

CWRU DEPARTMENT OF OCCUPATIONAL AND ENVIRONMENTAL SAFETY NEWSLETTER



August-September 2002 ***"Safety Comes First"***

Service Building, 1st Floor (216)368-2906/2907 FAX:(216)368-2236 <http://does.cwru.edu>

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Welcome to D.O.E.S.



It is once again the start of a new school year. Whether you have been here for years or this is your first semester, the Dept. of Occupational and Environmental Safety welcomes you!

Part of our operations involve the training and re-training of personnel. We cannot stress enough the importance of making sure that all lab personnel are properly trained. **All new employees must be trained by D.O.E.S.**

The Safety Office offers mandatory training sessions in Radiation, Chemical, Bloodborne Pathogens (BP) Safety, X-ray, and a variety of Physical Safety areas. Radiation and BP Training sessions are subdivided into "New" and "Retraining" sections, so sign up for the appropriate session based on your training status (call Safety Services at x2907 for info on your chemical or BBP status; Radiation Safety will notify you 30 days prior to your training expiration date).

New Biohood Procedures

If you need to have your biohood tested, you may do so through our website at <http://does.cwru> by clicking "Biological Safety."

For questions, service, or submitting results, please **CALL** us or use our email at does@po.cwru.edu. **NOTE:** This is a different email address than in the past so please make note of it.

All biohoods must be tested **ANNUALLY** or they are in direct breach of both Ohio and OSHA regulations. If you have any questions, please give us a call at x2907.

D.O.E.S. Says Farewell (and Good Luck!) to Asst. RSO Bill Stephany



Bill Stephany has decided after careful deliberation to yield to the call of the Northwest. With his wife Judith, he has retired to live next to the Cascade Mountains west of Seattle. Bill leaves behind many contributions to the Radiation Safety Programs at Case Western Reserve University. Just before leaving, Bill finished authoring a new training presentation for all incoming radioactive materials users that has been converted to DVD format and features the voice of our new training moderator, Karen Janiga.

Bill took over as Assistant RSO just as our program converted from NRC oversight to oversight by the State of Ohio. He helped guide restructuring of our license and streamlining of our radiation materials users application procedures. Bill also leaves behind new SOPs for all essential Radiation Safety programs and a well-trained staff who will continue to provide all services required for our Radiation Safety programs. His friends at D.O.E.S. wish him *bon voyage* on his new adventures and smooth sailing in the Northwest waters.

- W. David Sedwick
Director, D.O.E.S.

New D.O.E.S. Resources

Over the summer, D.O.E.S. has implemented some new online materials on our website:

<http://does.cwru.edu>.

These additions are highlighted by a new online link to Chemwatch's MSDS database. A new version of the Physical Safety Manual is also online and reflects many important changes from the previous document. There is also an archive of past newsletters. Please take time to familiarize yourself, **and your lab**, with these important safety resources.

Don't Speak English Well? You Are at RISK!

It might be said that laboratory hazards do not discriminate on the basis of ethnicity. Yet recent evidence suggests that workers from non-English speaking backgrounds are more likely to suffer workplace fatalities and injuries than other employees. And the situation is worsening.

"The disproportionately high number of work-related deaths suffered by non-English-speaking workers is of grave concern to us," says John Henshaw, OSHA assistant secretary. To help this situation, Lab Standards and MSDS are available in dozens of languages. See our *new* link to online MSDS at <http://does.cwru.edu> or call us at x2906. Be sure and walk new people through procedures and policies instead of relying on written instructions and signs. If necessary, require such people to sign up for additional tutoring.

TRAINING SCHEDULE

Radiation (x2906)

- New Training: Sept. 6, 16; Oct. 2 (call for times)
- Retraining: Sept. 9 (call for times)
- X-ray Training: Sept. 4, 18; Oct. 2 (call for times)

Chemical (x2907)

- OSHA Lab Standard: Tuesdays 1-2:00 (Service Building Conference Room)

Bloodborne Pathogen (x2907)

- New Training: Tuesdays 3-5:00 (Service Building Conference Room)
 - Retraining: Sept. 12, 27; Oct. 9 (call for times; Service Building Conference Room)
- *Rad Training is now ONLINE at

<http://does.cwru.edu>

Registration of Select Agents

Persuant to the Patriot Act and The Public Health Security and Bioterrorism Preparedness and Response Act of 2002 (P.L. 107-188) we will continue to take surveys of all labs to determine what you have which may fall under the rubric of a “select agent.” This includes materials in use and those in storage. This can be a time-consuming task, especially if you have small amounts of materials archived away. However, **it is essential that each investigator takes the time to accurately inventory his or her material** and report back to us when contacted. Federal penalties for non-compliance are very significant for individuals and their institution so everyone must comply.

