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# ENVIRONMENTAL HEALTH AND SAFETY

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THE UNIVERSITY OF  
**MEMPHIS**

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## Yes, We Have No Plutonium

The Physics Department's neutron source was recently shipped to Los Alamos National Laboratory for disposal. A team from the U.S. Department of Energy's (DOE) Off-Site Recovery Program sealed the source in a stainless steel "special form capsule" and placed it in an approved, secure shipping container for the trip west.

The neutron source had been on a DOE recovery list for several years; however, neither DOE nor private contractors were authorized to accept the 70 grams of plutonium-239 in the source. Fearing that unwanted radioactive material would be diverted for improper uses following 9/11, congress recently increased pressure on DOE to collect sources of this type from facilities across the nation.

Many thanks to the folks in Government Relations who lobbied for removal of the source and to those in Physics, University Police, and Physical Plant who helped ensure security of the source prior to shipment.



DOE Personnel Prepare Neutron Source for Shipment

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### Free Cookies, Drinks, and Door Prizes!

Our famous Laboratory Health and Safety Seminar has been scheduled for Wednesday, September 1, 2004, from 1:15 p.m. until 4:15 p.m., in the Ellington Hall Auditorium. In addition to helping you work more safely in the lab, the seminar will help satisfy training requirements found in federal regulations, Tennessee law, and the University Laboratory Chemical Hygiene Program.

Faculty, staff, and graduate students are invited. Please register through your de-

partment by Aug. 30. Pre-registering will help ensure that we have sufficient refreshments and door prizes.

***Come learn about lab safety, have some cookies, and register to win a door prize.***

### Biological Safety Program Updated

The University Biological Safety Committee recently approved updates to the Biological Safety Program. The updates include new information on autoclaves, prions, and lab decommissioning. The Biological Safety Program represents official University policy on biological safety matters.

***Check out the updated biosafety program at [www.people.memphis.edu/~ehas/bioman2004.pdf](http://www.people.memphis.edu/~ehas/bioman2004.pdf)***

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## More EPA Enforcement in Higher Education

Since our last newsletter more colleges and universities have been fined by the EPA. Fitchburg State College in Massachusetts will be spending \$205,000 to settle EPA allegations of improperly storing hazardous waste, failing to make a waste determination, improperly labeling containers, and storing unlabeled containers. The original EPA complaint proposed a \$358,518 penalty.

***"[Schools and colleges] everywhere need to make sure that environmental and hazardous waste issues are handled carefully in accordance with federal laws." Robert W. Varney, EPA regional administrator***

EPA regional administrator, Robert W. Varney said, "The college's failure to follow basic rules of handling and storing hazardous waste put students and employees, as well as the environment, at an increased risk of harm. Hopefully, the college now realizes that it is less costly and safer for everyone when the school is in compliance with our nation's environmental laws."

## Hazardous Waste Update

The University of Memphis incurred costs in excess of \$108,164.18 during calendar year 2003 as a result of hazardous waste generation. This figure includes only \$16,690.11 in direct disposal costs. Although the University has 14 hazardous waste generation sites, only 7 sites produced waste in 2003.

Disposal costs for a kilogram of waste ranged from \$5.58 to \$6.79 per kilogram; however, characterization and disposal of unknown chemicals cost a whopping \$229.50 per kilogram. Units generating unknown wastes are charged \$100.00 per container to help defray these excessive costs.

## Final Fume Hood Upgrades Funded

The University has received over \$4 million for the final phase of the fume hood upgrade project. Design work is underway, and construction will begin in the summer of 2005.

## Sonicators and Good Lab Practice

Sonicators have the potential to create significant levels of aerosols that have been demonstrated to injure laboratory workers through fires and explosions. Sonicators are also known to cause infection of personnel with various biological agents. Please remember the following guidelines:

- Never use a sonicator with flammable chemicals or materials containing radioisotopes
- Contain biological materials in a biological safety cabinet of appropriate class, and contain chemicals in a fume hood
- Wear appropriate personal protective equipment

## Researchers Exposed to Live Anthrax

According to *Chemical and Engineering News*, 5 scientists at Children's Hospital Oakland (California) Research Institute were exposed to viable anthrax bacteria due to a supplier error. A Frederick, Maryland, lab apparently shipped live bacteria rather than the inactivated bacteria that California researchers thought they were receiving. Needless to say, the FBI, CDC, and others are investigating this incident. The researchers probably aren't too happy either.

## New CD-ROM Training Available

If you have personnel who come to work after the lab safety training in September, never fear. EH&S has a new CD-ROM lab safety training system that will help meet your department's legal obligation to provide training at the time of initial assignment to a work area containing hazardous chemicals.

In addition to this CD-ROM and the lab safety seminar, EH&S offers training in bloodborne pathogens, laboratory ventilation and fume hoods, radiation safety, Hazardous Chemical Right-to-Know, and biological safety. We also have a great library of video tapes that your department can check out at no cost.

## Terrorism Fears Snare More Professors

If you have or plan to obtain materials from the American Type Culture Collection (ATCC), read the material transfer agreement carefully and follow it to the letter. A federal grand jury recently indicted an associate professor of art from SUNY-Buffalo and a genetics professor from the University of Pittsburgh for wire and mail fraud related to the purchase of two low-risk types of bacteria from ATCC.

