

EENS ESH Newsletter

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Lessons Learned and Experimental Safety Review

Three recent events, at other institutions, emphasize the importance of work planning and the Experimental Safety Review process.

In the first case, a scientist was deflating a bag filled with carbon monoxide failing to ensure that it was vented into an exhaust hood. Within a few minutes the scientist described to his/her supervisor symptoms consistent with carbon monoxide exposure. The supervisor immediately called 911 and the Fire Department responded. At the hospital, the scientist's blood concentration of carboxyhemoglobin was 11 percent (normal carboxyhemoglobin levels are less than 5%). Luckily, the scientist had no after effects from the CO exposure.

In a separate event, on March 3, 2008, a smoke alarm activated in a laboratory and personnel were evacuated. The reason for the alarm was discovered to be a fine white haze and powder in a laboratory. The origin of the haze and powder were associated with a release of arsenic from ampoules in a high temperature furnace. No personnel were present in the room when the incident occurred. The ampoules failed due to the unusual properties of arsenic; it sublimates at 613 degrees C at low pressures. The sublimation of the arsenic when heated were not anticipated in the design of the experiment.

The third event was a fume hood fire that occurred when a chemist prepared munitions with red

phosphorous powder. A flash fire resulted when a clogged funnel containing the powder was tapped. The experimental review failed to identify the flammability of red phosphorous and several other compounds.

Overall, the findings from the investigations and formal causal analysis pointed to several weaknesses in training and the review of these experiments.

Bottom line, all experimental work was suspended until each project was reviewed.

ALL WORK IS PLANNED

If you would like more information on these Lessons Learned please contact Linda Bowerman at x4265 or 5567.

Smoke venting from building during the fume hood fire.



Aftermath of fume hood flash fire.



EMS-OHSAS 2008 Audit Results:

We did great! Thanks to all who participated. Our machine shop got high marks and the auditor was impressed with the implementation of ESH commitments in the 7 projects he reviewed in EENS.

Disposing of Glassware: Empty Chemical Containers, Lab Glassware, Uncontaminated Broken Glass.

The following steps must be taken prior to disposing of Chemical Containers into the dedicated glass bags. The container must be “empty” (*as much of the material is removed as possible via typical means (e.g. dumping, pouring, draining)*). Remove or obliterate all chemical labeling and ensure the container is free of any residue. Flasks, beakers and other types of glassware must be rinsed clean prior to placing in dedicated glass bag. Broken lab glassware, unable to be rinsed of hazardous contaminants, must be disposed of as hazardous waste. Thermometers must be disposed of according to hazardous components (i.e., mercury thermometer - hazardous waste). Syringes/Plungers must be disposed of in sharps containers. Glass Food/Beverage Containers: Unbroken glass containers used for food (i.e., beverage bottles) must be disposed of in yellow recycling containers. For further guidance go to: <http://www.bnl.gov/ewms/pollutionpreve/WasteStream/>

Contributed by Joy Adams



Reminder: Check and Update your Emergency Contact Information

Use PeopleSoft Self Service to either provide or update Emergency Contact Information.

Summertime Energy Efficiency



Changing your A/C's filter is an easy-breezy way to increase its efficiency, and cut down on indoor air pollution and anxiety over upcoming energy bills. Indoor air pollution levels can be 2-5 times higher than outdoor levels; changing or cleaning your filter helps keep air cleaner and you can save up to 1%-2% each month on your electric bill. You'll get more relief on hot days by changing or cleaning your filter since that'll lead to optimal A/C performance. **MERV 8 Filters** are replacement filters that fit just about any A/C, and are made from *recycled materials* (prices vary depending on size).

Contributed by Pat Carr

Annual JTA Review: It is time to check and/or update your training requirements.

When you receive your training profile (Job Training Assessment), please check, sign and return to your Departmental Administration.

Sun Protection



Summer time and the living is easy—but don't forget to protect yourself from the sun. Cancers caused by UV exposure may be prevented by avoiding exposure to sunlight or other UV sources. In addition to applying sunscreen, try UV protective clothing. For a variety of ideas, a good web site to investigate is: <http://www.coolibar.com/>