

**In this issue of the Environmental Health and Safety (EHS) Listserv,
December 19, 2017**

1. Be an Active Participant in UNL's Efforts to Curb Stormwater Pollution!
 2. Near Miss: Liquid Nitrogen Incident
 3. "Biosafety Cabinets" Colloquium Online
 4. NEW Biosafety Training – Biosafety Research Compliance
 5. Holiday Safety
 6. Safety Shorts – Holiday Safety
 7. Situational Preparedness – Winter Driving/Bicycling/Walking
 8. Safety Poster – Don't Take Your Work Home With You!
 9. Would You Tell EHS?
 10. Revised Safe Operating Procedure
-

1. Be an Active Participant in UNL's Efforts to Curb Stormwater Pollution!

The University of Nebraska-Lincoln (UNL) is considered an operator of a Small Municipal Separate Stormwater Sewer System (SMS4) and is required to maintain a permit issued by the Nebraska Department of Environmental Quality (NDEQ). While UNL has held a SMS4 permit since 2007, the NDEQ recently developed a General Permit for SMS4 operators, and is requiring all SMS4 operators to apply for coverage under that permit.

The new General Permit is far more detailed and requires substantial commitments of permittees. EHS has prepared a Stormwater Management Plan (SWMP) to support coverage under the new SMS4 General Permit. We invite the campus community to review and comment on the draft SWMP and supporting documents, which are available on the EHS Web Site <https://ehs.unl.edu/stormwater-management> by/before January 31, 2018.

Comments may be submitted by email (stormwater@unl.edu), by telephone (Brenda Osthus, 402-472-4927), or by mail (EHS, 3630 East Campus Loop - 0824). All comments and responses will be posted on the EHS website.

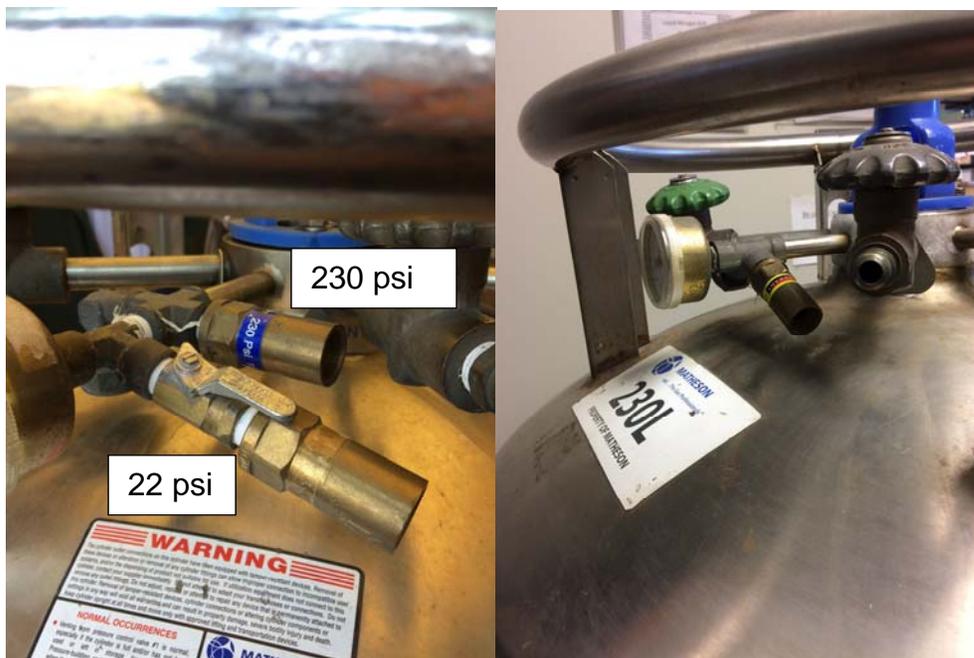
Resources

- Environmental Protection Agency's informational website on Stormwater Discharges from Municipal Sources
<https://www.epa.gov/npdes/stormwater-discharges-municipal-sources>

2. Near Miss: Liquid Nitrogen Incident

Recently, a near-miss incident occurred during the attempted transfer of liquid nitrogen from a 180-liter cryogenic liquid cylinder to a smaller-size dewar. When the valve of the large cylinder was opened to transfer liquid nitrogen to the smaller container, the transfer hose shot from the opening of the small dewar and sprayed liquid nitrogen into the room. Laboratory staff was able to close the valve and stop the flow of liquid nitrogen without injury. However, some floor tiles in the room were damaged.

Unbeknownst to the laboratory worker, the cryogenic liquid cylinder had two valve settings, and the valve was set to the 230 psi setting rather than expected 22 psi setting. The picture on the left shows a cylinder with two valve settings. The 230 psi valve in the rear is clearly marked (blue label). The 22 psi valve in the foreground is not clearly marked. The 22 psi valve shown has the ball valve in the open position, i.e., aligned with the valve axis.



