ENVIRONMENTAL HEALTH AND SAFETY

Lab Chatter

UNE UNIVERSITY OF NEW ENGLAND

Volume 3, Issue 2, October 2016

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Safety Spotlight

Meet the EHS Intern: Samantha Hardy, UNE Senior

As the new intern for the Environmental Health and Safety Department (EHS) I would like to introduce myself to the UNE community. My name is Samantha Hardy. I'm from Saugus, Massachusetts and my major is Environmental Science with a minor in Aquaculture and Aquarium Science. Some of my favorite hobbies are painting and longboarding. I have a passion for protecting the environment with a special interest in workplace and chemical safety. For several years I have known the field of EHS was the one I wanted to work in. The thought of doing good by keeping both people and the environment safe motivated me to work towards a career in EHS. As a painter who is inspired by nature, I work hard to ensure that it stays beautiful and healthy. As a daughter and a sister, I want to see the people who live near and work with chemicals and other hazardous materials stay safe and happy. I'm currently a senior here at UNE and when I learned that I had to find an internship to graduate, I knew that the EHS department on campus would be a perfect fit. Learning the tasks and duties of an EHS Specialist is perfect training for a job in the EHS field. Working for the EHS Department for the last three years has already taught me so much and I'm excited to expand that knowledge. I am very thankful to be part of the team here and hope to contribute effectively to health and safety here on campus.

OSHA® QuickFacts

Laboratory Safety
Electrical Hazards

In the laboratory, workers may be exposed to electrical hazards including electric shock, arc blasts, electrocutions, fires and explosions. Potential exposures to electrical hazards can result from faulty electrical equipment/instrumentation or wiring, damaged receptacles and connectors, or unsafe work practices.

To avoid such hazards, follow these best practices:

- Always follow manufacturer's recommendations for using electrical equipment.
- Do not use electrical equipment to perform a task for which it is not designed.
- Most equipment includes either a 3-pronged plug or double insulation. Equipment with neither of these features is less safe but may meet electrical codes. You will not be protected from electric shock if a 3-pronged plug is not inserted into a 3-prong outlet.
- If you plug more than two pieces of low demand equipment into a standard outlet, use a fused power strip that will shut off if too much power is used.
- Make sure that any outlet near a sink or other water source is Ground-Fault Circuit Interrupter (GFCI) protected. If you have a GFCI, periodically test it by plugging something into it and pushing the "test" button. Once the equipment shuts off just turn it back on.
- Above all, do not disable any electrical safety feature.
- Before turning equipment on, check that all power cords are in good condition.
- Do not use extension cords as a substitute for permanent wiring.
- If you see a person being electrocuted, DO NOT TOUCH THEM! The electricity can go through you, too. If possible, turn off the power (pull the plug or trip the circuit breaker), or use an item made of non-conductive material (e.g., wooden broom handle) to pry him or her away from the contact. Call 911 immediately.

If you see a person being electrocuted, DO NOT TOUCH THEM! The electricity can go through you, too.

For assistance, contact us. We can help. It's confidential.

OSHA® Occupational Safety and Health Administration
www.osha.gov 1-800-321-6742

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OSHA Quick Cards on several different safety and health topics can be found at:

https://www.osha.gov/pls/publications

THE 12 FACTORS THAT BUILD PHENOMENAL LEADERS:

How to improve your leadership skills or identify potential leaders in your organization

By Kevin Coughlin | August 26, 2016 (*Source: www.labmanager.com*)

(Submitted by Jessica Tyre)

When looking for leadership in your business or organization—perhaps in yourself—there are several factors that are part of all great leaders. Consider the following 12 factors to improve your leadership skills or help you identify those individuals in your organization that can take over leadership positions.

1. Motivation

Motivation is a huge key to any successful enterprise. Remember what motivates one person may not motivate another. True leaders can quickly identify motivating factors in an individual, in order to move them or influence them in a certain direction. Some of the strongest motivators include money, fear, time, and power. In most cases individuals will be motivated by several factors; however, one factor will prove to be the dominant one. When you find out what it is and how to use it, your ability to influence will be greatly improved.

