

Working alone—Safety at remote jobsites

Before you begin working alone at a remote jobsite, perform a basic assessment of the site. Are there potential hazards in the environment, like excessive heat or cold, electrical hazards, or chemical exposure? For each hazard you identify, make a plan for how you will address it to reduce the risk.

You also need to pay particular attention to your personal safety and security when you're working alone. For example, when traveling to a remote worksite, always keep your vehicle locked, and secure all valuables. Always remain aware of your surroundings. If you're working at night, stay in well-lighted areas or provide your own lighting source if necessary.

It's a good idea to have a procedure in place for checking in with your employer. One way to do this is to have a buddy system with a colleague whereby you check in with each other at specified times.

There are some types of work you should never attempt while working alone. For example, you should never enter a permit-required confined space without an attendant.

Have an emergency plan in place, and practice it, if possible. Carry a first-aid kit, as well as other items such as bottled water, some nonperishable food, blankets, a flashlight, batteries, and a dry change of clothes.

Finally, make sure you always have a way to call for help if you get injured or experience an emergency, either by carrying a cell phone, having access to an emergency alarm system, or some other method.



EMPLOYEE SAFETY NEWSLETTER

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Welding and cutting—Hot work hazards and best practices

Hot work operations can generate several different types of hazards that require their own unique set of precautions and safe practices to prevent injuries or damage to equipment. In almost all cases, the hazards can be either eliminated or controlled in a way that prevents injuries or damage.

Hazards of hot work

There are hazards to your health if you breathe in the toxic fumes created by welding or cutting work. Fumes come from the base or filler material, shielding gases, coatings, paints, cleaners, and degreasers. Inhaling welding smoke can cause damage to your nose, throat, lungs, and digestive system.

You can get burns from slag or other hot objects.

Fires start when the welding area has combustible materials or when a fire watch isn't on station for at least a half hour after the welding job is completed. Sparks can travel more than 30 feet from the hot work operation and can smolder and build into a fire after work is finished.

Explosions can happen when doing welding work on drums or tanks that had fuels or solvents in them and the remaining fumes ignite. Even though a tank may be empty, it often still contains flammable vapors.

Gas cylinders used in gas welding can explode if mishandled or exposed to heat or flames. Improper grounding when arc welding could result in static electrical charges, which could cause fires and explosions.

Safe practices

Before you start a cutting or welding operation, make sure the area is inspected by the person responsible for authorizing the operation. That person will explain or show you the precautions to follow as part of giving you authorization to start work.

Make sure there is a fully charged fire extinguisher within 30 feet of the hot work operation.

Weld or cut only in areas with fire-resistant floors or use protective shields. Catch slag in containers of water or sand. Protect open doorways or windows with a fireproof curtain.

Move combustible items like trash cans and rags at least 35 feet away from the hot work. If it's not possible to move them, cover or shield them with fire-retardant covers, shields, or curtains.

Designate a fire watch to look out for stray sparks or lingering fires, and make sure that person stays at the site at least 30 minutes after the hot work operation is done. Keep all firefighting equipment nearby.

Inspect any tank you will weld or cut for leftover fuel or fumes before you start work on it. If there are any fuel or fumes, have the fuel removed and fumes ventilated so the tank won't catch fire or explode.

Protective clothing and equipment

Welding and cutting operations generate heat, sparks, and slag. Remember that sparks can travel over 30 feet. Always wear flame-retardant clothing, such as aprons, leggings, and sleeves; high-top boots; and gauntlet-type gloves.

Wear all eye and face protection that is required by your training, by the authorized supervisor, and in the work permit.

Use a respirator in unventilated areas where toxic fumes accumulate from operation. Check the safety data sheets (SDSs) for any hazardous chemicals you are using so you can protect yourself properly from exposure to infection.

Scaffolding—Working safely on scissor lifts: Safe positioning

A scissor lift consists of a work platform with guardrails mounted on a wheeled base with an apparatus that raises and lowers the platform. Scissor lifts are quite safe when used properly, but you need to be aware of the hazards you could encounter and how to avoid them.

