REHS News

Rutgers Environmental Health and Safety

Woodlawn, Douglass Campus

Issue 9, December 2006

Welcome to the 2006 winter edition of the REHS Newsletter. This edition contains Environmental, Health & Safety (EHS) articles pertaining to Home Kitchen Safety, preparing your car for winter, using biodiesel at Rutgers, Noise and Hearing Conservation, Environmentally Friendly Green Cleaning in use at Rutgers, and the recent revision of the University's Contact Lens Policy. Additionally, you will find information about the upcoming Document and Media Shredding event. If you have a suggestion for a future EHS article, please feel free to contact us through the Safety Suggestion Link on our website at http://rehs.rutgers.edu or at (732) 445-2550.

Holiday Season Safety Tips from the National Safety Council

http://www.nsc.org/library/facts/holseasn.htm

Making our world a safer place

Check out the National Safety Council's website at http://www.nsc.org for links to many other safety programs.

Home Kitchen Safety

As you gather with friends and family for the holidays, we would like to offer the following kitchen safety tips:

General Safety

- Post emergency numbers in visible areas.
- Be careful to prevent steam burns when removing covers from microwaved food/pots.
- Make sure all knives are properly sharpened.
- Always turn pot handles inward and keep hot items from the edge of counters to prevent small children from reaching them.
- Keep your hot water heater set at 120 degrees Fahrenheit to prevent scalds from hot tap water.
- Sanitize food preparation surfaces after preparing food that can carry harmful bacteria (i.e. seafood, poultry).
- Fully cook all meats. Use a thermometer to ensure proper temperature.
- Do not leave food (that need to be refrigerated) out for more than two hours.
- Utilize child safety latches on cabinets where chemical and cleaners are stored.
- Install childproof electrical outlet covers.

Fire Safety

- Make sure the batteries in your smoke detectors and carbon monoxide detectors are changed every 6 months.
- Maintain access to properly charged fire extinguishers (ABC dry chemical extinguishers are recommended).
- Do not leave food cooking unattended.
- Ensure that all combustible items, such as dishtowels, paper or plastic bags, curtains, etc., are kept at least three feet away from open flames or heat sources.

Electrical Safety

- Countertop electrical outlets should have Ground-Fault Circuit Interrupters (GFCIs) to prevent electrical shock.
- Check the electrical cords on all kitchen appliances to make sure they are in good condition. If an electrical cord is deteriorated, it should be replaced or the appliance discarded.

The following links are good resources for home kitchen safety:

U.S. Food and Drug Administration's Food Safety site: http://www.cfsan.fda.gov/~lrd/advice.html#prepare

Home Safety Council: http://www.homesafetycouncil.org/index.aspx

Inside this issue:

Home Kitchen Safety	1
How to Prepare Your Car for Winter	2
Document and Media Shredding Event	2
Biodiesel at Rutgers	3
Noise and Hearing Conservation	3
Environmentally Friendly, Green Cleaning	4
Revision to the University Contact Lens Policy	4

R R R R R R R R R R R R R R R R R R R R R R R R R R

How to Prepare Your Car for Winter

Preparing your car for winter weather can prevent accidents and ensure the safety of you and your passengers. The following suggestions will help you prepare for driving this winter:

Windshield Visibility

- Check your windshield washer fluid and make sure it is full at the beginning of the winter.
- Use windshield washer fluid at full strength to avoid freezing.
- Replace windshield wipers if they are worn and not properly clearing the windshield.
- Test your defrosters (front & rear) to ensure they are functioning properly.

Tires and Traction

- Make sure your tires have plenty of tread left on them.
- Check your tire pressure to make sure it is at the recommended range for your vehicle and loads.
- Inspect your spare tire to see if it's inflated properly and check that you have all the necessary tools to change a flat tire.
- Store a collapsible shovel or snow shovel and some kitty litter for added traction in your trunk.

General Precautions

- Keep your gas tank more than ½ full when storm events are approaching. This will prevent you from running out of gas if you are stuck in traffic for an extended period.
- Make sure your antifreeze reservoir is full and adequate to protect your car in colder weather.
- Avoid staying in your car for long periods with the engine running and make sure the tail pipe is cleared of snow. This will prevent high levels of carbon monoxide from building up in your car.
- Remove snow from the roof of your car to avoid the snow and ice from flying into other vehicles.

