



Environmentally Speaking

University of Georgia
Environmental Safety Division

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Winter 2007

What's New at ESD?

ESD would like to introduce and welcome a new employee to the UGA campus. Welcome Elizabeth (Beth) Maples to ESD.



Beth started to work at ESD on Dec. 5, 2006 as an environmental safety specialist. Her job description includes environmental health issues such as food inspections,

animal bites, pool inspections, etc.

She lives in Flowery Branch, Georgia with her husband. They moved to Georgia from San Diego, California.

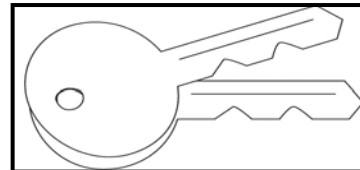
Beth received her BA in Environmental Analysis and Design from the University of California, along with a minor in Epidemiology and Public Health. She received a MS in Clinical Psychology from Vanguard University of Southern California.

Beth was employed at the University of California, San Diego, as a safety officer for the Department of Bioengineering from 2001-2005, then became the campus emergency services coordinator under the Environment, Health and Safety Department in 2005-2006, before coming to UGA.

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**Winter Weather Info...
Space Heaters
and
Kerosene Heaters
Are PROHIBITED
on Campus.**

FYI – Key Control As Viewed by ESD



The control of keys that are utilized by our personnel is one of the most important functions that we do on any given day. There is a sense of trust and responsibility that goes with the keys given to individuals to do their jobs. Personnel who misuse or misplace or lose keys assigned to them to safeguard and use could be subject to possible disciplinary action.

What happens when keys are lost? First, you immediately let your manager/supervisor know. A thorough search of the area is conducted, checking everywhere where the keys may have been left. It is important for you to know exactly what keys were lost and the areas/doors they open.

If a building key (outside door) is lost, then the Physical Plant's Operation Maintenance department will take the lead to see exactly what locks must be changed and provide an estimate of the costs involved. The average cost to install a new cylinder and re-key a door is approximately \$150.

We must emphasize the requirement to control our keys at all times. **Never leave them laying around – never let anyone borrow your keys, and always know where they are located.**

Managers should include key control in their staff meetings which they hold periodically. When individuals lose control of the keys entrusted to them, it hurts us all. Nothing good can come from the lack of key control.

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Chematix Update

Many exciting improvements have been made to the Chematix on-line chemical tracking program over the past year. Most recently, the Laboratory Inspection portion of Chematix has been rolled-out and is now being used exclusively to conduct lab inspections across campus. The completely web-based module allows inspectors to utilize a touch screen tablet PC to enter results in real time. The moment the inspection is complete, the results are instantly emailed to lab personnel as well as ESD for follow up. Also, full customization of the inspection form by ESD is possible including adding questions and standard comments as the need arises.

ESD continues to make progress on the Hazardous Waste portion of Chematix as the final details of the EPA/DOT manifesting process are integrated into the module. Critical components including state and federal guidelines are being thoroughly tested to ensure accuracy and compliance. Chemical laboratories within the CCRC will be the first to utilize Chematix to prepare their waste for pick-up.

Future Chematix plans include Radiation Safety and Fire Safety modules. Right To Know and Hazardous Waste training will also become components of Chematix which will ensure that all user training is completed as required.

Be sure to visit our recently completed Chematix Support page www.esd.uga.edu/chematix Step by step Chematix training and support are available as well as answers to common questions.

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Management of Hazardous Wastes at Satellite Accumulation Areas

**By: Brian K. Adams
Hazardous Materials Facility
Coordinator**

Satellite accumulation points are typically used to increase the efficiency of waste collection and to reduce the costs of waste disposal. Wastes collected at satellite accumulation areas are collected at the point where the wastes are initially generated in containers. In addition, wastes may be collected at that point indefinitely until 55 gallons of hazardous waste or 1 quart of acutely hazardous (P-listed) waste is accumulated. All waste at satellite accumulation areas must be under the control of the operator of the process generating the waste. The container at a satellite accumulation point must be placed next to or near the process that generates the hazardous waste, and the person who operates that process or area must control the hazardous waste placed in that container.

