Safety Newsletter

October 2022

National Protect Your Hearing Month

Each year in October, National Protect Your Hearing Month is observed to raise awareness about noise-induced hearing loss (NIHL). Sponsored by the National Institute for Occupational Safety and Health (NIOSH), the event encourages everyone to learn about NIHL and how to prevent it.

Everyday sounds typically do not damage your hearing. However, many people participate in activities that produce harmful sound levels, such as attending loud sporting events and music concerts and using power tools, which, repeated over time, will cause hearing loss.

When sounds are too loud for too long, tiny bundles of hair-like structures that sit on top of hair cells in the inner ear are damaged. When hair cells are damaged, they cannot respond to sound, causing NIHL. In humans, hair cells cannot be fixed or replaced, so the hearing loss is permanent.

Fortunately, you can take steps to protect your hearing:

- **Turn down the volume.** Know which noises can cause damage—those at or above 85 decibels (roughly equivalent to the volume of a train passing, police siren, or snow blower). If you use headphones or earbuds, keep the volume low.
- **Move away from the noise.** If you cannot lower the volume, put some distance between you and the source.
- **Wear hearing protection,** such as earplugs or earmuffs, when you're involved in a noisy activity, such as mowing the lawn, using power tools, playing loud music, or attending a concert or loud sporting event. If you work in a loud environment, such as a construction site, be sure to wear the appropriate personal protective equipment (PPE).

Working Safely Around Ammonia

Ammonia is an extremely hazardous chemical that is widely used in many industries. It is corrosive to the skin, eyes, and lungs; flammable; and, under certain conditions, explosive. Workers need to know how to work safely around this chemical.

Workers who are exposed to ammonia regularly may become desensitized to its irritant effects and not recognize dangerous concentrations. Don't let workers depend on smell for warning—install release-detection systems in all areas where ammonia is present.

Widespread Use of Ammonia

Ammonia is a common refrigerant in many industries. In agriculture, it is injected into soil as fertilizer. It is also used in the manufacture of plastics, dyes, textiles, detergents, and pesticides. It's even sold for home use. Ammonia may be found in solution, as ammonium hydroxide (the form most people are familiar with) or packaged as a pressurized gas in a waterless (anhydrous) form.

Hazards of Ammonia

Inform your workers of ammonia's hazards. Ammonia is a health hazard—it is corrosive to the skin, eyes, and lungs. Acute exposure can cause eye and respiratory irritation, coughing, and wheezing. The concentration in air that is immediately dangerous to life and health (IDLH) is 300 parts per million (ppm). Workers who inhale it may experience swelling and accumulation of fluid in the lungs, which can occur up to 24 hours after exposure.

Ammonia can be explosive, especially in an enclosed space or when other flammable chemicals are present. By itself, its flammable range is between 15 percent and 28 percent by volume in air. When mixed with lubricating oils, the flammable range increases.

Ammonia will react dangerously with some chemicals—most notably, chlorine bleach. Ammonia is also incompatible with other halogens (for example, fluorine), oxidizing agents (for example, nitrogen oxide), and heavy metals (for example, mercury and silver).

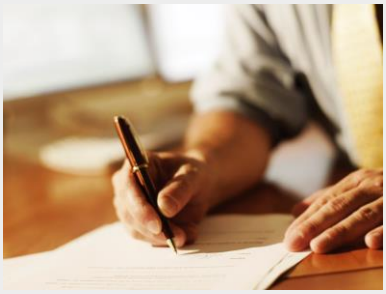
Photo credit: TheBusman / E+ / Getty Images

Accident Investigation–Reports

Accident reports play a crucial role in preventing future incidents. Accident reports explain causes and recommend solutions. They should include at least the following information:

- Name of the employee(s) involved
- Names of any injured employees
- Date of the accident
- Time of the accident
- Location of the accident
- Names of witnesses
- Work the employees involved were engaged in at the time of the accident
- Nature and extent of any injuries
- Name and address of hospital or doctor treating victims
- Description of the incident
- Unsafe condition(s) or unsafe act(s) that caused the accident
- Actions taken to prevent similar accidents
- Recommendations for additional action
- Name of supervisor(s) or manager(s) who investigated the accident
- Name of supervisor or manager responsible for writing the report
- Date report was written and submitted

The best reports are written in plain, direct language that leaves no doubt as to meaning. Descriptions or explanations are brief and to the point but contain sufficient detail to make the necessary point clearly.



