

Abandoned Laboratories Plague Campus Renovation

By Kevin Mouser

Several older campus buildings are currently or soon will be undergoing a rebirth as major renovation work is being planned to upgrade 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, however, 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. 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 outlines the responsibilities of lab staff in preparing chemicals for disposal. The Guideline also details services provided by EHS and establishes procedures concerning advanced notice for moving or disposing chemicals.

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

Please take this responsibility very seriously 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.



MERCURY, THE ENVIRONMENT AND IUPUI

by Kevin Mouser

The Indiana Department of Environmental Management and the Indiana State Department of Health have initiated Indiana's Mercury Reduction Program. The program's main objective is to eliminate mercury contamination in the environment and its documented effects on the population of Indiana, especially children.

This concern for mercury is also shared by the University community and has been discussed in several past issues of *LabNotes*. Mercury is a problem because it can be toxic in small amounts. Mercury is a major concern for IUPUI due to its prevalence in laboratories, its frequency of release, the extremely high cost for disposal and its potential impact on the Indianapolis community if it is not properly managed. Therefore, the Department of Environmental Health and Safety accepted the principals of the Indiana Mercury Reduction Initiative on behalf of IUPUI and solicits the assistance of campus laboratories in fulfilling our pledge.

Laboratory staff can assist in this effort by:

- C Identifying all sources of mercury within the lab - whether elemental mercury or mercury containing compounds.
- C Objectively evaluating whether the various sources of mercury in the lab are truly essential, whether mercury substitutes are available and whether the substitutes would perform in a satisfactory manner.
Is the accuracy of

mercury thermometers critical? Will a spirit or digital thermometer provide adequate results?

- C Implementing a department-wide, mercury-free purchasing policy.
- C Removing all nonessential sources of mercury from the lab as soon as possible, but no later than January 1, 2003. This includes phasing out all mercury-filled thermometers, sphygmomanometers and esophageal dilators by January 1, 2003. In applications where mercury thermometers are essential, replacing standard units with safety-wrapped units.
- C Training all staff on proper mercury management. Ensuring all waste mercury is referred to EHS for proper disposal. Ensuring all mercury spills are reported in a timely fashion as directed in the *IUPUI Staff and Faculty Emergency Procedures Handbook*.

Any questions regarding this mercury reduction program should be directed to Kevin Mouser at 274-4351.

NEW EMPLOYEE TRAINING SCHEDULE

Union Building Hoosier Room - 2nd Floor

General Safety-For all new employees.
10:00- 12:00 Noon

April 23, 30, 2001
May 7*, 14, 21, 2001
June 4, 11, 18, 25*, 2001
July 2, 9, 16, 23*, 30,

2001

Union Building (North) - Room 542

Bloodborne Pathogens-For all employees who may be exposed to human blood, body fluids or tissue. Session held the 2nd & 4th Tuesday of every month from 8:30 - 9:30 A.M.

April 10 & 24, 2001
May 8 & 22, 2001
June 12 & 26, 2001
July 10 & 24, 2001

Chemical Lab Safety- For all employees who work with chemicals in laboratories. Sessions held the second Tuesday of every month from 9:30 - 11:30 A.M.

April 10, 2001
May 8, 2001
June 12, 2001
July 10, 2001

* Call 274-2005 for scheduling and room location of these

International Chemical Safety Cards

by Brandy Robinson

The International Program on Chemical Safety (IPCS) is currently developing International Chemical Safety Cards (ICSCs) that summarize essential health and safety information on chemicals for their use by all employees and workers at any level in an organization. The IPCS is a joint activity of three cooperating International Organizations: the United Nations Environment Program (UNEP), the International Labor Office (ILO) and the World Health Organization (WHO). The main objective of the program is to carry out and publish evaluations of hazards posed by the chemicals to human health and the environment.

The ICSCs are not legally binding documents, but contain useful information on evident hazards posed by a specific chemical, similar to that contained in Material Safety Data Sheets (MSDS). The first section of the Card contains information on types of hazard (fire, explosion) and routes of exposure (inhalation, skin, eyes, ingestion); disposal, storage, and packaging/labeling information is contained within the second section of the Card. The final section of the Card provides information on physical properties (boiling point, relative density, solubility in water, vapor pressure, explosive limits), environmental data, physical state, occupational exposure limits, effects of short-term and long-term exposure, and chemical and physical dangers.

