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Air Aware: Baylor & The Clean Air Act

Some of U.S. Environmental Protection Agency's (EPA) top priorities are to improve air quality, take action on climate change, and clean up our communities. EPA's work on these priorities falls under the Clean Air Act and includes developing national programs, technical policies and regulations for controlling air pollution and radiation exposure. These efforts help protect the health of all Americans by preventing pollution and increasing energy efficiency, improving indoor and outdoor air quality, reducing industrial air pollution and pollution from vehicles and engines, protecting the stratospheric ozone layer, reducing acid rain, and addressing climate change.

In 2010, the EPA celebrated the 40th anniversary of the signing of the Clean Air Act Amendments, a landmark piece of legislation that has led to significant environmental and public health benefits across the United States. The Clean Air Act was signed by President Richard Nixon on December 31, 1970 to foster the growth of a strong American economy and industry while improving human health and the environment. President Richard Nixon

recognized the Clean Air Act as a beginning, stating, "I think that 1970 will be known as the year of the beginning, in which we really began to move on the problems of clean air and clean water and open spaces for the future generations of America".

Although significant progress has been made in improving the quality of the air in most U.S. cities and communities, there is more to be done over the next 40 years. After the Clean Air Act's first 20 years, in 1990, it prevented more than 200,000 premature deaths, and almost 700,000 cases of chronic bronchitis were avoided. Over the last 20 years, total emissions of the six principal air pollutants have decreased by more than 41 percent, while the Gross Domestic Product has increased by more than 64 percent. Through continued innovation and successful implementation, the Clean Air Act will deliver even more benefits over the next 40 years.

What is Baylor University doing to participate in this landmark piece of legislation?

- Baylor has representation on the Heart of Texas Counsel of Governments Air Quality Advisory Committee that

assists in ensuring state and federal funded programs are improving air quality in McLennan and surrounding counties (Dr. Rebecca Sheesley, Department of Environmental Science; and Alan Stover, Department of EH&S).

- Baylor operates within an Environmental Management System (EMS) that helps ensure environmental regulatory requirements and best practices are supported during planning and implementation of all activities on campus.
- Every individual on campus has some responsibility and duty to help maintain or improve our local air quality by contacting EH&S whenever new emission sources are used and ensuring processes and equipment operate within the guidelines of applicable air permits.

Please contact Alan Stover, Director of Environmental Compliance with any questions or concerns regarding clean air regulations at Baylor University: 710-7075, mail code 7046.

OSHA Holding National Safety Stand-Down for Falls in Early June

Falls are the No. 1 cause of workplace fatalities on construction sites, which is why OSHA has scheduled a national safety stand-down from June 2-6 to raise awareness among employers and workers about the hazards of falls.

"Falls account for more than a third of all deaths in this industry," OSHA Administrator Dr. David Michaels said. "We're working with employers, workers, industry groups, state OSH plans and civic and faith-based organizations to host safety stand-downs that focus on recognizing hazards and preventing falls. We are getting the message out to America's employers that safety pays and falls cost."

During the stand-down, OSHA encourages employers and workers to pause their workday to talk about fall prevention, and discuss topics such as ladder safety, scaffolding safety and roofing-work safety.

OSHA said it has launched a [national safety stand-down Web page](#) with information on how to conduct a successful stand-down. Afterward, employers will be able to provide feedback and receive a personalized certificate of participation.

The stand-down is part of [OSHA's ongoing fall-prevention campaign](#), which the agency launched in 2012 with NIOSH. The campaign provides employers with lifesaving information and [educational materials](#) on how to plan ahead to prevent falls, provide the right equipment for their workers and train all employees in the proper use of fall-protection equipment.

"Preventing falls in the construction industry benefits everyone from the worker to the employer to the community at large," NIOSH Director Dr. John Howard said. "This safety stand-down serves as an important opportunity for everyone to take the time to learn how to recognize and prevent fall hazards."

[OSHA's stand-down Web page](#) provides details on how to conduct a stand-down; receive a certificate of participation; and access free education and training resources, fact sheets and other outreach materials in English and Spanish.

Did You Know?

