



"Safety Comes First"

Case Western Reserve University Environmental Health and Safety

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2021

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June Is National Safety Month

June is National Safety month! Mark your calendars. The 2021 National Safety Month weeks are broken out into awareness topics:

- Week 1: Prevent Incidents Before They Start
- Week 2: Address Covid-19 Safety Concerns
- Week 3: It's Vital To Feel Safe On The Job
- Week 4: Advance Your Safety Journey

Identifying risks and taking proactive safety measures to reduce hazard exposure on important topics from ergonomics to chemical management is crucial to creating a safe workplace.

As the pandemic continues, employers play an important role in expanding operations and returning remote workers to physical workspaces, building trust around vaccines, supporting mental health and so much more.

Being able to be one's self at work without fear of retaliation is necessary for an inclusive safety culture. Leading organizations focus not only on physical safety, but psychological safety as well.

Safety is all about continuous improvement. Whether organizationally or individually, NSC can help provide guidance for your path forward.

Get involved! Strike up a conversation with coworkers about these topics and others during the 2021 National Safety Month. Or, send out a tweet or post your safety awareness tips on Facebook or social media.

Source: NSC

USTs – Monthly Walk-Through Inspections



“...make sure you can find the walk-through records quickly...”

Leaks and spills from underground storage tanks (USTs) are known to pollute soil and groundwater and ultimately threaten our health. Leaks and releases from these tanks can go unnoticed, and it's usually only after the problem is found that it is corrected. You can identify and resolve tank equipment problems quickly by conducting monthly walk-through inspections and reduce the chance of potential spills or releases.

One thing to understand about so-called “monthly” walk-through inspections is that they must happen every 30 days, not monthly, per se. This allows you to do more routine walk-throughs on a predictable schedule rather than random walk-throughs or when it is convenient each month. Also, you must be a designated operator and must have completed the operator training in order to conduct the walk-through inspection.

When preparing for a walk-through inspection, you need a checklist or form for completing the walk-through and indicate:

- The operator's name and designation
- The facility name and facility location address
- The date of inspection indicated in the mm/dd/yy format

Checklists should have a “yes” and “no” column to indicate whether the equipment is properly operating or needs corrective action and a space for the operator conducting the inspection to leave comments.

When conducting a walk-through, visually inspect all components of the tank system equipment. When walking through your facility, inspect:

- Spill prevention equipment—check for damage, remove any standing liquid or debris, remove any obstructions in the fill pipe, make sure the fill cap is securely connected to the fill pipe, and check for leaks in interstitial areas if you have installed double-walled spill prevention equipment with interstitial monitoring.
- Release detection equipment—check that the equipment is operating without alarms sounding and that there are no other unusual operating conditions, and check that records of release detection testing are up to date.
- Containment sumps—check for damage, make sure there are no leaks to the containment area or to the environment, remove any liquid or debris, and check for leaks in interstitial areas if you have installed double-walled spill prevention equipment with interstitial monitoring.
- Hand-held release detection equipment—make sure the tank gauge sticks or groundwater bailers are operating.

After completing a walk-through, record your findings so they are legible, and store the documents in a safe place. In case your facility is inspected, make sure you can find the walk-through records quickly, as well as give the inspector something to review that he or she can easily understand. If any problems were found while on the walk-through, you should clearly describe the problems on the checklist or form your facility uses so that corrective action can be taken.

The GHS Corrosion Pictogram

Containers of hazardous chemicals in a facility are all labeled in the same way and contain the same categories of information. You should take the time to read the labels on the chemicals in your work area and become familiar with the format and the type of information on the labels. On each of these labels, you will see one or more pictograms. These are the red diamonds with the black pictures on a white background.

Pictograms are meant to help you quickly identify the hazards associated with a chemical. There are nine different pictograms that represent different hazards. The “Corrosion” pictogram is a red diamond, and inside the diamond is an image of two vials of a corrosive substance damaging skin and another surface.

When you see this pictogram, it means the substance is corrosive—that is, it can damage and burn skin, eyes, metals, and other surfaces. Corrosives are usually thought of as liquids, but they can also be solids, such as granules or powders. Corrosive gases or mists can be released from concentrated corrosive liquids. Unprotected exposure to corrosives is very dangerous. Your skin and eyes can be burned by contact with corrosives in any form, and breathing corrosive gases can damage your throat and lungs.

Specific information on the hazards of a particular corrosive chemical is listed in the Hazard Statement on the label and in the safety data sheet (SDS) for the chemical. The SDS will also give you information on what personal protective equipment (PPE) to use; what to do if you or a coworker is exposed to the chemical; how to safely handle, store, and dispose of the chemical; and how to handle spills and leaks. At a minimum, when working with a corrosive, you will probably need eye protection and chemical-resistant gloves. Depending on the specific chemical and how you are using it, you may also need a face shield, protective clothing such as an apron, or a respirator. Again, check the SDS to find out what PPE you need.

