



LAB NEWS

THE UNIVERSITY OF IOWA - HEALTH PROTECTION OFFICE - 100 HPO

PHONE: 319-335-8501 - FAX: 319-335-7564

<http://www.uiowa.edu/~hpo>

January 2002

Prevention of Unknowns

The Health Protection Office (HPO) works to develop a culture of responsible chemical management throughout the University. In pursuing our goal of excellence, one area HPO has identified as needing improvement is the reduction or elimination of unknown chemicals/substances.

Each year, HPO receives a significant number of requests to dispose of unidentified waste from various lab and maintenance personnel. In order to comply with transportation and disposal regulations for hazardous materials, we are required to first test these unknown chemicals to identify their composition. The cost of identification and disposal of unknowns may be many times the cost of disposal for items that are known.

HPO's objective in regard to managing chemical unknowns is more than just cost control. Our ultimate goal is the responsible management of chemicals and the subsequent prevention of unknowns. Clearly labeling containers is a critical first step in preventing the generation of unknown chemicals. Additionally, care must be exercised to ensure labels remain legible and attached to the container. Every container (including working solutions) must have a label clearly identifying the contents.

The University's **Policy on Maintenance of Chemical Identity** can be found in Appendix XII of HPO's Waste Management Guidelines and Procedures manual. It is also available on HPO's web site at www.uiowa.edu/~hpo.

If you have unknowns, please follow the procedure outlined elsewhere in this issue of LabNews.

Importance of MSDSs

Are you planning to begin working with an unfamiliar chemical? A variety of resources are available to help identify and evaluate chemical hazards. One of the most important resources is a Material Safety Data Sheet (MSDS). The MSDS contains information on chemical identification, composition, and physical properties along with health, physical, and environmental hazards. Procedures for emergency, first aid, handling and storage may also be included. It is very important to review the MSDS **before** working with an unfamiliar chemical.

Manufacturers provide an MSDS for each hazardous chemical; they can be requested before the actual purchase of a chemical. If you are in possession of a chemical without an MSDS, most manufacturers will FAX a relevant MSDS on request. Alternatively, HPO's web site contains links to five other web sites that provide MSDSs at no cost. Go to: www.uiowa.edu/~hpo, and click on MSDS.

After reading the MSDS, it should be filed in a safe place for future reference. A laboratory library of MSDSs for your chemical inventory is a valuable safety resource, as well as a legal requirement.

Disposal of Unknown Chemicals

The management of unknown chemicals is a problem for generator and disposer. First, unknowns are unusable and take up precious space. Second, their presence creates a risk due to the potential that incompatible chemicals may be stored together. Third, unknown chemicals cannot be disposed of since regulations prohibit their collection and transportation.

Recognizing the dilemma, a number of years ago HPO embarked on a mission to rid the campus of unknowns and facilitate their collection and disposal. To prevent their generation, HPO implemented a policy entitled "Policy on Maintenance of Chemical Identity." In addition, significant effort was expended in developing the analytical capability to perform field analysis on unknown liquid and solid chemicals. Unfortunately, despite this effort, unknowns continue to be created on a recurring basis due to the mismanagement of chemicals.

June 30, 2002 will mark the end of the "grace period" under which HPO will analyze unknown chemicals at no cost to the investigator or department. Effective July 1, 2002, investigators and/or departments will be charged the cost of analysis. This generally ranges from \$7 for a single, unknown chemical liquid or solid, to approximately \$850 for the analysis of an unknown gas cylinder. The rate will be based on HPO direct costs for analysis of the unknown, or the direct charge of an outside vendor. These charges cover the analysis so the waste can be disposed of in accordance with the law. There will continue to be **NO CHARGE** for the pickup and disposal of properly identified chemical wastes.

Beginning in January 2002, HPO will require the completion of a "**Request to Test Unknown**" form for each container of unknown substance. The form, which must be submitted to HPO prior to analysis, requests information describing the location of the item and a contact person, as well as other information that will aid HPO in the identification process. No fee will be charged for unknown chemical analysis if HPO has been notified prior to July 1, 2002.

If you have an unknown substance, call Thom Powley at 5-4081 to obtain a "Request to Test Unknown" form. You may also download the form from HPO's web site at:

www.uiowa.edu/~hpo. Completed forms should be sent to Thom Powley via campus mail, 100 HPO, or FAX 5-4919.

If you have previously arranged for unknown analysis and have not been contacted by January 1, 2002, please contact Thom Powley at 335-4081 or e-mail thomas-powley@uiowa.edu.

