University Receives “No-Violation” Report During EPA Chemical Waste Management Compliance Inspection

By Steve Gauger

The Environmental Protection Agency (EPA) visited Purdue University this past August 10, 1999, to conduct their annual surprise chemical waste management compliance inspection. This year’s one-day inspection focused on assessing waste management activities in several areas across campus which included REM’s Laboratory Materials Storage Building (LMSB), chemistry research laboratories at Wetherill and Brown, and the Facilities Services Paint Shop. At the end of the inspection, EPA inspectors found no violations or waste management concerns at any of the locations they visited. Overall, the inspectors were pleased with the generators’ efforts and responsible waste management activities they observed at each waste generation site.

The REM Department would like to congratulate all campus personnel involved with making this inspection a success. More importantly, we want to thank you for your continued efforts and commitment towards maintaining compliance with the University’s chemical waste management regulations. Congratulations and keep up the great work!

Planning To Move Your Laboratory Equipment?

By Rachael DeRudder

REM schedules the annual certification and maintenance of the 175 biological safety cabinets (BSCs) and 150 laminar flow clean benches (LFCBs) in the laboratories on Purdue’s Calumet and West Lafayette campuses. These units are certified by NSF-accredited professionals employed by off-campus vendors.

To request service or report a problem, call Rachael DeRudder at 49-47968. Before making the call, have the following information ready:

- Name and phone number of a contact person for the unit
- Nature of the problem that resulted in the service call

If you will be moving your BSC or LFCB in the future, please notify REM at 49-47968. All bio-safety cabinets must be decontaminated before moving and re-certified before startup in the new location. Also, REM tracks the location of these units in order to have accurate information for the NSF-accredited professionals that we hire to do the annual certifications.

Another consideration when moving these units is the coordination of the move with the certification schedule.

When a unit has been moved, before it can be used in its new location, it must be certified that it is operating properly (per NSF standards). If the move is anticipated to be around the time of the annual certification, it might be possible to move forward or postpone the certification to coincide with the post-relocation certification, which translates into cost savings for Purdue. Once a unit has been moved and certified, it SHOULD remain in that EXACT location, otherwise if the unit is moved even two feet, it should be certified again. Further questions about BSCs and LFCBs should be directed to REM by calling 49-47968.
HazCom at Purdue

By Lila Albin and Stephanie Rainey

Right-to-Know. DTI. Hazard Communication. MSDS. What does it all mean? Who needs to care about what it all means? Maybe YOU do!

The Hazard Communication Standard is an OSHA regulation (29 CFR 1910.1200 for those of you who love numbers) that is meant “…to ensure that the hazards of all chemicals produced or imported are evaluated, and that information concerning their hazards is transmitted to employers and employees. This transmittal of information is to be accomplished by means of comprehensive hazard communication hazard programs, which are to include container labeling and other forms of warning, material safety data sheets and employee training.”

For Purdue’s purposes, the standard covers workers in non-laboratory settings who are potentially at risk for exposure to hazardous and/or toxic chemicals. This includes, but is not limited to, housing and food service workers in the residence halls, Building Services, and Facilities Services groups.

Now, for the terminology. Right-to-Know and Hazard Communication essentially mean the same thing and are frequently used interchangeably. Both phrases refer to the standard and the Purdue program which was put in place to help ensure that the University stays in compliance with the standard. A “DTI” is the designated trained individual who is responsible for maintaining the chemical inventory, keeping a complete file of material safety data sheets (MSDS), and facilitating employee training for their individual work area.

If you feel your work area should be participating in Purdue’s Hazard Communication Program and want to know how to get involved, contact either Stephanie Rainey at 49-43152 or email slrainey@purdue.edu or Lila Albin at 49-40204 or email tcaalbin@purdue.edu to get all the information you need.

Fumehoods:
Please Read The Labels

By Rachael DeRudder

All users of laboratory chemical fume hoods should be aware of some old, new, and updated informative labels that REM places on fume hoods. A new label can be seen on the red oil-filled manometers that are on many of the hoods in campus laboratories. It is a 1” x 2 ¼” white label. This label tells users the date and the inches of gauge oil in the manometer on the date the hood’s face velocity was read. If this measurement changes ± .05 inches the user should report this change to REM. Manometers are visual continuous monitoring devices that confirm adequate hood performance; thus, users should look at the recorded reading and compare it to the current oil level on a regular schedule.

An updated label that REM placed on fume hoods this year as the hoods were surveyed is a 5 ½” x 4 ¼” yellow label titled “Lab Hood Operating Procedures.” This label replaces a previous version of these instructions. Hood users should read this label from time to time. Also on this label is a REM phone number to which questions and comments about fume hoods can be directed.

Finally, an old label that has been used for several years is the yellow “Working Height…” label. Users should always be mindful of the information that REM records on this label. It tells the user where to position the sash to achieve the face velocity recorded on the label. This label also tells the user the type(s) of use for which the hood may be used: Storage Only; General Chemistry; Radioisotopes; Carcinogen or Toxic Chemical Work. If the hood being used is marked “Storage Only” and the user needs to use the hood for other storage purposes, REM should be contacted at 49-47968.
Hydrogen Fluoride Shelf Life Issue

By Product Stewardship Technical Information Center

We would like to inform you of a potential storage hazard which others in our industry have experienced, and which we are communicating to you to help ensure your continued safe use of the products you buy from Air Products and Chemicals.

There is a potential over-pressure hazard with the long-term storage of carbon steel cylinders containing Anhydrous Hydrogen Fluoride (AHF). The AHF in the cylinder reacts very slowly with the iron in the steel to form iron fluoride and hydrogen. The hydrogen collects in the vapor space and builds pressure.

