With the retirement of Warren Page this past May, EHS’s AVP Mark Demyanek has been asked to assume Interim duty as Sr. Director of Operations and Maintenance within Facilities Management. During this period, Nazia Zakir is serving as Interim Director of Research Safety and David Marder is serving as Interim Director of Operations for EHS. All EHS personnel are striving to make this time as seamless as possible for our valued GT partners across campus.

Highlights of the newsletter include implementation of a Biological Materials Safeguards Committee (BMSC) online application, collaborative work between EHS, Department of Chemistry and Procurement in developing and implementing a tax free ethanol purchasing procedure, and the launch of a new fire prevention initiative. We are also very pleased to have recently filled several open positions with talented EHS specialists. More information on these and other EHS happenings are included inside.

Please let us know of any EHS needs you may have, and thank you for your continued support!

From the AVP

New Fire Safety Office Building Inspection Program

The Fire Safety Office is launching another fire prevention initiative that focuses on maintaining fire safety and building integrity. Building and Facility managers are essential resources in managing building functionality and safety. This fire prevention initiative has identified building managers and facility directors as key stakeholders in maintaining Fire Preventative features and fire safe practices in the Institutes’ facilities. The form guides the user through the items typically covered during a fire inspection. While this program is voluntary, participation is strongly encouraged as it helps the Fire Safety Office team accelerate the efficiency of the annual fire inspection program. Please review and use the Self Inspection Program Form located on the next to last page of this newsletter.

New Online Biological Materials Safeguards Application

The EHS Biosafety Office recently announced a new online application system for the Biological Materials Safeguards Committee (BMSC). This new online system is based in the current online inspection system that researchers on campus are already using to report corrective actions. The application requests the same information as the paper version of the BMSC. The online system will allow for faster approvals as well as increased interaction between committee members and researchers to capture additional information. Applications can still be turned in via the paper method until December 31st of this year.

EHS Biosafety is working to ensure that all people, including staff and students, that need access to the forms for applications have access to the system via their Kerberos log in. If you have not already submitted your Georgia Tech ID or the Georgia Tech ID of the researchers and staff that can submit applications for your lab, please do so that these can be entered into the system. Detailed instructions for the program can be requested from Lisa Wooldridge (lisa.wooldridge@ehs.gatech.edu).

The system can be found at the following link: http://ehs1.fac.gatech.edu/EHSAdemografisapi.dll
Arc Flash Incident

On Tuesday September 3, 2013 a Georgia Tech employee entered the Lower Level Electrical Closet in the ES&T building. His job was to investigate why one of the building’s autoclave machines was not receiving power. The search led to the Lower Level Electrical Room power distribution panel where the employee proceeded to identify and check the panel’s 80 amperage/600 volt fuses. While attempting to remove a fuse from the top disconnect bucket, the fuse became stuck. The employee was attempting to push the fuse back into place—when a significant blast occurred.

The blast injured the employee and the resulting smoke triggered the fire alarms to sound. A full evacuation of the building took place halting classes and research. Georgia Tech Police and Emory EMT arrived around 2:50pm. Atlanta Fire Engine 6 came on scene to inspect the electrical room for further dangers and silence the fire alarms.

Some important Safety points to remember anytime you work with electricity:

- Wear proper Personal Protective Equipment/Arc Flash Clothing
- Assume equipment is energized
- Use proper meters to test equipment
- De-energize and verify voltage is off
- IF UNSURE:
  - STOP immediately
  - Assess situation
  - Evacuate and secure area
  - Seek support from management
- Unauthorized Employees should never access electrical rooms

Eye Splash Incident

A few weeks ago EHS was summoned to a lab where a grad student had suffered an eye splash. The grad student was at his desk in the office area adjacent to the lab when a high school intern told him that a solution that they had put on a stir plate was boiling. (It wasn’t supposed to do that.) The grad student rushed into the lab (without safety glasses) “just for a minute” to move the solution off the hot plate. As he picked it up, the ground glass stopper was blown out of the over pressurized flask and the grad student was splashed in one eye with cetyltrimethylammoniumbromide solution.

The grad student used a near by eyewash in the first 10 seconds after the incident and rinsed his eye for about 20 minutes (EHS recommends 15). After that, he was seen by a doctor who determined that he had not suffered a corneal burn. He was sent home with antibiotic eye drops to prevent infection of the irritated tissues and has fully recovered.