Working Safely with Ammonia

Train employees to work safely with ammonia by following these general precautions and the safe work practices that apply in the facility:

- Wear PPE. To work with liquid ammonia, you may need eye, face, and skin protection. To work with liquid or gaseous ammonia, you may require respiratory protection.
- Take hot work permitting precautions whenever hot work will be performed in areas where ammonia is present. If piping, vessels, or containers that have held ammonia will be welded, soldered, drilled, or cut, purge all ammonia first.
- Use proper ventilation. Never work with ammonia in an unventilated area. Always ensure that you have adequate ventilation, and make sure that ventilation is non-sparking or explosion-proof.
- Store ammonia separately from incompatible chemicals and away from heat and ignition sources.
- Know what to do in case of a spill or leak. When you work with ammonia, know where the emergency escape respirators are located. If ammonia leaks or is spilled, put on a respirator, and leave the area immediately. Report the spill or leak so it can be appropriately controlled.
- Know how to respond to splashes. Liquid ammonia can burn your eyes. Know where the emergency eyewash is in your work area and how to use it.

Accident Investigations

Employees play an important role in investigations. Here's what to tell your employees about how they can help in an accident investigation:

- Encourage employees to report all accidents and near misses right away. Even if nobody was hurt, your supervisor needs to know what happened so steps can be taken to prevent future problems.
- Do not attempt to place blame for the incident. This can cause employees to fear for their jobs and hide important facts.
- If you witness an accident, try to remember what happened. Write down what you saw as soon after the accident as possible—what, where, when, who, and why.
- Don't disturb the scene of the accident. You could destroy valuable evidence that could help investigators figure out exactly how the accident happened.
- Provide any information you have about an accident. Come forward right away and tell what you know. Your cooperation is essential to the success of the investigation.
- Lend your expertise to the investigation. If you have special knowledge about the equipment or procedures involved, the circumstances surrounding the accident, etc., tell what you know, and offer your suggestions.
- Encourage coworkers to cooperate in accident investigations. Remind them that the purpose of an accident investigation is to prevent future accidents.
- Join with coworkers to implement any corrective measures that come out of an investigation. Be sure to follow any new safety rules that result from an accident investigation.

RCRA—A Look at Facility Inspections: QUIZ

1. RCRA Section 3007 authorizes a representative of the EPA or a RCRA-authorized state to enter any premises where hazardous waste is handled to examine records and take samples of the wastes. **TRUE** or **FALSE**

2. All TSDFs must be inspected at least once every 3 years. **TRUE** or **FALSE**

3. Which of the following inspections are the primary mechanism for detecting and verifying RCRA violations by hazardous waste generators, transporters, and TSDFs?

A. CEI inspections

B. Case Development Inspections

C. Compliance Sampling Inspections

D. Operations and Maintenance Inspections

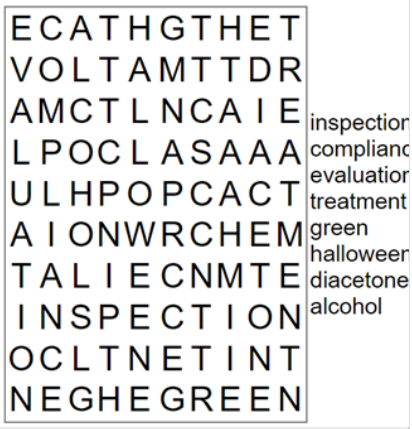
4. What can an inspection include?

A. Formal visit to the facility

B. Review of records

C. Taking of samples

D. All of the above



Accident Investigations: QUIZ

1. Employees do not play an important role in investigations. **TRUE** or **FALSE**

2. Supervisors should encourage employees to report all accidents and near misses right away. **TRUE** or **FALSE**

3. If you witness an accident, what details should you write down after the accident?

A. What
B. Where
C. When
D. All of the above

4. Which of the following are best practices for how you can help after an accident? Choose all that apply.

A. Immediately clean up the scene of the accident.
B. Do not attempt to place blame for the incident.
C. Do not be forthcoming with details if you witnessed the accident.
D. Lend your expertise to the investigation.

ANSWERS
1. FALSE. 2. TRUE. 3. D. 4. B. & D.

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Chemical Spotlight: Diacetone Alcohol

Diacetone alcohol is a clear, colorless liquid with a pleasant odor. It is used as a solvent, as well as in hydraulic brake fluid and antifreeze.

Store Diacetone Alcohol in tightly closed containers in a cool, well-ventilated area away from aluminum and lead. Diacetone Alcohol reacts violently with oxidizing agents, such as peroxides, nitrates, and chlorine, to form flammable and explosive hydrogen gas. Sources of ignition, such as smoking and open flames, are prohibited where diacetone alcohol is used, handled, or stored in a manner that could create a potential fire or explosion hazard.

If Diacetone Alcohol 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. Absorb liquids in vermiculite, dry sand, earth, or a similar material, and deposit in sealed containers. Ventilate and wash the area after cleanup is complete. It may be necessary to contain and dispose of diacetone alcohol as a hazardous waste. Contact the federal and local EPA for specific recommendations.

RCRA—A Look at Facility Inspections: ANSWERS

1. TRUE. RCRA Section 3007 authorizes a representative of the EPA or a RCRA-authorized state to enter any premises where hazardous waste is handled to examine records and take samples of the wastes.