All institutions using these materials must submit inventories at the Federal Government by early September. Regardless, the Select Agent List is a living document and will continue to change. We will keep you posted.

Pregnancy Precautions

Are you bringing an extra visitor to the lab this fall? If you are pregnant, work with radioisotopes, and wish to declare your pregnancy, you may inform the Radiation Safety Office in writing of your pregnancy and the estimated date of conception. This will lower your permissible dose limits from 5000 mRem per year to 500 mRem for your pregnancy. You will also receive a fetal badge to be worn at the waist (fetus dose limits are approximately 50 mRem per month). Declaring a pregnancy is voluntary but is **strongly encouraged** to keep you and your baby within safe limits. Contact Radiation Safety (x2906) if you have any questions or would like a copy of the NRC Regulatory Guide 8.14, “Instructions Concerning Prenatal Radiation Exposure.”



RADIATION NEWS

Security lapses involving radioactive materials have led to scores of enforcement actions against universities, construction companies, and hospitals according to Nuclear Regulatory Commission records.

Fearing that such sources could be used for so-called “dirty bombs,” Congress has recently introduced legislation to further regulate these low-yield sources of radiation. **This includes academic laboratory sources.**

Last month, the NRC disclosed that it receives an average of 300 reports a year of small amounts of radioactive materials missing from such sources. “There are hundreds of thousands of these, and not all of them are accounted for,” said expert John Pike.

High on the list of concern are radioactive cobalt-60 or cesium-137 — found in experimental and therapeutic irradiators at many medical or research labs. Cesium-137, one of the most common radioactive substances used today, was found listed as part of detailed plans and notes during raids in Afghanistan.

Another danger is improper waste disposal. Forty-five times a year, on average, significant amounts of radioactive materials are mistakenly thrown away. One of the most recent incidents was at the Nucor Steel recycling plant in Winton, N.C. On its way to being dumped in the furnace, Geiger counters sniffed out a radioactive industrial gauge that was still hot.

We will continue to take surveys of material (see above left) but you should continue to ALWAYS lock your lab and /or storage areas. If you are missing ANY materials, no matter how innocuous, you must notify D.O.E.S. and Security IMMEDIATELY .

Taking Out the Trash: Custodial Concerns

Our custodians are potentially at risk unless each of us carefully follows proper waste disposal procedures. Those who work in a research environment long enough often develop a healthy blend of skepticism and care about their work. Wisely, custodians are unlikely, and are indeed legally bound **NOT** to touch things that 1) aren't properly disposed of or that 2) they are unfamiliar with. However, custodians still have to empty trash cans and haul bags of autoclaved waste to the dumpster, and these activities provide a possible interface with all of the hazardous contaminants and chemicals used in your laboratories. Even the most cautious custodian could be injured if hazardous materials are disposed of improperly.

Take, for example, biohazardous waste. One of the reasons loose sharps are prohibited in these bags is to prevent someone from picking them up and getting inadvertently stuck with a contaminated needle. Loose needles, razor blades, scalpels, and broken glass are **NEVER** allowed in any trash can or bag. Each type of contaminated sharp has its own disposal requirements:

- Dispose of clean glass only in the broken glass containers.
- Sharps contaminated with hazardous chemicals must be collected in a leak-proof, puncture-proof red plastic container.
- Sharps other than syringes, needles, razor blades or scalpels contaminated with hazardous chemicals are described as *de Minimus* and are not regulated as a chemical hazard. These sharps may be put in a standard cardboard box with regular sharps and marked "Broken glass," but such containers must not weigh over sixty pounds.

