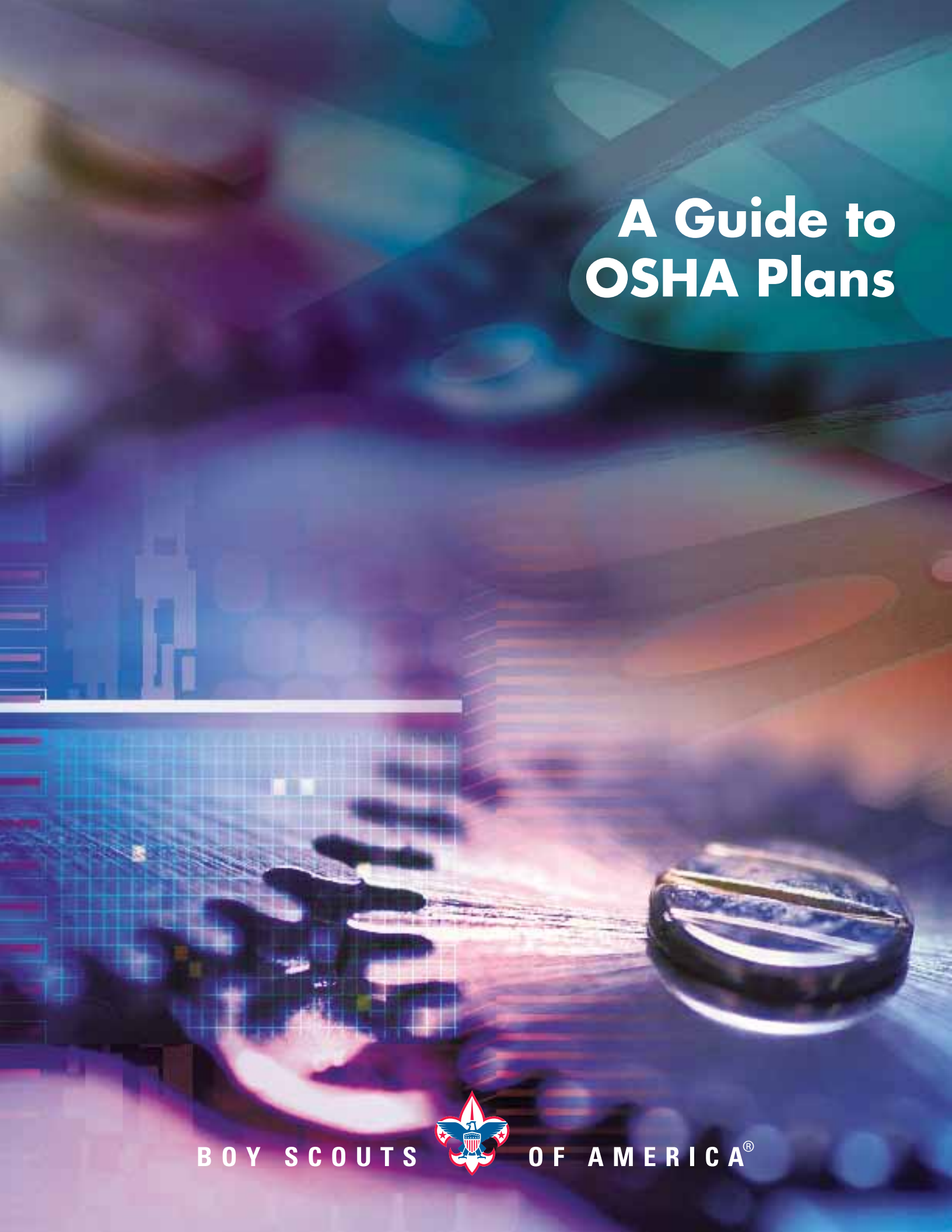

A Guide to OSHA Plans

BOY SCOUTS OF AMERICA®

A Guide to OSHA Plans

A council service center or camp may need to be in compliance with various OSHA standards and regulations. A great deal of the information needed to understand specific OSHA requirements may be found on OSHA's Web site at www.osha.gov.

BOY SCOUTS OF AMERICA®

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BOY SCOUTS OF AMERICA
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Irving, TX 75015-2079
www.scouting.org
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Contacting OSHA Offices

To get contact information for U.S. Occupational Safety and Health Administration (OSHA) area offices, OSHA-approved state plans, and OSHA consultation programs, please visit http://www.osha.gov/dcsp/smallbusiness/consult_directory.html at OSHA's Web site (www.osha.gov) or call 800-321-OSHA (6742). Feel free to contact the regional or area office by phone or mail, without the fear of triggering an inspection.

Where a workplace incident (council office or camp) results in one or more fatalities or the in-patient hospitalization of three or more employees within 30 days of the incident, you are required to notify the closest OSHA area/regional office within eight (8) hours of the fatality or hospitalizations. Alternatively, you may also notify OSHA by phoning 800-321-OSHA.

OSHA Regional Offices

Region I

(Connecticut,* Massachusetts, Maine, New Hampshire, Rhode Island, Vermont*)

JFK Federal Building, Room E340
Boston, MA 02203
617-565-9860
Region II

(New Jersey,* New York,* Puerto Rico,* U.S. Virgin Islands*)

201 Varick Street, Room 670
New York, NY 10014
212-337-2357

Region III

(Delaware, District of Columbia, Maryland,* Pennsylvania, Virginia,* West Virginia)

The Curtis Center
170 S. Independence Mall West
Suite 740 West
Philadelphia, PA 19106-3309
215-861-4900

Region IV

(Alabama, Florida, Georgia, Kentucky,* Mississippi, North Carolina,* South Carolina,* Tennessee*)

Atlanta Federal Center
61 Forsyth Street SW, Room 6T50
Atlanta, GA 30303
404-562-2300

Region V

(Illinois, Indiana,* Michigan,* Minnesota,* Ohio, Wisconsin)

230 South Dearborn Street, Room 3244
Chicago, IL 60604
312-353-2220

Region VI

(Arkansas, Louisiana, New Mexico,* Oklahoma, Texas)

525 Griffin Street, Room 602
Dallas, TX 75202
214-767-4731 or 4736, x224

Region VII

(Iowa,* Kansas, Missouri, Nebraska)

City Center Square
1100 Main Street, Suite 800
Kansas City, MO 64105
816-426-5861

Region VIII

(Colorado, Montana, North Dakota, South Dakota, Utah,* Wyoming*)

1999 Broadway, Suite 1690
Denver, CO 80202-5716
303-844-1600

Region IX

(American Samoa, Arizona,* California,* Hawaii,* Nevada,* Northern Mariana Islands)

71 Stevenson Street, Room 420
San Francisco, CA 94105
415-975-4310

Region X

(Alaska,* Idaho, Oregon,* Washington*)

1111 Third Avenue, Suite 715
Seattle, WA 98101-3212
206-553-5930

*Indicates an OSHA-approved state-plan state.

State Plan States

Currently, 22 states and jurisdictions operate complete state plans (covering the private sector and state- and local-government employees), and four—Connecticut, New Jersey, New York, and the Virgin Islands—have plans that cover public employees only. (Eight other states were approved at one time but subsequently withdrew their programs.)

States must set job safety and health standards that are "at least as effective as" comparable federal standards. (Most states adopt standards identical to federal ones.) States have the option to set standards covering hazards not addressed by federal standards.

