

**In this issue of the Environmental Health and Safety (EHS) Listserv,
September 27, 2012:**

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1. Mark Your Calendars! Machine Shop Safety Colloquium

Mark your calendars now so you do not miss the fall colloquium, "**Machine Shop Safety**," scheduled for November 7, 2012, 12:30 -3:30 p.m. at the Nebraska East Union.

Don Gardner, CSP, Loureiro Consulting, who has provided similar presentations at other locations, such as Yale University, will share his expertise with UNL attendees. This colloquium is specifically designed for all faculty, staff and students working with metal, wood or other medium fabrication equipment. Recent incidents here and at other universities have underscored the importance of developing and implementing an effective shop safety program. Learn how to conduct a risk assessment of the work being done in your area.

This colloquium is part of the ongoing laboratory safety colloquium series jointly sponsored by EHS and the Office of Research and Economic Development (ORED). Pre-registration for colloquia is not required. Previous colloquia contents are available online.

For questions to suggest future colloquium topics contact Elizabeth (Betsy) Howe at ehowe2@unl.edu or (402) 472-5488. To access past colloquia, visit the EHS or Office of Research and Economic Development (ORED) web site.

Resources:

- Laboratory Safety Colloquium Series
 - EHS web site: <http://ehs.unl.edu/training/Colloquium/>
 - ORED web site: http://research.unl.edu/lsi_9-06.shtml

2. Did You Know? CUSC Campus-wide Goal, Supplier Showcase Booth & Open Forum

The Chancellor's University Safety Committee (CUSC) is the overarching UNL safety committee established to assist the Chancellor by making recommendations

on methods to reduce safety hazards at UNL. The CUSC would like to share with the campus community the 2012-2013 goal for UNL:

*To help foster UNL employee awareness of the individual's role in their own personal safety, that of their co-workers, and safety/injury prevention in general at UNL. Ensuring successful completion of all applicable safety training modules as identified through the **Employee Training Needs Assessment for EHS-Related Topics** (http://ehs.unl.edu/Training_Needs_Assessment.pdf) is a recommended first step.*

Make the Chancellor's University Safety Committee (CUSC) current goal yours! Think about how you can 'spread the word' within your sphere of influence, large or small. Contact the CUSC Chair, Beth Whitaker (beth.whitaker@unl.edu), or Administrative Support, Elizabeth (Betsy) Howe (ehowe2@unl.edu) to get ideas or share yours.

UNL Procurement Services is sponsoring a **SUPPLIER SHOWCASE** again this year, to be held Tuesday, October 16, 2012, from 10:00 a.m. – 3:00 p.m. in the City Union. Stop by the CUSC booth at the Supplier Showcase and get your sticker to show you will **SPEAK OUT FOR SAFETY!**

After the Supplier Showcase, there will be the fall Open Forum CUSC meeting. The campus community is especially encouraged at these times to attend, share concerns, or just observe the workings of the CUSC. Plan to attend from 3:00 – 4:30 p.m. at Nebraska City Union!

Resources:

- Procurement Services Supplier Showcase 2012
<http://procurement.unl.edu/showcase/2012/>
- Chancellor's University Safety Committee <http://ehs.unl.edu/committees#cusc>

3. Personal Protective Equipment (PPE) – Body Protection

While there is no specific OSHA standard for body protection like there is for eye/face, head, foot, and hand protection, OSHA's general PPE requirements, 29 CFR 1910.132, specifically state that protective clothing should be used when appropriate.

Body protection is necessary when there is risk of injury due to:

- Contact with live electrical systems where there is risk of shock, electrocution, arc flash or blast.
- Chainsaw usage or exposure to other cut hazards such as sharp knives or power cutting tools.

- Work tasks involving Intense heat, molten metals, hot materials such as steam, sparks, etc. or extreme cold such as working with cryogenes.
- Potential chemical contact.
- Potential contact with infectious materials.
- Likelihood of “tracking” contaminants outside the work area, e.g. of chemicals, dusts, microbial agents, etc.
- Other circumstances such as: exposure to ionizing radiation; exposure to vehicular traffic where high visibility is desired; etc.

Examples of the types of body protection PPE are:

- Vests
- Jackets
- Aprons
- Coveralls
- Surgical gowns
- Full body suits

Information on body protection PPE is contained within the EHS web-based training, **Personal Protective Equipment (PPE)** and the related EHS SOP, **Personal Protective Equipment – Body Protection**. Selection of appropriate body protection is determined by evaluation of work tasks and work environment as part of a comprehensive risk assessment.

EHS has developed a **Job Safety Assessments** SOP to assist supervisors with identifying existing and potential work area hazards toward the goal of determining appropriate PPE, for circumstances where engineering and work practice (administrative) controls do not fully control the hazard.

Once hazards are assessed and appropriate body protection PPE is selected, the supervisor is responsible to provide training to employees so that they know:

- When body protection PPE is necessary;
- What specific body protection PPE is necessary;
- How to properly put on, take off, adjust, and wear assigned body protection;
- Limitations of the assigned body protection PPE;
- Proper care, maintenance, useful life and disposal of assigned body protection PPE.

Protective clothing should be carefully inspected before each use, it must fit each worker properly, and it must function properly and for the purpose for which it is intended. Most protective garments inhibit the loss of heat from the body and therefore increase the physical and psychological burdens on the user. Therefore, it is important to achieve a balance between user comfort considerations and adequate hazard protection. Protection should not be compromised, nor should the worker be unnecessarily burdened.

