



*Don H. Mahaffey Drilling
Co.*

CODE OF SAFE PRACTICES

**SAFETY
FIRST**



YOUR OSHA COMPLIANCE SOLUTION

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Acetylene Safety

Policy

Acetylene is a compressed gas most often used in welding. Pure acetylene is an odorless gas, but commercial grades usually smell like garlic because of impurities. Overexposure to acetylene could cause dizziness or a headache, but the more common danger is how explosive acetylene is. There are many things that could cause an acetylene explosion such as sparks, being stored in a confined area, and even coming into contact with pure copper. Therefore, it is important to be smart around acetylene and remember the following safety tips.

Safe Work Practices

- Do not use acetylene at a pressure more than 15 pounds per square inch.
- Do not put acetylene in contact with pure copper, except in a blowpipe or torch.
- Do not use bars to pry the acetylene cylinders from the ground if they are frozen there- use warm (NOT BOILING) water to defrost the cylinders.
- Don't weld or cut on an acetylene pipeline.
- NEVER transfer acetylene from one cylinder to another.
- Use only non-sparking tools to open acetylene cylinders.
- Be sure acetylene piped systems and associated equipment are grounded- because acetylene is so flammable, the smallest spark could set it off.
- Always have an ABC fire extinguisher nearby.
- Shut off the acetylene cylinders during lunch breaks, overnight, or if you aren't going to use it for any other "substantial period of time".
- Keep acetylene cylinders at least 35 feet away from the actual welding or cutting operation so that sparks, hot slag, or flame will not reach them.
 - If you can't keep them away, use fire resistant shields to protect them.
- Use a back-flow protector to prevent oxygen and acetylene mixing into each other's systems.

Aggressive Clients

Policy

Health care and social service workers are susceptible to, and face significant risk of being attacked physically by an aggressive client. Facilities where this could most happen are, hospitals, residential treatment facilities, outpatient treatment facilities, community care facilities, and in field work while making home visits.

Safe Work Practices

- Workplace violence prevention policy.
- Recognizing the risk factors that contribute to assaults.
- Being able to locate all applicable safety devices, i.e. alarms.
- Ways to recognize, prevent or diffuse volatile situations.
- Ways to deal with hostile behavior.
- Progressive behavior control methods and when and how to apply restraints properly and safety when necessary.
- Ways to protect oneself and coworkers, including use of the buddy system.
- Recognizing the early warning signs of escalation such as:
 - Blame Shifting
 - Confusion
 - Agitation
 - Anger
 - Aggression

Air Compressors

Policy

Compressed air is one of the most popular sources of energy in today's work environments. It powers a wide variety of tools and equipment as well as large machines and process lines. Benefits of compressed air include low maintenance costs, a low weight to power ratio and the ability to operate for long periods without overheating. The dangers of using compressed air are compared to the use of electricity. Just like electricity, compressed air can be deadly if not treated with respect and used properly.

Safe Work Practices

- Before using compressed air equipment, always inspect it and make sure everything is in good working order.
- Hoses should be checked carefully for any sign of damage. Air hoses with cracks or other damage should be removed from service.
- Air fittings and couplings should also be inspected. They should fit tightly into the hose and be clamped securely with an approved machine clamp. If couplings require locking pins, make sure they are in place before use.
- NEVER use homemade air nozzles.
- Keep tools that are used with the compressed air in good working condition.
- If a tool is dropped, inspect it for dents & bends.
- Do not carry tools by the hose.
- Test the valve on the compressor regularly.
- NEVER remove the guarding around the belt and shaft of the compressor motor.

Air Driven Fluid Pump

Policy

Air driven fluid pumps can be a great way to transfer a variety of liquids from one place to another. While these pumps are relatively safe, they could potentially expose employees to harm if they are improperly operated or maintained. By following the safe work practices presented in this lesson, employees can help minimize their chances of an accident occurring when operating or maintaining an air driven fluid pump.

Safe Work Practices

Before operating or maintaining an air driven fluid pump, employees should do the following:

- Inspect all provided PPE for damage. Report damaged PPE to your supervisor. Do NOT wear damaged PPE.
- Inspect the pump for missing or damaged parts. Report missing or damaged parts to your supervisor. Do NOT operate a pump that has missing or damaged parts.
- Ensure that there are no fluid or air leaks. Report fluid and air leaks to your supervisor. Do NOT operate a pump that has leaking air or fluid.

When operating an air driven fluid pump, employees should do the following:

- Only authorized employees should operate the pump.
- Operate the pump in accordance with the manufacturer's instructions.
- Do NOT exceed the maximum air drive pressure listed on the pump label.
- Only use with liquids that the pump has been approved for.
- Do NOT operate the pump in an enclosed vessel.
- Do NOT modify the pump. Report modified pumps to your supervisor. Do NOT operate modified pumps.
- Do NOT grab hold of a pressurized component.
- Ensure that hoses, lines, and screw connections are depressurized before dismantling or assembling.
- Immediately clean up any spilled liquids. Liquids should be cleaned and disposed of in accordance with all local, state, and federal laws.
- Do NOT smoke near the pump.
- Ensure that there is sufficient ventilation when working with evaporating fluids.

When performing maintenance on an air driven fluid pump, employees should do the following:

- Only authorized employees should perform maintenance on the pump.
- Ensure that the unit is properly depressurized before dismantling or assembling parts.
- When replacing parts, employees should only use manufacturer-approved parts.

Air Gun Safety

Policy

Air guns are commonly found in many work areas. Employees who use an air gun to clean their work area, surface, or machine could potentially be exposed to harm if the air gun is improperly used. By following the safe work practices presented in this lesson, employees can help minimize their chances of an accident occurring while using an air gun.

Safe Work Practices

Before using an air gun, employees should do the following:

- Inspect all provided PPE for damage. Report damaged PPE to your supervisor. Do NOT wear damaged PPE.
- Inspect all of the components of the compressed air system or portable air compressor for missing or damaged parts. Report missing or damaged parts to your supervisor. Do NOT use a compressed air system or portable air compressor that has missing or damage parts.
- Inspect the air gun for damage or items that may have gotten lodged in the barrel. Report damaged air guns to your supervisor. Do NOT use a damaged air gun or an air gun that has something lodged in the barrel.
- Ensure that the connections for both the air gun and air compression system or portable air compressor are compatible. Do NOT use incompatible components.

When using an air gun, employees should do the following:

- Operate the air gun in accordance with the manufacturer's instructions.
- Do NOT use air guns in excess of OSHA requirements.
- Use the appropriate air gun for the task.
- Do NOT modify the air gun. Report modified air guns to your supervisor. Do NOT use modified air guns.
- It is recommended that employees de-pressurize the air compression system before attaching the air gun.
- Use a chip guard or chip shield.
- Blow debris in a direction that is away from you and your coworkers.
- Do NOT use the air gun to clean yourself.
- Do NOT point the air gun at yourself or coworkers.

Air Hose Safety

Policy

Compressed air can cause serious injuries so it is always important to make sure you are using the proper equipment and using it correctly.

Safe Work Practices

- Do not yank the air hose if it gets caught around an object or a corner. Instead, walk over to the point where it is caught and untangle it.
 - Wear your PPE.
 - Safety goggles or a face shield to protect your eyes from the compressed air or flying debris
- Ear plugs or ear muffs to protect your hearing; air hoses are often with tools that have noise levels about 85 decibels, which can lead to hearing loss.
- When you are finished using the air hose be sure the air supply is turned off and the hose is bled before you detach it.
- Keep the air hose off in a safe place to make sure people (yourself included) do not trip over it.
- Prevent sharp objects from rubbing against the hose.
- Keep the hose away from heat and oil, both of which can cause it to deteriorate.
- Coil the hose without kinks and hang it in a safe place when not in use. (Proper storage of air hoses can make them last for up to 5 years longer.)

Airborne Contaminants

Policy

Airborne contaminants can affect the health of any person working with or around equipment that could release high levels of contaminants exceeding the minimum exposure limits. Proper training on the equipment used, along with safe work practices, should reduce the risk of illness and/or injury.

Safe Work Practices

Airborne contaminants can be avoided through well-educated employees who participate in safe work practices and that are fully aware of the health hazards exposure can create.

- Use protective equipment or other protective measures to keep the exposure of employees to air contaminants within the limits prescribed.
- Protective equipment used will be first inspected and approved for each particular use by an authorized technically qualified person.
- Tests should be conducted on all internal combustion equipment exhausts in enclosed spaces to avoid high concentration exposure to employees.
- Avoid any exposure to asbestos or formaldehyde.

Allergic Reactions to Latex

Policy

Workers exposed to latex gloves and other products containing natural rubber latex may develop allergic reactions. The exact cause of latex allergy is unknown, but it is thought that repeated exposure to latex and rubber products may induce symptoms.

Safe Work Practices

- Use non-latex gloves when contact with infectious material is not likely. (Food preparation, housekeeping, maintenance, etc.)
- Use powder-free gloves with reduced protein content if latex gloves are required.
- Do not use oil-based hand creams or lotions when wearing latex gloves.
- Wash hands with mild soap and dry thoroughly after removing latex gloves.
- Clean work areas contaminated with latex dust. (Upholstery, carpets, ventilation ducts, etc.)
- Change ventilation filters and vacuum bags often when used in latex-contaminated areas.

Anticipating Accidents

Policy

Accidents occur for many reasons. Understanding why an accident happens is the first step in prevention.

Safe Work Practices

- Having confidence is a good thing but being over confident can be dangerous.
- Failing to observe safety procedures can endanger all workers.
- As we try to be more efficient, we tend to take shortcuts that can lead to unsafe conditions and increased chances for injuries.
- An employee should not be intimidated about asking for better instructions and should never try to do a task without knowing exactly how to do things correctly.
- A well maintained work area sets a standard for all.
- Doing a task safely requires mental attention.
- Thinking through a process to complete a task can take away hazards.

Antifreeze Spills

Policy

Antifreeze can be a dangerous substance when it is not handled properly and spills and leaks should be cleaned up immediately. This is to ensure that antifreeze does not make its way to a drain and to prevent injuries from people slipping on the substance. Cleaning up spills or leaks that occur outside will also help in the protection of wild and domestic animals. Employees can minimize the dangers of leaked or spilled antifreeze by utilizing the safe work practices provided in this lesson.

Safe Work Practices

Antifreeze should be treated with care when it is not being used. Employees should do the following to prevent leaks or spills from occurring:

- Inspect the antifreeze packaging for damage. If the container has damage that could result in a leak, the liquid should be moved to an appropriate container and labeled with the product information. Report any damaged container to your supervisor.
- Ensure that antifreeze is being stored properly.
- Check the container lid to ensure that it has been tightly secured.
- Do NOT store antifreeze in an area in which it could be knocked over.
- Do NOT store antifreeze in an area in which the container could become wet. Antifreeze containers should be kept dry at all times.

When an accidental spill or leak occurs, an employee should clean it up immediately. Employees should do the following when cleaning up antifreeze:

- Consult the Safety Data Sheet (SDS) for required materials needed based on the size of the spill.
- Prior to cleaning up the spill, you should put on the proper personal protective equipment (PPE). Check all PPE for damage before putting it on. Report any damaged PPE to your supervisor.
- Based on the size of the spill, you may be required to block the area off from customers and other employees to prevent the spill from spreading and accidental injuries.
- Find the source of the leak and stop it.
- Check to see if any of the antifreeze went down a drain. If it appears to have gone down a drain, inform your supervisor as soon as possible as the EPA may need to be contacted.
- Use the appropriate absorbent material or designated mop to clean up the spill or leak.
- Ensure that the cleaned-up antifreeze or absorbent material is recycled or disposed of in the appropriate container.
- Report the leak or spill to your supervisor. Ensure that you include the size of the spill in your report as the cleaned material may need to be disposed of by a professional.
- In the event that antifreeze comes into contact with your skin, wash the area with soap and water.

Arc Welding and Cutting

Policy

Arc welding uses a welding power supply to create an electric arc between an electrode and the base material to melt the metals at the welding point. Arc cutting is a process using consumable carbon or graphite electrodes where metal is cut by the heat of a carbon arc. It is important to follow these safety rules to avoid creating safety hazards and unsafe working conditions.

Safe Work Practices

It is important to follow proper safe work practices to prevent injury or illness from arc welding and cutting hazards. Listed below are some very important steps to make sure that safety is maintained.

- The electrode holders should be removed when left unattended.
- Hot electrode holders should not be cooled off by dipping in water.
- The power supply switch to the equipment should be left opened when the welder or cutter leaves or stops work for any significant amount of time.
- Any faulty or defective equipment should be reported to the supervisor.
- Protect skin and eyes from UV light by using appropriate personal protective equipment.
- Shield the area with noncombustible or flameproof screens when welding.
- Work should be conducted in a well ventilated area.
- Keep area free of debris and flammable material.
- The frames of arc welding and cutting machines should be grounded.
- Cables in poor condition should not be used

Argon

Policy

While non-toxic and non-flammable, argon can still be dangerous if precautions are not taken. By following these guidelines and observing safe work practices, employee safety can be ensured.

Safe Work Practices

- Use only in well-ventilated areas.
- Use local exhaust in combination with general ventilation.
- Do not allow the temperature where cylinders are stored to exceed 125°F.
- Cylinders should be stored upright and firmly secured to prevent falling or being knocked over.
- Rotate cylinders so the oldest is used first.
- Do not drag, slide or roll cylinders.
- Protect cylinders from physical damage.
- Cylinders should not be transported in a closed place, like the trunk of a car.

Asbestos Safety

Policy

Asbestos safety procedures are extremely important because asbestos is extremely dangerous. However, as long as you follow the correct safety procedures, you can protect yourself and your health when working with asbestos.

Safe Work Practices

The idea behind safe handling of asbestos is to prevent dust from becoming airborne and being inhaled. Your company will have specific handling procedures based off of what type of asbestos material you are handling. In addition, some general safe handling tips are:

- Inspect the area every day for asbestos levels.
 - OSHA prohibits more than 0.1 fibers per cubic centimeter of air (0.1 f/cc) averaged over the 8 hour workday and 1 fiber per cubic centimeter of air over a 30 minute work period.
- If you are unsure whether or not the material you are handling contains asbestos, treat it like it does.
- If you are taking asbestos material off the roof, seal it in a bag and pass it down instead of simply throwing it off the roof.
- Wear the proper personal protective equipment.
 - If you are working in concentrations of asbestos that are above the permitted level, wear coveralls, gloves, head coverings, respirators, and foot coverings
 - Do not bring your clothes home to be laundered.
- Restrict access to the area and set up warning signs that there is asbestos in the area.

Assisting Coworkers with Medical Emergencies

Policy

A medical emergency can be a scary experience for all involved. To help keep calm during medical emergencies, employees should know what to do in these events. When such a situation arises, employees should use the check-call-care method when assisting victims. The most important thing to remember is to remain calm; panicking could make the situation worse.

Safe Work Practices

Employees should read and understand their company's Emergency Action Plan for specific details on how to handle medical emergencies. Employees should speak with their supervisor if they have questions on the emergency action plan.

Medical emergencies can be scary events. Knowing what to do in such situations will make them easier to handle when they arise. When dealing with a medical emergency, employees should use the check-call-care method to offer aid to victims. This method involves the following:

- Stay calm.
- Keep the victim calm.
- Visually inspect the area around the victim for signs of what could have caused their injury or condition. Do NOT step in to help the victim until you have verified that it is safe to do so. Do NOT become a second victim.
- Either call or have someone else call 911 or other emergency services. When talking with 911, employees should provide the following information:
 - The nature of the emergency
 - Their name
 - The location of the victim (give as many specifics about the location as possible)
- Remain on the phone with the dispatcher. Do NOT hang up until the dispatcher has hung up.
- Follow any instructions given by the dispatcher.
- Send someone to go greet the emergency services team. The greeter can help lead the team to the victim.
- Either fetch or have someone else fetch the first aid kit.
- Check the person for injuries. If the victim is conscious and is able to communicate, ask them if they are feeling any pain, discomfort, or numbness in any areas of their body.
- Render first aid if you have been trained or feel comfortable doing so.
 - CPR should only be done by qualified and trained employees.
- Stay with the victim until emergency services arrive and start to give aid to the victim.
- Reassure the victim that everything will be alright.
- When the emergency services team arrives, give them as much information about the victim and circumstances as possible.

Backhoe Loader: Safe Operation

Policy

Backhoe loaders, or backhoes for short, cause many injuries at jobsites every year. The operator of the backhoe has a responsibility to use caution to keep him or herself safe, keep others safe, and avoid causing damage to the equipment or the site.

Safe Work Practices

The leading cause of accidents involving backhoes is working too close to an edge and operating on steep or uneven grades. Proper use of stabilizers, as well as the following safety guidelines, will help to reduce these risks greatly.

- Stabilizers should be spread to their full width and the bucket must be in solid contact with the ground. If the machine is not stabilized correctly, it will bounce and increase the level of risk.
- Beware of ground conditions under your stabilizers and add support as needed.
- When operating on a hill, swinging a full bucket of dirt changes the center of gravity. Make sure you always work slow and keep your bucket as low as possible.
- Make an effort to know where others are in your area at all times.
- Keeping the bucket as low as possible at any time will avoid throwing off the center of gravity and maintain visibility.
- Avoid driving across a hill with a loaded bucket, instead go straight up or down the hill.

Backs and Lifting

Policy

Back injuries are one of the most common types of injuries in the workplace. By following the guidelines presented in this lesson, employees can help minimize their chances of a back injury from occurring while lifting or lowering objects. Employees should remember to use team lifts or mechanical methods of lifting whenever possible over manual methods.

Safe Work Practices

To aid in the protection of the back, employees should do the following when performing lifting tasks:

- Avoid lifting and bending whenever possible.
- Place objects where they are easy to access.
- Avoid placing objects on the floor when possible.
- When possible, use a dolly or forklift to lift objects instead of manual methods.
- If a manual lift must be performed, keep objects between your shoulder and waist.
- When possible, push an object rather than pull. Pulling puts more strain on the back muscles than pushing.
- Don't lift heavy loads. If you're straining under the weight of an object, then it is too heavy for you to lift alone.
- Make sure that you have enough room to lift safely before picking up an object.
- Know the destination of your load before picking it up.
- Avoid walking on slippery and uneven surfaces while carry objects.
- Plan your move
 - Ensure that the path you are going to take is clear of wet surfaces, obstacles and obstructions, and that there are no slopes.
- Size up the load
 - Look at the location of the object. If the object is overhead or on the ground, think about how you can safely reach it or how to get into a comfortable position to reach it.
 - Test the weight of the object that you will pick up.
 - Test the object for shifting contents. Shifting contents can affect how the object will behave when lifted.
- Get help as needed
 - Perform a team lift if the size or weight of the object is too much for you handle. Lifting awkwardly-shaped or sized objects can be just as dangerous as lifting heavy objects when you do it alone.
- If you have the option, use a dolly or other piece of material handling equipment over manual lifting methods.

When a manual lift must be performed, employees should use the following technique to minimize or eliminate the strain on the back:

- Get as close to the object as possible.
- Use a wide, balanced stance with one foot slightly ahead of the other with your heels on the floor.
- Bend your knees when lifting or lowering objects. This will help you keep the natural curve of your spine.
- Use your palms, not just your fingers, to grasp the load. It is recommended that you place your palms on opposite corners of the object.
- Keep your head up while lifting.
- Lift with a smooth, steady motion. Keep the object between your shoulders and waist area.
- Pivot to turn in the direction that you want to go. Do NOT twist.
- Slowly lower the load. Slow lowering will help maintain the curve of your lower back.
- When you have to get an object from above shoulder height, employees should lower the front portion so that it is below the shoulder.

Belt Sanders (Class B)

Policy

A belt sander does not have to be dangerous so long as the safe work practices are followed.

Safe Work Practices

- Consult the operator's manual to ensure you are complying with the manufacturer's instructions.
- Inspect the belt sander and sand paper.
- Replace the sand paper if it is worn down or too gummed up with dust and glue.
- Should you find any malfunctioning or broken parts, do not use the belt sander and report it to your supervisor.
- Wear safety glasses and hearing protection.
- Use two hands when using a belt sander.
- Watch the placement of any power cords to assure that the belt sander does not catch or go over them. The cords could become damaged causing electric shock or get tangled in the power tool.
- Do not force the sander.
- Do not wear loose clothing.
- Do not place the sander facing towards your body.
- Wear long hair up and tied back.
- Do not use a belt sander on any wood that is wet. It is to be used on dry wood only.
- Utilize any dust collection that is provided with the belt sander.
- When you have finished using the belt sander, check the sand paper. If the paper is not too worn down, clean the paper with an abrasive cleaning stick.
- When not using the belt sander, ensure that the power button is in the off position.

Bloodborne Pathogens

Policy

Although exposure to bloodborne pathogens is minimal in some work environments, it is necessary to take precautions to avoid exposure. Following the proper procedures can keep you safe.

Safe Work Practices

- Use “Universal Precautions” – a concept that says that all human blood and certain human fluids are treated as if known to be infectious for HIV, Hepatitis B and other bloodborne pathogens.
- Whenever you do a job or task that may expose you to bloodborne pathogens, you must wear protective equipment:
 - A full-face shield to protect your mouth, eyes and nose.
 - Protective gloves for your hands. If you have cuts or any broken skin, use appropriate cover or protection. (If you have a barrier cream, it is important to protect your hands under the protective gloves.)
- Avoid all actions and tools that may cause a personal injury.
- Avoid sharp or jagged objects.
- Wash your hands and face after completing the assigned task with soap. (Hands should be washed after gloves are removed.)
- If any exposure is suspected, you are to wash your hands and any other skin area with soap and water or flush mucous membranes with water immediately.
- Eating, drinking, smoking, applying cosmetics or lip balm and handling contact lenses are prohibited in work areas where there is a reasonable likelihood of occupational exposure.

Bobcat Safety

Policy

As most heavy machines in the construction industry, Bobcats require practice and skill to operate safely. A bobcat, also called a skid-steer loader, has a variety of uses from construction to landscaping to digging. Knowing how to safely and effectively operate a Bobcat loader is a useful skill on the job site.

Safe Work Practices

- Follow the manufacturer's operating and servicing instructions.
- Never operate the machine from the outside of the cab.
- Elevate loads no higher than necessary.
- Avoid working or moving below elevated loads.
- If you must work beneath an elevated load, securely block it and do a hazard assessment to ensure the blocking will remain secure.
- Always wear a seat belt.
- Check your surrounding while operating a Bobcat to ensure your safety and the safety of others around you.
- Make sure the bucket is lifted up a bit when moving the Bobcat to avoid skidding on the ground, but not too high. The bucket should not disrupt your visibility.
- Do not make sharp turns or go up slopes with the bucket raised.
- Avoid steep or uneven slopes and navigate slopes with the heaviest part of the loader facing uphill. Go directly up or down slopes, not across.
- Make sure surrounding workers are aware of the dangers of working near loud and powerful equipment that has limited operator visibility.
- Check the work area for hidden hazards such as holes, drop-offs, and snags before operating a Bobcat.
- Before starting the Bobcat, always engage the parking brake and set all controls to neutral or park position.
- Idle the engine for 30 seconds before shutting it down to allow the Bobcat engine to cool.
- Before turning off the bobcat, set all controls to the neutral or park position, engage the parking brake and fully lower the bucket.

Boom Lift Safety

Policy

Boom lifts are useful machines that make working on jobs with heights much easier. However, just like with all machines that create convenience, the boom lift presents hazards. As long as you use common sense, follow the operator's manual, and remember the following tips, you can remain safe while operating the boom lift.

Safe Work Practices

- Inspect the machine before use- check for rust, cracks, chips, and make sure the warning stickers are all legible.
- Inspect the area you will be working in and be aware of any hazards present. Have a plan for what to do should you encounter any of those hazards.
- Keep unnecessary personnel away from the operations of the boom lift.
- Always read and understand the operator's manual before using the boom lift.
- Know the maximum intended load and load carrying capacity and respect it.
- Do not use the guardrails as a ladder.
- Never disable the safety devices and do not modify the machine.

Boring Operations

Policy

Boring and drilling can be dangerous if certain precautions are not taken to ensure employee safety. Following company safety procedures and these work safe practices will help to create and maintain a safe work environment, and prevent injuries or death.

Safe Work Practices

- Each state has its own 8-1-1 call center. An 8-1-1 representative will ensure that the utility company will mark buried lines, so you can dig around them safely.
- Only qualified and trained personnel should operate the equipment.
- Unnecessary personnel should be prohibited from the work area.
- A safe work area should be maintained around the entry and exit points.
- Equipment should be set up and maintained
- Use 3 points of contact while entering the machine.
- The operator(s) should be familiar with the work area.
- Be aware of the proximity of any and all overhead power lines.
- All operations should be performed in compliance with OSHA, EPA, DOT, and other regulatory agencies guidelines.
- The operator should maintain constant communications with all essential personnel.
- A spotter should be appointed to help out in case there are underground utilities, overhead power lines, and/or tight working conditions.
- Only the operator should be in charge of the controls at all times during the operation of the equipment.

Building Evacuation

Policy

Building evacuations can be chaotic if employees do not know what to do and where to go. Employees should become familiar with their company's evacuation plan and participate in all practice drills. The most important thing for employees to remember in an evacuation is to stay calm.

Safe Work Practices

Employees should follow their company's evacuation plan when evacuating the building. Only those employees who have been trained to use a fire extinguisher should try to fight small, controllable fires during a fire emergency.

Regular Employees

If an employee has not been designated as an evacuation warden, captain, etc., they should do the following during an evacuation:

- Listen to all instructions that are given over loudspeakers, radios, etc. (If applicable).
- If safe to do so, turn off machines or computers.
- If items are easily accessible, gather all essential items (keys, IDs, medications, etc.). If items are not easily accessible, leave them. Items that have been left behind can either be retrieved at a later time or replaced.
- Do NOT go back for personal items.
- Have the last person who leaves the room or area close the door behind them (if applicable).
- Walk to the nearest exit that has been designated in the evacuation plan. There should be at least two alternative exits from every room or work area.
- Do NOT use doors that are marked "Not an exit" or "No exit".
- Do NOT take elevators. Always use stairs in an evacuation.
- Stay to the right when walking down stairs.
- Do NOT jump from dock doors (if applicable).
- Meet at the designated assembly or rallying points for a head count.
- Do NOT leave the assembly or rally point.
- Do NOT reenter the building until you have been instructed to do so by the designated evacuation warden, captain, etc.

Designated Employees

Employees who have been designated as wardens, captains, etc., should do the following during an evacuation:

- Help non-designated employees evacuate the building.

- Employees with disabilities or mobile restrictions should be helped to a designated rescue or safe area where they can be rescued by emergency personnel.
- Report injured employees to other designated wardens, captains, etc., so they can inform emergency personnel.
- Ensure that everyone has evacuated the building by checking rooms and other areas for any remaining employees.
- Take a head count at the designated assembly or rally point. Report any missing employees to emergency personnel.

Bulldozer Safe Operation

Policy

Becoming familiar with the bulldozer you will be operating and applying all safety training you have received from your employer will help keep you and others safe.

Safe Work Practices

General safety guidelines for operating bulldozers are as follows:

- A safety inspection should be conducted on each machine before use. This includes backup signals, seat belt condition, lever function, etc.
- Do not operate a bulldozer unless you have been trained and authorized by your employer to do so.
- Before starting the bulldozer fasten your seatbelt, and check that the path is clear of workers, objects, and other obstructions.
- When the bulldozer is in need of repair, workers must follow proper lockout/tagout procedures.
- A system of traffic controls must be used when operating the bulldozer on public roads or in areas close to, or obstructing vehicle traffic.
- Be watchful for overhead power lines and any ditches or trenches when operating the bulldozer.
- As with any industrial truck, shut off the engine whenever refueling.
- Never mount or dismount where hand and foot holds are not provided.
- Never climb or walk on the tracks.
- Blades and attachments must be kept close to the ground while moving.
- When parking, the bulldozer should either be on level ground or blocked to prevent rolling. Set the parking brake, lower all attachments to the ground, and turn the machine off before exiting for any reason!

Operating on a Slope

- Walk the slope before grading it to check for irregularities, erosion, or rocks that could negatively affect the bulldozer's traction.
- Only operate the machine up and down the sloped terrain rather than across.

Bullying in the Workplace

Policy

If you suspect you are being bullied, it is imperative that you take appropriate action. Do not retaliate, keep adequate records of the bullying history, and report to the proper authority so that the issue can be resolved as quickly as possible.

Safe Work Practices

The worst response to somebody who you suspect is bullying you is retaliation. Attempting revenge will only make it easier for the tormenter to accuse YOU of being the bully. Appropriate actions to take are:

- Firmly tell the tormenter to stop the unacceptable behavior.
- Keep a record of all events that suggest psychological harassment in as much detail as possible.
 - Witness names, if any, are important and should be documented.
- Keep copies of any malicious letters, emails, or memos received.
- Report the incident to your supervisor, or proceed to the next level of management if you suspect that your supervisor is the bully.

Burns: Kinds and Treatments

Policy

Know where your first aid kit is located and make sure that items are replenished. Burns can be painful and cause irreparable damage in seconds. Always call for medical help in severe cases and be prepared to treat the victim for shock.

Safe Work Practices

- First aid for heat burns
 - For first-degree and second-degree burns with no open blisters, flush with lots of cool running water. Apply moist dressings and bandage loosely.
 - For second-degree burns with open blisters, call for medical help then apply dry dressings and bandage loosely.
 - For third-degree burns - call for medical help immediately. Remove clothing from the burn area unless it is stuck to the burned area. Never peel stuck clothing from a burn. You can submerge the burned area under cold running water, pat dry and apply loose, sterile bandage.
- First aid for chemical burns
 - Call for medical help.
 - Use lots of running water to flush chemicals from the skin for 15 to 30 minutes.
 - Remove any clothing and jewelry on which chemicals have spilled.
 - Cover burns with dry, loose dressings.
 - Care for possible shock.
- First aid for electrical burns
 - If the emergency is outside and you suspect downed power lines, call the power company first.
 - If the emergency is inside, turn off the electricity at the fuse box or circuit breaker.
 - NEVER touch a person injured by a downed power line. Get emergency help instead.
 - Cover all burns with dry, loose dressing and then bandage.
 - Care for shock.

California: Cell Phone Use While Driving

Policy

Today, the incidence of drivers using a cell phone while operating their car has increased. Cell phones can be a useful tool for calling road service or reporting accidents and other emergencies, but they can also put you in danger.

Safe Work Practices

If you absolutely must have access to your cell phone while on the road, the law requires that you do so “hands-free” which means that the phone is not in your hands at all, even if you are using the speaker-phone feature.

Some options for becoming hands-free are:

- Speaker phone
- Wired headset
- Bluetooth device
- Hands-free car kit

The safest way to handle outgoing calls is to:

- Wait until you have reached your destination to dial.
- Look for an exit that will lead you away from the hazards of traffic before making a call.
- Avoid stopping on the shoulder of a road where it is not safe.

The safest way to handle incoming calls is to:

- Let your passenger answer.
- Let the call go to voicemail and retrieve the message and return the call when you have reached your destination.
- Pull over and stop your vehicle in a safe location before answering calls.

Calling 9-1-1

Policy

Knowing the difference between calling 9-1-1 from a landline phone and calling 9-1-1 from a cell phone can make a difference in how long help will arrive. If you choose to call 9-1-1, you need to know what to expect and how to react.

Safe Work Practices

Calling 9-1-1 can be very stressful and it's easy to feel overwhelmed. 9-1-1 call-takers are trained to guide callers through the experience, but knowing what to expect can help make the 9-1-1 call go smoothly and get emergency help where and when it's needed.

- Stay calm. Take a deep breath and do not get excited. The dispatcher or call-taker knows that you have an emergency and he/she will try to move things along quickly, but under control.
- Know the location of the emergency and the number you are calling from. This may be asked and answered a couple of times, but don't get frustrated. Even though many 9-1-1 centers have enhanced capabilities – meaning they are able to see your location on the computer screen – they are still required to confirm the information. If for some reason you are disconnected, at least emergency crews will know where to go and how to call you back.
- Wait for the call-taker to ask questions and then answer clearly and calmly. If you are in danger of assault, the dispatcher or call-taker will still need you to answer quietly, mostly “yes” and “no” questions.
- If you reach a recording, listen to what it says. If the recording says your call cannot be completed, hang up and try again. If the recording says all call-takers are busy, wait! When the next call-taker or dispatcher is available to take the call, it will transfer you.
- Let the call-taker guide the conversation. He or she is typing the information into a computer and may seem to be taking forever. There is a good chance that emergency services are already being sent while you are still on the line.
- Follow all directions. In some cases, the call-taker will give you directions. Listen carefully, follow each step exactly and ask for clarification if you don't understand.
- Keep your eyes open. You may be asked to describe victims, suspects, vehicles or other parts of the scene.
- Do not hang up the call until directed to do so by the call-taker.

Cell Phone Emergency Use

Policy

Besides being convenient to keep in touch with your family and friends, cell phones are invaluable to have during emergencies. In fact, it is estimated that about 70 percent of 911 calls are made from cell phones. Remember these tips so things can go as smoothly as possible when you are using a cell phone during an emergency.

Safe Work Practices

One of the most important things you can do to get the most out of your cell phone during emergencies is to be prepared before anything happens. Remember:

- Keep your cell phone charged.
 - Have a car charger handy in case electricity fails.
 - Consider having a backup battery on hand as well.
- Store useful phone numbers.
 - Save the contact numbers for supervisors, police and fire departments, and even power companies.
- Know who to contact in case of an emergency.
 - Create a group for your emergency contacts: many phones have a feature that enables you to send one message to all the people in one group.
 - If you can't make a list, consider having a "phone tree" if there are many people you need to get into contact with - assign one person to contact two people, who are each assigned to contact two people, and so on.
- Consider having a backup phone in your emergency supplies.
 - Be sure you are familiar with how to work all your phones; an emergency is not the time to learn how to do so.

Cell Phones: Distraction Hazard

Policy

Cell phones have made both managing personal and business matters easier; however, there is a time and place for cell phone use. Cell phones should only be used when they are permitted and stored out of sight when they are not. Using a cell phone in work areas can be dangerous and employees can be injured if their cell phone distracts them from the task that they are doing. Employees should read and understand their company's cell phone policy to ensure their safety while on the job.

Safe Work Practices

Cell phone use will depend on the company that an employee is working for and what the company's phone policy states. Below are listed general behaviors that employees should follow.

- Inform family and friends about your company's cell phone policy. If your company does not permit cell phone use during working hours, provide your friends and family with a number that they can call in case of emergencies.
- Talk to your supervisor about times in which you might need to keep your cell phone with you.
- Save cell phone use for breaks and lunch.
- Respond to text message before work and after work.
- Keep cell phones off of working surfaces. Depending on the company, employees may be required to store cell phones in their desks, purses, or provided locker.
- Leave the work area to take a phone call (when permitted). If you are operating a machine, the machine should be shut off and you should not leave until it has come to a complete stop.
- Keep phone conversations short. Do NOT take too long on a cell phone call.
- Mute or set your phone to vibrate.
- Keep personal cell phones and business phones separate (if applicable).
- Answer the phone or respond to texts during working hours when it is not permitted.
- Talk or text while operating a forklift or other type of vehicle.
- Talk or text while operating a machine.
- Talk or text while attending a meeting.
- Walk while texting.
 - If you need to respond because it is business related, stop walking and respond.
- Send personal messages on a business cell phone.
- Use offensive language while talking on the phone.
- Take too long on the phone.
- Take photos with your cell phone cameras.

- Check or update social media.
- Play games on your cell phone.

Cement Mixer Cleaning and Maintenance

Policy

Cleaning a cement mixer after each use is the only way to prevent heavy buildup of cement, but it doesn't have to be dangerous if you use caution and follow all the safe work practices that you have been instructed to. Personal protective equipment should be your first line of defense against these hazards

Safe Work Practices

In order to avoid the above stated hazards, as well as hazards not mentioned, safe work practices include:

- Personal protective equipment (PPE) must be worn at all times. This includes safety glasses, gloves, and hearing protection (if applicable) in addition to standard PPE.
- Keep hands and body parts clear of all moving parts while the mixer is spinning.
- Keep all applicable guards in place.
- Handle acid and other chemicals with great care.
- Never add water to hydrochloric acid when diluting, instead add small amounts of hydrochloric acid to water.
- When using pneumatic tools, never aim a tool at yourself or anyone else.
- Be careful not to let air hoses get trapped underneath other equipment, as they will whip around violently until they are turned off if they become severed.
- Do not exceed the tool manufacturer's recommended air pressure for any pneumatic tool.
- Clean after each use to avoid buildup of cement.

Chainsaw Safety

Policy

To keep the benefits of using a chainsaw and to lessen the danger, follow the above tips when you need to use a chainsaw.

Safe Work Practices

- Preparing to use the chainsaw
 - Follow the manufacturer's instructions- each chainsaw could be a little different.
 - Daily check controls, chain tension, and all bolts and handles to ensure that they are functioning properly and that they are adjusted according to the manufacturer's instructions.
 - Check that the chain is sharp and the lubrication reservoir is full.
 - Clear away dirt, debris, small tree limbs and rocks from the chainsaw's path, and look for nails, spikes or other metal in the tree before cutting.
- Using the chainsaw
 - Be aware of your surroundings.
 - Cut at full throttle.
 - Let the saw do the work- do not push the saw. If you do find you have to push the saw, stop and sharpen the chain.
 - Hold the chainsaw firmly with both hands.
 - **WORK WITH A PARTNER:** If something goes wrong, you need somebody who can go get help.
 - Do not overreach to make a cut.
 - If you have to use a ladder, be sure to keep your hands free while climbing the ladder. Tether the chainsaw to you so you can pull it up when you reach your destination.
 - Follow your company's procedures.
- Kickback
 - Never use the top half of the saw tip (especially if you are a beginner).
 - Never bend over the saw; if you stand up straight and to the left of the bar, any kickback should go over your right shoulder.
 - Using anti-kick nose guards, quick-stop brakes, and wraparound hand guards on any saw you use.
 - Using a low kickback chain.
 - Keeping the chain properly sharpened.

Cheese Cutting Machine Safety

Policy

Cutting cheese into predetermined portions and uniform cuts has been made easier with the use of cheese cutting machines. The shape and size of the machine can vary as food processors and producers have a variety of options to choose from when it comes to purchasing a cheese cutting machine. Blades or wires can cut at either vertical or horizontal angles. Employees who operate a cheese cutting machine could potentially be exposed to harm. Following the safe work practices presented in this lesson will help ensure employee safety.

Safe Work Practices

Before operating a cheese cutting machine, employees should do the following:

- Tie back long hair and remove all jewelry.
- Inspect all provided PPE for damage. Report damaged PPE to your supervisor. Do NOT wear damaged PPE.
- Inspect the machine for damage. Report damaged machines to your supervisor. Do NOT operate damaged machines.
 - Blades should be inspected for dullness (if applicable). Replace dull blades as needed and in accordance with the manufacturer's instructions.
 - Inspect wires for signs of wear or breakage (if applicable). Replace wires as needed and in accordance with the manufacturer's instructions.
- Ensure all manufacturer-provided guards are in place and secured. Report missing guards to your supervisor. Do NOT operate a machine that has missing guards.
- Ensure safety decals are readable and in good condition. Replacement decals should be used when decals become unreadable or are missing. Notify your supervisor of worn or missing safety decals.

When operating a cheese cutting machine, employees should do the following:

- Only trained and authorized employees should operate a cheese cutting machine.
- Ensure that the machine is operated in accordance with the manufacturer's instructions.
- Ensure that the machine is properly set up for the type of cheese to be cut.
- Use any provided pushing or plunging devices that the manufacturer has provided to push the cheese through the machine (if applicable).
- Keep hands and fingers outside the danger zone of the machine.
- Ensure that the area around the machine is kept clean and that any spilled material is promptly cleaned up.
- In the case of a blockage or jam, turn off the machine and notify your supervisor. Do NOT operate the machine until the blockage or jam has been removed in accordance with the manufacturer's instructions.