2. Tolerance

Tolerance is really the ability to respect other's views, without selling yourself out. It is of utmost importance to understand where the people or organizations are coming from and to realize that they may not understand your position. In order to accomplish this, you must be an excellent communicator.

3. Trust

Trust is necessary to create the right environment. Consider the three sides of a triangle—or the BLT, which stands for Believe, Like, and Trust. Your goal is always to attempt to have individuals and businesses Believe, Like, and Trust you and your organization. When you accomplish this, you are well on your way to professional and personal success.

4. Purpose

Purpose is your mission—the driving forces behind your business. You should clearly know and understand your purpose and the purpose of the individuals around you. In some cases, your team may not fully understand the real purpose of their job or their organization. It is a leader's job to effectively convey their mission and purpose to others. Leaders know their purpose and the purpose of those around them.

5. Vision

All leaders have a clear vision, which is really what the ideal future will look like. It is important that a vision include values, and it is critical that good leadership makes sure that the people and organization agree with your vision. When a leader's vision does not match the organizational vision, you will have problems.

6. Attitude

This may seem like a small thing, but a positive attitude can make a big difference and, conversely, a negative attitude can also make a big difference—but not in a good way. People and organizations feed off of leaders, and those with positive attitudes will receive the best response.

7. Awareness

A leader's awareness is the understanding of not just their own identity, but the identity of the people around them and the organization they represent. Each and every individual has a core identity, and the awareness to understand that core will improve your leadership.

Leadership continued…

8. Determination

It is impossible to become an effectual leader without this trait. Failure often accompanies leadership, and those who are not determined will never get off the mat and pull themselves back up. When determination starts to disappear, leadership will begin to fail. Determination never takes a vacation or gets sick; it should be working every day.

9. Faith

A great leader must have faith that they will succeed, but equally as important is that they have faith in the people and organization around them. The best leaders believe in themselves, and it is critical that in order for your organization and the people around you to believe in you, you first believe in yourself.

10. Inspiration

Leaders are always looking for new ideas and different places to find them. Leaders are not afraid to solicit new ideas from others. Businesses constantly need new ideas to improve their products and/or services, and some of the best ideas are inspired by something or someone.

