



Biology and Medical Department ES&H News Letter

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PPE in Your Workplace

By Bob Colichio

Happy New Year!

As we start off this new year we need to comply with a change in the requirements for Personal Protective Equipment (PPE) in laboratories. Specifically the requirement to **wear Safety Glasses at ALL times in labs where chemicals are stored and/or used**. We will be posting signs on the entry doors to remind everyone. If you are performing a task in which safety glasses cannot be worn without obstructing vision (such as looking into a microscope or at a computer terminal) then you may remove them for that activity, but keep them close by.



Standard safety glasses are available through Bob Colichio. If you require prescription safety glasses see Bob or your Departmental Office for forms which you will then bring to the on-site Safety Glass office. The on-site optician will not perform an eye exam but will fill an existing prescription that is no older than 2yrs. If you give the optician the phone number of your Doctor she will call for you.

We will be sending out further instructions regarding the requirements for lab coats in laboratories once the kinks have been worked out.

If you have any questions please contact Ann Emrick or Bob Colichio

Lab Safety Awareness

By *Bob Colichio*



On December 23, 2008, Sheharbano (Sheri) Sangji was performing a fairly common procedure with a pyrophoric material in a UCLA Chemistry lab when some accidentally spilled onto her polyester sweater and ignited. Over 40% of her body was burned and she died 19 days later.

A subsequent investigation by California Occupational Safety and Health Administration (OSHA) led to citations and fines for inadequate training, improper use of protective clothing, failure to correct safety violations noted on the October, 2008 inspection performed by UCLA's EHS Office, and non-existent records of training on the specific procedure being performed. Currently, criminal and civil charges are being considered against the PI for wrongful death.

Labs are extremely diverse spaces that may contain many different types of potentially hazardous materials or equipment. Numerous other incidents have occurred recently that have not received as much attention as the UCLA incident, but, should be reminders as to what can happen in our labs and what we can do to prevent it or minimize the possibility of it happening.

Listed below is a sampling of publicized events and links to the official reports: All descriptions are links and can be accessed by using Control + Click to follow link.

- [Nitric acid spill injures Boise State lab manager](#) (March, 2009)
- [Researcher mixes two unidentified acids and winds up with broken flasks and spilled chemicals at the University of Maryland](#) (March, 2009)
- [Chemical reaction in storage cabinet leads to explosion at Boston University](#) (June, 2009)
- [Alcohol ignites, fire spreads to plastics in lab at Rensselaer Polytechnic Institute](#) (June, 2009)
- [University of British Columbia, Okanagan, student burned by acid wasn't following safety rules](#) (added 8/28/2009)
- [Two students burned in an ethanol fire at Indiana University-Purdue University, Fort Wayne](#) (added 09/14/2009)
- [Fire in University of Colorado, Boulder, chemistry building due to "long-term experiment"](#) (added 10/30/2009)
- [Mercury spill at McLennan Community College, in Texas](#) (added 10/30/2009)
- [Hydrogen leak at Boston University](#) (added 10/30/2009)
- [Nitric acid and potassium cyanide spill at Georgia Tech sends three graduate students to the hospital](#) (added 10/30/2009)

Responding to Equipment Alarms

By Bob Colichio



In June 2009 in Building 490 a rare collection of human brain tissue that was being used to study mental illness (depression) was destroyed as a result of the -80 Ultra Low Temperature freezer they were being installed in failing. Investigation of the incident revealed a failure of the local alarm (on the freezer) and a mislabeled alarm indicator in the 9-400 hall way. The replacement value of the research specimens were estimated

at \$500K.

During the course of the investigation it was discovered that the ULT freezers frequently alarm when individuals keep the doors open to place or remove samples. It is commonplace to silence the local alarm figuring this was the case and that the freezer would come down in temperature shortly, when in fact it could be a catastrophic failure.

If in fact you are loading or unloading samples from a freezer and it alarms because the door has been opened for an extended time, feel free to silence the alarm. But, once the door is closed the freezer must be monitored frequently to ensure that the temperature is indeed falling to it's set temperature. If after 30 minutes it has not reached that temperature, contact the Building Manager, ESH Coordinator or Site Supervisor (after hours) immediately.

Therefore, it became the norm of the workforce culture to ignore or disregard equipment alarms/warnings. In addition, there appeared to be an absence of a questioning attitude (why is it alarming?). For example, even where the evidence from the alarming freezer was indicating the possibility of an actual failure, it was not considered a credible explanation until the evidence of the failure was incontrovertible.

This incident has brought to light the fact that we have numerous other equipment, other than ULT freezers (ie; incubators, autoclaves, environmental/HVAC) within our buildings that have local alarms (some of which may also be alarmed to the Site Supervisor).

If you happen to notice any equipment alarming, please contact your Building Manager or ESH Coordinator during normal work hours. After hours or weekends, you should contact the BNL Site Supervisor at Ext. 4174 or Cellular (631) 872-8988. The equipment can then be monitored or repaired to prevent any future loss or damage.

Laboratory Housekeeping

By *Bob Colichio*



As you walk through a well-kept laboratory, you should note a clean and orderly workplace.

General

- Floors should be free of hazards. Never leave carelessly discarded objects, dropped objects, or spilled material on the floor.
- Always keep tables, chemical hoods, floors, aisles, and desks clear of all material not being used.
- There should always be a clear passageway to the exits.
- There should always be clear space around safety showers or eyewashes, fire extinguishers, and electrical controls.
- Sink traps and floor drain traps should be filled with water at all times to prevent the escape of sewer gases into the laboratories.
- Any frequently used bench apparatus should be kept well away from any edges and secured whenever possible.
- Clean work areas upon completion of an experiment or at the end of each day.
- Bench tops and bench liners should be free of visible contamination.
- Reduce the risk of slips, trips, and falls by cleaning up liquid or solid spills immediately, keeping doors and drawers closed and passageways clear of obstructions.