2. FALSE. All TSDFs must be inspected at least once every 2 years.

3. A. CEI inspections. CEI inspections are the primary mechanism for detecting and verifying RCRA violations by hazardous waste generators, transporters, and TSDFs.

4. D. All of the above. An inspection can include a formal visit to the facility, a review of records, and the taking of samples. It may also include an observation of operations.

RCRA—A Look at Facility Inspections

The Resource Conservation and Recovery Act (RCRA) Section 3007 authorizes a representative of the Environmental Protection Agency (EPA) or a RCRA-authorized state to enter any premises where hazardous waste is handled to examine records and take samples of the wastes. Similarly, the Department of Transportation (DOT) may participate where hazardous waste transporters are involved.

All treatment, storage, and disposal facilities (TSDFs) must be inspected at least once every 2 years. Facilities may also be inspected at any time if the EPA or the state has reason to suspect that a violation has occurred. Inspections may be conducted by the EPA, an authorized state, or both, with one having overall responsibility for conducting the inspection. The inspection may include a formal visit to the facility, a review of records, the taking of samples, and an observation of operations.

Types of inspections

The compliance evaluation inspection (CEI) is the primary mechanism for detecting and verifying RCRA violations by hazardous waste generators, transporters, and TSDFs. Other types of inspections differ based upon the purpose, facility status, and the probable use of inspection results.

- **CEI:** Routine inspections to evaluate compliance with RCRA. These inspections usually encompass a file review before the site visit; an on-site examination of generation, treatment, storage, or disposal areas; a review of records; and an evaluation of the facility's compliance with RCRA.
- **Case Development Inspection:** An inspection when significant RCRA violations are known, suspected, or revealed. These inspections are usually intended to gather data in support of a specific enforcement action.
- **Comprehensive Ground Water Monitoring Evaluation:** An inspection to ensure that groundwater monitoring systems are designed and functioning properly at RCRA land disposal facilities.
- **Compliance Sampling Inspection:** Inspections to collect samples for laboratory analysis. This sampling inspection may be conducted in conjunction with any other inspection.
- **Operations and Maintenance Inspection:** Inspections to ensure that groundwater monitoring and other systems at closed land disposal facilities continue to function properly.
- **Laboratory Audit:** Inspections of laboratories performing groundwater monitoring analysis to ensure that these laboratories are using proper sample handling and analysis protocols.

The inspection

The first stage of an inspection is the facility entry. Upon entry, the inspector generally holds an opening conference with the owner and operator to discuss the nature of the inspection and to describe the information and samples to be gathered. Following the opening conference, the actual inspection takes place, which may involve:

- Reviewing facility operations and waste management practices
- Reviewing records
- Conducting a visual inspection
- Identifying sampling requirements

Finally, the inspector holds a closing conference to allow the owner or operator to respond to questions about the inspection and to provide additional information. The inspector usually summarizes what he or she has observed.

Composting a Whole Pumpkin

Make sure the pumpkin is clean. Seeds and other non-compostable ingredients should be removed from pumpkin before composting.

Cut pumpkin in pieces. This makes it easier for them to break down.

Let pumpkin decompose in compost pile. This should take approximately 8-12 weeks for the pieces to breakdown completely.

Post-Inspection

After the visit is completed, the inspector prepares a comprehensive report that summarizes the records reviewed, any sampling results, and the facility's compliance status with respect to RCRA.

The most important result of any inspection is the determination of whether the facility is in compliance with the applicable regulations. The inspector may also determine compliance through examination of the reports that facilities are required to submit or are part of normal waste handler operations. Inspection reports may contain information about the wastes being handled, the method of handling, and the ultimate disposal of wastes. Reports are submitted as required in a permit or an enforcement order and by regulation. If the facility is not complying with the appropriate state or federal requirements, then an enforcement action may be taken.

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Happy Green Halloween!

Sustainable practice doesn't usually come to mind when thinking about Halloween, but the amount of waste the holiday can generate is downright scary, from flimsy, single-use costumes to millions of thrown-out pumpkins to mass-produced decorations. Halloween doesn't just have a huge impact on the environment, either—it can also be expensive! Try the following tips to have an eco- and budget-friendly Halloween this year.

Costumes. Instead of going out to buy a new costume, reuse and update a costume you already own, or ask friends and family if you can borrow a costume. You can also check out your local thrift store to find some clothes that you can repurpose into a DIY Halloween costume.

Pumpkins. If carving a pumpkin, be sure to save the seeds and flesh to eat later; you can roast the seeds and make pumpkin soup or pie with the flesh. Also, check with your local farms and organizations such as community gardens to see if they take leftover pumpkins. Alternatively, you can compost your pumpkin and plant the seeds to grow your own pumpkins for next year!

Decorations. When it comes to other decorations, why not make your own? You can use cardboard to make tombstones, black pipe cleaners to make spiders, and old sheets to create ghosts, as well as repurpose empty toilet paper roll carboard to make bats.