previous SOPs:

- **Health Hazards: Hazard Assessment and Risk Minimization.** This SOP replaces and expands upon the **Exposure Control for Reproductive Hazards** SOP and should be reviewed by all who work with chemicals

presenting a health hazard, not just those who work with chemicals posing reproductive hazards.

- ***Gases Under Pressure Hazards & Risk Minimization*** reflects the Globally Harmonized terminology and replaces the ***Compressed Gas Cylinders in Laboratories*** SOP. This new SOP has application for any area using gases under pressure, not just laboratories.

Additional chemical hazard class specific SOPs include:

- ***Corrosive Chemical Hazards & Risk Minimization*** (new)
- ***Explosive Chemical Hazards & Risk Minimization*** (new)
- ***Hazards of Flammable Gases, Liquids & Aerosols & Risk Minimization*** (replaces ***Storage and Use of Flammable and Combustible Liquids*** SOP)
- ***Flammable Solids Hazards & Risk Minimization*** (new)
- ***Organic Peroxides Chemical Hazards & Risk Minimization*** (new)
- ***Oxidizers Chemical Hazards & Risk Minimization*** (new)
- ***Pyrophoric Substances That Emit Flammable Gases When In Contact With Water Hazards & Risk Minimization*** (replaces ***Pyrophoric Chemicals*** SOP)
- ***Self-Heating Substances Hazards & Risk Minimization*** (new)
- ***Self-Reactive Substances & Mixtures Hazard Assessment & Risk Minimization*** (new)

Take some time to review these new resources as they apply to chemical hazards present in your workplace.

Resources:

- EHS Listserv Archive <http://listserv.unl.edu/cgi-bin/wa?A0=ehsinfo>
- Web-based **Chemical Safety** training <http://ehs.unl.edu/onlinetraining>
- **Chemical Safety** Safe Operating Procedures <http://ehs.unl.edu/sop#node-811>
- EHS Virtual Manual <https://scsapps.unl.edu/VirtualManual/>

### **3. Elements of Creating Safety Cultures in Academic Institutions: #3. Establish a Strong Safety Program**

As you may recall from previous issues of the EHS listserv, there has been a great deal of national attention given to the topic of laboratory safety in higher education following investigations of serious incidents at UCLA and Texas Tech. As a result, the American Chemical Society (ACS) recently issued a report, ***Creating Safety Cultures in Academic Institutions***. While this report is focused on laboratory safety, its content is applicable to all campus settings. This report contained seventeen specific recommendations for creating vibrant, strong safety cultures in academic institutions. Each of these recommendations will be highlighted

individually and presented as a series in the EHS listserv. This is the third issue in the series, and therefore highlights the third recommendation contained in the ACS report.

The third recommendation in the ACS report is: ***Establish a strong, effective safety management system and safety program for the institution, including laboratory safety.***

The ACS report recommends several elements to establishing a strong and effective safety program and acknowledges that it doesn't happen overnight nor is it something that can be accomplished by a single department.

- Safety committees are encouraged, with representation from safety professionals, faculty, staff, administrators, and students.
- Safety committees need to be active and productive, and meet frequently.
- Strong safety programs establish collaborative interactions and teamwork among members of the institution, including individual departments, Facilities personnel, EHS staff, and others.
- Encourage reporting of incidents and share broadly lessons learned.
- Encourage frequent self and peer auditing as a means of continually identifying and mitigating uncontrolled hazards.
- Provide guidance on compliance with regulatory requirements, typically through an EHS office.
- Develop and implement safety policies.
- Establish procedures for laboratory safety.

On a broad perspective, UNL has established means of meeting many of these recommendations. UNL has established a university-wide safety committee, the Chancellor's University Safety Committee, which meets on a quarterly basis. This committee reviews audit findings and injuries/illnesses on a broad institutional level. However, committees operating at the local level are most effective in achieving improved safety performance. Some, but not all departments/units have local, active safety committees. If you would like assistance in setting up or enhancing a safety committee in your department, contact EHS. We would love to assist in this endeavor.

Also take this opportunity to think about those safety-related policies and procedures that have been established in your local unit or specifically for your work or tasks. EHS has established many university-wide procedures, but the most important procedures are those that operate at a specific work location. If you would like assistance or evaluation of your existing procedures or protocols, please contact EHS. Again, we would love to help.

Consider establishing a self and peer audit mechanism in your department/unit. EHS provides a number of audit checklists that may be assistance. These can be found on the EHS web page, under the SOP heading of "Safety Audit Guidelines."

These are a few ideas of steps that can be taken at the local level to further enhance the safety culture at UNL. Adopting the ACS “Safety Ethic” is a great first step:

- **Value safety:** Safety is an integral part of what one does, its automatic, and it does not change its priorities. It is never questioned and never compromised.
- **Work safely:** One continues to learn about safety, learns to recognize hazards, assesses the risks of hazards, manages the risk of hazards, and prepares to handle emergencies.
- **Prevent at-risk behavior:** One does not cut corners or bypass safety measures in the laboratory (or other work environment) and shares this information with others, as needed.
- **Promote safety:** One encourages and acknowledges others in working safely.
- **Accept responsibility for safety:** One takes steps to work safely, setting a positive example for others, and being accountable for safety.