A state must conduct inspections to enforce its standards, cover public (state and local government) employees, and operate occupational safety and health training and education programs. In addition, most states provide free on-site consultation to help employers identify and correct workplace hazards. Such consultation may be provided either under the plan or through a special agreement under section 21(d) of the Occupational Safety and Health Act of 1970.

The following listed states and territories operate their own OSHA-approved job safety and health programs. (The Connecticut, New Jersey, and New York plans cover public employees only.) States with approved programs must have a standard that is identical to, or at least as effective as, the federal standard.

Note: You may locate your state-plan state office on OSHA's Web page at http://www.osha.gov/dcsp/smallbusiness/consult_directory.html.

Alaska	Michigan	South Carolina
Arizona	Minnesota	Tennessee
California	Nevada	Utah
Connecticut	New Mexico	Vermont
Hawaii	New Jersey	Virgin Islands
Indiana	New York	Virginia
Iowa	North Carolina	Washington
Kentucky	Oregon	Wyoming
Maryland	Puerto Rico	

CONSULTATION PROGRAM SERVICE

Using a free consultation service largely funded by OSHA, employers can find out about potential hazards at their work sites, improve their occupational safety and health management systems, and even qualify for a one-year exemption from routine OSHA inspections.

The service is delivered by state governments using well-trained professional staff. Most consultations take place on-site, though limited services away from the work site are available.

Primarily targeted for smaller businesses, this safety and health consultation program is completely separate from the OSHA inspection effort. In addition, no citations are issued nor penalties imposed.

It is confidential, too. Your name, your firm's name, and any information you provide about your workplace, plus any unsafe or unhealthful working conditions that the consultant uncovers, will not be reported routinely to the OSHA inspection staff.

Your only obligation will be to commit yourself to correcting serious job safety and health hazards—a commitment you are expected to make before the actual visit and to carry out in a timely manner.

Your state's consultation office may be located on OSHA's Web page at www.osha.gov.

Asbestos—Renovation and Demolition

(29 CFR 1926.1101)

Introduction

Asbestos is the generic term for a group of naturally occurring, fibrous minerals with high tensile strength, flexibility, and resistance to heat, chemicals, and electricity.

In the construction industry (including renovation and demolition), asbestos is found in installed products such as sprayed-on fireproofing, pipe insulation, floor tiles, cement pipe and sheet, roofing felts and shingles, ceiling tiles, fire-resistant drywall, drywall joint compounds, and acoustical products. Because very few asbestos-containing products are being installed today, most worker exposures occur during the removal of asbestos and the renovation and maintenance of buildings and structures containing asbestos.

Asbestos fibers enter the body when a person inhales or ingests airborne particles that become embedded in the tissues of the respiratory or digestive systems. Exposure to asbestos can cause disabling or fatal diseases such as asbestosis, an emphysema-like condition; lung cancer; mesothelioma, a cancerous tumor that spreads rapidly in the cells of membranes covering the lungs and body organs; and gastrointestinal cancer. The symptoms of these diseases generally do not appear for 20 or more years after initial exposure.

Because of the difficulty in understanding the asbestos standards, it is highly recommended that any renovation or removal project be conducted by a professional asbestos abatement company and/or in consultation with a qualified project designer such as a certified industrial hygienist or licensed professional engineer. If your council decides to perform a renovation or removal project using council office or camp employees, the enclosed information could be used to assist in developing an abatement plan. Overall, all asbestos work performed within regulated areas must be supervised by a competent person as described in 1926.1101. The asbestos standards can be found on OSHA's Web page at www.osha.gov.

The following information provides a generic overview of a particular topic related to OSHA standards. It does not alter or determine compliance responsibilities in OSHA standards or the Occupational Safety and Health Act of 1970. Because interpretations and enforcement policy may change over time, you should consult current OSHA administrative interpretations and decisions by the Occupational Safety and Health Review Commission and the courts for additional guidance on OSHA compliance requirements.

Example
Asbestos Plan

Date _____

Council Office/Camp Name _____

Address _____

City, State, Zip _____

Phone _____ Fax _____

The OSHA standard establishes a classification system for asbestos construction work that spells out mandatory, simple, technological work practices that employers must follow to reduce worker exposures. Under this system, the following four classes of construction work are matched with increasingly stringent control requirements:

Class I asbestos work is the most potentially hazardous class of asbestos jobs. This work involves the removal of asbestos-containing thermal-system insulation and sprayed-on or troweled-on surfacing materials. Employers must presume that thermal-system insulation and surfacing materials found in pre-1981 construction are Asbestos-Containing Material (ACM). That presumption, however, is rebuttable. If you believe the surfacing material or thermal-system insulation is not ACM, the OSHA standard specifies the means that you must use to rebut that presumption. Thermal-system insulation includes ACM applied to pipes, boilers, tanks, ducts, or other structural components to prevent heat loss or gain. Surfacing materials include decorative plaster on ceilings and walls; acoustical materials on decking, walls, and ceilings; and fireproofing on structural members.

Class II work includes the removal of other types of ACM that are not thermal-system insulation, such as resilient flooring and roofing materials. Examples of Class II work include removal of asbestos-containing floor or ceiling tiles, siding, roofing, or calcium silicate panels.

Class III asbestos work includes repair and maintenance operations where ACM or presumed ACM (PACM) are disturbed.

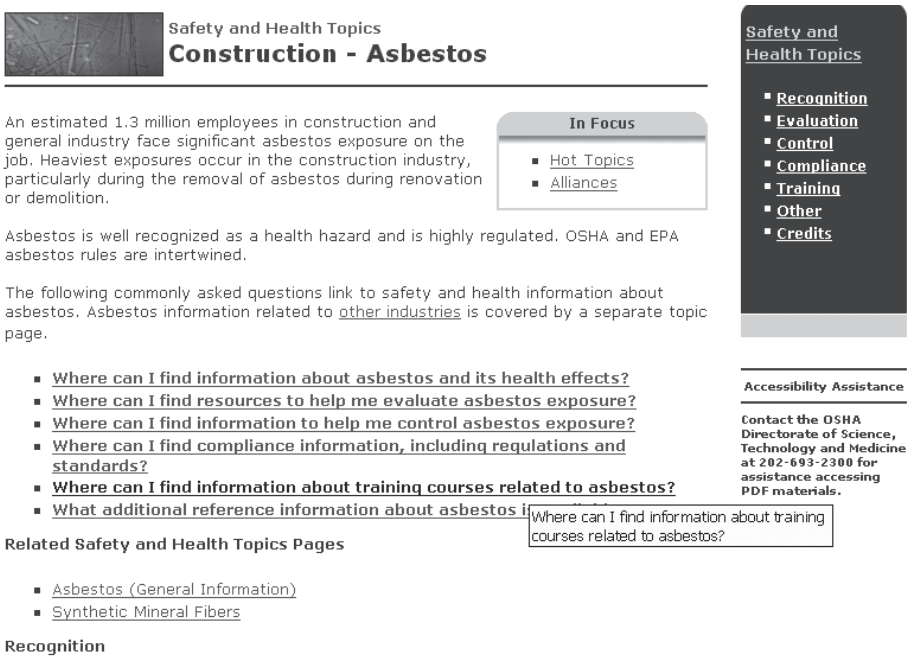
Class IV work includes custodial activities where employees clean up asbestos-containing waste and debris produced by construction, maintenance, or repair activities. This work involves cleaning dust-contaminated surfaces, vacuuming contaminated carpets, mopping floors, and cleaning up ACM or PACM from thermal-system insulation or surfacing materials.

