

The SAFETY BEAKON



Department of
Occupational
Health and
Safety

Recent Laboratory Emergencies, Spills, and Fires

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Several laboratory emergencies involving chemicals have occurred in the past eight months in various laboratories across campus. There also have been numerous small chemical spills, dumpster incidents and other near misses. Sharing and learning from these incidents can help to improve the safety program for everyone.



The response team being decontaminated.

Many of these incidents could have been prevented if laboratory personnel properly labeled waste containers, did not use fume hoods to store chemicals and/or contacted DOHS to receive training and information.

One of the most serious incidents involved a laboratory fire which occurred

in and above a fume hood that ultimately activated three sprinkler heads. A full-scale hazardous materials response was necessary because of the unknowns and potential for mixing of chemicals. Hazardous materials and decontamination teams responded from the State, County and the University of Delaware. Mem-

bers of the UD DOHS donned chemical protective suits and investigated. It was determined that the sprinkler system extinguished the fire. Crews then began the initial phases of the clean up. The building will undergo a

significant restoration effort; however, the damage would have been more severe had the building design and safety systems not functioned properly. While the exact cause is still under investigation, the fire would have been minimized or prevented had surplus chemicals been stored properly and

not left in the fume hood. Researchers should do their best to store all chemicals in appropriate cabinets away from active processes and reactions as well as maintain good "house keeping" practices.

Five other incidents were the result of improper chemical waste management. In all of these cases, inorganic acidic materials were mixed with organic materials causing either an explo-

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UD Wins National Recognition

The Department of Occupational Health and Safety entered two award programs run by the Campus Safety Health and Environmental Management Association (CSHEMA), a Division of the National Safety Council, in February 2004. The entries were judged

by a panel of seven judges who serve as Environmental Health and Safety Directors at universities across the country. The University was presented with plaques for the awards from the President of the National Safety Council at the International Conference

on Campus Safety July 7th in Chicago, Illinois.

DOHS received the top award issued by CSHEMA/NSC, the Complete Program Award of Honor. UD previously won this award in 1998 and was not eligible to

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Emergencies, Spills, and Fires

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sion and/or sprayed chemicals throughout the fume hoods. Many of these incidents could have been prevented if researchers labeled waste containers properly and checked labels prior to the addition of waste materials. Researchers must also immediately contact DOHS at x8475, or 911 after hours, if incompatible materials are added to a waste container or if an unexpected reaction occurs.

Due to the severity and number of chemical waste container incidents and the need to take corrective action to prevent injury, DOHS is purchasing



A Justrite chemical waste con-

ainers that are designed to vent under sudden pressure buildup conditions (3-5

pounds per square inch). DOHS will distribute these containers to laboratories that generate corrosive waste streams. Please contact DOHS if you are currently generating this waste and have not received one of these containers. Effective January 1, 2005, all corrosive waste must be managed in these containers. DOHS will not accept any chemical waste (except waste reagent grade chemicals) in glass or plastic-coated glass containers. Look for more information in the coming months. Remember to take part in annual chemical waste training sessions or sign up for online training through WebCT. Contact Kevin Eichinger at eich@udel.edu or x2103 with questions.

Back to the School Year Safety

In a few short weeks the students will be returning to campus, and university employees will be wrapping up vacations and preparing for the school year ahead. This is a good time to review emergency procedures and to ensure everyone knows what to do in the event of an emergency.

The best place to start is the Emergency Guide found on pages 20 and 21 of the Campus Directory. This summary tells you what to do in the event of a medical emergency or fire, a power outage or severe weather, as well as

"New emergency evacuation signs are being placed in buildings on campus- look for them in your work areas."

several other situations. Take a few minutes to review these procedures so you know what to do if the need arises. New emergency evacuation signs are being placed in buildings on campus- look for them in your work areas.

These new signs include pictures of outside gathering points where occupants will receive information and direction.

As the population of Newark swells, so too will the pedestrian, bicycle, and vehicular traffic. Drive and ride carefully around campus. When you're walking, cross the streets at designated crosswalks and obey the signals for your safety. Remember the special hazard posed by the railroad crossings as well. Visit <http://www.oli.org/oli> for more information.

2004 Safety Chair Luncheon a Success!

"SAFETY TRAVELS EVERYWHERE" was the theme for the May 2004 Safety Chair Recognition Luncheon. This annual event is to thank the Safety Chairs, CHOs, and other guests for their year-long commitment to keep safety a goal for employees and students at the UD. A beach scene was recreated in keeping with the "Safety Travels Everywhere" theme.



Fun in the sun with palm trees and beach balls!

The OHS training room was transformed into a beach party with patio umbrellas, palm trees, beach balls, parrots, colorful leis, brilliant beach towels and island music. A fun and relaxing program was shared and included delicious catering by Dining Services amid island blossoms

and souvenirs, recognition of the Department of the Month Award winners and a gift swap. Visit <http://www.udel.edu/OHS/luncheon04.html> for more on this event.



Recognition for Safety Programs

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submit prior to 2002. In 2001, the CSHEMA Awards committee updated the criteria for judging the award to reflect the increased risks and regulations that campus safety programs are challenged to address. Delaware is only one of three schools nationally that have measured up to the increased standards since their revision in 2001. Information about this Award program can be found at www.cshema.org. This honor will be held by UD for another four years.