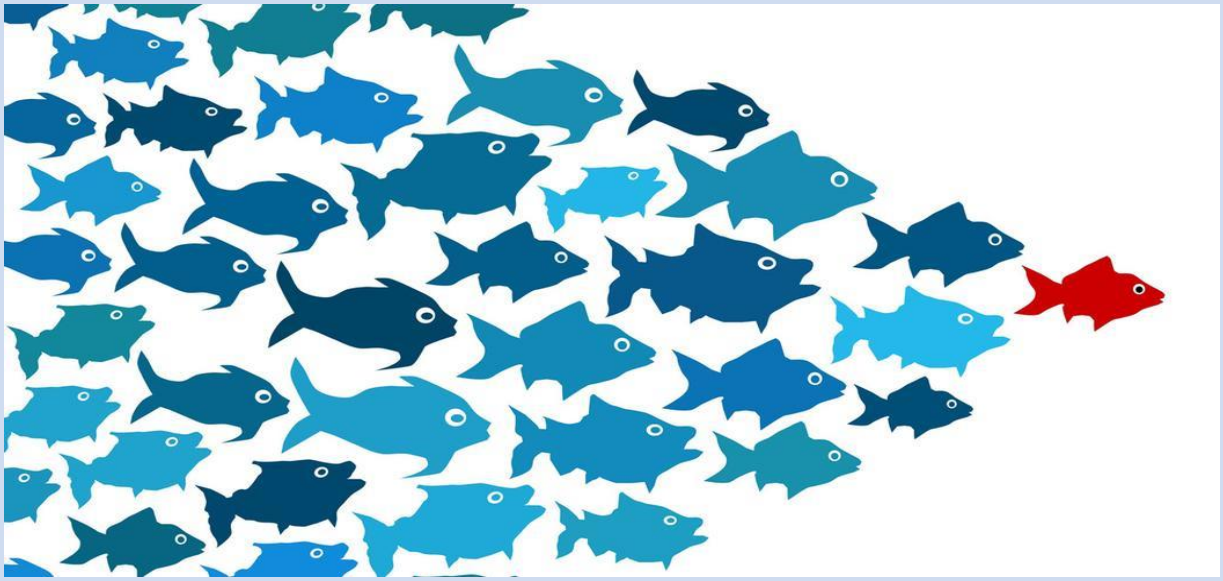
11. Willpower

Effective leaders know how to control their emotions and do not allow others to control their emotions or dictate their reactions. Willpower is critical for all leaders and is absolutely necessary to succeed. Life and business are very similar things; they will almost never go as planned, so be prepared.

12. Patience

Patience means that no matter what the challenge is, a leader never gives up. Your business and people around you sense this and respond to it. Patience goes hand-in-hand with commitment, which means that when a leader says something, they do something. They take action steps, they set examples and when this is done, people and organizations respond.

It's interesting how patience appears last on the list, however success and effective leadership happen over time and not overnight.



Biohazardous Waste Collection
By Peter Nagle

Occasionally there are classes or workshops on campus that generate biohazardous waste one time. Materials such as needles and blood-soaked items may be generated from these activities. If you are generating biohazardous waste in an area that does not typically work with biohazardous material, the equipment needed to collect the waste will not be readily available. If you find yourself in this situation, please contact the Environmental Health & Safety Office (EH&S) beforehand so we can supply you with the proper equipment. It is advantageous to both the facilitators and or instructors of an event and the EH&S office to have the proper equipment in place beforehand, rather than re-packaging the material after the event. Collecting the biomedical waste improperly puts us out of compliance with state and federal laws. Our goal is to always stay in compliance. Below is a review of the biohazardous waste process including identifying, generating, packaging conveying to the storage area, and storage while awaiting transportation to the disposal facility.

The following materials are regulated as biohazardous waste in Maine:

1. Discarded human blood, blood products, and body fluids: discarded blood, serum, plasma, blood products, and body fluids
2. Waste saturated with human blood, blood products, or body fluids
3. Pathological waste
4. Discarded sharps used in patient, animal, cadaver care or in medical and biomedical research laboratories
5. Discarded cultures and stocks of infectious agents and the culture dishes and devices used to transfer, inoculate and mix cultures; discarded clinical specimens and the associated containers or vials; discarded biologicals; and waste from the production of biologicals and recombinant DNA research
6. Discarded carcasses, body parts, bedding and other waste generated by research facilities from animals containing organisms or agents not usual to the normal animal environment and which are pathogenic or hazardous to humans

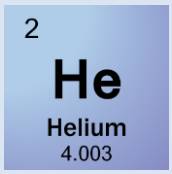
Packaging Biohazardous Waste:

1. All sharps (needles, razor blades etc.) must be packed in rigid sharps containers.
2. All liquids must be properly sealed and packed in a manner to prevent breakage.
3. All other biohazardous waste can be packaged directly into the biohazardous waste boxes, with no more than 40 lbs. per box.
4. All biohazardous waste boxes must be double lined.
5. Sharps containers can be packed directly into the biohazardous boxes.

Transferring boxes to biohazardous waste storage areas:

1. Properly seal all boxes. Facilities cannot pick-up the boxes if they are not completely sealed.
2. Submit work order to Facilities for pick-up.
3. If you are generating waste one time in an area not normally used for these activities, submit a work order beforehand to have the waste picked up at a specific time.
4. Facilities can provide a replacement box if needed.

Follow these steps, and if conducting a one-time event, plan ahead so the waste can be picked-up immediately, which keeps the university in compliance with bio-hazardous waste regulations.



Looming Helium Shortage Raises Alarms

By Marc Lallanilla, Assistant Editor for LiveScience.com
(Contributed by Ronnie Souza)

The worldwide shortage of helium threatens many industrial, medical and military applications far beyond balloons.

An odorless and colorless gas, helium (He on the periodic table) is the second-most-abundant element in the universe after hydrogen, but it's not easy to find or store in usable quantities — most of the helium in the atmosphere escapes into space, and our current helium supplies are largely extracted from underground natural-gas reserves.