- Ensure that machine has been properly turned off when not in use.
- Do NOT leave machine operating while unattended.
- Clean machine in accordance with the manufacturer's instructions.

When replacing knives, wires, or performing maintenance tasks, employees should do the following:

- Only trained and authorized employees should perform maintenance tasks on the machine.
- Only a licensed electrician should perform any electrical work on the machine.
- Ensure all lockout/tagout procedures are followed.
- Perform all maintenance tasks in accordance with the manufacturer's instructions.

Chemical Handling Safety

Policy

With proper handling, even highly toxic chemicals can be used safely. Remember to know what hazards the chemicals you are working with present and how to avoid them, and you will be able to prevent accidents and injuries from working with chemicals.

Safe Work Practices

- All chemicals must be appropriately labeled.
- Use Personal Protective Equipment when handling chemicals.
 - If you are unsure what PPE to use, ALWAYS ask your supervisor and/or consult your SDS.
 - Chemicals can enter your body through inhalation, absorption, ingestion, or injection.
- Use the buddy system or a way to constantly communicate with others if you are dealing with toxic substances.
- If your clothing is contaminated by the chemical, wash the clothing.
 - Be careful to not let your skin touch the contaminated clothing as you remove it.
 - Do not expose your family to the chemical by taking the contaminated clothing home to wash.
- If your skin is splashed by the chemical, wash immediately.
 - Follow the SDS for decontamination procedures.
- If your eyes are splashed with the chemical, go to the eyewash station and flush your eyes for 15 minutes.
 - Seek medical attention when you are finished flushing.

Chemical Storage Safety

Policy

There are many dangerous chemicals used in workplaces around the country. The danger can be reduced by using proper storage procedures and by following these safe work practices.

Safe Work Practices

- All containers should be properly labeled with proper identity and hazard warnings.
- Chemicals should never be stored alphabetically unless they are compatible.
- Chemicals should be stored and dated upon receipt.
- Chemicals should not be stored:
 - Higher than “eye level”.
 - On the top shelf of a storage unit.
 - On overcrowded shelves.
 - On shelves without an anti-roll lip.
 - On the floor.
- All chemicals should be stored away from direct sunlight.
- Be wary of conditions in chemical storage areas, such as:
 - Spilled chemicals
 - Trash accumulation
 - Improper storage
 - Temperature extremes

Close Calls

Policy

Accidents may be preceded by close calls that warn us of a safety problem. When safe outcomes do occur, there is nothing to capture anyone's attention: safety is invisible. Close calls can provide information that poses the greatest safety risk.

Safe Work Practices

- Identification: Understand what a close call is so when it happens you can report it.
- Disclosure: Report the close call as soon as possible.
 - Who the accident would have potentially impacted
 - Where the close call happened
 - The type of safety concern (i.e. unsafe act, unsafe condition, unsafe equipment, etc.)
- Prioritization: Decide if the event needs immediate attention and analysis.
- Distribution: Give the information in the report to whoever is in charge of analyzing it.
- Identification of Causes: Find out why the event happened.
- Solution Identification: Find out what to do to make sure the event does not happen again
- Dissemination: Give the information to everyone who is affected by it: the person who reported the event, the people who work in the area or with the machine, and the person who will be in charge of making the solution a reality.
- Follow up: Make sure the changes actually happen and the workplace is made safer.

Combustible Dust

Policy

As long as you are aware of the hazard of combustible dust and control the five parts, you can prevent dust explosions.

Safe Work Practices

IGNITION CONTROL

- Use appropriate electrical equipment and wiring methods.
- Control static electricity including bonding of equipment to ground.
- Do not smoke in areas with combustible dust.
- Control sparks and friction.
- Separate heating systems and surfaces from dusts.
- Maintain your equipment.

DUST CONTROL

- Inspect your workplace for dust buildup.
 - Be especially aware of unseen surfaces such as wires, pipes, ledges, and beams that may collect piles of dust over time.
- Vacuum areas where dust accumulation is constant.
 - OSHA recommends a permanently installed grounded vacuum cleaning system.
 - Only use soft push brooms or brushes if they will not form explosive clouds in the air.
 - Be aware that brush bristles made of synthetic fiber can collect strong electrostatic charges and ignite a dust cloud.
 - Blowing with fans or compressed air may create dangerous dust clouds and only should be used if there is no other cleaning method and all sources of ignition have been eliminated.
- Be sure your dust control systems, such as filters or cyclones, are always correctly working.

Compressed Gas Safety

Policy

Compressed gases can be very dangerous, but employees can avoid any and all accidents by handling and storing them properly.

Safe Work Practices

- Make sure that all compressed gas cylinders are marked properly.
- When applicable, valve protection caps should be left in place until cylinders are secured and connected for use.
- Keep cylinder valves closed at all times unless the cylinder is in use.
 - When opening cylinder valves, do so slowly and stand so that the valve outlet is pointed away from yourself and other employees.
- Never tamper with or alter cylinders, valves, or safety relief devices.
- Never tighten connections or leaking fittings, or attempt any repairs while the system is under pressure.
- Cylinders should never be subjected to extreme low temperatures or temperatures above 125 F.
- Cylinders must be used and stored away from heat sources and flames.
- Do not use or store cylinders where they become part of an electric circuit,
- Do not use cylinders as a ground during electric welding.
- Transferring compressed gases from one container to another should be performed only by the gas supplier or by authorized personnel who are qualified to use the proper equipment.
 - Non-refillable cylinders should never be refilled.
- Avoid dragging or sliding cylinders, lifting cylinders by the caps, or dropping cylinders.
- Slings, ropes, or chains are acceptable if the cylinder is equipped by the manufacturer with lifting attachments.

Computer Screen Safety

Policy

Computer screens are integral to almost all modern work processes and tasks in every industry. However, when the employee spends a significant time sitting at a computer workstation they are exposed to a variety of hazards. Following the safe work practices and ergonomic tips presented in this lesson will help ensure employee safety.

Safe Work Practices

SETTING UP YOUR WORK AREA

Many of the hazards associated with working at a computer workstation can be avoided by properly setting up your workplace. Employees should follow these tips when setting up their computer workstations:

- Ensure the computer screens are positioned a comfortable distance from where you are sitting. Screens placed too close or too far away may cause you to assume awkward body positions that may lead to eyestrain. The distance can vary from person to person, but the preferred viewing distance is between 20 and 40 inches.
- Position your computer screen directly in front of you, so your head, neck, and torso face forward when viewing the screen. Screens should not be farther than 35 degrees to the left or right.
- Position your computer screen so that the top of the screen is at or slightly below eye level. The center of the screen should normally be located 15 to 20 degrees below horizontal eye level. A screen that is too high or low will cause you to work with your head, neck, shoulders, and even your back in awkward postures.
- Tilt the screen so it is perpendicular to your line of sight, usually by tilting the screen no more than 10 to 20 degrees.

COMPUTER SCREEN ERGONOMICS

When working with a computer screen, employees should follow these safety tips:

- Have an eye exam before working regularly with a computer and once a year thereafter. Using a computer can make existing, untreated, eye and vision issues worse.
- Practice the 20-20-20 method. Take a 20 second break to look at something 20 feet away every 20 minutes.
- Ensure the ambient light of the office is not too bright. Too bright interior lights, or proximity to bright sunlight from a window, can cause a harmful glare.
 - When interior or exterior light cannot be altered consider installing an anti-glare screen.
- Adjust the text size on the screen to allow you to comfortably read. When text is too small it creates eye strain.

- Adjust the brightness of the screen so it is approximately the same as the brightness of your surrounding workstation.
- Consciously blink more often. When working at a computer people tend to blink far less frequently than when not working at a computer. Often eye strain is caused by the eyes becoming dry by not blinking frequently enough.
- Ensure feet sit flat on ground when sitting upright.
- Consider getting lenses for your glasses that partially block blue light.

Concrete Boom Pump

Policy

When used and set up correctly, the concrete boom pump can decrease the time it takes to do many jobs. All employees must take great care to obey the safe work practices provided by their employer and the manufacturer of the specific pump model they will be using to prevent serious damage or injury.

Safe Work Practices

- Most accidents involving concrete boom pumps occur when the machine is being folded, unfolded, or removed. A full-time spotter must be kept in position to keep an eye on the boom during these times and avoid inadvertently contacting wires, trees, or bridges.
- After determining the pump's placement and before doing anything else, the outriggers must be in place.
 - All four outriggers must be used any time the pump is in use.
 - Outriggers must be fully extended during use, because partially extending outriggers is dangerous and may damage the outriggers.
- Cribbing must be used under each outrigger to increase surface area and keep the concrete boom pump adequately supported.
- When positioning the boom pump next to an excavation, the one-to-one rule must be followed. This means that the closest outrigger must be set up one foot away from the excavation for every vertical foot of depth.
- Trench plates may be required to cover areas that have been recently backfilled.
- After positioning the outriggers and cribbing correctly, operators can double check by extending the boom out over each outrigger, checking to see if the cribbing sinks at all. If it does, the boom must be refolded, and a larger area of cribbing must be put in.
- Unfold the pump only when there is adequate light to see possible overhead hazards.
- The American Concrete Pumping Association (ACPA) requires that no piece of the pump, load, or rigging can be within 20 feet of an electrical wire at any time.
 - If the electrical wire is a large transmission tower or line, however, the rule is 50 feet minimum clearance.
- Never relocate the concrete boom pump when there is concrete in the boom.
- When pumping concrete into an excavation, employees must consider that the downward reach is usually 50% of the upward reach. A boom pump that can reach 80 feet high may only be able to extend 40 feet downward – consult the owner's manual of your specific model for exact figures.

Concrete Chipping

Policy

Chipping concrete is a labor intensive task that can present many health and safety risks over time. If you are required to do this task at work you must apply all of the safe work practices that your employer has outlined for you.

Safe Work Practices

- Use proper body mechanics when handling heavy equipment.
- Follow all established safe work practices.
- Keep all cords out of the path of the jack hammer's chisel.
- Besides wearing essential personal protective equipment, you can protect yourself by making sure the area you are working in is well ventilated, and using wet methods whenever possible.
- Alternate performing this task with another employee if possible.
- Always use the right tool for that job and be sure that you are using it correctly.
- Take regular breaks of at least 10 minutes away from the tool if you will be using it for a prolonged period of time.

Concrete Chipping: Mixing Truck

Policy

During chipping, the inside of an ordinary concrete mixer becomes home to a deadly combination of hazards such as concrete dust, noise that can reach up to 130 decibels, and falling debris. It is vital that you take every precaution possible to protect yourself from these dangers.

Safe Work Practices

ATTENDANT/ENTRY SUPERVISORS

This employee is responsible for the entrant's safety while inside the concrete drum. Duties include:

- Remaining outside of the space during entire procedures unless relieved by another attendant.
- Staying alert for possible behavioral effects of hazard exposure.
- Keeping non-authorized entrants from approaching or entering the concrete mixer.
- Communicating with the entrant as necessary to monitor status and/or order evacuation.
- Each attendant shall only supervise one confined space at a time.

TOXIC DUST EXPOSURE

- Wear all required personal protective equipment - including a respirator with a sufficient filter.
- Take measures to ensure the area is well ventilated.
- Test the air quality before entering any confined space for:
 - Oxygen content
 - Flammable gasses and vapors
 - Potential toxic contaminants

FALLING DEBRIS

- Rotate the drum every 15-30 minutes to ensure there is no loose concrete.
- Never attempt to chip overhead areas.
- Chip as often as possible to avoid heavy buildup of debris.
- Visually check prior to chipping to ensure that there is not an excessive buildup of concrete directly overhead.

NOISE EXPOSURE

- Always wear ear plugs and earmuffs while chipping is in process.

Concrete Construction Safety

Policy

Although concrete construction has several hazards, it is possible to remain safe. As long as you are alert, use common sense, and follow safety rules and procedures, you should be able to protect yourself and others in concrete construction.

Safe Work Practices

- Be sure to read the manufacturer's manual and have a legible copy of it on the machine or in an easily accessible area for reference.
- Inspect the machine before you use it.
 - Keep a record of the inspection and include the name of the person who inspected the machinery and the date and time of the inspection.
 - If part of the inspection includes testing, be sure everyone and everything is all clear before you test it.
 - If the machinery is found to be unsuitable, remove it from use and mark it to make sure that no one else uses it until it is fixed.
- Never remove any safety devices from the machinery.
- Do not ride on loads carried by machinery.
- Bend your legs, not your back, when lifting, mixing, or performing other strenuous work. This will make you stronger and prevent injuries to your back. If something is too heavy, ask for help carrying it.
- Be sure your rebar is capped or otherwise adjusted according to OSHA standards to lessen the chance of impalement.
- Do not remove framework until the concrete has cured.
- Check the ropes and bundles that transport equipment and materials to make sure they are not frayed and in otherwise good condition.
- Be sure you have the proper fall protection, whether it be guardrails or fall arrest systems.
- Have a construction plan and follow it.
- Use common sense while at the construction site.

Concrete and Cement Safety

Policy

Cement and concrete are so common it is easy to forget to follow safety procedures. However, not doing so could cause serious injury. Therefore, avoid the hazards of concrete and cement by acting safely.

Safe Work Practices

Wearing the right PPE will help you avoid the hazards of cement and concrete:

- Coveralls/Long sleeves and long pants will protect your skin from both wet and dry concrete and cement.
 - Do not let the cement or concrete soak into your clothes.
- Gloves: Wear water-proof gloves to keep your hands protected from irritation
 - Relying on barrier creams is not recommended.
- Boots: If you have to stand in concrete, be sure your boots are high enough that the wet concrete/cement will not slosh into your boots.
- Goggles: When working with both wet and dry cement, you should wear goggles to prevent dust from getting into your eyes and to prevent the wet mixture from splashing into your eyes.

Concrete: Connecting Steel I-Beams

Policy

Connecting steel I-beams to concrete doesn't have to be a hazardous job so long as safe work practices are followed.

Safe Work Practices

- If you are planning to use post-set anchors as your securing anchors, ensure that proper engineering and work practice controls are implemented to limit the amount of concrete dust produced.
- Inspect all anchor bolts and base plates for any defects or damages. Report any defects and damages to your supervisor.
- Inspect the beams for any damages. Report any damages to your supervisor.
- Should you be planning to connect a beam to a concrete wall, inspect the beam hole for any damage. Report any damage to your supervisor.
- Do not exceed the weight limit of the crane.
- Ensure that the beams have been secured to the rigging before attempting to lift them.
- Do not stand under beams while they are being lifted into place.
- Do not allow your feet or fingers to get under the beam as you guide it into place.
- Do not over-reach for a beam if you are connecting it to a concrete wall. If the beam gets out of your reach, signal to the crane operator that it needs to be brought closer
- Before you remove the rigging, make sure that any bolts that are needed to secure the beam, either vertically or horizontally, are secured.
- Should you be using post-set anchors for the beams, do not breathe in any concrete dust.
- Use two hands for any hammer drill used for post-set anchors.
- Use the proper tools for tightening bolts. Do not under or over-tighten the bolts.

Confined Space

Policy

All employees who work in and around confined spaces must be trained in order to acquire the understanding, knowledge, and skills necessary to safely perform their assigned duties. Knowing the hazards involved, rescue procedures, lock-out/tag-out and the use of protective equipment will provide a safer work environment.

Safe Work Practices

SAFETY PRECAUTIONS

- Make sure any employee entering into a confined space has been trained and certified in the type of confined space they will be entering.
- Before entering a confined space, all mechanical equipment must be locked-out, blocked-out and tagged-out.
- Test the air before entering and periodically as you work.
- If there are any hazards in the confined space, then it is a “Permit-Required” confined space and entry is allowed by following your company’s confined space permit program.
- Have the proper ventilation for the confined space. Portable self-contained breathing devices and forced air ventilation (FAV) are examples of proper ventilation.
- Wear the proper protective clothing for the type of confined space you are entering.

ROBOTS (IF APPLICABLE)

- When possible, a robot or drone should be sent inside the confined space instead of a person.
- Inspect the robot or drone for malfunctions or broken parts. Report any malfunctions or damage to your supervisor. Do NOT use a damaged robot or drone.
- Only a person who has been trained should operate the robot. Ensure that you are complying with all the manufacturer’s instructions when operating a robot or drone.

Confined Space: Air Testing

Policy

If you have a confined space in your workplace, you should be aware that you are required to test the air quality periodically. Employees who are designated to test the air quality must do so at specified intervals and in the correct manner to protect the health of those who may enter.

Safe Work Practices

- Air quality must be tested before entry, re-entry, and throughout entry as needed - **ESPECIALLY** when:
 - Work begins on a different portion of the site.
 - Different contaminants are being handled.
 - A different task is started (e.g., barrel opening as opposed to exploratory well drilling).
 - Workers are handling leaking drums or working in areas with obvious liquid contamination (e.g., a spill or lagoon).
- The following are the acceptable atmospheric levels:
 - Oxygen – between 19.5 and 22.0 percent.
 - Flammable gasses or vapors - below 10 percent of the lower explosive limit.
 - Toxic gasses or vapors – below the permissible exposure limit for each toxin.

Confined Space: Monitor

Policy

Confined space attendants have an important role in a confined space team. They monitor both the entrant and conditions (both inside and outside) of the confined space, so that the entrant may perform their job in a safe manner. One thing that all members of a confined space team should remember is that self-rescue is the best rescue. If the attendant uses the safe work practices provided, then they can help ensure the entrant's safety while on the job.

Safe Work Practices

- Inspect all lowering equipment for any damage. Report any damaged equipment to your supervisor or competent person. Do NOT use damaged equipment.
- Know the results of any prior air monitoring test. Depending on the confined space, continuous air monitoring might be needed. During such situations, the attendant should know how to operate any air monitoring equipment that they have been given and how to record the data.
- All natural and mechanical ventilation should be on before, during, and after the operation.
 - Exception: all ventilation should be turned off when air monitoring testing (a.k.a. a sniff test) is being performed. This is to ensure the accuracy of all testing results.
- Be familiar with all the potential hazards of the confined space. This includes any behavioral changes that may occur due to the entrant being exposed to the hazards.
- Only allow authorized entrants into the confined space area. If it is a permit required area, you should check and record anyone who enters the area. Inform both the supervisor and entrant of any unauthorized personnel who are in the area.
- Do NOT allow unauthorized personnel to stay in the area. If you need to, have another employee escort them out of the permit area or have the supervisor escort them out.
- Ensure that the entrant is wearing all required PPE. This includes the entrant wearing his or her harness and lifeline (if applicable) before they enter or exit the confined space.
- Do NOT enter the confined space for any reason. You should remain outside the confined space at all times.
- Do NOT leave your assigned area until the job is either finished or you are replaced by another qualified attendant. Inform your replacement of any changes that you noticed. Inform the entrant that you are being replaced.
- Do NOT hand tools or equipment to the entrant unless it is an emergency.
- You should monitor conditions both inside and outside of the confined space.
- Keep in constant communications with the entrant. If the entrant stops responding, pull on the lifeline or harness and call for both rescue and medical assistance.
- You should keep a form of mobile communication (cell phone, walkie talkie, etc.) on you at all times during your shift.
- If you feel that something might be endangering the entrant, order him or her out of the confined space. The entrant must follow any evacuation order that you give them.

- Call for the rescue team and medical assistance immediately when you can not pull the entrant out or the entrant cannot exit on their own.

Confined Space: Non Permit Required

Policy

A confined space is any space that has limited openings for entry and exit and is not designed for continuous worker occupancy. There are two main types of confined spaces and employees should know what type of confined space they will be entering before they enter it, and what kind of safe work practices are required to keep themselves safe in the confined space.

Safe Work Practices

BEFORE ENTERING

Before entering a non-permit required confined space, a contractor must verify that:

- The space poses no actual or potential hazardous atmospheres.
- All hazards within the space can be eliminated without entry into the space, such as locking and tagging equipment so it cannot be operated while employees are inside.
- Forced-air ventilation is not required to control atmospheric hazards.
- Once these things are verified, there must be a certificate made available to employees with the date, location of the space and name of the person certifying the space.

SAFETY PRECAUTIONS

Once a confined space is determined to be a non-permit required space, employees who enter must know and follow the appropriate safe work practices, such as:

- Never enter the confined space unless there is a minimum of two people in the entry team. This should consist of an attendant and the entrant.
 - Attendants and entrants must both be trained on confined space entry.
- Atmospheric testing should be done before entry and periodically thereafter with a calibrated direct-reading instrument, for oxygen content, for flammable gases and vapors, and for potential toxic air contaminants, in that order.
- The entrant should move slowly and carefully through the confined space.
- Entrants and attendants should have a means of communication throughout the entry.
- Employees must wear the proper clothing for the type of confined space you are entering.
- Leave the space immediately if an unexpected hazard is encountered.
 - In the event of an unexpected hazard, a contractor must determine if the space needs to be reclassified as a permit-required confined space.
 - Entry can continue if the hazard(s) are eliminated.

Conflict: Remaining Calm During Confrontation

Policy

No matter what industry you work in, it can be safely said that at some point you will be confronted. This is especially true of those who work in public places and interact with strangers. It will be beneficial in these instances if you have properly prepared and know techniques that can be used to diffuse a situation.

Safe Work Practices

PREPARE

In order to participate in constructive confrontation of this nature, you must first prepare yourself.

- Know your position.
- Mentally prepare information to be able to effectively communicate later. Make key points of your argument.
- Sometimes when the confrontation is work related, you must also be familiar with any state or federal laws, company policies, or other guidelines of behavior as they relate to the subject.

REMAIN CALM

- Breathe slowly and deeply. This will lower your heartbeat and blood pressure, and decrease the amount of adrenaline running through your body.
- Do not take anything the other person says personally.
- Avoid becoming emotional, defensive, or irrational.

COMMUNICATE EFFECTIVELY

- Share facts instead of emotions to prevent making the conversation emotionally charged.
- Be concise.
- Speak slowly and calmly.
- Use statements that force the other person to analyze their behavior. A calmly asked question such as “Are you threatening me?” may help the other person to notice that they are acting aggressively.

Connecting High Pressure Pipes to Hoses

Policy

Connecting hoses to a pipe or tank can be dangerous. The danger comes from the potential material that an employee may be exposed to during the connection process. Employees can minimize the potential exposure to hazards of connecting a hose to a pipe or tank by utilizing the safe work practices provided in this lesson.

Safe Work Practices

- Ensure that you are complying with the manufacturer's instructions for the proper way to store, cut, and handle the hose.
- Inspect the hose for damage. This includes looking at all connectors, couplings, quick connects, etc. Report any damage to your supervisor. Do NOT use a damaged hose, connector, coupling, or quick connect.
- Check the hose's psi to ensure that the hose will be appropriate for the psi of the pipe or tank.
- Match the hose color to the material and temperature that the pipe or tank will be transporting or holding.
- Ensure that you are using the appropriate length of hose for the required job. If the hose needs to be cut to the appropriate length, ensure that you use a sharp knife. Do NOT use a dull knife.
- Do NOT touch a blue hose unless you have been trained in how to handle and connect it properly. A blue hose should only be used for chemicals.
- Use proper ergonomics or mechanical assistance when lifting a larger hose. Ask for assistance with lifting if you feel the hose is too big or heavy to lift on your own.
- Avoid dragging the hose whenever possible. Hoses that are larger than the average garden or commercial hose should NOT be dragged at all. Such hoses should be transported by a hose dolly or other mechanical device.
- Do NOT overtighten connectors or couplings. You could damage these parts, which could result in a leak.
- If a quick connect is being used, ensure that the hitch pin has been put into place.
- Once the connection has been made, test the hose for leaks. Water should be the preferred liquid for testing, especially if the piping system or tank is empty at the time of connection.
- Should a hose leak during the testing process, clean up that leak in accordance with local and federal law (chemicals). Consult the Safety Data Sheet (SDS) for proper clean up procedures for chemicals.
- Before leaving the area, inspect the connection one last time to ensure that nothing has leaked out or come loose during the testing process.

Connecting High Pressure Pipes to Tanks

Policy

Connecting high pressure pipes to tanks can be dangerous to employees. The pipes need to be lifted into place using a crane and sometimes welding is required to make a secure connection between the pipe and tank. Employees can minimize the hazards associated with connecting high pressure pipes to tanks if they utilize the safe work practices provided in this lesson.

Safe Work Practices

- Inspect all the pipes (including the threading), valves, flanges, crane and rigging equipment for any damage. Report any damages to your supervisor. Do NOT use any damaged components or machines.
- Ensure that you are using the proper pipe for the expected psi of any liquids, gases, or other materials that the pipe is going to be transporting.
- Inspect all welding components and personal protective equipment (PPE). Report any damaged PPE or welding components to your supervisor. Do NOT use any damaged PPE or welding components.
- Ensure that the pipe is secure in the hoisting line before it is lifted too high off the ground.
- Do NOT stand in front of or behind the crane while it is being operated.
- Do NOT stand under a pipe while it is being lifted or transported through the air.
- The crane operator and signaler should be aware of what signals are going to be used prior to the lifting operation. The crane operator and signaler should be in constant communication.
- When possible, use a tagline to help control the pipe while it is in the air.
- Keep your hands on the outside of the pipe while it is lowered into position.
- Ensure that the pipe is as secure as possible before welding or tightening the flanges.
- Do NOT overtighten the flange. Overtightening could damage the flange.
- Do NOT point the welding torch towards your body. The welding torch should only be pointed at the pipe.
- If the piping needs support, ensure that it is sitting properly in the chosen method of support.
- Test the pipe for leaks once the connection has been made. Should leakage occur, close the connection and clean up the leak in accordance with proper procedures for specified chemicals or gas.

Connecting Steel Handrails to I-Beams

Policy

Connecting handrails to I-beams is one of aspect of construction that is necessary. Handrails prevent people from falling whether they are part of the general public or employees. While dangers do exist around the job of connecting the handrails to their temporary or final spot, following the safe work practices will help keep everyone safe and the job running smoothly.

Safe Work Practices

- Ensure that proper engineering and work practice controls are implemented to limit the amount of concrete dust produced.
- Inspect your fall protection system for any damage. Report any damage to your supervisor and do not use a damaged fall protection system.
- Inspect all drilling and cutting equipment for damage. Report any damage to your supervisor and do not use damaged equipment.
- Inspect the bolts for any defects.
- Utilize your fall protection equipment whenever you are near an open edge.
- Utilize a tool belt to keep your tools secure. Keep tools away from openings or edges.
- Wear eye protection and gloves when drilling into the I-beam. You should have a way to help keep the drill bit cool while drilling into the metal; this will prevent damage to the drill bit.
- Wear a welding shield and gloves when you are welding the handrails to the I-beam. Do not have the flame face you at any time. Point the flame in the direction that you are welding only.
- Before setting a welding torch down, ensure that the flame has gone out and that any safety features have been engaged.
- If you have to drill into concrete, do not breathe in the concrete dust.
- Use two hands whenever handling drills or welding torches.
- Do not over-tighten the bolts. Over-tightening could cause damage to the bolts, steel beam, railing, or your hands.
- Do not remove red colored handrails.
- Ensure that the handrails are secure before leaving them alone.

Connecting Steel I-Beams Together

Policy

Connecting steel I-beams together doesn't have to be a dangerous job so long as safe work practices are followed.

Safe Work Practices

- Inspect all rigging and beams for defects or damage. Report any problems to your supervisor and do not use any defective or damaged equipment or products.
- Inspect your personal fall arrest system for any malfunctions or damage. Report any malfunctions or damages to your supervisor and safety component person. Do not use any defective or damaged personal fall arrest system.
- You should put on your personal fall arrest system before walking out on the beams.
- Make sure that the beam is secure in the rigging before attempting a lift.
- Watch the path of the beam while it is being raised and lowered.
- Ensure that you are complying with the manufacturer's instructions for any beam connectors being used (side plates, clamps, etc.)
- Do not over reach for a beam. If a beam gets out of reach, use the chosen form of communication to indicate to the crane operator to bring the beam closer.
- To prevent the beam from falling, bolt one side of the beam before removing the rigging.
- Do not overtighten the bolts. You could damage the bolts or cause damage to your hand if you are not wearing gloves.
- When welding, make sure that you are wearing gloves and a welding shield to prevent getting burned and damage to your eyes.
- Ensure that all bolts have been tightened down before moving on, as loose bolts could cause the beam to fail or fall.

Construction Barricades and Warning Devices

Policy

Barricades, signs and lights are important to the safety of the traveling public. Never move a barricade, sign, cone, drum, etc. unless necessary and remember to replace it when finished with your work. If you see a broken or misplaced barricade, light or sign, fix it or report it to your supervisor.

Safe Work Practices

- Give the public plenty of warning by use of signs.
- Make sure warning devices can be seen and are effective.
- Use flagmen on narrow passages or when construction vehicles will be interacting with the public traffic flow.
- Maintain all barricades and signs.
- Give the site a buffer area.
- Clearly mark the beginning and end of the construction area.
- Illuminate all barricades and obstructions from sunset to sunrise.

Construction Laser Safety

Policy

There are many variations of construction lasers, and each can be a time-saving device if used properly. Employees who use construction lasers at work are required to be properly trained and to apply all safe work practices in order to avoid damage or injury.

Safe Work Practices

- Only qualified employees are permitted to install, adjust, or operate laser equipment.
- Operators must be familiar with the class and strength of the specific laser they use.
- Employees must wear anti-laser eye protection when working in areas where potential exposure to direct or reflected laser light is greater than 0.005 watt (5 milliwatts).
- Areas in which lasers are used shall be posted with laser warning signs and labels.
- Beam shutters or caps must be utilized where available.
- Employees must turn the laser off any time laser transmission is not required or when the laser is left unattended for any period of time.
- The laser beam should never be directed at another person.
- When it is raining, snowing, dusty, or foggy, the operation of laser systems is prohibited.
- All laser equipment must bear a label to indicate maximum output.
- Employees are never to be exposed to light intensities above the following:
 - Direct staring: 1 micro-watt per square centimeter;
 - Incidental observing: 1 milliwatt per square centimeter;
 - Diffused reflected light: 2 1/2 watts per square centimeter.

Construction Site Operations

Policy

Safety on a construction site is everybody's responsibility. Following the established guidelines set forth by the company, as well as these safe work practices will help to ensure the safety of every employee.

Safe Work Practices

- Only properly grounded electrical tools should be used, if insulation is frayed or deteriorated, discontinue use.
- Tools should be in good working order, faulty or worn tools should not be used.
- Only trained and authorized employees should operate machinery or equipment.
- Employees should be familiar with the location of all exits, alarms, fire extinguishers, first aid kits, and telephones.
- Hand carts or other handling equipment should be used to move heavy loads.
- Employees should assist each other, especially new employees in safely performing their work.
- Warning signs should be obeyed at ALL times.
- Safety devices should not be modified.
- Get help lifting when the load is too heavy to handle alone.

Core Drilling Safety

Policy

Drilling holes in masonry with a core drilling machine can be very dangerous. Workers who do this job may be exposed to risks from dust, flying debris, high noise levels, slippery surfaces and even falling from heights if the work area is elevated. You are required to follow all safe work practices to avoid harm from any of these risks.

Safe Work Practices

- Verify that the core cutter is compatible with the arbor and guiding drill bit that you will be using.
 - The diamond core bit must also be compatible with the material being drilled.
- If drilling second story floors or floors of suspended slabs, the area below must be properly secured to avoid anyone from walking into the area of falling cores.
 - If it is possible to do so safely, take measures to catch the core directly after drilling.
- Do not use jerky movements when drilling to avoid snagging the teeth of the drill.
- If instructed by the manufacturer for the material and type of bit used, water must be sprayed on the work surface while drilling to reduce friction.
- If using anchors to give more support, employees should make sure the concrete is strong enough to support the drill where the anchors are placed.
- If using suction vacuum pads to secure the drill to the floor, proper suction to the floor must be confirmed before starting the drill motor.
 - Do not attempt this on floor types that are not recommended by the manufacturer.
- Never attempt to remove the core by banging the drill on stationary objects or putting a wrench or other tool inside the bit and then starting the drill.
- When lifting the drill onto a wall for mounting, mount the stand to the wall first then slide the carriage onto the stand to eliminate muscle strain.
- Never stand on the drill stand to secure it in place.

Corrosive Safety

Policy

Always make sure you follow the proper handling and storage procedures when using corrosives to avoid injuries. Especially remember to always consult the SDS of the substance you are working with to be sure you know all the hazards and how to avoid them.

Safe Work Practices

- Always read the SDS and chemical labels so you know exactly what you're dealing with.
- When mixing with water, remember AAA "Always Add Acids".
 - Never pour water into corrosives; be sure the corrosives are poured into the water instead.
- When transferring liquids with a pipette, use a pipette bulb or aspirator.
 - Never use your mouth to start the pumping.
- Personal Protective Equipment (PPE):
 - Always wear proper eye and face protection.
 - You may need a respirator if you are working with corrosive dust or gas and there is not enough ventilation.
 - Wear gloves and chemically resistant protective clothes.
 - Be sure your PPE will protect you from the specific corrosive you will be working with; there is no "one size fits all" for corrosives.
- Wash your hands after working with corrosives, even if you were wearing the proper PPE.
- Do not eat, drink, smoke, or chew gum in areas where corrosives are present.
- Do not damage or beat containers that hold corrosives.
- Do not store incompatible materials next to each other.
- Always inspect storage areas and containers.
- Follow the manufacturer's or distributor's instructions on what type of container to use; some corrosives dissolve metals.
- Keep the containers tightly closed when not in use.
 - Some materials may require periodic ventilation, so consult your SDS.

Cranes

Policy

Fatalities and serious injuries can occur if cranes are not inspected and used properly. Many fatalities can occur when the crane boom, load line or load contacts power lines and shorts electricity to ground. Other incidents happen when workers are struck by the load, are caught inside the swing radius or fail to assemble/disassemble the crane properly.

Safe Work Practices

- The manufacturer's instructions must be followed when operating the crane. Attach the load to the block hook by means of slings or other approved devices, making sure the sling is clear of all obstacles. Once the load is properly secured and balanced in the untwisted sling, slowly raise the load. Horizontal movement must also begin slowly to prevent the load from swinging or coming into contact with other obstacles.
- The crane warning signal or horn must be sounded when the load or hook comes near or over personnel. Carrying loads over personnel is not recommended. A load should not be left suspended.
- Audible and discernible voice communication should be kept with the operator at all times. If this cannot be accomplished, a signal system should be used. Standard signals should be used; however, it may be necessary to create special signals in certain circumstances. In these circumstances, the signals must be understood and agreed upon by all individuals using the crane.
- Cranes are to be operated only by qualified and trained personnel.
- A designated competent person must inspect the crane and all crane controls before use.
- Be sure the crane is on a firm/stable surface and level.
- During assembly/disassembly do not unlock or remove pins unless sections are blocked and secure (stable).
- Fully extend outriggers and barricade accessible areas inside the crane's swing radius.
- Watch for overhead electric power lines and maintain at least a 10-foot safe working clearance from the lines.
- Inspect all rigging prior to use; do not wrap hoist lines around the load.
- Be sure to use the correct load chart for the crane's current configuration and setup, the load weight and lift path.
- Do not exceed the load chart capacity while making lifts.
- Raise load a few inches, hold, verify capacity/balance, and test brake system before delivering load.
- Do not move loads over workers.
- Be sure to follow signals and manufacturer instructions while operating cranes.

Cranes: Lifting

Policy

A lift operation goes smoothly, and accidents and injuries are minimized, when the safe work practices are followed.

Safe Work Practices

- All crane operators should read and understand the operator's manual for their crane.
- Any crane operation should have a preplan in place for the lift operation.
- The crane hook should be inspected for broken or malfunctioning parts. Inspect all the rigging equipment.
- The crane operator and the signaling person should be clear on the hand signals.
- Cranes need to be kept at specific distances from powerlines. Please consult the provided chart for those distances.
- Do not operate a crane in high winds or other hazardous weather conditions.
- Do not overload the crane.
- Ensure that all loads have been secured tightly as to avoid material dropping during lift operations.
- All personnel not involved with the lifting operation should keep their distance.
- Before lifting or lowering a load, the crane operator should inspect the area around the landing/lift site to ensure that no one is under the load.
- The crane operator should allow any personnel who is connecting the load to the crane to safely exit the area before proceeding with the lift.
- The lifting path should be cleared of all debris and obstructions.
- All personnel should avoid being under the load.
- Lifting or lowering should only be done based on the hand signals given to the crane operator.
- Depending on the load, someone else should be on a guiding/tag line for the load.
- All rigging should be removed from the crane when the job is finished.
- When finished, the crane hook should return to original resting position.

Voltage (nominal, kV, alternating current)	Minimum Clearance Distance (feet)
Up to 50	10
Over 50 to 175	15
Over 175 to 350	20
Over 350 to 550	27
Over 550 to 1,000	45
Over 1,000	(as established by the utility owner/operator or registered professional engineer who is a qualified person with respect to electrical power transmission and distribution)

Cranes: Sling Crane Operation

Policy

Safety with sling cranes involves knowing what types of slings to use, how to use them, and how to safely operate cranes. Knowing these things and putting them into practice will help prevent accidents and keep your work site safe.

Safe Work Practices

- Inspect your slings before you use them.
- Set the slings to avoid slippage.
- Pad or protect the slings from the sharp edges of their loads.
- Keep the loads clear of all obstructions.
- Do not use damaged or defective slings.
- Do not use slings that are kinked or knotted.
- Do not load the slings with more weight than they can handle.
- You can find how much weight your sling can handle by looking at the identification markings that must be permanently attached to every sling.
- Do not put hands or fingers between the sling and its load while the sling is being tightened around the load.
- Do not shock load (when there is a sudden stopping of the load, rapid acceleration of the load, sudden load release or sudden load snatching).
- Shock loading wears the equipment down faster, meaning that a load that would otherwise be within the capacity of the sling could cause the sling to break.
- Do not use deformed or defective hooks or rings.

Cranes: Standard Hand Signals

Policy

When you use a crane or boom truck you want the load to be placed safely. You need to be able to quickly and efficiently communicate to the operator exactly what it is you are trying to do. Fortunately, there is a universal language for directing crane movements...The Standard Hand Signals. These same signals are officially used all over the world. A crane operator should always move loads according to the established code of signals, and use a signaler.

Safe Work Practices

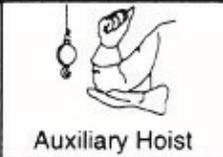
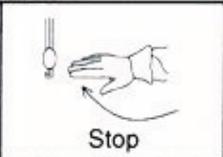
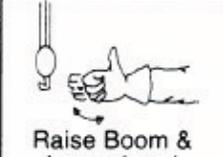
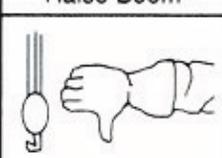
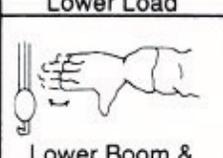
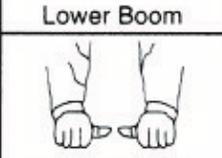
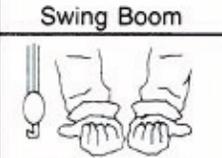
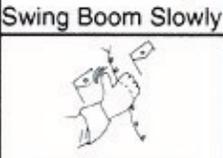
WHO CAN GIVE THE HAND SIGNALS?

- There should be only one designated signaler at a time.
- If signalers are changing between each other, the one in charge should wear a clearly visible badge of authority.
- A crane operator should move loads only on signals from one signaler.
- A crane operator must obey STOP signals no matter who gives it.

WHAT SHOULD YOU DO WHEN IN CHARGE OF SIGNALING?

The signaler must:

- Be in clear view of the crane operator.
- Have a clear view of the load and the equipment.
- Keep persons outside the crane's operating area.
- Never direct a load over a person.

