Chemistry Safety Notes

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"Chemistry Safety Notes" is published by the Chemistry Dept. Safety Committee, written & edited by Debbie Decker, Safety Mgr.

Hazardous Waste—Most Excellent News!

Acting Provost Burtis has extended the HMRP funding model through 2016-2017. Academic units **WILL NOT** return to the pay-per-use based funding model which dis-incentivizes the proper disposal of hazardous waste. Over the next year, a sustainable, long-term funding model will be established.

Bottom line—hazardous waste disposal remains no-charge to individual researchers for at least another year!

Sharps Management

Sharp pointy things (broken glass, TLC plates, Pasteur pipettes, pipette tips) which are not contaminated, must be disposed in a hard-walled container. If you choose to use a red "biological sharps" container, be sure all the biohazard labelling is defaced.

If sharps are contaminated, then they must be disposed in a hard-walled container, properly labelled as "hazardous waste."

Empty solvent bottles can be recycled or re-used, so long as the bottle didn't contain an extremely hazardous waste.

Hazardous Waste Management—Continued

Beginning Sept. 1, 2016, the current hazardous waste label and method of requesting hazardous waste pick ups will be updated. The new WASTe application will become the mechanism to create hazardous waste labels and request waste pick up.

WASTe is a web-based system that facilitates regulatory compliant labeling, tracking, collection and disposal of hazardous wastes.

Some key benefits of WASTe are:

- Quick and easy to use – create a tag in less than one minute
- Provides all required components of labeling hazardous waste
- Prints tags that can be affixed to waste containers
- Allows users to easily request waste pick up
- Automatically notifies EH&S staff to pick up waste when the 9 month limit is reached
- Secure access with your Central Authentication (CAS) credentials
- Delegates can manage lab personnel and storage location
- Creates tags for chemical, radioactive, mixed and universal waste (for example, batteries and light bulbs)

Active Shooter Training

At the request of the Department Safety Committee, I offer several resources for training and awareness.

Yale University has developed a campus-specific video here: http://emergency.yale.edu/be-prepared/active-shooterweapon It's 8 minutes and would be a good option for discussion at group meeting or similar.

There's also this video developed by the City of Houston and DHS: https://www.youtube.com/watch?v=ilBDx6pQym0

Campus Police is offering an active shooter training on September 12 at 10:30. Seating is limited. You can sign up here: http://doodle.com/poll/cqz24avgf3ivz6s2 Don't dawdle—seats are going fast.

pH Local Limit

The local limit for pH has changed. Solutions with a pH less than 5 or greater than 11 must be disposed as hazardous waste. Solutions with a pH >5 and <11 may go down the drain, so long as it has no other hazards.

New Shop Safety Manual

Safety Services has released a new Shop Safety Manual, designed to provide guidelines for improving safe practices in any area in which stationary equipment is used. The manual describes the proper access controls, training, engineering controls, safe work practices and procedures to be followed by any personnel working in shops at UC Davis.

Although the term "shop" might bring to mind a work room designed specifically for, or occupied entirely by industrial machinery. For the purposes of meeting UC Davis policies and procedures, a shop can be any area of a room in which stationary equipment is used for fabrication, manufacturing, modification, or repair.

A laboratory, for example, may have a drill press in the corner used for miscellaneous drilling operations. In this case, the corner of the laboratory should be treated as a shop and the policies and procedures outlined in the Manual would apply.

This is UC Davis' first campus wide Shop Safety Manual available on the Safety Services website or in the UC Davis Policy and Procedure Manual, Chapter 290, Section 58. For more information, or if you need assistance determining if your lab falls under the Shop Safety plan, please let me know.

Report on UH Incident Released

The report of the UC Center for Laboratory Safety on the University of Hawai'i incident has been released. The report is in two parts: Technical Analysis and Recommendations for Improvements in UH Laboratory Safety Programs. The first report presents conclusions regarding the technical details of the explosion as well as presenting an analysis of its immediate cause. The second report contains recommendations for improvement of the UH research safety operations.