OSHA has released its list of the top 10 most frequently cited standards for the Fiscal Year 2013. The 10 standards which were most often seen violated during OSHA inspections were:

1. Fall Protection
2. Hazard Communication
3. Scaffolding (general requirements)
4. Respiratory Protection
5. Electrical (wiring methods, components and equipment)
6. Powered Industrial Trucks
7. Ladders
8. Control of Hazardous Energy (lockout/tagout)
9. Electrical Systems Design (general requirements)
10. Machinery and Machine Guarding (general requirements)

On The Lighter Side

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"According to new government safety regulations, employees must wear goggles and protective clothing when exposed to sharp criticism or cutting remarks."

Dear EH&S

Dear EH&S,

What is the definition of a "hazardous chemical"?

-Lab Rat

Dear Ratty,

In the Hazard Communication Standard, which is also the definition the Laboratory Standard defers to, OSHA defines a "hazardous chemical" as "any chemical which is classified as a physical hazard or a health hazard, a simple asphyxiant, combustible dust, pyrophoric gas, or hazard

not otherwise classified".

To take that and break it down into plain English, it means any chemical that can hurt you—either directly through exposure to it, or indirectly through catching fire or exploding.

It is interesting to note that physical hazards are now included in the definition, whereas in the past the definition was focused on health hazards. Lab fires and explosions have shown us that chemicals can harm you indirectly as well.

Leading Safety by Example: Walking the Walk Saves Lives

One of the questions on the application for EHS Today's America's Safest Companies asks about management engagement in safety. Companies with extraordinary safety programs have leaders that are engaged in safety, who recognize the importance of EHS performance to the bottom line and support EHS efforts as part of their goal to be a world-class operation.

At any business or institution, leadership is critical to establishing safety at the work site. Workers who believe that administrative leaders and supervisors take occupational safety seriously are more likely to take the time and effort to work safely.

We know that leadership can take many forms. Which are most important when engaging employees?

Transactional leadership aligns the interests and preferences of team members with the organization of which they are a part, while transformational leadership encourages employees to work towards a unified purpose. Both have been associated with numerous positive safety outcomes, such as improved safety climate, increased safety behaviors and decreased accidents and injuries. But it still is unclear how these dimensions of leadership differentially relate to safety outcomes.

Over the past five years, the Center for Construction Research and Training (CPWR) has sponsored a world-class research team from the fields of psychology and occupational health to investigate safety leadership in the construction industry. A survey of more than 1,000 plumbers and pipefitters uncovered some important clues.

Researchers Krista Hoffmeister, Alyssa M. Gibbons, Stefanie K. Johnson and John C. Rosecrance from the University of Colorado, Konstantin P. Cigularov from Old Dominion University and Peter Y. Chen from the University of South Australia surveyed 1,167 construction pipefitters and plumbers to link their perceptions of leadership with their assessment of safety culture and practices on the job.

The Differential Effects of Transformational Leadership Facets on Employee Safety, which appears in the [February 2014 edition of Safety Science](#), found that although most facets of transactional or transformational leadership were related to at least one safety outcome, idealized influence - where members admire the qualities and imitate the actions of workplace leaders - accounted for the most variance. Other key findings include:

- Taken together, the seven facets of leadership accounted for 40-45 percent of the variation in safety climate, 15-18 percent of safety compliance and participation behaviors, and 3-6 percent of the workplace injury and pain outcomes reported by mechanical apprentices and journeymen.
- Idealized influence, consisting of attributes (i.e. characteristics) and behaviors, consistently emerged as the most important leadership behaviors associated with workplace safety. Leaders acquire idealized influence when their employees admire their actions and integrity, and adopt them as role models.
- The most important leader behaviors for developing a positive safety climate were, in order: idealized influence, inspirational motivation, intellectual stimulation, individualized consideration and contingent reward.
- Although leadership overall was a significant predictor of workplace pain and injuries, no single leadership behavior contributed significantly by itself. This suggests that although leaders may be able to engage in one behavior or another to promote safety climate and safety behaviors, ultimately, to reduce injuries, they have to be holistically good leaders.

"When supervisors reward safe behavior or punish unsafe behavior, they engage in what psychologists call 'transactional leadership,'" said Pete Stafford, executive director, CPWR. "They are striking a deal with employees: if I get something I want, you will get something you want. This kind of leadership did lead to some improvements, but it wasn't the most important kind."