Know your equipment

Never use a scissor lift unless you have been trained to do so. Before you use a scissor lift, review the manufacturer's operating instructions. Pay attention to weight limits, instructions for raising and lowering the lift, and instructions for moving and positioning the lift. Make sure you know where all the controls are located and how to operate them. Test and inspect the controls before each use of the scissor lift and tell your supervisor if anything isn't working.

Safe positioning

Positioning your scissor lift safely can protect you and others in the area from a variety of hazards. Follow these safe practices:

- If you are working outside, make sure the lift is at least 10 feet away from energized power lines.
- Look for overhead obstructions such as branches, building overhangs, door frames, and utility structures, and position your lift to avoid being struck by these obstacles.
- Use traffic controls such as cones, barricades, and signage to prevent other workers or vehicles from getting too close.
- Drive the lift slowly and communicate with a guide on the ground when operating or moving the scissor lift around the worksite to help you avoid obstructions, pedestrians, and other vehicles.

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Table saw safety—Preventing cuts and amputations: QUIZ

1. You should use a table saw if the self-adjusting guard is damaged or missing. TRUE or FALSE.
2. You must use the correct type of blade for the work you are doing. TRUE or FALSE.
3. You must set the blade height so that it does not extend more than what length above the height of the piece you are cutting?
 - A. 1/8 of an inch
 - B. 3/8 of an inch
 - C. 5/8 of an inch
 - D. 7/8 of an inch
4. You should not use wood that satisfies which of the following?
 - A. It has at least one straight edge.
 - B. It is warped.
 - C. It has metal objects in it.
 - D. The condition of the wood does not matter.

ANSWERS

1. FALSE. 2. TRUE. 3. A. 4. B and C.
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Table saw safety—Preventing cuts and amputations

First, always make sure your table saw is equipped with a self-adjusting guard. The guard should cover the portion of the blade that extends above the table. Don't use the table saw if the guard is damaged or missing.

Always choose the correct type of blade for the work you are doing. You will use a different type of blade for making rip cuts than you use for making crosscuts. Make sure the blade is clean, sharp, and in good condition.

Before you begin, put on safety glasses and hearing protection. Set the blade height so that it does not extend more than about 1/8 of an inch above the height of the piece you are cutting. Never adjust the blade height or angle while the saw is running.

Also inspect the wood you plan to cut. Make sure it is not knotted, warped, or twisted and that it has at least one straight edge. Never cut any wood that has screws, nails, or other metal objects embedded in it.

For rip cuts, use the fence to guide the wood. For crosscuts, use the miter gauge. Never use the fence and miter gauge at the same time.

Keep your hands out of the line of the cut. Use a push stick rather than your hands to feed in small pieces of wood, clear away scrap, and push stock past the blade. Don't release the wood until it has cleared the blade.

When you have completed your cut, make sure the saw comes to a complete stop. Turn off the power and lower the blade completely below the table.

Zero Emissions Day: QUIZ

1. Sulfur dioxide is the primary greenhouse gas produced from fossil fuels. TRUE or FALSE.

2. When is Zero Emissions Day observed?

- A. April 21
- B. June 21
- C. August 21
- D. September 21

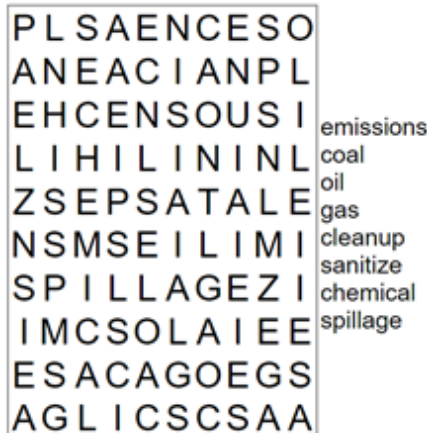
3. Which of the following are fossil fuels?

- A. Coal
- B. Oil
- C. Natural gas
- D. All of the above

4. Electricity generation and transportation are two of the biggest human-produced emitters of atmospheric carbon dioxide. TRUE or FALSE.

