



notes

ENVIRONMENTAL HEALTH and SAFETY

Electronic Pick-Up Request Forms

Let's just state this up front in the first sentence: the ability to submit Pick-Up Request Forms (PURFs) to EHS via the web is finally here. As many Registered and Authorized Users (RUs and AUs) know, EHS has been working behind the scenes for some time to create an electronic method for submitting PURFs to EHS. And we're pleased to launch the final product.

The WebPURF, as we're calling it, integrates all three PURF forms into one interface. To access the feature, follow the link from the EHS PURF Page (<http://ehs.missouri.edu/haz/purf.html>). RUs and AUs will need to login with their PawPrint name and their EHS password. First time users will just need their employee ID to set up an EHS password. (It should be noted that the system requires Internet Explorer 6 or higher or Firefox 1.5 or higher and pop-up blockers to be disabled. Macintosh users should not use Safari, the default Mac browser.) The reason for using an EHS password instead of the PawPrint password is to give RUs and AUs the option of providing their EHS login information to others in their workplace (for access to the WebPURF on their behalf), without compromising the security of the RU/AU's PawPrint password.

Users entering the system under an RU's PawPrint/EHS Password will see the electronic equivalents of the Unused Materials PURF and Used Materials PURF. The user will select a PURF type and will be presented with a web-form that mimics the paper based one. The user will select his/her name

from a drop down list. The user's name may not be listed for one of two reasons: either EHS doesn't have record associating the user with the RU, or the user's training is not current. In either event, there is a contingency to tell EHS who you are so we can update our records internally. The user will also select the pickup location from the RU's registered locations.

Upon entering the system under an AU's PawPrint/EHS Password, a user can select the electronic equivalent of the Rad PURF, enter his/her name and select from the AU's registered locations. Only the isotopes for which the AU is authorized will be available on the form, and activities entered will be checked against the AU's real-time inventory to avoid errors.

The remainder of all forms, while electronic, is similar to the paper equivalents. Once submitted, the user can print a copy to retain, while the RU/AU and EHS will receive an electronic copy of the PURF. We think campus will welcome this enhancement to the unwanted materials management program at Mizzou.

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Todd Houts
Assistant Director, EHS



Director's Desk

EHS Hard at Work

Serving the Campus

I have recently been working on the EHS annual report. Each time I do this, I am impressed with the variety and amount of activities of my staff. I would like to use this column to share some of that information with you.

Training is one of the most common reasons people have contact with EHS. In FY07, EHS staff presented 384 courses serving 3,860 persons. The top three courses by attendance were: Chemical Management for Chemical Workers, CPR & First Aid, and Asbestos Ancillary Awareness, all of which were attended by more than 300 persons.

Most of our time is spent providing support to research laboratories for biological, chemical, and radiation safety issues. We have identified approximately 174 Authorized Users of radioactive materials, 568 Registered Users of hazardous (chemical) materials, and 164 Biosafety Users of biological materials. Although some of these people are the same, that's a lot of users. Since some researchers have more than one laboratory, we estimate that MU has over 1,000 laboratories. We have identified over 3,000 rooms associated with laboratories where hazardous materials of various types are used or stored. We have a goal of visiting all these rooms at least once a year and we are required to visit some of these four times per year. Some other numbers of interest are that EHS processes about 10,000 dosimetry badges each year to monitor exposure to radiation; we annually service over

2100 requests for pickup of unwanted hazardous materials; and we annually track over 1000 persons who work with research animals to assess potential hazards from this work.

EHS also serves as the liaison with a number of regulatory agencies to keep the campus in compliance with applicable regulatory programs. The biggest effort is compliance with asbestos regulations; we process over 1500 asbestos samples annually to determine the presence of asbestos and make sure that remediation projects have been thoroughly completed. We also work with various campus units to maintain compliance with air permits, storm water permits, land disturbance permits, lagoon regulations, drinking water regulations and underground tank regulations.

If you eat on campus, you can feel confident about food safety because our sanitarian conducts over 200 inspections each year of food service facilities, over 400 inspections a year of food concessions, and issues over 400 temporary food permits for specific events. The sanitarian also inspects all the pools, including therapy pools, once a month when they are open.

I haven't mentioned fire safety or worker safety programs, or some of our miscellaneous activities like emergency preparedness (and in some cases, emergency response), hazardous materials transportation compliance, and pedestrian safety.

There is truly never a dull moment around EHS. However, as impressive as these numbers are, the campus would not be a safe place without everyone taking responsibility for safety. Remember, EHS is your resource for safety—please use us.