Compile an emergency kit for your car with the following items:

- Cell phone
- Flashlight
- Jumper cables
- An ice scraper (the type with a thin brass blade works very well)
- An extendable broom/scraper combination to reach across roofs & windshields
- A blanket and warm clothes including gloves, hat and boots
- A can of lock de-icer (this is best stored in the garage so it's not locked in a frozen vehicle)
- Warning devices (i.e. flares, reflectors)

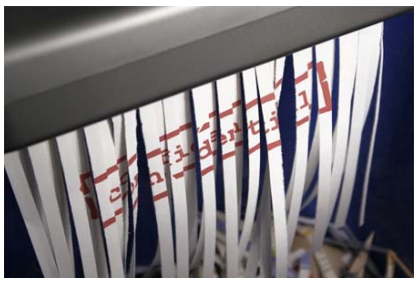
These simple steps can ensure that you and your car are well prepared for winter travel.

Document and Media Shredding Event

To promote recycling and to ensure documentation is properly destroyed, the University is planning a document and media shredding event. This event is planned for the first two weeks of February 2007 in conjunction with the Recycle Mania competition, (http://www.recyclemaniacs.org). This event will be provided at no cost to your department and will include the following media types:

- Paper
- CD's/DVD's
- Floppy Disks/Diskettes
- Zip Disks
- Magnetic Tape (Reels & Cassettes)
- VCR tapes
- Microfiche/Microfilm

Special arrangements can be made for shredding confidential documents/media or if you must witness your items being shredded. To participate, you must complete the online survey before the holiday break at the following link http://www.rci.rutgers.edu/~rehs/forms/shred.php. The survey can also be accessed through the REHS website at http://rehs.rutgers.edu/.



GET YOUR FREE DOCUMENT SHREDDING INFORMATION AT
http://www.rci.rutgers.edu/~rehs/forms/shred.php

R R R R R R R R R R R R R R R R R R R R R R R R R R

Biodiesel at Rutgers

The term Biodiesel refers to any diesel fuel that contains some content from a biological source. Biodiesel can be made from various plants, such as soybeans, or from processed food wastes, such as used cooking oils. Biodiesel has the following two primary advantages over conventional diesel fuel:

- It burns cleaner than conventional diesel, which results in less air pollution
- It contains domestic renewable fuel, which helps us reduce our dependence on fossil fuels, especially foreign oil

How biodiesel is used in vehicles depends on the type of biodiesel. In order to use "neat" or 100% biodiesel, certain modifications must to be made to a vehicle. Because biodiesel gels at a much higher temperature than regular diesel, it must be heated before using it. Most vehicles using 100% biodiesel usually are started and run on regular diesel until they warm up and then switched over to 100% biodiesel. Also biodiesel is corrosive to most metal parts, such as fuel lines and gas tanks. These parts must be replaced with either stainless steel or plastic. For this reason, it is only practical to use 100% biodiesel in certain limited applications.

A more practical approach to using biodiesel is to mix it with conventional diesel fuel. A mixture of 20% biodiesel with 80% petroleum based diesel has been found to be an ideal mixture that offers the advantages of biodiesel without requiring any modifications to the vehicles using it. This mixture, called B20, produces 30% less unburned Hydrocarbons, 20% less Carbon Monoxide and 15% less Particulate Matter (soot) as compared to conventional diesel fuel. This mixture is commercially available and is comparable in price to regular diesel fuel.

Several individual departments at the University have already used B20 biodiesel including REHS, Material Services and the Bridgeton Research farm. Based on the positive experiences of these departments, the university has filled the main diesel tank on Busch campus with B20 biodiesel for use in all University vehicles. A University contract has been established, which enables departments with their own diesel tanks to purchase B20 biodiesel.

More information about biodiesel can be found at http://www.biodiesel.org/. If you have specific questions regarding the University's use of biodiesel, please contact Rich Bankowski at (732) 445-2550.

Noise and Hearing Conservation

The Rutgers Occupational Noise and Hearing Conservation Program establishes minimum requirements to protect University employees from harmful noise exposures.

The program addresses noise exposures that are greater than or equal to 85 decibels ("A" weighing scale (dBA), averaged over an 8-hour time period). Noise at these levels is capable of causing hearing loss. How loud is 85 dBA? As a rule of thumb, if you have to shout to have a conversation with somebody 3 feet away from you, then the noise level is at or above 85 dBA. Work activities with noise exposure above this level include landscaping (mowing grass, street sweeping, leaf collection), heating plant operations and dishwashing (University dining halls).
If you think your workplace is noisy, please call REHS at (732) 445 – 2550 to request and schedule a noise survey. We have survey meters to measure the noise levels in a particular location, as well as noise dosimeters to measure an individual's noise exposure throughout his/her workday. Once REHS determines an employee must participate in the University Hearing Conservation Program, both the employee and his/her supervisor must fulfill their responsibilities as identified in this program.