HAPPY
NEW YEAR





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Shipping Infectious Substances and/or Dry Ice Requires Certification

If you are required to ship infectious substances and/or dry ice, you must receive initial training to be certified, and be retrained every two years. Until a few weeks ago, training was only available at our training facility at 126 Grand Avenue Court. The training is now available on CD, so you can take the class at a time and place convenient for you. Call HPO and request the in-house "Shipping Infectious Substances" training module on CD. To run this module, your computer must be equipped with a CD-ROM, PowerPoint, an internet connection, and a printer. IATA, DOT and Public Health regulations and resources are available in PDF format throughout the course. When you return the CD to HPO, a training certificate will be mailed to you if you receive an exam score of at least 80%. In the near future, this training course will be available on HPO's Web site. You will be notified when it becomes available on-line. If you have any questions, please contact Carol McGhan at 5-9553, or Mirabella Fernandes-Paul at 3-5679.



Changes in HPO Classroom Training Sessions

HPO has discontinued presenting monthly classroom sessions for Bloodborne Pathogens Refresher Training, Lab Chemical Safety Training, and Hazardous Waste Management for Lab or Non-Lab Personnel training. These training courses are available online at <http://www.uiowa.edu/~hpo/training/onlinetraining.htm>

Upon request and at the discretion of the instructor, HPO may provide customized classroom training, tailoring the session for your specific work area. Contact Laurie Taylor at 335-8532, or e-mail laurie-taylor@uiowa.edu if you have a group needing classroom instruction in any of the following areas:

- Bloodborne Pathogens Refresher Training for Lab Personnel
- Lab Chemical Safety
- Hazardous Waste Management for Lab or Non-Lab Personnel

What do I do if my waste is not collected?



Waste is collected from the generator **only** if it complies with HPO procedures. If waste cannot be collected from a pickup location, a note will be left with the waste explaining why it was not removed. If no note is left in the area, please contact HPO (5-8501) and ask to speak to a hazardous waste chemist for clarification.

The most common reasons waste is not picked up by HPO are:

1) container lacks sufficient head space; 2) labels are not completed properly; and, 3) labels do not reflect 100% of the contents.

To have the waste removed, correct the identified problem and call 5-8501 to reschedule your waste pickup.

Spirit Thermometers to Replace Mercury

The Health Protection Office is always looking for ways to reduce the amount of hazardous waste generated on The University of Iowa campus; spirit thermometers are an excellent way to help achieve this goal. Thermometers invariably have a way of breaking, either while in use or inadvertently rolling off a bench top. Broken mercury thermometers must be cleaned up using a mercury spill kit. After the spill is contained, the waste must be bagged, boxed, labeled, and called in to HPO for pick-up. Mercury also seems to find its way into bench top sinks and drains, leading to costly cleanups later. In addition, laboratory personnel involved in mercury spill cleanups are placed at unnecessary risk.

Spirit thermometers can simply be cleaned up and placed with sharps for disposal, thus eliminating the risk of mercury exposure. For those interested in switching to spirit thermometers, HPO will dispose of your unbroken mercury thermometers. They should be packaged as described above, bagged, boxed, and labeled. If you need further information, please contact Jim Pyrz at 5-4625.

PAPER/CARDBOARD RECYCLING GUIDELINES

Facilities Services Group's (FSG) Campus Services Shop is responsible for collecting and transporting recyclable materials generated on The University of Iowa campus. Their services and recycling policies apply to academic and general fund buildings. Materials currently being recycled include paper and cardboard. Glass, metal, and plastic are not being recycled due to the lack of an economically viable secondary market at this time. FSG collects and transports recyclable material from other university entities that generate their own funding, e.g., UIHC, Residence Services, etc.

The procedure for general fund buildings is as follows: paper to be recycled should be placed in the blue metal recycling bins located in campus buildings. **Recyclable paper products include all office paper, newspaper and magazines that are either loose-leaf or utilize staples as the method of binding.** Paper bound in book form, glued backs, held together with heavier weight metal clips or metal or plastic-ringed backbone bindings are not acceptable for recycling. In addition, file folders with metal hangers, plastic covers, transparencies and waxed paper are not to be included with recycled materials. Recycled cardboard includes corrugated cardboard and chipboard (such as cereal boxes). Cardboard should be broken down to a flat condition and stacked behind or around the blue bins (the process varies slightly at different locations depending on how much cardboard is generated, amount of space that can be devoted to recycling, frequency of custodial service, etc.).

The procedure for UIHC facilities is as follows: recycling waste generators, in partnership with Housekeeping, bring recyclable materials to a central area for handling and transportation.

