

**In this issue of the Environmental Health and Safety (EHS) Listserv, March 27, 2014:**

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## **1. Ultraviolet Radiation = NEW SOP**

EHS recently added a new Safe Operating Procedure (SOP), ***Ultraviolet Radiation***, to provide information and recommendations for use and handling of devices that emit ultraviolet (UV) light, which can damage skin and eyes.

Common sources found at UNL that can generate varying levels of UV radiation are:

- UV Light Box/UV Transilluminator
- UV Crosslinker
- Germicidal Lamps
- Portable or Handheld Lamps
- UV Radiation-Generating Equipment, such as HPLC machines, UV microscopes, UV lasers, etc.

Precautionary measures, described in greater detail in the SOP, include:

- Engineering Controls, such as containment/location, interlocks, and/or eliminating reflection.
- Administrative Controls, such as training, access limitations, and warning signs/labels.
- Personnel Protective Equipment (PPE), such as safety glasses, face shield, gloves, and proper laboratory attire including a lab coat.

Many devices producing concentrated UV radiation have UV light bulbs that can be replaced. Do NOT dispose of UV bulbs in the regular trash. Follow guidelines provided by EHS in the Safe Operating Procedures, ***Fluorescent and Other Non-incandescent Lamps, Light Bulbs, and Ballasts*** and ***Hazardous/Radioactive Material Collection Procedures***.

Resources:

- ***Ultraviolet Radiation*** SOP [http://ehs.unl.edu/sop/s-ultraviolet\\_rad.pdf](http://ehs.unl.edu/sop/s-ultraviolet_rad.pdf)
- ***Fluorescent and Other Non-Incandescent Lamps, Light Bulbs, and Ballasts*** SOP <http://ehs.unl.edu/sop/s-flotube.pdf>
- ***Hazardous/Radioactive Material Collection Procedures*** [http://ehs.unl.edu/sop/s-chem\\_collection\\_procedures.pdf](http://ehs.unl.edu/sop/s-chem_collection_procedures.pdf)

## 2. Do Your Eyes Have It?

The Prevent Blindness organization, founded in 1908 and the nation's leading volunteer eye health and safety organization has designated March as "Workplace Eye Wellness/Safety" month. Eye injuries in the workplace are very common. More than 2000 people injure their eyes at work every day. Of the total injuries, 10-20% will cause temporary or permanent vision loss. Common causes of eye injuries are:

- Flying objects
- Tools
- Chemicals
- Harmful radiation (such as UV)
- Any combination of these or other hazards

There are three things you can do to help prevent an eye injury:

1. KNOW the eye safety dangers at work.
2. ELIMINATE hazards before starting work, e.g. using engineering controls if possible.
3. USE the eye protection provided.

You should wear safety eyewear whenever there is a chance of eye injury. Anyone working or passing through areas that pose eye hazards should wear protective eyewear. Safety eyewear protection includes:

- Non-prescription and prescription safety glasses
- Goggles
- Face shields
- Welding helmets
- Laser or UV radiation-specific eyewear

The type of safety eye protection you should wear depends on the hazards in your workplace. If you are working in an area that has particles, flying objects, or dust, you must at least wear safety glasses with side protection (side shields). If you are working with chemicals in a manner that presents a splash hazard, you should wear goggles. If you are working near hazardous radiation (welding, lasers, or fiber optics) you must use special-purpose safety glasses, goggles, face shields, or helmets designed for that task.

It is estimated that 90% of all workplace eye injuries can be prevented by using proper safety eyewear. The Bureau of Labor Statistics estimates that approximately three of every five workers injured were either not wearing eye protection at the time of the injury or were wearing the wrong kind of eye protection. Your eyes need proper eye protection. Make sure they have it!

Resources:

- Prevent Blindness: Prevent Eye Injuries at Work  
<http://www.preventblindness.org/ten-ways-prevent-eye-injuries-work>
- **Personal Protective Equipment (PPE) –Eyes and Face** SOP  
[http://ehs.unl.edu/sop/s-PPE\\_eyes-face.pdf](http://ehs.unl.edu/sop/s-PPE_eyes-face.pdf)
- **Personal Protective Equipment for Chemical Exposures** SOP  
<http://ehs.unl.edu/sop/s-ppe.pdf>
- **Personal Protective Equipment (PPE)** Web-Based Training  
<http://ehs.unl.edu/onlinetraining#PPE>
- **Welding Lens Shade & Personal Protective Equipment (PPE) Selection**  
[http://ehs.unl.edu/sop/s-welding\\_lens\\_and\\_ppe.pdf](http://ehs.unl.edu/sop/s-welding_lens_and_ppe.pdf)
- **Centers for Disease Control/National Institute for Occupational Safety & Health “Eye Safety Checklist”**  
<http://www.cdc.gov/niosh/topics/eye/eyechecklist.html>

### 3. Laboratory Safety Colloquium 4/2/14!

The spring Laboratory Safety Colloquium, **Veterinary Services Permits**, will be presented by the United States Department of Agriculture (USDA) - Animal and Plant Health Inspection Service (APHIS) Assistant District Director of Veterinary Services, Kathleen Akin, D.V.M. on Wednesday, April 2, 2014, 10:00 – 11:30 a.m. in the Nebraska East Union (check kiosk for room assignment) and will include an opportunity for questions at the end.