 Main Hoist	 Auxiliary Hoist	 Hoist Load	 Hoist Load Slowly	 Stop
 Raise Boom	 Raise Boom & Lower Load	 Lower Load	 Lower Load Slowly	 Emergency Stop
 Lower Boom	 Lower Boom & Raise Load	 Swing Boom	 Swing Boom Slowly	 Travel (mobile eqpt)
 Retract Boom 2 hands	 Retract Boom 1 hand	 Extend Boom 2 hands	 Extend Boom 1 hand	 Dog Everything

Cuts, Lacerations and Punctures

Policy

Cuts, lacerations and punctures are wounds that are unfortunately very common in many workplaces. All of them are open wounds that not only are dangerous when first received, but also create a greater vulnerability to infection of the human body. Twenty-nine percent of the cut, laceration, and puncture wounds reported involve work equipment. Therefore, to avoid receiving any of these wounds, remember the following instructions.

Safe Work Practices

- When cutting thick material, use several passes of the blade and apply more downward pressure with each pass
- Be sure you are properly trained before using.
- Use the proper PPE such as gloves and boots when working with processes that could cause cuts, lacerations, and punctures
- Practice good housekeeping by getting rid of clutter and debris
- Never use a tool for a purpose other than what it was meant to be used
 - For example, do not use a screwdriver as a chisel or a knife as a pry bar
- Do not use tools in poor condition, such as a broken handle or a dull blade
- Do not place sharp objects in your pockets, belt, or pants
- Inspect machinery on a regular basis to be sure the machine guards are working and in place
- Do not take shortcuts
 - Always focus on your work

Dealing with Aggressive People in the Workplace

Policy

Outbursts from aggressive people can occur in any job industry and construction is not an exception. Sometimes in construction there can be a problems dealing with contractors/subcontractors. This can be a result of many things, including monetary issues, work performance, or just miscommunication. These steps should help to ensure that any confrontation can end peacefully.

Safe Work Practices

DEFUSE THE SITUATION (IF POSSIBLE)

- Remaining calm is the most important step.
 - Avoid raising your voice
 - Avoid sarcasm
 - Talk softly
- Control your actions, you can't control the actions of others, try to avoid:
 - Pacing
 - Clenching you fist and jaw
 - Rolling your eyes
- Remain a safe distance away and position your body in a non-aggressive manner.
- Listen to their side of the story, sometimes lack of communication causes problems.
 - Try not to interrupt, even if you feel they are wrong.
 - Use positive nonverbal cues such as: make eye contact (but do not stare); nodding in acknowledgment; show genuine concern
- Ask questions to see if you can resolve the problem.
- Try to work with them to find a solution.
 - Try to compromise
 - If need be get a supervisor.

SAFE WORK PRACTICES

- Always keep your cool and maintain your composure.
- Keep your distance and your options open, sometimes it is wise to pick your battles.
- Remember that the anger is most likely directed at the situation, and not you as a person.
- Take any threat of violence seriously and call the police.
- If at all possible, try to get the aggressor to leave the premises before any violence occurs.
- Try to avoid conflict but defend yourself if your life is in immediate danger.
- Follow any and all company procedures if a violent incident should occur.

Defensive Driving Practices

Policy

Driving is always going to be a hazardous task. Employees can help protect themselves and others from accidents by practicing defensive driving. Defensive driving is not difficult to learn, and it has long-term benefits. The defensive driving practices provided in this lesson can help protect employees both at home and on the job.

Safe Work Practices

LOOK AHEAD

- Glancing at your intended lane of travel continuously while driving.
- Looking at the spot where your vehicle will be in 15 seconds or longer. In inclement weather, drivers should add more seconds on to their initial 15-20 seconds depending on road conditions.
- Watching the vehicle not only in front of you, but the vehicles that are driving in front of that vehicle. The vehicles that are further ahead will impact how the drivers behind them will act.
- Looking at traffic that are in the other lanes that are ahead of you.

BE AWARE OF YOUR SURROUNDINGS

- Locating motorcycles or bicycles that may be to the side, in front of, or behind your vehicle. Locating these riders is important because they have an easier time moving around traffic than other vehicles. Ensuring that you give all motorcycles and bicycles sufficient space to avoid accidental collision.
- Identifying the location of pedestrians. Watching pedestrians is important because they may have not seen your vehicle when crossing a street or jogging on the side of the road.
- Noting and preparing for changes in the speed limit.
- Accounting for the stopping time and loads of other drivers. Put some extra distance between your vehicle and those vehicles that have trailers or other items, such as boats, attached to the rear. These items may come loose and detach during travel.

SCANNING THE AREA AROUND YOUR VEHICLE

- Continuously looking to the front, rear, and sides of your vehicle.
- Checking your mirrors every few seconds. Your mirrors play an important part of informing you of where other vehicles and pedestrians are located.
- Keeping distractions like cell phones, laptops, tablets, etc. stored during travel. Your eyes are meant to be scanning the area around your vehicle for hazards. They can't do that if you are looking at a screen.

PREPARE FOR "WHAT IFS" AND EMERGENICES

- Leaving a sufficient amount of space between you and other vehicles. The more amount of space between you and another vehicle, the better.
- Leaving one lane to the side of your vehicle open for swerving or exiting.
- Watching and predicting the behaviors of other drivers.
- Avoiding “herds” of vehicles.

ALERT OTHER DRIVERS TO YOUR PRESENCE

- Staying out of other driver’s blind spots.
- Making eye contact with other drivers.
- Using your signals when changing lanes and making turns.
- Using your headlights when conditions are dark or in inclement weather.
- Ensuring that your brake lights are in working order. Other drivers cannot brake for you if they do not know that you are braking.
- Use your horn to warn others that you are backing up or to get their attention. Do NOT use your horn to express anger.

Diesel Spill Safety Procedures

Policy

It is every employee's responsibility to ensure that any leaked or spilled diesel fuel is cleaned up properly and in a timely manner. If a leak or spill is left unattended, the fuel could go down a drain or catch on fire, resulting in more damages and potential fines. Employees should remember to put on PPE before attending to any spills. If employees utilize the safe work practices provided in this lesson, they will find that they minimize the risk associated with diesel fuel spills and leaks.

Safe Work Practices

Cleaning up a spill or leak in a timely manner is important. For a spill or leak to be cleaned up in a timely manner, employees should know the following before a leak or spill occurs:

- Know the location of all spill kits. Spill kits should be kept in an area that is easy to access.
- Know what a spill kit contains. Personal protective equipment will vary between spill kits based on the material that was spilled or leaked.
- Drivers should keep a spill kit in all company transport vehicles at all times. Spill kits should be kept in an area of the vehicle that is easy to get to and items should not be stored on top of them whenever possible.

When a spill or leak occurs, time is of the essence. Nobody wants to have diesel fuel enter any drains or waterways. Employees should do the following when cleaning up a spill or leak:

- When a leak or spill is brought to your attention, you should grab the spill kit and put on the personal protective equipment (PPE) that has been provided. Take a quick second to inspect the PPE for damage. If the PPE has been damaged, report it to your supervisor.
 - If your company does not have a spill kit, grab some rubber or heavy-duty disposal gloves, kitty litter or some other absorbent material, a heavy-duty plastic bag (garbage bags would be best), broom, and dust pan. Wearing goggles is optional, but may be required by employer.
- Stop the source of the leak or spill.
- Block off the area where the spill occurred to prevent others from entering the area during clean up.
- The leak or spill should be surrounded by absorbent socks. If you do not have absorbent socks, use kitty litter or some other absorbent material around the edge of the spill or leak to prevent it from spreading further.
- If possible, cover or block drains to ensure that no diesel fuel enters the drain.
 - If you notice that diesel fuel has entered a drain or some other source of water, report it to your supervisor as soon as possible as the EPA or other agencies will need to be contacted.
- Follow the spill kit directions for the use of absorbent pads or absorbent granules.

- Once all fuel has been cleaned up, ensure that the container for the used material has been labeled as hazardous waste and dispose of it in accordance with local and federal law.
- Report the spill to your supervisor. When possible, have another coworker report the spill to your supervisor while you clean up the spill or leak. If you do have another person report it, you should still go to your supervisor to provide additional information about the spill or leak.

Discrimination in the Workplace

Policy

Discrimination is something that should not be tolerated in any workplace. It is up to both employers and employees to ensure a safe work environment for everyone. Everyone needs to remember that people want to be treated with respect and professionalism. Discrimination is something that can and should be prevented. Discrimination laws are evolving all the time, so everyone needs to ensure that they are informed about any changes to all local and federal law.

Safe Work Practices

HOW CAN YOU PREVENT DISCRIMINATION?

Employers and employees can prevent discrimination by:

- Providing handbooks that outline and discuss the company's policies in regard to behaviors and practices that will not be tolerated. Employees should carefully read and understand non-discrimination policies in the handbook. If an employee has questions, they should ask questions to their supervisor or human resources department.
- Providing anti-discrimination training to all management staff and regular employees. Employees should attend all required anti-discrimination training and take opportunities to attend additional training if it is offered.
- Encourage ideas of respect and professionalism.
- Grant reasonable accommodations when they have been requested.
- Encourage meetings between parties before issues escalate.

HOW CAN I TELL IF DISCRIMINATION IS TAKING PLACE?

There are some situations when an employee, manager, or supervisor is unsure about a behavior or action that may be an indicator of discrimination. Listed are some signs that may be indicators of discrimination:

- Hiring practices that disallow certain individuals or groups from applying for the job or from being offered the position in which they applied.
- When a rule or policy is not applied to everyone equally.
- When a reasonable accommodation for a disability or religious belief is not granted.

Unless it would cause undue hardship to the company.

- Jokes that are shared that might offend someone.
- Behavior that humiliates or degrades someone. This behavior might be repeated over and over again.

- Someone not getting a promotion or raise based on the fact that they belong to a protected category.

WHAT CAN AN EMPLOYEE DO IF THEY FEEL THAT THEY ARE BEING DISCRIMINATED AGAINST?

If an employee feels that they have been discriminated against, they should talk with or file a complaint with either their supervisor or human resources department. Should the behavior not be stopped or an employee becomes a target for retaliation (it is another form of discrimination), he or she can file a complaint with the local Equal Employment Opportunity Commission (EEOC). The EEOC can and will investigate all complaints about workplace discrimination and they can act as mediators between the parties involved.

Dispensing Chemicals

Policy

When dispensing chemicals, be sure to follow safety procedures and know what to do if something goes wrong so you can avoid hazards to yourself and others in the workplace.

Safe Work Practices

In order to avoid hazards while dispensing chemicals, follow these procedures:

- Inspect the secondary container to make sure there are no cracks or other damage that will cause leaks or spills.
- Check the labels on the primary containers (the containers that are dispensing the chemicals) and be sure you follow all of the instructions.
 - This could include what kind of PPE you should be wearing while dispensing and handling the chemicals.
- Mark the secondary containers (the containers that are receiving the chemicals you are dispensing) with the name of the chemical and any hazard warnings.
- Bond and ground metal containers to prevent sparks and static electricity from igniting the chemicals.
 - When liquids move in contact with other materials, such as containers, during pouring, they can generate static electricity.
 - Safety cans, which have self-closing airtight lids, may still conduct electricity and therefore need to be grounded during dispensing operations.
- If possible, dispense the chemicals within a hood or in a well-ventilated area.
- Dispense the chemicals as closely as you can to where you will be using them.
- Be sure that you close both containers tightly so no liquids or fumes can escape.
- Do not overfill buckets.
- Consider having closed containers for transferring the buckets, or using carts that will keep the containers steady while they are moved.
- Always follow your workplace procedures while dispensing and moving chemicals.

Downed Power Lines Safety

Policy

Downed power lines should be treated with extreme caution. Drivers and pedestrians should never attempt to touch downed power lines. When downed power lines are spotted, drivers and pedestrians should keep their distance and call either 9-1-1 or the local electric company to have the downed lines de-energized and repaired.

Safe Work Practices

Seeing a Downed Power Line While Driving

When a person is driving, and they see downed power lines, they should do the following:

- Stop the vehicle and call 9-1-1 or the local electric company.
- Stay in the vehicle.
- Do NOT attempt to move the power line.
- Do NOT drive over the power line.
- Always assume that downed power lines are energized.
- Give the dispatcher all the information you can about the area where the downed power line is and other immediate hazards (sparks, smoke, flames, etc.) that you see.
 - If possible, give the dispatcher the pole number to help identify the pole that needs to be de-energized.
- If you see pedestrians, roll down your window and warn them about the danger while waiting for emergency services to arrive.

The Vehicle is Making Contact with a Downed Power Line

When a vehicle has made contact with a downed power line, the driver should do the following:

- Remain calm.
- Stay in the vehicle and call 9-1-1.
- Give as much information as possible about your location to the dispatcher.
- Wait until you have been informed that the lines have been de-energized to leave the vehicle.

If the driver has to leave the vehicle due to an immediate threat, they should do the following:

- Open the vehicle door all the way.
- Put both feet on the ledge of the door.
- Keep your feet together as you jump.
- Ensure that your feet stay together when you land.
- Shuffle or hop 30 or more feet away from the area.
- Do NOT attempt to walk, as this could result in step potential.

- Do NOT make contact with the vehicle.

DOWNED POWER LINES IN RESIDENTIAL AND WORK AREAS

If a driver or pedestrian comes across a downed power line in a residential or work area, they should do the following:

- Keep a distance of 30 feet or more from the downed power line.
- Do NOT attempt to move the power line.
- Always assume that downed power lines are energized.
- Call 9-1-1 or the local electric company and give the dispatcher as much information as you can about the area and any immediate hazards that may be present.
- Warn others about the lines and keep them away from the power lines.
- Do NOT step in any water that may be around the power line.
- Avoid touching any objects that may be in contact with the line (metal, fencing, dirty or wet wood, etc.)

Driver Vehicle Inspection

Policy

To help protect themselves and the public, employees who drive a commercial motor vehicle (CMV) should conduct a driver vehicle inspection prior to hitting the road. Driver vehicle inspections help drivers identify and correct damaged or suspected problems with a vehicle before the vehicle is on the road.

Safe Work Practices

When performing a driver vehicle inspection, employees should use their company's driver vehicle report and mark items that are defective or in need of repair. Forms can differ between companies, so employees should fill them out according to their company's policy.

When performing a driver vehicle inspection, employees should do the following:

- Chock the tires (if applicable).
- Remove the key from the vehicle and put it in your pocket.
- Do NOT smoke while performing a driver vehicle inspection.
- Take a visual overview of the portion of the vehicle that they are inspecting (Employees should start at the front of the vehicle and work their way towards the back.)
 - When performing a visual overview, employees should look to see if the vehicle is leaning. Leaning vehicles could indicate flat tires or other problems.
- Be aware of areas that may be hot. Hot areas will normally be a concern when performing on-the-road or post-trip inspections. Hot areas include batteries and engine areas.
- Ensure that all fluids are at appropriate levels. Top fluids off as needed.
- Note all fluid leaks. Leaks should be cleaned up as soon as possible to prevent someone from slipping and falling. Leaked fluid should be cleaned up in accordance with all local and federal laws.
- Mark and make notes of defective items on the driver vehicle inspection report (DVIR) as you conduct the inspection.
- Wheels should be checked for illegal welds. A wheel should be marked as defective or damaged if it has been welded.
- Ensure that tires have the appropriate amount of tread. Tires should be marked if they do not have the appropriate amount of tread remaining.
 - If your vehicle has dual tires, you should inspect the gap between the tires for debris. Debris should be removed before leaving the inspection area.
- Ensure that gauges are working properly during the inspection. Improperly working gauges could indicate a problem with the vehicle or the gauge.
- Ensure that seatbelts latch. Do NOT just look at them.

- It is recommended that employees get assistance when checking the lights. One person should be in the cab of the vehicle while the other person looks at the lights to ensure that they are on.
- Remove chocks before performing any movement checks when inspecting brakes.
- Turn in your completed report as directed by your supervisor.

Driving Company Vehicles: Breaking Down

Policy

If you are in an accident or your vehicle breaks down while driving a company car, there is a certain protocol to follow. Employees' safety is the first priority in a situation like this, and all safety steps are required to be followed so the problem can be solved as quickly and safely as possible.

Safe Work Practices

BREAKING DOWN

- Do not pull into the left-hand shoulder unless there is no other option.
- Turn your hazard lights on as soon as you are stopped to warn other drivers to be cautious.
- Turn your wheel away from the road and put the emergency brake on.
- Do not get out of the vehicle unless you have checked that it is completely safe to do so.
 - Get out through the passenger-side door if you are parked next to a busy road or highway.
 - Stay near your vehicle unless your engine is smoking or you see flames.
- Call 911 if you are hurt or unable to pull to the side of the road.
- If you have flares or triangles available, set them up. One should be placed about ten feet behind your vehicle and the other should be placed about 200 feet behind the vehicle.
- Pop your hood to reduce confusion, because this is the universal sign of a breakdown.
- Do not attempt to fix the problem by yourself if you are not sure what the problem is.

ACCIDENTS

- Check yourself, passengers, and the other affected party for injuries, and call 911 if necessary.
- Pull over to a safe location, turn your hazards on, and set your emergency brake.
- Set up traffic flares, cones, or triangles as previously described.
- Call the police even for a minor accident.
- Exchange insurance information with the other driver.
- Do not admit fault and limit your discussion of the accident to facts.
- Take pictures of the damage, if possible.

Driving Industrial Vehicles

Policy

All operators of industrial vehicles should be prepared for a safe day behind the wheel. They should know the vehicle or moving equipment they are going to be using and should observe the operating, maintenance and safety instructions.

Safe Work Practices

- Be attentive.
- Do not operate an industrial vehicle or equipment if drowsy, under the influence of alcohol or drugs. (Some prescription drugs could make you drowsy.)
- If you are ill, operating industrial vehicles should be limited or avoided.
- Take occasional breaks, especially on hot days.
- Operators should dress appropriately for the weather and work conditions, including head and eye protection.
- Dust respirators and acoustic earmuffs or plugs may be required if a vehicle does not have a protective cab.
- Seat belts should always be securely fastened.
- Passengers should only be in the vehicle if there are seat belts for them. No seat belt, no rider.
- No one should ride on any part of a moving vehicle that is not designated for a passenger.
- Vehicles should match ground speed to operating conditions.
- When a vehicle is stopped, brakes should be securely set, using a park lock and remove keys to keep unauthorized persons or children from restarting the machinery.
- Operators should disengage the power take off, keeping shields and guards in place and turning off the engine before unclogging, refueling or working on any power-driven machine.
- Operators should make sure other workers are out of the way and that they never walk under or alongside moving equipment.

Driving Safety

Policy

Automobile accidents are a leading cause of injury to employees, as well as lost time and equipment to employees. Drivers should be prepared to drive safely every time they are behind the wheel of a vehicle.

Safe Work Practices

- Seat belts should be worn by the driver and passenger(s) any time the vehicle is moving. If there are no passenger seats, there should be no riders.
- Avoid using cell phones, programming GPS or reading maps while driving. Pull off of the road to do any of these activities.
- Only those with an active driver's license should operate a vehicle.
- All traffic laws and speed limits should be obeyed under all circumstances
- Do not drive while under the influence of alcohol or drugs. (Prescription medications which can impair judgment are included.)
- When the vehicle is parked, brakes should be set.
- Do NOT text while driving.
- Do NOT use a cell phone without a hands-free device.

Driving Vehicles with Trailers

Policy

Towing a trailer requires a lot of extra precaution than just driving a regular vehicle. Remember to properly and safely load the trailer, drive extra cautiously, and always properly prepare and inspect the trailer before you take it anywhere.

Safe Work Practices

PREPARATION

- Know the specifications of your vehicle, hitches, etc. before you tow a trailer.
- OSHA requires the driver to check the vehicle at the beginning of each shift.
- Inspect the trailer and its connections.
- Know what the GTW is and be sure it is not more than the trailer can carry or more than the vehicle can tow.

DRIVING SAFELY

- Always wear your seatbelt.
- Prevent Trailer Sway.
- Never speed or accelerate too quickly.
- Do not make sharp turns; otherwise the trailer could jackknife or tip over.
- Make sure you allow enough space for the trailer when you turn.
- Allow more distance between the cars in front of you than you usually would have.
- Inspect the trailer and your vehicle every time you make a stop to make sure everything is still in working order.
- Slow down when driving on railroad crossings or unpaved roads.
- Use a spotter to help you back up the trailer.

LOADING AND UNLOADING

- When you are about to load or unload a trailer, be SURE that the brakes are on, the vehicle is off, and any stabilizers are used.
- Do not overload the trailer.
- Put heavier items on the bottom so the trailer does not become top heavy and cause it to overturn.
- Make sure each side of the trailer is balanced as well.
- Cover and tie down the objects in the trailer to prevent them from flying off or falling out.

Driving in Inclement Weather

Policy

There are many potential hazards than can occur while driving. Especially when driving in rainy or foggy conditions. Extra precautions should be taken while driving in inclement weather.

Safe Work Practices

- Do not use cruise control while driving in wet conditions.
- Drive at least 5 MPH under the speed limit, and even slower if necessary.
- Feather the brakes when driving through a puddle to avoid hydroplaning.
- Never drive through flooded areas:
 - It is hard to gauge the depth of the water.
 - If water gets into intake valve it could shut down engine.
- If the vehicle starts to hydroplane remember the following:
 - Take your foot off of the accelerator.
 - Gently turn steering wheel in the direction vehicle is hydroplaning.
 - Feel to see when the tires are on solid road again.
 - If necessary (and if safety permits) pull over to the side of the road to compose yourself.

Driving while Tired

Policy

If you are tired while driving, you should always pull over and take a nap. If you do not feel tired yet, you can keep your energy levels up by eating healthy snacks, drinking plenty of fluids, and taking frequent breaks. Trying to power through exhaustion while driving can have devastating effects that are not worth it!

Safe Work Practices

- **STOP FREQUENTLY:** During your breaks, try taking a few deep breaths to help get more oxygen to your brain. This will increase your mental energy, and studies show that deep breathing may also help:
 - Release tension in your body
 - Strengthen the lungs
 - Lower your blood pressure
- **EAT A SNACK:** The best energizing snacks contain a combination of carbohydrates and proteins, such as:
 - Banana slices with some peanut butter
 - Whole grain crackers dipped into hummus
 - Dried fruits and nuts
 - Yogurt and granola
 - Along with eating healthy snacks, you should be drinking plenty of water to avoid dehydration. Many people are unaware that one of the first symptoms of dehydration is fatigue.
- **OTHER TIPS:**
 - If there is a passenger in the vehicle, discussing an engaging topic may help keep your mind alert.
 - If there is no passenger and you are still sleepy after applying the above mentioned tips: pull over and take a nap! Even a short nap can refresh you and prepare you for another long drive.

Driving: Accident Reporting

Policy

When an employee is a professional driver, there is a chance that the employee may experience an accident during the course of their career. Accidents can be shocking and traumatic experiences depending on the severity of the accident. Employees may also panic during an accident if they do not know how to handle and report it. Presented in this lesson are some general guidelines that employees can follow if they are in an accident. The order in which these guidelines are implemented will depend on the severity of the accident and injuries.

Safe Work Practices

Once an accident has occurred, employees should do the following to prevent additional damage to their, and the other party's, vehicle or persons:

- Get your vehicle far off the road as possible unless doing so will increase the danger, cause additional damage or inflict injury to you or the other party.
- Ensure that the vehicle is in park before turning off the engine. Once the engine has been turned off, employees should activate their four-way emergency flashers.
- Secure the area by turning on your flashers and set out warning devices (if available). Warning devices may include:
 - 3 bidirectional triangles
 - 6 fuses
 - 3 flares

Note: Depending on the cargo, employees may only be allowed to use the 3 bidirectional triangles.

- When setting out bidirectional triangles, employees should walk towards oncoming traffic holding an assembled triangle in front of them to ensure maximum visibility.
- It is recommended that employees wear a reflective vest or jacket when securing the area to ensure that they are visible to other drivers.

After an employee has secured the scene, they should do the following when checking for injuries and notifying authorities:

- Take a moment and check yourself for injuries. If you have no immediate injuries, take a calming breath and check the other parties for injuries.
- Give reasonable assistance to any injured person. Reasonable assistance means calling for emergency services, if they are not on scene, and keeping any injured person warm and dry.
- Do NOT move an injured person unless they are in immediate danger or there is a chance of additional injury.
- When contacting law enforcement, employees should provide the following information:

- The exact location of the accident using mile markers or landmarks if necessary.
- The number of injured people and how severe their injuries are.
- The extent of vehicle and property damage.
- Your contact information in the event that they need to contact you for additional details.
- Do NOT leave the scene to contact law enforcement. Leaving the scene is against the law.
- After notifying the proper authorities, employees should call their company and notify them of the accident. Employees should follow their company's accident procedures.

NOTE: Some states require that employees not leave the scene until all required paperwork has been completed.

When documenting an accident, employees should do the following:

- Use provided forms and complete as much information as possible. Information may include the following:
 - Witness information
 - Investigating officer information
 - Vehicle information (for all parties involved)
 - Injuries (both yours and the other party's)
 - Contact information for all involved persons
 - Sketches or drawings of the scene
- Only write down the facts of the accident. Do NOT place blame or write down your emotions.
- Take pictures of the scene with either a digital, film, or work-only cell phone camera. When taking pictures, employees should include different angles of the road, landmarks, and license plates (including those of witness vehicles).
- Take pictures of your injuries (if applicable).
- Collect witness statements.
- Turn in all required reports as soon as possible to all required departments and authorities.

Driving: Avoiding Accidents

Policy

Driving has and will always be a risky task. While professional drivers cannot control the actions of others on the road, they can control their own actions. Every driver should do their part to help minimize the chances of an accident. By following the guidelines presented in this lesson, professional drivers can limit the number of an accidents that occur on the road.

Safe Work Practices

Professional drivers should get plenty of rest before driving; this includes drivers of passenger vehicles. Driving while fatigued is nearly as bad as driving while under the influence of drugs or alcohol. To help avoid driving while tired, professional drivers should do the following:

- Get between 7-8 hours of sleep.
- If you are a making a long trip and start to feel tired, pull off the road at a safe area and take a nap or stop for the evening.
- Do NOT exceed your permitted driving hours.

Professional drivers should plan their routes. Whether you are driving a commercial or passenger vehicle, it is important to know where you are going and how to get there. When planning your trip, employees should do the following:

- Call your dispatcher or the customer for directions.
 - Your dispatcher will be the best help, but truckers may talk to someone in the shipping or receiving department as they are more familiar with the docking area.
- Get a road map and ensure that you use it. A Global Positioning System (GPS) can be great a tool, but it can fail or give wrong directions if it hasn't been updated with the latest information.
- Ensure that your GPS is updated.
- Input the address before you leave.
- Preplan your stops to help you with your driving and break times.
- If possible, check the traffic conditions of your destination prior to leaving. Try to plan your arrival for low traffic periods.

Due to how fast weather can change, professional drivers should be prepared for any weather condition on the road. To help plan and adjust for changes in the weather, employees should do the following:

- Inspect and change out windshield wipers before leaving.
- Check the weather forecast.
- Ensure that you have snow chains if you are going to an area known for snow.
- Slow down in wet or icy conditions.
- Pull over if conditions are too severe for driving.

Professional drivers should minimize how many lane changes that they do. To help minimize lane changes, professional drivers should do the following:

- Pick a lane and stay in it for as long as possible.
- When driving on a road with more than two lanes, avoid merging vehicles by staying in the 2nd lane from the right. This leaves the far right lane open for vehicles to enter the freeway.
- Watch vehicles that are merging onto the freeway.
- If you do need to change lanes, check your mirrors and be aware of your blind spots.
- Only change lanes when it safe to do so.

Speed is one of the biggest contributors to accidents. Professional drivers should do the following when driving:

- Do NOT exceed posted speed limits.
- Adjust your speed to the length and weight of your vehicle.
- Slow down in wet or icy conditions.
- Slow down in construction zones.

The risk of driving has increased with the multiple distractions that drivers experience these days. Distractions are a big contributor to accidents. To help minimize distractions, employees should do the following:

- Do NOT text, talk, watch videos, or check email on a cell phone, laptop, etc. All portable electric devices should be put in a safe place before leaving. A text or phone call can wait until you are in a safe place and not driving.
- Set up your radio before leaving.
- Do NOT eat or drink while driving.
- Do NOT apply cosmetics while driving.
- Keep radio talks short and to the point. Radios should be kept as close as possible to minimize reaching.
- Do NOT reach for items while driving.

Driving: Car Accident

Policy

Getting into a car accident is a scary experience, this is can be even worse while driving a company vehicle. The first step is not to panic, take a deep breath and follow the instructions below if you are able to do so.

Safe Work Practices

If you are involved in a car accident, the following steps should be taken:

- STOP! Not stopping could result in a hit and run charge.
- DO NOT admit fault, regardless if at fault or not.
- Take pictures of any damage.
- Remove vehicle from traffic if possible.
- Notify your employer or supervisor of the accident.
- Notify law enforcement immediately.
- Fill out the appropriate paperwork required by your state, insurance, and company.
- If you injure or kill an animal the following steps should be taken:
 - Pull over to the side of the road.
 - Try and find the owner, if you can't find them call the humane society or law enforcement.
 - Do not try to remove injured animal.
 - Never leave an injured animal to die.
- If you hit a parked vehicle or damage property, the following steps should be taken:
 - Try and find the owner of car or damaged property.
 - If you can't find the owner leave your name and address (company name and address too) in or on the vehicle.
 - Report the accident to law enforcement immediately.

Driving: Distracted Driving

Policy

Distracted driving is dangerous to both employees and the public. Drivers have enough to focus on when driving that distractions such as cell phones, paperwork, and eating can wait until the driver is in a safe place to take care of those obligations. Employees should adhere to their company's driving policies when operating a commercial vehicle or company-owned passenger vehicle. Employees are responsible for adhering to all local and federal motor laws.

Safe Work Practices

NOTE: Employees should adhere to their company's cell phone and other portable communication device policies when driving commercial vehicles or company-owned passenger vehicles. Employees should adhere to all local and federal laws regarding cell phone use.

To help avoid distractions while driving, employees should do the following:

- Take care of any adjustments (mirrors, air conditioning, seats, radios, etc.) before leaving the parking area or at roadside stops.
 - Employees with communication radios should ensure that their radio is in a place that is easy to reach. Radio talk should be kept as short as possible.
- Ensure that addresses and destinations have been put into GPS systems prior to driving.
- Read and fill out all paperwork before driving. Paperwork can wait until you are off the road.
- Create a voice message on cell phones that states that you are currently driving and will call back when it is safe to do so.
- Do NOT text, talk, check social media, watch videos, or check email on your cell phone while driving. Cell phones should be put in a safe place before getting on the road. Text, calls, and emails can wait until you are off the road.
- When possible, do NOT eat or drink while driving. If you are hungry, pull off the road and go inside to eat or eat in your vehicle while parked in a parking area. If you have no other option other than to eat or drink while driving, only drink fluids that come with a lid from which you can drink (coffee, soup, etc.) and avoid messy foods (tacos, hamburgers, chili, etc.).

Driving: Over-The-Road Truck Driving

Policy

Professional drivers help keep the economy going by transporting goods; however, employees should remember that they are responsible for their own safety and the safety of the public. By following the guideline presented in this lesson, professional drivers can help contribute to the minimization of accidents that occur on the road.

Safe Work Practices

Fatigue can be dangerous when an employee is driving on the road. Fatigue can contribute to both accidents and health problems. Some employees may not be aware of the signs of fatigue. Signs of fatigue include:

- Rubbing eyelids
- Yawning or blinking
- Heavy eyelids
- Head nodding or dropping

When an employee experiences the signs of fatigue or begins feeling tired, they should pull off the road when it is safe to do so. After pulling off, employees should either take a short break or stop for the evening and get a full seven to eight hours of sleep. Employees should ensure that their driving hours are in accordance with the Hours of Service, as regulated by the Federal Motor Carrier Safety Administration (FMCSA), to ensure that they are getting enough rest to drive safely.

Weather plays a role in how drivers operate. Employees should do the following when encountering bad weather:

- Keep substantial space between your truck and the vehicle in front of you.
- Do NOT speed.
- Slow down in wet or icy conditions. Slowing down can help prevent rollovers, jackknives, and collisions.
- Use tire chains when driving on icy or snowy roads.
- To aid against water condensation build up, employees should keep their fuel tank full during the colder months of the year.

While driving, employees should do the following:

- Be aware of the actions of other drivers on the road.
- Signal early when approaching an intersection.
- Slow down long before making a complete stop.
- Keep lane changes to a minimum.

- Check your mirrors every 7 or 8 seconds to ensure that no one has entered your blind spot.
- If you must drive at a reduced speed due to a heavy load or bad weather, use your flashers.
- Do NOT idle for more than 5 minutes as this can expose you to fuel fumes and waste fuel.
- If idling is necessary, employees should keep their windows closed.
- Do NOT tailgate.
- Take all required breaks. Take a break if you are feeling tired or fatigued.
- Wear loose-fitting clothing to avoid cutting off circulation.

Due to the locations of some deliveries, pick-ups, or rest stops, employees should always exercise caution when exiting their trucks. To help in the prevention of robberies or bodily harm, employees should do the following:

- Call ahead to your destination and ask about the area.
- Be aware of your surroundings at all times.
- Avoid parking in dark areas.
- Park in areas that are well-lit and in areas with other professional drivers.
- Keep doors locked when you have to move away from your vehicle.
- Do NOT walk alone at night.
- Avoid carrying large amounts of cash.

Driving: Parking Lot Accidents

Policy

Parking lot accidents are just one of the many types of accidents that are associated with driving. Parking lot accidents are avoidable, but when they occur employees should remain calm and follow their company's accident procedures. By following the guidelines presented in this lesson, employees can help minimize their chances of a parking lot accident.

Safe Work Practices

Employees should follow their company's accident procedures when an accident occurs. When a car accident occurs in a parking lot, employees should do the following:

- Do NOT leave the scene if you are the one responsible for the accident. Leaving the scene can be considered a hit and run and could result in a fine or jail time.
- Stop and put the vehicle in park. Vehicles should not be moved unless there is potential for additional injuries or accidents.
- Remain calm.
- Check for injuries. If someone is injured, call 9-1-1.
- Call local law enforcement.
 - Note: Depending on the severity of the accident, law enforcement may not come out to investigate as the parking lot in question may be considered private property. Employees should be aware that some states may require that an incident be reported if the damage exceeds a certain dollar amount.
- Gather and exchange information. Information should include:
 - Name of the driver
 - Name of the vehicle owner (if it is different than the driver)
 - Name of any passengers (if applicable)
 - Vehicle make, model, license plate number, and if applicable, vehicle number
 - Insurance information which includes the company name, policy number, and phone number to call for claims
 - Contact information
 - Contact information of any witnesses (if applicable)
- Use your designated work phone or digital camera to take pictures. Pictures should include:
 - Vehicle damage
 - Broken glass
 - Skid marks
 - Property damage
- Call your company and notify them of the accident. Follow any instructions that your company tells you.

- Fill out any required paperwork and turn it in as soon as possible.

To help minimize the chances of a parking lot accident, employees should do the following:

- Drive slowly.
- Limit or eliminate distractions.
- Use your turn signals to indicate your actions to other drivers.
- Watch the actions of other drivers and pedestrians.
- Park in spaces that are further away from the building or large crowds of vehicles.
- When possible, pick spaces where you have the ability to pull forward to avoid having to back out of a space later.
- If you can't pull forward, back into a space.
- Ensure that there is enough room between your vehicle and any other parked vehicles before parking. For bigger vehicles like trucks, it is recommended that drivers get out and look.
- Try to park in the center of the space.
- Exit your vehicle when it is safe to do so.
 - For bigger vehicles like trucks, employees should use three points of contact when exiting the vehicle.
- Check traffic conditions before pulling out or backing up.
- Check for pedestrians before pulling out or backing up.

Driving: Railroad Crossings

Policy

Drivers should remember that railroad crossings are dangerous. These crossings should always be treated as if a train were coming. Drivers should not attempt to race trains as trains do not have the same stopping ability as cars. Accidents at railroad crossings can be avoided so long as every driver does their part and respects the train's right-of-way.

Safe Work Practices

When crossing a railroad track, drivers should do the following:

- Always approach the crossing as if a train were coming. It is recommended that drivers slow down when approaching a crossing.
- Do NOT attempt to race a train.
- Do NOT put yourself in a position where there is a chance of your vehicle becoming trapped on the tracks.
- Depending on the vehicle, drivers should stop between 15-50 feet from the crossing.
- Listen for sounds of a train approaching.
 - Note: Due to noise ordinances, it is not always possible for drivers to hear trains approaching, so drivers should always conduct visual assessments before crossing the tracks.
- If it is a passive crossing, drivers should look left, right, and left again before crossing.
- Obey all signs when approaching a railroad crossing.
- Do NOT try to beat the gates. Drivers should always stop when gates are lowering into position.
- Wait for the gates to lift completely back into their original positions and for the lights to stop flashing before proceeding across the track.
 - Note: If there are two or more tracks, driver should look left, right, and left again before crossing as the first train could hide any other train that is approaching.

If a driver's vehicle gets trapped on the tracks, drivers should do the following:

- Exit the vehicle and get clear of the tracks.
- Do NOT reenter the vehicle for any reason.
- Call 9-1-1 or the local police department. Give them your location. Locations can be found on the warning signs at crossings.
- Call the emergency contact number that is listed on the warning signs.

Dump Truck Safety

Policy

Operators of dump trucks are responsible for following all of the safe work practices necessary for avoiding accidents, to keep themselves and others safe. Knowing the hazards involved, performing pre-operation inspections, and following the safety guidelines are the steps that can be taken to ensure safe dump truck operation.

Safe Work Practices

- Dump truck operators should wear a reflective, high visibility vest, protective footwear, and a hard hat in areas where required.
- Do not back up the truck unless you have surveyed the area and have a spotter.
- Operators should have a spotter or backer when reversing or dumping a load, and the spotter and operator should always be clear on the meaning of hand signals.
- All personnel should be clear of an area before dumping.
- Do not reverse a dump truck faster than walking speed.
- When raising the dump truck bed:
 - Always make sure the ground is level before dumping.
 - Make sure there are no overhead obstacles, like trees or electrical lines.
 - Drive slowly and do not make sudden turns with a raised load.
- Always block a raised dump truck bed with a prop specifically intended for this purpose before working beneath it. Props must be used according to the manufacturer's instructions.

Earthquakes

Policy

To survive an earthquake and reduce its health impact requires preparedness, planning and practices. Having emergency supplies, knowing what to do during and after an earthquake may save lives.

Safe Work Practices

BEFORE AN EARTHQUAKE

- Know where the first aid kits are and make sure they have all of the needed supplies.
- Know where the fire extinguishers are located and that they are operating properly.
- Know where to shut off utilities if you are designated to do so.
- Know your company's Emergency Escape Plan and know where it is posted.
- If you work in an area that has hazardous materials or other dangers, you need to leave that area during an earthquake.
- Know the location of your Emergency Staging Area and have regular earthquake drills.
- Make sure shelving, heavy objects on walls, signs, etc. are secured using earthquake approved methods.

DURING AN EARTHQUAKE

- Drop, Cover and Hold – If you are not in a hazardous area, find a table, desk or other piece of equipment, cover your head and hold onto a table, desk or equipment leg.
- Move into a hallway or get against an inside wall, staying clear of windows, heavy objects that may fall over and any other furniture pieces that are free standing.
- If you are in a hazardous materials area, leave the area. If you need to leave the building, watch for falling debris.
- If you are outside, get into an open area away from buildings, power lines and anything else that may fall.

AFTER AN EARTHQUAKE

- If you are inside a building, exit the building, being careful of falling debris and debris on the ground.
- Go to the Emergency Staging Area. **STAY THERE!** You need to wait for your supervisor or emergency personnel to tell you that it is safe to leave.
- A head count or roll call needs to be taken to make sure no one is missing.
- Do not tie up telephone lines. Use the telephone for emergencies only.
- Utilities should be shut off by qualified employees only.
- If there are injuries, only trained personnel should attempt first aid and rescue.
- Wait for a member of your company who is in charge to tell you when you can either go home or go back into the building.

Earthquakes: Aftershocks

Policy

Aftershocks are themselves earthquakes, but they are more accurately described as the lower-magnitude or lower-intensity tremors that follow the principal earthquake or main shock (the largest earthquake in a sequence of earthquakes).