Make sure any containers you are using with a corrosive chemical will not be damaged by the chemical. If you get a corrosive chemical in your eyes, immediately go to an eyewash station and flush your eyes with water for at least 15 minutes, then seek medical attention. If corrosives get on your skin, remove any clothing the corrosives contacted, and wash the area with water immediately. Use a safety shower if the chemical covers your face or a large part of your body. If you breathe in corrosive gases, vapors, or mists, move into fresh air, and see a doctor for follow-up.



“Corrosives are usually thought of as liquids, but they can also be solids... gases and mists...”

Responding To Indoor Spills



“Many spill kits are universal and are suitable for cleaning up most types of spills.”

Spill Kits

If a chemical spill occurs in your workplace, it can create a dangerous situation for both your health and the environment. Spill kits are containers that house absorbent materials, personal protective equipment (PPE), and other necessary gear for cleaning up chemical spills. Spill kits are often strategically placed throughout a facility in areas where there is significant risk for spills, such as chemical storage areas. Some spill kits are mobile and can be wheeled to any location within a facility.

The contents of a spill kit may vary depending on its intended use. For instance, some spill kits are designed for corrosive chemical spills and will contain absorbents that neutralize acid. Others are meant for oil. Many spill kits are universal and are suitable for cleaning up most types of spills. Generally, spill kits should contain the following:

- Absorbent materials such as booms, mats, pillows, and loose or granular absorbents;
 - PPE such as hazmat suits, safety goggles, face shields, protective boots, and gloves;
 - Tools such as a shovel, broom, and dustpan;
 - Disposal bags; *and*
 - Safety cones, caution tape, or other barricades for restricting access to the spill zone.
- In some cases, the remnants of a chemical spill and materials used to clean it up will be considered hazardous waste, as defined by applicable federal and state laws, and must be managed accordingly.

Before attempting to handle a spill, you need to make sure you are wearing the right PPE for your safety. For example, corrosive chemicals will burn your skin on contact, and handling them will require chemical-resistant gloves, a hazmat suit, protective boots, and a face shield to protect against splashes. Always check the safety data sheet (SDS) for the chemical you are working with, once identified, to see what the PPE requirements are for handling it.

Liquid spills

- Once your PPE is donned, you will need absorbent materials to soak up the spill. If the spill is in danger of spreading, you will first need to place an absorbent boom around the edges of the spill to contain it.
- Once the spill is contained, you can place safety cones and/or other barricades around the spill area to keep passersby from getting too close.
- Put down absorbent mats and/or loose absorbent materials like vermiculite to soak up the spill. Make sure the absorbents have sufficient time to soak up the spill before attempting to gather and dispose of them, but also make sure you don't forget to come back and finish the cleanup!
- Place contaminated absorbents in bags or other appropriate disposal containers, and properly characterize the waste.

Solid spills

Spills of solid materials should be cleaned up using tools like a shovel or dustpan and broom. As with liquid spills, the waste must be placed in a proper disposal container, characterized, and then managed accordingly.

Help make sure your facility stays prepared for potential spills by restocking spill kits after each use. If you notice materials are missing from the stock area, notify your supervisor.

Distracted Driving

Are you giving the road your attention?

According to the Department of Transportation's (DOT) National Highway Traffic Safety Administration (NHTSA), 3,477 people were killed and 391,000 people were injured in motor vehicle crashes involving distracted drivers in 2015.

The DOT defines distracted driving as "any activity that diverts attention from driving, including talking or texting on your phone, eating and drinking, talking to people in your vehicle, fiddling with the entertainment or navigation system—anything that takes your attention away from the tasks of safe driving."

Put down the phone

According to DOT's 2015 statistics, approximately 660,000 people are using cell phones while they are driving during the daytime. Teenagers were the largest age group reported as distracted at the time of fatal crashes.

Texting is considered the most alarming distraction. The DOT says sending or reading a text takes your eyes off the road for five seconds. At 55 miles per hour, it's similar to driving the length of an entire football field with your eyes closed.

Drivers who use hand-held devices while driving are four times as likely to get into crashes serious enough to injure themselves or others.

Studies have shown that in most cell phone-related crashes the drivers were not presented with challenging or changing situations, which required quick thinking or emergency maneuvers. In most cases, the drivers simply failed to control their vehicles during routine driving conditions.

What can you do?

