Welcome to the 2008 Winter edition of the REHS Newsletter. 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](http://rehs.rutgers.edu) or at 732-445-2550.

### Material Safety Data Sheets

A Material Safety Data Sheet (MSDS) or Hazardous Substance Fact Sheet (HSFS) provides vital information for anyone working with chemicals, whether you are working with chemicals in a laboratory, cleaning a facility or working with chemicals at home.

An MSDS, which is produced by the chemical manufacturer or supplier, is a document that contains health and safety information about the specific product including:
- Health hazards associated with the material;
- How to prevent exposure or injury;
- Signs of overexposure;
- What Personal Protective Equipment (PPE) to use;
- How to dispose of the material; and
- What to do in the event of an emergency (spills or overexposure).

MSDSs should be readily available in the workplace (hardcopies or online access). If you are unsure of how to obtain an MSDS, ask your supervisor. The following websites are additional MSDS resources:

#### REHS Website
[http://rehs.rutgers.edu/rehs_msdsinfo.htm](http://rehs.rutgers.edu/rehs_msdsinfo.htm)

#### Fisher Scientific- MSDS Website

#### MSDS Search
[http://www.msdssearch.com/DBLinkSN.htm](http://www.msdssearch.com/DBLinkSN.htm)

#### National Institutes of Health- National Library of Medicine

Hazardous Substance Fact Sheets or HSFS are produced by the NJ Department of Health and Senior Services (NJDHSS) and are prepared for substances on the NJ Right to Know Hazardous Substance List. HSFSs are similar to MSDSs in that they provide similar chemical information as an MSDS. HSFSs are only produced for pure chemicals such as acetone, ethanol, etc. Over 1,700 HSFS can be readily accessed on the NJDHSS website [http://web.doh.state.nj.us/rtkhsfs/indexfs.aspx](http://web.doh.state.nj.us/rtkhsfs/indexfs.aspx) or through REHS. There are also over 600 HSFS that can be found in Spanish.

If you are concerned about exposures to chemicals in your workplace or you would like additional information about MSDSs or HSFSs, please contact REHS at (732) 445-2550.
Call Before You Dig

Before you begin any excavation, there are three questions you should ask before digging:

- Should I call for a Mark-Out?
- Will this excavation require Erosion Control?
- What type of controls should I implement for General Safety?

Regardless if you are a homeowner or contractor, you must call for a utilities mark-out before you dig. Digging for a mailbox post or tree could disrupt vital utilities and endanger your life. The organization to call is referred to as NJ-1 Call and the number is 1-800-272-1000. The service is free and this “one call” will ensure proper notification to the appropriate utilities for your location.

You must allow three days after your call for the various utilities to complete their mark-outs. For more information about NJ-1 Call, visit their website at www.nj1-call.org.

They will code the mark-outs according to the following colors:

<table>
<thead>
<tr>
<th>Color</th>
<th>Utility</th>
</tr>
</thead>
<tbody>
<tr>
<td>RED</td>
<td>Electric</td>
</tr>
<tr>
<td>YELLOW</td>
<td>Gas, Oil, Steam</td>
</tr>
<tr>
<td>ORANGE</td>
<td>Communications, CATV</td>
</tr>
<tr>
<td>BLUE</td>
<td>Water</td>
</tr>
<tr>
<td>GREEN</td>
<td>Sewer</td>
</tr>
<tr>
<td>WHITE</td>
<td>Proposed Excavation</td>
</tr>
</tbody>
</table>

For properties located within Rutgers University New Brunswick and Piscataway campuses, calling NJ-1 Call will notify the Rutgers Utilities Departments, who will complete the mark-outs.

Some larger excavations require erosion control. Generally, any project which will disturb more than 5,000 square feet of land (surface area) will require a Soil Erosion & Sediment Control Plan. This plan outlines how the project will prevent soil from being washed into streams, or into roadways or adjacent properties. In New Jersey, these plans are administered by the Freehold Soil Conservation District (Freehold SCD). For additional information about erosion control in New Jersey, please visit the Freehold Soil Conservation District website at http://www.freehold-scd.org/CHPT251.HTM.

