



# REM NEWS

A publication by Purdue University Radiological and Environmental Management

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## Biosecurity...Monitor Your Facilities

By Bob Golden

**B**ecause of recent terrorist activity, there is a need to monitor security of facilities, including those with infectious organisms. The Centers for Disease Control (CDC) as well as the National Institutes of Health (NIH) are concerned with this issue and are monitoring the effectiveness of institutional security measures. Please review the following and take the appropriate action to ensure security of your lab or facility.

If you are using Class II biohazards or regulated Select Agents in your

biosafety level 2 (BSL2) laboratory, please make sure these materials are secured. If you need to determine the classification of the biomaterial you are using, you can do so by using the Purdue Biological Safety Manual. Link to the following web address and scroll down to this index heading "Categories of Biohazardous Agents": <http://www.purdue.edu/rem/home/booklets/bioman.htm>.

Keep your lab doors locked as well as the doors to areas outside your lab where Class II organisms are incubated, stored, or otherwise processed. Ask for identification from unknown

individuals who enter your lab and do not allow unauthorized people to have access to your BSL2 lab. Secure biohazardous waste and autoclave as soon as possible. Report the disappearance of any biohazardous material to your Department Head and to REM.



If you have any questions please contact Robert Golden, Biological Safety Officer, at [rwgolden@purdue.edu](mailto:rwgolden@purdue.edu) or call 49-41496. Thanks for your assistance in this matter.

## OSHA Changes Workplace Injury and Illness Reporting Requirements

By Kristi Evans

**E**ffective January 1, 2002, the Occupational Safety and Health Administration's (OSHA) injury and illness reporting requirements have changed. This change affects our reporting in three major ways: the form had changed, the criteria for calling the injury in to Liberty Mutual has changed, and the completed handwritten form must be sent to REM within a 48-hour time frame.

The new procedures are as follows:

### 1. Supervisor completes the First Report of Injury Form.

As of January 1, the old First Report of Injury form is not in compliance with OSHA standards. The new First Report of Injury form must be completed

**without exception** by the supervisor of the injured person. The new First Report of Injury requires more detailed responses about the injuries and includes an accident investigation portion. Training, along with the First Report of Injury form, is available on the REM home page: [www.purdue.edu/rem](http://www.purdue.edu/rem).

### 2. Call Liberty Mutual when the incident meets the criteria.

The requirements for calling Liberty Mutual's claims service center have changed. Although supervisors must complete a First Report of Injury form on every injury or illness, he/she will only call Liberty Mutual when either **medical treatment is provided or the employee loses time other than on the date of injury**. This change in

procedure will result in a reduction in University expenditures.

### 3. Send a copy to REM.

A copy of the First Report of Injury must be sent to the REM Safety Section within 48 hours of the incident (Note: REM needs these reports within 48 hours in order to comply with the 7-day reporting time listed on the First Report of Injury form). This includes the incidents that were not called in to Liberty Mutual.

It is important that the supervisor of the injured party complete this form. Call Liberty Mutual when required and send a copy to REM. If you have any questions, please contact Kristi Evans at 49-41431.

# Mercury Thermometer Replacement Program

By Brian McDonald

## Why should I replace my thermometers?

The Chemical Management Committee (CMC) recommends all faculty, staff, and students participate in pollution prevention on campus. Product substitution is at the heart of pollution prevention and is a viable option for many types of mercury thermometers. In an effort to achieve a mercury free campus, the CMC strongly encourages individuals to replace mercury-containing devices with suitable non-mercury devices where feasible. Please examine your procedures that involve the use of mercury and evaluate the possibility of eliminating or at least reducing the use of mercury.

The Great Lakes Binational Toxics Strategy, signed by Canada and the United States in April 1997, is an effort to reduce mercury, a Persistent Bioaccumulative Toxic (PBT) substance, in the Great Lakes. The Strategy sets a goal of virtual elimination of mercury from the Great Lakes Basin, with a U.S. challenge of a 50 percent reduction nationwide in the use and release of mercury by 2006.

Eight states and 15 municipalities have already enacted mercury thermometer bans, and 11 national retail chains have pledged only to sell mercury-free thermometers. The Universities of Illinois, Michigan, Vermont, along with Northwestern, Stanford, Yale, and Harvard are taking a pro-active approach to reducing elemental mercury by eliminating mercury thermometer use in teaching and research laboratories.