Get the word out! Talk about the dangers of distracted driving at your workplace. Ask your coworkers to commit to distraction-free driving or set a company policy on distracted driving.

Pull over to talk on your phone or to text, and don't do it at a stop sign or a stoplight. Let calls coming in go to voicemail. Try leaving your phone on silent while you drive. Keep your eyes on the road and your hands on the wheel. Make sure the road has your full attention.



"...approximately 660,000 people are using cell phones while they are driving during the day-time."

Source: Safety BLR

Avoid Heat-related Illnesses and Death



*“In 2018,
162
people
died in
the U.S.
from
exposure
to
excessive
heat.”*

The human body is normally able to regulate its temperature through sweating, until it is exposed to more heat than it can handle. Heat exhaustion and heat stroke can escalate rapidly, leading to delirium, organ damage and even death. In 2018, 162 people died in the U.S. from exposure to excessive heat.

People most at risk include:

- Infants and young children, especially if left in hot cars
- People 65 and older
- People who are ill, have chronic health conditions or are on certain medications
- People who are overweight

Heat Exhaustion

When the body loses excessive water and salt, usually due to sweating, heat exhaustion can occur. Signs and symptoms include:

- Sweating
- Pale, ashen or moist skin
- Muscle cramps (especially for those working or exercising outdoors in high temperatures)
- Fatigue, weakness or exhaustion
- Headache, dizziness or fainting
- Nausea or vomiting
- Rapid heart rate

Uncontrolled heat exhaustion can evolve into heat stroke, so make sure to treat victims quickly:

- Move victims to a shaded or air-conditioned area
- Give water or other cool, nonalcoholic beverages
- Apply wet towels, or have victims take a cool shower

Heat Stroke

Seek medical help immediately if someone is suffering from heat stroke. Signs include:

- Body temperature above 103 degrees
- Skin that is flushed, dry and hot to the touch; sweating has usually stopped
- Rapid breathing
- Headache, dizziness, confusion or other signs of altered mental status
- Irrational or belligerent behavior
- Convulsions or unresponsiveness

Avoid Heat-related Illnesses and Death, Cont.

Immediately take action:

- Call 911
- Move the victim to a cool place
- Remove unnecessary clothing
- Immediately cool the victim, preferably by immersing up to the neck in cold water (with the help of a second rescuer)
- If immersion in cold water is not possible, place the victim in a cold shower or move to a cool area and cover as much of the body as possible with cold, wet towels
- Keep cooling until body temperature drops to 101 degrees
- Monitor the victim's breathing and be ready to give CPR if needed

DO NOT:

- Force the victim to drink liquids
- Apply rubbing alcohol to the skin
- Allow victims to take pain relievers or salt tablets

The best way to avoid a heat-related illness is to limit exposure outdoors during hot days. According to the Centers for Disease Control and Prevention:

- Air conditioning is the best way to cool off
- Drink fluids, even if you don't feel thirsty, and avoid alcohol
- Wear loose, lightweight clothing and a hat
- Replace salt lost from sweating by drinking fruit juice or sports drinks
- Avoid spending time outdoors during the hottest part of the day, from 11 a.m. to 3 p.m.
- Wear sunscreen; sunburn affects the body's ability to cool itself
- Pace yourself when you run or otherwise exert your body

Keep Each Other Safe

If your job requires you to work outside in hot weather, you and your supervisors can take precautions to minimize the risk of heat-related illnesses.

The National Institute for Occupational Safety and Health recommends:

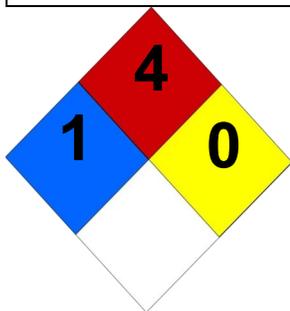
- Working shorter shifts until workers have adjusted to the heat
- Staying hydrated and drinking before you get thirsty
- Watch out for co-workers exhibiting signs of heat exhaustion or heat stroke
- Take time to rest and cool down

In your community, please check in on neighbors who are elderly, house-bound or otherwise may be reluctant to ask for help. You can offer to host them in the air-conditioned comfort of your living room on hot days, drive them to a local cooling center, or call relatives or city services to arrange for them to stay cool.