Numerous other requirements—including monitoring, methods of compliance, medical surveillance, and training—may be required based on the type of project. A council office or camp should review the OSHA standard for asbestos (construction) found at http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10862 to determine further requirements.

References

Further information on **29 CFR 1926.1101, *Asbestos (Construction),*** is available through OSHA's public page at http://www.osha.gov/SLTC/constructionasbestos/index.html.

The following list from the Environmental Protection Agency (EPA) is intended as a general guide to show which types of materials may contain asbestos. The list does not include every product or material that may contain asbestos. (This is not a comprehensive list and any construction, renovation, or demolition work should include an assessment by the contractor as to the preserve of asbestos.)



Safety and Health Topics
Construction - Asbestos

An estimated 1.3 million employees in construction and general industry face significant asbestos exposure on the job. Heaviest exposures occur in the construction industry, particularly during the removal of asbestos during renovation or demolition.

In Focus
- Hot Topics
- Alliances

Asbestos is well recognized as a health hazard and is highly regulated. OSHA and EPA asbestos rules are intertwined.

The following commonly asked questions link to safety and health information about asbestos. Asbestos information related to other industries is covered by a separate topic page.

- Where can I find information about asbestos and its health effects?
- Where can I find resources to help me evaluate asbestos exposure?
- Where can I find information to help me control asbestos exposure?
- Where can I find compliance information, including regulations and standards?
- Where can I find information about training courses related to asbestos?
- What additional reference information about asbestos i

Where can I find information about training courses related to asbestos?

Related Safety and Health Topics Pages

- Asbestos (General Information)
- Synthetic Mineral Fibers

Recognition

Safety and Health Topics
- Recognition
- Evaluation
- Control
- Compliance
- Training
- Other
- Credits

Accessibility Assistance

Contact the OSHA Directorate of Science, Technology and Medicine at 202-693-2300 for assistance accessing PDF materials.

Asbestos-Containing Materials

Sample List of Suspected Asbestos-Containing Materials

Cement pipes
Cement wallboard
Cement siding
Asphalt floor tile
Vinyl floor tile
Vinyl sheet flooring
Flooring backing
Construction mastics (floor tile, carpet, ceiling tile, etc.)
Acoustical plaster
Decorative plaster
Textured paints/coatings
Ceiling tiles and lay-in panels
Spray-applied insulation
Blown-in insulation
Fireproofing materials
Taping compounds (thermal)
Packing materials (for wall/floor penetrations)
High-temperature gaskets
Elevator brake shoes
HVAC duct insulation
Boiler insulation
Breaching insulation
Ductwork flexible fabric connections
Cooling towers
Pipe insulation (corrugated air-cell, block, etc.)
Heating and electrical ducts
Electrical panel partitions
Electrical cloth
Electric wiring insulation
Chalkboards
Roofing shingles
Roofing felt
Base flashing
Thermal paper products
Fire doors
Caulking/putties

Laboratory hoods/tabletops

Laboratory gloves

Fire blankets

Fire curtains

Elevator equipment panels

Adhesives

Wallboard

Joint compounds

Vinyl wall coverings

Spackling compounds

Additional Guidance

Additional information on asbestos can be found at http://www.osha.gov/SLTC/asbestos/index.html.

Safety and Health Topics

Asbestos

An estimated 1.3 million employees in construction and general industry face significant asbestos exposure on the job. Heaviest exposures occur in the construction industry, particularly during the removal of asbestos during renovation or demolition. Employees are also likely to be exposed during the manufacture of asbestos products (such as textiles, friction products, insulation, and other building materials) and during automotive brake and clutch repair work.

Asbestos is well recognized as a health hazard and is highly regulated. OSHA and EPA asbestos rules are intertwined.

The following questions link to information about asbestos in the workplace. Information related to the construction industry is covered by a separate topic page.

In Focus

- Hurricane Recovery
- Hot Topics
- Self Inspection Checklist
  Use this checklist to determine compliance to the asbestos standard.
  Text Version

What OSHA standards apply to asbestos?
Standards | Federal Registers | Preambles to Final Rules | Directives | More

What are the hazards of asbestos?
Health Hazards | Recognition

How do I evaluate asbestos exposure?
Medical Surveillance | Exposure Monitoring | Sample Analysis

What controls are used to protect workers?
Automotive | Asbestos Removal | Facilities

Safety and Health Topics

Asbestos

- OSHA Standards
- Hazards
- Evaluating Exposure
- Control
- Training
- Additional Assistance
- Credits

Control of Hazardous Energy—Lockout/Tagout

(29 CFR 1910.147)

Introduction

The following example of a simple lockout procedure is provided to assist employers in developing their procedures so they meet the requirements of this standard. When the energy isolating devices are not lockable, tagout may be used, provided the employer complies with the provisions of the standard that require additional training and more rigorous periodic inspections. When tagout is used and the energy isolating devices *are* lockable, the employer must provide full employee protection [see §1910.147(c)(3) of the Lockout/Tagout standard] and additional training and more rigorous periodic inspections are required. For more complex systems, more comprehensive procedures may need to be developed, documented, and utilized.

All or any part of the example plan can be modified to fit your council office/camp's control of hazardous energy processes or equipment.

The following information provides a generic overview of a particular topic related to OSHA standards. It does not alter or determine compliance responsibilities in OSHA standards or the Occupational Safety and Health Act of 1970. Because interpretations and enforcement policy may change over time, you should consult current OSHA administrative interpretations and decisions by the Occupational Safety and Health Review Commission and the courts for additional guidance on OSHA compliance requirements.

Lockout. The placement of a lockout device on an energy isolating device, in accordance with an established procedure, ensuring that the energy isolating device and the equipment being controlled cannot be operated until the lockout device is removed.

Lockout device. A device that utilizes a positive means such as a lock, either key or combination type, to hold an energy isolating device in the safe position and prevent the energizing of a machine or equipment. Included are blank flanges and bolted ship blinds.

Tagout. The placement of a tagout device on an energy isolating device in accordance with an established procedure, to indicate that the energy isolating device and the equipment being controlled may not be operated until the tagout device is removed.

Tagout device. A prominent warning device, such as a tag and a means of attachment, which can be securely fastened to an energy isolating device in accordance with an established procedure, to indicate that the energy isolating device and the equipment being controlled may not be operated until the tagout device is removed.

Example
Control of Hazardous Energy—Lockout/Tagout

Date _____

Council Office/Camp Name _____

Address _____

City, State, Zip _____

Phone _____ Fax _____

Lockout Procedure

Lockout procedure for _____ *(council office/camp name for single procedure, or identification of equipment if multiple procedures are used)*

Purpose

This procedure establishes the minimum requirements for the lockout of energy isolating devices whenever maintenance or servicing is done on machines or equipment. It shall be used to ensure that the machine or equipment is stopped, isolated from all potentially hazardous energy sources, and locked out before employees perform any servicing or maintenance where the unexpected energization or start-up of the machine or equipment or release of stored energy could cause injury.