Storage

- Sharp or pointed tools should be properly sheathed or stored.
- Clothing should be hung in proper locations and not draped over equipment or benches.
- Less commonly used equipment should be kept in storage.
- Do not store chemical containers on the floor.
- Do not store excess cardboard boxes, equipment boxes, Styrofoam, etc. under lab benches, on shelves, or above shelves/cabinets throughout the lab. This can be a safety as well as a fire hazard.

Call for Proposals

By Ann Emrick



The BNL Safety Solutions (S2) and Pollution Prevention (P2) programs seek employee suggestions for safety and health (S2) and environmental (P2) improvement projects. For FY10, project proposals are due by January 30, 2010. Each program distributes funds totaling \$20,000. Projects of any size, from a few dollars up to the full total funding, will be accepted for evaluation. As many projects as funding allows will be supported. Similar There is a project submission form and a Council to review the proposals and select the projects to be funded.

S2 potential projects could range from purchasing safer scientific equipment (e.g interlocked), protective safety equipment; providing training on unique hazards; replacement of hazardous equipment; ergonomic improvements to labs, offices, and shops; and many other ideas that workers provide for their particular operations.

P2 projects could range from purchasing environmentally friendly scientific equipment (e.g generates less waste than a previous model) to solar lighting.

All BNL employees, users, and researchers are encouraged to submit an idea at:

- S2 Program Web site: http://www.bnl.gov/esh/shsd/OHSAS/S2_homepage.asp
- P2 Program Web site: http://www.bnl.gov/ewms/pollutionpreve/P2_ROI.asp

Please contact Bob Colichio or Ann Emrick for additional information or for help in putting together your proposal.

Winter Car Safety

By Denise Monteleone

When winter storms strike, avoid driving unless necessary

- If you must travel, make sure your car is stocked with survival gear like blankets, a shovel, flashlight and extra batteries, extra warm clothing, set of tire chains, battery booster cables, quick energy foods and brightly-colored cloth to use as a distress flag.
- Keep your gas tank full to prevent gasoline freeze-up.
- If you have a cell phone or two-way radio available for your use, keep the battery charged and keep it with you whenever traveling.
- If you should become stranded, you will be able to call for help, advising rescuers of your location.
- Make sure someone knows your travel plans.

Winterize Your Vehicle

Preparing your vehicle for the winter season now will help ensure your vehicle is in good working order when you need it most.

1) Have a mechanic check the following items on your vehicle:

- Battery
- Wipers and windshield washer fluid
- Antifreeze
- Ignition system
- Thermostat
- Lights
- Exhaust system
- Flashing hazard lights
- Heater
- Brakes
- Defroster
- Oil level

2) Install good winter tires. Make sure the tires have adequate tread. All-weather radials are usually adequate for most winter conditions. You may also want to carry a set of tire chains in your vehicle for heavy snow conditions.

3) Keep a windshield scraper and small broom for ice and snow removal and maintain at least a half tank of gas throughout the winter season.

4) Finally, plan long trips carefully. Listen to the local media report or call law enforcement agencies for the latest road conditions.

Drive Safely



The leading cause of death and injuries during winter storms is transportation accidents.

- Before getting behind the wheel this winter season, every driver could learn a lesson from our school bus drivers. It is elementary, but we have to keep our vehicles clear of ice and snow. Good vision is a key to good driving.
- Plan your stops and keep more distance between cars. Be extra alert. Remember, snowdrifts can hide smaller children. Moreover, always match your speed to the road and weather conditions.

Trapped in a Car

What would you do if a blizzard trapped you on the road?

Here are some tips to follow:

- Stay in your car and wait for help to find you.
- Run your engine for short periods of time to stay warm. Keep your down-wind window open and make sure your exhaust pipe is clear of snow.
- Turn on the dome light at night when you are running the engine to signal rescuers.
- Hang a brightly colored piece of cloth or piece of clothing from your car.
- Exercise from time to time by vigorously moving arms, legs, fingers and toes to keep blood circulating and to keep warm.

Windows Key Shortcuts

By Denise Monteleone

These first thirteen (13) shortcuts utilize the Windows Key which is located at the lower left hand corner and, the lower right hand corner of your keyboard between the Ctrl and Alt keys. If it is not there, then you do not have a Windows keyboard.



= Windows Key

Windows Key	Displays the Start Menu.
Windows Key + D	Minimizes all windows and shows the Desktop.
Windows Key + D	Opens all windows and takes you right back to where you were.
Windows Key + E	Opens a new Explorer Window. Probably one of the hottest Windows keyboard shortcuts.
Windows Key + F	Displays the Find all files dialog box.
Windows Key + L	Lock your Windows XP computer.
Windows Key + M	Minimizes all open windows.
Windows Key + Shift + M	Restores all previously open windows to how they were before you Minimized them.
Windows Key + R	Displays the Run command.
Windows Key + F1	Displays the Windows Help menu.
Windows Key + Pause/Break	Displays the Systems Properties dialog box.
Windows Key + Tab	Cycle through the buttons on the Task Bar.
Windows Key + U	Displays the Utility Manager with accessibility options; Magnifier, Narrator and On-Screen Keyboard.
Alt + Tab	Toggle (switch) between open windows.