REHS News

Rutgers Environmental Health and Safety

Introduction

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Welcome to the second edition of the Rutgers Environmental, Health and Safety (REHS) newsletter. We appreciate everyone's support to ensure safe and environmentally conscious culture at the University. If you have a suggestion for a future Environmental, Health or Safety article, please feel free to contact us through the Safety Suggestion Link on our website at http://rehs.rutgers.edu or by contacting us at (732) 445-2550.

In This Issue:

Check out all the links to each story by going to our website at http://rehs.rutgers.edu. There's something for everyone!

Radiation and Radioactive Materials at Rutgers University

Did you know that as a leading research institution, Rutgers University laboratories utilize a variety of radioactive materials and radiation-producing machines? Much of the research investigating cures for various forms of cancer, the mapping of the genome, how to grow disease resistant crops in the third-world, and nano-technology wouldn't be possible without radioactive materials or radiation producing machines. In contrast to sensationalistic images of Chernobyl or Three Mile Island, Rutgers University and hundreds of other universities use small amounts of radioactive materials in a responsible manner, for the betterment of society.

The University maintains licenses from both the Nuclear Regulatory Commission (NRC) and the New Jersey Department of Environmental Protection (DEP) that govern the safe and compliant use of these materials. REHS is responsible for the day-to-day elements of the radiation safety program. These responsibilities include: delivery of radioactive materials to the laboratories, quarterly inspections of all laboratories authorized to use radioactive materials, security, training of users, and the environmentally responsible disposal of low-level radioactive wastes. Perhaps the most important element of the radiation safety program is the oversight provided by the Radiation Safety Committee. This committee is composed of faculty members from various departments and geographic locations within the University as well as the Radiation Safety Officer and a representative of the Executive Vice President's office. The Committee is responsible to maintain the University policies for the use of radioactive materials, provide expertise on the use of radioactive materials, approve all uses of radioactive materials and conduct an annual audit of the radiation safety program.

If you would like to learn more about the radiation safety program, are a new faculty member anticipating utilizing radioactive materials in your research, or just have questions or concerns, please visit our website (http://rehs.rutgers.edu) and follow the "Laboratory Personnel"/"Radiation Safety" link. You may also call or email our University Health Physicist, Patrick McDermott, at 732-445-2550 or mcdermot@rehs.rutgers.edu.

Art Safety Program

It is important to consider the safety and environmental concerns when training or working in the Arts. Artists work with a variety of materials that can be hazardous, such as solvents, paints, adhesives and glazes. They must be aware of the properties, the exposure hazards, and protective equipment necessary to work safely with these materials.

Additionally, artists must consider the physical hazards associated with their projects. These include lifting heavy materials, use of sharp tools and the use of power tools.

To ensure safety when creating a project be sure to do the following

- Evaluate the work to be performed and tools used to determine the potential hazards.
- Plan how to do the job in a safe manner.
- Obtain a Material Safety Data Sheet (MSDS) for all chemicals, review it and follow safe handling instructions.
- Use the recommended personal protective equipment (see MSDS sheet).
- Identify the location of the eye-washes and/or safety showers.
- Utilize an area with adequate ventilation.
- Use the least hazardous material, which provides the desired effect.
- Know the emergency response numbers.
- Follow the manufacturer's directions when using chemicals & power tools.
- Limit dust exposures by wet wiping the area during work and after you are finished.

Set construction at New Theater on Douglas Campus

If you have questions or need more information, call REHS at 5-2550 or visit the REHS website at http://rehs.rutgers.edu.

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Lead Based Paint

Rutgers University provides housing to undergraduate students, graduate students, post-doctoral students, residence life staff, and visiting faculty. Some of the residents may have small children and may also live in housing that contains Lead Based Paint (LBP). REHS, in coordination with the Division of Housing, has developed mechanisms to notify residents of potential LBP hazards and to minimize the risk of exposure to LBP.

Housing built before 1978 may contain LBP. Lead from paint, paint chips, and dust can pose health hazards if not managed properly. Lead exposure is of particular concern to young children (age 6 and under) and pregnant women. Before renting pre-1978 housing, lessors must disclose the presence of known LBP and/or LBP hazards in the dwelling. Notification of residents is only required for apartments. Dormitories (single rooms) are not covered under the EPA lead based paint disclosure rule.

> *"Housing built before 1978 may contain lead based paint."*

You can reduce your risk of exposure by:

- Cleaning floors, window frames, windowsills, and other surfaces weekly
- Thoroughly rinsing sponges and mop heads after cleaning dirty or dusty areas
- Washing children's hands often, especially before they eat and before nap and bedtime
- Keeping children's play areas clean
- Keeping children from chewing on painted surfaces
- Cleaning or removing shoes before entering your home to avoid tracking in lead from soil
- Ensuring children eat nutritious, low fat meals that are high in iron and calcium

For more information about the Rutgers University's lead program please visit the REHS website at http://rehs.rutgers.edu/student_safety_lead.htm or the EPA website at http://www.epa.gov/lead/

Mercury Thermometer Exchange

Waste minimization is an important component to any environmental program. Minimization of waste has an environmental benefit and also can reduce operating costs. Here at our University, we employ a variety of techniques to minimize the generation of hazardous wastes.

One of these techniques is a mercury thermometer exchange program. Researchers can exchange their existing mercury thermometers with alcohol thermometers **at no cost to their department**. The most common replacement alcohol thermometers that we offer have a range from -20˚C to 150˚C. They are excellent for lab applications such as water baths, incubators, and refrigerators.