Excavation sites pose many safety hazards including falls, collapse, hazardous atmospheres, or utility hazards (i.e. electrical lines). To help protect yourself and others ensure the following:

- Call in advance for utility mark-outs;
- Secure the perimeter with safety fencing and controlled access points;
- Utilize trench shoring as necessary to prevent collapse;
- Keep excavated material and fill away from the edge of the excavation; and
- Ensure adequate egress from the excavation.

For additional information pertaining to excavation safety please contact Alex Ruiz of REHS at aruiz@aps.rutgers.edu or (732) 445-2550.

Sustainability Measurement Program

The common definition of sustainability is “development that meets the needs of the present without compromising the ability of future generations to meet their own needs”. This concept has been implemented in many settings such as industry, government and education. As this concept has evolved, it has become necessary to measure an organization’s sustainability. Various sustainability measurement tools currently exist, although most of them are not relevant to colleges and universities. Fortunately, The Association for the Advancement of Sustainability in Higher Education (AASHE) has taken on the challenge to develop a tool specifically for colleges and universities. This tool is called STARS, which is an acronym for The Sustainability Tracking Assessment and Rating System.

STARS is a voluntary, self-reporting framework for gauging relative progress toward sustainability and is designed to:

- Provide a guide for advancing sustainability in all sectors of higher education;
- Enable meaningful comparisons over time and across institutions by establishing a common standard of measurement for sustainability in higher education;
- Create incentives for continual improvement toward sustainability;
- Facilitate information sharing about higher education sustainability practices and performance; and
- Build a stronger, more diverse campus sustainability community.

Rutgers has joined with over 90 other colleges and universities to take part in a “Pilot” or “Beta” testing of the STARS program. In the STARS program, points are awarded in the following three categories:

- Education and Research
- Operations
- Administration and Finance

Under these headings are approximately 100 separate questions concerning programs and procedures that relate to Sustainability. Points are allocated for each of these questions with a total of 177 points. To receive points for a specific question, you must demonstrate that the policy or procedure meets specific sustainable criteria. The results of this pilot study will be analyzed in order to validate the STARS tool and modify it, where necessary. We plan to have the Rutgers sustainability information entered into the system and scored by the end of this year.

Information about the STARS program can be found on the AASHE website at http://www.aashe.org/stars/. If you have questions pertaining to sustainability measurement, please contact Rich Bankowski of REHS at (732) 445-2550.
Biosafety 101

Biosafety specifically deals with the safe handling of potentially dangerous biological materials. Biological materials of concern include pathogenic viruses, bacteria, fungus and human tissues (blood, cells, etc.). Primarily, we are concerned with the effects of biological agents on humans, although plant and animal pathogens are also of concern.

Based on the hazards associated with it, a specific biological agent is assigned one of four biosafety categories:

- **Biosafety Level 4 (BSL-4)** These are the most dangerous biological agents because these agents currently have no vaccine or other means of disease prevention should an individual be exposed to it and usually cause fatal disease in humans. There is no BSL-4 work is performed at Rutgers;
  - **BSL-3** These are very similar to BSL-4 except they are not always fatal;
  - **BSL-2** These agents can make you sick under the right circumstances, but illness due to exposure to these agents can be prevented through vaccination or cured easily with medication or the body’s natural defenses; and
  - **BSL-1** Organisms in this category are not known to cause ill effects in a healthy person and can be worked with on the open lab bench.

Currently at Rutgers, research is limited to BSL-1 and BSL-2. Researchers working with BSL-1 materials are required to follow general work practices and properly manage their waste. Individuals working with BSL-2 materials at Rutgers are required to:

- Have their protocol(s) approved by the Rutgers Biosafety Committee;
- Employ specific work practices in accordance with the *Biosafety in Microbiological and Biomedical Laboratories (BMBL, 5th Edition)*; and
- Use the applicable Personal Protective Equipment (PPE), such as gloves, lab coats, safety glasses and biosafety cabinets. (Additional information about repair and certification of biosafety cabinets at Rutgers can be found at [http://rehs.rutgers.edu/ls-bio_cabpol.htm](http://rehs.rutgers.edu/ls-bio_cabpol.htm)); and
- Properly autoclave and dispose of waste as outlined in the Rutgers Medical Waste policy which can be found at [http://rehs.rutgers.edu/pdf_files/biowaste_policy.pdf](http://rehs.rutgers.edu/pdf_files/biowaste_policy.pdf).