## What is the benefit to switching to a non-mercury thermometer?

Mercury thermometers break on a regular basis, the contaminated clean-up debris generated by a spill is consid-

ered hazardous waste and is a very expensive disposal process. In addition, mercury vapors, which are colorless, and odorless, can expose lab and clean-up personnel to hazardous levels of mercury. REM personnel have responded to 64 mercury related clean-ups on campus in 2001, which accounts for 73% of our total responses.

## Who should replace their mercury thermometers?

We recommend all faculty, staff, and students using mercury thermometers find suitable non-mercury replacements. Non-mercury thermometers meet accuracy standards from the National Institute of Standard and Technology (NIST).

Non-mercury thermometers can be used in most applications including, incubators, water baths, or other applications where mercury thermometers have been traditionally used. If your application requires a mercury thermometer for higher accuracy and precision, we recommend the thermometer be Teflon coated to prevent spills when broken.

## How to choose the non-mercury thermometer that is right for you.

First, choose the appropriate thermometer by answering the following questions:

- What type? Partial or Total immersion?
- What scale? Celsius or Fahrenheit?
- What scale division is needed?
- What length does the thermometer need to be?
- What type of application?

With these questions answered, you should now reference the “Non-mercury thermometer” spreadsheet to select the specific thermometer for your application. REM has used these preferred vendors, **VWR Scientific Products** (<http://www.vwrsp.com>) or **Fisher Scientific** (<http://www.fishersci.com>) with success. You may go to their websites and search using the words “non-mercury” for more information.

Now you are ready to order your thermometers. If you need any assistance in selecting or ordering your non-mercury thermometers, please call Brian McDonald, EPS-REM, at 49-63712, or by email at [bnmcdonald@purdue.edu](mailto:bnmcdonald@purdue.edu).

Once your non-mercury thermometer(s) arrive, submit a “Hazardous Materials Pickup Request” (<http://www.adpc.purdue.edu/PhysFac/rem/home/forms/pickupfm.htm>) or (<http://www.adpc.purdue.edu/PhysFac/rem/home/forms/chemwaste.pdf>) for your old mercury thermometers. REM will remove these from your laboratory so they may be recycled.



REM collected and recycled these mercury thermometers from various campus departments.

# USA Patriot Act Has Gone Into Effect

The USA Patriot Act was passed on October 25, 2001, and signed into law on the following day (P.L. 107-56). Although implementing regulations have not yet been prepared, the Act is effective now. Several provisions, in particular Sec. 817, affect university research. Universities need to inform themselves of the relevant provisions and assess their current exposure and risk.

This Act contains several provisions that impact universities. The provision with the most immediate implications for research is Section 817, Expansion of the Biological Weapons Statute. The Antiterrorism Act of 1996 (P.L. 104-132) mandated CDC registration of laboratories that transfer or receive select biological agents (listed in section 72.6 of Title 42, Code of Federal Regulations) See table on this page. The Patriot Act amends the Biological Weapons statute (18 USC 175) and criminalizes possession of such materials of a type or in a quantity not reasonably justified by a bona fide research or peaceful purpose. In addition, it prohibits possession by “restricted persons” in a number of categories set forth in the Act. Below are suggested steps for universities to consider in assessing current risks with regard to the Patriot Act restrictions. A brief summary of other provisions in the Act with relevance to universities follows.

## Suggested Steps to Assess Current Risks:

1. Non-permanent residents from countries on the State Department’s list of countries that support terrorism are prohibited from transporting or possessing select biological agents. The seven countries currently on the State Department list are: Cuba, Iran, Iraq, Libya, North Korea, Sudan, and Syria. It would be prudent to determine if you have persons from any of those countries currently working with select agents. There are proposals in Congress to provide a waiver process for such individuals if it can be shown they are not a threat; but, at this time there are no exceptions to the prohibition.

2. Other “restricted persons” are also prohibited from transporting or possessing the select agents – this includes any individual who is:

- under indictment or has been convicted for a crime punishable by imprisonment for a term exceeding one year;
- a fugitive from justice;
- a user of illegal drugs;
- an alien illegally in the US;
- has been adjudicated as a mental defective or has been committed to any mental institution;
- has been dishonorably discharged from the U.S. Armed Services.