Peter Ashbrook

Laser Printer Emissions

In August, a team of Australian scientists made headlines when they published a paper on the emission of ultrafine particles (UFP) from laser printers. The researchers measured emissions from 62 printers, which are commonly used in the United States and around the world. Their results showed that 40 percent of the printers tested produced measurable levels of UFP.

In cities where outdoor air pollution is significant, UFP have been shown to cause respiratory problems for people with existing disease. Urban air, however, is a complex mix of pollutants and is not likely to be representative of emissions from laser printers. While the Australian scientists measured the number of particles emitted from the printers, they did not attempt to determine the makeup of those particles.

At this time, there have been no product recalls by the Consumer Product Safety Commission nor have there been any advisories to stop using office printers by either the Occupational Safety and Health Administration or the Environmental Protection Agency. EHS continues to recommend that printers be used according to manufacturers' recommendations.

Dennis Elmore

Manager, Industrial Hygiene/
Occupational Safety

New Biosafety EHT

Mary Reichel joined the Biosafety Section full-time this past November as an Environmental Health Technician. Mary brings extensive EHS experience, organizational and interpersonal skills to the Biosafety Program, having previously supported the Program as part of her duties as an EHS Administrative Associate. Please welcome her in her new role at EHS!

NRC Jurisdiction Expanded

In November of 2007 the Federal government placed into law a new rule concerning the "Expanded Definition of Byproduct Material" effectively putting the jurisdiction of all forms of Radioisotopes under the United States Nuclear Regulatory Commission (NRC). This new rule placed what was previously considered State regulated discrete forms of Naturally Occurring (e.g. Radium, Uranium, Thorium) and Accelerator produced (e.g. Medical Thallium, Fluorine, Germanium, etc) Radioactive Material (NORM) and (ARM) in the same NRC regulatory oversight category as Special Nuclear Material and reactor produced Byproduct Material. Due to the nature of our Broad Scope license, MU was not drastically affected i.e. no immediate laborious and expensive amendments of our license. However, from this point forward, this new expanded definition rule may affect some of your operations because of how EHS conducts our Radioactive Material inventory, how we maintain security for all forms of Radioactive Material, and more importantly the proper handling and dose reduction ALARA techniques for all types of discreet NORM, ARM or Byproduct Radioactive Material used on MU's campus and at the hospitals.

Note, these changes in NRC jurisdiction do not affect diagnostic and therapeutic machines that produced radiation (CT's, Mammography, General x-ray, LINAC's) as the state of Missouri's Radiation Control Program of the Department of Health & Senior Services will still regulate those machines.

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It's Picnic Time!

We're coming into that nice time of year when our thoughts turn to grilling and eating outdoors. Here are a few tips on how to maximize your safety while still getting to enjoy the great outdoors. To begin with, there is nothing you can prepare in a kitchen that you can't prepare in the outdoors. I have done full turkey Thanksgiving dinners complete with rolls, mashed potatoes and gravy and all the other accoutrements that you have with a traditional Thanksgiving dinner. A few safety rules will keep eating in the outdoors safe.

The first is temperature. This means the temperature of the air and the temperature of your food. The warmer it is outdoors, the more preparation you need to do to keep your foods safe. For food the temperature danger zone is from 41°F to 140°F. What that means is to try to keep your food temperatures outside of this range. To this end, hot holding is $\geq 140^\circ\text{F}$ and cold holding is $\leq 41^\circ\text{F}$. The temperature danger zone is where bacteria reproduce and grow the best.

EHS appreciates campus support of environmental and safety issues. If you have any special needs regarding the format of this publication, or have any comments regarding newsletters, training programs or services, please direct your communications to Rebecca Bergfield, Editor at the above address.

Mayonnaise is one of the problems. You have it on sandwiches, in salads like potato and macaroni and other foods. It is made with eggs and is susceptible to bacterial growth. Be sure to keep those products on ice as much as possible. Set those salads out in a larger bowl of ice to help keep them cool. Keep the jar of mayo on ice along with other ingredients and make sandwiches fresh. Of course you can pre-make the sandwiches and put them in the cooler.

When grilling meats, be sure to fully cook them, especially hamburgers and brats. Due to the grinding process in the manufacture of ground beef and brats, as well as other ground meats, a more potentially hazardous product is produced. They should be cooked to a minimum of 160°F before serving. Extra food, not served immediately, need to be kept hot or placed in the cooler.

Keep all foods under the proper temperatures to prevent contamination and possible food-borne illness. If you have questions or concerns on anything, please drop me a line at fancherr@missouri.edu.

Richard Fancher
Sanitarian