

March 2022

Hearing conservation program

A hearing conservation program at a facility must include:

- A noise monitoring program designed to measure employee noise exposure to identify employees for inclusion in the hearing conservation program and to enable the proper selection of hearing protectors.
- An audiometric testing program that makes testing available to all employees whose exposures equal or exceed an 8-hour, time-weighted average (TWA) of 85 decibels (dB).
- Provisions for the use of feasible engineering and administrative noise exposure controls. If the controls fail to adequately reduce sound levels, personal protective equipment (PPE) must be used to reduce noise exposure levels.
- Requirements for the provision and use of personal hearing protection. In particular, employers must evaluate hearing protector attenuation for the specific noise environments in which it will be used. Hearing protectors must reduce employee exposure to at least to an 8-hour TWA of 90 dB. For employees who have experienced a standard threshold shift (STS), hearing protectors must reduce employee exposure to an 8-hour TWA of 85 dB or below.
- Required recordkeeping, including employee exposure measurements and audiometric test records.
- A training program for each employee exposed to noise at or above an 8-hour TWA of 85 dB.



COVID-19: Face coverings

The Centers for Disease Control and Prevention (CDC) emphasizes that it's important that you wear the most protective mask you can that fits well and that you will wear consistently to prevent the spread of COVID-19.

Respirators protect you by filtering the air and fitting closely on the face to filter out particles, including the virus that causes COVID-19. They can also contain droplets and particles you breathe, cough, or sneeze out so you do not spread them to others. If worn properly, respirators can provide a higher level of protection than a cloth or procedural mask. A respirator will be less effective if it fits poorly or if you wear it improperly or take it off frequently. Wear a respirator if you need or want greater protection, such as if you are at increased risk for severe illness, when working at a job in which you interact with the public, when physical distancing is not possible or when you are in crowded indoor or outdoor public settings, or if you are not up to date on COVID-19 vaccinations. Make sure your respirator seals tightly to your face. Do not wear a respirator if it is hard to breathe while wearing it, it is wet or dirty, or you are wearing another face covering or respirator.

Some respirators, such as KN95s, are designed and tested to meet international standards. Keep in mind that these respirators are designed to standards that do not often have quality requirements and filter varying levels of particles in the air. However, they should still seal tightly to your face. Do not wear an international respirator if it has exhalation valves, vents, or other openings; if it is hard to breathe while wearing it; if it is wet or dirty; with other masks or respirators; or as a replacement for a National Institute for Occupational Safety and Health (NIOSH)-approved respirator.

Wear a disposable surgical mask that fits over your nose, mouth, and chin to prevent leaks. It should have multiple layers of nonwoven material and a nose wire. Do not wear a surgical mask if it has gaps around the sides of the face or nose or is wet or dirty. Some of these masks are designed and tested to meet new industry standards and have markings printed on them to indicate that they are authentic. Follow the manufacturer's instructions on how to wear, store, and clean or properly dispose of these masks. Do not wear this type of mask if it is hard to breathe while wearing it, with other masks or respirators, or as a replacement for a respirator.

Cloth masks provide the least amount of protection and are made from a variety of fabrics. If you wear a cloth mask, make sure it fits properly over your nose, mouth, and chin to prevent leaks; has multiple layers of tightly woven, breathable fabric that blocks light when held up to a light source; and has a nose wire. Do not wear a cloth mask with wet or dirty fabric or gaps around the sides of the face or nose or exhalation valves, vents, or other openings. Cloth masks should not be made of a single layer of fabric or thin fabric that does not block light.

Lockout/Tagout program

Employers must establish a program with procedures for attaching appropriate lockout devices or tagout devices to energy-isolating devices and to otherwise disable machines or equipment to prevent unexpected start-up or release of stored energy. An "isolating device" is a mechanical device that physically prevents the transmission or release of energy, such as a manually operated electrical circuit breaker, disconnect switch, line valve block, or similar device used to block or isolate energy.

The program must include energy control procedures, employee training, and periodic inspections to ensure that machines or equipment that could unexpectedly start up or release stored energy is isolated from the energy source and rendered inoperative before any employee performs servicing or maintenance on the machines or equipment.