No more than 55 gallons of hazardous waste or 1 quart of acutely hazardous waste may be collected in any satellite accumulation area. If the 55 gallon limit is exceeded in a satellite accumulation area, the operator must mark the container holding the excess waste with the date when the excess waste began accumulating. The excess waste must be moved to an accumulation point or a permitted treatment, storage, or disposal facility within 3 days.

The EPA has set the following management standards for wastes collected at satellite accumulation areas:

Containers must be in good condition. Containers used to accumulate hazardous waste must be in good condition (e.g., no severe rusting or apparent structural defects). A container that begins to leak must immediately have its contents transferred to another container.

Waste compatible with container. The waste placed in the container must be compatible with it. Acidic or basic wastes will destroy metal drums and some organic solvents will dissolve the materials in certain plastic containers.

Containers kept closed. A container holding hazardous waste must always be kept closed during accumulation except when it is necessary to add or remove waste. This is one of the most commonly cited violations during regulatory compliance audits.

Manage containers to avoid releases. At accumulation areas, containers must not be stored or handled in a manner that may cause them to rupture or leak. The following precautions are required and should be considered best management practices: Do not completely fill a container, liquids expand in containers as the temperature increases and can cause bulging which damages the container and creates a safety hazard for lab personnel. Do not allow containers to freeze, the freeze/thaw cycle can damage some containers.

Incompatibles separated. Incompatible wastes or incompatible wastes and materials, must not be placed in the same container if the placement could lead to a hazardous chemical reaction.

Weekly inspections conducted. To ensure that accumulation areas are kept in good condition, RCRA regulations require these areas to be inspected weekly. Areas where containers are stored must be inspected for leaks and deterioration caused by corrosion or other factors. Inspection records should be maintained on site for at least three years from the date of inspection. <http://www.esd.uga.edu/hazmat/pub/sataccum.pdf>

Marking requirements during accumulation. The date upon which each period of accumulation begins must be clearly marked on each container and must be visible for inspection. Additionally, while being accumulated on-site, each container must be clearly marked with the

words “Hazardous Waste” or with other words that identify their contents.

Employees trained. Generators of hazardous waste are required to receive hazardous waste management training. Persons who must be trained include those who are involved with or are occupationally exposed to hazardous waste. This training must be reviewed annually and is available online at: <http://www.esd.uga.edu/hazmat/training.htm>

The success of our program, the Environmental Safety Division and the University research community, relies on the continued proper management of all hazardous wastes generated on campus. Adherence to the regulatory standards above will help ensure compliance and lessen the chances of violations resulting from regulatory audits. If you have questions please contact the Hazardous Materials Program at (706) 369-5706. Our staff is available and ready to assist you when needed.

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Project Cleans Up Site of Future Student Learning Center
 By Sharon Omahen
 Griffin, UGA

Building a new structure where a fuel station once stood is not an easy task. But for the sake and safety of the environment, it's a very detailed and necessary one.

This is exactly the case on the University of Georgia campus in Griffin where a new Student Learning Center is set to be built on a site that was once a fueling station for UGA vehicles and equipment.

As with many old gas stations, years of fueling operations led to the petroleum-impacted soil and groundwater below the underground storage tanks, said Daniel Centofanti of Mill Creek Environmental

(cont. next column)

Services. Centofanti managed the UGA clean-up project along with Dale Hess, UGA Griffin Campus physical plant superintendent.

To protect public health, a clean-up project had to take place before the ground could be officially broken for the new Student Learning Center. The clean-up project involved the use of an innovative technology called In-Situ Chemical Oxidation.

"ISCO is the process of injecting a special mix of oxidizing chemicals into the affected soil and groundwater," Centofanti said. "The chemicals consist mostly of diluted hydrogen peroxide and sodium persulfate."

"They work to breakdown the contaminants in the ground and leave only harmless by-products such as carbon dioxide and water," he said. "The chemical reaction that destroys the contaminants is

(cont. on page 5)

GEPA's and YOU
 By Mike Stover

The Georgia Environmental Policy Act was enacted by the Georgia Legislature in 1991 to ensure that state agencies conduct their affairs in accordance with being good stewards of the state's air, land, water, plant, animal, environmental, historical, and cultural resources. The Board of Regents has an established policy for the university system's adherence to this act and it is very important that this procedure be followed. Failure to do so can, and recently has, produced very undesirable consequences including enforcement actions and monetary penalties.