Safe Work Practices

After an earthquake, the disaster may continue. Expect and prepare for the potential aftershocks, landslides or even a tsunami if you live on a coast. Immediately after you should:

- If away from home, return only when authorities say it is safe to do so.
- Check yourself for injuries and get first aid, if necessary, before helping injured or trapped persons
- Each time you feel an aftershock, DROP, COVER, and HOLD ON.
- Aftershocks frequently occur minutes, days, weeks, and even months following an earthquake.
- Look for and extinguish small fires. Fire is the most common hazard after an earthquake.
- Be careful when driving after an earthquake and anticipate traffic light outages.
- Stay out of damaged buildings.
- Use extreme caution and examine walls, floors, doors, staircases, and windows to check for damage.
- Watch out for fallen power lines or broken gas lines and report them to the utility company immediately.
- If you smell natural or propane gas or hear a hissing noise, leave immediately and call the fire department.
- Open closet and cabinet doors carefully as contents may have shifted.
- Do NOT use candles or open flames as a source of light. If power is out, use a flashlight and tune into a radio for more information.
- If you are trapped by debris, tap on a pipe or wall so rescuers can locate you. Shouting can cause you to inhale dangerous amounts of dust.

Electric Reach Lift

Policy

Operators of electric reach lifts are required to follow all of the safe work practices associated with these machines and not operate them unless they have been properly trained and authorized. Electric reach lifts are very safe and useful machines when handled correctly.

Safe Work Practices

- Do not allow coworkers to ride on electric reach lifts unless it was specifically manufactured to carry a passenger.
- Proper foot protection is required along with all other required personal protective equipment required for your specific task.
- If the electric reach lift requires the employee to operate in a standing position, shoes are not to be wet or greasy.
- If the electric reach lift required the employee to operate from a sitting position, operators must sit squarely on the intended seat and wear a seat belt, if provided.
- Electric reach lifts must always be operated at reasonable, controllable speeds.
- Employees should not operate unless they know the maximum weight capacity.
- All loads must be properly balanced and secured in order to ensure stability.
- The electric reach lift must be parked in a designated location where it is not an obstruction.
- Reduce driving speed when rounding corners in order to prevent loads from shifting.
- Reduce speed and use extra caution when going up and down ramps or over wet surfaces.
- Always drive straight up or down inclines instead of an angle.

Electric Shock (High Voltage) Emergency Response

Policy

Employees need to remember that every time they work with electricity, they have a chance of potentially experiencing an electric shock. When someone is a victim of electric shock, employees should call 911 and offer aid when it is safe to do so. Employees should avoid becoming second victims by only aiding the victim after the power source has been turned off and isolated. Aiding an electric shock victim can help increase their chances of survival.

Safe Work Practices

Employees should always contact 911 when someone has experienced electric shock. Electric shock victims can have delayed symptoms which need to be treated by a medical professional.

IMPORTANT: Employees should NOT touch a victim who is still making contact with a power source, as touching the victim in this state could result in the employee becoming a second victim.

If an employee sees a victim of electric shock, they should do the following to ensure both their safety and the safety of the victim:

- Turn off and isolate all power sources.
- In scenarios where the victim needs to be separated from the power source, employees should do the following:
 - Insulate themselves from the ground by standing on a non-conductive material such as books, newspapers, rubber matting, etc.
 - Use a non-conductive object (wooden broom handle, rolled up newspaper, plastic pole, cardboard, a rescue hook, etc.) to push the power source away from the victim.

Once the victim has been removed from the power source, employees either call 911 or have someone call 911 while they are offering aid to the victim.

After turning off and isolating the power source from the victim, employees should check to see if the victim can respond to vocal questions and commands. Such questions and commands can include:

- “Can you hear me?”
- “Open your eyes and blink.”

If the victim is unconscious but breathing, employees should do the following:

- Remove any sharp objects from the victim.
- Position the victim in the recovery position.

- Note: Look at page 1 for reference picture
- Check the victim for obvious injuries.
 - Employees should cool burns with potable water for a minimum of 10 minutes and cover burns with either a clean cloth or sterile gauze bandage if one is available. Adhesive dressing should not be used. Dressings should not be tight. Do NOT use blankets, towels, or anything having loose fibers.
 - Apply pressure to bleeding wounds. If the wound is located on the arm or leg, the area should be elevated.

Note: If the victim is unconscious and not breathing, employees who are qualified and have the appropriate training should perform CPR until emergency medical services arrive.

Employees should give reassurance to the victim during this time and wait with them while emergency services arrive. When emergency services arrive, employees should give as much information as possible to the emergency medical technicians (EMTs).

Electrical Arc Flash

Policy

Although arc flashes and the resulting arc blasts can be devastating, there are many things you can do to reduce your risk of danger. As a professional, you must use critical thinking to assess the hazards involved when working on any electrical circuit, and act accordingly.

Safe Work Practices

- The best thing you can do to protect yourself is to avoid energized circuits, if possible.
- Along with all of your standard personal protective equipment, you must wear clothing and an electrical hood with an arc rating that is appropriate for the work that you are doing. It is important to note that the flying shrapnel will not be in its solid form, but instead will have turned into molten droplets of metal under the intense heat.
 - The most important thing that arc rated clothing will do is resist catching fire when coming into contact with the molten metal. Without the flame resistance, your clothing will ignite.
 - The second thing that arc rated clothing will do is insulate you against the heat to decrease the severity of any burns you might get. Standard flame resistant clothing will not do this.
- Install precautionary equipment such as insulation, guardrails, and barricades.
- Use caution when working near any energized line.
- Perform maintenance regularly to prevent deterioration of the lines.

Electricity Safety: Low Voltage

Policy

Low voltage electrical work does not equal low danger. Employees who work with low voltage systems must do all they can to prevent accidents from happening.

Safe Work Practices

- Wear all the required personal protective equipment for electrical jobs.
- Only work on de-energized systems, if possible.
- Make sure all equipment is grounded.
- Only use tools for their intended purpose.
- Do not do electrical work in wet conditions.

Electricity: A Basic Understanding

Policy

Electricity can burn, shock or even kill you, depending on the strength of the shock. If you or a coworker is shocked, muscles can contract violently, causing broken bones, serious falls or other accidents and injuries.

Safe Work Practices

- Know your equipment. Read the manufacturer's literature BEFORE you try it out.
- Unplug machinery and appliances before cleaning, inspecting, repairing or removing anything from them.
- Keep electrical equipment and work areas clean. Oil, dust, waste and water can be fire hazards around electricity.
- Keep access to panels and junction boxes clear. Do not block an electrical panel.
- Move flammable materials away from electric heat sources and lights.
- Know the location of fuses and circuit breakers.
- If you are not trained to work in high voltage areas, do not enter them, even in an emergency.
- Make sure all electrical equipment is properly grounded. Check all extensions cords to make sure that the cord is a three (3)-prong cord.
- Plug power tools into grounded outlets installed with ground fault interrupters (GFI).
- Check with your local utility companies before you dig or work near suspended power lines. A "live" line is very dangerous.
- Always treat every electrical plug or box as being "live". Be wrong on the safe side.
- Use "C" rated extinguishers for electrical fires. NEVER use water.
- Use a tool or a piece of equipment only for its intended purpose.
- Never overload the capacity of the equipment.

Electricity: High Voltage Lines

Policy

Power lines are everywhere, and with them comes the danger of electrocution. Electricity can jump or arc from a power line to a person who gets too close, so you don't even need to be in actual physical contact with a power line to be in danger. Therefore, it is important to be cautious when you are working near power lines. To stay safe, keep these tips in mind.

Safe Work Practices

- Always carry ladders horizontally
- Equipment drivers should use a spotter so they don't run into power lines
- Try not to perform maintenance on vehicles around power lines
- Try not to park under high voltage lines because vehicles can collect induced voltage
- Follow the signs on your equipment that warn against using the equipment within certain distances

Do not climb towers

- Never touch a fallen wire
- Stay away from towers and lines during extreme windstorms, thunderstorms, and other extreme conditions
- Treat every power line as if the power is on, even if you think it has been shut off
- Stay away from trees that have fallen on power lines
- If you cause a tree to fall on power lines, get away from it; do not try to retrieve your equipment

Electricity: Working Near High Voltage Power Lines

Policy

Doing any kind of work near high voltage power lines has several hazards that come with it. To avoid these hazards, inspect your worksite first and remember to practice the following safety tips.

Safe Work Practices

- Electrical Hazards: Working at heights increases possible contact with electrical lines.
- If you must work near electrical lines, try to get the lines shut off for the period of time you need to work in the area
- Overturning: If the bucket or platform is loaded beyond capacity or if the lift is parked on an incline that is too steep, then the boom lift could fall over.
- Always follow the load capacity warnings from the warning stickers or the operators manual.
- Remember to take into account the weight of the people, tools, and other equipment when you use a boom lift
- Falling: Work at heights always brings with it the dangers of falling
- Always wear the proper fall protection
- Pinch Points: There are many pinch points in a boom lift, including the hinges as the boom extends or retracts
- Be aware of your surroundings
- Avoid working too near pinch points
- Be sure all safety guards and devices are in place before you use the boom lift
- Falling Objects: There is always the risk of tools or other objects being accidentally dropped from the boom lift.
- Always wear a hard hat
- Do not walk under the bucket or platform
- Set up barriers or warning tape to keep bystanders at a safe distance

Electricity: Working Safely

Policy

Electricity is essential to the workplace and everyday living. When used improperly, electricity can injure or kill. Taking proper precautions can save lives and lessen injuries.

Safe Work Practices

Your actions can protect yourself and your coworkers by:

- Reading and following instructions before handling anything electrical.
- Inserting plugs only in receptacle outlets with the same slot or blade pattern. Don't force or alter a plug by bending, twisting or removing blades to make it fit into a receptacle outlet.
- Never touch electrical equipment or light switches with wet hands.
- Firmly gripping the plug, not the cord, when disconnecting equipment. Pulling on the cord can damage the cord, plug or receptacle outlet and result in a shock or fire.
- Unplugging equipment or appliances when not in use as electrical current is still present even when in the "off" position.
- Recognizing signs of overloaded circuits. Flickering or dimming lights, blown fuses, warm wall plates or extension cords and tripped circuit breakers are signs of overloaded circuits.

Emergency Action Plan

Policy

Emergencies and disasters can strike at anytime. You are responsible for your own safety. The best way to protect yourself is to become familiar with your workplace emergency action plan and to be prepared for any emergency before it takes place.

Safe Work Practices

- Know your escape route.
- Know your emergency assignment, if you have been given one.
- Know your meeting place, and who to report to for check-in.
- Know how to report emergencies.
- Know the name of the employee or supervisor you can contact for further explanation of the plan if you have any questions.

Employee Safety Responsibilities

Policy

Employers have many responsibilities under the law that requires them to keep their employees safe and healthy on the job. There are written safety programs, as well as safe equipment and training that each employer must provide. In general, the employer must provide their employees with a safe and healthy workplace. But safety is not just the employer's responsibility, it is also the job of every employee.

Safe Work Practices

As an employee, it is your responsibility to:

- Keep your work area free from debris, equipment, trip hazards and spills.
- To properly dispose of hazardous substances.
- To read any Safety Data Sheets (SDS) when working with chemicals.
- Keep guards on all tools and machinery that you use.
- Report injuries and/or illnesses that occur while on the job.
- Know how to evacuate your building in case of an emergency.

Encountering Homeless People on Jobsites

Policy

With the increased number in the homeless population in certain areas, employees could potentially encounter a homeless individual on the jobsite as it could offer a place to sleep or be an easy target for vandalism or theft. When interacting with a homeless person, employees could potentially be exposed to harm as the individual may have a mental illness or under the influence of drugs or alcohol. Employees should apply an amount of caution when interacting with a homeless individual. While it is impossible to predict how an individual will behave, employees can use the tips provided in this lesson to help them have a safe interaction with a homeless individual.

Safe Work Practices

When encountering a homeless individual on a jobsite, employees should do the following:

- Report unauthorized individuals to your supervisor.
- Report signs of camping to your supervisor.
- Do NOT approach the camping area alone.
 - Do NOT touch anything at the camping area as items could expose you to bloodborne pathogens or other hazards.
- Be aware of your surroundings.
- Before approaching the individual, watch the person's body language. Do NOT approach if the individual shows signs of aggression.
- Look for any signs that the individual may be armed with a potential weapon.
- When possible, try to have another person with you when interacting with a homeless individual.
- Keep calm when interacting with the individual.
- It is recommended that you maintain a safe distance from the individual. Do NOT stand close enough where the person can grab you.
- Be aware of the individual's demeanor during the conversation. It is recommended that you back away if the individual becomes aggressive.

To help prevent encounters on the jobsite, employees should do the following:

- Inspect the fencing around the jobsite for damage (if applicable).
- Ensure that all signs (No Camping, No Trespassing, etc.) are visible and properly secured (if applicable).
- Ensure that all vehicles and tools are properly secured.
- Ensure that all debris is properly disposed of.
- Inspect the jobsite for signs of camping. Immediately report signs of camping activity to your supervisor.
- Inform any security personnel of any known homeless individuals in the area (if applicable).

Etiquette in the Workplace

Policy

Practicing office etiquette is essential to developing and maintaining a healthy workplace. If you take the time to exercise common courtesy among all those with whom you associate with, your experience in the office or workplace is sure to be a pleasant one.

Safe Work Practices

- Being punctual – Tardiness implies that your job is low on your priority list whether you are a new employee or have been with the company for a long period of time.
- Looking professional – Regardless if your company has a standard dress code or not, dressing appropriately is a must. In addition to keeping yourself looking professional, it is equally important to keep your work area uncluttered and sanitary.
- Staying well-groomed – Personal hygiene plays an important role when it comes to the way you present yourself. Neglecting to shower, shave, or stay well-groomed in general will lead your coworkers to believe that you are careless or lazy.
- Be true to your word – Your word is a personal guarantee that you should never give unless you intend to follow through. Sometimes you only get one chance to prove that you are a trustworthy employee.
- Own your mistakes – Everybody falls short at times, and the best way to handle this is to be upfront and apologetic instead of making excuses.
- Stay away from gossip – Gossiping about others is extremely unprofessional and reflects poorly on you. Limit your comments about other coworkers to positive ones only.

Be polite – People will notice if you consistently treat them with respect and kindness. Saying “please” and “thank you” as well as avoiding interrupting others during conversations will go a long way.

- Ask before borrowing – A colleague’s desk is their personal space. Even if you are on good terms with your coworker, they will not appreciate it when they start to notice that things are missing from their desk without their consent.
- Avoid being offensive – Perhaps most importantly, use common sense in your interactions and refrain from saying anything that may be taken offensively. Even if swearing and inappropriate language is used freely in your personal life, you never know who you might be making uncomfortable by bringing it into the workplace. If you want to be viewed as a professional who values his or her job, stay away from the following at all costs:
 - Swearing or inappropriate language
 - Inappropriate jokes
 - Racial remarks
 - Sexual comments
 - Comments on religion

Excavation Safety: Preventing Cave-ins

Policy

Excavating and trenching have many dangers, including the potential for cave-in. The type of digging you do will determine the safety precautions you will use.

Safe Work Practices

Inspect the protective system daily to be sure it is still safe. Be aware of your surroundings and recognize unsafe conditions:

- Vibrations from equipment could endanger the shoring system.
- Pools of liquid, blowing dirt, hissing sounds, vapor clouds, and/or gaseous odors may mean a utility pipe or wire was damaged.
- Wet or discolored soil is an indication of a water/sewer leak and should be treated as a potential emergency condition.

Excavation Safety: Utilities

Policy

Hopefully excavators will avoid contact with utilities if they dial 811/contact the Underground Service Alert in their area. However, if something does happen, knowing what to do will help prevent any serious consequences during excavation.

Safe Work Practices

If the excavation comes into contact with overhead or electric lines:

- Turn off the equipment ONLY if you can safely do so.
- If you are on the equipment that is in contact with the electric utilities, either stay on the equipment or jump clear of it.
 - You will get electrocuted if you touch the equipment and the ground at the same time.

If the excavation causes water or sewage lines to break:

- Evacuate immediately- trenches can fill up quickly.
- Do not close valves to prevent flooding.
- Be careful of high pressure water lines because even the slightest scratch or vibration can cause the lines to burst.
- Move carefully around trenches with wet walls.
- Avoid contact with waste water.
- Sewer gas is flammable- avoid open flames or anything that might start a fire.
- If you cut into a fiber-optic cable, do not look directly into it.

Excavation: Dust

Policy

Employees will find that they will not have to worry about dust as often when they follow the safe work practices.

Safe Work Practices

- Read and understand the operator manual for all dust suppression equipment.
- Inspect all dust suppression equipment for any broken or malfunctioning parts.
- Report any found malfunctioning or broken parts to your competent person or supervisor, and do not use that specific piece of equipment.
- Before the shift begins, check the day's forecast to see what the weather conditions will be.
- Look for any signs of a high wind.
- If high winds have kicked up before the operation, use your dust suppression system to ensure that minimal or no dust will be kicked up during the operation.
- Should high winds occur during the operation, stop the operation and allow for the dust suppression equipment to be used.
- When moving loads of dirt from one place to another using a truck, ensure that the dirt has been covered to help minimize the dust.
- Storage areas of dirt should be covered to help minimize or eliminate dust.
- When using a water suppression system, the soil should only be damp, not soaking.
- Record all dust activity.
- All equipment should be hosed/cleaned off at the end of the day.

Excavation: Guardrails

Policy

Guardrails are an essential part in fall protection for both the public and employees. Guardrails are required in most, if not all, construction projects, as they tend to be the number one method of preventing falls in the workplace. For the public, they act as a visible warning that an area is being worked on and that, for their safety, distance should be maintained. For employees it is a reminder to watch their activities around the excavation site and is an accident prevention tool. Following the safe work practices provided in this lesson will help ensure employee safety.

Safe Work Practices

- Check the visibility of the excavation site; if it cannot be seen due to obstructions (trees, bushes, it's happening behind a building, etc.) then a guardrail system should be placed around the site.
- Inspect the guardrails for any rough or jagged surfaces. If the guardrail has such a surface, do not use it as it could cause punctures, lacerations, or snagged clothing.
- Double check the depth of the excavation site; if it is 6 feet or deeper, than a guardrail should be installed.
- All guardrails installed should have a top rail and a mid-rail.
- If you believe a hazard of falling objects exists, include a toe rail at the bottom of the guardrail system to prevent those working in the excavation site from being hit.
- Check the height of the guardrail. The top rail should be 42 inches plus or minus 3 inches.
- All guardrails should be able to withstand a force of at least 200 pounds.
- If you are using a steel cable guardrail, check to ensure that it has flags every six feet. This is to help make the guardrail visible to others on the excavation site.
- A gate should be added to any guardrail that is used at a point of access (ladderways).
- Ensure that if you are lifting material over a guardrail, that it is not lifted any higher than necessary to clear the guardrail. Lifting material higher than needed could lead to the boom of the lift machine (crane, etc.) hitting a powerline or any other overhead obstruction.
- Should employees require a bridge/walkway to cross the excavation, guardrails should be installed.
- A bridge/walkway with guardrails should be installed at any excavation site where the bridge/walkway will be 6 feet or higher above the site.
- If using a steel cable guardrail system, the clamps should be placed correctly. That means that the U-bolt and the Saddle are clamped with the U-blot facing down into the saddle which is facing straight up. The dead end of the cable should have small space between it and the body of the cable.
- When an excavation is not being worked on/in, there should be guardrails installed around the perimeter/edge of the site.

Excavation: Soil Grades

Policy

Always know what type of soil you are working with so you know how to prevent cave-ins, injuries and death. Remember to look for clues from the following guidelines, and when in doubt, assume the soil is the weakest type and treat it accordingly.

Safe Work Practices

Visual Inspections:

- Observe the soil as it is excavated to see if it is cohesive or granular
- Look for underground structures and see if the soil has been previously disturbed
- Observe the surrounding areas for water seepage
- Look around for sources of vibration that may affect the stability of the soil

Manual Inspections:

- Try to mold moist soil into threads as thin as 1/8 inch in diameter
 - If it stays together without crumbling, it's cohesive
- Crumble dry soil
 - If it turns into individual grains or fine powder, it is granular
 - If it falls into clumps and the clumps can only be broken up with difficulty, then it can be considered uninsured
- Thumb Penetration or Penetrometers
 - Using these tests will tell you what the tsf of the soil is
- Drying Test: Moisten the soil and watch it as it dries
 - If it develops cracks as it dries, it is fissured
 - Break the soil with your hand if it doesn't create cracks; and if it is hard to break, it is cohesive

Excavations and Trenching

Policy

Plan before you start any excavations or trenching with a competent person managing all the work. Follow all OSHA requirements and make sure your trenches and excavations are safe

Safe Work Practices

- Check and locate any underground utilities or other buried items. “Call Before You Dig”
- Soil conditions must be carefully evaluated to determine the protective system needed.
- Wear your hard hat at all times as well as rugged boots.
- Excavate trenching banks to their proper slope ratio.
- Where necessary, straight banks should be shored.
- Weather conditions can greatly affect sloping and shoring.
- Material stock piled nearby can increase the pressure on trench or excavation walls.
- Keep heavy equipment and materials such as pipe and timbers well away from the excavation site.
- Maintain a minimum of two feet between any materials, including the spoils pile and the edge of the trench.
- Vibrations from equipment passing by can contribute to cave-ins by loosening the soil. Any soil vibration can endanger a shoring system.
- Compaction operations cause vibration; therefore, check soil conditions before, during and after compaction.
- A competent person is to inspect shoring systems daily.
- Ladders are to be located no more than 25 feet away from any worker. Ladders must extend from the floor of the excavation to 3 feet above the top and must be secured at the top.

Excavator Safe Operation

Policy

Whether you are trenching, climbing hills, or just maneuvering around the jobsite, all aspects of excavator handling can be made safer if the included safety rules are followed.

Safe Work Practices

General Safety Rules

- Buckle the seatbelt before starting the engine.
- Scan the area to make sure that no one is in the intended path.
- Double check that the control pattern is set to your desired mode and that all levers are performing their indicated task.
- Select a route that is flat as possible when driving, and slow when going over rough terrain.
- To clean the bucket, do not strike it against the ground or another object.
- Make small and gradual changes to turn.
- Never allow riders anywhere on the excavator or bucket.
- Do not operate the excavator from anywhere other than the seat.
- Carry the bucket low to increase stability and visibility.
- Inspect the jobsite if you are unfamiliar with it to become aware of any slopes, banks, or overhead obstacles (such as power lines).
- Park the machine on a level surface with the bucket or attachment and blade lowered to the ground. When exiting, remember to face the machine and maintain three points of contact on the hand or foot holds at all times.

Trenching or Digging

- When trenching, make sure the excavator is level.
- Spoil piles must be dumped a sufficient distance away to prevent cave-ins.
- Do not dig near the edge of an excavation or trench
- Never dig underneath the excavator.
- Underground utilities should always be marked before digging.

Climbing or Descending Hills

- Do not drive diagonally or horizontally across slopes. When driving up a slope, the boom and arm should be extended with the bucket carried low. If the unit begins to slide, you can set the bucket down to prevent sliding.
- In very steep conditions, you can use the boom and arm to assist when moving up or down the slope. When going up, alternate extending the arm and retracting it towards you to help lift the excavator up the slope.

- When going down a hill or embankment, position the bucket with the flat surface resting on the ground to support the unit and reduce the chance of slipping.

Exiting Trucks Safely

Policy

Jumping from the cab of a truck is stressful on your ankles, knees, and lower back. Employees who routinely do this should always use three points of contact, face the cab, and follow all the necessary guidelines to protect their health and safety.

Safe Work Practices

- Face the vehicle.
- Do not multitask or carry items into the cab of the vehicle.
 - If you need to put something into the vehicle, or take something out, either put it in before entering or get it after exiting.
- Use the steps and handrails provided.
- Maintain three-points of contact at all times.
 - This means that at least two hands and one foot are to be used for stabilization and support at all times during entry or exit.
 - Employees may break the three-point contact rule only after reaching the ground or the cab of the vehicle.
- Never attempt to enter or exit a moving vehicle.
- Do not rush when entering or exiting the vehicle.
- Always wear appropriate footwear for the weather conditions and work being performed.
- Avoid wearing loose, baggy, or bulky clothing if there is a possibility that it may become entangled in the vehicle, or interfere with the access points used for entering and exiting the vehicle.

Exits and Egress

Policy

Safe exit is a vital part of any escape plan and employees are required to know all exit routes in detail. A dangerous situation can be made even more chaotic if employees are not familiar with their emergency action plan.

Safe Work Practices

All employees should be trained on the Emergency Action Plan and the location of every exit. The pathways of exit must be obvious and unobstructed. Additionally:

- Employees must not store unnecessary items in walkways.
- You must be familiar with multiple paths of exit.
- Employees are not to tamper with exit signs.
- If you notice items or material blocking a walk way, do your part to fix it.

Exposed Energized Lines

Policy

Working on or near exposed energized parts on any job site can create some serious safety hazards that can be avoided with the proper observance of safety practices. Along with safe work practices, being aware of your surroundings at all times is an important factor in a safe work environment.

Safe Work Practices

- Before any work is performed you should:
 - Determine the location and condition of energized lines
 - Determine the location of equipment and associated hazards.
 - Lines or parts should be de-energized.
 - The exact voltage determined.
- Employees should position themselves out of reach or exposed to energized parts when:
 - Re-fusing circuits or equipment with a hot stick.
 - Operating switching by means of operating handle or switch sticks.
 - Installing or removing a hot line clamp connection
 - Installing or removing by hot stick simple load metering devices
 - Emergency repairs to safeguard the general public.
 - Where a slip or shock will not bring body into contact with non-insulated parts.
- Electric lines should be treated as energized until lockout/tagout procedures have been followed.
- Two or more employees should be present when working on 600 volts or more.
- Connections should be made as follows:
 - Attach wire to de-energized part first.
 - Remove the source end first when disconnecting.
 - Loose conductors should kept away from exposed energized parts.
- Rubber gloves should only be used on equipment with 5,000 volts or less.
- Be careful when wearing jewelry, the metal is conductive.

Extension Cord Safety

Policy

Extension cords help temporarily make electricity more accessible, which also means the dangers of electricity are more accessible. It is estimated that 4,000 people at the emergency room are there because of some mishap involving electricity. Therefore, keep in mind these rules and tips.

Safe Work Practices

There are other things to remember when using extension cords:

- Just because there are enough outlets in an extension cord doesn't mean you can fill them up
- Be sure you do not exceed the current required
- Make sure cords do not dangle
- They can be tripped over and ripped out of the wall
- Don't plug one extension cord into another
- You could overload the cords or circuits and start fires or other damage
- Don't plug a three-prong into two-hole extension cord
- You could overload the cord
- If you are done using an extension cord, put it away
- This prevents tripping and keeps the extension cord in good condition
- Do not store extension cords outside
- This prevents the casing from cracking and prevents damage to the prongs
- Do not use indoor extension cords outside
- The casing for indoor extension cords are not meant for conditions outside and will wear away quicker and cause hazards
- Make sure your extension cords have enough slack
- Otherwise it will be too easy for cords to be pulled out while they are transmitting electricity, which can damage the cords, circuits or equipment
- Do not coil the cords too tightly
- This will cause the wire to bend and become weak, which will damage the extension cord
- Do not pull on the cord to disconnect it; instead, grasp the plug firmly and pull it out
- This will damage the prongs and damage the wire where it connects to the prongs
- Use extension cords for temporary situations
- Extension cords wear out quickly, and electricity is too dangerous to be harnessed with damaged equipment

Fall Protection: General Industry

Policy

Fall protection is necessary to help protect employees from injuries that may result from a fall. The only way fall protection works is if everyone plays their part in ensuring that the protection works as intended. Like construction, general industry employees may find themselves working at heights or other areas which may require the use of fall protection. By following the safe work practices provided in this lesson, employees can help minimize their chances of a fall by properly using fall protection.

Safe Work Practices

Employees should do the following when working with fall protection:

- Inspect any wearable fall protection for damage (personal fall protection systems, arrest systems, travel restraint systems, etc.).
- Report any damaged fall protection immediately to your supervisor (faded floor markings, loose guardrails, fall protection harnesses with tears, etc.).
- Store any wearable fall protection in accordance with the manufacturer's instructions.
- Do NOT bypass or modify any provided fall protection.
 - Modified fall protection should be reported to your supervisor.
- All worn fall protection equipment should be worn in accordance with the manufacturer's instructions.
 - Employees should also wear provided PPE along with the fall protection.

Fall Protection: Harness Safety

Policy

A full body harness is just one tool of fall protection. It can save an employee's life should a fall occur at, or above, six feet. However, a full body harness requires proper training, storage and maintenance to ensure an employee's safety. By following the safe work practices provided in this lesson, an employee can take an active role in preventing injuries or fatal accidents from a fall.

Safe Work Practices

Note: Only those who have been trained in fall protection should be working in areas that require fall protection.

A full body harness should be stored and maintained properly to ensure the safety of all employees: Storage and maintenance should include:

- Inspecting the harness for damage. Damage could include:
 - Fraying, cuts, or chemical damage to the belts or webbing
 - Loose rivets
 - Distorted, cracked, or broken rings
 - Snaps or latches that won't attach or "mate" together
 - Burn holes or tears in the shock-absorbing packs
 - Safety labels that are not intact
- Ensuring that all harnesses have not passed their expiration date.
- Checking to see if the harness has been modified. Any modified harness should be taken out of service.
- Ensuring that the harness can limit the free fall to a maximum of six feet.
- Checking lanyards to ensure that they will be the proper length for the job and that the deceleration device can limit the max arrest force to 1,800 pounds.
- Recording inspection dates either on a designated form or on designated areas of the harness (check the user's manual for details about writing requirements).
 - A full body harness should be visually inspected before every shift, but it is required to have an in-depth inspection at least 2 times a year.
- Ensuring the harness is stored in compliance with the manufacturer's instructions.

Once the harness has passed inspection, the next step is putting the harness on and ensuring that it is set to the proper length to ensure that the system will not only stop the employee from falling, but that they won't hit an object or the ground during their fall. This includes:

- Making sure that the D-ring is in the middle of the shoulder blades.
- Ensuring that the chest straps are in the proper position on the upper chest.

- That straps are tight against the body. They should not impede movement or be too tight as to cause pain.
- Checking straps to ensure they are properly connected or “mated”.

Should a fall occur, do NOT panic. Once you have stopped falling, pull out a suspension trauma strap (if applicable) and secure it to your harness. A suspension trauma strap is used to help slow or prevent the occurrence of suspension trauma.

If a harness has stopped a fall, it should be taken out of service as the shock-absorbing pack, webbing, and other parts have been exposed to gravitational forces and have been damaged.

Fall Protection: Rescue Poles

Policy

Rescue poles can be a valuable tool when it comes to rescuing someone who has fallen. While the rescue pole itself does not pose a hazard to employees who use it, the height and location of the fall victim could potentially expose the rescuing employee to harm. By following the safe work practices presented in this lesson, employees can help minimize their chances of becoming a second victim when using a rescue pole to aide in the rescue of a fall victim.

Safe Work Practices

Before a rescue even becomes necessary, employees should do the following when a rescue pole is part of the fall rescue plan:

- Become familiar with all company Fall Rescue Plan procedures.
- Inspect the rescue pole and rescue line prior to using it in a practice scenario, actual emergency, or annually (a designated competent person must be the one to perform annual inspections). When inspecting the pole and rescue line, employees should look for the following:
 - Cracks
 - Dents
 - Sharp edges
 - Burrs
 - Worn parts
 - Corrosion
 - Chemical or heat damage
 - Frayed or spliced strands
 - Discoloration
- Ensure that all inspections have been recorded in either the manufacturer-provided or company-created inspection and maintenance log.
- Report any defective or damaged poles to your supervisor. Remove all defective or damaged poles from service.

When a rescue does need to be performed, employees should do the following:

- Only trained and authorized employees should perform rescues with the rescue pole.
- Ensure that all company Fall Rescue Plan procedures are followed.
- Use the pole in accordance with the manufacturer's instructions.
- Ensure that you are properly wearing a fall protection harness and lanyard (if applicable).
- Ensure that the pole has been secured in accordance with the manufacturer's instructions. An unsecured pole could become a falling object hazard.

- After the rescue is completed, a designated competent person or the employee who used the pole should perform an inspection on the pole and rescue line. If a pole was damaged during rescue, it should be removed from service and reported to your supervisor.
- Ensure that the pole is properly stored in accordance with the manufacturer's instructions.

Fire Extinguishers

Policy

Employees who work in any area with potential fire hazards must be trained and aware of the possible risks, and what to do in case of an actual fire. Employees must not use fire extinguishers unless they have been properly trained on how to do so correctly.

Safe Work Practices

- Employees should know where all nearby fire extinguishers are located.
- Fire extinguishers must always be mounted in readily accessible locations.
- Employees should be trained on how to properly operate the fire extinguishers.
- Only the correct type of extinguisher should be used for the particular fire:
 - Class A: For ordinary combustible materials, such as wood and paper.
 - Class B: For flammable liquids and gases.
 - Class C: For energized electrical equipment.
 - Class D: For combustible metals, such as magnesium.
 - Class K: For cooking oils, grease, or animal fat.
- Halon: For sensitive electrical equipment or aircraft parts.
- Fire extinguishers should be inspected monthly by a competent employee.
- Fire extinguishers must be serviced and recharged annually.

Fire Hazards in the Workplace

Policy

Be sure to educate yourself about the different types of fire hazards in your workplace, such as heat sources and electricity, and learn and practice safe procedures when dealing with them. If you are aware of the fire hazards around your workplace and know what to do to eliminate them or keep them safe, you can prevent workplace fires.

Safe Work Practices

- Keep an appropriate fire extinguisher nearby
- Turn off all nonessential electrical equipment at the end of the day
- Do not overload circuits or extension cords
- Do not use extension cords for heavy duty electrical equipment
- Keep the dust buildup to a minimum
 - Take special care with hard to reach areas where dust buildup often goes unchecked
- Take out the trash regularly
- Keep doors, hallways, stairs, and other exit routes free of obstructions
 - Be sure you are familiar with different escape routes
- For flammable and combustible materials, remember LIES:
 - Limit the amount of flammable liquids in storage
 - Isolate and store materials in approved containers stored in enclosed cabinets
 - Eliminate products you don't need by safely disposing of them
 - Separate incompatible materials (ie don't store flammables near corrosives)

Fire Hazards in the Workplace: Fuels

Policy

85% of workplace fires are caused by human error, which means that 85% of workplace fires are preventable. If you identify and properly handle and store fuels, you can help avoid workplace fires.

Safe Work Practices

Once you have identified the fuels in your workplace, record them and evaluate what you need to do for each specific one in order to prevent them from starting a fire.

- Always consult your SDS to make sure you are properly handling and storing the fuels
- Minimize the storage of combustible materials
 - Be sure they are present only in quantities needed for the operation
- Dispose of combustible waste in covered, airtight, metal containers
- Report all gas leaks immediately
- Clean up spills and leaks immediately
- Practice good housekeeping:
 - Keep work areas free of dust, lint, sawdust, scraps, and similar material
 - Keep storage and working areas free of trash
 - Do not use gasoline or other flammable solvents to finish or clean floors
 - Keep passageways free of obstacles
 - Put items away when not in use
 - Put oily rags in a covered metal container and regularly and properly dispose of them
 - Leave time for cleanup at the end of you shift
- Store fuels away from sources that can produce sparks
 - Some fuels, such as liquids and gas, will travel on surfaces and in the air, so it may not be enough to store the fuel sources at a distance; you may need to put them in completely separate rooms
- Do not transfer fuels from one container to another by applying air pressure to the original container
 - Transferring them in this way may cause the containers to rupture and cause a serious spill
- Do not refuel gasoline-powered equipment while it is hot

Fire Hazards in the Workplace: Ignition Sources

Policy

A fire needs three elements: fuel, oxygen, and an ignition source. Therefore, if you can control one of the elements, you can prevent an unwanted fire from starting in your workplace.

Safe Work Practices

- Keep ignition sources as far away from fuel as you can
 - Eliminate all nonessential ignition sources where flammable liquids are used or stored
- Keep flammable and combustible materials stored below their auto-ignite temperatures
- Use non-sparking tools when opening containers of flammable and combustible liquid
- Bond and ground your equipment to prevent static electricity discharge
- Do not use any ignition sources in areas with a flammable atmosphere
 - If an ignition source goes off in flammable atmosphere, an explosion is likely to result
- Only use equipment for the purpose it was intended
- Do NOT smoke in non-smoking areas

Fire Safety and Prevention

Policy

Fires don't usually occur with frequency or regularity in the workplace and therefore workers are not particularly concerned about them. However, fires have many causes and can happen anytime. Therefore, it is important to try to prevent fires and be ready to correctly respond to them if they do happen.

Safe Work Practices

USING A FIRE EXTINGUISHER

When using a fire extinguisher, remember PASS:

- P: Pull the locking pin
- A: Aim the fire extinguisher at the base of the fire, not the flames or smoke
- S: Squeeze the lever of the fire extinguisher to operate
- S: Sweep the fire extinguisher back and forth at the base of the fire

RESPONDING TO FIRES

- Remain calm
- Call the fire department when there is a fire
 - Do NOT wait to investigate the situation
- Use the stairs to evacuate, not the elevators
- If you get stuck in an office high off the ground, hang a sweater or shirt out of a window to alert the firemen to find your position
 - Stay as close to the floor as you can; smoke rises to the ceiling, leaving the cleaner air towards the floor
 - Use a sweater, shirt, or towel to help reduce smoke inhalation

YOUR RESPONSIBILITIES

- Be aware of potential fire hazards in the workplace, such as frayed electrical wire, and report hazardous situations to the supervisor
- Know your company's safety procedures and participate in fire drills
- Know where the emergency exits, fire alarms, and fire extinguishers are
- Know your location, address, and the nearest cross street so you can give that information to the 911 operator

Fire Safety: Stop, Drop and Roll

Policy

Fire in the workplace are usually caused by human error and can be prevented in most cases. Being aware of your surroundings and of all potential fire hazards is the responsibility of every employee. Time is of the essence when an employee catches on fire. Remembering to stop, drop and roll is essential in helping prevent or minimize fire-related injuries or death.

Safe Work Practices

- If you catch on fire, remember to:
 - STOP where you are.
 - DROP to the floor.
 - ROLL around to smother the flames (as long as floor is not on fire).
- If a co-worker catches on fire, smother the flames by wrapping a blanket or rug around them. This could save them from serious burns or even death.
- Implement good housekeeping practices.
- Keep work areas free of clutter and dust.
- Keep ignition sources away from combustible materials, flammable liquids/gases.
- Change clothes if they come in contact with any flammable material.
- Loose fitting clothing should not be worn while working around potential fire hazards.
- Fire resistant clothing should be worn when possible.
- Long hair should be kept in a hairnet or hat.
- Knowledge of location and how to use fire extinguishers is essential.

Fire Sprinkler Systems

Policy

Fire sprinklers can be very useful, and employees who work in buildings with fire sprinkler systems should understand how they work in relation to the emergency action plan.

Safe Work Practices

- Employees should understand that smoke alone will not trigger a fire sprinkler system.
- When a fire sprinkler system goes off, only the required amount of sprinklers will discharge.
- It is important to know what type of fire sprinkler system the building is equipped with:
 - Wet pipe system – the pipes are full of water ready for activation at any moment.
 - Dry pipe system – the pipes are full of compressed air and upon activation, the sprinkler heads must release the air to allow the system to be filled with water.
 - Pre-action system – upon first detection of fire, the pipes fill with water. Then this turns into a wet pipe system in which the individual sprinkler heads must be activated to spray.
 - Deluge system – triggered by a smoke detector or heat detector, but instead of requiring an additional sensor, every sprinkler head is always open and each one goes off without delay.