In this case, the flask happened to “pop its cork” when the student touched it, but it could have just as easily erupted onto the intern or anyone passing by. EHS requires that all persons in labs wear safety glasses from the time they enter until they leave for reasons such as this. A lot can happen in a few seconds including losing your eyesight.
Odor Releases in Buildings: Hazardous or Just Unpleasant

Like so many other situations in Environmental Health and Safety, the answer to the question above, is It Depends... It not only depends on the chemical causing the odor, but who is being exposed and how long they are exposed. Other things to be considered are the consequences of the release.

Let’s take a look at some recent incidents here at Georgia Tech, for example, the case of the urethane floor coating application in an office building: Urethane finishes involve two part mixtures which usually contain a diisocyanate. Diisocyanates are a family of chemicals that have the potential for causing serious health effects including serious respiratory reactions such as irritation, airway constriction, and pulmonary edema.

The good news is that when mixed correctly the diisocyanate part of the reaction is completely used up rendering the diisocyante inert. The bad news is that even when done correctly, the by-products of this reaction have an unpleasant odor and are irritating. This makes them a potential hazard to people who have preexisting lung conditions such as asthma or COPD (airway constriction, difficulty breathing) or people who are just sensitive to odors (headache, nausea, dizziness).

Put this process in an office building which re-circulates most of its air, rather than exhausting it, (like a lab building would do) and by the next morning you have a building which greets its occupants with an unpleasant and, for some, potentially hazardous environment. (This is an example of when who is exposed makes the difference between hazardous or just unpleasant.) What’s the answer? Pre-planning and installation of a temporary ventilation system to exhaust the odors out of the building.

Or how about the case of the graduate student who got a little careless while working with a mercaptan? Mercaptans, AKA thiols, are a sulfur-containing family of chemicals known for their unpleasant odor. T-butyl mercaptan is the stuff they add to natural gas to give the naturally odorless gas a warning odor. Anyway, the odor escaped the lab into other lab and office spaces and prompted a building evacuation as the perception was that there was a natural gas leak in the building. Several hours, seven fire engines, seven fire engine crews, several interrupted never-can-be-recovered lecture periods and unknown dollar losses due to lost work hours later, everyone got back to work.

Was anyone hurt? No, but it cannot be argued that there were expensive consequences. Even if the odor in this case had not prompted a building evacuation, today’s students, staff, and researchers are health and safety savvy and will not risk their health by tolerating unpleasant, unknown, and possibly hazardous odors.

Hazardous Waste Labeling

Identification & Labeling of Hazardous Waste: The Hazardous Materials section of EHS provides service to research, academic and support activities by removing and properly disposing of hazardous waste. To do this safely and legally, we need to know what the waste material is. While we’ll do our best to provide support we reserve the option of leaving material behind that is insufficiently identified.

Here are a few samples of UNACCEPTABLE labels.

- “Organic Waste”: Most of the time this means solvent but we like to know what solvent(s) are in the container. Streams with halogenated solvents are twice as expensive to dispose of as nonhalogenated ones.
- “Liquid Waste and Solid Waste”: Material described by its physical characteristics doesn’t do us much good when we have to determine the associated hazards.
- “Aqueous Waste”: This just says there is water in the bottle; if that is all there is—then Hazardous Materials doesn’t need to pick it up.
- Waste described by process such as “Histology Waste”, “Plating Waste” and the like. There are multiple different mixtures that can be used in the various processes on campus – we can’t tell the difference unless you tell us.
- Waste described only by its brand name. Entries such as “Zeta 2285” don’t tell us anything about the actual ingredients – if you don’t identify the constituents on the label, be prepared to provide a [Material] Safety Data Sheet.
- “Unknowns”
Morgan Wright, Lab and Chemical Safety Specialist

What is your educational/work background?
I obtained my Bachelors of Science in Environmental Science from Mercer University. While at Mercer, I interned at Warner Robins Air Force Base. It was here that I fell in love with Chemical Safety. After college I landed my first “real job” at Emory University. While at Emory, I was the Project Manager of Radioactive Waste and Disposal. Despite having the duties of the project manager, I always volunteered to help out the Chemical Safety group… Chemical Safety just had a hold on me! Long story short, I finally got the opportunity to be a legit Chemical Safety employee here at Georgia Tech!

What attracted you to working at Georgia Tech?
The family atmosphere here at Georgia Tech is what attracted me the most. Everyone that I work with here treats me as if I’m a part of their family. This type of interaction is hard to come by in the work force and I truly value the relationships that I have built with my EHS and Georgia Tech family.