An HF lecture bottle (DOT 3E) that had been in storage for as long as 14 years was found to be at an estimated pressure of 2400 psig. While venting the contents of this cylinder to a scrubber, the vented gas was analyzed and found to be primarily hydrogen. The expected pressure based upon the AHF’s vapor pressure should have been between 5 – 15 psig.

There have been a few reported cases worldwide of AHF cylinders failing after approximately 15-25 years of storage due to over-pressurization from hydrogen buildup.

If your facility has carbon steel cylinders containing AHF, you should not store these cylinders for extended periods of time. As with any handling of HF, proper safety procedures should always be used and first aid supplies should be available in the event of personnel exposure.

You should also consider any potential impact on your operation of using the gas from any AHF cylinder that has been stored for extended periods of time since it may now contain hydrogen as well as the AHF. This communication is consistent with the goals of Responsible Care and reinforces Air Products’ leadership in communicating product stewardship and safety issues to our customers. We encourage you to communicate this information to any others in your location who may have access to the AHF cylinders you purchased.

If you have any questions, please contact the Product Stewardship Technical Information Center at 1-800-752-1597 or by web at: http://www.airproducts.com/productstewardship/product-safety.

ISP Pilot Groups Begin Indemnification Process

By Carol Shelby

Our University departments at Purdue are attempting to become the first to be indemnified against regulatory fines. The four departments are Chemistry, Chemical Engineering, Food Science, and PUSH.

The indemnification process begins with self-audits by each respective department safety committee followed by a thorough audit by a team of REM staff. If the department passes all of the criteria necessary to ensure regulatory compliance, the department will be indemnified and will not be responsible for fines levied against it by regulatory agencies. The fine will instead be paid for from central funding. Since EPA, NRC and OSHA fines routinely run in the tens of thousands of dollars, indemnification could prevent a budget crisis for the noncompliant department as well as providing a safer and healthier environment for employees.

Contact Carol Shelby at cshelby@purdue.edu or 49-47504 for more information about how your department can become indemnified.

Purdue’s Respiratory Protection Program

By Fran Memmer

Purdue University’s Respiratory Protection Program is administered through Radiological and Environmental Management, in accordance with OSHA regulations.

Currently there are 242 employees participating in the program. Annually, each is provided a physical to determine his or her physical fitness to wear a respirator. A fit-test follows to determine which respirator best suits the needs for that individual and fits the wearer’s face. The employee is trained in the use, maintenance, storage, and limitations of the respirator.

There are a wide variety of choices ranging from the filtering face-piece for medical personnel to full face air-supplied, such as a firefighter wears. Many factors are considered in determining which respirator is appropriate for various procedures in the laboratories and Physical Facilities shops.

If you are currently doing a task that might require respiratory protection, you can contact Steve Jurss at 49-49227 or Fran Memmer at 49-40110.
Indoor Environmental Quality and IAQ Ghostbusters

By Lila Albin

If the air smells and you can’t identify it, who you gonna call? If the space makes you sleepy, who you gonna call? The Ghostbusters.

Actually, you need to start by contacting REM staff to conduct an indoor air quality or indoor environmental quality (IAQ/IEQ) evaluation of the area based on the specific problems experienced by the occupants. After the IAQ evaluation of the occupied space is completed, REM generates a request to Zone Maintenance for the air handler to be evaluated, cleaned, disinfected, etc. If after this work is conducted and follow-up IAQ evaluation does not show improvement in the measurements or more extensive work is needed, then the request is sent to the IAQ Ghostbusters for a full evaluation of the air handling equipment including system balancing.

A request may also be submitted, by REM, to Building Services “Dust Busters” - a special cleaning crew to schedule time to come in and disinfect all hard horizontal and vertical surfaces in the space. This can be a labor-intensive effort for all parties involved. The space occupants are required to remove all personal and departmental items off these surfaces for the Dust Busters to adequately reach the solid surfaces without damage to the items. When it is more convenient for the space occupants, the Dust Busters will leave a spray bottle of the disinfectant solution to use.

IAQ covers a broad range of health symptoms experienced by the occupants. The most common symptoms include headache, sleepiness, fatigue, dizziness, eye, nose, and throat irritation, shortness of breath, and sinus congestion. Sometimes these symptoms are not work related – they are a result of exposures outside the workplace. The Federal government currently does not regulate IAQ. REM has established guidelines which we use in our evaluation of complaints and we have a thorough system to evaluate problems and execute corrective measures.

If you have questions concerning indoor air quality contact Lila Albin at 49-40204, lcalbin@purdue.edu or contact Stephanie Rainey at 49-43152, slrainey@purdue.edu.

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Tingle and Tell Electrical Safety Tips

By Don Campbell

I f you receive an electrical shock in your workplace, even a tingle you can barely feel, do...

- Tell your supervisor.
- Tag the item out of service.
- Arrange for the equipment’s repair or replacement.

A tingle is a wakeup call. A tingle indicates electricity has been diverted from its safe path to you. This is not a good situation.

Prevention is good...

- Buy quality equipment.
- Inspect equipment on a scheduled basis.
- Keep records.
- Look for broken components including damaged power cords.
- Be vigilant especially where power cords enter the equipment.
- Examine power receptacles for damage.
- Have dropped or otherwise damaged equipment checked out.
- Follow equipment manufacturer’s recommendations for safe use.

Ask for help if you need information.

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Surf REM’s Website

By Don Campbell

Looking for Purdue Safety Information? Visit REM’s website www.purdue.edu/REM and click on the ten gateways into the site.

REM NEWS
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