Anyone importing or transferring from other states: live animals, materials derived from animals (e.g. RNA/DNA extracts, enzymes, blood, tissues, etc.) or livestock-associated microorganisms should attend to learn WHEN you need a Veterinary Services permit, WHY you need a permit and HOW to apply. Mark your calendars for this important event! Note that there will be one session only. Pre-registration is NOT required.

To suggest future colloquium topics contact Elizabeth (Betsy) Howe at [ehowe2@unl.edu](mailto: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:

- **Importing Animals and Animal Products** SOP [http://ehs.unl.edu/sop/s-import\\_animals.pdf](http://ehs.unl.edu/sop/s-import_animals.pdf)
- Laboratory Safety Colloquium Series
  - EHS web site: <http://ehs.unl.edu/training/Colloquium/>
  - Office of Research and Economic Development web site: <http://research.unl.edu/laboratorysafetycolloquium/>

## 4. Elements of Creating Safety Cultures in Academic Institutions

### #16: Establish a System to Promote Safety.

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) issued a report, ***Creating Safety Cultures in Academic Institutions***. While this report focuses 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 is being highlighted individually and presented as a series in the EHS listserv. The sixteenth recommendation in the ACS report is:

***Establish a system to promote safety in an institution or department that encompasses: electronic communications; printed materials' special seminars or events discussing or promoting safety; a recognition system for good safety performance; and a process to solicit, review, and act on suggestions for improving safety and identifying safety issues.***

One of the best ways to promote safety is through personal example. Always following safety procedures, protocols, and rules sends a message to others that safety is important. If your department has a safety committee, participate. If your department does not have a safety committee, contact EHS for assistance in setting one up.

“Advertise” safety. A safety newsletter or safety communications coming from the department/safety committee might be distributed by email or via social networks. Raising awareness and internal distribution of the EHS monthly safety listserv is one possibility in addition to department/safety committee-generated publications/emails.

Printed information sheets, or signs and posters may be displayed, in particular if traditional methods of communication work better for your area. EHS provides professionally printed posters, small in size (8 ½ x 11 on poster board) for ease of posting. These are available in any quantity by contacting EHS. Review/request the posters currently available, order yours, and suggest others that might be relevant to your work area.

Departments may consider having open seminars to discuss safety issues or incidents relevant to research/work tasks of a particular area. Regular faculty/staff/graduate student meetings/seminars might contain a ‘safety tip’ as part of the regular agenda. EHS can assist departments who are interested in instituting ideas such as these.

Participate in campus-wide activities that provide safety information, such as the fall Supplier Showcase which features a booth by the Chancellor's University Safety

Committee. Also at this event, many vendors display or provide information on items that help improve workplace safety. A department or even an individual lab/work area can designate a “Safety Day” as a way to focus on safe work practices, safety training and activities such as chemical disposal/housekeeping.

New employees in particular, but all employees periodically, should review the ***Training Needs Assessment for EHS-Related Topics*** and review resources available through the EHS web site. New Safe Operating Procedures and other resources are continually being added.

Make sure all faculty/staff/graduate and undergraduate students know how to contact the safety committee or departmental safety contact. Use the EHS online “*Near-Miss/Close Call Incident Reporting System*” and the “*Student Injury/Illness Reporter!*” to share incidents from which (anonymous) lessons learned can be distributed by EHS to help improve safety campus-wide.