Supervisor responsibilities include the following:

- Purchasing the proper hearing protection
- Enforcing the use of hearing protection
- Ensuring employees attend annual training sessions
- Ensuring employees receive annual hearing tests

Employee responsibilities include the following:

- Selecting the proper hearing protection
- Ensuring their hearing protection fits correctly
- Wearing their hearing protection while performing their work activities

Both the REHS and the Occupational Health Department administer the Hearing Conservation program. For more information or to review a copy of the program, please visit http://rehs.rutgers.edu/ms_noise.htm. If you have questions about this program please contact Tom Block at (732) 445-2550 or tblock@rehs.rutgers.edu.

Typical Noise Levels	Quiet Office = 40 dBA	Subway = 90 dBA	Woodworking Tools = 110 dBA
	Busy Street = 60-70 dBA	Fire Alarm = 85-120 dBA	Airplane Jets = 150-160 dBA

R R R R R R R R R R R R R R R R R R R R R R R R R R R

Environmentally Friendly, Green Cleaning

In 2005, Facilities Operations and Services (FOS) formed a team (Rutgers Facilities Green Cleaning Product Evaluation Team) to evaluate the cleaning chemicals being used, their hazards and impact on the environment.

The goal of the team was to evaluate and choose cleaning chemicals that were:

- Environmentally friendly (green cleaning)
- Less hazardous to employees using the chemicals
- Able to adequately maintain the facilities

The team invited seven major manufacturers to present their "green" cleaning and floor care product lines. Each manufacturer was given the opportunity to present their products to the team. Each manufacturer also provided us with samples of their products and how the chemicals would be mixed and dispensed so that we could effectively evaluate their products.

Over the course of three months, these products were tested and evaluated on the following:

- Environmental impacts – Associated with use and waste (all products had to receive the Green Seal Rating, at a minimum)
- Sustainability - Renewable resource content (petroleum based vs. bio-based)
- Safety - HMIS/NFPA health rating scale
- Cleaning quality – Ability to adequately clean the facilities
- Practicality – Dispensing, ease of use
- Cost stability – Price fluctuation depending on content

At the end of the process, Rochester Midland was selected as our vendor of choice and "Green Cleaning" began in the Fall Semester 2006.

Information from this process was shared with University Housing and Athletics, who quickly began using the same chemicals.

We would like to acknowledge all the employees and departments who participated in the evaluation and implementation of "Green Cleaning" at the University. In particular, we would like to thank Dianne Gravatt and all the members on the Green Cleaning Product Evaluation Team: Tom Cunningham, Walter Zieser, Al Lewis, and Dave DeHart.

Revision to the University Contact Lens Policy

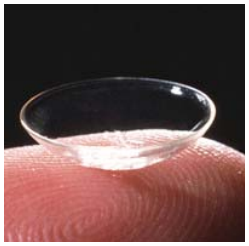
Historically, people have been prohibited from wearing contact lenses in chemical environments, especially in the industrial and laboratory work settings. This prohibition was based upon the opinions and best medical judgment of healthcare professionals concerned with absorption and adsorption of chemicals to the contact lens surface, as well as complications to emergency treatment in response to chemical splashes in the eye.

In June 2005, the National Institute for Occupational Safety and Health (NIOSH) issued a bulletin (#59) that recommends workers be permitted to wear contact lenses when handling hazardous chemicals, and provides workers with a greater choice of eye and face protection as well as improved visual acuity. However, this recommendation applies only if:

- Employers follow the specific guidelines contained within the Bulletin
- Contact lens use is not banned by other regulations
- Contact lens use is not contraindicated by medical or safety recommendations

The Rutgers Laboratory Safety and Design Committee, comprised of tenured faculty and staff members, reviewed and revised the university policy on contact lens use in the laboratory. To summarize briefly, the committee recommends the continued use of prescription eyewear with chemical splash goggles while working in the laboratory. However, laboratory workers may wear contact lenses if *all* of the following conditions are met:

- The principal investigator, chemical hygiene officer, or laboratory director must enforce the use of appropriate eye protection, regardless of contact lens use, in the lab



- Regulations do not prohibit the use contact lenses
- The principal investigator or chemical hygiene officer does not prohibit the use of contact lenses in the Chemical Hygiene Plan for the lab.

To read the full text of NIOSH Bulletin #59, as well as the revised university contact lens policy, go to the REHS website at http://rehs.rutgers.edu/. For specific questions or assistance on the use of contact lenses in the workplace, call Thomas Block of REHS at (732) 445-2550.