Compliance With This Program

All employees are required to comply with the restrictions and limitations imposed upon them during the use of lockout. The authorized employees are required to perform the lockout in accordance with this procedure. No employee, upon observing a machine or piece of equipment that is locked out to perform servicing or maintenance, shall attempt to start, energize, or use that machine or equipment.

Type of compliance enforcement to be taken for violation of the above: _____

_____

Sequence of Lockout

1. Notify all affected employees that servicing or maintenance is required on a machine or piece of equipment and that the machine or equipment must be shut down and locked out to perform the servicing or maintenance.

   Name(s)/job title(s) of affected employees and how to notify: _____

   _____

2. The authorized employee shall refer to the company/manufacturer procedure to identify the type and magnitude of the energy that the machine or equipment uses, shall understand the hazards of the energy, and shall know the methods to control the energy.

   Type(s) and magnitude(s) of energy, its hazards, and the methods to control the energy: _____

   _____

3. If the machine or equipment is operating, shut it down by the normal stopping procedure (depress stop button, open switch, close valve, etc.).

   Type(s) and location(s) of machine or equipment operating controls: _____

   _____

4. Deactivate the energy isolating device(s) so that the machine or equipment is isolated from the energy source(s).

   Type(s) and location(s) of energy isolating devices: _____

   _____

5. Lock out the energy isolating device(s) with assigned individual lock(s).

6. Stored or residual energy (such as that in capacitors, springs, elevated machine members, rotating flywheels, and hydraulic systems, and air, gas, steam, or water pressure, etc.) must be dissipated or restrained by methods such as grounding, repositioning, blocking, bleeding down, etc.

   Type(s)of stored energy and methods to dissipate or restrain: _____

   _____

7. Ensure that the equipment is disconnected from the energy source(s) by first checking that no personnel are exposed, then verify the isolation of the equipment by operating the push button or other normal operating control(s) or by testing to make certain the equipment will not operate.

   Caution: Return operating control(s) to neutral or "off" position after verifying the isolation of the equipment.

   Method of verifying the isolation of the equipment: _____

   _____

8. The machine or equipment is now locked out.

Restoring Equipment to Service

When the servicing or maintenance is completed and the machine or equipment is ready to return to normal operating condition, take the following steps.

1. Check the machine or equipment and the immediate area around the machine to ensure that nonessential items have been removed and that the machine or equipment components are operationally intact.

2. Check the work area to ensure that all employees have been safely positioned or removed from the area.

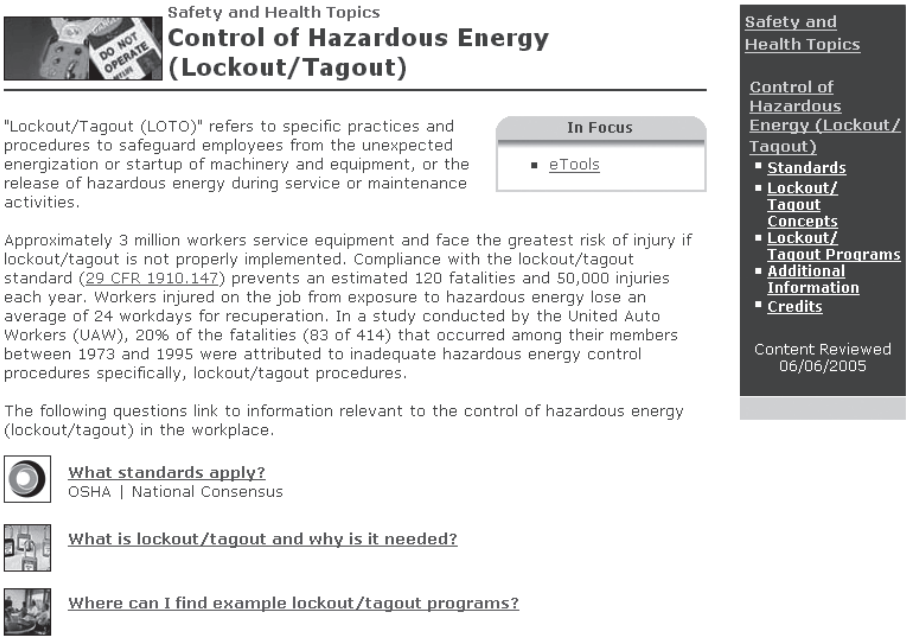
3. Verify that the controls are in neutral.

4. Remove the lockout devices and reenergize the machine or equipment. *Note:* The safe removal of some forms of blocking may first require reenergization of the machine.

5. Notify affected employees that the servicing or maintenance is completed and the machine or equipment is ready for use.

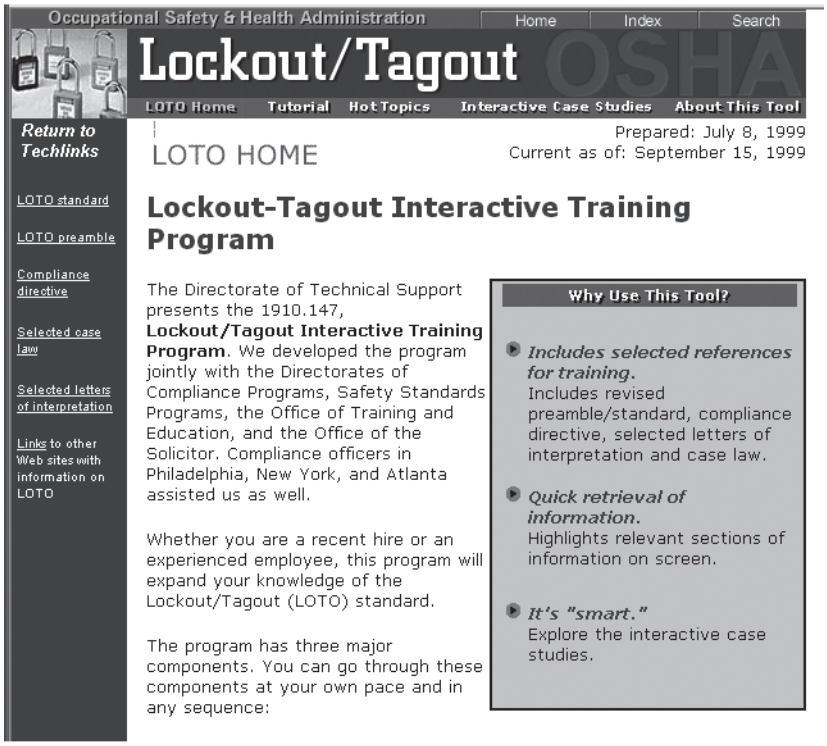
References

Further information on **29 CFR 1910.147, *Control of Hazardous Energy,*** is available through OSHA's public page at www.osha.gov. OSHA's Web page on the Control of Hazardous Energy can be found at http://www.osha.gov/SLTC/controlhazardousenergy/index.html#etools.



Additional Guidance

OSHA provides an interactive training module that council offices and camps may use to assist them in understanding the lockout/tagout standard. The training module is on OSHA's Web page at http://www.osha.gov/dts/osta/lototraining/index.htm.



