

Hazardous Material Receiving & Shipping

You may have heard about the mandatory training requirements for shippers and receivers of hazardous materials. On February 18, Risk Management & Safety sent a letter describing this requirement. Essentially, any person who is involved in receiving or shipping hazardous materials (HazMat) must be trained commensurate with their involvement. People who must be trained include:

Hazardous Materials Transportation Coordinators (shippers & receivers of hazardous packages) designated by AU departments and divisions

Loading Dock / Receiving area personnel

Employees who sign for, open and/or unpack packages of hazardous materials (e.g., administrative assistants, researchers, faculty, etc., essentially anyone who touches a HazMat package).

Employees who prepare hazardous materials and associated shipping papers for transport.

RMS has developed training to assist AU Departments in meeting this regulatory requirement. Personnel who only receive hazardous materials are required to complete the web-based module available on the AU Blackboard Learning System. To access the course, follow these steps:

1. Go to Blackboard homepage <https://blackboard.auburn.edu>
2. Select the "open Blackboard at Auburn University" link
3. Click on the Course List
4. Select the Risk Management division
5. Select the Risk Management group
6. Select the Uncategorized category
7. Select the "Hazardous Materials Safety at Auburn University" courses by clicking on the green arrow next to the title
8. Select the "shipping Hazardous Materials Safely" course by clicking on the small man icon on the right, under Actions
9. Register for the course using your Banner ID and Password
10. Once registered, log into the Blackboard System to access your course

Personnel who prepare hazardous materials for shipment are required to complete a more in-depth training program. If you are not a certified shipper and need to ship hazardous materials please contact the following RMS program representatives for assistance.

Chemical and Biological materials: RMS Hazardous Materials Management program at 844-4805

Radioactive materials: RMS Radiation Safety program at 844-4870.

Auburn University
Department of Risk Management and Safety
316 Leach Science Center
(334) 844-4870
<http://www.auburn.edu/rms/>



Auburn University

RISK MANAGEMENT AND SAFETY

Laboratory Safety Newsletter – April 2008

This has been a pretty quiet semester. The High Risk Chemical Inventory requirement was promulgated in November, 2007 and we sent in five reports for Auburn. Although there have been some personnel changes, the basic program elements of Laboratory Safety have remained relatively unchanged. We hope the information in this newsletter will improve your lab's safety awareness.

Chemical Inventory Reporting

The newspaper headline read, "The blaze left three firemen dead." The common thread of this and similar incidents involve emergency personnel responding to a fire at a hardware store, autobody shop, sporting goods shop, etc., where flammable or explosive materials such as propane, paint thinner, or gun powder are stored or used. When the fire reaches these chemicals, explosions or poisonous fumes can be produced.

Most codes require businesses to obtain permits to store flammables, but these are pretty generic. Consider the fire in a large refrigerated warehouse. The blaze quickly turned into a 5-alarm fire that darkened the sky and took hours to bring under control. The reason, over 1,000,000 pounds of butter, made this essentially an oil fire.

I attended an emergency response training where a fire captain related that his primary goal was to insure all of his firemen returned home, uninjured. To achieve this goal, firemen receive a lot of training. Not just how to handle the equipment, but special circumstances such as how to enter / exit burning structures, vehicle fires, hazard material response, etc. To protect themselves, firemen are trained to err on the side of caution when dealing with hazardous materials. This can be particularly true when they are dealing with a laboratory setting where the types and quantities of hazardous materials may be unknown or so varied that responders are unable to assess the actual hazard.

When I was in Madison, we got a call from a lab claiming, "There's a fire under my fume hood." We told him to call 9-1-1, not Safety. We then walked over to the Zoology building and arrived about the same time as the fire department. The fire lieutenant and his crew were dressed in turn-out gear and were wearing Scott air packs with the mask around their neck. We walked up to the third floor, we could smell smoke. We got to the landing and were looking through the window in the stairway door. Some lab people exited their lab and were walking to the door. When they tried to open the door, the fireman wouldn't let them, presumably to prevent oxygen from getting to the fire. In our ignorance, we thought he was over reacting. But, we "knew" there wasn't any big hazard, the fireman did not know.

To help emergency responders, as well as State and local officials plan and prepare for emergencies involving hazardous materials, the US Environmental Protection Agency (EPA) enacted the Emergency Planning and Community Right-to-Know Act (EPCRA). In addition to EPCRA, a number of other regulations require entities to report information on the hazardous materials they

store and use. Recently, the Department of Homeland Security enacted legislation to aid in securing hazardous chemicals from potential terrorists.

Many of you recently completed an on-line inventory to satisfy reporting requirements from both Homeland Security and EPCRA. The inventory Collection system was developed in conjunction with the Chemical Reporting Focus Group which is composed of representatives from departments which maintain the largest chemical inventories. The next step will be to develop a system to facilitate periodic updating of the campus inventory as required by regulation.

We would like to thank the members of the Chemical Reporting Focus Group and the entire campus community for all of their efforts in completing the inventory. This was a monumental project with a very short timeline and it couldn't have been accomplished without the support and cooperation of the campus community.