The second award that UD entered was the Unique or Innovative

Award. This Award is given to schools that have developed unique or innovative solutions to safety concerns on their campus. The solution must be cost effective and address an identified hazard. The award is designed to highlight successful programs and make them known to other schools who could implement the solutions on their cam-



UD: A leader in safety!

pus. UD's entry described the building evacuation plans that were cooperatively developed by Bernie Alexander and Joe Phillipone of FP&C. These evacuation plans not only show the exit routes for buildings but also include the gathering point outside the building where occupants meet for further direction. For more information about this program visit <http://www.udel.edu/OHS/evacposting.html>

Gel Waste Disposal Guidelines

For those of you who work with gels in your lab, do you know the procedures for disposal of these hazardous wastes? Here is a summary of the proper procedures:

- Ethidium bromide and agarose gels can be collected in a sealed plastic bag or container then discarded into an infectious waste box, or bagged and labeled for chemical waste disposal.
- Acrylamide gels MUST be bagged, labeled, and discarded through the

“Do you know the procedures for disposal of these hazardous wastes?”

chemical waste program.

- Acrylamide and ethidium bromide waste reagents, as well as liquid acrylamide and ethidium bromide MUST be labeled and discarded

through the chemical waste program.

- Liquid agarose may be disposed down the sink drain with copious amounts of water.

Contact DOHS for information on disposal of buffers. DO NOT discard any gels in the regular trash! Contact DOHS (x8475) if you would like a poster of these procedures to put up in your lab or department.

Look Who's Safe!

The Department of Occupational Health and Safety (OHS) would like to

recognize Kristi Kiick from Materials Science and Erica Selva from Biology for their efforts to ensure current and standardized safety training for the members of their labs. Both of these UD faculty members individually arranged a “Right to Know” training lunch for their students where food and beverages were provided to the students in attendance. The students enjoyed a free lunch, which made a safety seminar just a bit more palatable! Thanks to both of you for your extra

efforts in making safety a priority in your labs!



Kristi Kiick (third from left) and her lab group.



Erica Selva (far right) and her lab group.

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Safety Training for New Students

The start of the fall semester brings many new students to the University. For graduate students, this means that it is time for New Graduate Student Safety Orientation. All new graduate students must take this training. There are several options for completing it: Someone within the department may present the material, there is training available through DOHS on WebCT, or departments may contact DOHS to schedule a session for their students by calling x8475. Further information regarding training options is available at <http://www.udel.edu/OHS/newgradindex.html>. And of course, don't forget any other safety training sessions your new and returning students may need!

Grilling Safety

Anyone wishing to use a grill on campus, either charcoal or gas, needs to first obtain an Open Flame Permit from the University of Delaware Fire Protection Engineer, Bernie Alexander. Once the permit is approved and you are ready to grill, here are some safety tips:

- Similar to working in a lab, grilling has recommended Personal

Training Schedule for upcoming DOHS Courses—

for additional information and upcoming courses please see our website!

* Note: All trainings take place in GSB 130 unless otherwise specified.

August 11	Computer Workstation Ergonomics	11:00a.m. - 12:00p.m.	William Fendt
August 13	Confined Space Training Part 2	9:00-10:00a.m.	Joe Miller
August 16	Biosafety Awareness Training	10:00-11:00a.m.	Krista Murray
August 16	Chemical Waste Training - Lewes	10:00-11:00a.m.	Kevin Eichinger
August 17	Biosafety Training	10:00-11:00a.m.	Krista Murray
August 19	Chemical Waste Training	9:00-10:00a.m.	Kevin Eichinger
August 20	Compressed Gases Safety Training	9:00-10:00a.m.	Leslie York-Hubbard
August 20	Environmental Programs at the University of Delaware	2:00-3:00p.m.	Dave Levandoski
August 26	Safety Program Orientation	9:00-10:00a.m.	Robin Elliott
August 27	Laboratory Instructor Training	9:00-10:00a.m.	Robin Elliott

Protective Equipment. Aprons and oven mitts need to be worn.

- Keep gas cylinders stored outside and away from structures.
- Keep gas cylinders turned off when not in use.
- Check connections for leaks by using a soapy water solution. Spray the solution over the fittings; if the solution bubbles, there is a leak present.
- Grilling should be done on level ground, away from structures, vehicles, trash receptacles, and landscaping (mulch).
- When using charcoal, only use limited quantities of fluids designed



as starter fluid on dry charcoal. Do not spray starter fluid after ignition. **Never use gasoline or kerosene as starter fluid.**

- Soak all coals in water and assure they are cool to the touch before disposal.
- Grills remain hot long after cooking has ceased. If the grill is hot to the touch, allow it to continue cooling before covering or storing indoors.
- Do not store hot coals in a combustible container.

To obtain an Open Flame Permit, go to <http://www.udel.edu/OHS/formindex.html> at least two weeks prior to date of grilling. Please note that grilling at football games (tailgating) does not require an Open Flame Permit unless it is a University sponsored event.