The written lockout/tagout (LOTO) program must clearly outline the scope, purpose, authorization, rules, techniques, and employee training to be used for the control of hazardous energy and the means to enforce compliance. The program must include documentation of:

- A specific statement of the intended use of the procedure;
- The specific types of energy to be controlled and, in instances in which a common procedure is to be used, the specific equipment covered by the common procedure by type and location;
- Specific procedural steps for shutting down, isolating, blocking, and securing machines or equipment to control hazardous energy;
- Specific procedural steps for the placement, removal, and transfer of lockout devices or tagout devices and the responsibility for them;
- Specific requirements for testing a machine or equipment to determine and verify the effectiveness of lockout devices, tagout devices, and other energy control measures;
- Certification of periodic inspections; *and*
- Certification of training.

HAZWOPER—Engineering controls and PPE: QUIZ

1. The HAZWOPER standard requires that employers implement certain engineering controls and PPE to protect workers from exposure to hazardous substances during hazardous waste site operations. TRUE or FALSE.

2. Removing all nonessential employees from potential exposure during the opening of drums is an example of an engineering control. TRUE or FALSE.

3. Which of the following are examples of work practices used to protect workers? Choose all that apply.

A. Locating employees upwind of possible hazards

B. Wetting down dusty operations

C. Removing all nonessential employees from potential exposure during the opening of drums

D. Using pressurized cabs or control booths on equipment

4. Which of the following are examples of engineering controls used to protect workers? Choose all that apply.

A. Using remotely operated material-handling equipment

B. Locating employees upwind of possible hazards

C. Wetting down dusty operations

D. Using pressurized cabs or control booths on equipment

ANSWERS

1. TRUE. 2. FALSE. 3. A, B, and C. 4. A & D.

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HAZWOPER—Engineering controls and PPE

Hazardous waste operations and emergency response (HAZWOPER) engineering controls, work practices, and/or personal protective equipment (PPE) must be implemented to reduce and maintain employee exposure to or below the permissible exposure limits or dose limits for hazardous substances during hazardous waste site operations.

Engineering controls and work practices. Engineering controls that may be feasible include the use of pressurized cabs or control booths on equipment and/or the use of remotely operated material-handling equipment. Work practices that may be feasible are removing all nonessential employees from potential exposure during the opening of drums, wetting down dusty operations, and locating employees upwind of possible hazards.

PPE. If employees require PPE, employers must include a written PPE program in the safety and health plan. This portion of the plan must clearly describe how the employer selects and uses PPE based on the tasks and the nature and concentration of site contaminants. The PPE program must address:

- PPE selection based on site hazards;
- How PPE will be used and identification of the limitations of the equipment;
- Appropriate work mission durations;
- PPE training and proper fitting to ensure the PPE is used correctly;
- PPE inspection procedures to be followed by employees before, during, and after use; *and*
- Procedures for decontaminating, maintaining, storing, and discarding PPE.

Employees using PPE must be physically capable of doing so, and the PPE program must address the limitations of PPE use during temperature extremes, heat stress, and other appropriate medical considerations. If PPE will be used, then the PPE program that includes all of the elements listed must be evaluated to ensure it is effective.

Managing hazardous waste pharmaceuticals: QUIZ

1. A non-creditable hazardous waste pharmaceutical is a hazardous waste that has general management requirements. TRUE or FALSE.

2. The hazardous waste pharmaceuticals container must be closed at all times, except when adding or removing waste. TRUE or FALSE.

3. The container used to accumulate hazardous waste pharmaceuticals must be which of the following? Choose all that apply.

- A. Structurally sound
- B. Compatible with its contents
- C. Lack evidence of leakage, spillage, or damage
- D. All of the above

4. Which of the following are some good ways to mark a container? Choose all that apply.

- A. Write on the container with pencil
- B. Write on the container with a permanent marker or paint
- C. Use a label that is 1 inch by 3 inches or larger
- D. Stencil on the container

5. How long is a facility allowed to accumulate hazardous waste pharmaceuticals on-site?

- A. 1 year
- B. 2 years
- C. 3 years
- D. 4 years



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Managing hazardous waste pharmaceuticals

A non-creditable hazardous waste pharmaceutical is a hazardous waste that has its own specific management requirements.

The container

Your facility will choose a specific type of container to use to manage hazardous waste pharmaceuticals and let you know where it will be located. The floor plan will show you the container locations at your healthcare facility for accumulating non-creditable hazardous waste pharmaceuticals.

Managing containers

Keep containers closed and secured. Make sure the container is closed at all times, except when adding or removing waste, and make sure it is secured in a manner that prevents unauthorized access to its content. Alert your supervisor if the device that secures the container is not working or if there's a problem with the lock on the door of the room or closet where the container is located.