For questions about recycling within general fund buildings, or to arrange for special collection, contact Jim Croy, at 5-5109. For questions about recycling with UIHC, contact Martin Shafer at 6-2277.

Radiation Dosimeters, ALARA and You

The Health Protection Office often receives calls regarding individual radiation doses as reported on the Landauer reports. Copies of the reports are sent to each principal investigator or department in which individuals with dosimeters work. The reported doses should be readily available for your review (i.e., posted in the lab area). You have probably noticed that the reports list individual results on the left side of the report, by Participant Number only. In the past, reports also included names, social security numbers, and birthdays of participants; this was changed for confidentiality purposes.

To find your radiation dose for a given exposure period, you will need to find the five-digit participant number on the back of your dosimeter. Remove the dosimeter from the holder and turn it over. The participant number is located at the end of the second line, immediately following the three-digit series code assigned to your department or investigator. Your individual participant number will remain the same for the duration of your employment within the same department at The University of Iowa.

The Health Protection Office reviews dosimetry results each month as part of the University's ALARA program. ALARA is an acronym that stands for "As Low As Reasonably Achievable" and is a fundamental principle in radiation safety. In short, ALARA means that radiation workers should take whatever practical steps possible to minimize their radiation exposure. All institutions holding radioactive materials licenses are required by regulation to have an ALARA program.

The ALARA program is based on ALARA dose limits. HPO has three levels of exposures, based on quarterly totals. When an individual's quarterly radiation dose total exceeds the operational ALARA dose limits, the individual and his or her supervisor are notified in writing. When either of the higher levels are exceeded, the HPO investigates the cause, validity, and possible means by which to reduce future exposure to the affected individuals. The following table summarizes the three ALARA levels as well as the regulatory radiation dose limits for each type of exposure:

| | Deep Dose | Shallow Dose | Lens of Eye | Extremity Dose |
|--------------------------------|--------------|---------------|---------------|----------------|
| Operational ALARA Limit | 125 mrem/qtr | 1250 mrem/qtr | 375 mrem/qtr | 1250 mrem/qtr |
| Level I ALARA Limit | 375 mrem/qtr | 3750 mrem/qtr | 1125 mrem/qtr | 3750 mrem qtr |
| Level II ALARA Limit | 625 mrem/qtr | 6250 mrem/qtr | 1875 mrem/qtr | 6250 mrem/qtr |
| Regulatory Dose Limit | 5000 mrem/yr | 50000 mrem/yr | 15000 mrem/yr | 50000 mrem/yr |

As the table illustrates, the ALARA levels are set well below the regulatory dose limits, ranging from 2.5% to 12.5% of these limits. The ALARA levels are set to provide a program to limit personnel radiation exposure to as far below regulatory limits as possible. It is important to recognize that the regulatory dose limits are established at levels thought to represent a very small risk of adverse health effects; however, it is commonly accepted that any exposure to radiation carries with it some risk, and that risk increases with the magnitude of exposure. Therein lies the reason why ALARA programs are mandatory elements of radiation safety programs – to identify a means to minimize dose, and therefore risk, wherever possible.

Finally, radiation workers often want to know what their dosimeter results mean in terms of risk adverse health effect resulting from the exposure. As stated above, an individual who receives the maximum dose limit in a year can still expect a very low risk for an adverse effect. Very few individuals at the University ever approach this level. In fact, most lab workers receive monthly radiation exposure results ranging from M (less than 1 mrem) to 10 mrem. This level of exposure is far below even the lowest ALARA limit, and five-hundred fold less than the annual radiation dose limit for radiation workers. It can therefore be deduced that nearly all occupational radiation exposures at UI are associated with a very low risk of adverse health effects. As with many potentially harmful substances, risk is decreased even further by minimizing exposure.

The staff at UI is to be commended for their commitment to maintaining radiation exposures at ALARA and their interest in safety in general.



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New Laser Safety Manual

The Health Protection Office has recently completed its "Laser Safety Manual" and will be distributing it to researchers utilizing Class 3b and 4 lasers on campus. The manual details laser safety policies and practices as required at The University of Iowa. Some important aspects of the laser safety program at UI include:

Laser Registration – All Class 3b and Class 4 lasers and laser systems must be registered with HPO. A laser registration form is included in the manual and will also be available at HPO's Web site at www.uiowa.edu/~hpo. Please note that a particular investigator can list more than one laser on this form. Registration of lasers is required for "home-made" units as well as those purchased commercially.