At this setting, the dewar operates at 22 psi. When the ball valve is closed, the dewar operates at 230 psi. Although liquid nitrogen was ordered by the laboratory at 22 psi, the cylinder was operating at the 230 psi setting when the transfer was attempted, since the ball valve was closed. Staff in that laboratory were not aware of a cryogenic liquid cylinder with the possibility with two pressure settings. See the right-hand picture for an example of a cryogenic liquid cylinder with a single valve.

Upon consultation with the vendor it was agreed that, in future, if a liquid nitrogen cylinder has two valve settings, the vendor will secure one valve so the pressure requested by the lab will be the default pressure delivered. On receipt of cylinders, laboratory personnel need to confirm the design and ascertain what level of pressure is being delivered. If the design of the container includes two pressure relief valves, workers must ensure that the ball valve is in the proper position for the intended use.

Resources

- **Cryogenic Material** Safe Operating Procedure https://ehs.unl.edu/sop/s-cryogenic_material.pdf
- **Cryogen Safety** Colloquium <https://mediahub.unl.edu/media/2589>

3. “Biosafety Cabinets” Colloquium Online

The fall safety colloquium, co-sponsored by EHS and the Office of Research and Economic Development, held on Wednesday, October 11, 2017, is now online. If you missed this safety event or would like to review the contents of this or previous colloquia, go to <https://ehs.unl.edu/training/Colloquium>.

4. NEW Biosafety Training – Biosafety Research Compliance

EHS is in the process of revamping the online biosafety training modules. The first revamped module, **Biosafety Research Compliance**, is now available on the EHS web site. This module replaces the former module titled **NIH Guidelines for Research Involving Recombinant or Synthetic Nucleic Acid Molecules**. We will soon be replacing the existing modules titled **Biosafety Basics** and **Biosafety in the BSL-2 Laboratory** with new modules titled **Biosafety 101** and **Biosafety 201**.

Under the revised approach to biosafety training, the modules are designed to be taken in a sequential order, with the new **Biosafety Research Compliance** being the first module that should be completed. The second module that should be taken is **Biosafety 101**. The last module, **Biosafety 201**, is designed for persons working at Biosafety Level 2 containment or higher.

EHS welcomes your feedback on these re-designed modules and we hope that you find them appealing. If you have questions on this topic or the changes being implemented, contact Matt Anderson, manderson11@unl.edu, 402-472-9554.

Resources:

- **Biosafety Research Compliance** web-based training <https://ehs.unl.edu/web-based-training#BioRC>

5. Holiday Safety

The festive holiday season is underway. To keep the season festive, think about safety during your preparations and activities. Here are some tips to avoid hazards related to the upcoming holiday.

Hanging lights/decorations:

- Use a properly designed ladder or stepstool to decorate areas beyond your reach.
- Inspect your ladder to be sure it has non-skid feet, no visible damage, and has the proper rating to hold not only your weight but also the weight of the decorations/tools you will be using.
- Make sure stepladders are fully unfolded prior to use. Do not stand on the top rung, climb on the backside of the ladder, or lean out to the side of the ladder.

Electrical hazards:

- Carefully inspect holiday lights and discard any with frayed or nicked cords or loose connections. Always turn off holiday lights, both indoors and out, when you leave the house unattended or retire for the night.
- Do not use power strips in series for indoor holiday electrical needs, rather arrange items so power strips can be plugged directly into a permanently installed outlet.
- When purchasing/using light strings, extension cords, spotlights, or electrical decorations, look for the certification mark of an accredited organization such as UL (Underwriter's Laboratories). Before using lights outdoors make sure they have been certified for outdoor use.
- Do not use extension cords in series, rather use a cord long enough to reach the outlet without stretching, but not so long as to become easily tangled. Plug all outdoor electric decorations into circuits with ground-fault circuit interrupters to avoid potential shocks.
- When hanging outdoor lights keep electrical connectors off the ground and away from metal rain gutters. Use insulated tape or plastic clips to hold them in place, not metal nails or tacks. Ensure your lights and cords are rated for outdoor use.

Fire safety:

- Test your smoke alarms and carbon monoxide detectors if you have not recently done so, and make sure that they are UL-listed.
- Choose a Christmas tree with fresh, green needles that do not fall off when touched. Water the tree daily. Keep the tree at least three feet away from fireplaces, radiators, portable heaters, or other heat sources. When purchasing an artificial tree look for the label "Fire Resistant."
- Use noncombustible or flame-resistant materials to trim a tree. Replace any string of lights with worn or broken cords or loose bulb connections. Read instructions on the number of light strands to connect.

- Make sure trees and other decorations do not block exits.
- Do not burn wrapping paper in a fireplace. Keep candles away from decorations and other things that can burn. Two of every five home decoration fires are started with candles. Blow out all candles when you leave a room or go to bed.

These are just a few tips to help keep you safe during the holidays. Look around your home for other hazards.