The following are the benefits of this program:

- Decrease use of mercury
- Minimize mercury spill clean-ups in labs, which results in less "down time", fewer exposures to mercury vapors and reduces waste generated from clean-ups.
- Cost reductions associated with mercury spill kits, spill cleanup costs, and disposal costs.

Currently in its sixth year after implementation, REHS has distributed over 4500 alcohol thermometers throughout the University. If you are interested in participating in this program, please contact REHS by phone at (732) 445-2550 or email at hazwaste@rehs.rutgers.edu. REHS will deliver your new thermometers and pick up your old mercury thermometers.

Air Pollution Control and Compliance

Rutgers maintains an air pollution control and compliance program. Because of our size and utilities needs, we are required to comply with the same regulations, as manufacturing facilities and power plants.

Our air pollution control and compliance program consists of the following:

- Maintaining an up-to-date inventory of all of our fuel burning equipment.
- Obtaining an air permit before we install any large fuel burning pieces of equipment, such as a boiler or an emergency generator.
- Maintaining fuel use records.
- Maintaining operating data for specific equipment.

Busch Campus Co-Generation Plant

Failure to properly meet any of the above-mentioned requirements can result in regulatory violations and penalties. These penalties can range from tens of thousands to hundreds of thousands of dollars. For more information about Rutgers air compliance program, please visit the REHS website at: http://rehs.rutgers.edu/ms_env_air.htm or call REHS at (732) 445-2550.

Asbestos Abatement Program

Every year Rutgers completes over 300 asbestos abatement projects. These projects are typically small scale, such as removing asbestos insulation from a section of pipe or removing asbestos containing floor tile. Occasionally the University will complete a large project, which may require that an area be closed for several work shifts.

Unfortunately, some asbestos removal projects may cause disruption for individuals working in the area. Before an asbestos project is to be completed REHS will notify the occupants and address any concerns or questions. REHS will inform the occupants of potential impacts on their work environments such as:

- Which areas cannot be accessed
- If electricity or HVAC systems impacted
- How we are protecting their health during and after the completion of the work

If you have any questions or concerns about our asbestos abatement program or any other health and safety topic, please call REHS at (732) 445-2550 or visit our website at http://rehs.rutgers.edu.

Asbestos abatement enclosure.

Shipments of Hazardous Materials and Dangerous Goods

If you ship a laboratory sample or specimen to a fellow researcher or ship a product back to a manufacturer, you may unknowingly be shipping a hazardous material (also known as a dangerous good).

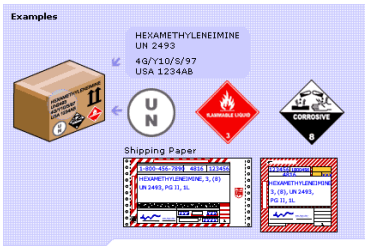
Many items may seem innocuous in small quantities; however, the U.S. Department of Transportation (DOT) and the International Air Transport Association (IATA) strictly regulate the transportation of hazardous materials, regardless of the quantities. These materials, when shipped by air, are subject to additional requirements.

Examples of materials that may contain potentially dangerous components are:

- Specimens preserved in ethanol
- Materials shipped on dry ice (hazardous or non-hazardous)
- Pesticides
- Paints, adhesives and cleaners (including household products)
- Equipment containing batteries
- Laboratory chemicals/samples
- Aerosols
- Genetically modified organisms (GMO's) such as plants and seeds

Fines for shipping hazardous materials incorrectly can be severe. The Federal Aviation Administration (FAA) recently proposed a $60,000 fine against a cosmetics company for improperly shipping a box containing three one-ounce bottles of perfume (a flammable liquid). The package was discovered leaking by the courier. The FAA cited violations for improper packaging, marking, classification, documentation, failure to train employees to properly handle and ship hazardous materials, and failure to have the required emergency information readily available.

The DOT and IATA require persons who ship hazardous materials to be properly trained. REHS has staff that are properly trained and experienced in national and international hazardous materials transportation regulations. REHS will assist university personnel with shipments of materials that fall under these regulations. If you or your department ship hazardous materials on a frequent basis, REHS can provide the appropriate training to designated personnel. For additional information, please contact REHS at (732) 445-2550 or hazwaste@rehs.rutgers.edu.



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Computer Collection Event

This past spring the Material Services Department worked with Facilities Operations and Services (FOS) and REHS to collect obsolete consumer electronics (computers, printers, copiers, fax machines, VCRs, stereos, televisions, and telecommunication devices) throughout the University. This program was developed in conjunction with Earth Day to promote the proper disposal of these items, which are regulated as Universal Waste by the New Jersey Department of Environmental Protection (NJDEP).

Campus	Items Removed
Busch	1645
Camden	150
College Ave.	408
Cook/Douglas	491
Livingston	288
Newark	85
Research Stations	53
Totals	3120

The University collected a total of over 3,000 individual pieces of obsolete consumer electronics equipment.

This event resulted in a win/win situation on many fronts. The removal of obsolete equipment throughout the University resulted in additional storage space. The combined efforts demonstrated environmental stewardship by sending these obsolete items for reuse and recycling. We promoted the concept of multiple departments working together with a common goal of improving the University. Additionally, many computers were redistributed within the university for use by students, faculty and staff.

CRT's and other electronic equipment must be disposed of properly.

If you have unwanted or obsolete computers or other consumer electronics, please contact material services at (732) 445-2255 to arrange for a pick up. For more information regarding the management of obsolete consumer electronics, please visit the Material Services website at http://www.material.rutgers.edu, the REHS website at http://rehs.rutgers.edu/ and the NJDEP website at http://www.nj.gov/dep/dshw/lrm/uwrcompu.htm.