Fire Watch

Policy

In order to prevent fires that could cause property damage and injuries, have a qualified fire watch who knows how to look for potential fires and knows the safe steps to take when there is an actual fire.

Safe Work Practices

- Identify and control fire hazards in the workplace
 - Inspect the workplace for potential releases of flammable vapors or liquids
 - The fire watch should have a fire extinguisher near them at all times
 - The fire watch should wear all required PPE
 - Depending on the situation, the fire watch should have a fire blanket on stand by
 - Should be within 25 feet of any hot work
 - The fire watch should wear dark (tinted) safety glasses when watching welding jobs
 - The fire watch must remain for at least 30 minutes after welding projects are completed to make sure there is no fire
- Detect unwanted fire
 - Indications of fire can be sparks, smoke, or excessive heat
- Keep flammable materials from ignition sources
- Alert others to exit the area whenever:
 - The fire watch perceives an unsafe condition
 - The fire watch perceives that a worker performing hot work is in danger
 - The employer or a representative of the employer orders an evacuation
 - An evacuation signal sounds
- Notify the fire department
 - The fire watch should be prepared to identify the type of emergency and provide an address and specific location
- Keep a log of fire watch activities
- A fire watch should not be distracted by any other duties while they are watching for fires.

First Aid Kit: Where and What

Policy

First-aid is emergency care given before regular medical aid can be obtained. If and when an accident occurs, a first-aid program that meets OSHA standards and is tailored to the type and size of the workplace can make a difference between life and death.

Safe Work Practices

WORKPLACE REQUIREMENTS

Workplaces should have the following:

- At least one person with first-aid or medical training readily available in case an emergency should be in the workplace.
- First-aid equipment and supplies
- Up to date first-aid manual
- Posted phone numbers for the Police Dept., Fire Dept., Ambulance or EMS, nearest hospital and Poison Control.

KNOW WHERE THEY ARE

- Know where the first-aid kit(s) is located. First-aid kits should be easily accessible.
- Have emergency phone numbers posted for quick responses.
- Know where all fire extinguishers are located.
- Know where nearest exits are located for easy access out of the building.
- Know where the AED – Automated External Defibrillator – is located and how to use it. (Not required by OSHA to have, but highly recommended.)

First Aid: Basics

Policy

At work, injuries and illnesses kill more than 2 million people in the world each year. That is one death every fifteen seconds or 6,000 people a day. Safe practices can prevent many injuries, illnesses and deaths. However, once injury or sudden illness has occurred, providing effective first-aid can make the difference between life and death; rapid versus prolonged recovery and temporary versus permanent disability.

Safe Work Practices

NEVER attempt first-aid skills that exceed your training.

- Assess the Scene
- If it is not safe or at any time becomes unsafe, GET OUT!
- Observe Universal Precautions by using personal protective equipment. (Universal precautions means to wear goggles, gloves or a face mask to protect from a patient's body fluids.)
- If victim is awake and talking, identify yourself and ask if it is okay to help.
- If victim appears weak, seriously ill or injured or is unresponsive, call 9-1-1.

First Aid: Shock - What It Is & How to Treat It

Policy

If someone loses too much blood, they will go into a condition known as “shock”. Our bodies can cope with a small amount of blood loss, normally around a pint, which is perfectly safe. However, if you lose too much blood, your body’s cells and tissues are deprived of oxygen, which we call shock.

Safe Work Practices

The most important step in treating shock is to control bleeding. However, if the victim is already showing signs of shock, it’s important to take the necessary steps to stabilize the victim until help arrives. If you are needed to treat a victim for shock, you should:

- Call 9-1-1 (Remember that 9-1-1 works differently on a wireless phone than it does from a landline.)
- Use universal precautions and wear personal protective equipment if you have it.
- Lie the person down & elevate their legs. If you suspect neck or back injuries, do not move the victim.
- Turn the victim’s head to the side if neck injury is not suspected.
- Loosen any tight clothing.
- Make sure the victim is breathing. If not, begin rescue breathing.
- Keep the victim warm and comfortable.
- Do NOT give the person anything to eat or drink as this may cause them to be sick.

First Aid: What Is It

Policy

First-aid is the emergency treatment and care of the wounded or sick before professional medical services are acquired. On job sites or workplaces, first-aid is the care given by a trained person as soon as possible after an accident. The particulars of a workplace medical and first-aid program are dependent on the circumstances of each workplace and employer.

Safe Work Practices

- The key to providing the best assistance in an emergency situation is making sure that all employees understand the protocol.
- Having a workplace first aid program in writing and readily available to all employees ensures that there will be a resource to reference if necessary in an emergency situation.
- Having emergency phone numbers – such as the local police station and fire department, the nearest hospital or clinic, and poison control among others – in your first aid program is also valuable.

Flagger Safety

Policy

Flaggers have a very important job. Not only are they the first contact people will have with the group of workers, and therefore responsible for the first impression, but they are also responsible for protecting themselves, coworkers, and anyone else that passes by. Therefore, when you are a flagger, remember to follow these safety tips.

Safe Work Practices

- Flaggers should be in place before work starts and should be the last to leave
- Flaggers will be provided with the proper hand-signaling devices
- Flaggers will be provided training per their respective duties
- Be visible
 - Do not lean or sit on a vehicle
 - Do not let your coworkers gather around you and block you from view
- Stay focused on traffic
 - Do not wear head phones or ear buds
- Look for at least one method of escape should things go wrong (such as a car not stopping)
 - Protect yourself first, then alert your coworkers
- Alert your supervisors if you need someone to take over for you
- Know what to do in emergency situations, such as car accidents
- Pedestrians will have the right of way
- Remember the following if you come across a hostile driver:
 - Do not argue with them or raise your voice
 - Be professional and civil
 - Do not lean on their car
 - If they threaten your safety or fail to follow instructions, discreetly take down their license plate number and vehicle description and report it to your supervisor

Flammable Liquid Storage

Policy

Flammable cabinets are a necessary piece of equipment in many industries. The main cause of industrial fires is improper storage and handling of flammable liquids, so the best defense against these fires is the proper use of approved safety cans and flammable storage cabinets.

Safe Work Practices

If your facility stores less than 25 gallons of flammable liquids at any given time, they can be stored in safety cans outside of a flammable liquids storage room or storage cabinet. However, if you have more than 25 gallons of flammable liquids, you are required to store them inside flammable storage cabinets that comply with the requirements as listed under OSHA code, which includes:

- No more than 120 gallons of flammable liquids should be stored in a single storage cabinet.
- No more than 60 gallons combined of either Class I or Class II flammables should be stored in the same cabinet at any given time.
- Bottom, top, and sides of the cabinet shall be constructed with at least No. 18 gage sheet
- The flammable cabinet must be doubled walled with 1 ½ inches of airspace.
- Joints shall be riveted, welded or made tight by some equally effective means.
- Door shall have a three-point latch and be raised at least 2" above the cabinet bottom to retain spilled liquid within the cabinet.
- Cabinet shall have "FLAMMABLE—KEEP FIRE AWAY" markings or signage.

Flammable Liquids: Safe Handling

Policy

Chemicals and fuels have widespread usage in industries for a multitude of important needs, but because of their hazardous nature, special care and handling is paramount. The proper use and storage of flammable liquids must be understood, and it clearly is a critically important subject for employee training. The range of flammable liquids goes from cleaning fluids to paints and gasoline to other volatile and dangerous liquids. Knowing the rules for handling and storing flammable liquids can help prevent injury to yourself and your coworkers and can prevent your jobsite from going up in flames.

Safe Work Practices

- Carefully read the manufacturer's label on the container of any flammable liquid before storing or using it.
- Practice good housekeeping in flammable liquid storage areas.
- Clean up spills immediately and then place the cleanup rags in a closed, bottom ventilated, metal container.
- Only use approved metal safety containers or the original manufacturer's container to store flammable liquids.
- Keep the containers closed when not in use; stored away from exits or passageways.
- Once the flammable liquid is in place in an adequately constructed storage room, it should be connected by a grounding wire to the room's grounding system.
- Grounding allows static electricity charges to drain off before they can build up to a spark-producing potential.
- Use flammable liquids only where there is plenty of ventilation.
- Not all dangerous liquids give off vapors you can smell. Some vapors are poisonous as well as flammable.
- Wear the proper PPE when working with any flammable liquid.
- Be careful not to get a flammable liquid on you or your clothing.
- It could cause painful skin irritation or ignite your clothing and envelop you in flames. If you get it on you, wash it off or change your clothes as soon as you can.

Flammable Storage Cabinets

Policy

One of the leading causes of industrial fires is the improper storage and handling of flammable liquids. It is important to identify and inventory all chemicals in your workplace and know the correct way to store them.

Safe Work Practices

- There may only be 60 gallons of the following liquids per cabinet:
 - Acetone
 - Ethanol
 - Diethyl ether
 - Gasoline
 - Jet fuel
 - Methanol
- There may only be 120 gallons of the following liquids per cabinet:
 - Biodiesel
 - Diesel
 - Kerosene
 - Vegetable oil
- What should not be stored in the cabinet
 - Food or drinks
 - Hazardous material that would badly react with the vapors from the flammable liquids

Flu Season Tips for Staying Healthy

Policy

Flu season is the portion of the year where the flu is most prevalent. In the United States, flu season can start as early as October and last all the way through May with the peak being January and February. Getting the flu causes a host of terrible symptoms, and all employees should actively avoid catching it.

Safe Work Practices

PREVENTION

It may be impossible to guarantee that you won't get the flu during flu season, but there are some things you can do to reduce your risk. Employees should avoid the flu by practicing the following:

- The number one doctor-recommended way to avoid the flu is to get the flu shot.
- Wash your hands often! Everything and everyone you touch during flu season could potentially transfer the flu virus. Alcohol-based sanitizer is also a satisfactory substitute for hand washing.
- Reduce skin to skin contact, such as shaking hands, even with healthy-looking individuals.
- Sanitize your work station frequently with disinfectant wipes or spray, if available.
- Never touch your face. Unbroken skin will block the flu virus, but broken skin and mucous membranes such as your nose, eyes, and mouth will not!
- Instead of coughing or sneezing into your hands, aim into the crook of your elbow. This will reduce the spread of germs.
- If you are feeling ill you should call in sick from work.
- Employees should get advice from their doctor if they are at risk for complications from flu or if symptoms become significantly worse after the first three days of illness, because the flu may leave the body more vulnerable to other more dangerous infections.

BOOST IMMUNE FUNCTION

The following lifestyle changes will actually boost immune function and make you less likely to come down with the flu:

- Make sure to get a full night's sleep at night.
- If you are physically capable, regular exercise can boost immune function.
- Stay hydrated by drinking at least 8 glasses of water a day.
- Make sure your diet has the recommended daily amount of vitamins C and D.
- Avoid smoking, as this decreases immune function.

Forklift Safety

Policy

A forklift, jitney, hi-lo or lift truck, is an industrial truck. It is designed to maneuver within industrial areas, with a variety of functions and purposes, such as lifting heavy machinery, crates and boxes, and removing stock off of racks and shelves. A forklift may be powered in several ways such as propane, electricity, gas and diesel.

Safe Work Practices

- When you pick up the load:
 - Move squarely into position in front of the load.
 - Position the forks wide apart to keep the load balanced.
 - Drive the forks fully under the load.
 - Tilt the mast backward slightly to stabilize the load and lift.
- Check the destination before you place the load.
 - Is the destination flat and stable — or, will the load rock, tilt or lean?
 - Never place heavy loads on top of light loads.
 - Observe maximum stacking quantities and orientation if printed on cartons.
 - Know the load bearing capacity of your rack or storage loft destination.
 - Check rack legs or support members to make sure they are not bent or disconnected.
 - Are racks arranged back to back with a stock behind where you will place the load?
(Someone may need to be in the next aisle to control access while you place the load.)
 - Are wooden stringers or decking laid between front and rear rack beams in good condition?
 - If you are stacking, are other pallets in the stack in good condition and capable of supporting the load in addition to what they are already supporting?
- When you place the load at its destination:
 - Move squarely into position in front of the rack or stack where the load will be placed.
 - When ready to place the load, tilt the mast to level. Only tilt forward when the load is over the spot where it will be placed.
 - Lower the forks and back away.
 - Visually verify that the load is stable.

Forklift: Battery Charging

Policy

Charging forklift batteries can actually bring many new hazards to working with forklifts. However, as long as you are aware of the hazards and know how to avoid them, you should be able to keep yourself and coworkers safe.

Safe Work Practices

- Make sure the charger is the right one for the battery you are about to charge
- Keep sparks, flames, and other ignition sources away from the battery charging area
 - Especially do NOT smoke in the battery charging area
- Do not charge the battery if it is too hot or too cold to touch
- Turn off the charger when you are finished and before unplugging the battery
- If acid spills on you or a coworker
 - Flush the affected area with water for at least 20-30 minutes
- If acid spills on the floor, follow the Safety Data Sheet (SDS) on how to neutralize it and clean it up
- When adding water to the battery, pour acid into the water, NOT water into the acid
 - Only water the battery after it is fully charged
 - Make sure you use distilled water without minerals
- Let the battery cool down before you put it back in the forklift
- Charge your battery after the shift is over
- Do not use the battery beyond the manufacturer's discharge level
 - If the manufacturer's discharge level is 25% and you have 25% of your battery left, charge it
- Follow all signs and workplace rules
- Make sure the battery rack is insulated so there is no chance of causing a spark
- Keep a watering log file so the next person who uses it will know whether or not it is time to refill the battery

Forklift: Changing Battery

Policy

The changing of a forklift battery doesn't have to be a dangerous job so long as safe work practices are followed.

Safe Work Practices

- Ensure that the forklift has been turned off and that both the standard and emergency brake have been engaged. You can also chock the wheels for added protection.
- Allow the battery to cool before touching.
- Remove all jewelry or conductive accessories prior to touching the battery. You can be burned if it comes into contact with the battery.
- Inspect the battery for any acid leaks or damage. Report any leaks or damage to your supervisor.
- Use a mixture of baking soda and water to neutralize any leaked acid. Dispose of the compound in accordance with local and federal law.
- Utilize a battery slide, another forklift with a crane adaptor or some other chain-protected hoist to lift and move the battery from the forklift. Ensure that you are complying with the manufacturer's instruction for these products to avoid the battery falling onto you.
- Ensure that the chains are secured on the battery before attempting a lift.
- Do not pull a battery by its cables as this could cause damage to them and the battery.
- Do not lift the battery higher than necessary.
- Keep your hands and feet away from the bottom of the battery.
- Inspect the battery bed of the forklift to see if there is any leaked acid or damage to the forklift. Should an acid leak be found, clean up with the baking soda-water mixture and report it to your supervisor. Dispose of mixture in accordance with local and federal law.
- When a battery is being moved back onto the forklift, make sure that there is enough clearance on both sides of the bed. Hitting the edges could cause damage to the battery and possibly a leak.
- Check the connection between the battery and cables. A loose connection could damage the battery or forklift.

Forklift: Pedestrians

Policy

Driving a forklift near pedestrians requires additional safety precautions that may not otherwise be needed. High traffic areas are more likely to have accidents and there are extra steps that can be taken to protect your safety and the safety of others around you.

Safe Work Practices

High Traffic Areas

- Sound the forklift's horn when entering blind corners, doorways, or aisles.
- Sound the horn before backing up if there is no back-up alarm.
- Never use your cell phone while operating a forklift.
- Move slowly through areas with heavy traffic and pay close attention to your surroundings.
- If a pedestrian or forklift travels across your path:
 - Stop.
 - Do not move until the person or forklift completely passes by.
 - Proceed cautiously through intersections or heavily congested areas.
- Do not move the forklift forward if you do not have a clear view of travel.
- Never allow riders unless there is a seat specifically intended for a passenger.
- Use a spotter if you need to in order to navigate a crowded area or tight spaces.
- Use eye contact and hand signals to indicate to pedestrians to stand clear.
- Never allow anyone to stand or pass under the load or lifting mechanism.

Pedestrians

- Make eye contact with forklift operators, to confirm that they are aware of you.
- Do not walk across restricted areas intended only for forklift travel.
- Do not walk across high traffic areas while using your cell phone.
- Do not rely on your sense of hearing to detect approaching forklifts.
- Be aware that forklifts cannot stop suddenly. Even if forklifts could stop quickly, this sudden stop could cause the load to fall off and become a hazard itself.
- Stay clear of forklifts in motion and be aware of any blind spots the driver may have.
- Understand that the end of the forklift may swing wide when turning.
- Do not ride on a forklift unless it is specifically designed for passengers.
- Never pass underneath a load elevated by a forklift.

Forklift: Propane Tank Safety

Policy

Propane is a clean burning fuel used by forklifts. However, just like with any chemical or fuel, caution must be taken when refilling or changing the propane tanks on forklifts. To avoid accidents, remember the following tips.

Safe Work Practices

- Do not fill around any open flames or ignition sources
 - Especially do NOT smoke while filling or changing cylinders
- Fill the tank in the designated filling area
- Do not leave the tank unsupervised while it is filling
- Position the cylinder correctly; otherwise
 - The forklift may give false signs that the cylinder is empty
 - The forklift will not run as well and a lot of propane will be wasted
- Slowly open the valve to the forklift after the cylinder is properly mounted
- Make sure there are no leaks in the tank or valves after installation: Look, Listen and Smell
 - Look: Frost with form around leaks
 - Listen: Tank pressure will create a hissing noise if there is a leak
 - Although propane is an odorless gas, bad smells like rotten eggs or skunk are added to it so people can tell if there is a leak

Forklift: Secured Work Platforms

Policy

Having an employee in a forklift safety work cage platform doesn't have to be dangerous so long as safe work practices are followed.

Safe Work Practices

- Ensure that you are complying with the manufacturer's instructions for both the forklift and the safety cage work platform.
- Only use the safety cage work platform on a forklift that is positioned on a smooth, flat surface.
- Inspect the forklift, safety work cage platform, and fall protection system for any malfunctions or damages. Red tag any discovered damages and report them to your supervisor. Do not wear any damaged fall protection.
- Ensure that all parking brakes have been engaged while the cage is being attached to the forklift.
- Use the safety strap and any locking mechanism provided to secure the safety work cage platform to the forklift. Do not have any slack in the safety strap. Do not modify any tines that don't fit the heel of the forklift.
- Before you enter the cage, get together with the forklift operator and discuss how you two will communicate with each other. Improper communication could cause an accident.
- After entering the cage, ensure that the door is secured by using the locking mechanism or chain provided by the manufacturer. Do not leave the door unsecured.
- Utilize the fall protection system that has been provided by either the manufacturer or your employer. Make sure that the fall protection system is secured to the cage.
- The forklift operator should maintain a perimeter around the parked forklift to ensure that no one walks under the cage and that falling objects do not strike any product, shelf, or employee. The forklift operator should not try to catch falling objects.
- Do not drive the forklift with the safety work cage occupied. If the forklift and cage need to be moved, have the person exit the cage and re-enter upon relocation.
- Do not go over the weight limit for the forklift or the safety work cage. Calculate the combined weight of the cage, forklift and person getting into the cage to ensure that proper weight balance is maintained. Should products need to be placed in the safety work cage, add that weight to your calculations.
- Avoid overhead obstructions. Should the cage not be equipped with a roof stopping device, the forklift operator should ensure that the cage does not get too close to the ceiling or other obstructions to help in the prevention of injury to the person inside of the cage.
- Do not put a ladder in the cage for more reach. Do not overreach.
- Maintain control over any tools or equipment that you use to reach outside of the cage.
- Utilize any attachments that the manufacturer provided for any fragile or oversized equipment.

Forklift: Securing and Transporting Loads

Policy

Failure to observe any of the included safe work practices can result in serious injury, damage, or even death. Protect yourself and those around you when you are using a forklift to transport loads of material.

Safe Work Practices

Lifting the Load

- Carefully and slowly approach the load while keeping the forks level.
- Before lifting the load, make sure that there is enough overhead clearance.
- The forks should be at least 2/3 the length of the load.
- Do not lift loads that are damaged, torn, or unbalanced in any way.
- If possible, keep the weight of the load as close to the forklift as possible, instead of having all of the weight at the tip of the forks.
- Elevated loads should never be tilted forward, except when the load is being set down.
- The mast may be tilted back to keep the center of gravity as close to the forklift as possible.
- Return the mast to vertical position before lowering the load.
- When lowering, do so slowly to avoid striking the ground or other objects.

Transporting the Load

- If your view is blocked by the load, you may be required to drive in reverse.
- Before entering an aisle way, be sure that the load is not too wide for safe passage through it.
- Do not carry the load higher than what is necessary to clear obstacles.

Forklift: Truck Mounted

Policy

In order to make sure you, your co-workers, and equipment stay unharmed, follow all the safety procedures when you are using a truck mounted forklift. This includes being especially aware of conditions around you and the condition of the equipment. Remember to use common sense, follow the rules, and stay safe.

Safe Work Practices

Safe Mounting Procedures

- Make the mast of the forklift go all the way forward
- Center the forklift on the back of the trailer
- Raise the forks to the same level as the fork support brackets
- Drive forward SLOWLY to completely insert the forks between the fork supports
- Tilt the mast to raise the rear wheel of the forklift
- Lower the forks until the bottom of the front wheels of the machine are a little higher than the wheel rests
- Retract the mast in order to bring the forklift towards the truck trailer
- Turn off the engine
- Get off the forklift using the three point contact method
- Attach the safety/transport chains, pins, and any extra parts that prevent the forklift from becoming unattached during transport

Safe Dismounting Procedures

- Make sure no one is in the path of the forklift while dismounting
- Climb into the forklift using the three point contact method
- Start the engine
- Raise the machine off the wheel rests by lowering the forks
- Tilt the mast to lift the weight of the forklift off the chains
- Clear the chains out of the way
 - If you need to get out of the forklift, turn off the engine and get out using the three point contact method
- Extend the mast slowly to move the machine out of the mounting kit
- Raise the forks to lower the machine to the ground
- Tilt the mast until the rear wheel touches the ground first
- Back up SLOWLY until the forks are completely clear of the fork support brackets

General Safety

- Make sure there is no way the truck could roll back or forward while you are mounting or dismounting the forklift
 - Be sure the truck is completely stopped and the wheels are chocked
- Always inspect the forklift and forklift mounting gear
- Never operate a forklift unless you have been properly trained
- If you are installing the forklift mounting kit, follow the owner's manual and do NOT take shortcuts
- Wear a seatbelt
- Do not jump out of the forklift when you are finished driving it
 - Always use the three point contact method
- Be aware of your surroundings
- Do not participate in horseplay

Forms, Falsework and Shoring

Policy

Forms, falsework, and shoring are systems of support for freshly placed concrete. They are temporary structures used in construction to support spanning or arched structures in order to hold the component in place until the construction is sufficiently advanced to support itself.

Safe Work Practices

Work Area and Procedure

- Do not work below a building floor form installation unless:
 - You're actually engaged in the installation
 - You're engaged in the removal of the form
 - You're inspecting the form
- Pay attention to the warning signs that shall be posted at the perimeter of the affected work area
- Do not work in the affected work area below the concrete placement unless you are:
 - inspecting the work area
 - making necessary building floor form modifications
- These areas can't be occupied unless the building floor form installations have been inspected and certified by a certified engineer currently registered in California to safely withstand all anticipated loads

Clean-Up/Removal

- Develop and implement a system that clearly identifies the vertical shoring parts that are to be removed and those that are to remain in place so workers know not to walk on parts without support
- Do not walk on plywood while vertical shoring is being removed
- Only remove form work and shores when the employer determines that the concrete has gained sufficient strength to support its weight and the superimposed loads
- Promptly stockpile removed forms and shoring in safe areas
- Get rid of protruding nails, wire ties, and other potentially hazardous form accessories that are not necessary for subsequent work

Foundation Construction Safety

Policy

A good foundation does more than just hold a building above ground. Foundations support buildings by keeping out moisture, providing insulation, and protecting against movement. Employees who do this job must be sure to follow the safe work practices required to protect their health and safety.

Safe Work Practices

- Inspect all tools and materials for visible defects before use.
- Use all power tools and equipment according to the manufacturer's instructions.
- Use safe lifting practices and lift with your legs to prevent ergonomic injuries.
- Make sure to follow all procedures for safe excavation.
 - Shoring and trenching may be required depending on the soil type and trench depth.
- Never eat or drink in areas where food may be contaminated with cement dust.
- Rebar that is used to reinforce concrete work must be capped if it is vertically exposed.
- Employees should watch their footing when working on a foundation because there is rebar, trenches, and stacks of material that all present trip hazards.
- Prevent falls from elevated work areas by guarding openings from elevated areas and using fall protection when required.

Front-End Loader Safety

Policy

Front-end loader may have many hazards associated with them but are usually safe when they are operated correctly. Understanding the potential hazards, the pre-boarding operations and following safe work practices should all help to ensure employee safety.

Safe Work Practices

- Seat belts should always be worn.
- Always know the weight limit that the loader can carry.
- Avoid jerking movements when starting and stopping.
- Be wary of drainage washouts, potholes and ditches.
- Travel up and down on hills, not horizontally.
- Keep the load up hill at all times (back down a hill when there is a full load and drive up a hill when there is a full load).
- Drive in a slow safe manner.
- Avoid turning too quickly.
- The buckets should be loaded evenly.
- Always use loader in a well ventilated area.
 - If used indoors, make sure it is not used for extended periods of time.
- For visibility purposes, the bucket should always be kept low while driving the loader, especially with a full load.
- Never walk or work under a raised loader.
- Only operate a loader from the operator's seat.
- Watch for overhead wires and obstacles when you raise the loader.
- Lower the loader when parking or servicing.
- Be certain anyone operating the loader is aware of safe operating practices and potential hazards.

Gantry Crane Safety

Policy

Gantry cranes put workers in considerable danger if they are not operated correctly, so employees should be familiar with these dangers as well as the safe work practices that must be taken to reduce them.

Safe Work Practices

- The crane operating zone must never be directly over common walkways.
- Never suspend a load over personnel below.
- Loads must be properly secured onto the hoist before lifting.
- Under no circumstances is anyone to ride the load or hoist.
- Do not exceed the maximum load capacity of any component on the crane.
- Crane operators should avoid jerky or rapid movements.
- All loads must be lifted high enough to clear obstructions BEFORE moving the load.
- Never leave the controls unattended while a load is raised.
- If a power outage occurs during operation, turn all controls to the OFF position.
- Do not walk on any part of the bridge or runway.
- Preventative measures to avoid contacting power lines or other electrical sources must be taken when operating gantry cranes.
 - Assume that all electrical lines are energized unless proven otherwise.
 - Use safe speeds near electrical lines or equipment.
 - Maintain appropriate distances from power lines.

Generator Safety

Policy

Portable generators are commonly used and provide necessary power to many jobsites. They are safe to use for the most part, but can be dangerous if used incorrectly. Following company policy and these safe work practices should help to ensure employee safety, while using a portable generator.

Safe Work Practices

- The generator should not be ran in an enclosed space.
- Frayed or defective extension should not be used.
- The generator should not be used in the rain or snow, use an overhang or in portable shelter if possible.
- Gasoline should not be added to a running generator and be sure, to:
 - Shut down the generator and let it cool before adding fuel or performing maintenance.
 - Store and transport fuel in approved containers.
- Appliances and tools should be plugged in directly to the generator, unless:
 - An outdoor rated extension cord with ample watts or amps in used.
- If the generator is going to sit for long periods of time it is good to periodically start it up and let it run for a few minutes.

Good Housekeeping

Policy

Good housekeeping will not only prevent accidents and injuries, but it will save space, time and materials. Keeping a clean workplace that is orderly and free of obstructions will help to get work done safely and properly.

Safe Work Practices

Good housekeeping should be a habit and should become natural to all employees. Some things that can be done to make sure things are kept clean and safe are:

- Put items such as tools, away as soon as you are done using them.
- Clean up spills, broken glass, etc. as soon as they happen and place signage, cones etc. if needed.
- Clean up your work space as you work instead of leaving it all until the end of the day.
- Clean tools as soon as you're finished using them.
- Empty trash receptacles often.
- Keep aisles clear at all times.
- Keep clutter out of the workplace.
- Close cabinet doors and drawers.
- Report any unsafe item or area to a supervisor if you are not able to fix the problem.

Good Hygiene Practices

Policy

Employees can reduce distracting odors, contamination, pest control problems, and safety hazards by applying good hygiene practices in their personal lives and at work.

Safe Work Practices

- Never eat, drink, or apply cosmetics in any work areas where possible chemical or bacterial contamination may occur.
- Wash your hands before eating lunch or going home.
- Wear all personal protective equipment required to shield your clothing from possible splashes of workplace substances.
 - Remove personal protective equipment in a way that will not contaminate your clothing.
- At home, do not wash workplace clothing in the same load as your home laundry if you handle chemicals or dangerous substances at work.

Guardrail Safety

Policy

Falls can be prevented by something as simple as installing a guardrail system. Remember to follow all of the requirements for maximum safety.

Safe Work Practices

- Make sure the guardrail systems do not have rough or jagged surfaces that would cause punctures, lacerations or snagged clothing
- Do not sit, climb, or stand on the platform guardrails to gain elevation
- Use common sense- if installing guardrails will make the area more dangerous, use a different system of fall protection
- Inspect the site before work every day to make sure all safety issues have been identified and addressed

Hand Protection

Policy

Hand safety is a very important element to overall workplace safety. These guidelines have been established to ensure the safety of employees. Following these guidelines and safe work practices will help to ensure a safe work environment.

Safe Work Practices

- Work areas should be kept clean and maintained in an orderly fashion.
- Sharp instruments should be put away properly when not in use
- Hands should be thoroughly washed with soap and warm water to eliminate bacteria.
- Be careful where you put your hands, especially when putting stuff in trash cans.
- Rings, watches, and bracelets should not be worn when working around machinery.
- Double check to make sure that all guards are in place and secure before operating machinery.
- Don't try to force the machine to work outside of its normal function.
- Guards are in place for your protection, do not reach through the guards for any reason.

Hand Tool Safety

Policy

Not following the appropriate safe work practices may lead to various injuries depending on what tool is misused. Possible injuries include abrasions, lacerations, puncture wounds, contusions, burns, or muscles sprains. Even common, non-powered hand tools must be handled and treated with caution at all times.

Safe Work Practices

- Know how to safely operate any tool before using it.
- Keep all tools in good condition by using them for their intended purpose.
- Wear personal protective equipment as required.
- Inspect your tool for cracked or bent pieces, loose or missing parts, and rust or corrosion.
- Make sure that handles are not loose, cracked, or splintered.
- Tools that you strike must be intact and ground down to reduce chipping.
- Store tools in a safe place – elevated work areas and ladders are not appropriate storage areas.
- All applicable guards should be in place.
- Use spark proof hand tools when working near flammable materials.
- Do not try to fix a tool that is in disrepair unless you are specifically trained.
- Use insulated hand tools when working near electrically energized equipment.
- Make sure the area that you are working in is properly lit.
- Keep the floor neat and clean – tripping with a tool in your hand can be very dangerous!
- Do not try to get your coworker's attention while they are using a tool.
- If somebody tries to get your attention while you are working with a tool, stop what you are doing to talk to them.
- Use a wrist lanyard to help keep tools from falling when working at elevated locations.
- Do not modify tools in any way.
- In some situations, clamping down materials will help to keep it from shifting.

Hazard Communication and GHS

Policy

Effective Hazard Communication promotes safe use and handling of chemical substances in the workplace. It is vital that employees actively participate in company hazard communication procedures and use safe work practices to assure a safe work environment.

Safe Work Practices

- Be aware of all chemical hazards in your work area.
- Always know where to access hazard communication material.
- DO NOT handle chemicals until the SDS has been reviewed and employee is properly trained.
- Make sure there is an SDS for every chemical substance.
- Comply with SDS safe use, handling, and storage requirements.
- Inform supervisor if there is no SDS for a chemical substance or if the SDS is not up-to-date.
- DO NOT handle chemicals or containers if there is no label.
- DO NOT handle containers if you do not understand how to read labels.
- Make sure every chemical substance container is labeled.
- Make sure labels are up to date and are presented in the GHS format, which includes:
 - Signal word(s).
 - Pictogram(s).
 - Manufacturer information
 - Precautionary statements/ first aid.
 - Hazard Statement(s)
 - The product identifier or name.
- Abide by label statements and use the appropriate precautionary actions, such as use of PPE.
- Do not remove, alter, or deface labels.
- Inform supervisor if there is no label for a chemical substance or if the label is defective.

Hazard Communication: GHS Labels

Policy

It is important that workers understand and identify various chemicals throughout the workplace and know how to work with them safely. Not only does this eliminate accidents, but also gives workers a greater sense of confidence and peace of mind while working.

Safe Work Practices

- DO NOT handle chemicals or containers if there is no label.
- DO NOT handle containers if you do not understand how to read labels.
- Make sure every chemical substance container is labeled.
- Make sure labels are up to date and are presented in the GHS format, which includes:
 - Signal word(s).
 - Pictogram(s).
 - Manufacturer information
 - Precautionary statements/ first aid.
 - Hazard Statement(s)
 - The product identifier or name.
- Abide by label statements and use the appropriate precautionary actions, such as use of PPE.
- Do not remove, alter, or deface labels.
- Inform supervisor if there is no label for a chemical substance or if the label is defective.

Hazard Communication: Safety Data Sheets (SDS)

Policy

It is important that workers understand and identify various chemicals throughout the workplace and know how to work with them safely. Not only does this eliminate accidents, but also gives workers a greater sense of confidence and peace of mind while working.

Safe Work Practices

- DO NOT handle chemicals until the SDS has been reviewed.
- Make sure there is an SDS for every chemical substance.
- Make sure SDSs are up to date and are presented in the 16-section GHS format.
- Comply with SDS safe use, handling, and storage requirements.
- Inform supervisor if there is no SDS for a chemical substance or if the SDS is not up-to-date.

Heat Illness Prevention

Policy

A healthy body temperature is maintained by the nervous system. As the body temperature increases, the body tries to maintain its normal temperature by transferring heat. Through sweating and blood flow to the skin, our bodies cool down. A heat-related illness occurs when our bodies can no longer transfer enough heat to keep us cool.

Safe Work Practices

Most heat related health problems can be prevented or risk reduced by following a few basic procedures.

- Good ventilation of an indoor facility
- Fans, evaporative cooling or mechanical refrigeration
- Acclimatization using short exposures followed by longer periods of work in the hot environment.
- Drink plenty of water
- Take frequent shade breaks
- Stay away from caffeinated drinks when working in hot environments
- Learn to recognize the symptoms of heat-related illnesses
- Use protective equipment (Hats, cool fabrics, etc.)

Heat Illness Prevention: Acclimatization

Policy

Acclimatization may not be rushed, because the body needs time to adjust. The majority of heat-related injuries and illnesses are due to improper or absence of heat acclimation procedures, so it is important that this step is not skipped or seen as optional!

Safe Work Practices

During acclimatization:

- Employees should do the heaviest work of the day during cooler hours, if possible.
- At least two hours in the heat are required each day.

Gradually increase your intensity level a little bit each day – don't push yourself too hard too early.

- Make sure you are drinking enough water – before becoming acclimated to the heat, your thirst reflex will not be very strong so you will have to remind yourself to drink even before you are thirsty (about one quart of water per hour).
- Employees who are not acclimated to the heat are required to take more frequent shade breaks than acclimated employees.

Heat Illness Prevention: High Heat

Policy

Working in the heat could be hazardous, and is especially so in weather of 95 degrees or hotter. Be sure to drink enough water, take shade breaks, and keep in communication with your supervisor or a partner so you can avoid heat illness and death for you or your coworkers.

Safe Work Practices

- Drink about four 8-oz cups per hour during hot weather
 - That's how much your body loses when you sweat
 - Know where the water is located
 - Do NOT drink too much water: "too much" is usually about 48 cups in a 24 hour period
- If possible, start work earlier in the day when it's coolest
- Try to do the heaviest jobs during the cooler hours of the morning or late afternoon when the sun is down
- Wear light colors and loose clothing to allow the body to breathe
- Get help if you are experiencing the symptoms of heat illnesses
- Rest in the shade when you need it
- If you are new, be sure someone is supervising you for the first 14 days until you are acclimatized (used to) the high heat

Heat Illness Prevention: Hydration

Policy

Water makes up about 80% of the brain and is an essential element in neurological transmissions. Poor hydration adversely affects our mental performance and learning ability.

Safe Work Practices

How much should we drink?

- The standard recommendation is at least 6-8 glasses a day.
- Drink regularly throughout the day, ensuring that plenty of additional fluid is taken in during warm weather.
- Replace electrolytes by drinking fluids that replace the electrolytes.

How does hydration work?

- The skin is the key to the body's ability to regulate its temperature (thermoregulation). Once the brain senses that there is an increase in temperature, it initiates thermoregulatory mechanisms.
- The skin is the main cooling organ. It maximizes heat loss by using radiation, convection, conduction and evaporation.
 - Radiation – heat is directly lost to the atmosphere.
 - Convection – heat loss is facilitated by moving air or water vapor.
 - Conduction – heat loss by direct contact with a cooler body.
 - Evaporation – heat is lost by turning liquid (sweat) into vapor (the skin's major heat loss mechanism).

Horseplay in the Workplace

Policy

You are responsible for your own safety. Perform your job correctly, and follow the safety rules and procedures that have been designed to protect you. Failure to follow safety rules is dangerous, not only to yourself but to those around you. Do not encourage horseplay by participating in it or applauding it, for it can quickly turn from entertaining to threatening and become a safety rule violation that results in serious injury on the job.

Safe Work Practices

- Employees must never initiate or participate in horseplay of any kind.
- All regulations, guidelines and safety rules set by your employer must be followed to guarantee the protection of all personnel in the workplace.
- Report all unsafe or unprofessional behavior to a supervisor.
- Inappropriate behavior such as hazing, initiations, or other demoralizing activities that adversely affect safety are considered inappropriate.
- Any employees found participating in prohibited activities such as horseplay will be subject to disciplinary action.

Hot Work Permits

Policy

Depending on the location of hot work, contractors may be required to obtain a hot work permit. A hot work permit is used to identify safety hazards associated with hot work, precautions that should be taken when hot work is going to be performed, and the expectations that the hiring party has with the contractor when hot work is going to be performed. Hot work permits can vary between companies, so contractors should work closely with the hiring party to ensure that all requirements of the hot work permit are met.

Safe Work Practices

A hot work permit should include the following information:

- The effective time and date
- The place of use
- The hours during which the source of ignition may be used
 - This should not exceed 24 hours
- The nature of the use of the source of ignition
- Any special precautions or limitations to be observed before, during, or after the use of the source of ignition
- Fire watch information
 - This includes the amount of time that the fire watch needs to stay on duty to ensure that no fires ignite

Hot Works

Policy

When dealing with hot work, it's important to recognize, evaluate and control the hazards that are present.

Safe Work Practices

- Weld only in designated areas.
- Don't weld on containers which have combustible materials or on drums, barrels or tanks until proper safety precautions have been taken to prevent explosions.
- Locate the nearest fire extinguisher before welding.
- Know what the substance is that's being welded and any coating on it.
- Check area around you before welding to be sure no flammable material or degreasing solvents are in the welding area.
- Keep your head away from the plume by staying back and to the side of the work.
- Don't weld in a confined space without adequate ventilation and a NIOSH-approved respirator.
- Keep a fire watch in the area during and after welding to be sure there are no smoldering materials, hot slag or live sparks which could start a fire.
- Proper PPE should be worn at all times when welding.
- Remove all fuel sources where possible.
- Provide proper fire extinguishing equipment close to the work area.
- Do not leave oxygen or acetylene hoses unattended.
- Consider where sparks will fall when doing hot work.
- Shield fuel sources to protect from ignition sources.
- Cover openings to prevent sparks from entering and being carried to unprotected fuel sources.
- Don't coil the electrode cable around your body.
- Ground both the frame of the welding equipment and metal being welded.
- Check for leaks in gas hoses using an inert gas.
- Deposit all scraps and electrode butts in proper waste container to avoid fire and toxic fumes.
- If you have any questions about your welding operation relating to health and safety, talk to your supervisor

Hydraulic Power Tools

Policy

Operators of hydraulic power tools must observe many of the same safety guidelines that they would when using a regular power tool. General safety guidelines must be used in addition to guidelines specific for hydraulic power tools AND all safety rules outlined by the manufacturer.