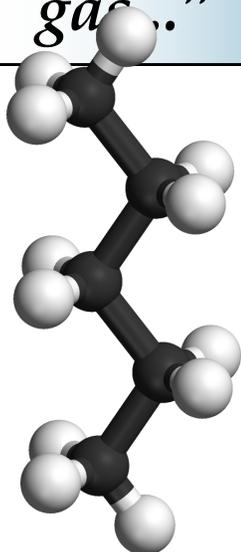
***“ DO
NOT
force the
victim to
drink
liquids.”***



Chemical Spotlight: Pentane



*“(Pen-
tane
is a)
compo-
nent
of
natural
gas..”*



Pentane is a volatile, colorless liquid with a gasoline-like odor. In addition to being a component of natural gas, pentane has numerous industrial uses. Primarily, pentane is used to create a blowing agent, which is then used to create a foam known as polystyrene. Polystyrene is used to make insulation materials for refrigerators and heating pipes.

Store pentane in tightly closed, locked containers in a cool, well-ventilated area away from oxidizing agents, strong acids, strong bases, and combustible materials. Pentane will attack some forms of plastics, rubber, and coatings. Take precautionary measures against static discharges, ground and bond all equipment containing the material, and avoid all possible sources of ignition. Use only nonsparking tools and equipment, especially when opening and closing containers.

If pentane is spilled, avoid breathing vapors, mist, or gas, and ensure adequate ventilation. Remove all sources of ignition, and evacuate personnel to safe areas. Use personal protective equipment (PPE), including goggles or safety glasses, gloves, flame-retardant protective clothing, and respiratory protection.

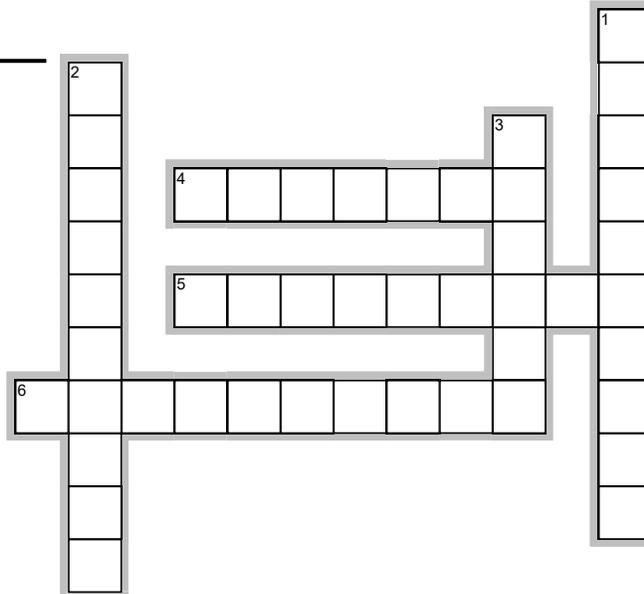
Prevent further leakage or spillage if safe to do so, and do not let the product enter drains, sewers, underground or confined spaces, groundwater, or waterways or discharge into the environment. Contain the spillage, and then absorb it with vermiculite, dry sand, earth, or a similar material. Place the spillage in a sealed container for disposal according to federal and local regulations.



Fun Page

Across

4. In addition to being a component of natural gas, _____ has numerous industrial uses.
5. The remnants of a chemical spill and materials used to clean it up may be considered _____ waste.
6. Talk about the dangers of _____ driving at your workplace.



EclipseCrossword.com

Down

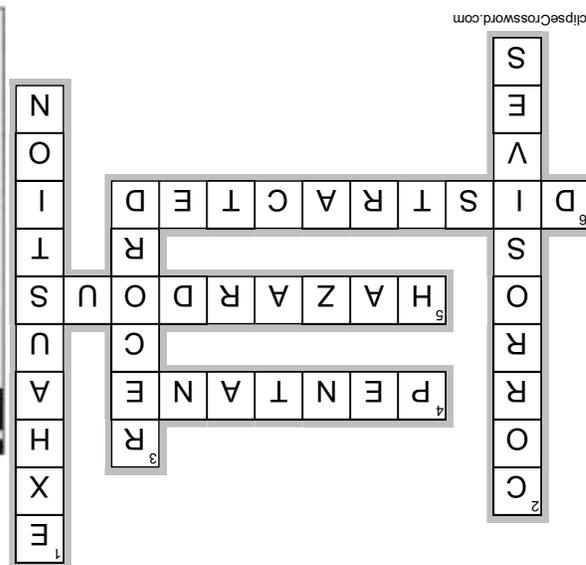
1. When the body loses excessive water and salt, due to sweating, heat _____ can occur.
2. Your skin and eyes can be burned by contact with _____.
3. After completing a (UST) walk-through, _____ your findings so they are legible.

Funny Corner



"Oh yeah, I totally get the 'don't-drive-and-phone' safety thing now. Seatbelts, too."

Puzzle Answers



EclipseCrossword.com

F
U
N

P
A
G
E

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Safety Quotes

*Working
safely
may get
old, but
so do
those
who
practice
it.*

*~Author
Unknown*

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