While the penalties under the Act are for the individual, it is reasonable to expect the government will, either with

regulations issued under this Act or in other legislation currently being considered, hold institutions at least partly responsible for any violations. Pending Senate legislation would place responsibility for background checks of individuals with the Justice Department, but other legislation being considered in the House would direct the DHHS Secretary to establish “personnel screening protocols.”

Please review the agents listed below and take the time to carefully review your stocks, inventories, storage areas, shelves, refrigerators, and freezers to identify any select agents you may have. If you have any of these agents, please notify Robert Golden at [rwgolden@purdue.edu](mailto:rwgolden@purdue.edu) or 49-41496.

## Select and Restricted Agents

Viruses	
Crimean-Congo Haemorrhagic fever virus	Eastern Equine Encephalitis virus
Ebola viruses	Equine Morbillivirus
Lassa fever virus	Marburg virus
Rift Valley fever virus	South American Haemorrhagic fever virus (Junin, Machupo, Sabia, Flexal, Guanarito)
Tick-borne Encephalitis complex virus	Variola major virus (Smallpox)
Venezuelan Equine Encephalitis virus	Viruses causing hantavirus pulmonary syndrome
Yellow fever virus	
Bacteria	
Bacillus anthracis	
Brucella abortus, B. melitensis, B. suis	
Burkholderia (pseudomonas) pseudomallei	
Clostridium botulinum	
Francisella tularensis	
Yersinia pestis	
Rickettsiae	
Coxiella burnetii	
Rickettsia prowazekii	
Rickettsia rickettsii	
Fungi	
Coccidioides immitis	
Toxins	
Abrin	Aflatoxins
Botulinum toxins	Clostridium perfringens epsilon toxin
Conotoxins	Ricin
Diacetoxyscirpenol	Shigatoxin Staphylococcal enterotoxin
Saxitoxin	T-2 toxin
Tetrodotoxin	

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# Brown University Agrees to Hazardous Waste Storage Settlement

By Bob Golden

**B**rown University has agreed to pay \$365,000 to settle an EPA complaint that it failed to properly store hazardous waste on campus and committed other environmental violations. Brown has more than 300 laboratories, studios and other work sites that use materials requiring special handling and disposal.

The complaint filed last year says the University violated laws governing

handling of hazardous waste and protecting water from oil pollution, dating to 1996. Nearly all the violations occurred at laboratories and waste storage facilities on the school's 143-acre Providence campus.

The EPA stepped up enforcement on campuses in 1999 and has taken action against the University of New Hampshire, the University of Rhode Island, the Massachusetts Institute of Technology and the University of Massachusetts-Amherst.

Always ensure that your laboratory hazardous waste storage meets the following criteria:

1. Waste is labeled with the constituents and percentages.
2. The container is in good shape and compatible with the contents.
3. The container is capped when not in use.
4. There is no excess accumulation of chemical waste in the waste area.

## Hazardous Materials Shipping at Purdue

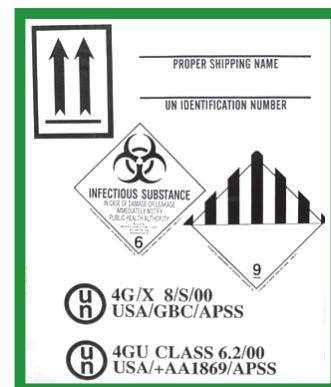
By Lanie Hazlewood

**E**ffective January 31, 2002, Lanie Hazlewood of REM will be providing the services of shipping hazardous materials off campus. Gayle Archer of Chemistry Stores in WTHR provided these services previously.

The goal of this service is to provide safe, compliant, and timely shipment of DOT hazardous materials. There can be significant penalties levied by the

Department of Transportation and the Federal Aviation Administration for failure to comply with hazardous materials shipping regulations.

Please contact me if you have any questions or concerns. I can be contacted by phone at 496-7367, pager 420-2647 or by e-mail [lhazlewood@purdue.edu](mailto:lhazlewood@purdue.edu). I look forward to helping with your hazardous material shipments.



REM is available to ship hazardous materials off campus for you.

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