Resources:

- Creating Safety Cultures in Academic Institutions  
[http://portal.acs.org/portal/PublicWebSite/about/governance/committees/chemicalsafety/CNBP\\_029720](http://portal.acs.org/portal/PublicWebSite/about/governance/committees/chemicalsafety/CNBP_029720)
- ACS Committee on Chemical Safety resources <http://www.acs.org/safety>

#### 4. Wear Your Lab Coat!

In December 2008, with the lab accident and subsequent death of Sheri Sangji, graduate research assistant at UCLA (University of California, Los Angeles), a new era in safety began at UCLA. Repercussions from this incident were felt in academic institutions across the country. This tragic incident was extensively investigated by UCLA and Cal/OSHA (California Occupational Safety and Health Administration) and led to a legal settlement between the University of California and the Los Angeles District Attorney’s Office. Investigations determined that factors possibly contributing to the fatal laboratory accident were:

- The experiment design
- Experimental techniques
- Synthetic clothing worn by the research assistant
- Lack of necessary training
- Inadequate Personal Protective Equipment (PPE)

PPE was identified as the major factor. The researcher was not wearing a lab coat at the time of the accident and the only lab coat available to her was not flame-resistant. Lack of proper sizing of lab coats available campus-wide was a component of the findings.

In response to this fatal lab accident, UCLA implemented changes throughout their entire lab safety program from 2009 onward. Since Personal Protective Equipment was a prime area of concern, UCLA developed PPE Policy 905 issued in February 2010. This official policy covers PPE requirements for all campus research laboratory faculty, staff and students. Components of UCLA Policy 905 are:

- Full length pants, or equivalent, and close-toed shoes must be worn at all times by all individuals that are occupying the laboratory area.
- Protective gloves must be worn while utilizing any hazardous chemical, biological or unsealed radiological material.
- Laboratory coats, or equivalent, are required to be worn while working on, or adjacent to, all bench-top procedures utilizing hazardous chemicals, biological or unsealed radiological materials.
- Flame-resistant laboratory coats must be worn when working with pyrophoric materials or large amounts (greater than four liters) of flammable liquids.
- Laboratory coats may not be worn outside of a laboratory unless the individual is traveling directly to an adjacent laboratory work area.
- Each department or research unit shall be responsible for providing professional laundry services as needed to maintain the hygiene of laboratory coats.
- Eye protection or equivalent engineering controls must be used while handling any hazardous chemical, biological or unsealed radiological materials.
- Some operations and procedures may warrant further PPE, as indicated by the chemical Material Safety Data Sheet (MSDS), the standard (laboratory) operating procedures for the material being used, facility policies, regulatory requirements, or the (UCLA) EH&S Laboratory Hazard Assessment Tool (a proprietary tool developed as part of the Settlement Agreement).

This policy is consistent with the guidance provided at UNL. EHS maintains a number of resources to provide guidance to the UNL community on PPE selection, use, and care, as listed below.

Resources:

- Wear Your Lab Coat! Changes in UCLA's PPE Policy and How Researchers Responded (webinar) <https://www.youtube.com/watch?v=4iMKmlljsnc>
- EHS web-based **Personal Protective Equipment** training <http://ehs.unl.edu/onlinetraining>
- EHS SOP, **Personal Protective Equipment for Chemical Exposures** (<http://ehs.unl.edu/sop/s-ppe.pdf>)
- EHS SOP, **Personal Protective Equipment (PPE) – Eyes and Face** ([http://ehs.unl.edu/sop/s-PPE\\_eyes-face.pdf](http://ehs.unl.edu/sop/s-PPE_eyes-face.pdf))
- EHS SOP, **Personal Protective Equipment (PPE) – Hand Protection** ([http://ehs.unl.edu/sop/s-ppe-hand\\_protection.pdf](http://ehs.unl.edu/sop/s-ppe-hand_protection.pdf))
- EHS SOP, **Personal Protective Equipment (PPE) – Head Protection** ([http://ehs.unl.edu/sop/s-PPE-head\\_protection.pdf](http://ehs.unl.edu/sop/s-PPE-head_protection.pdf))

- EHS SOP, **Personal Protective Equipment (PPE) – Body Protection**  
([http://ehs.unl.edu/sop/s-ppe-body\\_protection.pdf](http://ehs.unl.edu/sop/s-ppe-body_protection.pdf))
- EHS SOP, **Foot Protection PPE – Evaluation and Checklist**  
([http://ehs.unl.edu/sop/s-foot\\_protection.pdf](http://ehs.unl.edu/sop/s-foot_protection.pdf))
- EHS **Laboratory Safety Training** (colloquia)  
<http://ehs.unl.edu/training/Colloquium>
- EHS Virtual Manual <https://scsapps.unl.edu/VirtualManual/>
- EHS **Training Needs Assessment for EHS-Related Topics**  
[http://ehs.unl.edu/Training\\_Needs\\_Assessment.pdf](http://ehs.unl.edu/Training_Needs_Assessment.pdf)
- OSHA 29 CFR 1910:132, Subpart 1: Personal Protective Equipment  
[http://www.osha.gov/pls/oshaweb/owadisp.show\\_document?p\\_table=STANDARDS&p\\_id=9777](http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9777)

**Remember...SAFETY IS AN ATTITUDE!**

**Environmental Health and Safety**

University of Nebraska-Lincoln

3630 East Campus Loop

Lincoln, NE 68583-0824

(402) 472-4925

<http://ehs.unl.edu>