Resources:

- EHS Web-based **Personal Protective Equipment (PPE)** training
<http://ehs.unl.edu/onlinetraining>
- **Job Safety Assessments** SOP <http://ehs.unl.edu/sop/s-JSA.pdf>
- **Personal Protective Equipment – Body Protection** Safe Operating Procedure (SOP) http://ehs.unl.edu/sop/s-ppe-body_protection.pdf
- OSHA Standards - Personal Protective Equipment General Requirements (29 CFR 1910.132)
- OSHA PPE Assessment tool
http://www.osha.gov/dte/library/ppe_assessment/ppe_assessment.html
- OSHA Technical Manual: Chemical Protective Clothing
http://www.osha.gov/dts/osta/otm/otm_viii/otm_viii_1.html

4. Risk Assessment: Step 3. Evaluate the Level & Likelihood of Risk

A risk assessment is a thorough look at the workplace or task to identify things, situations, processes, etc. that may cause harm, particularly to people. The goal of the risk assessment process is to create a safer work environment by removing a hazard or reducing the level of risk by implementing appropriate precautions or control measures. The first two steps in the risk assessment process, identification of hazards and analysis of receptors, were discussed in previous editions of the EHS listserv.

The third step of the risk assessment process is to evaluate the level of risk and the likelihood of an adverse incident. Consider the following during this evaluation:

- How much of the workforce or facility would be exposed?
- What is the likely frequency of exposure?
- What is the degree of harm likely to result from an exposure?
- How likely is it that there will be an exposure?
- Could exposure to the hazard have immediate or delayed effects?

The most attention should be given to those hazards that have a high probability of occurrence or that can result in very serious consequences (even if the probability is low). It is important to take into consideration the knowledge, skill, and experience of person(s) who will be conducting the work.

Seek out reputable sources of information when conducting this step of the risk assessment process. This may include chemical safety data sheets, trade/scientific publications, equipment manufacturer's warnings and instructions, previous monitoring data, past experiences, prior near-miss incidents, etc.

Next month we will look at Step 4: Mitigation/Control. To review previous Risk Assessment Steps or other topics from past issues of the EHS Listserv go online to: <http://listserv.unl.edu/cgi-bin/wa?A0=ehsinfo>.

Resources:

- OSHA Job Hazard Analysis <http://www.osha.gov/Publications/osha3071.pdf>
- Canadian Centre for Occupational Health and Safety: Risk Assessment http://www.ccohs.ca/oshanswers/hsprograms/risk_assessment.html
- European Agency for Safety & Health at Work: Risk Assessment <http://osha.europa.eu/en/topics/riskassessment/index.html>
- A step by step guide to COSHH (Control of Substances Hazardous to Health Regulation 2002) assessment <http://www.hse.gov.uk/pubns/books/hsg97.htm>
- COHHS, a brief guide to the regulations <http://www.materials.ox.ac.uk/uploads/file/COSHHRegulations.pdf>

5. National Fire Prevention Week October 7-13, 2012

National Fire Prevention week was established in 1927 to commemorate the Great Chicago Fire in 1871 that killed more than 250 people, left 100,000 homeless, destroyed more than 17,400 structures and burned more than 2000 acres. Annually the National Fire Protection Agency (NFPA) selects a theme supported by online resources to promote fire safety. While the main thrust of the effort is toward fire safety in the home, this is a good time for a reminder about fire safety at work.

Fires can cause serious injury, death and property loss. The most important aspects of fire safety are fire prevention and preparedness. Fire prevention strategies are discussed in the EHS web-based **Fire Extinguisher Training** course, and EHS Safe Operating Procedure (SOP), **Fire Safety – General Prevention and Extinguishers**. Preparedness in case of fire or other emergency, as well as personal safety in the event of fire, can be reviewed within the EHS web-based **Core-Emergency Preparedness Training**.

Resources:

- NFPA Fire Prevention Week (information & resources) <http://www.fpw.org>
- **Fire Safety – General Prevention and Extinguishers** SOP http://ehs.unl.edu/sop/s-fire_safety.pdf
- EHS Web-based **Fire Extinguisher Training** <http://ehs.unl.edu/onlinetraining>
- EHS Web-based **Core-Emergency Preparedness Training** <http://ehs.unl.edu/onlinetraining>

6. Revised Safe Operating Procedures

- **All-Terrain Vehicles (ATVs)** <http://ehs.unl.edu/sop/s-atv.pdf>
Added: reference to training offered by the Southeast Research and Extension Center; recommendation to mark terrain hazards in frequently operated areas; language to indicate that implements/attachments impact vehicle stability and should be used in accordance with manufacturers recommendations

- **Autoclave Operation and Performance Testing** <http://ehs.unl.edu/sop/s-bio-autoclavesafety.pdf>
New procedures for testing the autoclaves with biological indicators are described. New guidance was added on autoclave operation dos and don'ts. Information about disposal of autoclaved waste was revised. A template sign for "out of order" autoclaves was included.
- **Nanoparticle Safety** http://ehs.unl.edu/sop/s-nanoparticle_safety.pdf
Added reference to an ISO document and additional detail to the PPE recommendations
- **Pathological Incinerator Operator - Environmental Compliance Responsibilities** http://ehs.unl.edu/sop/s-incinerator_operator.pdf
Revised language on disposal of ash

Remember...SAFETY IS AN ATTITUDE!

Environmental Health and Safety

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