If you are considering any land disturbing activity, alteration to any structure on or eligible for the Georgia Register of Historic Places (generally buildings more than 50 years old), sale or exchange of more than five acres of state-owned land, or any harvesting of five or more acres of trees, or any other project which may adversely affect the environment, you should carefully consider whether a University of Georgia, Georgia Environmental Policy Act (GEPA) survey and form should be completed. If you have any questions about this policy, contact Mike Stover at (706) 369-5706.

Environmental Safety Division's Phone Number: 706-542-5801

RAD DAWG NEWS
 By Jody Jacobs

The next series of Radiation Safety training classes begins on Wednesday, February 7, 2007. These classes are open to all UGA faculty, staff, and students.

The first two training modules provide a good introduction to radiation safety. Individuals that successfully complete all four training modules are qualified as Advanced Radiation Workers. Each

(cont. next column, Rad Dawg)

(Rad Dawg, cont.)

radioisotope laboratory should have at least one person qualified as an Advanced Radiation Worker.

The classes are offered at Training and Development. To view all class schedules or register, you can visit the T&D website at <http://www.busfin.uga.edu/staff/index.html>

The schedule for Radiation Safety classes is as follows:



Date/Time	Description	Class Code
February 7, 2007 1:15 - 4:30pm	Module 0 Orientation	162007W-01
February 14, 2007 1:15 - 4:30pm	Module 1 Basic Radiation Principles	162107W-01
February 21, 2007 1:15 - 4:30pm	Module 2 Safety and Radiation	162207W-01
February 28, 2007 1:15 - 4:30pm	Module 3 UGA Site Specific Procedures	162307W-01

Georgia Director of Homeland Security Visits the UGA Campus

by Wes Kolar
UGA Hazmat Response Coordinator

On Thursday, October 19th, the University of Georgia was visited by Major General William T. Nesbitt, Director of Homeland Security for the State of Georgia.

General Nesbitt began his army career in 1966, and served for two years in Vietnam with the 5th Special Forces Group. In 1973, he joined the Georgia Army National Guard where he began as a first lieutenant. Since 1973, he has worked his way up the chain of command and was promoted to Brigadier General in 2001, and Major General in 2005. General Nesbitt has held several titles over his many years of service, including Director of Manpower and Personnel, Operations Officer, Chief of Staff, and Brigade Commander. The many positions in which the General has served have helped to make him an ideal candidate for his current position of Director of Georgia Homeland Security. According to Governor Perdue, "General Nesbitt is a leader who will take Georgia's homeland security office to the next level. He brings the most relevant experience possible to the table – the ability to lead multiple civilian, military and law enforcement organizations at a time of heightened alert."

The purpose of the General's visit was to meet emergency preparedness and response personnel at UGA, and to learn more about safety initiatives on campus. As the state's largest institution of higher education, the University of Georgia provides both intellectual and physical resources to help assess and manage large-scale emergencies. Likewise, the University presents some risks due to the nature of its research, highly publicized political and sporting events, and high density population. General Nesbitt's visit was coordinated by Wayne Dill, Associate VP for the UGA Environmental Safety Division (ESD) and Opal Haley, Director of the UGA Office of Security and Emergency Preparedness (OSEP). The visit also included a short tour of campus and a working lunch wherein the General was introduced to several UGA leaders.

Following his October visit, General Nesbitt returned to the UGA campus on November 25. During his second trip to UGA, the General attended the Georgia/Georgia Tech football game as a guest of President Adams. During the game he met with personnel from multiple emergency response agencies in the stadium emergency operations box. Representatives from the Environmental Safety Division also provided General Nesbitt and VP for Finance, Tim Burgess, with a tour of the stadium during peak activity. By visiting the UGA campus and attending a game, General Nesbitt was able to get a first hand view of many of the security and emergency preparedness issues on campus.

Both of the General's visits were well received by UGA personnel, and we look forward to working closely with him and his staff in the future.