Containers must be in good condition. The container used to accumulate these hazardous waste pharmaceuticals must be structurally sound; be compatible with its contents; and lack evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions. Contact your supervisor if you notice leaks or damage to the container. Your supervisor may request that you transfer the waste to a similar container that is in good condition.

Container markings. Each container of these pharmaceuticals must be labeled or clearly marked with the words "Hazardous Waste Pharmaceuticals." Here are some good ways to mark a container:

- Write on the container with a permanent marker or paint.
- Stencil on the container.
- Use a label that is 3 inches by 5 inches or larger.

Accumulation time limits

Because a facility is not allowed to accumulate these hazardous waste pharmaceuticals on-site for more than a year, you have to demonstrate the length of time that these wastes have been accumulating, starting from the date the pharmaceuticals first became a waste. Be sure to advise your supervisor if you observe that the container is nearing its 1-year accumulation limit. The way you will show the accumulation period is by:

- Marking or labeling the container with the date that the waste pharmaceuticals became a waste;
- Maintaining an inventory system that identifies the date the waste pharmaceuticals being accumulated first became a waste; or
- Placing the waste pharmaceuticals in a specific area and identifying the earliest date that any waste pharmaceuticals in the area became a waste.

Following these management standards will ensure that your facility is in compliance with the U.S. Environmental Protection Agency (EPA) rules for managing containers that accumulate non-creditable hazardous waste pharmaceuticals.

Managing hazardous waste pharmaceuticals: ANSWERS

1. **FALSE.** A non-creditable hazardous waste pharmaceutical is a hazardous waste that has specific management requirements.
2. **TRUE.** The hazardous waste pharmaceuticals container must be closed at all times, except when adding or removing waste.
3. **D.** The container used to accumulate hazardous waste pharmaceuticals must be structurally sound; be compatible with its contents; and lack evidence of leakage, spillage, or damage.
4. **B & D.** Some good ways to mark a container include writing on the container with a permanent marker or paint or using a stencil on the container.
5. **A.** A facility is allowed to accumulate hazardous waste pharmaceuticals on-site for 1 year.

C H E M I C A L I P	hazardous waste containers accumulate chemical disposal dangerous reactions
A C C U M U L A T E	
D A N G E R O U S O	
H A Z A R D O U S C	
C O N T A I N E R S	
S R E A C T I O N S	
D I S P O S A L A S	
W A S T E T L E A D	
A O S A S C M I A S	
L A U I I U E W A A	

Hazard communication: The SDS and chemical disposal

Chemical safety data sheets (SDSs) are composed of 16 sections, and these sections will always appear in the same order for any product, regardless of who manufactures it. After using a hazardous chemical, you may find yourself wondering what to do with the waste chemical, contaminated packaging, or the chemical container, which may still contain some chemical residue. All SDSs will have a Section 13 for disposal considerations, but it is not mandatory for manufacturers to provide information in this section. Even so, the SDS is one of the first places you should look to determine disposal practices and information on recycling or reclaiming the chemical or its container.

Section 13 of the SDS may provide useful information, including:

- A description of appropriate disposal containers to use. You want to be sure the container is compatible with the waste and that it complies with applicable waste management requirements.
- Recommendations of appropriate disposal methods to employ, including options for recycling or reclaiming the chemical or its container.
- A description of the physical and chemical properties that may affect disposal activities.
- Language discouraging disposal by discharging to a sewer.
- Any special precautions to consider before landfilling or incinerating the waste.

Improper disposal of hazardous chemicals can result in spills, dangerous reactions, fire, and even explosions that can have significant impacts on your safety and the safety of your colleagues. In addition, improper disposal can do great harm to the environment and result in enforcement actions being taken against your company.

Chemical spotlight: Cyclopentadiene

Cyclopentadiene is a colorless liquid with a sweet odor like turpentine. It is used to make resins, insecticides, fungicides, and other chemicals.

Store cyclopentadiene in tightly closed containers in a cool, well-ventilated area away from heat and pressure. Cyclopentadiene is not compatible with oxidizing agents, strong bases, oxygen, and oxides of nitrogen. Sources of ignition, such as smoking and open flames, are prohibited where cyclopentadiene is used, handled, or stored. Metal containers involving the transfer of cyclopentadiene must be grounded and bonded.

If cyclopentadiene 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. For small spills, absorb cyclopentadiene with vermiculate, dry sand, or earth, and deposit in sealed containers. Ventilate and wash the area after cleanup is complete. It may be necessary to contain and dispose of cyclopentadiene as a hazardous waste. Contact the federal and local Environmental Protection Agency (EPA) for specific recommendations.