Laser Safety Training – Two types of laser safety training are required for all individuals using Class 3b and Class 4 lasers. HPO has developed a training module entitled "Laser Safety Training in Research." This training can be completed by going to HPO's Web site at www.uiowa.edu/~hpo, reviewing the laser safety training slides, and completing the on-line quiz. You must send your completed quiz to HPO for grading. A score of 80% is required to receive credit for the training.

In addition to HPO's training, all individuals must receive documented training for the specific laser system that they will be using. Providing this training is the responsibility of the principal investigator or his designee.

Laser Hazards – Both beam and non-beam related hazards are described in the manual, as well as in the laser safety training. In addition to the risk to the eye resulting from direct or indirect exposure to the beam, other hazards include electrical shock, chemical hazards, collateral radiation, fire, and airborne contaminants. An understanding of these hazards is essential to minimizing the risk of injury resulting from the use of lasers.

Laser Safety Practices - Laser use policies and good work practices are described in detail in the manual, including personal protective equipment, and administrative and engineering controls. This information provides the basis for establishing and maintaining a safe working environment.

The Health Protection Office encourages all laser users to refer to the laser safety manual periodically to help ensure the safe use of lasers at the University. If you have any questions regarding laser safety, please contact Gordon Axt at 335-8503.

Location of BRST Changes as of July 2002

Starting July 2, 2002, the Basic Radiation Safety Training course will be held in HPO's Conference Room at 126 Grand Avenue Court (126 GAC). The July classroom session will begin at 2:30 p.m. and end at 5:00 p.m. The schedule for other Basic Radiation Safety Training sessions is found online at <http://www.uiowa.edu/~hpo/training/trainsched.htm>. Individuals **must** register for all Basic Radiation Safety Training classroom sessions by calling Laurie Taylor, HPO's Training Coordinator, at 335-8532.

Identification and Disposal of Your Unlabeled, Unknown Chemicals

The following is a description of the process for unknown identification and disposal. Please note that this identification process is offered by HPO for the purpose of chemical disposal only.

1. Complete the "**Request to Test Unknown**" form for each item that needs testing. The form is located on HPO's Web site at: <http://www.uiowa.edu/~hpo>.
2. Send the completed form(s) to Health Protection Office, HPO-OSB, or FAX to 335-4919.
3. Upon receipt of the form(s), a control number will be assigned to each item. A representative of HPO's Waste Section will visit the area and attach a tag to each container identifying it as an unknown to be tested.
4. Unknowns will be tested on a "first come, first served" basis. You will be contacted a short time before HPO comes to perform the actual testing so arrangements for the use of fume hoods, lab space and other considerations can be made.
5. Following identification of the unknown, a pick-up request will be completed by HPO and the item will be removed on the day of regular chemical waste collections.

If you have any questions, please call Thom Powley at 335-4081.

Moving Guidance Now Available

Moving Out Of Your Laboratory Or Work Area? If you work with chemical, radiological, or biological material, there are several issues you need to consider. Moving guidance is now available on HPO's Web Site at: <http://www.uiowa.edu/~hpo>. Information can also be found on FSG's Web site at: <http://www.uiowa.edu/~fusfg/admin/moving/relocation.htm>. Proper planning can help prevent time delays and make the move easier for you.

Is EPA Really Coming?

Periodically, staff from Iowa colleges and universities meet to discuss ways to improve environmental compliance at institutions of higher learning. At an April meeting entitled "The Feds are Coming!" two Region VII EPA inspectors provided their perspective on select regulations. They confirmed that EPA does, in fact, have an initiative directed toward environmental compliance at colleges and universities. The initiative began with EPA's regional conference last fall in Kansas City, where they communicated their expectations; it is now up to individual institutions to demonstrate compliance. EPA indicated the inspection will be unannounced and focus on areas where they perceive weaknesses exist; however, the concept of the multi-media inspection has been changed somewhat. EPA will inspect each media under a separate inspection, rather than addressing all medias at once. In summary, EPA said, "**WE ARE COMING!**"



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New MSDS Site on HPO Web Site

HPO has added a new link for Material Safety Data Sheets to its Web site. These are available now at <http://www.uiowa.edu/~hpo/chemsafety/msds.htm> and are described at the end of this message. You can reach them from any MSDS link on our web page.

When you do a search, the results column entitled "MSDS Image" will either be in blue or say "NA." Click on the blue for the electronic copy. NA means Not Available electronically at this time. There are now four to five thousand electronic copies for MSDSs that are not commonly available on the internet. The remaining paper copies are being added as quickly as possible.