During a recent visit, Major General Terry Nesbitt (center) meets with Wayne Dill, Associate Vice President for Environmental Safety, and Opal Haley, Director of OSEP.

Come On Baby Light My Fire

By: Cupid

Candles can provide a warm, festive, and romantic atmosphere, but they can also be a fire hazard. Candles may be pretty to look at but they are a growing cause of home fires and home fire deaths. A candle is an open flame, meaning that it can easily ignite any combustible material nearby. The following tips can help you use candles safely.

- Light candles carefully. Keep your hair and any loose clothing away from edges and any places where they could be knocked over.
- Keep candles at least 3 feet away from anything that can burn including curtains, blinds, clothing, wallpaper, or any other material that can catch fire.
- Keep candles away from flammable liquids.
- Do not place lit candles in windows or near doorways where drafts could bring combustibles in contact with the flame.
- Use candle holders that are sturdy, will not tip over easily, are made from a material that can not burn, and are large enough to collect dripping wax.

Keep these safety tips in mind while pursuing your romantic adventures with candles, chocolates, and cupid. Cupid does not want you to get burned on love or those romantic candles.

Lab Safety News

By Bruce Hild

Moving into a new lab? Who's responsible for moving what?

All persons handling and transporting hazardous materials must have completed the required chemical specific right to know training.

This training is available online at: <http://www.esd.uga.edu/rtk> .

If the move is within the same building or to an adjacent building on campus, you can move properly packaged chemicals and hazardous materials using a good hand-truck, dolly, or cart. The use of private vehicles to transport hazardous materials is PROHIBITED. ESD should be consulted during the packing process, prior to any moves, 542-5801.

For your move to a non-adjacent building or across campus, a university vehicles MUST be employed. ESD staff will move properly packaged chemicals and hazardous materials for you FREE OF CHARGE.

For moves to off-campus locations (Tifton, Brunswick, etc....) arrangements should be made through the hazardous materials program (369-5706) for assistance.

The Physical Plants Labor Pool WILL NOT move chemicals or hazardous materials. They can be employed to move furniture and heavy equipment, 542-7456.

For moves involving radioactive materials, arrangements MUST be made through the Radiation Safety Office, 542-0113.

For moves involving biological hazards, arrangements MUST be made through the Biological Safety Office, 542-7265.

For moves involving liquid nitrogen tanks/cylinders, Central Research Stores will assist 542-2411.

For moves involving gas cylinders contact your vendor. Cylinders MUST be moved by the vendor, unless the move is within the same building.

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(Project Cleanup cont. from page 3)

exothermic and can raise the temperature of groundwater, produce steam, and generate significant pressures during application.”

“For this reason, special vents were installed on injection points at the site to safely release heat, steam and other harmless gases that may be generated during the treatment,” Centofanti said.

The treatment area will be off-limits to curious bystanders until the process is complete.

“The clean-up project will ensure that the air quality in the new building will not be impacted from the past uses of petroleum products on the property,” he said. “It will also allow UGA to make best use of its valuable real estate and limited space for new facilities.”

Clean-up of the contamination was funded and directed by the Georgia Environmental Facilities Authority. The Georgia Environmental Protection Division oversaw the clean-up.

(Sharon Omahen is a news editor with the University of Georgia College of Agricultural and Environmental Sciences.)

**Hands on
Fire Extinguisher
Classes
on
Feb. 21, 2007 (Wed.)
March 21, 2007 (Wed.)
at
10:00 am until finished.**

**Class taught by
Tori Outlaw,
First Safety Inspector,**

**at the
FIRST Building
behind the HMTF
facility off of
Will Hunter Drive.**

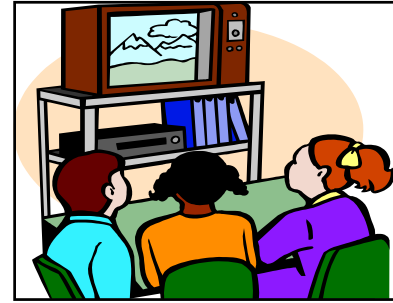
**Call:
706-369-5706
for more info
or
706-542-5801.**



Project cleanup at the Griffin Campus around the future Student Learning Center.