Safe Work Practices

- Most power tools require the following personal protective equipment:
 - Safety glasses
 - A hard hat
 - Safety gloves
 - Protective boots
- Before you start, you should inspect the tool for any defects such as:
- At all times, the fluid inside of a hydraulic power tool must be:
 - Approved fire-resistant fluid.
 - Able to retain its operating characteristics at the most extreme temperature to which it will be exposed.
 - At the recommended operating pressure.
- Considerations when choosing a hydraulic hose include:
 - Inside diameter, outside diameter, and length
 - Recommended internal liquid temperature and external working temperature
 - Flexibility
 - Connectors

Industrial Injuries

Policy

Industrial injuries are something that nobody wants to happen. However, when they do, it is important to remember what to do so the incident does not become worse. This includes administering the proper first aid and making sure serious injuries or illnesses are properly reported, and knowing how to investigate the accident so it does not happen again in the future.

Safe Work Practices

- Know where the first aid kit is located
- Know where eye wash stations, fire extinguishers, and other safety features around the workplace are located
- Know how to properly administer first aid
 - Be sure that the person administering first aid knows what they are doing so they don't make the injury worse.
- Once the emergency of the injury, illness, or death has been dealt with, you will want to make sure the accident never happens again. An accident investigation should stay neutral and not be used to blame employers or employees.
- Serious Injuries or Illnesses are required to be reported to OSHA
- You need to report a serious injury, illness, or death of an employee immediately. "Immediately" means:
 - As soon as practically possible and
 - No longer than 8 hours after you found out about it
- You need to report the serious injury, illness, or death of an employee by telephone to the nearest District Office of the Division of Occupational Safety and Health.
- Be sure to know which office that is and have their number on hand.

Industrial Vacuum Safety

Policy

Industrial vacuums play an important role in the reduction or elimination of airborne particles or other materials. Employees who operate and maintain industrial vacuums or vacuum systems could potentially be exposed to harm. By following the safe work practices presented in this lesson, employees can help minimize the chances of an accident occurring when operating or maintaining an industrial vacuum or vacuum system.

Safe Work Practices

Before operating an industrial vacuum or vacuum system, employees should do the following:

- Tie back long hair and remove all jewelry.
- Inspect all provided PPE for damage. Report damaged PPE to your supervisor. Do NOT wear damaged PPE.
- Wear the appropriate PPE for the area in which the vacuum is to be used.
- Inspect the vacuum and the hose for damage. Report any damaged vacuums and hoses to your supervisor. Do NOT operate a damaged vacuum or vacuum with a damaged hose.
- Inspect the filter for either the vacuum or vacuum system. Replace filters as needed. Replace filters in accordance with the manufacturer's instructions.

When operating an industrial vacuum or vacuum system, employees should do the following:

- Only trained and authorized employees should operate vacuums or vacuum systems.
- Use vacuum or vacuum system in accordance with the manufacturer's instructions.
- Only vacuum materials that the vacuum or vacuum system has been rated for.
- Use vacuums in well-ventilated areas.
- Only use manufacturer-approved attachments.
- Keep hair, loose clothing, fingers and all body parts away from the wand, other openings, and moving parts of the vacuum.
- Practice proper ergonomics.
- Do NOT unblock vacuums while the suction is running. To remove blockages, employees should turn off the unit and wait until suction stops before removing the blockage in accordance with the manufacturer's instructions.
- Do NOT leave running vacuum unattended.
- Do NOT vacuum in wet environments unless the vacuum has been rated for liquids.
- Ensure all hoses and cords are properly stored when not in use.

When maintaining an industrial vacuum or vacuum system, employees should do the following:

- Only trained and authorized employees should perform maintenance tasks on industrial vacuums and vacuum systems.

- Ensure that all lockout/tagout procedures have been followed.
- Do NOT enter the filter housing enclosure before unplugging and performing all required lockout/tagout procedures. Entering when units have not been unplugged or when lockout/tagout procedures have not been performed could result in injury.
- Perform all maintenance in accordance with the manufacturer's instructions.

Inter-Office Workplace Conflict

Policy

Inter-office/workplace conflict can have serious effects on productivity and workplace morale. Following these tips are a vital factor in preventing inter-office/workplace conflict and could prevent workplace violence from occurring.

Safe Work Practices

- Create strict policies against gossip- Gossip is a huge cause of conflict and should be nipped in the bud as soon as possible.
- Address the problem directly- Address the problem as soon as the conflict arises. Let them know that negative thoughts and feelings can be handled in an appropriate manner.
- Listen to both sides of the story- Listen to both parties separately to gain each individual's perspective.
- Bring both parties together to explain their points of view- This is where both sides can air their grievances and hopefully begin to resolve the conflict.
- Find common ground- Find something both parties can agree with, this can help to bridge the gap.
- Encourage compromise- Both sides must be willing to bend a little.
- Confront negative feelings- Feelings and thoughts that arose to create the conflict need to be worked out.
- Remain positive- Resolve to address future conflicts in a positive manner.

Jib Crane Safety

Policy

A jib crane is a crane that uses a horizontal or near-horizontal beam attached to a vertical mast or tower to support a load clear of the main support. Employees who operate these complex pieces of equipment could potentially be exposed to harm. Following the safe work practices presented in this lesson will help ensure employee safety.

Safe Work Practices

Before operating a jib crane, employees should do the following:

- A full inspection of the jib crane, and all auxiliary equipment, must be performed daily. Thorough inspections must be performed according to the manufacturer's instructions frequently and regularly.
- Only trained and authorized employees should operate a jib crane.
- Inspect all provided PPE for damage. Report any damaged PPE to your supervisor. Do NOT wear damaged PPE.
- Ensure that no safeguard, safety appliance, or device attached or forming an integral part of the jib crane are removed or rendered ineffective.
- Ensure the work area is clear of debris and employees that may be in the working path of the jib crane.
- Ensure any object being lifted by the jib crane is securely and safely attached.
 - The weight of the object must be evenly distributed among the rigging attachment points.
- Ensure the weather is appropriate to operate an exterior jib crane, inclement weather could render the job activity unsafe.

While operating a jib crane, employees should do the following:

- Maintain appropriate overhead and lateral clearances between crane and any obstructions.
- All movements made by the crane should be done slowly, smoothly, and deliberately.
- Keep in constant communication with all riggers and other nearby employees.
 - Methods of communication may include hand signals, walkie-talkies, or verbal communication.
- Ensure taglines are used in accordance with the manufacturer's instructions (if applicable).
- Practice good ergonomics while pushing or pulling an item rigged to the hoist, with or without a tagline.

While operating a jib crane, employees should NOT do the following:

- Exceed the loading and mounting weight limits as stated by the manufacturer.
- Attempt to perform tasks that are outside the scope of operation as defined by the manufacturer.

- Swing any item being lifted by the crane.
- Move crane into an area that you cannot see clearly.

When repairing or maintaining a jib crane, employees should do the following:

- Ensure proper lockout/tagout procedures are followed.
- Ensure the crane is regularly lubricated on a schedule as defined by the manufacturer.
- Cranes may be modified and rerated provided such modifications and the supporting structure are checked thoroughly for the new rated load by a qualified engineer or the equipment manufacturer.

Ladder Selection

Policy

Selecting the right ladder for a job is the first step in preventing ladder-related accidents and injuries. There are a few factors that employees need to consider while selecting the right ladder; such as ladder type, height, duty rating, and material. Proper ladder selection and following safe work practices can reduce the risk of accidents and injuries.

Safe Work Practices

- Do not use a ladder until properly trained.
- Consider environmental and job operation factors before selecting ladder.
- Select the ladder that is the proper length for the job, consider:
 - Height to be reached.
 - Overlap requirement.
 - Permitted standing level.
- Inspect ladder prior to selection and use.
 - If ladder appears to be in poor condition, tag/label damaged and do not use.
- Read and follow all labels and markings on the ladder.
- Do not remove safety decals from ladders.
- Do not exceed the maximum load rating of a ladder.
- Do not use metal ladders near electrical exposure.
- Only use ladders for the purpose for which they were designed for.
 - Includes ladder accessories, such as levelers, jacks or hooks.

Ladder Storage

Policy

Even if you use a ladder correctly, you can still be injured around ladders if the correct storage guidelines are not followed. If you take the necessary precautions to prevent damage, the ladder will be able to do the job that it was intended to do.

Safe Work Practices

General Ladder Storage

- Ladders and all of their accessories must be maintained in good condition.
- Ladders should be stored in a dry and safe place.
- Never use ladders in any way which they are not intended to be used. For example: sitting on a ladder while it is in storage can be dangerous.
- Do not stack or store materials on ladders.
- All ladders must be properly secured during transport.
- Ladders should be stored on ladder racks specifically made for that purpose.
 - Ladder racks should be spaced out at intervals of 6 feet for proper support.
- Do not store ladders in the middle of walkways.
- Always return ladders to their storage areas after use.
- Ladders should be kept clean and free of contaminants that may deteriorate them or cause them to become slippery.

Wooden Ladders

- Wooden ladders that are to be used outside should be treated with a preservative to prevent damage from the elements, as well as an oil treatment to help keep the metal parts free of rust.
- Paint is not a suitable weather sealer, because it can fill or hide any dangerous cracks.
- Keep wooden ladders stored in well-ventilated areas where they will not be exposed to excessive heat or moisture.
- After removing a wooden ladder from storage and before using it, you should inspect the rungs and nails, and check for cracks, splinters, or any loose parts.

Metal Ladders

- Never store metal ladders where they may be exposed to fire or chemicals.
- Do not store metal ladders in areas with excessive moisture.
- After removing a metal ladder from storage and before using it, you should inspect it for loose rungs or other metal parts, dented rungs or rails, sharp edges or burrs, or corrosion damage.

Fiberglass Ladders

- Do not store fiberglass ladders where they can be exposed to fire, strong chemicals, sunlight or other ultraviolet light.
- After removing a fiberglass ladder from storage and before using it, you should inspect it for cracks, chips, or splinters, deformed rails or rungs, and any bends or breaks.

Ladders

Policy

Employees who exercise safe ladder use and safe work practices minimize their risk from falling, which can lead to serious injury and even death.

Safe Work Practices

- Select the proper ladder for the job, consider load capacity, height, and type of ladder.
- Avoid electrical hazards - do not use a metal ladder around exposed energized electrical equipment.
- Thoroughly inspect ladder before use.
 - Check joints between steps and side rails.
 - Make sure ladder rung is free from oil or grease.
 - Check for splints, loose bolts, or any defective or damaged parts.
- Remove defected ladders from service for repair or replacement.
- Use ladder only as designed, do not alter from manufacturer's specifications.
- Use proper erecting and positioning procedures, to ensure:
 - Footing support.
 - Top support.
 - Ladder security.
 - Safe angle of inclination.
- Wear appropriate attire and PPE.
- Do not erect ladders in front of unlocked or unblocked doors.
- Ascend and descend facing the ladder, while maintaining 3 points of contact.
- Do not lean out or overreach while on ladder.
- Ask for a helper to support the base of ladder for added ladder stability.

Landfill Safety

Policy

Landfills have several different procedures that must be enacted in order to maintain their smooth operation. Dumping, covering, and machine maintenance are just some of the activities that go on. Therefore, there are several different areas of safety to keep in mind while working at a landfill.

Safe Work Practices

Heavy Equipment/Vehicles

- Never operate anything unless you have been properly trained
- Always inspect equipment and vehicles before you use them
- Follow proper Lockout/Tagout Procedures
- Avoid steep gradients and sharp curves when driving if possible
- Do not travel over unstable surfaces
- Know all hand signals and other worksite communication methods to avoid accidents

Other Safety Procedures

- Monitor gas and leachate to keep yourself and others safe from asphyxiation or explosions
- Always wash up at the end of the day
- Promptly bury all biodegradable wastes to avoid attracting flies, vermin, and birds and therefore avoid carrying of diseases
- Know what to do in case of a fire or explosion at the site
 - Be sure you know all emergency numbers for your area
- Pay attention to restricted access signs
 - If you aren't supposed to be in an area, don't go into it

Lead Safety

Policy

Exposure to lead occurs in at least 120 different occupations, and lead becomes toxic if absorbed by the human body. No matter the time of exposure, lead can cause health problems including hearing and vision impairment, reproductive problems, and high blood pressure. It can even cause a condition which can lead to seizures, coma, and death. However, these problems can be avoided if the proper procedures are followed when dealing with lead.

Safe Work Practices

- Working safely with lead
 - Wear protective clothes such as gloves, hats, coveralls, and shoes or shoe coverlets
 - Clean the protective clothing weekly
 - Wear a respirator. Make sure your respirator fits properly and works properly
 - Do not eat, smoke, or apply make-up in areas with lead
- What to do after working with lead
 - Remove work clothes in a special changing area before going anywhere else, such as lunchrooms or home
 - DON'T shake the dust off the work clothes
 - Wash your hands and face
 - Follow housekeeping procedures as set by your employer to keep surfaces and air as free as possible from lead dust
 - Wear your respirator when cleaning up
 - Use vacuums- not compressed air- to clean up
 - Use dry or wet sweeping, the wet method (hosing down the work area), shoveling, or brushing ONLY if vacuuming has been tried and doesn't work
 - Try to keep material wet or at least damp when possible to keep the air free from lead dust
 - Talk to your doctor if you are worried about your level of lead absorption

Lift Gate Safety

Policy

Lift gates are attachments to trucks that lift loads into the truck by mechanical means. They are especially useful for getting heavy loads into truck beds instead of lifting them yourself. Always remember to put safety ahead of everything, and you will be able to prevent injury to yourself and others.

Safe Work Practices

- Dos
 - Wear safety protection needed for the loads
 - Never work under the lift gate unless you have proper supports
 - Check the work area for debris, personnel, slippery floors, and other hazards before loading or unloading the objects on the lift gate
 - Make sure the vehicle's parking brake is on before loading and unloading the lift gate
 - Make sure the load is distributed evenly on the lift gate
 - Make sure the lift gate is properly secured before transportation
 - Put the lift gate in the stowed position when it's not in use
 - Know what to do in case there is a malfunction with the lift gate or a problem with the load
 - Think about what could go wrong and have a plan on what to do in case it happens
 - Be sure you are familiar with the operator's manual and your company's policies
- Don'ts
 - Never operate the lift gate while the vehicle is running UNLESS called for in the operator's manual
 - Don't step off moving equipment
 - Don't jump off the lift gate
 - Never exceed the maximum weight limit
 - Don't put a load wider than the lift gate on the lift gate; make sure everything fits properly
 - Do not operate any equipment while under the influence of drugs or alcohol
 - Don't allow the lift gate to be used by people who don't know how to use it
 - Don't lose focus on your job; always pay attention
 - Remember the dos and don'ts of using a lift gate

Lifting

Policy

Back injuries are considered one of the most painful and costly problems plaguing the workplace today. Back Injuries are second only to the common cold for lost time on the job.

Safe Work Practices

- Test every load before you lift by pushing the object lightly with your hands or feet to see how easily it moves. This tells you about how heavy it is.
- Remember, a small size does not always mean a light load.
- Make sure the weight is balanced and packed so it won't move around.
- Loose pieces inside a box can cause accidents if the box becomes unbalanced. Be sure you have a tight grip on the object before you lift it.
- Handles applied to the object may help you lift it safely.
- To avoid hurting your back, use a ladder when you're lifting something over your head.
- Get as close as you can to the load. Slide the load towards you if you can.
- Don't arch your back--avoid reaching out for an object.
- Do the work with your legs and your arms--not your back.
- How to Avoid a Back Injury
 - Plan ahead before lifting: Knowing what you're doing and where you're going will prevent you from making awkward movements while holding something heavy. Clear a path, and if lifting something with another person, make sure both of you agree on the plan.
 - Lift close to your body: You will be a stronger and more stable lifter if the object is held close to your body rather than at the end of your reach. Make sure you have a firm hold on the object you are lifting, and keep it balanced close to your body. Keep the load close to your body. Having to reach out to lift and carry an object may hurt your back.
 - Feet shoulder width apart: A solid base of support is important while lifting. Holding your feet too close together will be unstable, too far apart will hinder movement. Keep the feet about shoulder width apart and take short steps.
 - Bend your knees and keep your back straight: Practice the lifting motion before you lift the object, and think about your motion before you lift. Focus on keeping your spine straight--raise and lower to the ground by bending your knees.
 - Tighten your stomach muscles: Tightening your abdominal muscles will hold your back in a good lifting position and will help prevent excessive force on the spine.
 - Lift with your legs: Your legs are many times stronger than your back muscles--let your strength work in your favor. Again, lower to the ground by bending your knees, not your back. Keeping your eyes focused upwards helps to keep your back straight.
 - If you're straining, get help: If an object is too heavy, or awkward in shape, make sure you have someone around who can help you lift.

- Wear a belt or back support: If you are lifting in your job or often at home a back belt can help you maintain a better lifting posture. A back belt or support will not prevent you from straining or hurting your back.

Load Securement

Policy

Properly securing loads for transport is very important. Unsecured loads are very hazardous for everyone involved and illegal. Employees can take responsibility for their safety and the safety of others by ensuring that loads are properly secured before they hit the highways. By following the safe work practices provided, employees can help minimize the chances of an accident occurring by properly securing a load for transport.

Safe Work Practices

Before a load is even put on or in a trailer, an inspection should be conducted. An inspection should include the following:

- Comparing the weight capacity of the trailer to the weight of the load that it will be carrying.
- Ensuring that all ramps, anchor points, and bed of the trailer are free of damage. Employees should also check the tire pressure of all tires.
- Ensuring that all tie downs and anchor points are rated for the load.
 - This includes the binders. Binders should be sized for the chain that it will be holding (Example: a 3/8 chain will need a 3/8 binder). Each fastener, whether chain or synthetic, must be rated for ½ the aggregate load, so size fasteners accordingly.
 - Each anchor point must be rated for ½ the working load limit of the fastener.
 - Note: In situations where cargo is not blocked or positioned to prevent forward movement by a headerboard, bulkhead, other cargo, or other approved blocking devices, it must be secured by either one or two tiedowns. The decision for one or two tiedowns will depend on the weight and length of the cargo (one or two tiedowns for cargo that is 5 feet or less in length. Two tiedowns must be used if the cargo is longer than 5 feet but less or equal to 10 feet in length, irrespective of the weight).
- Looking for damage on chains and synthetic tie downs. Damage includes:
 - Bent or dented links
 - Broken links
 - Faded or damaged rating marks or stamps
 - Fraying, tears, or chemical damage in synthetic straps
- Report damaged trailers and tie downs to your supervisor. Do NOT use damaged trailers or tie downs.

When a trailer is ready to be loaded, employees should do the following:

- Clean off any mud, water, ice, etc. from the ramps and trailer bed.
- Remove any obstructions from the path of heavy pieces of equipment, forklifts, and cranes.
- Maintain clear communication between spotters and operators.

- Ensure that you have the correct number of tie downs for the load. Heavier pieces of equipment (bull dozers, forklifts, excavators, etc.) should have at least four tie downs for the body of the vehicle and an additional tie down for any attachments.

Note: Requirements for tie downs and chains can vary from state to state or from state and federal.

- Utilize any provided anchor points on equipment or other pieces of cargo. Sometimes the provided anchor point does not lend itself to a good tie down spot; in these situations, employees should look for another approved method for securement.
- Secure any binders and ratchets that could stick out into traffic.

Lockout/Tagout (LOTO): Affected Employees

Policy

Lockout/tagout procedures may seem to be nothing but a hassle; however, these procedures help protect all employees who work with machines or equipment. Everyone may play a different role when it comes to carrying out the procedures, but everyone is a team when it comes to ensuring safety. The time taken away for maintenance and repair may seem unnecessary at times; however, when machines are properly repaired and maintained, employees will find that their work is more productive and safer.

Safe Work Practices

When a lockout/tagout is needed, affected employees should do the following to ensure everyone's safety during the process:

- Listen to all authorized employees when they notify you of a lockout/tagout. The information that they give you will be important as lockout/tagout could affect the lighting, air conditioning, or other factors of the work environment.
- Do NOT attempt to remove any locks or tags. These items are meant to be seen as a warning to other employees. Removing a lock or tag is illegal and could result in an authorized employee being injured or worse.
 - If a lock and tag needs to be removed, only your supervisor is allowed to do it and only after it has been established that the authorized employee is not at work and only when it is safe to do so.
- Do NOT attempt to turn on any machine or piece of equipment that has a lock and tag. Depending on the machine, attempting to turn it on could release any stored energy that didn't get removed from the machine, which could result in an injury or worse for the authorized employee.
- If a shift change is going to occur, ask who the authorized employee is in case you or other affected employees need to get in contact with them.
 - Tags should have the name of the authorized employee written on them.
- Remove yourself from the area or stay a safe distance away when authorized personnel are working on a machine or piece of equipment. This includes the time when authorized personnel are removing the locks and tags from machines.
- Do NOT work on a machine until you have been notified that the lockout/tagout is over.

Lockout/Tagout (LOTO): Authorized Employees

Policy

Lockout/tagout is an essential part of protecting employees while they perform certain tasks on a machine or piece of equipment. It takes everyone to make these procedures work; however, employees need to remember that they are responsible for their own safety. Lockout/tagout doesn't take too much time and it helps protect everyone.

Safe Work Practices

In addition to following the procedures of a lockout/tagout, employees should do the following to ensure their safety while performing maintenance or repair work:

- Assume responsibility for own safety while looking out for the safety of others.
- Communicate as much as possible with coworkers, especially during shift changes. Always provide as much information as possible to the person who will be taking over and do not leave until they have put their lock on and you have removed yours.
- Remember that each machine may have a different lockout/tagout procedure.
- Do NOT remove guards or other safety features while the machine is turned on or has power running to it.
- Only use your lock. Do NOT lend or trade locks with other authorized employees.
- Do NOT rush. It is better to take a few minutes and make sure everything has been properly performed than having an accident occur.

Machine Safeguards

Policy

Machines enable amazing things to be done. But machines can also cause disfiguring injuries and death, especially during operation, examination, lubrication, adjustment, and maintenance of the machine. Therefore, it is important to have some sort of safeguards to protect workers from machines.

Safe Work Practices

Safeguards must:

- Prevent contact
 - The safeguards must prevent any part of the worker's body from coming into contact with moving parts
- Be secure
 - The worker should not be able to easily remove the safeguard
- Protect employees from objects falling off the machine
- Create no new hazards
 - The guard should not have sharp edges or other dangers
- Create no interference
 - A safeguard must not impede the job the machine is meant to do
- Allow for safe, simple maintenance
 - If possible, safeguards must allow for simple maintenance, such as lubrication

Machine Shop Safety

Policy

Machine shop employees play an important role in the economy. However, they work in a very dangerous environment. By following the safe work practices provided in this lesson, employees can take proactive steps to minimize their chances of experiencing an injury while working in a machine shop.

Safe Work Practices

Before an employee enters the shop floor to begin work, they should do the following:

- Tie back long hair. Buns are preferred over ponytails.
- Remove all jewelry.
- Ensure that they are not wearing loose-fitting clothing. Loose clothing can get caught by machines which leads to injuries.

Before an employee starts their shift, they need to conduct an inspection of their PPE and the machine that they are going to be working with. Inspections should include:

- Checking all PPE for damage. Do NOT wear damaged PPE.
- Unplugging and ensuring that a machine cannot be turned on while the inspection is taking place.
- Checking the sharpness of blades. Dull blades should be removed from service and replaced.
- Ensuring that all covers and guards are in place. Machines that are missing covers and guards should NOT be operated.
- Checking to see if the machine has been modified. Modified machines should NOT be operated.
- Visually look for any signs of damage.
- Making adjustments to the machine.

Once an inspection has been completed, employees should do one of the following:

- Report any modified or damaged machines to your supervisors. Damaged machines should be locked and tagged out until they have been repaired.
- Plug in the machine. Depending on the machine, employees might want to turn on the machine to see if they can hear any changes in the machine. Changes in sound could indicate a problem.

While working on the floor, employees should do the following to ensure their safety:

- Use proper ergonomics when lifting heavy objects. If the object is too heavy for you to lift on your own, either ask a coworker to help you lift or use a mechanical lifting device.
- Ensure that you are operating the machine in accordance with the manufacturer's instructions.
- Keep the work area clean. This includes not placing tools or other objects on machinery.

- Walk while in the shop. Do NOT run.
- Utilize all safety guards and covers.
- Roll up long sleeves (if applicable).
- Do NOT try to catch falling objects.
- Do NOT force objects into blades, grinders, etc. If an object gets stuck, turn the machine off, let it come to a complete stop, and then dislodge the object.
- If adjustments need to be made during a job, turn off the machine and unplug it.
- Do NOT leave machines unattended when they are turned on. If you need to leave a machine, turn it off.

Machine and Tool Safety

Policy

If you cannot do a job safely with the machinery or tool that you are using, don't do it! Your safety and the safety of your coworkers is of extreme importance. Do a safety check each and every time you use machinery or tools. Do not take short cuts.

Safe Work Practices

General Machine Safety

- Know the hazards.
- Make a safety check.
- Make sure everyone is clear of the machine before starting it up.
- Check the guards and safety devices to make sure they are in place and properly adjusted.
- Do not operate power tools or machinery when you are ill, taking strong medications, fatigued or consuming alcoholic drinks. If you cannot do a job safely, don't do it.
- Do not smoke while working with tools and machinery.
- Keep your machine and tools clean and free of debris as well as the area you are working in.
- Avoid distractions and keep your mind on your work.
- Electrically powered machines and tools need to be grounded. Extension Cords are not to be used as a permanent source of electricity.

Proper Clothing and Personal Protective Equipment

- Do not wear loose-fitting clothing when working with machinery and tools.
- Jewelry and long hair could get caught in certain types of machinery and certain types of tools. Remove jewelry such as necklaces, rings and bracelets before using machinery and tools. Long hair should be secured so as to not get caught in machinery or tools.
- Long sleeves should be rolled up and secure so as not to get pulled into a machine or tool.
- Impact resistant safety glasses or goggles should be worn to protect your eyes.
- With some tools and machinery, safety shields, hard hats and aprons might be required.

Managing and Reducing Stress

Policy

It is important for employers, supervisors, loss control personnel, and workers to recognize stressful jobs, situations, and signs of stress in themselves or in their coworkers before accidents, injuries, or violent incidences occur.

Safe Work Practices

- Accept it:
 - Some things are out of your control and all you can do is accept them and learn from them.
 - Seek helpful advice or support from friends or coworkers.
- Avoid it:
 - Stay away from recurring situations or sources of constant frustration.
 - Remove yourself from the situation or rearrange your surroundings.
 - For time related stress, plan ahead.
- Alter it:
 - Communicate your feelings to your employer or supervisor.
 - Change your feelings or ask someone else to change their behavior.
 - Ask for help with your job or take advantage of your company's Employee Assistance Program.
- Adapt to it:
 - Learn to cope with the situation or look at it as an opportunity. Focus on the positive things in your life.
 - Try to make time for the activities you enjoy.
 - Maintain a healthy lifestyle including exercise, meditation, and a balanced diet.

Material Handling: Lifting

Policy

There are many back injuries that occur every year due to improper lifting. Using proper lifting techniques, following company policies and procedures, and these safe work practices should help to prevent such injuries from occurring.

Safe Work Practices

- Before lifting, always test the load for stability and weight.
- For loads that are unstable or extremely heavy, follow management guidelines for:
 - Equipment use
 - Reducing the weight of the load
 - Repacking containers to increase stability
- Wear appropriate slip resistant shoes.
- Only wear gloves (if necessary) that fit and allow you to maintain a proper grip.
- Know your limitations, lift only as much as you can handle by yourself.
 - Seek assistance or use mechanical means if it is too heavy.
- Keep the lift in your “power zone”. The power zone includes the following:
 - Above the knees
 - Below the shoulders
 - Close to the body
- Preventative maintenance is important, whenever possible you should:
 - Reduce reaching and bending.
 - Reduce the stress on your back and shoulders.
 - Reduce the effort and force needed to perform the task at hand.

Material Handling: Safe Operations

Policy

Think how your actions will affect others. What will be the result of your action or lack of action? When you see a condition or circumstance that is not as you think it should be, tell someone, do something.

Safe Work Practices

- Size Up the Load
 - Determine if you can carry a load comfortably. Don't carry a big load alone.
 - Get help if the load is too big or bulky for one person.
 - Check for nails, splinters, rough strapping, and rough edges.
- Look for Special Hazards
 - Aisles and passageways must be kept clear of obstruction.
 - Watch for pedestrians.
 - Materials spilled in walkways must be cleaned up immediately.
 - When present, markings on aisles and walkways must be obeyed.
 - Materials or equipment must be stored so that sharp projections will not interfere with walkways.
 - Materials must be stored so adequate headroom is provided for the entire length of any aisle or walkway.
 - Watch for trip hazards.
 - Safe clearance must be allowed for walking in aisles where motorized or mechanical handling equipment is operating.
 - Bridges over conveyors and similar hazards must be kept in place.
- Wear Appropriate Protective Equipment
 - Never perform a task for which PPE is required but not available
 - Always wear and use required PPE correctly
 - Never use PPE that is defective or damaged
- Use the Right Equipment the Right Way
 - Keep clothing, fingers, hair, and other parts of the body away from the conveyor
 - Don't climb, step, sit or ride on conveyor at any time
 - Don't load conveyor outside of the design limits
 - Don't remove or alter conveyor guards or safety divides
 - Know location and function of all stop/start controls
 - Keep all stopping/starting control devices free from obstructions
 - All personnel must be clear of conveyor before starting
 - Report all unsafe practices to your supervisor
- Hand Trucks, Carts and Dollies

- Use the two-wheel hand truck only when handling light loads. Always use the four-wheel hand truck for heavy loads.
- Always make sure the weight is evenly distributed on all wheels of a hand truck, cart or dolly, especially with four-wheeled hand trucks with side railings.
- Never pull a cart, dolly, or hand truck. Always push it when moving loads.
- Secure loads with heavy-duty nylon belts.

Multiple Lift Rigging Procedure

Policy

“Multiple lift rigging” means rigging manufactured by rigging suppliers that facilitates the attachment of up to five independent bull tails to one master link, which is hooked to the load line of a crane. In the ironworking industry, this is also known as Christmas treeing. It should be noted that a multiple lift rigging can only be done with steel erections. Since this type of rigging can have a maximum of five independent loads being hoisted up into the air, there are risks involved. Following the safe work practices provided in this lesson will help ensure employee safety.

Safe Work Practices

- Before the shift begins, have a competent person inspect the crane.
- Before the shift begins, have a qualified rigger inspect the rigging.
- Check the area around the crane for overhead obstructions.
- Make sure that the total load does not exceed the rated capacity specified in the rigging chart.
- Make sure that loads that are rigged are beams and/or similar structural steel members.
- Ensure that there is at least 7 feet between each beam and/or similar structural steel members that are being hoisted.
- Secure beams and/or similar structural steel members at their center of gravity.
- Make sure that the beams and/or similar structural steel members remain reasonably level.
- The structural steel must be rigged from the top down.
- When rigging, make sure that the steel members on the multiple lift are rigged from the bottom up.
- Have another person controlling the load when lowering over connectors.
- Check to make sure that the load has a 5 to 1 safety factor for all components.
- When hoisting the load, make sure that no one is under the load.

Night Shift Safety

Policy

Working night shift can make ordinary tasks more dangerous than they might be during the day, but you can stay safe by following all of the appropriate safety guidelines.

Safe Work Practices

- Employees transitioning from days to nights must be conditioned slowly into working night shift.
 - Starting a night shift schedule without letting your body adjust will make injuries and stress more likely.
- Try to stick with a night shift schedule or just a day shift schedule instead of switching back and forth. Each time you switch, your body will attempt to adjust your circadian rhythm which will cause physical and mental fatigue.
- Employees must understand their job duties and corresponding safety responsibilities.
- Make sure that adequate lighting is used to avoid working in the dark.
- Take frequent, short breaks - especially during the early morning hours when employees are more likely to have lower energy levels than any other time.
- There should always be an emergency plan in place regarding emergencies such as natural disasters or even attacks or robberies. Night shift workers must be aware of the procedures and be prepared to follow protocol if needed.
- Never working alone in confined spaces.
- Do not operate dangerous equipment or tools unless you have been properly trained and authorized to work on that specific piece of equipment by yourself.
- When working alone, always make sure somebody knows where you are.
- Keep your cell phone charged and have important numbers stored in case of an emergency.
- Before starting your tasks, and throughout the task, pay attention to your surroundings to assess any potential hazards.
- If you will be driving, have a clear travel plan and make sure others are aware of this plan.
- Be extremely careful and aware of your surroundings when walking to your car in the dark, especially if you are alone.

Noise Induced Hearing Loss

Policy

NIHL is a condition that employees can develop over time if they do not wear the appropriate hearing protection while working in loud environments or with loud pieces of equipment. However, this condition is preventable. Employees need to remember that are responsible for their safety, including their hearing.

Safe Work Practices

When an employee works in an environment or with equipment that exceeds 90 decibels, they should wear the appropriate hearing protection. When choosing and using hearing protection, employees should do the following:

- Inspect all hearing protection for damage and a comfortable fit. Do NOT wear damaged or improperly fitting hearing protection. Report all damaged hearing protection to your supervisor.
- Ensure that the hearing protection chosen fits with the work that you will be doing.
- Wear all hearing protection in accordance with the manufacturer's instructions.
- Do NOT remove hearing protection until you have either turned off the piece of equipment being used or you have left the area.
- Do NOT use headphones that are meant for music or other entertainment in place of proper hearing protection.
- Store all hearing protection in accordance with the manufacturer's instructions.

Oil Spill Safety Procedures

Policy

Spilled oil is a nuisance, but it can also be hazardous if the proper safety procedures are not followed during clean up. All personal protective equipment must be worn, and safety steps followed in order to do this task correctly.

Safe Work Practices

If an oil spill is discovered, the following safety steps must be followed:

- The spill response team must be alerted right away to deal with oil spills as soon as possible.
- Correctly identify the oil or oils to make sure it is compatible with the sorbent you will be using.
- Personal protective equipment that is required may include slip resistant footwear, a respirator, and gloves depending on the oil and sorbent involved.
- Containment of the oil spill must be first priority:
 - Form a dam around the spill with the correct absorber to prevent it from spreading – all absorbents must be used according to the manufacturer's instructions.
 - Sweep up and properly dispose of any residue or waste.
- Replace the absorbent and replace or decontaminate personal protective equipment used immediately after cleaning up the spill.
- Report any oil spill that cannot be completely contained and cleaned up if it discharges into a storm drain, creek, bay, the ocean, or any outdoor soil or paved surface by contacting Environment, Health & Safety.

Open Trench Safety

Policy

Open trenches can be extremely dangerous if precautions are not taken to ensure employee safety. Employees should follow all company safety rules and these safe work practices to ensure a safe work environment.

Safe Work Practices

- All trenches should be thoroughly examined before entering.
- Protect employees from cave-ins by using an adequate sloping or support system.
- Always know of and have a means for exiting the trench in case of an emergency.
- Workers should stay away from any equipment that is loading or unloading material.
- Any equipment or material should be kept two feet or more from the edge.
- Excavation and trench sites should be tested for an oxygen deficiency before employees are allowed to enter them.
- Surface crossing of trenches is strongly discouraged.
- Water accumulation in trenches should be avoided if possible.
- Rocks, soil, equipment and other materials should be kept from falling into the trenches.
- Trenches should be opened only the minimum amount of time that it takes to complete the job.

Operator and Ground Worker Safety

Policy

Every year, heavy equipment operators and ground-workers are injured or killed by heavy mobile equipment used in construction. Working safely in the area of any heavy equipment requires the shared responsibility of both the equipment operator and ground-workers.

Safe Work Practices

- Only trained persons should operate heavy machinery.
- Wear high visibility clothing and appropriate PPE and attire.
- Avoid distractions and actions that could interfere with good communication (e.g., headphones, loud music, etc.).
- Do not engage in horseplay.
- Be aware, stay alert and know your equipment's blind spots – whether you're the operator or just working around it.
- Communicate with people working around you – either via two-way radios or a spotter who's been trained on standard hand signals. Never assume people know what you're going to be doing.
- Always wear your seat belt.
- Don't climb on or get off equipment while it's moving.
- Never exceed the load that a machine is rated to carry.
- Inspect equipment before operation.
- Adjust all side and back mirrors to help compensate for blind spots.
- Ensure workers are clear of equipment before operating.
- Establish eye contact with the operator before approaching danger zone.
- Unless it is essential to the task, all personnel should stay away from all sides of heavy equipment while it is in use.

Overhead Cranes

Policy

An overhead crane is a crane with an overhead “bridge” carrying a hoisting mechanism that travels on a fixed runway structure. This type of crane is often used indoors such as in a warehouse or a machine shop, where it can present a very different set of hazards than a portable crane. You must be aware of these hazards in order to stay safe in this kind of environment.

Safe Work Practices

- Do not exceed the rated load capacity of any component of the crane.
- Avoid any rapid movements.
- Ensure that all loads are lifted high enough to clear obstructions BEFORE moving the load.
- If possible, maintain a MINIMUM of one foot of clearance above and to the side of all loads.
- Lower the load to the floor if you must leave the controls unattended.
- If loss of electrical power occurs, turn all controls to the OFF position.
- Lift and lower the load only from directly above.
- Do not reverse a motor until the load has come to a complete stop.
- Do not walk on any part of the bridge or runway.
- Operation of the crane must be done by authorized personnel only.
- Overhead rigging must only be secured by authorized personnel.

Oxygen and Acetylene: Cylinder Storage

Policy

Acetylene and Oxygen are used as fuel gas for welding, cutting and allied processes. These gases are classified as Class 2 gases. Acetylene and Oxygen are delivered in cylinders that are under constant pressure. The risk associated with these cylinders is due to the high pressure of the gases contained in them. Transportation or storage of these cylinders must be done with extreme care.

Safe Work Practices

General

- All cylinders should be protected against:
 - Physical and mechanical damage.
 - Tampering by an unauthorized person.
 - High temperatures.
- Oxygen cylinders shall be separated by a minimum distance of 20 feet or by a non-combustible barrier at least 5 feet high, or a minimum of 18 inches (46 centimeters) above the tallest cylinder and having a fire-resistance rating of at least one hour.
- Acetylene and liquefied gas cylinders should be stored valve end up. The valve should be closed, with the protective device in place.
- Valve protection devices should not be used for lifting cylinders.
- All cylinders which are designed to accept valve protection devices should be equipped with such devices when the cylinders are not in use or connected for use.
- Unless cylinders are secured on a rack, regulators should be removed and valve-protection devices, when provided for, should be put in place before cylinders are moved.
- All gas cylinders in service should be securely held in substantial racks or secured to other rigid structures so that they will not fall or be knocked over.
- Cylinders should never be used as rollers to move other objects.
- Cylinders should be stored in definitely assigned places away from elevators, stairs, or gangways.

Indoor Storage

- In a well-protected location.
- Well-ventilated location.
- In a dry location.
- At least 20 feet from highly combustible materials such as oil or excelsior.
- Where cylinders will not be damaged by passing or falling objects.
- Where they cannot be subjected to tampering by unauthorized persons.

Outdoor Storage

- Compressed gas cylinders should be stored in a manner to prevent them from creating a hazard by tipping, falling or rolling.
- Liquefied fuel-gas cylinders should be stored in a position so that the safety relief device is in direct contact with the vapor space in the cylinder at all times.
- These external stores should be secured against damage and tampering and be clear of combustible materials.

Pandemic Safety

Policy

A pandemic is a global disease outbreak where people have little or no immunity, making everyone at risk. A pandemic could disrupt everyday life such as commerce, schooling, shopping, work, and the economy. Part of fighting a pandemic is to minimize exposure of the disease, so remember the following information and safety tips.