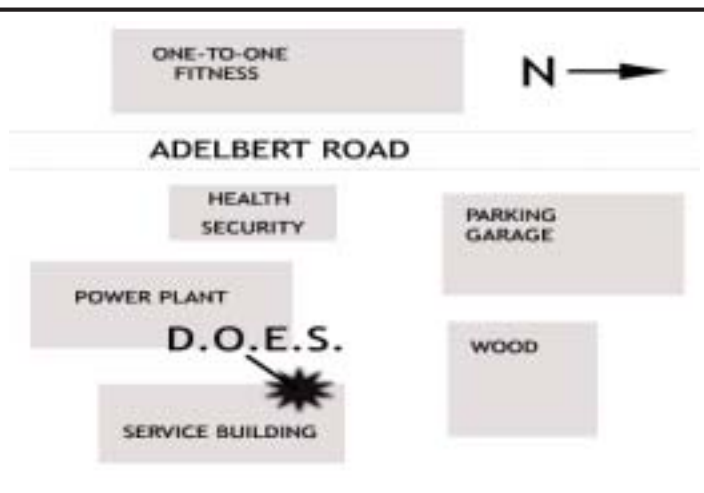
When a chemical spill occurs, it is the responsibility of the person causing the spill to clean it up or call D.O.E.S. for assistance. If the spill involves hazardous materials or you are unsure of how to proceed, call us immediately.

Standard wastebaskets are for the disposal of common trash only, **NOT** materials used in experiments. Paper should be sorted from other trash and disposed of in the green recycling bins. Custodial personnel found to be moving improperly packaged trash are told that they could lose their jobs. When trash is improperly packaged, the custodial staff is to 1) Leave it there, 2) Leave a note, 3) Tell their superior 4) Notify Protective services and D.O.E.S. right away.

If you're new to CWRU (or simply haven't been to visit us yet), this map should help you in finding us.

Phone Numbers:
Chemical: x2907
Radiation: x2906

Website:
<http://does.cwru.edu>



Ask Dr. Goggles



Dear Dr. Goggles:

Should I be scared of West Nile virus?

Sincerely;
Once Bitten

Dear Once Bitten:

This year there have been over 130 cases of human West Nile reported, mostly in the southeastern United States. And yes, there have been some tragic deaths due to resulting viral encephalitis. However, West Nile in humans is still **extremely rare**. However, it has been found in birds and mosquitoes in Cuyahoga County, and there have been at least **three** local human cases attributed to West Nile virus at this time.

The West Nile virus is primarily carried by birds and horses. If a mosquito bites an infected animal, it may carry the virus in its salivary glands and transmit it to humans through bite. Most people with West Nile virus will show no symptoms. Very few (in greater numbers after age 50) will develop encephalitis (inflammation) of the brain, which occasionally results in death.

To protect yourself, the CDC recommends **1)** using a DEET mosquito repellent (not for those under age two), **2)** stay inside during dawn and dusk, the peak hours of mosquito activity **3)** wear loose fitting, long sleeves and pants during these times, **4)** eliminate sources of standing water around your home, and **5)** check with your local city to see if they have a mosquito control program. If they don't? Suggest it. One of the early warning signs of West Nile is an overabundance of dead birds. If you find a dead bird, do not report it -- **Cuyahoga County is no longer accepting birds for testing**. Using a shovel or gloves, double-bag it using plastic bags and simply throw it away. The CDC says that **you cannot get West Nile from a bird, only from a mosquito**. This is a scary disease, but prudence can help limit your risk.

Tales from the LAB . . .



While cleaning up one late summer afternoon, a grad student at a university laboratory noticed condensation on a high voltage power supply for a high-powered laser. Her advisor was coming back from vacation tomorrow, so she wanted the lab to look perfect. So with the power still on, she wiped the moisture with a paper towel, making contact with the exposed anode terminal at approximately 17,000 volts D.C.

She received a severe electrical shock and second degree burns to her right thumb and abdomen. Witnesses stated that they heard a loud "snap" and then heard the worker scream and stagger out to the hallway. She was met by a secretary, told her "I got a shock," and collapsed onto the floor. She had no pulse and was not breathing.

Her co-workers started CPR until the ambulance arrived and used a defibrillator to restart her heart. She said later that she knew the power was on but didn't think that contact was possible at the terminal. The interlocks had been defeated and guards removed -- with no signs posted.

This could have been avoided if the worker (and her peers) had done the following:

- Understood the operating characteristics of equipment before use.
- Did not defeat machine safety interlocks.
- Did not work around energized exposed conductors.

Take this tale to heart and safeguard all electrical equipment so you too can avoid the horrifying mistakes made in this *Tale From The Lab* . . .



Leon the electron was not sure just to where he'd been blasted when the photon struck, but the indicators suggested he was now in one of the atom's degenerate orbitals.

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