Resources

- EHS **Ladder Safety** SOP <http://ehs.unl.edu/sop/s-ladder.pdf>
- EHS **General Electrical Safety** SOP <http://ehs.unl.edu/sop/s-electricalsafety.pdf>
- NFPA Project Holiday “Winter holiday safety” <http://www.nfpa.org/winterholidaysafety>
- Consumer Products Safety Commission “Holiday Decoration Safety Tips” <http://www.cpsc.gov/PageFiles/121347/611.pdf>
- Parents.com “12 Tips for Holiday Home Safety” <http://www.parents.com/holiday/christmas/safety/12-tips-for-holiday-home-safety/>

6. Safety Shorts (Holiday Safety)

This series features links to short safety resource(s) each month. Regardless of format - video, PDF, other - these short features cover various topics and are intended as resources for safety committees, faculty/staff/students, as well as individual laboratories/work areas. These videos are applicable to holiday safety.

- **Holiday Fire Safety** (Electrical Safety Foundation International (ESFI), Duration 1:01 minutes). Various fire safety tips. <https://www.youtube.com/watch?v=En9E1bsKZvM>
- **Winter Fire Safety** (FEMA, Duration 1:30 minutes). Safe use of stoves, etc. <https://www.youtube.com/watch?v=1UXLRvu61Gc>
- **Holiday Safety Tips** (NC PublicPower, Duration 1:54 minutes). Safety with holiday lighting, power strips, extension cords. <https://www.youtube.com/watch?v=IlkFYyp5pBk>
- **Deck the Halls with Fire Safety** (National Fire Protection Association, Duration 1:05). Candle safety. https://www.youtube.com/watch?time_continue=9&v=-ugeFgJlpi4

NOTE: Resources are provided for informational purposes only. Publication does not in any way endorse a particular company or product or affect current UNL policies and procedures.

7. Situational Preparedness – Winter Driving/Walking/Bicycling

Situational preparedness is so important that we will be looking at various aspects over time, as well as providing resources to assist you to “be prepared” for whatever situations you may encounter at UNL. Operation of motor vehicles in the winter and in particular during the holidays when traffic increases, both in and out of town poses its own set of hazards.

Accidents tend to increase during times of bad weather and increased traffic. When operating a motor vehicle be sure to drive defensively and not engage in the most dangerous driving behaviors: texting/cell phone use, speeding, aggressive driving, inattention, drowsiness, and driving when impaired.

Monitor the weather and do not attempt travel during hazardous conditions. Make sure your vehicle is in good repair and your vehicle contains a cold weather emergency kit in case you become stranded. Do not leave your vehicle running inside a closed garage to avoid build-up of dangerous carbon monoxide.

When surfaces are snow-packed or icy follow safe winter cycling tips to reduce the chance of injury. Head injuries are more common so be sure to wear a helmet. When visibility is limited, wear bright reflective colors. Consider investing in front and rear lights. Follow the same roadway recommendations provided for motor vehicles.

With visibility and icy/snowy conditions use extra care while walking, in particular when crossing streets. Vehicles may have a harder time seeing you if visibility is limited. When roadways are snow-packed or icy, stopping takes a vehicle longer than when conditions are sunny and dry.

Resources

- **Charlie Brown Christmas Safety Message** (Ohio Department of Transportation, Duration 0:43). Focus on holiday driving.
<https://www.youtube.com/watch?v=DHnIKOOpMOE>
- **5 Tips for Riding a Bike on Snow and Ice** (Wild Outdoor Living, Duration 2:13) <https://www.youtube.com/watch?v=4dO67EuJUus>

8. Safety Poster – Don’t Take Your Work Home With You

EHS provides a number of safety posters of relevance to the campus community. We tend to think of our electronics as an extension of our “self.”

Remember when working in the laboratory or in the field that germs and other contamination will get onto phones or other items you are using. You don't want to take contaminants home with you!

Don't Take Your Work Home With You!

Is your device clean... or contaminated?

You cannot see germs/other contamination.

Avoid using cell phones and other personal electronic devices in the laboratory!
Remove gloves, wash hands, then use the device.

Learn More
ehs.unl.edu

Pictures used with permission of Cornell University
Original Source: youtube.com/watch?v=r11cwgk-h4w

UNIVERSITY OF
Nebraska
Lincoln | Environmental
Health & Safety
(402) 472-4925

Request your FREE poster(s). Contact ehs@unl.edu or 402-472-4925 with your name, campus mailing address including zip+4, and quantity desired. If you have an idea for a safety poster, contact Elizabeth (Betsy) Howe, ehowe2@unl.edu, 402-472-5488.

Resources:

- Safety Posters <http://ehs.unl.edu/safety-posters>

9. Would You Tell EHS?

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. The

Director, Brenda Osthus, is the recipient and follows up on all submissions. We greatly appreciate your participation.

Please feel free to contact Brenda Osthus, EHS Director, directly at 402-472-4927 or bosthus1@unl.edu if you would rather communicate outside the parameters of this survey.

10. Revised Safe Operating Procedures

- ***Incident Reporting – National Institutes of Health (NIH) Guidance***
https://ehs.unl.edu/sop/s-bio-incident_reporting-NIH.pdf
Updated to include NIH's new template of information requested when filing an incident report.

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>

- ➔ To SUBSCRIBE and get your own copy if you received this from someone else or UNSUBSCRIBE, send an e-mail to LISTSERV@LISTSERV.UNL.EDU . In the Message (not Subject) field enter SUBSCRIBE EHSINFO or UNSUBSCRIBE EHSINFO