The identification of the chemicals on the Cards is based on the UN numbers, the Chemical Abstracts Service (CAS) number and the Registry of Toxic Effects of Chemical Substances (RTECS/NIOSH) numbers. It is thought that the use of the those three systems assures the most indisputable method of identifying the chemical substances concerned, referring to numbering systems that consider transportation matters, chemistry and occupational health.

Great similarities exist between the various headings of the ICSCs and the manufacturers' Material Safety Data Sheet. However, ICSCs should not be a substitute for an MSDS or management's responsibility to communicate with workers on the

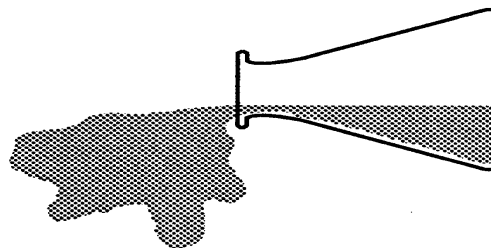
exact chemical, the nature of the chemical used, and the risk posed in any given workplace.

ICSCs can be located at www.cdc.gov/niosh/ipcs/icstart.html#usversion and can be found in the following languages: Chinese, English, Finnish, French, German, Hungarian, Japanese, Korean, Malaysian, Russian, Spanish, Swahili, and Thai.

Accidents DO Happen

In early 1999, a chemistry grad student at another university was involved in an incident involving a cryogenic liquid. She was filling a trap with liquid nitrogen from an open flask when the glass lining of the flask imploded. This caused the trap to shatter and glass shards were flying everywhere. The student ended up with cuts to her face and neck (about 17 stitches) except around her eyes, where the outline of her goggles were clearly formed by uninjured skin. The fact that she considered it necessary to wear any eye protection while performing "routine, nonchemical" lab work (as she stated) was surprising.

While working with cryogenic fluids, it is very important to protect exposed skin. Thermal gloves, goggles and a face shield are necessary components for protection while handling and delivering cryogenic fluids. Skin and eye damage can happen rapidly at these low temperatures. Rapid contraction of materials at these temperatures can also cause incidents such as the one reported here.



Glass Waste Box Overfilled?

Lab staff at IUPUI are doing a good job of keeping most glass and plastic pipets out of regular trash. This initiative was started many years ago to protect Building Services staff and anyone else who handles lab refuse to prevent cuts and punctures from these items during disposal. Heavy-duty corrugated cardboard, either recycled acid /solvent boxes or purchased >glass waste= boxes, have been appropriately used on campus for some time now.

The success of this program has created a different risk for staff who dispose of the glass waste. When these waste boxes are not appropriately replaced, they sometimes get overfilled and difficult for one person to safely lift and transport to the dumpster. In other cases, the bottom of the cardboard boxes can get wetted when rinsed glassware drips water to the bottom of the box or when the floor is mopped. This causes the bottom of the box to deteriorate and then create the problem of the bottom falling out of the box when it is lifted.

Ways in which to minimize these problems are as follows:

- , When using the tall commercial >glass waste= boxes (or any other >large box=), make sure that the box is prepared for disposal before it is completely full and too heavy to lift;
- , When using recycled acid/solvent boxes, put a plastic liner in the box if wet glassware is disposed in the box;
- , If there is a problem of boxes getting wet on the bottom and deteriorating from water on the floor, consider an elevated location to prevent this from happening; and
- , Replace glass waste boxes routinely (for example annually) if not routinely used to help insure the integrity of the box when moved for disposal.

Glass waste boxes are prepared by lab personnel for final disposal by taping over the top of the box and placing with other ordinary trash containers. Remember, glass waste boxes are appropriate for glass and plastic waste; metal sharp items such as needles syringes and scalpels must be disposed in non-puncturable containers made of metal, heavy-duty plastic or glass.

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**PLEASE POST OR
CIRCULATE**



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