If you have questions about Biosafety at Rutgers, please contact Greg Lupinski at (732) 445-2550 or visit the REHS website at [http://rehs.rutgers.edu/lsbio.htm](http://rehs.rutgers.edu/lsbio.htm).

Shipping Hazardous Materials at Rutgers

Many common items are considered “hazardous materials” or “dangerous goods” when they are shipped via ground or air transportation. These hazardous materials are regulated by government agencies and anyone shipping them, including university faculty and staff, are required by law to:

- Attend an initial training session and refresher training every two years thereafter;
- Properly identify, package, mark and label the materials;
- Complete the necessary shipping papers; and
- Retain the shipping papers for 2 full years.

The university has an extensive Department of Transportation (DOT) and International Air Transport Association (IATA) compliance program. Here are a few facts about the university's DOT/IATA program:

- Over 250 university staff have received hazardous materials and dangerous goods shipping training;
- The university completes approximately two shipments of dangerous goods daily; and
- Shipments containing dry ice are the most common type of dangerous goods shipment at the university.

REHS will provide shipping assistance for university faculty and staff that ship infrequently. If you need assistance please contact REHS at (732) 445-2550. All individuals who ship frequently are required to attend a training course. This includes, but is not limited to, the following (including materials returned to the manufacturer):

- Specimens preserved in ethanol or formalin;
- All materials shipped on dry ice;
- Pesticides, paints, adhesives and cleaners (including household products);
- Equipment containing certain types of rechargeable batteries (i.e. lithium, NiCad, and other rechargeables);
- Laboratory chemicals/samples (i.e. flammable, toxic or corrosive);
- Aerosols;
- Radioactive materials;
- Infectious substances; and
- Genetically modified organisms (GMO’s) such as plants and seeds.

If you would like specific information about the university's training program or register for training, please contact Dave Dzubina of REHS at (732) 445-2550 or visit the REHS website at [http://rehs.rutgers.edu/lsbio.htm](http://rehs.rutgers.edu/lsbio.htm).
Integrated Pest Management

Integrated Pest Management (IPM) is an effective and environmentally sensitive approach to pest management. IPM programs use current, comprehensive information on the life cycles of pests and their interaction with the environment. This information, in combination with available pest control methods, is used to manage pest damage by the most economical means, and with the least possible hazard to people, property, and the environment.

The IPM approach can be applied to both agricultural and non-agricultural settings, such as the home, garden, school and workplace. IPM takes advantage of all appropriate pest management options including, but not limited to, the judicious use of pesticides. In contrast, organic food production applies many of the same concepts as IPM but limits the use of pesticides to those that are produced from natural sources, as opposed to synthetic chemicals. IPM is beneficial for the environment by the following:

- Limits the quantity of residual pesticide in soil and stormwater;
- Minimizes the pesticides used in food production; and
- Reduces the consumption chemicals necessary to produce pesticides.

The Environmental Protection Agency (EPA) is encouraging school officials to adopt IPM practices to reduce children's exposure to pesticides. Since children spend so much of their day at school, integrated pest management provides an opportunity to create a safer learning environment for students. New Jersey has adopted IPM regulations for K-12 schools, which includes:

- Designation of an IPM Coordinator;
- Recordkeeping of pesticide applications;
- Use of low impact pesticides;
- Annual notice about pesticide use at the school;
- 72 hour prior notification and, posting of areas for non-low impact pesticides; and
- Control when students re-enter pesticide treated areas, (minimum of 7 hours).

Additional information related to IPM in Schools can be found at http://www.epa.gov/opp00001/ipm/ and http://www.nj.gov/dep/enforcement/pcp/ipm-intro.htm

The EPA funded a project to create an educational video to help people implement IMP concepts with their residential use of pesticides. This was a collaborative effort which included staff from Rutgers University. The product of this collaboration is a video titled “Arrest the Pests in Your Nest” which can be viewed at http://njaes.rutgers.edu/environmentalhealth/arrest-pests.asp.


Safety Observance Calendar

**Tie One on for Safety Campaign** Nov 25 - Dec 31
Sponsored by Mothers Against Drunk Driving madd.org

**3D Month - National Drunk and Drugged Driving Prevention Month** December 1 - 31
Sponsored by the National Highway Traffic Safety Administration (NHTSA) nhtsa.gov