Safety Training for University Laser Users

Laser safety training is now available on HPO's web site. The training and accompanying quiz is **required** for all operators, technicians, or maintenance personnel working with Class 3b and Class 4 lasers and is recommended for all laser users. The training program is located at the following URL: <http://www.uiowa.edu/~hpo/training/laserresearch/index.htm>. The course consists of a Power Point presentation, followed by a quiz. To receive credit for the course, you need to review the material in the presentation, print out and complete the quiz, and return to 100 HPO, Attn: Laurie Taylor. A score of at least 80% is required to receive credit for the training.

Individuals who supervise users of Class 3b and Class 4 lasers should ensure that they complete this training as soon as possible. The Health Protection Office is in the process of developing an audit system for the use of these two classes of lasers in research. Completion of HPO's laser safety training is a prerequisite for continued use of these lasers. In addition, all individuals who are required to complete HPO laser safety training must also be provided with documented training on each specific laser or laser system they will be using. Providing and documenting this training is the responsibility of the principal investigator (PI) or his designee.

An HPO staff member will contact each PI responsible for Class 3b or Class 4 laser, on campus to complete registration of equipment and to perform a basic compliance assessment of each laser use area. More thorough audits will be initiated in the near future.



If you have any questions, please contact Gordon Axt, University of Iowa Laser Safety Officer at 335-8503, or e-mail gordon-axt@uiowa.edu.

Lab Emergency Plans

With the increased emphasis on emergency preparedness and response, labs are encouraged to review and update plans and ensure that staff are aware of their unit plan and the University's Critical Incident Management Plan. Section 13 in the Chemical Hygiene Plan addresses plans for spills and emergencies. Overall, labs have made great progress with spill response. Panic calls to HPO have become rare and most calls are made to double check on response actions. Congratulations to the lab community.

Annual Chemical Fume Hood Checks

HPO checks airflow performance of all fume hoods on campus on an annual basis. During the summer months, you'll be seeing Nina Whiting in your labs checking the hoods. If the hood passes performance criteria, the hood sticker will be updated. If the hood fails, HPO will make the initial referral to the Work Control Center. Follow-up checks will be done after maintenance work. Details are included in the Chemical Hygiene Plan, Section 9.3, Maintenance and Inspection of Fume Hoods. For questions contact Chandran Achutan at 33(5)-9379, or e-mail chandran-achutan@uiowa.edu.



Ventilation Failure Procedures

Section 9.4 in the Chemical Hygiene Plan, Ventilation Failure Procedures, states: "In the event of a ventilation failure or recurring low flow alarm on the monitor, occupants should contact the Work Control Center in Facilities Services Group (319-335-5071, 24 hours, 7 days). Occupants should place lids on open containers, lower the fume hood sash, and shut down equipment and secure reactions that may be generating hazardous emissions. All lab staff should be aware of this procedure as part of their emergency preparedness plans. For questions contact Kate Kendall at 33(5)-9555, or e-mail kate-kendall@uiowa.edu.

Health & Safety Coordinators Workshop

The workshops held in April for department coordinators were well attended this year. Attendees reviewed the Chemical Hygiene Plan and resources available on HPO's Web site through PC stations at the Info Commons in the Hardin Library. Presentations were also given on the following: statistics generated from HPO's database of injuries and illnesses, which summarizes workplace rates throughout the University; chemical exposure air tests conducted within laboratory settings; and, EPA's compliance initiatives focused on colleges and universities.

Waste Collection, Handling and Shipment Statistics

| | Total (2000) | Total (2001) | Year to Date (through 06/20/2002) |
|--------------------------|-----------------|-----------------|--------------------------------------|
| Hazardous Waste | | | |
| Stops | 3,456 | 3,519 | 1,796 |
| Items Collected | 25,409 | 25,276 | 17,159 |
| Liquid (gal) | 26,746 | 27,809 | 16,194 |
| Solid (lbs) | 42,948 | 32,681 | 12,682 |
| Recycling (lbs) | 233 | 57 | 149 |
| Treatment (lbs) | 2,185 | 3,860 | 1,244 |
| Shipments (drums) | 690 | 766 | 483 |
| Radioactive Waste | | | |
| Stops | 942 | 931 | 376 |
| Items Collected | 5,503 | 5,985 | 2,495 |
| LSC Vials (gal) | 1,201 | 1,844 | 991 |
| Dry Waste (lbs) | 19,341 | 17,999 | 7,237 |
| Biological (lbs) | 231 | 433 | 80 |
| Sharps (lbs) | 1,426 | 1,275 | 674 |
| Liquids (gal) | 2,241 | 2,333 | 907 |
| Activity (mCi) | 50,467 | 3,203 | 1,027 |