Safety Videos Available

The Environmental Safety Division has a library of safety videos which can be borrowed free of charge by University employees. Call us at (706) 542-5801 or place a checkmark by the videos you wish to borrow and return this completed page to us. Videos can be borrowed for up to two weeks or longer, if necessary; they can also be reserved for upcoming training classes you might be conducting. For a description of each video, including its length, go to our website: www.esd.uga.edu/info/pub/vlibrary.pdf.



Art Safety:

(A1) ___ Health Hazards and the Visual Arts

Chemical and Laboratory Safety:

- (CL2) ___ Chemical Storage Hazards
- (CL3) ___ Chemical Hazards
- (CL4) ___ A Place for Everything: Chemical Storage in the Laboratory
- (CL5) ___ Practicing Safe Science
- (CL6) ___ The Keys to Laboratory Safety
- (CL7) ___ Introduction to Reactive and Explosive Materials
- (CL8) ___ Radionuclide Hazards
- (CL9) ___ Science—Live to Tell About It
- (CL10) ___ Glassware Washing Hazards
- (CL11) ___ Centrifugation Hazards
- (CL12) ___ Fume Hood Test and Training
- (CL13) ___ Safety Showers and Eyewashes
- (CL14) ___ All Washed Up
- (CL15) ___ Safe Handling of Laboratory Glassware
- (CL16) ___ Whose Job Is It Anyway?
- (CL17) ___ Laboratory Fume Hood Safety
- (CL18) ___ Assessing Risks of Toxic Chemicals
- (CL19) ___ Flammables and Explosives
- (CL20) ___ Mammalian Cell Culture Hazards
- (CL21) ___ X-Ray Diffraction Hazards
- (CL22) ___ Controlling Your Risks—HIV in the Research Laboratory
- (CL23) ___ Working Safely with HIV in the Laboratory
- (CL24) ___ Preventing Contamination

- (CL25) ___ Get Your Checklist Ready—A Guide to Lab Safety Inspections
- (CL26) ___ Laboratory Safety: Potential Hazards II
- (CL27) ___ Ether Removal at Mercer University; Reactives/Explosives, AETC
- (CL28) ___ Hazardous Materials
- (CL29) ___ Lab Safety
- (CL30) ___ Chemical Lecture & Demonstrations
- (CL31) ___ It Only Takes a Second
- (CL32) ___ Confined Spaces—Silent Killer
- (CL33) ___ Virtual EPA Inspection of a College or University
- (CL34) ___ Environmental Health: The Invisible Profession

Driver Safety:

- (DS1) ___ Just Another Saturday Night
- (DS2) ___ Breaking the Accident Chain of Events
- (DS3) ___ Night Driving

Emergency Procedures:

- (EP1) ___ Tornado—Nature’s Fury 2000
- (EP2) ___ Chernobyl—Legacy of a Meltdown
- (EP3) ___ Emergency Response
- (EP4) ___ Preparing for a Crisis on Campus

- (EP5) ___ An Orientation to Community Disaster Exercises
 - (EP6) ___ Bioterrorism and Mass Casualty Presentation; UGA; 10/31/01
- Fire Safety:**
- (FS1) ___ Fire Safety in the Laboratory
 - (FS2) ___ Fire Escape—Getting Out Alive
 - (FS3) ___ How Fast It Burned!
 - (FS4) ___ Ready to Respond

Gas Cylinders:

- (GC1) ___ Gas Cylinders—Welding, Cutting, and Brazing
- (GC2) ___ Compressed Gases Can Be Dangerous; An Explosion Case History
- (GC3) ___ Handling Compressed Gas Cylinders
- (GC4) ___ Gas Cylinders—Overview

Right to Know/Hazard Communication:

- (RTK1) ___ Cracking the Code
- (RTK2) ___ Material Safety Data Sheets
- (RTK3) ___ MSDS—Roadmap to Safety; Read that Label
- (RTK4) ___ Your Right to Know
- (RTK5) ___ Right to Know: Administrator’s and Trainer’s Guide
- (RTK6) ___ Your Right to Know; MSDS—Roadmap to Safety

Name _____

Date Requested _____ **Department** _____

Room No. _____ **Building** _____

Mailing address (if off-campus) _____

Phone _____ **E-mail** _____