Always “think safety” and help foster the proper attitude toward safety as reflected in the “Safety Ethic,” espoused by the Safety Culture Task Force of the ACS Committee on Chemical Safety:

- **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)
- **Environmental Health and Safety** web site <http://ehs.unl.edu/>
- EHS-Provided “Safety Posters” <http://ehs.unl.edu/safety-posters>
- **Training Needs Assessment for EHS-Related Topics**  
[http://ehs.unl.edu/Training\\_Needs\\_Assessment.pdf](http://ehs.unl.edu/Training_Needs_Assessment.pdf)
- *Near-Miss/Close Call Reporting System!*  
<https://scsapps.unl.edu/EHSNearMissReporter/>
- *Student Injury/Illness Reporter!*  
<https://scsapps.unl.edu/studentinjuryillnessReporter/>

## 5. New/Revised Safe Operating Procedures/Program Document/Training

- **Core-Emergency Preparedness** Web-Based Training  
<http://ehs.unl.edu/onlinetraining>  
Training updated to include additions/revisions to the Emergency Planning and Preparedness web site: Revised Building Continuity Planning Template; New Building Emergency Action Plan template; and additional resources relating to “Active Shooter” topic.
- **Custodial Services Chemical and General Safety** Web-Based Training  
<http://ehs.unl.edu/onlinetraining>  
Training revised to include information on mitigating additional hazards commonly encountered during work tasks by UNL Custodial Services workers.
- **Elevated Work Surfaces** SOP [http://ehs.unl.edu/sop/s-elevated\\_work\\_surfaces.pdf](http://ehs.unl.edu/sop/s-elevated_work_surfaces.pdf)  
SOP updated to better describe the various types of fall protection that are acceptable based on various elevated work surfaces.
- **Housing Custodial Operations Chemical and General Safety** Web-Based Training <http://ehs.unl.edu/onlinetraining>  
This new training specifically for Housing Custodial Operations workers provides the chemical safety training required by this group as well as information on other potential hazards these workers may encounter and mitigation strategies for those hazards.
- **Limitations on Fuel Consumption in Stationary Combustion Air Emission Sources** ([http://ehs.unl.edu/sop/s-fuel\\_consumption\\_use.pdf](http://ehs.unl.edu/sop/s-fuel_consumption_use.pdf)) *and*
- **Power Generators – Stationary Emergency Generator Operations and Maintenance Log** ([http://ehs.unl.edu/sop/s-generator\\_emergency\\_log.pdf](http://ehs.unl.edu/sop/s-generator_emergency_log.pdf))  
These two SOPs revised in response to newly re-issued air operating permit, primarily to indicate: emergency generators can be operated no more than 500 hours in any 12-month period and no more than 100 hours for maintenance/readiness testing during any 12-month period; and fuel must have a minimum cetane index of 40 or a maximum aromatic content of 35% by volume.
- **Medical Surveillance Exams** SOP [http://ehs.unl.edu/sop/s-medical\\_surv\\_exams.pdf](http://ehs.unl.edu/sop/s-medical_surv_exams.pdf)  
Removed instruction to attach the hazard assessment to the fax cover letter as that information is provided to the health practitioner by EHS.
- **Personal Fall Arrest Systems** (previously titled **Fall Arrest Systems**) SOP  
[http://ehs.unl.edu/sop/s-personal\\_fall\\_arrest\\_systems.pdf](http://ehs.unl.edu/sop/s-personal_fall_arrest_systems.pdf)  
SOP revised to specifically focus the content on personal fall arrest systems.

➤ **Petroleum Storage Tanks SOPs**

<http://ehs.unl.edu/sop/petroleum-storage-tanks>

All of the following SOPs have been revised to reflect the State Fire Marshall delegating authority to the UNL Building Code Official.

- Aboveground Petroleum Storage Tanks
- UST – Automatic Tank Gauging
- UST – Closure Requirements
- UST – Installation Requirements and Summary of Recommended Design Features
- UST – Registrations, Permits, Notifications and Fees
- UST -- Petroleum Release Requirements
- UST – Summary of Recordkeeping Requirements
- UST – Summary of Regulatory Requirements

➤ **Power Stationary Emergency Generators – Permits and Compliance Requirements SOP** [http://ehs.unl.edu/sop/s-generators\\_permits\\_compliance.pdf](http://ehs.unl.edu/sop/s-generators_permits_compliance.pdf)

SOP revised to indicate that permitting authority for fuel tanks associated with generators has been delegated to UNL's Building Code Official by the State Fire Marshal; to reflect hours of operation restriction as described above; and to advise consultation with EHS prior to specifying any generator with a liquid fuel tank capacity of greater than 1300 gallons.

➤ **Respiratory Protection Program**

[http://ehs.unl.edu/programdocuments/respiratory\\_protection.pdf](http://ehs.unl.edu/programdocuments/respiratory_protection.pdf)

Minor changes: Added reference to a SOP that was not previously listed; removed some of the tools that EHS uses to identify respirator use; changes to who receives copies of certain documents.

➤ **Respiratory Protection Program – Summary SOP**

[http://ehs.unl.edu/sop/RPP\\_SOP\\_Respiratory\\_Summary.pdf](http://ehs.unl.edu/sop/RPP_SOP_Respiratory_Summary.pdf)

Language was added to clarify that in certain circumstances respirators may be shared by employees.

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

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