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EPA Visits the UI

On July 8 and 9, and again on August 13 and 14, representatives of the EPA performed inspections to determine the University's level of compliance with hazardous waste regulations. The representatives were from an engineering firm hired by EPA to perform compliance inspections. EPA routinely sends hired contractors rather than actual EPA personnel. The July inspection involved the Oakdale campus; the August inspection involved the main campus. In laboratories, the inspectors were specifically examining waste generator compliance with the following six items:

- Is waste collected in suitable containers that are in good condition?
- Are waste containers compatible with the chemicals in them?
- Are containers capped?
- Are containers labeled with the words "hazardous waste" and are the contents identified?
- How long has the waste been accumulating in the area?
- Is waste being accumulated in "satellite accumulation areas," i.e., does waste accumulate where it is generated?

The EPA representatives randomly selected 31 areas on campus from all locations where waste is collected by HPO. Twenty-eight of the 31 areas were laboratories. The inspectors walked around campus, spoke to laboratory personnel, and took notes and pictures of areas where concerns were visible.

Several potential violations were found during the inspection.

The following problems were among the preliminary findings:

- containers left open with funnels in them
- containers not labeled
- containers containing used oil, but not marked with the words "used oil"

Since the inspectors were EPA contractors, they were not authorized to issue citations for failure to follow EPA regulations. Instead, they issued a report entitled "Notice of Preliminary Findings," which details items that they believe are regulatory violations. The Notice is sent to EPA administrators, along with a detailed written report and pictures. After reviewing the contractor report, EPA may issue citations or choose another course of action.

It may appear that the inspection went very well, that the items found were only minor, and that there is no problem with hazardous waste management on campus. However, EPA does not view these types of problems as minor. In fact, these are the same types of violations that have resulted in six-figure fines assessed to other universities. Furthermore, there is a strong possibility that EPA will return to the campus to delve further into waste management issues.

In the meantime, HPO will be sending a memo to labs that were visited. Areas with specific items identified in the preliminary report will need to address them. After all problems have been corrected, HPO will issue a response to the Notice, reporting on how the UI has dealt with the items. It could be several months before we receive a response from EPA on what will happen next.

If you have any questions about the recent inspection or compliance in your lab, please call Jim Pyrz at 5-4625.

New Radiation Dosimeter Policy

Effective August 1, 2002, all UI and UIHC personnel requesting dosimeters for the first time must complete HPO's radiation safety training in order to receive a dosimeter(s). In the past, HPO has issued radiation dosimeters to new personnel without regard to their initial training status. The new policy means HPO staff will verify that appropriate training has been completed prior to issuing the dosimeter(s). Following are several guidelines to assist you in complying with this policy:

- Badges may be requested in advance. HPO will order them and hold them until training has been completed. This will help reduce the number of temporary badges that need to be issued, as well as streamline dosimetry record-keeping.
- HPO offers many radiation safety training courses and most are available online at <http://www.uiowa.edu/~hpo/training/trainingpage.htm>. The type of training required depends on the nature of your work with regard to exposure to radioactive material and/or radiation producing equipment. For example, most individuals working in research labs will need to complete "Radiation Safety for the Non-Medical Use of Radioactive Materials in the Basic Sciences." By contrast, a physician performing X-ray fluoroscopy guided procedures would need to take "Diagnostic X-ray Procedures" training. For more information regarding the appropriate training to complete, please contact Laurie Taylor, HPO Training Coordinator at 335-8532, or Gordon Axt at 335-8503.
- Individuals completing HPO radiation safety training online must receive a score of 80% or greater on the associated exam. The exam must be signed and mailed to Laurie Taylor, HPO - 100 HPO.

Thank you in advance for your assistance in implementing this program. If you have any questions regarding this policy, please contact Joe Graves at 5-8517.

Changes to DOT

Shipping Infectious Substances Rules

New DOT Rules for Shipping Infectious Substances will become effective February, 2003. The new rules regulate shipments by ground transportation only (e.g., UPS), **not** when shipment is by air (e.g., Fed Ex). If you ship packages containing infectious substances under DOT regulations and need to review changes in the final rule, they are published in the August 14, 2002 Federal Register (Volume 67, Number 157), pages 53117-53144 or contact Carol McGhan at 5-9553.