Emergency Action Plan (29 CFR 1910.38)

Fire Prevention Plan (29 CFR 1910.39)

Introduction

OSHA standards 1910.38 and 1910.39 require employers to develop an emergency action plan (EAP) and fire prevention plan (FPP) whenever a specific OSHA standard (e.g., 1910.120) requires one. However, developing a written EAP and FPP will enable the council office/camp to prepare its professional, support, and camp staffs to know what to do in case of an emergency (e.g., fire, medical emergency, natural disaster, man-made disaster). A written plan will also assist a camp in fulfilling mandatory National Camp Standards M-6, M-9, M-11, and M-18.

The EAP/FPP must include, but is not limited to, the following: a written evacuation plan, floor plans showing primary and secondary evacuation routes, emergency alarm system (e.g., pull box, public address, radio, voice), the posting of emergency numbers, training of employees on the plan and the procedures, inspection of fire extinguishers, location(s) of hazardous materials (e.g, paints, varnish, inks, etc.), and the responsible party for maintaining the EAP/FPP. The specific OSHA standards must be consulted for further requirements.

The following information provides a generic overview of a particular topic related to OSHA standards. It does not alter or determine compliance responsibilities in OSHA standards or the Occupational Safety and Health Act of 1970. Because interpretations and enforcement policy may change over time, you should consult current OSHA administrative interpretations and decisions by the Occupational Safety and Health Review Commission and the courts for additional guidance on OSHA compliance requirements.

The following is an example EAP/FPP that the council office/camp may choose to use. All or any part of the example plan can be modified to fit your council office/camp emergency procedures.

Example
Emergency Action Plan and Fire Prevention Plan

Date _____

Council Office/Camp Name _____

Address _____

City, State, Zip _____

Phone _____ Fax _____

I. Council Office/Camp Evacuation and Shelter–In-Place Policy

1. **All** employees (professional and support staff), volunteers, and visitors must evacuate immediately upon the sounding of the fire alarm.

2. Each _____ (department, area) will designate person(s) from their staff to assist in the evacuation of any disabled staff personnel, volunteer, or visitor. Emergency signage will conform to the Americans With Disabilities Act.

3. Each _____ (department, area) will designate specific staff members to perform a final visual inspection of their designated department/area to ensure that all persons have vacated the department/area (including restrooms).

4. In cases of inclement weather (example: tornado, lightning) and other emergencies (example: terrorism incident), **all** employees, volunteers, and visitors must evacuate to the designated shelter-in-place location in the basement of the building. Notification will be given via ____ (e.g., building alarm, telephone intercom system).

II. Reporting And Evacuation Procedures

1. Report the emergency to _____ (management official/backup), when available. The _____ (management official/backup) will sound the alarm signaling the need for immediate evacuation and use a land-line or cell phone to call the emergency phone number (e.g., 9-1-1) if it is safe to do so.

2. When it is not possible to report an emergency (for example, a fire or a medical emergency) to _____ (a management official), the employee who first observes the emergency must call the emergency phone number (e.g., 9-1-1) reporting the location and nature of the emergency.

3. The nearest fire station/medical unit is located at _____ . It can be reached for non-emergencies at _____. As needed, a local fire official will be invited to review this plan, walk the _____ (council office/camp/building), and provide training to the staff.

4. Any employee, if needed, can sound the internal fire alarm to notify everyone of the emergency and the need to evacuate the _____ (counciloffice/camp). When using the emergency notification system (e.g., telephone intercom) to notify employees, it is important to remain calm. The employee must calmly state that there is a fire or other emergency in or near the _____ department/area.

5. For inclement weather, medical, or other types of emergencies, all employees/volunteers/visitors will be notified via _____ (e.g., building's telephone intercom system) to take appropriate action. In case of inclement weather or a terrorism incident, all employees must proceed directly to their designated shelter-in-place location without delay. Our designated shelter-in-place locations are _____ (e.g., basement, third floor).

6. When possible without the risk of injury (e.g., being trapped, etc.), _____ (designated employee[s]) shall shut down machinery, such as shutting off gas supply, pulling the main power switch, etc.

7. Evacuation shall be conducted in a calm, orderly, and businesslike fashion. The buddy system is highly recommended when evacuating. A timely evacuation is important, but safe evacuation is the objective.

8. _____ (e.g., department heads, floor wardens) must make a sweep of the area(s) under their responsibility to ensure that all staff, volunteers, and visitors have left their department/area. Once outside, everyone must proceed directly to the designated assembly area(s). Please remain in the designated area until notified by a management official (or designated backup) or emergency official that it is safe to reenter the workplace.

9. CAUTION is the word when crossing any road(s). Watch for and stay away from emergency vehicles.

10. A list of individuals designated to provide first aid during emergencies is posted in the following locations: _____. First-aid supplies including an Automated External Defibrillator (AED) are located at _____. All other medical emergencies will be handled by local emergency medical services personnel.

III. Fire Prevention

1. **No** employee is directed to or assigned to use any of the fire extinguishers (i.e., firefighting duties). The risk of injury is too high. _____ (council office/camp) will offer appropriate training on the proper use of fire extinguishers for any employees who choose to use a fire extinguisher on their own to put out a fire in the incipient stage. *No employee should place himself/herself at extreme risk in attempting to fight a fire beyond the incipient stage.*

2. The buddy system will be in effect if one chooses to stay and fight an incipient-stage fire.

3. The following is a list of locations within the _____ (council office/camp) that may potentially initiate or contribute to the spread of a fire:
   (Example: Printing shop First floor Stain storage area Handicraft)

4. All hazardous chemicals will be properly kept and stored in their original labeled containers. Material safety data sheets (MSDSs) will be maintained on all hazardous materials used within the building. The MSDSs are available for viewing and copying at _____.

5. All used rags (contaminated with oil, paint, ink, etc.) must be properly discarded in proper metal containers with lids.

6. Electrical panels must not be blocked. A clearance of three (3) feet must remain in front of all electrical panels.

7. Smoking will not be allowed in _____ (example: in the building, in camp). Designated smoking areas have been set aside at _____.

8. (name/title) will be responsible for ensuring the fire source hazards are kept under control. An annual assessment of the _____ (council office/camp/building) will be conducted in cooperation with the council office/camp health and safety and/or risk management committees.

9. All portable fire extinguishers shall be mounted, located, and identified so that they are readily accessible to employees without subjecting the employees to possible injury. Fire extinguisher locations are identified on the evacuation route maps.

10. _____ (name) shall assure that portable fire extinguishers are maintained in a fully charged and operable condition and kept in their designated places at all times except during use. The maintenance schedule at the end of the plan shall be followed.

11. _____ (name) shall be responsible for the inspection, maintenance, and testing of all portable fire extinguishers in the workplace by an appropriately trained and certified person or company. The maintenance schedule at the end of the plan shall be followed.

12. Portable extinguishers shall be visually inspected monthly. _____ (name) will be responsible for (or oversee) the monthly inspection and will ensure the inspection tag is up-to-date. The maintenance schedule at the end of the plan shall be followed.

IV. Floor Plans

1. Emergency evacuation floor plans with designated evacuation routes have been posted (and are attached to this plan) throughout the _____ (building/council office/camp). These plans show the primary and secondary exit routes, fire extinguisher locations, emergency lighting locations, and alarms. Always use the PRIMARY EXITS except where their use poses a risk. SECONDARY EXITS are just that; they are not as desirable for exit but can serve as backup exits when primary exits are blocked or at risk for another reason. Be sure to become familiar with the floor plans and exit routes in your work area.