What do you enjoy most about your job at Georgia Tech?
From showing someone the proper safety gloves that need to be worn or responding to a chemical spill, I enjoy teaching people how to incorporate safety into their daily lives here at Georgia Tech. And it doesn’t hurt that Georgia Tech’s campus is beautiful and I actually enjoy walking to any engagement that I have planned.

What do you find most challenging about working at Georgia Tech?
The most challenging aspect of my job is making sure people absorb what EHS teaches them. I’ve learned first-hand that many people become complacent in work activities and all too well forget to do basic laboratory etiquette, thus accidents happen. When I see a person involved in a chemical accident that I just interacted with either during a lab inspection or a training class, it hits home. I actually re-evaluate how I should have come across to that person.

What might people be surprised to learn about you?
People may be surprised to know that I’m into extreme sports. For example, it’s been a family tradition to attend Monster Jam every year. We’re actually waiting until our 2 year old daughter gets a little bit older before we introduce her to the live and in person thrill of Monster Jam.

James Dark, General Safety Specialist

What is your educational/work background?
I received my masters in Environmental Science focused on Industrial Safety from The University of Houston – Clear Lake in 2012. Previously I worked as the Safety Coordinator for a manufacturing facility making car safety devices.

What attracted you to working at Georgia Tech?
The location to home and the abundance of top notch Safety related training.

What do you enjoy most about your job at Georgia Tech?
The proximity of my office to Fire House Subs, and getting to work with people of all types of professional backgrounds.

What do you find most challenging about working at Georgia Tech?
Diplomacy.

What might people be surprised to learn about you?
Even though I’m from Texas I’ve never owned a horse… a couple donkeys, but not a horse.

Brandon Shaw, Fire Safety Specialist

What is your educational/work background?
I am originally from Batesburg-Leesville, South Carolina and moved to Charleston in 2001 to attend The Citadel where I studied Civil Engineering and Business Administration. After college, I worked with several civil engineering consulting firms and spent most of my time as a Design Engineer on a commercial design team. In 2010, I began serving the City of Charleston as a firefighter on a ladder company before transitioning into the Fire Marshal Division in 2012. Once in the Fire Marshal’s Office, I worked as a Fire Inspector/Fire Investigator inspecting buildings and fire protection systems as well as examining fire scenes for cause.

What attracted you to working at Georgia Tech?
Looking for a change, my wife, Jennifer (a PICU Nurse at Egleston) and I made the decision to move the family to Atlanta. We currently reside in the Brookhaven area with our 10 month old son, Bowen.
What do you enjoy most about your job at Georgia Tech?

In Charleston, I grew bored of inspecting the same businesses and the lack of variety in my day to day activities. I was attracted to Georgia Tech because of the uniqueness of working on a college campus and the culture that surrounds it. The fact that there are so many different things going on every day has yet to produce a dull moment. Furthermore, as a die-hard South Carolina Gamecock fan, the fact that Tech is a rival of Clemson and Georgia also made for a smooth transition.

What do you find most challenging about working at Georgia Tech?

What I see as being the most challenging aspect of my job is also what I see as the most appealing aspect. Working on a campus is different than working for a local municipality in that there are so many considerations that I have to make when I am performing an inspection or reviewing a set of plans. For example, in the past, I never had to deal with a lab and the regulations surrounding them can be quite overwhelming. Reading the various codes that govern all things related to the type and amount of chemicals in a lab can be time consuming and requires a thorough understanding of the material therein.

What might people be surprised to learn about you?

The thing that most people would not know about me is that I was named Time Magazine’s Person of the Year in 2006. Other than that, at one time in my life I was an avid coonhunter and still hold the school record for the most average yards per carry at my high school (football). I also once accidentally picked up a live rattlesnake and can recite every line to Smokey and the Bandit.

Matthew Williams, Health Physicist

What is your educational/work background?

I received my undergraduate degree in Nuclear and Radiological Engineering from Georgia Tech as well as my masters in Medical Physics. This is my first full-time non-research position.

What attracted you to working at Georgia Tech?

Georgia Tech has been home for me for over 6 years. It is a hotbed for research and technological growth and I feel it will help me put my career in the fast lane.

What do you enjoy most about your job at Georgia Tech?

The best part about working at Tech is being in Atlanta. While I do enjoy the campus feel and opportunity to apply the years of skills I have acquired, nothing beats looking out the window and seeing the Atlanta skyline.

What do you find most challenging about working at Georgia Tech?

Getting accustomed to a set time schedule. In research positions you come and go as you please. Whether the work is done at 3:00 a.m. or 3:00 p.m. all that matters is it’s done. I now have a set time to be in the office, taking some time to adjust to not just walking out.