The following is a brief summary of the changes in the hazardous materials regulations, which for the most part bring them in line with international regulations: 1) New classification criteria for infectious substances based on criteria developed by WHO; 2) Packaging requirements for 6.2 materials and diagnostic specimens consistent with IATA regulations; and 3) new requirements for bulk shipments or regulated medical waste.

BIOHAZARD WASTE GUIDELINES

HPO's Biosafety Office has received numerous reports of pipettes and gloves found in regular trash cans. As everyone is aware, if waste is incorrectly discarded, injuries can occur. To prevent punctures, cuts and potential exposures, it is imperative that everyone follow the UI's Biohazard Waste Guidelines available at: www.uiowa.edu/~hpo/guide/biowaste.pdf. Custodians will place properly closed, secured and labeled biohazard waste containers in the designated area for transport to off-site incineration. Call 5-5109 for questions regarding pickup schedules or locations. Some general guidelines are given in the table below:

GENERAL GUIDELINES FOR DETERMINING PROPER DISPOSAL OF BIOHAZARDOUS WASTE (does not include chemical or radioactive waste)

| Type of Waste | Red Bag or Biohazard Box | Red Sharps Container | Regular Trash |
|--|--------------------------|----------------------|---------------|
| Specimens/pipette tips/plastic pipettes/tubes/culture plates, biohazard spill clean-up materials, all disposable gloves/masks, etc. | X | | |
| Liquid animal or human blood in quantities greater than 500 ml must be solidified and placed in biohazard box. Amounts less than 500 ml can be autoclaved or disinfected with bleach and then sewered. | X | | |
| Needle/syringe units, safe needle devices, needles, scalpels, glass slides and cover slips, Pasteur pipettes, broken CONTAMINATED glass, etc. | | X | |
| Untamminated paper towels, soda cans, paper, packaging materials, food waste (e.g., paper cups, plastic cutlery). Note: Place uncontaminated glass in a brown Kraft box. | | | X |
| Spill clean-up materials from non-hazardous substances. | | | X |



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Controlled Substances Disposal

The U.S. Department of Justice Drug Enforcement Administration (DEA) regulates controlled substances. By law, persons in possession of controlled substances must register with the DEA; these persons then become DEA registrants. HPO is not a DEA registrant.

Occasionally, a lab will request that HPO remove controlled substances for disposal. Because HPO is not a DEA registrant, we cannot dispose of controlled substances. The DEA registrant that owns the substances is responsible for their proper possession and disposal. Questions regarding possession and disposal of controlled substances should be directed to the DEA Diversion Control Program, Des Moines Resident Office, 515-284-4709. The registrant will speak to the Special Agent in Charge, who will request information about the items for disposal. The Agent will then authorize and instruct the registrant to dispose of the controlled substances by one of the following methods:

- By transfer to another registrant
- By delivery to the DEA
- By destruction in the presence of an authorized person
- By other means determined by the Special Agent in Charge

In the event the registrant is required to regularly dispose of controlled substances, he/she may be authorized by the Special Agent in Charge to dispose of controlled substances without prior approval.

IDPH Annual Radiation Inspection

The Iowa Department of Public Health-Bureau of Radiological Health completed its annual inspection of the University's radioactive materials license and radiation safety program during the week of October 28, 2002. While overall the University's radiation safety program was found to be effective in managing the use of radioactive materials, the inspectors expressed concern over the number of individuals receiving personal dosimeters who do not appear to be using them appropriately. This issue was evident by dosimeter badges either not being returned to HPO, or returned consistently late or unused in their original packages. Dosimeters unreturned or unused leave gaps in the individual's dose history and represent poor radiation safety practice. If you are currently receiving a dosimeter, it should be worn properly and returned for processing in a timely manner in order to provide an accurate assessment of external radiation exposure. If you no longer work with radioactive materials or are exclusively using radioactive materials that cannot be monitored with a dosimeter (H-3, C-14, S-35), please cancel your dosimeter. Should you resume use of radioactive materials capable of being monitored with a dosimeter, you can easily be reinstated into the dosimetry program by completing a Dosimeter Request Form, available on our web site at www.uiowa.edu/~hpo/form/forms.html. If you have questions regarding your need for a dosimeter or its effectiveness in monitoring your work, please contact Gordon Axt at 335-8503, or e-mail gordon-axt@uiowa.edu.