2. All emergency exit doors must remain unlocked and unobstructed at all times when the building is occupied. Emergency doors may have "crash or grab bars," if needed.

3. All walkways and stairwells must be kept clear of obstructions (e.g., boxes, stacked paper, trash).

4. A minimum of 32 inches of clearance is needed for all exit walkways. Hallways will be kept clear of any obstruction that would prevent a safe exit.

V. Alarm Systems

1. In the event of a fire emergency, everyone will be notified to evacuate through the following alarm system(s): _____ (type of alarm—e.g., siren, alarm pull boxes).

2. The fire alarm can be activated by _____ (e.g., pulling on the fire alarm pull-down boxes) located throughout the _____ (building, etc.). The evacuation maps indicate the location of all fire alarm boxes.

3. The _____ (e.g., telephone intercom system) will be used for a medical emergency requiring the assistance of the trained first-aiders.

4. The _____ (e.g., telephone intercom system) will be used to notify all employees to report to their designated shelter-in-place location for any inclement weather, terrorism incident, or other emergency situation.

VI. Emergency Phone Numbers—Fire/Medical/Other Emergency

1. The emergency phone numbers have been posted at all telephones and on the employee bulletin boards throughout the council office/camp.

   Fire/Medical/Police/Other Emergency: Dial **9-1-1**
   (or the correct local emergency number)
   Poison Control: Dial 1-800-222-1222

   _____

2. Staffers should also have the Poison Control number programmed into their cell phones.

VII. Training

1. All employees (professional/support/camp staff) will receive training on the EAP/FPP initially upon hire, whenever the employee's responsibilities change, whenever the plan changes, and annually. The training will include the use of the alarm system in alerting others in the building to an emergency.

2. Unannounced emergency evacuation drills will be conducted at least annually to practice evacuation procedures.

3. All volunteers and visitors will be informed of the evacuation procedures at least annually via the _____ (e.g., newsletter, camp information sheet).

4. Even though no _____ (council office/camp staff) employee is required or designated to use a fire extinguisher, the _____ (council office/camp) will offer annual training to those interested. _____ (name) will ensure training is made available.

5. The _____ (council office/camp) will offer first aid/CPR/AED training to those designated to render first aid and CPR/AED in accordance with American Red Cross recommendations.

6. A critique session will be held after each emergency evacuation drill and actual emergency with _____ (management officials) and designated employees to identify and correct any concerns or problems that were observed.

VIII. Assembly Areas

1. The outside assembly area(s) for the _____ (council office/camp) will be: _____.

2. The shelter-in-place location(s) for the _____ (council office/camp) are at: _____.

3. _____ (e.g., department heads) will be responsible for performing a head count of employees, volunteers, and visitors at the assembly area(s) or shelter-in-place location(s).

IX. Recordkeeping

1. A record (for example, a list, or staff meeting notes) of all those having received training on the EAP and FPP will be maintained by _____ (e.g., human resource).

2. A record of all _____ (council office/camp) staff that has received training in the use of fire extinguishers will be maintained by _____ (e.g., human resource).

3. A record of all _____ (council office/camp) staff having received training in first aid/CPR/AED will be maintained by _____ (e.g., human resource). The list of currently trained staff will be posted on employee bulletin boards.

X. Contact Information

1. _____ will be responsible for maintaining fire alarms, backup lighting, and backup power.

2. _____ (person) is responsible for maintaining this EAP/FPP. For further information regarding the council office/camp Emergency Action/Fire Prevention Plans, please contact _____ at ext._____.

Approved by:

_____
Scout Executive

_____
Council President on behalf of the Executive Board

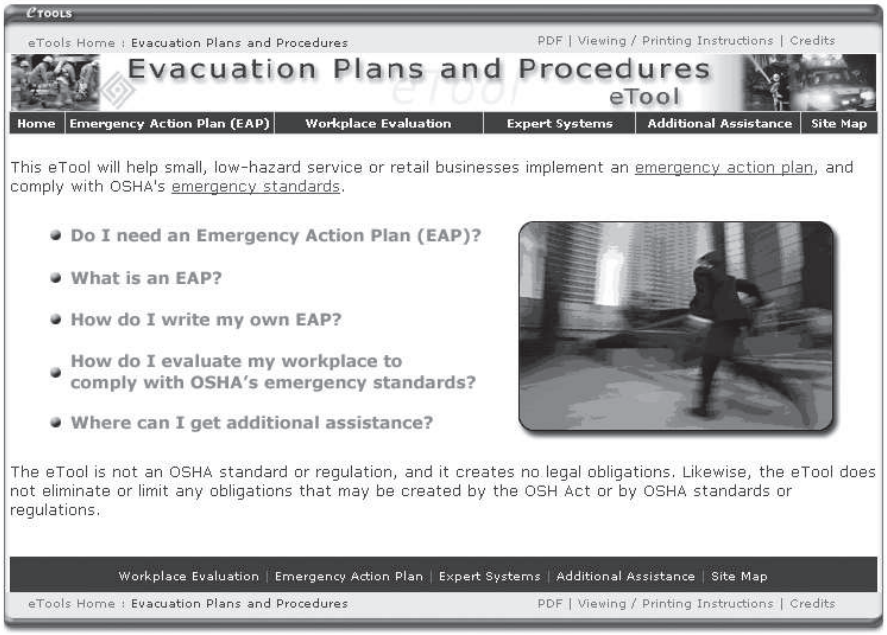
Date: _____

Maintenance Schedule

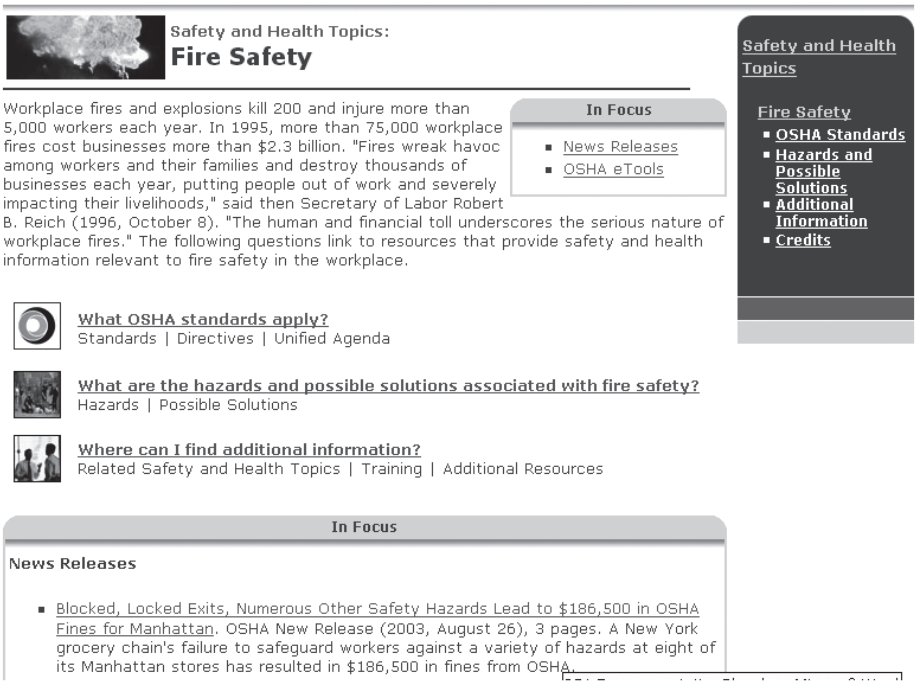
Equipment or System Being Maintained	Inspection Interval	Other Criteria
1. Portable Fire Extinguishers	Monthly checks (ensuring they are available for use) [29CFR1910.157(e)(2)]	Annual servicing (thorough evaluation, usually by service company) [29CFR1910.157(e)(3)]
2. Battery Operated Emergency Lights	Monthly test using test button [NFPA 101 Sec. 7.9.3]	Annual test for 1.5 hrs. [NFPA 101 Sec. 7.9.3]
3. Fire Alarm System	Supervised system to be tested annually [29CFR1910.165(d)(4)]	Maintained by trained person [29CFR1910.165(d)(5)]
4. Emergency Telephone System	Unsupervised system to be tested every two months [29CFR1910.165(d)(2)]	Maintained by trained person [29CFR1910.165(d)(5)