What might people be surprised to learn about you?

I do Yoga 3 times a week. Flexibility is the key to life.

GT Procedure on the Purchase of Tax-Free Ethanol

Georgia Tech has a permit issued by the Alcohol and Tobacco Tax and Trade Bureau of the United States Treasury which allows purchase of tax free ethanol up to 4,128 gallons. This type of permit allows for use of tax free ethanol exclusively for scientific research and learning. Compliance with permit conditions requires tracking ethanol purchases and maintenance of semiannual inventories.

EHS, the Department of Chemistry, and Procurement have developed a procedure that maintains compliance and allows ethanol users to continue to have access to tax free ethanol. All purchases of ethanol must be made using Buzz Mart only, not through P-Card purchases.

Once received, all containers of ethanol must be tracked using the Chematix application. As Chematix tracks chemicals by their Chemical Abstract Service number (CAS) and cannot distinguish between the different concentrations of ethanol captured under the law, ethanol will now be entered into Chematix using the following Z-numbers:

- Tax Free Ethanol 100% (200 Proof) CAS#: Z00107107
- Tax Free Ethanol 95% (190 Proof) CAS#: Z00107109
- Tax Free Ethanol 70% (140 Proof) CAS#: Z00107111

If you have any questions on how to properly enter chemical purchases into Chematix, please contact Morgan Wright at 404 385-0821.
Use the following checklist to prepare for an annual fire inspection. Not all items on this list apply to each building on campus.

### Facility Items
- Address/Room Identification are clear and visible
- Correct keys in lock box (if one exists)
- FDC- accessible and visible
- Fire Department access - No parking lanes and signage maintained
- Hydrants- accessible, visible and operational
- Fire Alarm- system operates properly
- Sprinkler System- operational with current "Green Tag"
- Spare sprinkler heads / wrench at riser
- Fire Extinguishers - current tag, visible and accessible
- Kitchen Hood - maintained and operational
- Current inspection tag on kitchen hood suppression system
- General housekeeping
- Loft design meets established GT standard
- No flame based candles
- Fire Doors and Openings – functionality and meets specifications
- Red Book – Available and up-to-date
  (Encouraged but not required)
- Evacuation Plan(s) posted and correct

### Egress
- Exits are clear and accessible
- Exit signs are functional
- Emergency lights are functional
- Door Hardware- functionality and proper type
- Corridor Clearance - aisle widths maintained
- Corridor storage removed

### Storage
- Storage of flammable or combustible liquids and/or gases is prohibited
- Storage to ceiling clearance is 18" for sprinklered and 24” non-sprinklered
- Ceiling tiles in place
- Storage prohibited above ceiling (not sleep or clothing above ceiling)

### Electrical/Mechanical
- Extension Cords - Temporary use only not used on permanent basis
- Electrical / Mechanical rooms- clear of combustible storage
- Emergency lights- functioning properly (inside and outside as required)
- Switches / Outlets- cover plates installed, not overloaded
- Circuit loading
- Electrical Panel- all circuits labeled, no openings in panel
- Exit Signs- operational and visible

### Documents
- Fire Suppression System Annual Inspection Report
- Fire Alarm Annual Inspection Report
- Commercial Cooking Hood Annual Inspection Report
- Hood and Hood Duct Cleaning Record
- 6 Month Fusible Link Replacement
- Redbook/Emergency Plan/Evacuation plans

Once you have completed this checklist, please email a copy to Fire@gatech.edu and schedule your annual building inspection.
Mission:
To guide and assist the Georgia Tech community in meeting its safety, public health, environmental protection, and compliance responsibilities.

Guiding Principles:
EHS will provide occupational health, safety, and environmental protection services to facilitate the Institute's compliance with applicable regulations and to prevent occupationally-induced injury, illness, property loss, and degradation to the environment by:

1. Conducting environmental evaluations and interventions where there are personnel exposures and/or concerns; and pursuing appropriate solutions.
2. Developing and implementing policies, procedures, and programs that proactively deliver safety, occupational health, and environmental protection services to the campus community.
3. Participating in and providing administrative support to Institute-wide safety committees.
4. Providing training and services in safety, laboratory safety, fire and life safety, hazardous chemical, biological, and radiological waste management, and environmental protection.
5. Maintaining and continuously improving EHS staff expertise and capabilities in environmental health and safety issues.
6. Providing environmental assessments and technical reviews of plans and specifications for capital construction and renovation projects; ensuring that safety and environmental protection features are "built-in."
7. To provide customer service distinguishable from the norm.