

## Lab Safety Audits—We're Here to Help You!

The yearly survey of laboratories on campus is once again under way. As a continuing effort to improve safety in laboratories, there are a few new safety issues our department is surveying during our annual inspections. The new issues include:

- Storage of materials within 18 inches of the ceiling needs to be eliminated in laboratories equipped with a sprinkler system. This is necessary in order to allow water to reach all areas of the lab (including walls) in case of fire.
- Storage of flammable liquids needs to be eliminated from exit-access doorways. This is necessary to minimize the potential for feeding a fire near the exit of the laboratory, thus preventing a safe path for leaving a lab during a fire.

Some of the continuing safety issues that are most predominantly seen in laboratories include:

- ♦ Eliminate the storage of flammable solvents from non-explosion safe refrigerators to eliminate the potential for solvent vapors from exploding due to an ignition source within a household-type refrigerator. This includes, for example, ethanol (flammable in aqueous concentrations down to 30%), Sigmacote and methanol. Find an explosion-safe refrigerator with available capacity for

your solvents or purchase a unit that can be utilized by several labs.

- ♦ Place all sharps in sharps containers. This includes all petri dishes and rigid plastic pipettes which can break when bent or forced into a container and become sharp, thus posing a threat for cut or puncture.
- ♦ Store acids/bases/oxidizers/solvents in separate areas. This will minimize the potential for reactions with bad outcomes if bottles break and chemical contents mix together.

Some of the safety items that are noted during these audits seem trivial to lab staff but each has some significance in preventing illness, injury or property damage in the lab. Many of the minor items are indicated as 'recommendations' on the reports sent back to labs and should be considered 'best practice' but not absolutely necessary. While it may not seem like these audits are always helpful, the primary purpose of the audit process is to minimize the potential for injury or illness for lab staff.

In the past several years, Environmental Health and Safety has relied on part-time student workers to complete most of the lab safety audits. Each student has been trained to evaluate lab issues according to a checklist of about 100 items. It is likely that they will not be familiar with all of the procedures and equipment used in your lab. Please understand that

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## Abandoned Laboratories Plague Campus Renovation Projects

By Kevin Mouser

Several older campus buildings are currently or soon will be undergoing a rebirth as major renovation work is being planned for these facilities. The Department of Environmental Health and Safety (EHS) has, over the past several months, seen a rash of problems related to laboratory space that has not been properly vacated prior to the commencement of renovation activities.

Significant inventories of hazardous materials and other hazardous and other safety considerations including sharps hazards (needles, scalpels, lancets as well as glass waste), compressed gas cylinders, radiation sources and biohazardous materials have been discovered in lab spaces that have been presented as having been properly closed-out.

Fortunately to date, observant representatives from the University Architects Office and renovation workers have discovered these oversights and referred the concerns to EHS for resolution. It remains the responsibility of the vacating department to ensure that all hazardous materials and hazardous environments are addressed prior to the area being released for renovation activities.

Two documents intended to assist in the decommissioning process are currently available from EHS by calling 274-4351 or are available on-line on the EHS homepage at [www.ehs.iupui.edu](http://www.ehs.iupui.edu).

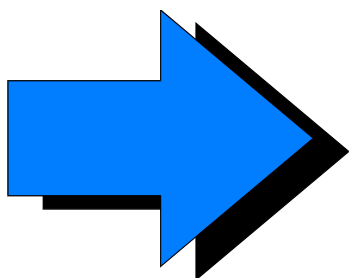
The first document is titled "*IUPUI Decommissioning Guidelines for Termination of Laboratory Use*" prepared by John Beltz. This document discusses major areas of concerns relative to vacating a lab and provides technical resources to assist in addressing environmental and safety concerns.

The second document, "*IUPUI Chemical Move Guidelines*", prepared by Kevin Mouser, provides guidance on the proper moving or disposal of hazardous materials that may have been used in the lab. The Guideline overviews the responsibilities of lab staff in preparing chemicals for disposal. The Guideline also details services provided by EHS and establishes guidelines for advanced notice for chemical moves or disposal.

Under no circumstances should such materials be left in the lab unless prior arrangements have been made with EHS.

Please take this concern to heart as you prepare to relocate your laboratory operations. The health and safety of campus personnel (including housekeeping, asbestos abatement and maintenance staff) and the staff of University contractors is dependent on the condition each vacated laboratory space is left.