References

Further information on **29 CFR 1910.38, *Emergency Action Plan***, **29 CFR 1910.39, *Fire Prevention Plan***, and **29 CFR 1910.157, *Portable Fire Extinguishers,*** is accessible through OSHA's public page at www.osha.gov. An Evacuation Plans and Procedures eTool to assist in developing an EAP can be found at http://www.osha.gov/SLTC/etools/evacuation/index.html.



The safety and health topics links to information on fire safety can be found at http://www.osha.gov/SLTC/firesafety/index.html.



Additional Guidance

Written and oral emergency action plans and/or fire prevention plans: An emergency action plan and/or fire prevention plan must be in writing, be kept in the workplace, and be made available to employees for review. However, an employer with 10 or fewer employees may communicate the plan orally to employees.

The following serves as a nonmandatory guideline to assist employers in complying with the appropriate required emergency plans:

1. **"Emergency action plan elements."** The emergency action plan should address emergencies that the employer may reasonably expect in the workplace. Examples are: fire; toxic chemical releases; hurricanes, tornadoes, blizzards, floods; and others. The elements of the emergency action plan presented in paragraph 1910.38(c) can be supplemented by the following to more effectively achieve employee safety and health in an emergency. The employer should list in detail the procedures to be taken by those employees who have been selected to remain behind to care for essential operations until their evacuation becomes absolutely necessary. Essential operations may include the monitoring of power supplies, water supplies, and other essential services that cannot be shut down for every emergency alarm. Essential operations may also include chemical or manufacturing processes that must be shut down in stages or steps where certain employees must be present to assure that safe shutdown procedures are completed.

   Floor plans or workplace maps that clearly show the emergency escape routes should be included in the emergency action plan. Color coding will aid employees in determining their route assignments.

   The employer should also develop and explain in detail what rescue and medical first-aid duties are to be performed and by whom. All employees are to be told what actions they are to take in these emergency situations that the employer anticipates may occur in the workplace.

2. **"Emergency evacuation."** At the time of an emergency, employees should know what type of evacuation is necessary and what their role is in carrying out the plan. In some cases where the emergency is very grave, total and immediate evacuation of all employees is necessary. In other emergencies, a partial evacuation of nonessential employees with a delayed evacuation of others may be necessary for continued plant operation. In some cases, only those employees in the immediate area of a fire may be expected to evacuate or move to a safe area, such as when a local-application fire-suppression-system-discharge employee alarm is sounded. Employees must be sure they know what is expected of them in all such emergency possibilities that have been planned, in order to assure their safety from fire or other emergency.

Designated refuge or safe areas for evacuation should be determined and identified in the plan. In a building divided into fire zones by fire walls, the refuge area may be within the same building but in a different zone from where the emergency occurs.

Exterior refuge or safe areas may include parking lots, open fields, or streets that are located away from the site of the emergency and provide sufficient space to accommodate the employees. Employees should be instructed to move away from the exit doors of the building, and to avoid congregating close to the building where they may hamper emergency operations or endanger themselves or others.

3. **"Emergency action plan training."** The employer should assure that an adequate number of employees are available at all times during working hours to act as evacuation wardens so that employees can be swiftly moved from the danger location to the safe areas. Generally, one warden for each 20 employees in the workplace should be able to provide adequate guidance and instruction during a fire emergency. The employees selected or who volunteer to serve as wardens should be trained in the complete workplace layout and the various alternative escape routes from the workplace. All wardens and fellow employees should be made aware of employees with disabilities who may need extra assistance, such as using the buddy system, and of hazardous areas to be avoided during emergencies. Before leaving, wardens should check rooms and other enclosed spaces in the workplace for employees who may be trapped or otherwise unable to evacuate the area.

   After the desired degree of evacuation is completed, the wardens should be able to account for or otherwise verify that all employees are in the safe areas.

   In buildings with several places of employment, employers are encouraged to coordinate their plans with the other employers in the building. A building-wide or standardized plan for the whole building is acceptable, provided that the employers inform their respective employees of their duties and responsibilities under the plan. The standardized plan need not be kept by each employer in the multi-employer building, provided there is an accessible location within the building where the plan can be reviewed by affected employees. When multi-employer building-wide plans are not feasible, employers should coordinate their plans with the other employers within the building to assure that conflicts and confusion are avoided during times of emergency. In multistory buildings where more than one employer is on a single floor, it is essential that these employers coordinate their plans to avoid conflicts and confusion.

4. **"Fire prevention housekeeping."** The standard calls for the control of accumulations of flammable and combustible waste materials.

   It is the intent of this standard to assure that hazardous accumulations of combustible waste materials are controlled so that a fast-developing fire, a rapid spread of toxic smoke, or an explosion will not occur. This does not necessarily mean that each room must be swept each day. Employers and employees should be aware of the hazardous properties of materials in their workplaces, and the degree of hazard each poses. Certainly oil-soaked rags must be treated differently from general paper trash in office areas. However, large accumulations of waste paper or corrugated boxes, etc., can pose a significant fire hazard. Accumulations of materials that can cause large fires or generate dense smoke, which are easily ignited or may start from spontaneous combustion, are the types of materials with which this standard is concerned. Such combustible materials may easily be ignited by matches, welder's sparks, cigarettes, and similar low-level energy ignition sources.

5. **"Maintenance of equipment under the fire prevention plan."** Certain equipment is often installed in workplaces to control heat sources or to detect fuel leaks. An example is a temperature limit switch often found on deep-fat food fryers in restaurants. There may be similar switches for high-temperature dip tanks, or flame failure and flashback arrester devices on furnaces and similar heat-producing equipment. If these devices are not properly maintained or if they become inoperative, a definite fire hazard exists. Again employees and supervisors should be aware of the specific type of control devices on equipment involved with combustible materials in the workplace and should make sure, through periodic inspection or testing, that these controls are operable. Follow manufacturers' recommendations to assure proper maintenance procedures.