Lasers

Some research labs work with lasers that could produce injuries. These types of lasers are easily identified because they have a label affixed to them that uses the word "Danger." Lasers which are less hazardous are labeled with the word "Caution."

The AU Laser Safety Program is part of the Radiation Safety Program. Dangerous lasers (class III B and greater) need to be registered. The area where the laser will be used must be inspected by the Laser Safety Officer, Mr. Michael Anderson (x 4-6233), to insure that there are no reflective surfaces, that protective eyewear is available and that any interlocks needed are in place and functioning.

The Radiation Safety web site, <http://www.auburn.edu/rms/radiological.html> contains both the Laser Safety Manual and the Application for Use of Laser. Applications are reviewed by the AU Laser Safety Officer and the Radiation Safety Committee.

Eye exams for laser operators: The previous requirement was that all laser workers have a baseline (i.e., pre-employment) eye exam and an exam whenever a worker believes they were exposed. At our recent Radiation Safety Committee meeting, the Committee determined that not all laser workers would require the exam, perhaps only 25% - 50% of the workers, depending upon how they work with the laser, would require the exam. Final determination will be made by the Laser Safety Officer.

Currently Mr. Anderson is building the inventory of lasers on campus and identifying persons who will need eye exams. He is working with Medical Arts Eye Clinic in Auburn to set up a protocol for conducting these exams. If you have lasers with a "Danger" label, please send him an eMail (andermr@auburn.edu) including the make/model of the laser; the frequency and output power; the location; and a phone number / eMail address for the point of contact.

Lab Hoods, Eye Washes, Safety Showers

Most labs on campus that use hazardous chemicals have access to these safety devices. These devices are inspected periodically by Risk Management & Safety (RMS) or by a contractor (i.e., biosafety cabinets). Let's review some considerations relating to these safety devices.

Eye Wash stations are normally required in any lab with hazardous material. It is desirable that the eye wash be hardwired to the building plumbing, squeeze bottles are NOT acceptable. The eye wash should be capable of providing a soft stream or spray of aerated water for at least 15 minutes. Do not

block access. Remember, the person who needs this device may not be able to see well, so they should have unobstructed access. RMS personnel test these devices on a regular basis (e.g., semiannually or annually) to ensure it continues to function properly. However, the lab manager should routinely (weekly or monthly) check the device for proper functioning.

Safety showers or deluge showers are similar in use to eye washes. While many labs have eye wash stations in the room, some safety shower may be in the hallway. Again, these are used for immediate first aid treatment of chemical splashes and for extinguishing clothing fires. Lab workers should know where the safety shower is located and how to use it. As with eye washes, access to safety showers should be kept clear. Testing of safety showers is performed by RMS personnel on the same frequency as eye wash stations. **DO NOT ATTEMPT TO TEST THESE DEVICES ON YOUR OWN. IT COULD RESULT IN WATER DAMAGE TO THE BUILDING OR EQUIPMENT!**

There are basically two kinds of hoods found in labs: the chemical fume hood and the biological safety cabinet (BSC). Personnel from RMS check these hoods annually and verify functionality by measuring the air flow or face velocity through the sash opening. The standard for AU fume hoods is that they must provide a face velocity of 100 feet per minute (fpm) of air across their face. Hoods which pull between 80 and 100 fpm are sub optimum, but for many chemicals, this is adequate. Hoods which pull less than 80 fpm are considered unsafe and should be taken out of service and repaired. When using the fume hood, remember to keep the sash lowered to the 100 fpm arrow (usually pasted on the side of the sash frame). If you can work comfortably with the sash lower, then lower it more. The glass in the sash is designed to reduce the effects of an explosion. To insure good air flow, keep material and equipment at least 6 inches from the sash opening and do not store chemicals or equipment in the hood, such practices will cause the flow to be affected.

A BSC may appear to be similar to a chemical fume hood, but it is designed to filter the air and remove airborne microbes. These units are not intended for containment of chemical fumes. Many BSCs are not exhausted and recirculate the air into the lab. Cabinets which are not exhausted should never be used for work with hazardous chemical agents. A contractor certifies each BSC at least annually.

The purpose of the BSC is to protect both the worker and the work from biological contamination. To ensure biocontainment when working in a BSC it is critical that operators understand and follow proper work practices. For guidance on BSC work practices please review the training presentation available on our website at <<http://www.auburn.edu/rms/nuaire/nuarcbsc.pdf>> or contact the RMS Lab Safety Program at 4-4870.

Radioisotope Users

Here are three reminders for persons working with or ordering radioactive material:

1. When you order, instruct the vendor to send the material to 316 Leach Science, for the attention line use your professor's name; we need the name of the faculty member approved to work with radioactive material for our inventory system.
2. Inventory requests are sent to you at the end of every month, return those forms to Sevgi.
3. As long as you have material in you lab, you must submit a monthly survey to Sevgi. She sends an e-mail monthly requesting your survey and inventory results.