Safe Work Practices

Precautions During Pandemics

- Keep a 6 foot distance between you and other people
- Keep meetings to a minimum
 - Use different forms of communication such as texts, phone calls and emails to talk with your coworkers
- Follow your company's pandemic plan
- If the pandemic is really bad, you may need to wear Personal Protective Equipment:
 - Make sure everything fits properly
 - Keep your PPE maintained
 - Properly dispose any PPE to make sure it doesn't contaminate anybody else
 - Be sure you know how to correctly wear your PPE and always do so
- Ask yourself these questions before you go to work during a pandemic. If any of the answers to these questions is yes, go to the doctor and do not come to work:
 - Do you have a fever higher than 100.5 F?
 - Have you had difficulty breathing?
 - Have you been coughing?
 - Do you have any other symptoms of the pandemic disease?
 - Do you think you have had contact with someone with the disease in the past 7 days?

General Health Precautions

The following health practices should always be followed, especially during a pandemic:

- Avoid touching your eyes, nose or mouth
- Cough or sneeze into a tissue or your upper sleeve
 - Wash your hands or put on hand sanitizer after you do so
- Clean and disinfect surfaces and objects
- Stay at home when you're sick
 - You will recover faster
 - Your work will not suffer (like it would if you were trying to do it when you were sick)
 - You prevent coworkers and customers from becoming sick

Parking Lot Safety

Policy

Accidents happen but for the most part they can be easily avoided if people are aware of their surroundings. Knowing what to do if you hit another car, or if somebody hits your car and how to avoid break-ins are vital elements to maintaining parking lot safety

Safe Work Practices

Avoiding Accidents

- The most important thing is not to become distracted and be aware of your surroundings at all times.
- While not convenient, sometimes it is best to park further away from the entrance, this could:
 - Make backing out easier
 - May help to avoid damaging vehicles
 - Provide more space to enter and exit the vehicle.
 - Provide exercise to help burn calories.
- Keep headlights on so other vehicles will notice you easier.
- Use proper turn signals.
- Avoid parking near large vehicles.
- Avoid pulling into spaces that are too tight.
- If your vehicle has a back-up camera, do not rely solely on this method. It is still wise to turn and look around.
- If possible, make eye contact with drivers and pedestrians.
- Drive only in the proper aisles, do not cut through parking spaces.

If You Hit a Car

- DO NOT drive away! If you are spotted by another person or security camera you could be charged with hit and run.
- Attempt to contact the owner of the vehicle, if this is not possible leave a note with the following:
 - Name
 - Phone number
- Notify your supervisor immediately.

If Somebody Hits Your Vehicle

- Notify your supervisor immediately.
- Take pictures of the damage, if at all possible.
- If the driver is around make sure to get all of their information.
- Ask others if they witnessed anything and would be willing to provide a “back up” statement.
- Ask owners of the building if they have security cameras in the parking lot.

Avoiding Break-Ins/Vandalism

- Locking the doors.
- Making sure the windows and/or sunroof are closed.
- Set the alarm if applicable.
- Items such as a steering wheel lock could act as a deterrent.
- Only parking in well, lit areas.
- Not leaving valuables in car (or at least not in plain sight)

Polite Driving

- Give pedestrians plenty of space.
- Avoid stealing parking places that other drivers have been waiting for.
- Angry glances, staring and finger gestures should be avoided.
- Do not tailgate or otherwise harass other drivers.

Personal Protective Equipment (PPE): Back Braces

Policy

OSHA and NIOSH neither recommend nor forbid use of the back brace for lifting heavy objects, instead reminding people to follow proper lifting techniques. Even though the usefulness of a back brace is debatable, proper lifting techniques are not, and you can avoid back injury as long as you follow those techniques.

Safe Work Practices

- Do not use your back to lift; instead lift with your knees
- Keep the load close to the body
- Do not twist your waist but keep your feet frozen while carrying something
- Keep the load between shoulder and knuckle height
- Ask for help if something is too heavy for you to carry by yourself
- Be sure your pathway is clear so you do not have to make any awkward movements

Personal Protective Equipment (PPE): Disposable Dust Masks and Respirators

Policy

Disposable dust masks and respirators are a safe and cost-effective option for some jobs. Do not use this type of respiratory protection unless you are sure it will be sufficient for your job and you understand all safety guidelines related to their use.

Safe Work Practices

- Do not use disposable respirators for lead, asbestos, cadmium, gases, vapors, fumes or smoke.
- Wearers of disposable respirators conduct a fit check each time they put on a respirator.
- Only choose respirators that display a label or statement of certification by NIOSH (National Institute for Occupational Safety and Health) on the packaging or respirator itself.
- Read all instructions provided by the manufacturer and adhere to the recommendations regarding the proper use, maintenance, cleaning, care, and warnings.
- Confirm that a good face seal is achieved by pinching the metal bar around your nose and making sure there are no gaps between the mask and your face.
- Never share disposable respirators with others.
- Keep respirators protected from moisture, dust or other contaminants at all times.
- Do not use a misshapen or bent disposable respirator.
- Prevent others from reusing a disposable respirator by breaking the straps when finished.
- Discard immediately if, at any time, the disposable respirator:
 - Becomes damaged or deformed;
 - No longer forms a seal;
 - Becomes visibly wet;
 - Becomes difficult to breathe through; or
 - Becomes contaminated in any way.

Personal Protective Equipment (PPE): Eye Protection and Preservation

Policy

Prevention is the key to protecting your eyes. Your ability to see is a very valuable asset. Don't take risks with your eyesight. Eye injuries are often permanent.

Safe Work Practices

- The primary prevention to eye injury is protection. Keeping the eyes shielded with the proper equipment is essential.
 - Safety Glasses: These are the most commonly used eye protection. They are made much stronger than street-wear lenses. They are impact resistant and come in prescription and non-prescription.
 - Goggles: These are very similar to the safety glasses, but they fit much closer to the eyes. These are necessary when working in situations which could result in chemicals splashes, fumes vapors and dust injuries.
 - Face Shields: Full-face shields are often required to guard against molten metal and chemicals splashes. These shields can be made to fit over a hard hat or to wear directly on the head.
 - Equipment Guards: Plant equipment and machinery is the source of many eye injuries. Be sure to use guards, screens and shields that are attached to any equipment. Make sure they are always in place and used along with additional eye protection.
- If an injury does occur, prompt attention is essential.
- Sudden Blow to the Eye
 - Apply a cold compress without pressure, or tape crushed ice in a plastic bag to the forehead and allow it to rest gently on the injured eye.
 - Seek immediate medical attention if pain continues, if vision is reduced, or if blood or discoloration appears in the eye.
- Penetration of the Eye
 - Do not wash out the eye.
 - Do not try to remove a foreign object stuck in the eye.
 - Seek immediate medical attention.
- Chemical Splashes
 - Check the label for specific first aid instructions and follow those instructions.
 - If washing of the eye is on the label for treatment, wash the eye out for at least fifteen minutes. Hold the eye open with your fingers and look into the running water.
- Foreign Particles
 - Flush the eye with water until the foreign object has come out.
 - If for some reason you cannot rinse the eye, loosely bandage it and get emergency medical treatment.
 - Never rub or try to remove objects embedded in the eye.

Personal Protective Equipment (PPE): Foot Safety

Policy

Proper footwear is important, not only for foot comfort but also for one's general well-being. Improper footwear can cause or aggravate existing foot problems. Workers may be exposed to various hazardous conditions on the job, including slippery surfaces, climbing hazards, handling or working around heavy equipment and machinery and working around electricity. These different working conditions may require different safety footwear to protect the foot, and the worker, from injury.

Safe Work Practices

- The OSHA regulations require foot protection when there is a danger of foot injuries. Depending on the specific hazards, employees may need to wear special foot protection such as:
 - Rubber or wooden-soled shoes for wet or slippery surfaces
 - Reinforced impact-resistant work shoes or boots to protect feet and toes from being bruised or crushed
 - Rubber or neoprene boots to protect against chemical hazards
 - Metal insoles or reinforced soles to protect against punctures
 - Non-conducting shoes, with no metal or nails, for working around electricity
- Even when special protective footwear isn't needed, work shoes or boots should:
 - Fit comfortably, without slipping or pinching the foot or toes.
 - Be solidly constructed of sturdy materials that can resist wear and tear.
 - Provide good foot support.
 - Have low heels and nonskid soles for good traction.
 - Be in good condition, with no rips or holes.
 - Fasten securely; laces shouldn't drag on the floor.

Personal Protective Equipment (PPE): Foot Safety (Metatarsal Guards)

Policy

Metatarsal guards play an important role in foot protection. Employees who wear steel-toed boots should wear metatarsal guards or use boots that come already equipped with the guards. Employees should follow their company's policy on when metatarsal boots and guards should be worn. By wearing metatarsal guards or boots, employees can help minimize their chances of foot injury occurring while on the job.

Safe Work Practices

Employees should wear metatarsal guards in accordance with their company's personal protective equipment (PPE) policies.

It is recommended that employees wear metatarsal guards when performing the following activities:

- Using pneumatic tools
- Operating or working near heavy machinery
- Lifting or transporting heavy loads
- When rolling heavy objects
- When working around or with heavy tools or objects that could fall or roll over the foot

Personal Protective Equipment (PPE): Hand Protection

Policy

Protecting your hands is an extremely important part of your job. Gloves can help protect your hands from cuts, burns, frostbite, abrasions, punctures, chemical exposure and biohazards. Protecting your hands by wearing the appropriate gloves can help you to achieve the highest productivity in the safest manner possible.

Safe Work Practices

- Leather Gloves
 - Protects against abrasions
 - Good for working with wood to protect against splinters
- Cut-Resistant Gloves
 - This type of glove is form fitting and allows for a lot of dexterity.
 - Good for working with knives and for gripping.
- Heat-Resistant Gloves
 - Good choice for applications requiring moderate protection or handling rough, sharp metal parts and for high heat protection.
- Chemical-Resistant Gloves
 - Since no one coating can protect against every chemical, it is important to know what chemical or chemicals you are working with so that you choose the right type of glove with the right coating.
- Vibration-Resistant Gloves
 - Jobs involving repetitive impact and vibration can lead to carpal tunnel syndrome and other debilitating injuries.
 - Good for when you are using pneumatic tools, rivet guns or jack hammers.
- Welding Gloves
 - Depending on the heat protection, durability and dexterity you require, will depend on the type of welding glove you will need.
- Mechanic Gloves
 - Designed for dexterity as well as guarding against scrapes and nicks.
- Cold-Condition Gloves
 - Designed for warmth, grip and dryness.
 - Good for those who work in refrigerated areas as well as outdoors.
- Disposable Gloves
 - Disposable gloves are used in food, industrial, light chemical, dental and medical applications.
 - Disposable gloves are available in polyethylene, vinyl, latex, and nitrile. They are also available in varying thicknesses (measured in millimeters) from 3 mil to 15 mil.

Personal Protective Equipment (PPE): Hard Hats

Policy

Wearing a hard hat is the first line of defense against head injuries on the job. Prevention of head injuries is an important factor on any job site.

Safe Work Practices

- Maintenance of your hard hat will help it to last longer and keep you protected. Doing a shell degrading test would include the following:
 - Compress the shell inward from both sides about 1 inch.
 - Release without dropping the shell.
 - The shell should return to its original shape quickly.
 - If elasticity is not similar to a new shell, it should be replaced.
- The hard hat shell should be replaced if:
 - The brim or shell is nicked, cracked, perforated or deformed.
 - Chalking or fading of the surface.
 - Flaking of the surface.
 - The shell is stiff or brittle.
 - The helmet has been struck by a falling object.
 - The helmet has had an electrical contact.
- Check the suspension and if you see any of the following, replace the suspension:
 - Cracking
 - Tearing
 - Fraying
 - No longer holds the shell from 1 to 1-1/4 inches away from the head.
- Cleaning
 - Remove the head liner and inspect for defects. (If there are defects, replace the liner.)
 - Immerse the shell in hot water and detergent for one minute.
 - Scrub.
 - Rinsed in clear hot water.
 - Inspect for defects. (If there are defects, replace the shell.)

Personal Protective Equipment (PPE): Hearing Protection

Policy

Hearing protection is just one part of a complete hearing conservation program that should include engineering controls, administrative controls, and available hearing protection devices. Employees must obey all applicable guidelines in the hearing conservation program, including wearing hearing protection devices when necessary.

Safe Work Practices

The choice of hearing protective devices may depend on the noise level, comfort, and the suitability of the hearing protection device for both the worker and the environment. The three general types of hearing protection are:

- Ear plugs are pre-formed or moldable pieces of foam that are inserted to block the ear canal. These typically have a noise reduction rating between 20 and 30 which means that wearing them will reduce the existing noise by 20-30 decibels based on laboratory test data.
- Ear caps seal the opening to the ear without actually entering the ear canal. These typically have a NRR between 20 and 30 decibels.
- Ear muffs consist of a headband connecting two hard outer cups that fit around the ear and contains sound-reducing material with soft ear cushions inside. These typically have a NRR between 20 and 35 decibels.

Personal Protective Equipment (PPE): Knee Pads

Policy

The knee is the largest joint in the body, making it the most susceptible to injury. Unfortunately, the knees are also made up of the slowest healing tissues (cartilage and tendons), which means that injuries in this area heal very slowly. If your work exposes you to pressure or impact to the knees in any way – wearing knee pads is a necessity.

Safe Work Practices

- Types – Knee pads wrap around your knee joint, and provide needed support to that area. The amount of support you need should determine what kind of knee pads to wear.
 - Cloth Brace – these slide on like cuffs and protect the back of your knee as well as the knee cap in the front. They fit snugly to offer gentle support without being bulky.
 - Soft Cap – provides more cushion and support than a cloth brace, while still allowing free range of motion and flexibility.
 - Hard Cap – offers the most protection from long periods of kneeling. Includes a rigid outer shell that may be rubberized – ideal for flooring projects, as the rubber will not scuff new floors as they are put in.
- Jobs that put pressure or strain on your knees should always be done with knee pads
- Make sure you wear the right type of knee pad for the job
- The added support that knee pads provide during jobs that require frequent use of your knees should increase your performance and speed
- Immediately call your healthcare provider if you are experiencing sudden or increased pain to your knee joints

Personal Protective Equipment (PPE): Respiratory Protection

Policy

Respirators are a means of protecting you from harmful fumes, dust, vapors and gases that may cause cancer, lung impairment or other respiratory diseases. The improper use of respiratory equipment can cause death so proper use and maintenance are of extreme importance.

Safe Work Practices

- Respirator selection – use the right respirator for the job.
- Respirator should be stored in a clean and sanitary location.
- Respirators should be inspected before and after each use.
- Check for defects such as tears in the facepiece, missing straps and missing valves.
- Respirators should be replaced if damaged or not working properly.
- Tight-fitting respirators should not be worn by those with beards.
- Know when and where to use respiratory protection.
- Know what type of respirator protection to use.
- Maintain your equipment and replace when needed.
- Get re-evaluated every year.
- Employees should leave the area where respirators are required for any of the following reasons:
 - To replace filters or cartridges.
 - When they smell or taste a chemical inside the respirator.
 - When they notice a change in breathing resistance.
 - To adjust their respirator.
 - To wash their face or respirator.
 - If they become ill.
 - If they experience dizziness, nausea, weakness, breathing difficulty, coughing, sneezing, vomiting, fever or chills.

Personal Protective Equipment (PPE): Spill Cleanup

Policy

Whether you are working in a research laboratory or a chemical processing plant, spills can be hazardous to your health. Therefore, if you need to clean up spills, you must wear the proper Personal Protective Equipment (PPE).

Safe Work Practices

- Have the proper PPE on hand before there are any spills
 - Spills won't wait for you to find and buy the right PPE because they happen without warning
 - Gather information about all chemicals that could spill so you are prepared for the worse that can happen
 - Assess what you have on hand: you may already have the correct PPE to deal with spills if you are exposed to the chemical as part of regular work
- Keep your PPE in an easily accessible area
- Keep your PPE clean and regularly maintained
 - Dirty or fogged lenses could impair vision
 - Holes in gloves, suits, or shoes could allow hazardous substances to come into contact with the body
- Participate in training and drills
 - Get used to your PPE so when a real emergency happens, you aren't wasting time trying to navigate the awkward suits, gloves, masks, or boots

Pinch Points

Policy

A pinch point injury on the job can be seriously disabling and can cause amputation or even death. Pinch points can occur anywhere a part of the body can get caught between two objects. This hazard is everywhere in the workplace.

Safe Work Practices

- Keep your mind on task and focus on keeping all body parts out of the 'line of fire'
- Be mindful of where you put your fingers, hands and feet.
- Before you put any body part between objects, ask yourself, "What would happen if this moves?"
- Practice good housekeeping by keeping your workplace clean and orderly.
- Always use the proper tool for the job.
- Wear suitable gloves for the hazard. Keep in mind that gloves should not be worn while working around rotating equipment.
- Never tamper with machine or tool guards. They are there to protect you.
- Secure materials so that they cannot roll or fall. Stacked materials should be strapped and tag lines should be used to maneuver lifted loads.
- Use doorknobs / handles and drawer handles to prevent slamming your finger or hand in a pinch point.

Pressure Washers

Policy

Pressure washers operate at pressures from 1,000 to 5,000 psi, meaning that they are capable of causing serious property damage and personal injury. To avoid this, be sure to be smart and follow the proper procedures when using pressure washers.

Safe Work Practices

- Only use chemicals approved for use with that specific pressure washer
- Check the engine oil level every time you use the washer
- Check the parts of the safety washer to make sure they are in good shape and properly connected
- Never refuel a hot or running engine
- Wait at least two minutes after it is turned off before refilling
- Be sure electric pressure washers are properly connected and grounded
- Identify and know how to operate emergency fuel cut offs
- In winter:
 - Store the pump in a warm area
 - Use compressed air to release the remaining fluid
- Connect and turn on the water supply before you turn on the pressure washer
- Set the trigger safety lock when the gun valve is not in use
- Be aware of the location of electricity sources such as power lines and fuse boxes and keep the water away from them
- Get used to the pressure washer
- Begin with the spray far away from the surface and gradually find the right distance for cleaning-to close may destroy the surface being cleaned
- Be aware that the washer may “jump” when it is first turned on
- Do not exceed the manufacturer’s safe operating pressures for hoses, valves, and other fittings
- Never leave the unit unattended
- Try not to use gasoline-powered washers inside; if you must use them inside, be sure the area is well ventilated to avoid carbon monoxide poisoning
- Never point the gun at yourself or another person
- Personal Safety
 - Wear safety goggles or face shields when operating a pressure washer
 - Wear ear protection to prevent hearing loss
 - The pressure can cause loss of balance
 - Use an extension like a spray arm to help clean areas that are out of reach
 - Never wear open toed shoes

- Never attempt to rinse off any part of your body with the water jet; it can easily penetrate skin

Preventing Injuries from Falling Objects

Policy

Falling objects can cause injuries and death, not only for workers but for the general public as well. In order to prevent these types of injuries and fatalities, remember the following tips.

Safe Work Practices

PROPERLY TRANSPORTING THE LOAD

- If possible, transport loads at times when fewer people are present
- Have a spotter in place to tell you where it is safe to move and swing the load
- Never assume other people can see you or your loads
- Do not stack loads too high
 - Stack loads to prevent sliding, falling, or collapse
- If bad weather increases the danger for transportation, focus on another project until you can transport the load safely

KEEPING YOUR WORKSPACE SAFE

- Do not leave loose items or tools on window ledges, shelves, cranes, or working platforms
 - Stack them on a flat surface or a safe, designated storage place
 - If necessary, cross tie or cover them to keep them in place
- Use close boarded platforms or toe boards so it is more difficult for anything on the platform to fall over the edge
- Use tool and material lanyards
- Use canopies or nets to catch falling items
- Never throw materials or tools
 - Use lanyards or buckets to transport tools up and down
- Clean up debris immediately
- Report any loose supports or platforms to your supervisor

SAFETY ON THE GROUND

Although workers above will try hard to make sure that nothing falls, workers on the ground have a responsibility to be safe as well.

- Wear Personal Protective Equipment
 - Hard hats
 - Safety boots
- Do not walk under loads
- Follow warning signs and do not go into areas that are off-limits
- Be alert at all times

Railroads: Safely Working Near Railroad Tracks

Policy

All over the country there are miles upon miles of railroad tracks. Depending on the area and industry, employees may be required to conduct work near railroad tracks. Working near railroad tracks can potentially expose employees to harm. Following the safe work practices presented in this lesson will help ensure employee safety.

Safe Work Practices

Before going to work near the tracks, employees should do the following:

- Tie back long hair and remove all jewelry.
- Inspect all provided PPE for damage. Report damaged PPE to your supervisor. Do NOT wear damaged PPE.
- Wear clothing that will be appropriate for the day's weather.
- Ensure that everyone on the team is aware of their responsibilities for the day.
- Inspect all tools and equipment before getting on site. Report damaged or malfunctioning tools and equipment to your supervisor. Do NOT use or operate damaged tools and equipment.

When working near railroad tracks, employees should do the following:

- Stay alert and listen for bells, horns, or other signs that a train may be approaching.
- Unless otherwise notified, treat all tracks as if a train will be on the tracks.
- Follow all instructions that are given by the employee in charge or roadway worker in charge. Additionally, employees should follow any instructions that are given by the watchman or lookout.
- Stay at specified distances from tracks when work is not being directly done on the tracks.
 - Most tracks require between 15-25 feet distance from tracks. The railroad company and any local departments should inform contractors ahead of time of specified distances that will help keep employees safe while working near the tracks.
- Ensure that all equipment procedures are followed.
- Be aware that any on-track equipment could move at any time.
- Use all tools and equipment in accordance with the manufacturer's instructions.
- When required, ensure that all lockout/tagout procedures are followed.

To avoid accidents, employees should NOT do the following when working near railroad tracks:

- Do NOT foul the tracks. Employees should not walk on or place tools and equipment on the tracks, unless the tracks are being worked on. Employees or tools and equipment that are on the tracks could be struck by a train resulting in an accident.
- Do NOT ignore alarms, horns, signals, or instructions.

- Do NOT stand next to the tracks when a train approaches your location. When a train approaches, employees should move a safe distance away from the tracks to avoid accidental contact which could result in bodily harm.
- Do NOT walk in front of or behind a train. Train operators have limited vision in both the front and rear of the train and could hit unseen employees.
- Do NOT assume that once a train has passed that is safe to approach the tracks. There could be multiple trains on the same track, or if there are two sets have tracks, have two or more trains coming in alternate directions. Employees should only resume work when they have been notified by designated employees that it is safe to do so.

Rainy Conditions

Policy

Rain can be an unanticipated danger in many worksites, and it is important that employees are aware of general safe practices when working in or around the rain.

Safe Work Practices

- Employees should move cautiously. The weather may tempt you to work more quickly than normal to get out of the rain, but this can be dangerous. The rain causes slick surfaces, so you must work slowly and deliberately – especially when climbing ladders!
- All tools should have textured or non-slip handles when working in high moisture conditions. Never use electrical tools or equipment not rated for outdoor use when working in the rain.
- Protective footwear with deep treads for traction should be worn to prevent slipping. Be sure to cover your boots or shoes with your pant legs instead of tucking them in.
- Wear layers when you will be working out in the rain for extended periods. Be certain that your coat is well-ventilated and does not restrict movement so it can be worn comfortably.
- When using hand protection, choose gloves with strong, slip-proof grips. Gloves should be sufficiently tight and long enough to be covered by your coat sleeves.
- If you wear glasses or goggles, it is important to use anti-fog spray or wipes on them before going outside. Hoods or hats can be used to keep rain out of your eyes.
- It is especially important during bad weather to make sure work areas are adequately lit.
- High visibility clothing must be worn in areas with heavy machinery or traffic.
- For those that are required to drive at work, it is vitally important to avoid accidents by:
 - Keeping both hands on the steering wheel at all times.
 - Turning on your headlights not only for your visibility, but so that other drivers can see you.
 - Keeping at least five car lengths of space in between you and the car ahead of you.
 - Driving at or BELOW the speed limit, because your traction is reduced in bad weather.
 - Avoiding flooded roads and standing water, if possible.

Ramp and Runway Safety

Policy

Ramps and runways can offer alternative ways to access areas of a construction site. To help ensure employee safety, ramps and runways should meet certain requirements.

Safe Work Practices

When ramps and/or runways are provided for employee access, they should meet the following requirements:

- Ramps and/or runways that are erected for use should be no less than 20 inches in width.
- Ramps and runways should be secured and supported as to avoid deflection and springing action.
- Inclined runways sloped two feet in 10 feet or more should have securely fastened cleats or other means to improve footing. When cleats are used, they should be eight inches or more in length and no more than 16 inches apart.
- Planks that are used for raised walkways, runways, or sidewalks should be secured against displacement.
- Planks should be uniform in thickness and all exposed ends should be provided with beveled cleats as to prevent tripping.

Ratchet Strap Operation and Safety

Policy

Proper application, removal, and care of your ratchet tie-down straps will help them to be as effective as possible. Take care of your straps according to the manufacturer's recommendations as well as the tips included in this lesson – and at the same time, dispose of them as soon as they show any signs of damage.

Safe Work Practices

- Applying the straps
 - Attach the hook to a secure anchor point.
 - Guide webbing across the cargo, making sure there is no twisting over the load.
 - Attach the hook with ratchet mechanism onto the opposite side anchor point.
 - Making sure that the loose end is on top, thread webbing through the center slot of the spindle.
 - Pull the strap to remove most of the slack, but not so tight that it damages the cargo.
 - Crank the ratchet handle back and forth to tighten the strap until there is sufficient tension.
 - Close the ratchet handle completely to lock it in place.
 - Secure the extra webbing so that it does not come loose in the wind.
 - Before driving, check all tie-downs to make sure they are adequately secure.
 - It is recommended to check all of the tie-downs again after 20-30 miles of driving.
- Removing the straps
 - Pull and hold the release handle while lifting the grip to release.
 - Open the ratchet mechanism completely.
 - Pull the loose webbing free from the device.
 - Release the hooks from their anchor points.
- Additional tips
 - Practice applying and removing the ratchet tie-down straps before transporting the load.
 - Edge protectors may be necessary to keep the webbed straps free from damage.
 - Make sure the tie-down straps are clean and dry before storing.
 - Do not store the ratchet straps in direct sunlight.
 - To clean, scrub with water and a mild detergent without any bleach additives. Hang to air dry.
 - Broken stitching, burns, stiff, or unevenly worn tie-down straps are signs that the strap needs to be replaced.

Rattlesnakes in California

Policy

Rattlesnakes can cause serious injury to humans on rare occasions. The California Poison Control Center notes that rattlesnakes account for more than 800 bites each year with one to two deaths. Most bites occur between the months of April and October when snakes and humans are most active outdoors. About 25 percent of the bites are “dry,” meaning no venom was injected, but the bites still require medical treatment.

Safe Work Practices

- Do not step or put your hands where you cannot see. Step ON logs and rocks, never over them. Check out stumps or logs before sitting down.
- Be careful when stepping over the doorstep as well. Snakes like to crawl along the edge of buildings where they are protected on one side.
- Do not handle a freshly killed snake, it can still inject venom.
- Stay calm
- Wash the bite area gently with soap and water
- Remove watches, rings, etc., which may constrict swelling
- Immobilize the affected area
- Transport safely to the nearest medical facility

Reach Lift Safety

Policy

Employees must do their part to avoid injuries or accidents involving the reach lift by following all of the safe work practices during operation AND when charging the battery. Reach lifts should only be operated by employees who have been trained, authorized by their employer, and agree to the safety rules.

Safe Work Practices

- Never operate this machine without a seatbelt securely fastened.
- Passengers are not permitted to ride the reach lift unless there is an extra seat and seatbelt available for them.
 - Riding on the forks is prohibited.
- Do not operate in heavy dust, fog, smoke, or any other conditions that may impair your vision.
- When operating in an area with power lines present, call to have the electricity turned off if possible, and always maintain a safe working distance from the lines.
- All operators must know the maximum load capacity of the reach lift they will be using.
- Before lifting or moving a load, employees should consider:
 - Will the load shift during movement?
 - Does the load fall within the maximum load capacity set by the manufacturer?
 - Is the intended location for the load stable and unoccupied?
- Never attempt to traverse hills, ditches, or other obstacles that exceed the manufacturer's recommendations.
- Avoid throwing off your center of gravity by traveling with the forks as low as practical and slowing for turns.
- Always pay attention to the location of on-foot personnel when working on job sites.
- Never attempt to operate the reach lift from anywhere other than the operator's seat.
- Battery charging
 - Make sure the charger is the correct one for the battery you are about to charge.
 - All ignition sources must be kept away from the battery charging area.
 - Turn off the charger when you are finished and before unplugging the battery.
 - Let the battery cool completely before you put it back into the machine.
 - Any employee who works in a battery charging area should be familiar with their employer's emergency action plan regarding battery acid spills.

Reach Truck Safety

Policy

Reach trucks serve a great purpose in many industries, but can also be extremely dangerous if they are not properly operated. Employees following good safe work practices and being aware of their surroundings are paramount to safely operating a reach truck.

Safe Work Practices

- Always use the roof rail and the step when getting on or off the reach truck.
- Passengers should never be allowed on the reach truck.
- Keep all body parts in the vehicle while driving.
- Always make sure that nobody is walking or standing under the forks.
- Watch out for people in the work area, especially those on foot that may cross your path.
- Only lift people with certified accessories, like a cage.
- Make sure to position the load carefully on the shelves.
- Never drive with the load excessively raised, keep it at a low and safe level.
- Always use the horn to alert others especially when:
 - Crossing aisles
 - Turning corners
 - Backing-up
- Always turn off the truck before leaving it.
- Only handle loads that are properly secured.

Rebar Cutter/Bender Safety

Policy

A rebar cutter/bender is a tool widely used in building and construction. Working around rebar can be very dangerous but the risk of danger can increase while cutting rebar. There is always a chance that pieces of rebar can be “shot off” at high speeds, causing serious injury or death. These safe work practices have been established to ensure employee and bystander safety.

Safe Work Practices

- The work area should be kept clean and be well lit at all times.
- Bystanders should be kept away while employees are operating the cutter/bender.
- Any and all distractions should be avoided.
- Do not operate in areas where there is any danger of explosions occurring.
- Keep hands, feet and other body parts away from the cutting area.
- Employees should stay alert and be aware of their surroundings.
- Employees should make use of all available safety equipment, this includes, but is not limited, to:
 - Eye Protection
 - Dust masks
 - No skid shoes
 - Hard hat
 - Hearing Protection
- Employees should ensure the switch is in the off position before plugging in to avoid accidental starting.
- Keep proper footing and balance at all times, do not overreach.
- Only use this tool for its intended purpose.
- Do not force the tool, the tool will do the job better at the rate it was designed.
- Do not use the tool if there is a faulty power switch.
- Disconnect from the power source or battery pack when performing maintenance on the tool.
- Do not expose the tool to rainy or wet conditions due to a risk of electric shock.
- Do not carry the tool by the cord, as this can cause damage and increase the risk of electric shock.
- Cutting tools should be kept sharp and clean.

Rebar Safety

Policy

Rebar, short for reinforcing bars, are steel rods used in concrete. Rebar often causes injuries because they jut out of concrete and can cause cuts, scrapes, falls, and even impalement. Therefore, when you work with rebar, remember these safety tips.

Safe Work Practices

- Watch where you're going and be aware of your surroundings so you do not trip on the rebar
- Consider wearing work gloves when handling rebar so you do not scrape your hands
- Practice proper lifting techniques so you do not strain your back while transporting rebar
- Wear eye protection and gloves when you are bending rebar, and be very careful with the equipment

Release or Threatened Release of Hazardous Materials or Waste and Emergency Response (Minor On-Site Incidents)

Policy

The release or threatened release of a hazardous material or waste can be handled by employees if it is small. Remember, your safety and the safety of your coworkers comes first. If you do not feel comfortable handling a spill, alert someone who is. If you do not know what the substance, object, or chemical is, do not hesitate to call in outside help. When employees utilize the safe work practices provided, they will help protect themselves and the public from the release or threatened release of a hazardous material or waste.

Safe Work Practices

Due to the varied nature of hazardous materials and waste, you should be prepared for any accidents that may occur by performing the following safe work practices:

- Know your company's emergency response plan. If you don't know the location or have questions, ask your manager, supervisor, or competent person.
- Know who you report an accident to; reporting an accident quickly will help in stopping and containing the material.
 - If your emergency response plan has a select team of people designated as the hazardous clean up crew, know who is on the team and who to contact in the event of an accident.
- Become familiar with all containment and cleaning procedures.
- Attend and complete all required trainings.
- Know where all PPE is stored. PPE should be inspected daily or before use.
- Ensure that items are stored properly and in compliance with all manufacturer instructions. Storage should also comply with all local and federal laws.
- Know the location for evacuations or informational meetings. This spot should be a safe distance from the spill.

Should a spill or release of fumes, mists, or gases occur, do NOT panic. Use your prior knowledge of policies and procedures to help you contain and clean up the spill or stop the release of any fumes, mists, or gases.

- Should the material get on you, immediately clean it off in accordance with the manufacturer's instructions. Do NOT breathe in any fumes, mists, or gases.
- Report the incident in accordance with your company's emergency response plan.
- Only those employees who are trained and wearing the proper PPE should clean and contain the spill or stop the release of fumes, mists or gases. Do NOT attempt to clean up or handle hazardous materials and waste if you are not wearing the proper PPE.

- The material should be cleaned up in accordance with manufacturer's instructions, as well as all local and federal laws.
- All employees who are not helping with the clean up should be kept away from the area of the spill or release. This is to help in the prevention of injury and exposure.
- All disposal procedures should be followed once the spill has been dealt with. This includes disposing of material in accordance with all local and federal laws. Depending on the substance, a HAZMAT team may need to be contacted for clean up or disposal instructions.
- PPE should be disposed of or decontaminated in accordance with local and federal laws.
- Ensure that all documentation has been filled out and filed in accordance with company policy, as well as local and federal laws.

Repetitive Motion Injury

Policy

Understanding the causes and symptoms is the first step in preventing RMI. If you think you have a Repetitive Motion Injury, let your supervisor know and see your physician as soon as possible.

Safe Work Practices

To help in the prevention of RMI's, employees could do one or more of the following:

- Take scheduled breaks.
- Vary or rotate tasks whenever possible.
- Keep your hands warm. Cold hands tend to grip tools and materials too tightly.
- Shake out your hands or rotate your hands and wrists periodically.
- Keep wrists in a neutral position.
- Avoid prolonged bending of the wrists.
- Avoid excessive pressure on parts of the hand, wrists or arm.
- Make adjustments at your workstation.
- Grip tools correctly
- Wear protective equipment when using tools with high levels of vibration, especially below 1,000 cycles per second.
- Wear proper fitting gloves when required. Vibration absorbing padding in gloves can lessen the adverse effects of some tools.
- Avoid wearing watches, bracelets or tight clothing that hampers wrist circulation.
- Grasp objects with the whole hand if possible.

Reporting Work-Related Injury and Illness

Policy

When an injury or illness occurs at the workplace, an employee needs to report it. Even a minor injury should be reported. Some employees may think that minor things, such as a paper cut, do not need to be reported; after all they can just put a band aid on it and return to work. However, employees need to remember that even paper cuts can get infected. Both you and your supervisor want you to be able to work and part of that includes getting injuries and illnesses treated and reported.

Safe Work Practices

Employees should always follow their company's specific procedures for reporting injuries and illnesses that occur at work. Injuries and illnesses should be reported immediately or as soon as possible. When reporting an injury or illness, an employee should do the following:

- Report the injury or symptoms immediately (or as soon as possible if you are seeking medical treatment) to your supervisor or designated person.
- Give details about the injury or symptoms. Details include:
 - Date
 - Time
 - Description of the work area and activities being performed
 - The names of eyewitnesses or coworkers who aided the employee
 - Symptoms (if applicable)

Note: If possible, give an estimated time of when symptoms first appeared.

- Fill out any forms that relate to the reporting of a work-related injury or illness.
 - Depending on the situation, your employer may give you a form for your medical provider or other medical professional to fill out. Return this form as soon as possible to your supervisor or designated person.
- Keep your supervisor or designated person up-to-date on any ongoing medical treatment or accommodations that you are receiving or will need.

Respirable Crystalline Silica

Policy

Crystalline silica can cause silicosis and other non-reversible diseases when inhaled, but these diseases are completely preventable if employees reduce their exposure and follow all of the required safe work practices.

Safe Work Practices

Employees who work with silica can protect themselves by following all of the required safe work practices, such as:

- Reducing silica dust exposure by:
 - Using materials that do not contain silica, whenever possible.
 - Using water to suppress the amount of dust generated, or vacuums to capture dust at the source.
 - When water or vacuums are not feasible, or if the exposures are still high even with these controls, a NIOSH approved respirator must be used (however, respirators won't protect those working close by like other control measures will).
- Never eat, drink, or use tobacco products in dusty areas.
- Wash hands and face before eating, drinking, or smoking outside of dusty areas.
- Change into disposable or washable work clothes at the worksite
- Do NOT blow or shake your clothes to remove the silica dust
- Shower (if possible) and change into clean clothes before leaving the worksite to prevent contamination of other work areas, cars, and homes.
- Park cars where they will not be contaminated with silica.
- Make sure to participate in training and take advantage of any health or lung screening programs offered by your employer.

Respirators: Dust (Nuisance) Masks

Policy

Dust masks are used in a variety of applications including mowing, gardening, sweeping and dusting. Their purpose is to provide protection against nuisance dust only and is used for employee comfort.

Safe Work Practices

- Prior to use of dust (nuisance) masks, employees should review the contents of Appendix D.
- Do not wear dust masks in environments which require the use of particulate (filtering facepiece) respirators.
- Ensure that the use of dust (nuisance) masks does not create a hazard in itself.
- Heed all instructions regarding the dust (nuisance) mask limitations.
- Employees should not share dust (nuisance) masks.
- Keep track of your dust (nuisance) mask so that you do not mistakenly use someone else's.
- Replace dust (nuisance) masks daily or when they become soiled, damp or contaminated in any way.
- Discontinue use if breathing becomes impaired.

Rigging Safety

Policy

Employees who work with rigging must understand its maximum load capacity, proper care and storage, and splicing guidelines to make sure it stays in top condition. Rigging that has been handled improperly may cause serious damage and injury if it fails while hoisting a load.

Safe Work Practices

PROPER USE AND CARE

- Visually inspect rigging for defects before working, and never use any rigging that may cause a hazard. Things to watch out for may include:
 - Abnormal wear.
 - Powdered fiber between strands.
 - Broken or cut fibers.
 - Variations in the size or roundness of strands.
 - Discoloration or rotting.
 - Distortion of hardware in the sling.
- Rigging equipment must have permanent and legible identification markings that indicate the recommended maximum load capacity.
- Rigging must not be loaded beyond its maximum load capacity, except for test purposes.
- All components of rigging must be free from any kinks or twists before use.
- Make sure there are no lines or components twisted around each other.
- After use, rigging must be stored so as not to become an entanglement hazard for other employees and where they will be safe from moisture, chemicals, or excess heat.

SPLICING

- In manila rope, eye splices should contain at least three full tucks, and short splices should contain at least six full tucks (three on each side of the center line of the splice).
- In synthetic fiber rope, eye splices should contain at least four full tucks, and short splices should contain at least eight full tucks (four on each side of the center line of the splice).
- For all eye splices, the eye must be sufficiently large to provide an included angle no greater than 60 degrees at the splice when the eye is placed over the load or support.
- Employees must never use knots in place of splices.
- Clamps that are not designed specifically for the type of rigging used must not be used for splicing.

Road Rage

Policy

The vast majority of road rage incidents can be easily prevented if cooler heads are allowed to prevail. Mistakes are made by everybody while driving, and you cannot control the way other people act while they are driving. It is up to each individual to control their own anger and to avoid conflict.