This incident at the UH laboratory showcases once again the challenges that academic research laboratories face in addressing physical hazards of experimental processes and recognizing potential hazardous consequences when experimental procedures are changed. In scientific research the experimental outcome often becomes the driving force and overrides risk considerations. In this respect, the UH lab explosion is similar to the explosion at Texas Tech University and the fire at UCLA[1]. Based on the report of the explosion at Texas Tech University by the Chemical Safety Board (CSB), OSHA has amended its regulatory standards[2] by establishing non-mandatory recommendations regarding physical hazards in the laboratory including combustible liquids, compressed gases, reactives, explosives and flammable chemicals, as well as high pressure/energy procedures, sharp objects and moving equipment. The key lessons identified in the CSB report are directly applicable to UH and are included as several of the safety recommendations to UH.

This report was written to serve as a direct call to action for researchers, administrators and EHSO staff not only at the UH, but at all institutions of higher education that conduct research. The recommendations and lessons learned contained herein should be understood and addressed at all universities in order to help prevent laboratory incidents.

Pokemon Go—Be Safe while you catch them all

As you search for characters, remember that Pokémon Go is a game you play in public, with the public. As you play, be aware of your surroundings and the people around you. If possible, only go to a Pokéstop with a friend or partner.

Pokémon Go characters and locations are randomly generated and some real locations may be dangerous or unsafe for players to enter. Stay alert and always watch where you're going – being distracted by a phone in your hand could make you a target for a crime or susceptible to injury. Recently in southern California, two men were so distracted they fell off a cliff while playing.

Safety Tips While Searching For Pokemon Include:

- **Never!** Drive and play Pokemon Go. This includes your car or bicycle.
- Pay close attention to your surroundings, do not walk in unlit areas by yourself.
- Enjoy our campus but go with a friend. Walking in pairs is key.
- Always be aware of where you are, again go with a friend.
- Avoid suspicious locations.
- Do not trespass while playing.

Editor's Note: *Most inappropriate place to play Pokemon Go? My son playing at my daughter-in-law's ultrasound!*

Weather balloon measurements and other data showed that last September, the ozone hole was 4 million square kilometers smaller than its peak size.. World Meteorological Organization/Flickr

OZONE LAYER ON THE MEND, THANKS TO CHEMICAL BAN

Tags: Antarctica, public, discovery, environmental, ozone

http://www.sciencemag.org/news/2016/06/ozone-layer-mend-thanks-chemical-ban

Since it was discovered in 1985, the Antarctic ozone hole has been a potent symbol of humankind's ability to cause unintended environmental harm. But now comes a glimmer of good news: The void in the ozone layer is shrinking. "It's a big surprise," says Susan Solomon, an atmospheric chemist at the Massachusetts Institute of Technology in Cambridge. "I didn't think it would be this early."

Although the hole will not close completely until midcentury at the earliest, the healing is reassuring to scientists who pushed for the Montreal Protocol. The 1987 international agreement phased out the industrial production of chlorofluorocarbons (CFCs): chlorine-containing chemicals that help trigger the destruction of stratospheric ozone, which screens out cancer-causing ultraviolet light. "You want to be sure that the actions we've taken have had the intended effect," says Solomon, who led the study published online by Science this week.

Layers of depleted ozone open up over both poles just as winter gives way to spring. During the wintertime cold, nitric acid and water condense out of the atmosphere and form wispy clouds. The surfaces of the cloud particles host chemical reactions that release chlorine that came from CFCs. The chlorine, in turn, goes on to destroy ozone—but only in the presence of light. That is why, over Antarctica, ozone loss doesn't get going in earnest until September, the beginning of the southern spring, when light returns to the pole. Peak losses are usually in October, and that is when researchers have typically taken stock of year-to-year changes in the hole.