New IAQ Procedure for FSG Buildings

The Facilities Services Group (FSG) recently implemented new procedures for responding to non-emergency IAQ complaints in buildings they service. The point of first contact for non-emergency IAQ complaints (e.g., odors, irritant effects) in an FSG maintained building is the FSG Work Control Center (WCC). The WCC will initiate a complaint response by having a mechanic from the area maintenance shops investigate. If the area mechanic needs assistance in resolving the complaint issue, the area supervisor will be contacted. Assistance for IAQ problems can be provided from other FSG resources, from other campus resources (i.e., HPO), or from off-campus resources. FSG will provide feedback to the complainant to verify the issue has been addressed; they will also encourage input to assess their response and resolution of the problem. FSG expects these new procedures to provide a smoother and more complete response to IAQ complaints.

HPO has modified its IAQ procedures to complement the FSG plan. All non-emergency IAQ complaints related to FSG maintained buildings will be directed to the WCC. Requests for assistance from HPO should be directed to Robin Lindenboom at 335-9554, or robin-lindenboom@uiowa.edu.

If you have a complaint about IAQ in an FSG maintained building, you can contact the WCC at 335-5071, or fsg-wcc@uiowa.edu. If you are unsure who maintains your building, find your building in HPO's Building Maintenance Assignment List under indoor air quality at www.uiowa.edu/~hpo/IndustrialHygiene/IHprogram.htm. Some buildings have a designated representative to whom you should report IAQ issues.

This procedure does not apply to emergency situations. If you have any emergency on campus, call Public Safety at 911; at UIHC call Hospital Safety & Security at 195.

Label Your Radioactive Waste Cabinets

Due to labs moving to different rooms and buildings throughout campus, we would like to request that cabinets containing radioactive waste be labelled accordingly. Most labs have several rooms posted for radiation and there are times when the regular staff may not be available to collect waste. When lab personnel are not present, substitute staff often find it difficult to locate the waste. Labelling cabinets will assist us in timely collection of your waste.

New Hazardous Materials Specialist at HPO



Dick Comried has become an HPO Hazardous Material Specialist I for the Waste Section. Dick is a graduate of both Mount Mercy College and Coe College.

His previous employment includes time at Duane Arnold Nuclear Power Plant. Dick was also a science teacher in the Cedar Rapids Community School District. His primary responsibility will be with chemical waste collection and management.

2002 Holiday Pick-up Schedules for Radioactive and Hazardous Waste

The following is the revised building pickup schedule during the Thanksgiving, Christmas and New Years holidays.

Please note any changes in the pickup schedule for your building.

November

| Monday | Tuesday | Wednesday | Thursday | Friday |
|---|--|---|--|--|
| 25 Hazardous IREH, MTF, PHAR, PRL & UIHC | 26 Radiation EMRB, ML, MRC, MRF, UIHC, MTF, OH & VAMC <hr/> Hazardous BB, BSB, MERF, VAMC & all other areas | 27 Radiation BSB, MERF, BB, CB, DSB, ERF, MEB, SB & all other areas <hr/> Hazardous CB, IATL, SC, WP, OH, BT, DSB, EMRB, ML, MRC & MRF | 28 University Holiday | 29 University Holiday |
| 2 Hazardous IREH, MTF, PHAR. PRL & UIHC | 3 Radiation EMRB, ML, MRC, MRF, UIHC, MTF, OH & VAMC <hr/> Hazardous BB, BSB, MERF, VAMC & all other areas | 4 Hazardous CB, IATL, SC, WP & OH | 5 Radiation BSB, MERF, BB, CB, DSB, ERF, MEB, SB & all other areas <hr/> Hazardous BT, DSB, EMRB, ML, MRC, MRF | 6 No Pickups |

December/January

| Monday | Tuesday | Wednesday | Thursday | Friday |
|---|--|--|---|---|
| 23 Hazardous IREH, MTF, PHAR, PRL & UIHC | 24 University Holiday | 25 University Holiday | 26 Radiation EMRB, ML, MRC, MRF, UIHC, MTF, OH, VAMC, BSB, MERF, BB, CB, DSB, ERF, MEB, SB, & all other areas <hr/> Hazardous CB, IATL, SC, WP, OH, BB, BSB, MERF, VAMC & all other areas | 27 Hazardous BT, DSB, EMRB, ML, MRC, MRF |
| 30 Hazardous IREH, MTF, PHAR, PRL & UIHC | 31 Radiation EMRB, ML, MRC, MRF, UIHC, MTF, OH & VAMC <hr/> Hazardous BB, BSB, MERF, VAMC & all other areas | 1 University Holiday | 2 Radiation BSB, MERF, BB, CB, DSB, ERF, MEB, SB & all other areas <hr/> Hazardous CB, IATL, SC, WP & OH | 3 Hazardous BT, DSB, EMRB, ML, MRC, MRF |