5. Which of the following can you do to minimize or eliminate the use of electricity generated by fossil fuels?

- A. Only use single-use plastics and paper products.
- B. Properly recycle any plastic, paper, glass, and metal.
- C. Throw all food scraps in the trash.
- D. Reuse plastic items by repairing or upcycling them.



Zero Emissions Day

Zero Emissions Day, also known as ZeDay, is observed annually on September 21 by several countries across the world. The purpose of this day is to give the earth a break from fossil fuels such as coal, oil, and natural gas and what they release into the air, at least for 1 day, every year. These harmful emissions include carbon dioxide, which is the primary greenhouse gas produced from burning fossil fuels, as well as sulfur dioxide, nitrogen oxides, and particulates. Human-produced emissions have increased atmospheric carbon dioxide by about 50%, with electricity generation and transportation being two of the largest emitters. Zero Emissions Day aims to encourage the use of renewable energy sources as opposed to finite fossil fuels.

In March 2008, Ken Wallace of Halifax-based graphic design firm Sea-level Special Projects launched a website calling for September 21 to be a day for a global refrain from fossil fuel consumption. The idea came to Wallace years prior when walking down the street with his child and noticing the traffic emissions and idling vehicles. He was struck by the thought of how beneficial it would be to stop all of it, even for just a short amount of time. His message was: "Giving our planet one day off a year." The date was chosen partly because it is the autumnal equinox and days and nights are of equal length and partly because it is the United Nations' International Day of Peace. Since then, Zero Emissions Day has turned into a worldwide movement.

The day is used as an opportunity to raise awareness of the amounts of fossil fuels that are used worldwide every single day and to share information about how each person can minimize his or her carbon footprint on Zero Emissions Day and in the long run. You can minimize or eliminate the use of electricity generated by fossil fuels by practicing the five Rs: refuse, reduce, reuse, rot, recycle. Avoid single-use plastics and paper products; buy only things you really need; find a way to reuse items by repairing or upcycling them; set a compost system for food scraps; and properly recycle any plastic, paper, glass, and metal.

Here are a few Zero Emissions Day guidelines to consider following on September 21:

- Don't use or burn gas, oil, or coal.
- Minimize, or eliminate, your use of electricity generated by fossil fuels.
- Keep in mind life and safety first; all essential and emergency services operate normally.
- Plan your day ahead of time and find ways to do your best to have fun, enjoy, and work with others to observe Zero Emissions Day.

Chemical spotlight: Benzonitrile

Benzonitrile is a colorless, oily liquid with an almond-like smell. It is used as a solvent for nitrile rubber, specifically lacquers, resins, polymers, and metal salts.

Benzonitrile may attack some plastics and is not compatible with oxidizing agents, strong acids, strong bases, and reducing agents. Store benzonitrile in tightly closed containers in a cool, well-ventilated area away from heat or flame. Avoid all sources of ignition where benzonitrile is used, handled, or stored.

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

Prevent further leakage or spillage if safe to do so, and do not let the product enter drains, sewers, underground or confined spaces, groundwater, or waterways or discharge into the environment. Contain the spillage, and then absorb it with vermiculite, dry sand, or earth. Place the spillage in a sealed container. It may be necessary to contain and dispose of benzonitrile as a hazardous waste. Contact the federal and local Environmental Protection Agency for specific recommendations.

Zero Emissions Day: ANSWERS

1. **FALSE.** Carbon dioxide is the primary greenhouse gas produced from fossil fuels. 2. **D. September 21.** Zero Emissions Day is observed on September 21. 3. **D. All the above.** Coal, oil, and natural gas are all examples of fossil fuels. 4. **TRUE.** Electricity generation and transportation are two of the biggest human-produced emitters of atmospheric carbon dioxide. 5. **B and D.** Some things you can do to minimize or eliminate the use of electricity generated by fossil fuels are properly recycling any plastic, paper, glass, and metal and reusing plastic items by repairing or upcycling them.