**"If you think the rules are silly, if you think compliance is a joke, please resign now...."  
Peter Nanos, Director of Los Alamos National Laboratory**

At the heart of this situation was the improper transfer of these bacteria to a person who was not qualified to obtain them directly from ATCC. The two profs are alleged to have defrauded ATCC and the University of Pittsburgh. If convicted, each man could face a maximum of 20 years in prison.

Of special interest in the criminal indictment is language indicating that as faculty members, both men were "directly and primarily responsible for knowing of and applying the principles and procedures contained" in their respective university biological safety programs.

*Are you applying the principles and procedures found in the Laboratory Chemical Hygiene Program, Radiation Safety Manual, and Biological Safety Program?*

## Rad New Software in Use

EH&S, with support of the Radiation Safety Committee and radioisotope users, has implemented a new software-based management system for radioactive material. This software allows radioisotope users to minimize paperwork and improve regulatory compliance while helping EH&S track radioisotopes.

We would like to express our sincere thanks to Dr. Carlos Estrano, Assistant Professor of Biology, for helping us find and fix many of the early problems with the system. We appreciate Dr. Estrano's willingness to be the first PI to use the new system.

## Have You Tried an Eco Funnel?

If your lab generates liter quantities of liquid wastes, take a look at an Eco Funnel. These devices screw on four liter jugs, allowing you to easily pour in wastes or transfer wastes directly from instrumentation via tubing. Eco Funnels help reduce evaporation of waste and eliminate open containers that violate hazardous waste regulations. If you are interested in seeing one of these gadgets, we have one that you may look at.

## Safety, Security Issues Shut Down LANL

Los Alamos National Lab temporarily shut down in July as a result of security and safety violations. Among the many safety violations were radiation exposures above the annual federal limit for radiation workers and a laser injury to the eye of a student working at the facility.

In an e-mail to all employees, Laboratory Director Peter Nanos said, "... people will be terminated if they ignore the safety, security and environmental regulations that are at the core of what we do here. ...[W]illful flouting of the rules must stop, and I don't care how many people I have to fire to make it stop. If you think the rules are silly, if you think compliance is a joke, please resign now and save me the trouble." It sounds like this guy is serious.

*Are you serious about safety?*

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## Sources of Assistance

Manager of EH&S . . . . . 678-4672  
Radiation Safety Officer . . . . . 678-4672  
Chemical Hygiene Officer . . . . . 678-4672  
Environmental Protection Specialist . . 678-2044  
Laboratory Safety Specialist . . . . . 678-2740  
Fax . . . . . 678-4673  
Emergency (Fire, Police, Ambulance,  
after hours Chemical/Radiological) . 678-4357  
EH&S Home Page . . . . .  
. . . . . <http://www.people.memphis.edu/~ehas/>

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## Va. Tech Graduate Student Dies

The July 30, 2004, issue of *Science* noted the death of a Virginia Tech graduate student who apparently contracted hantavirus pulmonary syndrome (HPS) while capturing small rodents in West Virginia. *Science* also notes a case of HPS contracted by a UC Davis student doing similar field work in California.

Cases like this should remind us that field work, just like work in any lab or shop, presents hazards and requires a risk assessment to determine the need for personal protective equipment (PPE). When respiratory protection is required, remember that your department must implement a respiratory protection program. And don't forget that the best PPE and the most thorough training on how to use it are worthless unless you actually wear the PPE appropriately.

*Are you wearing your PPE?*

## What's a CHMM?

If you've wondered about the letters CHMM on some of our business cards, wonder no more. Certified Hazardous Materials Manager (CHMM) is one of the most widely recognized environmental professional credentials. Many corporations, including Boeing, Delphi, General Motors, and TRW, have policies that require or encourage their environmental management professionals to have this credential. The CHMM is also recognized by federal agencies like the National Parks Service, Air Force, Department of Energy, Department of Defense, Corps of Engineers, and Environmental Protection Agency.

The CHMM Program is accredited by the Council of Engineering and Scientific Specialty Boards. CHMM certification requires a baccalaureate degree or higher in a related field; experience in hazmat management/engineering, including developing, implementing, directing and/or evaluating programs; and passing a comprehensive written test. A CHMM must comply with a code of ethics and meet stringent requirements for re-certification every 5 years.

## Laser Safety Checklist Available

EH&S has created a Laser Safety Checklist to assist those of you who have lasers. The document is available at [www.people.memphis.edu/~ehas-/lasersafetychkst.pdf](http://www.people.memphis.edu/~ehas-/lasersafetychkst.pdf).

If you have a Class III or IV laser, we would like to add it to our inventory. Please give us a call, and we will let you know what information we need for the inventory record.

## Goodbye, Ron

Ron MacDonald, Laboratory Safety Specialist, will be leaving the University at the end of August. Ron joined EH&S as a student worker, was then hired full-time as Environmental Protection Specialist, and finally moved into his present job. Talk about upward mobility! We will all miss Ron.

With Ron's departure, EH&S may need to temporarily suspended or delay delivery of certain services. We would appreciate your patience while we hire and train a replacement.

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## Environmental Health & Safety Staff

Alton Simpson, Manager of EH&S  
Ronald W. MacDonald, Laboratory Safety Specialist  
Frank Williams, Environmental Protection Specialist  
Melissa Shaw, Clerical Assistant

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