According to Stafford, "Supervisors whom workers admired for their character, intelligence and skills could exercise much more powerful 'transformational leadership.' That is, when trades employees saw a foreman they admired making safety a top priority, the workers began to make safety a higher priority as well. "

Stafford noted that other CPWR studies have shown that incentive programs that reward crews with prizes for safe work actually discourages workers from reporting injuries when they happen. This new study suggests that construc-

tion workers are motivated better by role models than by rewards for accident-free days.

from an article written by Sandy Smith that appeared in EHS Today.

Web Bytes

Spring can bring severe weather here in Texas, so perhaps this is a good time to highlight some internet resources and applications for you.

[Pro Weather Alert](#) is our favorite app to keep track of weather watches and warnings. There is a free version, and a paid version with more customization options. Our favorite points include the ability to customize the level of alert you receive, how often it updates, and the widget that allows you to toggle the sound on and off, as well as toggle tracking on and off. Tracking is good if you're traveling distances, as you will be alerted if you pass into an area where there is a watch or warning.

[Radarscope](#) is, by far, the best radar app we have found. It is designed specifically with meteorologists and storm spotters in mind, and it updates in near real time, as opposed to the approximately 6-minute lag of traditional radar. It isn't free, but well worth the price if you're a serious weather geek.

For emergency steps to take in the event of severe weather, we recommend visiting the [Weather Safety](#) site run by the [National Weather Service](#). It will give you loads of information on all types of severe weather.

Another good source of information on preparing for severe weather can be found on the [Severe Weather](#) site run by [FEMA](#).

The weather in Texas can change very quickly, so always have ways to stay weather aware!

Bringing Safety Home: Unused Household Medications

If we flush them down the sink or toilet, they poison our groundwater, but if we throw them in the trash and consign them to a heap somewhere, they can still come back to haunt us. Rainwater flows over landfills and into rivers and streams that we and other animals bathe in and drink from. When we eat fish or game, we consume the toxins that have poisoned them. And water off of landfills also joins the groundwater which nourishes our gardens and contributes to our drinking water. According to studies reported at wegreen-usa.org, a whopping 82% of landfills *leak!* Disposemy meds.org warns, "More than 100 different pharmaceuticals have been detected in lakes, rivers, reservoirs and streams throughout the world."

But if we can't throw them away and we can't recycle them, where on Earth do they go?

Luckily, there is help. The National Prescription Drug Take-Back Day aims to provide a safe, convenient, and responsible means of disposing of prescription drugs, while also educating the general

public about the potential for abuse of medications.

The next Take-Back Day is coming up on Saturday, April 26th from 10 am - 2 pm. Police Departments in Waco, Hewitt, Woodway, and surrounding areas are all taking part. Collection areas will be set up in the police department offices.

All citizens that wish to participate may dispose of their current or outdated unwanted medication either in its original container or by removing the medication from its container and disposing of it directly into the disposal box. If an original container is submitted, the individual should remove any identifying information from the prescription label.

All solid dosage pharmaceutical products and liquids in consumer containers may be accepted. Liquid products, such as cough syrup, should remain sealed in their original container. The depositor should ensure that the cap is tightly sealed to prevent leakage.

Intravenous solutions, injectibles, and syringes will not be accepted due to the potential hazard posed by bloodborne pathogens.

For questions, please contact your local police department.



What We're Working On

It was decided not to have a Lab Safety Committee meeting this quarter, due to a lack of items for the agenda. In lieu of that, Karen Humphrey will be sending her CHO report via email to the Committee members, so they can pass the information on to their departments. Meetings bi-annually, as opposed to quarterly, will be considered for the 2014-2015 year.

The department of EH&S has a number of projects planned for the summer, including the re-vamp of the website and revisions to at least some of the training modules currently in place. Whatever changes are made, we will be sure to inform you in this newsletter or through email.

This will be the final edition of The Safety Net for the spring semester. We wish everyone a successful end to the semester, and a safe and enjoyable intersession. Our summer newsletter will pick up in June.

Current Live Training Schedule:

<http://www.baylor.edu/ehs/index.php?id=98325>

Training Matrix:

<http://www.baylor.edu/ehs/doc.php/203191.pdf>

Online trainings available through Blackboard

"The Safety Net" is a monthly electronic newsletter published by the Department of Environmental Health & Safety and intended to share information with the Baylor community, promote transparency within the university's safety program, and encourage the continued development of a culture of safety among university employees and students.

Comments, questions, and ideas for future stories are welcomed. Email: ehs@baylor.edu