The United States is the global leader in helium production, producing about 75 percent of the world's helium. About half of that is stored outside Amarillo, Texas, in the country's Federal Helium Reserve, a vast subterranean complex of storage reservoirs and pipelines that extend to natural-gas fields as far away as Kansas.

But the looming helium shortage is actually the government's fault, according to Science magazine. The U.S. Bureau of Land Management (BLM), which manages the Federal Helium Reserve, sells off helium at below-market rates, encouraging waste and discouraging the development of new sources.

"If … companies can buy the federal helium gas at a relatively low price, there is less incentive to develop it," physicist Moses Chan, a member of the National Academy of Sciences panel studying the helium reserve, told Marketplace.org.

Helium sales scheduled to end

In 1996, Congress mandated that the federal government get out of the helium business altogether, so the BLM is selling off its existing supply until it recoups the costs of producing it. That point will come in October, after which point the government cannot sell any more helium.

As a result, the United States and much of the industrialized world now faces an imminent "helium cliff." Legislation that intended to address this problem by allowing continued helium sales after October was passed by the U.S. House of Representatives in April, but the Senate has yet to pass its own version of the bill, according to the Wall Street Journal.

"We're running out of time," David Isaacs, of the Semiconductor Industry Association, told the Journal. "We're positioned to get it done, but there's certainly no guarantee — certainly not in this Congress."

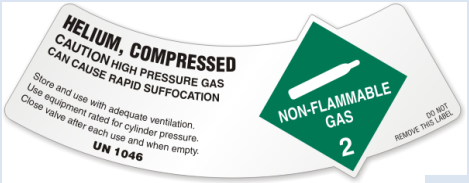
An irreplaceable element

The Federal Helium Reserve got its start shortly after World War I, when helium was used to float military reconnaissance aircraft. Since then, helium has proven to be indispensable in a wide range of industrial and medical uses.

Magnetic resonance imagery (MRI) relies on helium to regulate the powerful magnets needed to create MRI scans, which are cooled to minus 452 degrees Fahrenheit (minus 269 degrees Celsius). Indeed, the fact that helium has the lowest boiling and melting points of all the chemical elements — liquid helium is the only liquid that cannot be solidified by lowering its temperature — is what makes it so irreplaceable in so many industries.

Helium is also essential to the manufacturing of computer chips, optical fiber and medical lasers. It's often needed for rocket-engine testing, arc welding, air-to-air missile guidance, and other civilian and military uses, according to the BLM. (Party balloons and parade floats use just a tiny fraction of the world's helium supply.)

There are some plans in place to address the current helium shortage, including a new helium plant in Wyoming and increased development overseas. And assuming that demand for helium remains strong, "new technologies for extracting and refining helium … would bring new sources of helium to the market," according to the BLM.



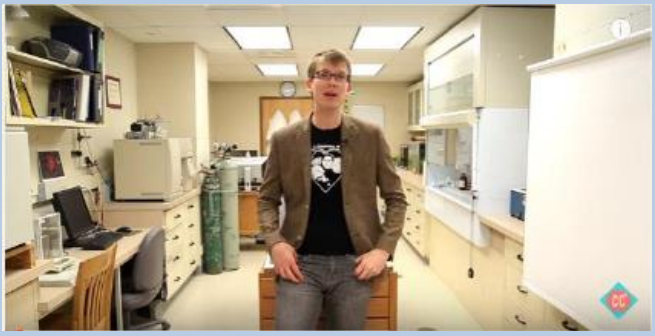
UNE Chemical Sharing Program

The UNE Chemical Sharing Program is a great way to reduce hazardous waste, reduce costs for your department, and have a positive environmental impact on campus. If you have any commonly used lab chemicals that you are thinking of disposing, please contact EHS so they can be listed in the next issues of EHS Lab Chatter as available for the UNE Chemical Sharing Program.

Chemicals currently available: None

Lab Safety Video of the Month:

Lab Techniques & Safety: Crash Course Chemistry #21



https://www.youtube.com/watch?v=VRWRmIEHr3A

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