Safe Work Practices

- Do's
 - Do realize that the other driver is probably just as frustrated as you are.
 - Do use positive open handed gesture such as waving (the five finger type)
 - Do say or behave as if apologizing, especially if you are in the wrong.
 - Do be aware of the precursors and triggers that affect you.
 - Do remember to limit the amount of caffeine that you drink. Excessive caffeine can alter your character.
 - Do stay safe and alive for family and friends.
- Don'ts
 - Don't respond in an aggressive manner.
 - Don't escalate the situation.
 - Don't make eye contact with an aggressive driver.
 - Don't get in somebody's face (think of how you would react if somebody were to do that to you)
 - Do not stop the vehicle
 - Don't get out of the vehicle to have a verbal or physical confrontation for ANY reason as this could lead to a potentially violent confrontation.

Safety Signs

Policy

Signs are never a substitute for good safety procedures and training, they are useful to remind us of hazards and ways we can protect against them. Always take seriously the information on a sign whether in the workplace or on the road. You can prevent injuries and save lives if you understand the signs and the hazard they are warning about.

Safe Work Practices

- Danger Signs
 - Red and black with white field
 - Indicate an immediate hazardous situation which could result in severe injury or death
- Warning Signs
 - Orange with black lettering
 - Indicate a potentially hazardous situation which could result in severe injury or death
- Caution Signs
 - Yellow with black lettering
 - Indicate a hazardous situation which may result in a moderate injury
- Notice Signs
 - Blue and white
 - Indicate company policies relating to the safety of personnel or protection of the property
- Safety First Signs
 - Green and white
 - Indicate general safety instructions as respect to safe working conditions
- Special Safety Signs
 - Various colors depending on the sign and are usually signs for biological hazards and radiation hazards
 - Alerts us to the present or potential presence of blood or other biological hazards
- Safety Instruction Signs
 - Green and white
 - Remind you to report accidents, help locate first-aid equipment and direct you along an evacuation route

Safety Vests

Policy

In order to avoid accidents due to low visibility, wear the correct safety vest for each task as mandated by the ANSI.

Safe Work Practices

- Class 1 safety vests are good for workers in controlled environments, such as loading docks and parking lots- basically for people who work around traffic that is travelling 25 mph or less. Class 1 safety vests should have at least 155 square inches of reflective material. Examples of workers who wear Class 1 safety vests are:
 - Parking attendants
 - Warehouse personnel
 - People who get shopping carts from parking lots
- Class 2 safety vests are for people who work near traffic that goes faster than 25 mph and who won't be devoting their full attention to the traffic. Class 2 safety vests should have at least 201 square inches of reflective material. Examples of workers who need to wear Class 2 safety vest are:
 - Forestry Workers
 - Law Enforcement Personnel
 - School Crossing Guards
 - Airport Baggage Handlers & Ground Crew
 - Parking and Toll Gate Personnel
- Class 3 safety vests are for workers who deal with traffic traveling at speeds of 50 mph or higher and who work in all manner of weather. Class 3 safety vests are for workers who face serious hazards or whose task load requires a shift of attention away from their work. The enhanced visibility must be on the chest, back, arms and possibly legs. Class 3 safety vests should have at least 310 square inches of reflective material. Examples of workers who need to wear Class 3 safety vests are:
 - Accident Site Investigators
 - Emergency Responders
 - Railway Workers
 - Utility Workers
 - Survey & Flagging Crews

Seat Belt Safety

Policy

The law requires that you wear your seat belt. Seat belts protect people from needless death and injury. But whether it is because they are in a hurry, distracted, or they simply forget, many people don't wear their seat belts, and thousands die as a result. Therefore, it is important to remember to buckle up, even when traveling short distances.

Safe Work Practices

- Keep your seat belts in good condition
- Be sure to alert your employer if the seat belt is too worn or old. Wearing a seat belt is pointless if it's so worn it doesn't work.
- Wear the seat belts correctly
- Always buckle up before driving or riding in a vehicle. This goes for everyone in the vehicle, whether you're sitting in the front or the back.
- Wear the lap belt low across the hips and below your stomach.
- Wear the shoulder belt over your collarbone, away from your neck. It should cross over your chest.

Securing Ladders

Policy

Falls from ladders can be easily prevented with adherence to safe work practices and proper training. Proper placement, inspection and securing of ladders are also key factors in safety and fall prevention.

Safe Work Practices

SETUP

During set up the footing should be:

- Kept level by digging out the ground or using ladder levelers.
- On hard ground the feet of the ladder should be rested flat and free of debris.
- On grass or soft ground the feet could be flipped up and the spiked ends driven into the ground.
- The ladder should be positioned at a 75-degree angle.
- Secure the base of the ladder to prevent accidental movement by using one or more of the following:
 - Using a ladder with non-slip feet.
 - Nail a cleat to the floor.
 - Anchoring the ladder at the base with a strap or rope.

SECURING METHODS

- Using a cleat- Installing a cleat behind the feet of the ladder can prevent the ladder from slipping.
- Using a ladder stabilizer- This is especially essential when working around large windows.
- Tie off the ladder top- This can be done by attaching eye screws to a 2x4, then attaching the 2x4 to the fascia. Tie the ladder to the eye screws to avoid the top of the ladder slipping.

OSHA REQUIREMENTS

- A metal spreader or locking device should be provided on each stepladder to hold the front and back sections in an open position when the ladder is being used.
- Ladders should be used only on stable and level surfaces unless secured to prevent accidental displacement.
- Ladders should not be used on slippery surfaces unless secured or provided with slip-resistant feet to prevent accidental displacement.
- Extension ladders should always extend 3 feet above the point of contact when a person could potentially be walking on the surface.

Sexual Harassment in the Workplace

Policy

While isolated incidents of teasing or offhand comments are not against the law, harassment that is frequent, severe and creates a hostile work environment is illegal and punishable by law. Sexual harassment is psychologically and emotionally damaging, often causing humiliation, loss of dignity, and damage to reputation and career. All employees have the responsibility of behaving in a way that enables others to work in an atmosphere free from harassment of any kind.

Safe Work Practices

If you are a victim of sexual harassment, it is not your fault. Still, the decision to report sexual harassment can be a stressful one. In order to ensure that appropriate steps are taken to correct the problem and prevent it from continuing, you need to take action:

- Tell the harasser that you find their behavior offensive and you want it to stop;
- Report the incidents to your supervisor, general manager, or president of the company.

Situational Awareness

Policy

Situational awareness is a method of forming conclusions and making decisions based on adding new information from your surroundings to previous knowledge. It can be difficult to understand because it is more of a mindset than a skill, but situational awareness can help you anticipate trouble and react accordingly.

Safe Work Practices

- Recognize that threats exist - In some instances, denial of this fact can be harmful because it will slow your reaction time to an imminent threat. It has been said that the three main obstructions to good situational awareness are complacency, apathy, and denial.
- Trust your intuition - Your subconscious may notice subtle changes in your environment that you are unable to explain, and it is advisable to follow these promptings to avoid any trouble.
- Stay aware of your surroundings - Allowing yourself to daydream while you drive or text as you walk to your car in a dark parking lot are examples of things that take away your focus and reduce your ability to anticipate danger. If you put all of your focus into one thing, it takes away the previously mentioned ability of your subconscious to detect a possible risk.
- Know your level of focus – Are you zoned out, alert, on high alert, or frozen? It is your job to know your level of focus at all times, and determine if it is appropriate for the current situation.
 - Zoned out – distracted, not paying attention, or completely unconcerned.
 - Alert – Calmly paying attention to your surroundings and being mindful of possible objects or persons that may become a threat.
 - High Alert – Directing all of your focus on your environment. This costs more mental energy to maintain and the stress of it may become draining if continued for an extended period of time, especially if the situation does not require it.
 - Frozen – a panic stricken state that leaves you unable to react.
- Practice – If you don't naturally have good situational awareness, you can improve that with the following exercises:
 - Consciously increase your level of focus to “high alert” for a short time. Plan an escape route, note exits, and be aware of foot traffic. Soon you will find yourself noticing such things easily and automatically.
 - When in public, pay attention to those around you and, one at a time, attempt to determine their mood, attitude, or background. This exercise forces you to be aware of others.

Skid Steer Safety

Policy

Skid steer machines can be operated safely as long as you use common sense, do not tamper with the safeguards, and follow the operator's manual.

Safe Work Practices

- Check your blind spots
- Never allow anyone to ride in the cab with you
- Always wear your seatbelt and/or safety bar
- When traveling on slopes, do not travel across
 - Instead, travel up and down with the heavy end of the skid steer machine uphill
- Never remove the falling overhead protection or the rollover protection
- Do not allow bystanders to get too close, and never lift a load over a person or let them get near the arms
- Never pick up more weight than the particular machine can handle
- Carry the load low for maximum visibility and stability
- Never speed
- Try to keep away from gullies, crevasses, and creeks to prevent the ground from collapsing under the machine
- Do not wear loose clothing that could get caught in pinch points or controls
- Always look in the direction you are traveling; a backing up alarm is not an excuse not to look where you are going

Slips, Trips and Falls

Policy

On the average, workers who are injured as a result of a slip and fall accident, spend more days away from work than those who are injured as a result of other cause. Loss of productivity is often an unfortunate side effect of slips, trips and falls.

Safe Work Practices

Slips and falls can be avoided by:

- Keeping all passageways, storerooms, service rooms and work areas clean and orderly.
- Keeping floors maintained and in a clean and dry condition.
- Keeping floors free from debris, protruding nails, holes, large cracks or loose boards.
- Keeping passageways and aisles clear with no obstructions across or in the aisles.
- Keeping permanent aisles and passageways appropriately marked.
- Using mats and runners in areas where individuals may encounter slippery surfaces.
- Using warnings to identify slip/fall hazard areas.
- Making sure you can see where you are going and keeping work areas well lit.
- When walking on uneven surfaces such as gravel, uneven lawns, flaws in parking lots, walk a little slower and take smaller steps.

Smoking in the Workplace

Policy

Smoking can be very dangerous, but it is extremely so in the workplace. Remember to follow the rules and use common sense in the workplace so that smoking in prohibited places will not be the cause of injury or ill health for you or your coworkers.

Safe Work Practices

Smoking laws vary from state to state. It is recommended that both employers and employees educate themselves on their state's smoking laws. Employees should follow their company's smoke-free policies. Some states prohibit smoking in an enclosed space. An enclosed space includes:

- Lobbies
- Lounges
- Waiting areas
- Elevators
- Stairwells
- Restrooms that are part of the building
- Within 50 feet of any area where explosive materials are being handled
- In places where the employees are exposed to asbestos
- In areas used for fueling

Spill Plan

Policy

The best way to protect against spill-related damages is to be prepared for spills before they happen. Knowing what to do is the best first line of defense. Being prepared will act as a road map to direct your response to spills, whenever and wherever they may occur.

Safe Work Practices

The proper procedures for cleaning up an oil spill can effectively be divided into three steps:

- Oil Spill Control
 - If possible, stop the source of the spill.
 - Assess the area for possible ignition sources and remove hazards such as sparks.
 - Put on the appropriate personal protective equipment such as safety glasses, rubber boots, leather gloves, a hardhat, and a respirator depending on what kind of spill it is.
 - Inform management and other appropriate personnel immediately.
- Oil Spill Containment
 - Seal off all openings to any type of drainage systems.
 - Surround the oil spill with gelling agents or oil spill booms to enclose the area of contamination.
 - Be certain that you have secured all points of exit for the spill.
- Oil Spill Clean Up
 - Place oil absorbent pads, pillows or rolls directly on the spill.
 - Continue placing and replacing absorbent pads until all of the oil is completely absorbed.
 - Have a plastic bag ready for the soiled absorbents.
 - Double bag the soiled absorbents to prevent leakage.
 - Label or bag the container.
 - Immediately contact your waste handler for proper disposal.

Spills: Emergency Response

Policy

The best way to protect against spill-related damages is to be prepared for spills before they happen. Knowing what to do is the best first line of defense. Being prepared will act as a road map to direct your response to spills, whenever and wherever they may occur.

Safe Work Practices

REMEMBER S.W.I.M.S.

- How big is the spill?
- Has it made contact with clothing or skin?

Warn Others: Tell your supervisor or the person in charge of emergency response

- Call 911 if there is a medical emergency or danger to life or health
- Alert people nearby

Isolate the Area: Restrict Access to the contaminated area

- Determine the extent of the spill

Monitor yourself: Check yourself carefully and completely

- Check yourself for any chemical contamination or signs/symptoms of exposure
- Be sure you check yourself thoroughly – symptoms can be delayed, so look for signs of exposure such as splashes on your skin or wet clothing
- If you have been injured, follow your workplace personal injury procedures for minor injuries
- Call 911 for serious injuries

Stay: Stay in or near the area until help arrives

- Minimize your movements
- Notify your Supervisor

Staging and Fall Protection

Policy

Following the rules on how to set up staging and being sure to use some sort of fall protection will keep staging accidents to a minimum and keep people safe.

Safe Work Practices

- Hook Shaped Stops
 - Place hook-shaped stops on each end of staging members (pieces) to prevent them from slipping off the ropes.
 - Place hooks so they will prevent the staging members from falling if one wire rope breaks.
- Planks:
 - Must be at least 14 inches wide.
 - Must consist of “structural plank” or the equivalent.
- Wire Ropes:
 - Don’t make the wire ropes so tight that putting a load on the scaffold will overstress the ropes.
 - Use a safety factor of at least 6 when determining the size of the wire rope to be used.
 - A safety factor is a ratio of how much weight the ropes are designed to hold and the weight they will actually hold during the specific project.
 - Follow the wire rope manufacturer’s recommendations for number and spacing.
 - Place the clamps so the “U” is on the dead end.
 - Assuming that everyone knows how to do his or her job correctly can lead to an accident.
- Required Fall Protection
 - Place a guardrail on all open sides and ends of staging OR
 - Install safety nets OR
 - Use safety belts and lanyards
 - The lanyard **MUST** be tied off to the structure or a separate cable.
- Access and Egress
 - Provide a safe means of entering and exiting the stage.

Standard Hand Signals for Crane Operation: Overhead Cranes

Policy

Overhead cranes are used in a variety of industries. Similar to cranes that are found on construction sites, overhead cranes have their own standardized hand signals that should be used. Hand signals can help in communication when environments are loud or busy. Hand signals should always be used when a crane is being operated.

Safe Work Practices

Only qualified employees who have received the proper training and authorization should be giving hand signals to crane operators.

- There should only be one designated signaler at a time.
- The designated signaler should wear a clearly visible badge of authority.
- A crane operator should move loads only on signals from the designated signaler.
- A crane operator must obey STOP signals no matter who gives it.

When an employee has been designated as a crane signaler, they should do the following:

- Be in clear view of the crane operator at all times.
- Ensure that hand signals are continuous during crane operations.
- Ensure that you always have a clear view of the load and equipment during the crane operation.
- Perform all signals from the crane operator's perspective (i.e. when the signal person is facing the operator, the operator will move the load to the left when the crane signaler uses his right arm).
- Stop crane movement if a signal is not understood, unclear, or cannot be seen by the crane operator.
- If a change in designated signalers is required, then crane operations should cease until the new designated signaler is in position.

Stress in the Workplace

Policy

Too much stress causes damage to businesses, relationships, and health. Although stress in little amounts can be good, it is dangerous to be stressed all the time. Therefore, it is important to recognize when you are undergoing stress so that you can fight it and prevent the negative consequences.

Safe Work Practices

There are many good ways to manage stress. Here are a few suggestions:

- Get regular exercise
- Good eating habits
- Get enough sleep
- Leave earlier in the morning for work
- Learn how to organize and prioritize tasks
- Share your thoughts and feelings with someone you trust
- Avoid toxic coworkers
- Clean up your workspace
- Get rid of negativity
- Look for humor in the situation
- Don't try to be a perfectionist and don't try to control the uncontrollable
- Do NOT turn to drugs, alcohol or nicotine

Substance Abuse in the Workplace

Policy

Drug and alcohol use are normally considered personal issues. However, those under the influence of drugs or alcohol cause friction in the work group, lower morale and work efficiency, use poor judgment that results in bad decisions, and put the safety of themselves and coworkers at risk.

Safe Work Practices

SIGNS OF ABUSE

- Frequent, prolonged, and often unexplained absences.
- Involvement in accidents both on and off the job.
- Erratic work patterns and reduced productivity.
- Indifference to personal hygiene.
- Overreaction to real or imagined criticism.
- Overt physical signs such as exhaustion or hyperactivity, dilated pupils, slurred speech, or an unsteady walk.
- There are certain times of the year when individuals should be especially aware of their alcohol and drug consumption. In winter, some people experience a sense of depression or Seasonal Affective Disorder (SAD). They may turn to drugs or alcohol in the mistaken belief it will relieve the symptoms of the disorder.

WHAT TO DO

- Don't be an enabler.
- Don't "look the other way".
- Don't intervene on your own.
- Don't worry about jeopardizing a substance abuser's job.
- If you are abusing a substance, seek professional help so you can quit.

Sun Protection

Policy

Overexposure to sun can have terrible consequences, but as long as you use sunscreen, wear the proper clothing, and follow the other tips listed, you will be able to avoid sunburn, skin cancer, and eye damage.

Safe Work Practices

- Use sunscreen in every kind of weather and climate
 - Sunlight reflects off snow, ice, sand, and water, intensifying the rays and possibility of damage
 - Reapply sunscreen every two hours, or after swimming or excessive sweating
 - Don't use sunscreen past its expiration date
- Wear wide brimmed hats, long sleeved shirts, pants, and sunglasses
- Ask your doctor or pharmacist for more information about the medications you are taking- some medications can increase your skin's sensitivity to the sun
- Seek out shade if you can

Towing Safety

Policy

If you follow the included safe work practices, you will avoid costly damage and possible injury to yourself and others. Towing a vehicle or trailer safely includes following all of the regular road rules as well as additional safety guidelines specific for towing.

Safe Work Practices

- Make sure the weight of the load is not too heavy for the tow vehicle.
- Consult the owner's manual to confirm appropriate towing weights.
- Employees must be trained on how to hookup properly before attempting to do so.
- All connections and safety chains must be secured and double-checked before towing.
- Avoid becoming distracted when hooking up a vehicle or trailer to tow.
- If you hear an unusual noise or suspect trouble while towing, employees must stop at a safe place to identify and correct the problem.
- Before driving, and at each fuel stop, you should perform a brief inspection of the following:
 - Attachments
 - Safety chains
 - Lights
 - Tire Pressure
- All of the general road rules for your area must be applied at all times while driving. In addition to that, when towing vehicles or trailers, you should:
 - Avoid sudden acceleration or braking, as these can be highly dangerous.
 - Allow much more time or distance when braking or passing other vehicles than usual.
 - Never pass on hills or curves.
 - Slow down, shift into a lower gear, and never ride the brakes when driving on downgrades.
 - A wider than normal turning radius may be required when towing.
 - Reduce your normal driving speed when towing.
- Trailer-specific towing safety rules that must be adhered to include the following:
 - Un-braked trailers must not weigh more than the empty weight of the towing vehicle.
 - Braked trailers and their loads may weigh more than the empty weight of the towing vehicle only if approved by the recommendations of the trailer manufacturer.
 - The component ratings must meet or exceed the trailer weight.
 - Load weight must be evenly distributed or as recommended by the trailer manufacturer.
 - Cargo must be properly secured against any movement.
 - If sway or whipping occurs, always let off the gas, and hold the steering wheel straight ahead.

Towing Safety: Flatbed

Policy

When employees follow the safe work practices listed below, loading and unloading vehicles from flatbed trailers can be completed safely.

Safe Work Practices

- Before loading or unloading a flatbed towing vehicle, ensure that the area is clear of all bystanders.
- When loading vehicles on the road, activate flashers and emergency lights.
- Chock the front and rear surfaces of each rear wheel of the car carrier when loading or unloading vehicles from the carrier bed.
- Vehicles should be secured by at least four tiedown chains, straps or equivalent devices.
- Do not exceed the safe working load of the flatbed.
- Never exceed the rating of the weakest component of the tow truck.
- Ensure that the attachments have a working load limit that meets or exceeds the chain's or cable's working load limit.
- Ensure that a hook's point is facing upward.
- Never stand behind the carrier bed when it is in a loaded, tilted position.
- Never get beneath the carrier bed after it has been lifted.
- Perform a walk-around inspection after the vehicle has been loaded. Check the position of the vehicle on the carrier bed as well as the winch, cable, all connections and the securing devices.
- When traveling, avoid fast starts, rapid acceleration and sharp turns.

Tractor Safety

Policy

Tractors can be operated safely and efficiently as long as the operator understands and observes all of the safety guidelines involved. Proper preparation, safe handling, and caution when using any attachments or implements will greatly reduce your risk of getting hurt while performing this task.

Safe Work Practices

- Preparation
 - Be sure the tractor is properly serviced by checking lubrication, fuel, and water. The radiator level must be checked when the tractor is cold.
 - Never refuel your tractor while the engine is running.
 - Always fuel your tractor outside and store your fuel outside. Store fuel at least 40 feet from any building in an area free of weeds or other burnable material.
 - There must be a dry chemical fire extinguisher and a first aid kit on every tractor.
 - Only start, repair, and operate the tractor in well ventilated areas to reduce the build-up of carbon monoxide.
 - Keep wheels spread wide whenever possible to avoid tipping over.
 - If the wheels must be narrowed for a specific job, reduce your speed when operating.
- While operating
 - Securely fasten your seat belt if the tractor has a Rollover Protection System (ROPS).
 - Where possible, avoid operating the tractor near ditches, slopes, embankments and holes.
 - Reduce speed when turning, crossing slopes, and on rough, slick or muddy surfaces.
 - Stay off slopes too steep for safe operation.
 - Watch where you are going, especially at row ends, on roads, and around trees.
 - Do not permit others to ride.
 - Operate the tractor smoothly – no jerky turns, starts or stops.
 - Hitch only to the drawbar and hitch points recommended by tractor manufacturers.
 - When tractor is stopped, set brakes securely and use park lock if available.
- Attachments
 - Keep all shields and guards in place. Do not operate equipment with missing shields or guards.
 - Shut off the engine and be sure implement motion has stopped before performing any adjustments or maintenance.
 - For some attachments, use counterweight for stability.
 - Lift rear-mounted attachments and drive slowly when making sharp turns.
 - Raise and lower attachments slowly and smoothly.
 - Do not touch, climb over, or adjust the PTO shaft at any time while it is in motion.

Traffic Control

Policy

Working on or near traffic can make a safe job dangerous and a dangerous job much more so. Employees who do this must follow all of the safety guidelines in order to prevent injuries or accidents.

Safe Work Practices

- Stay visible by wearing a safety vest with an approved amount of reflective material on it anytime you are working near traffic.
 - You can also stay visible by not allowing coworkers or other obstructions to block your view of traffic.
- Do not lean or sit on vehicles.
- Stay focused on traffic.
- Do not wear head phones or ear buds that may interfere with your ability to hear.
- In the case of an emergency, such as a car driving into the work zone, keep at least one method of escape in mind.
 - Get yourself to safety then alert your coworkers.
 - Employees must know what to do in all emergency situations, including car accidents.
- Alert your supervisors if you are feeling weak or need somebody to take over for you.
- Hostile drivers:
 - Do not argue or raise your voice.
 - Be professional and civil.
 - Do not lean on or touch their car.
 - If they threaten your safety or fail to follow instructions, discreetly take down their license plate number and vehicle description and report it to your supervisor.

Traffic Control: Freeway and Highway Safety

Policy

It is important for all traffic control employees to remember that when they are working on a highway or freeway, cars could be going at 65 MPH or higher. Flaggers need to make sure that they are visible and ensure that any directions given to drivers are clear and easy to understand. Following the safe work practices will help ensure employee safety while they are working on the highway or freeway.

Safe Work Practices

- Park your vehicle to the side or off of the road when possible.
- Before you leave your vehicle, check your mirrors (rear view and your side mirror).
- Do not open your door when there is oncoming traffic.
- Should you not be able to leave the driver side due to the flow of traffic, exit the vehicle by going out the passenger side door.
- Ensure that you have barriers, signs, and flags that meet visibility requirements.
- Visually inspect the space that you have available to you. Pick out an area that you can easily access should you have to move out of the way of a vehicle or accident.
- Make sure that the area in which you are standing is in a highly visible area for traffic to see you.
- Do not stand in the road way.
- Stand on the shoulder of the road.
- Never turn your back to traffic. You should face all oncoming traffic.
- Give clear directions to drivers.
- Do not cross the center line.
- Do not talk or text on your cellphone. You need to be alert to the flow of traffic at all times.
- A Class 3 retroreflective vest or jacket with a Lime-Green or yellow base color should be worn at night. You should also wear retroreflective pants during a night shift to help make you more visible to drivers.
- When working at night, check the batteries on your flashlight.
- Maintain communications with all of your coworkers who are working as flaggers. A radio should be your first choice for communication. Have a way (air horn, whistle, etc.) to quickly alert your coworkers to an accident or a potential accident.

Trench Shoring Boxes

Policy

Trench shoring boxes (also simply called trench boxes) are used in construction operations to secure work areas by ensuring ground stability. They are used to protect workers while performing their duties within trenches. Assembling and installing trench boxes present a set of hazards to employees that may be mitigated by following the safe work procedures contained within this lesson.

Safe Work Practices

- Underground services should be located before excavation and installation of trench shoring box.
- Ribbons, barriers or other means of protection should be used to create boundaries around the construction site.
- Personnel should never be inside the box when a trench shoring box is being installed or withdrawn.
- Personal protective equipment should be worn by all employees.
- A load operator should stand to the front of the excavator and maintain eye contact with the machine operator.
- Boxes should not be excessively forced into the ground during installation.
- Use a securely-fastened ladder to enter and exit the work area. Never climb on the struts.
- Trench shoring boxes should be lowered onto level and firm ground. Trench shoring boxes should be set up at right angles to the slope where the ground is sloping, if possible.
- The instructions of the mode of use must be respected during installation.
- Only hooks provided with a screed (safety hooks) should be used.
- Every pin should be secured with the appropriate clip.
- The various parts of the equipment should be checked before installation.
- Employees should never step out of the safe working area into an unprotected section of the trench.

Unloading and Stacking Steel I-Beams

Policy

Due to the size and weight of steel beams, employees could potentially be harmed during the unloading and stacking process. By following the safe work practices presented in this lesson, employees can help minimize their chances of an injury occurring when unloading and stacking steel I-beams.

Safe Work Practices

Before employees start to unload the beams from the trailer, rail car, etc., they should do the following:

- Inspect all forklifts or cranes that will be used in the unloading operation for damage. Report damaged equipment to your supervisor. Do NOT operate damaged equipment.
- Inspect all rigging for damage. Report damaged rigging to your supervisor. Do NOT use damaged rigging.
- Ensure that the area in which the beams are to be stored is clear of any obstructions. Remove any obstructions from the area.
- Inspect the area for overhead obstructions. Report overhead obstructions to your supervisor.
- Ensure that the beams are properly secured before removing any chains or straps from the load.
 - If the load looks unstable while still secured, do not remove the chains or straps from the load. Use other pieces of equipment to help prop and secure the load before attempting to remove the chains or straps from the load.

When unloading the beams, employees should do the following:

- Operate all forklifts and cranes in accordance with the manufacturer's instructions.
- Only certified employees should be operating cranes and forklifts.
- Do NOT walk under the load.
- Alert operators to your presence.
- Do NOT exceed the weight limit of forklifts, rigging, or cranes.
- Ensure that the beam is properly secured in the rigging before it is lifted.
- Be aware of high winds. Do NOT use a crane to unload when high winds are present or forecasted.
- When a crane is used for unloading, employees should use a tagline to help guide the beam.
- Do NOT stand between the beam and other objects.
- Use hand signals or other communication devices to communicate with the operator.

When stacking beams in the storage area, employees should do the following:

- When possible, employees should store items of different size and length separately from each other.

- If different sizes have to be stacked together, employees should stack them using the following guidelines:
 - Stack beams with the widest width at the bottom.
 - Long beams should be stored on the bottom of the stack, while short beams should be stored at the top of the stack.
- Store beams in the horizontal position.
- Centrally align the stack for stability.
- Beams should be interlocked and blocked for stability.
- A competent person should routinely inspect the stack for stability.

Wash Your Hands

Policy

Hand washing doesn't take much time or effort, but it does offer great rewards in terms of preventing illness. The simple act of washing your hands prevents ingestion and absorption of harmful substances, the spread of infection and diseases, absenteeism due to illness, and lost work time.

Safe Work Practices

- Use warm water
 - Hot or cold water is not recommended because of the uncomfortable temperature; you will likely not wash long enough and you risk making your skin tough and chapped
 - Hot water is used to kill microbes and sterilize objects, but you don't want to stick your hands in water that hot
- Use soap
 - Use whatever soap you like- antibacterial soaps are popular but regular soap does the job just fine
 - The real cleansing is done by the friction and force of rubbing the soap against your hands
 - Soap suspends microbes, allowing them to be rinsed away
- Rub your hands together vigorously and scrub all surfaces
 - Lather up on both sides of your hands
 - Remember to get between your fingers and under your nails
 - Wash for 15-20 seconds- about how long it takes to sing "Happy Birthday" twice
- Pat dry with a clean towel
 - Don't use your clothes to dry your hands; your clothes could be dirty and wiping your clean hands on your dirty clothes defeats the whole purpose of washing your hands

Water Pump Safety

Policy

Water pumps are used by a variety of industries. Water pumps are primarily used for removing water from one location and moving it to another. Employees who operate a water pump could potentially be exposed to harm. Following the safe work practices presented in this lesson will help ensure employee safety.

Safe Work Practices

Before operating a water pump, employees should do the following:

- Inspect all provided PPE for damage. Report damaged PPE to your supervisor. Do NOT wear damaged PPE.
- Inspect the pump for damage. Report damaged pumps to your supervisor. Do NOT operate a damaged water pump.
- Ensure that the pump has enough fuel. Refuel as needed. Do NOT overfill the tank.
 - Do NOT refuel hot engines. Allow engines to cool completely before refueling. Refueling a hot engine could result in fire.
- Ensure that all manufacturer-provided guards are in place and secured. Report missing guards to your supervisor. Do NOT operate a pump that has missing guards.

When operating a water pump, employees should do the following:

- Operate the pump in accordance with the manufacturer's instructions.
- Only use manufacturer-approved hoses with the pump.
- Keep fuel away from sparks, open flames, pilot lights, heat, and other ignition sources.
- Ensure that all connections to the pump are tight.
- Only use pumps on a level surface.
- Ensure the pump is secured. Loads from the hoses may cause the pump to tip over causing the fuel to spill.
- Secure the discharge hose to avoid whipping.
- Be aware of puddles that may result from the use of a water pump. Puddles could result in a slipping hazard.
- Ensure engine has completely cooled before moving the pump after use.
- Store pump in accordance with the manufacturer's instructions.

When operating a water pump, employees should avoid the following:

- Smoking around the water pump.
- Pumping chemicals or flammable liquids.
- Pumping liquid meant for human consumption.
- Using pumps on elevated surfaces where there is the chance of the pump falling.

- Discharging a hose near the power source of the pump.
- Touching hot parts of the pump. Touching hot areas could results in burns.
- Operating pumps in buildings. Water pumps should only be operated in the outdoors.
- Operating the pump dry. Operating a dry pump could result in damage to the pump.
- Modifying the pump. Report modified pumps to your supervisor. Do NOT operate modified pumps.
- Leaving the pump running while unattended. If you need to leave the pump for any reason, employees should turn the pump off and wait for it to stop pumping before leaving the area.

Weather Conditions

Policy

Outdoor jobs are not only subject to hazards directly related to the job, but also from sources like the weather that cannot be controlled. Employees must follow all safety practices relating to their job AND stay vigilant in detecting poor weather conditions when working outside.

Safe Work Practices

- Outdoor job sites must always be prepared to shut down if thunderstorms are forecast.
- Keep an eye on the weather throughout the day and seek shelter if necessary, even if there is no official thunderstorm advisory.
- Electrical workers or roofers may need to shut down jobsites in high winds, thunder, or rain long before there is a weather advisory.
- If there are no available safe shelter sites, seek cover low to the ground (such as in clumps of bushes) or under trees of uniform height.
- If a co-worker gets struck by lightning, administer first aid immediately.
 - Call 911, because an electrical shock may result in cardiac arrest.
 - Wait for a safe opportunity in between lightning strikes to move the victim.
 - Begin CPR – the body does not retain an electrical charge.
 - Do not remove burned clothing unless necessary.
 - Treat for shock, if necessary.

Web Sling Safety

Policy

Employees must take great care to use web slings properly and follow all of the safe work practices to avoid accidents.

Safe Work Practices

GENERAL SAFETY RULES

- Employees may not use web slings unless they understand the manufacturer's instructions for use, as well as the proper selection, inspection, and possible hazards of using the web sling.
- Never exceed the rated capacity of the sling, as indicated by the manufacturer.
- Employees must always use the appropriate sling for the load's weight and size, as indicated by the manufacturer in the owner's manual.
 - The type of hitch configuration must also be appropriate for the sling being used.
- All employees must stay clear of loads during lifts and make sure to never stand under, on, or near a suspended load.
- Do not place any part of your body in between the sling and a load.
- If you notice damage of the sling at any point during use, remove from service immediately. Unless it can be repaired and tested by the sling manufacturer or other qualified inspector, damaged slings must be discarded.

STORAGE AND MAINTENANCE

- Protect slings from corners and sharp edges of a load with an edge protector, when necessary.
- When cleaning the web sling, use mild soap and water, rinse thoroughly, and dry completely.
- Slings must be stored in a cool, dry location to prevent damage when not in use. Make sure slings are free from any dirt or moisture before storing.
- Avoid handling slings in a way that could cause damage, such as:
 - Dragging the slings across the ground instead of carrying properly.
 - Yanking slings out from under loads while the load is still on the sling.
 - Putting knots in the sling.
 - Exposing the sling to acids, alkalis, or any sources of heat.
 - Driving or walking over slings that have been left on the ground.

Welding Safety

Policy

There are a few different types of welding, but all of them can be made safer if certain tips are followed.

Safe Work Practices

WORK AREA

- Before you start welding:
 - Make sure there is a working fire extinguisher in reach
 - Remove clutter and unnecessary materials that could start a fire
 - Sparks and slag can fly up to 35 feet away from the source- be sure flammable and combustible materials are far enough away or protected from the sparks
 - Be sure you have the proper equipment before you start
- After you're finished:
 - Mark hot work pieces to alert others of the burn and fire hazards
 - Deposit all scraps and electrode butts in proper waste containers to avoid fire and toxic fumes
 - Keep a fire watch in the area during and after welding to be sure there are no smoldering materials, hot slag or live sparks which could start a fire

GENERAL SAFETY TIPS

- Only operate welding equipment you have been trained to use
- Never look directly at a flash (the arc of light), even for an instant
- Be sure anyone who would be exposed to the arc light has proper eye protection
- Avoid working in wet conditions since water is an electrical conductor
- Know what the substance is that's being welded and any coating that's on it so you can take the necessary precautions
- Don't coil the electrode cable around your body

Welding Torch Safety

Policy

Take your time to be sure you're using the welding torch correctly. Remember to wear the proper gear, inspect your equipment for irregularities, and take steps to prevent the different hazards from occurring.

Safe Work Practices

- Procedure
 - Inspect your torch, torch attachments, and hoses for irregularities.
 - Check the location of your hoses; be sure sparks or slag won't fall on them.
 - Purge your hoses by letting them run for about 2-3 seconds before lighting the torch.
 - Only use approved lighters.
 - Never use matches, cigarettes, or cigarette lighters to light a torch.
 - Turn on/light the fuel gas first.
 - Never light both the fuel gas and the oxygen at the same time.
 - If the flame smokes, increase the gas until the smoke disappears.
 - Add the oxygen until there is a well-defined cone of flame.
- Burn back
 - If the lines aren't properly purged before lighting, an explosion in the hose, regulator or cylinder might occur.
- Backfire
 - This can be prevented if you don't keep your torch too close to what is being welded.
- Flashback
 - Make sure your torch tip is clear of clogs
 - Use a flash arrestor on your torch: this piece of equipment stops the fire before it can get back into the hose
 - If you don't have a flash arrestor, destroy the fire by turning off the oxygen

Wet Working Conditions Safety

Policy

It can be dangerous to work in wet or damp work environments. Employees could potentially be exposed to both physical and health hazards. By following the safe work practices presented in this lesson, employees can help minimize their chances of an accident occurring while working in wet or damp working conditions.

Safe Work Practices

Before working in wet or damp working conditions, employees should do the following:

- Inspect all provided PPE for damage. Report damaged PPE to your supervisor. Do NOT wear damaged PPE.
- Inspect all guardrails, safety protection devices, work equipment, and tools for rust or deterioration from moisture. Report any damaged safety guards or equipment to your supervisor. Do NOT use damaged equipment or work near damaged safety guards.
- Inspect work area for mold. Report mold to your supervisor.
 - When excessive moisture or water accumulates indoors, mold growth often will occur, particularly if the moisture problem remains uncorrected. While it is impossible to eliminate all molds and mold spores, controlling moisture can control indoor mold growth.
- Inspect work area for mud. Scrape up and remove any mud that might produce a slipping hazard.
- Inspect any excavations or earthworks. Wet ground could cause a collapse.
- If in a cold environment, inspect the work area for ice. Scrape up any ice or spread a deicer.
- Ensure the work area is well lit. Working in a low light area might obscure slipping hazards.
- Ensure all hand tools have nonslip grip handles.
- Ensure no power cords, cables, or outlets are wet or damp.
 - Even if power cords or cables are plugged into a GFCI-rated outlet that has stopped working it is recommended to shut off the power at the breaker box to avoid possible electrocution.
- Clean up all temporary wet spots and place wet floor sign.

While working in wet or damp working conditions employees should do the following:

- Practice good housekeeping.
- Periodically wipe or clean eye protection of excessive moisture.
- If feet are continuously wet throughout a workday, employees should change into clean socks at least three times to avoid trench foot.
- Periodically remove mud from work boots throughout the day.

After working in wet or damp working conditions employees should do the following:

- Completely dry all PPE and work equipment.
- Change all wet clothing.
- Clean up puddles or any other wet areas.

Working at Heights

Policy

Whether it's just climbing up a ladder or getting onto a roof top, working at heights is dangerous. Employees who work at heights have the potential to fall or be hurt by falling objects. By practicing the safe work practices presented in this lesson, employees can help minimize their chances of an accident occurring when working at any height.

Safe Work Practices

Before an employee works at any height, they should do the following:

- Ensure that they are wearing the appropriate PPE for the task.
- Inspect all fall harnesses for damage (if applicable). Report damaged harnesses to your supervisor. Do NOT wear damaged fall harnesses.
- Inspect ladders for damage (if applicable). Report damaged ladders to your supervisor. Do NOT use damaged ladders.
- If feasible, inspect guardrails for damage (if applicable). Report damaged guardrails to your supervisor. All guardrails should meet the OSHA standards for guardrails.
- Become familiar with your company's fall rescue plan. If you have questions about the fall rescue plan, ask your supervisor for clarification.

When working at heights, employees should do the following:

- When feasible, employees should move the work to ground level.
- Use the appropriate equipment for the task.
- Use all equipment (boom lifts, scissor lifts, forklift platforms, etc.) in accordance with the manufacturer's instructions.
- Only trained employees should operate boom lifts, scissor lifts, forklifts, etc.
- Maintain three points of contact when using ladders.
- Only use ladders on stable surfaces. Report unstable ladders to your supervisor.
- When feasible, ask a coworker to hold the ladder while you climb or descend the ladder.
- Do NOT carry objects in your arms while climbing ladders.
- Only authorized and trained employees should work at heights that require the use of a fall protection harness.
- Ensure that fall protection harnesses are properly secured to anchor points.
- Ensure openings through which an employee could fall are properly guarded. Report unguarded openings to your supervisor.
- Avoid working on edges when possible.
- Ensure that all tools are properly stored or secured when not in use.
- Immediately clean up spills to prevent slipping. Spilled chemicals should be cleaned up in accordance with the manufacturer's instructions.