Environmental Health and Safety is now making available a new training module. Biosafety training covers aspects of Biosafety not discussed in Bloodborne Pathogens training. In addition to the scheduled times listed, department presentations may be scheduled by calling the Biosafety Manager, Jim Klenner, at 274-2830



### NEW EMPLOYEE TRAINING SCHEDULE

#### Union Building Roof Lounge - 6th Floor

<b>General Safety</b> -For all new employees. 10:00- 12:00 Noon	<b>Oct. 1, 8, 15, 22, 29, 2002</b> <b>Nov. 12, 19, 2002</b> <b>Dec. 3, 10, 17, 2002</b> <b>Jan. 7, 14, 21, 28, 2003</b>
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#### Union Building (North) - Room 542

<b>Bloodborne Pathogens</b> -For all employees who may be exposed to human blood, body fluids or tissue. Session held the 2nd & 4th Monday of every month from 8:30 - 9:30 A.M.	<b>October 14 &amp; 28, 2002</b> <b>November 11 &amp; 25, 2002</b> <b>December 9 &amp; 23, 2002</b> <b>January 13 &amp; 27, 2003</b>
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<b>Biosafety Training</b> -All employees who work with biohazardous materials are encouraged to attend. Session held the 4th Monday of every month from 9:30 - 10:30 .M.	<b>November 25, 2002</b> <b>December 23, 2002</b> <b>January 27, 2003</b>
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<b>Chemical Lab Safety</b> - For all employees who work with chemicals in laboratories. Sessions held the second Monday of every month from 9:30 - 11:30 A.M.	<b>October 14, 2002</b> <b>November 11, 2002</b> <b>December 9, 2002</b> <b>January 13, 2003</b>
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## Fire Prevention Month

*By Tom Hulse*

The week of October 6-12, 2002 is Fire Prevention Week and we often refer to October as the Fire Prevention Month. This is a good opportunity to review some key fire safety tips for the laboratory. It is always a good idea to check for the location of the two nearest fire extinguishers to your work area. There will be at least one inside the lab and another within 25 feet outside in the hallway. The extinguishers will be wall mounted or in a cabinet. The cabinet will be surface mounted on the wall or it may be recessed. Make a mental note of the locations so that you can find one quickly if you need it. If you do not know how to use an extinguisher, Fire Protection Services does offer fire extinguisher training to departments. If you anticipate using a fire extinguisher in an emergency, you will need to know how to operate it.

You need to be aware of where the exits are from your lab and any other areas of the building that you use. You should make a conscious effort to look at these exits and record their locations in your memory. If a fire occurs, smoke may impair your vision and you may need to find the exit doors without a good view of them. Also, if you notice any changes to the doors, such as objects placed in front of them, etc., you should notify your supervisor or Fire Protection Services. Your life or someone else's may depend upon it. Lastly, do not conduct any laboratory operation which would prevent the occupants from getting to the exit door. If you block the exit, unless there is a second one, you will trap all who are in the lab.

If you smell or see smoke or fire, always pull a manual fire alarm which is located on the wall in every corridor. Calling 911 will get the fire department, but it will not notify the occupants of the building to evacuate. The best way to report a fire in campus is to call 274-2311 followed by 274-7911. Never take a

fire alarm for granted. Play it safe and evacuate. The law in Indiana requires you to leave the building.

Be aware of your environment. Know what is going on around you and you will have a good chance of remaining safe in your laboratory, within the campus community and at home.

## Lab Hazard Warning Signs

About 10 years ago, during new lab building construction projects, the value of identifying the type and extent of hazards present in a lab prior to entering the lab was recognized. A major program of identifying specific hazards for all labs in the Schools of Medicine and Dentistry was undertaken and flexible hazard warning signs were installed accordingly outside of all labs identified during this process.

If there are no changes in personnel or hazards, these signs would fairly reflect the hazards present in each lab. At IUPUI, there has been a significant movement of research labs as new space has been constructed or renovated. During this movement process, questions have been raised concerning the information that is required and/or useful to post outside of the lab entry.

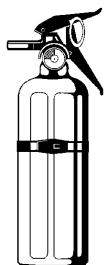
Information appropriate for lab signage is as follows:

### Required for all Labs

- \* Eye/face protection requirements (by University policy)
- \* "In case of emergency, contact..."

### Required for Labs with Hazard Present

- Radioactive Materials (for labs approved for radioisotope use)
- Biohazard (for labs with biological agents at Biosafety Level 2 or higher)



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## Lab Hazard Warning Signs

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- Laser Area (for labs with lasers at the Class 3 level or higher )

Note that the original sign package consisted of a plexiglass sign board with replaceable panels. If this sign package is not a part of the renovation for your lab space, it may be ordered through the IUPUI Purchasing Department. Until the permanent signs are ordered (or if they are not ordered), computer-generated signs may be used to convey this information. Keep in mind that it is the responsibility of each department and investigator to maintain correct information posted outside of their labs. Environmental Health and Safety can help determine what is needed for your lab. For additional information, please call 274-2829.

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they are performing this task to the best of their ability at the direction of the Lab Safety Manager. If you have questions during this process, ask the person performing the audit or call the EHS office at 274-2829.

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**Be Alert for Safety - Expect the Unexpected**