Portable Fire Extinguishers

(29 CFR 1910.157)

The requirements of 29 CFR 1910.157, Portable Fire Extinguishers, apply to the placement, use, maintenance, and testing of portable fire extinguishers provided for the use of employees. Paragraph (d) of this section does not apply to extinguishers provided for employee use on the outside of workplace buildings or structures. Where extinguishers are provided but are not intended for employee use and the employer has an emergency action plan and a fire prevention plan that meet the requirements of 29 CFR 1910.38 and 29 CFR 1910.39, respectively, then only the requirements of paragraphs (e) and (f) of 1910.157 apply.

General Information on Other OSHA Standards and Regulations

Permit-Required Confined Spaces [Confined-Space Entry]

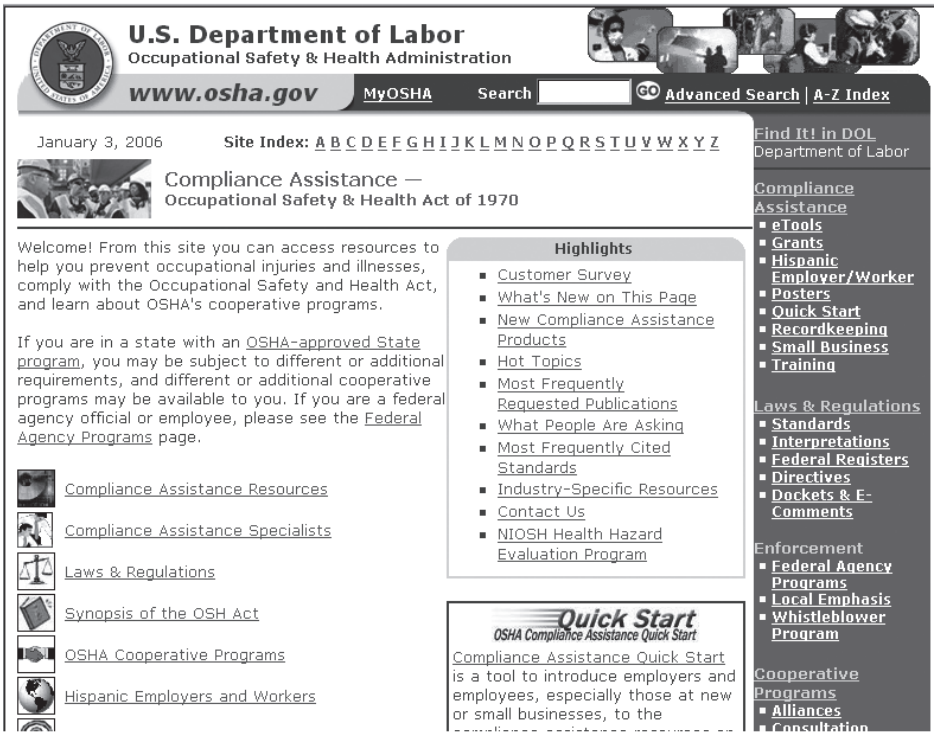
(29 CFR 1910.146)

Occupational Exposure to Asbestos [Construction]

(29 CFR 1926.1101)

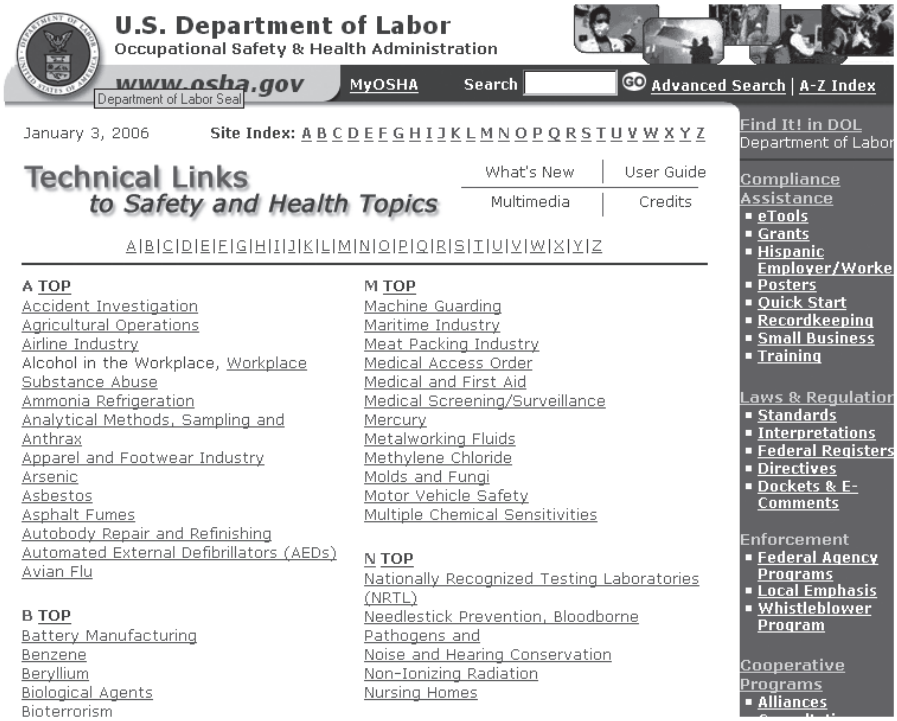
Introduction

A council office or camp may need to be in compliance with various OSHA standards and regulations. Some of OSHA's standards that may be applicable to operations controlled by the council office or camp include Permit-Required Confined Spaces (29 CFR 1910.146) and Occupational Exposure to Asbestos [Construction] (29 CFR 1926.1101). A great deal of the information needed to understand the specific requirements for these listed hazards as well as others may be found on OSHA's Web site at www.osha.gov.

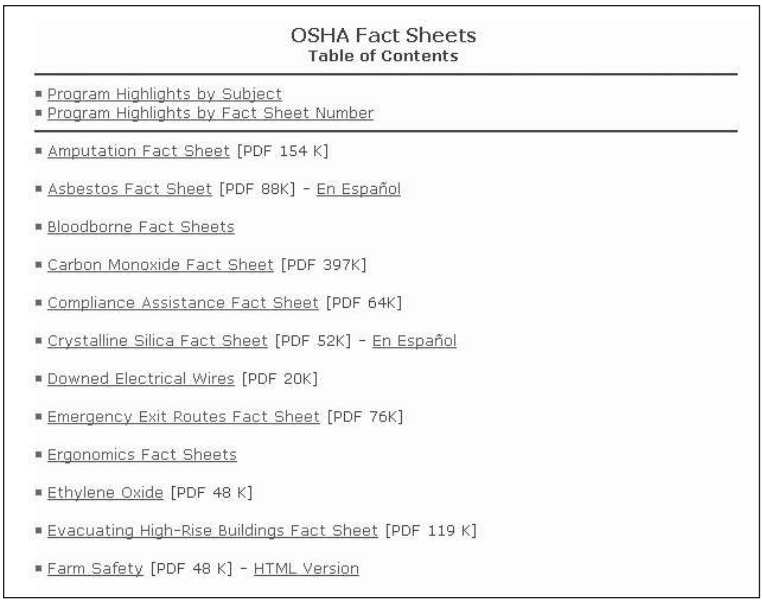


OSHA offers many ways for employers and employees to understand its standards and regulations. One way is through OSHA's compliance assistance efforts. OSHA's **Compliance Assistance** Web page (shown in part below) has been developed to provide users with a quick start to OSHA information.

OSHA also maintains on its Web site a section titled Technical Links to **Safety and Health Topics.** The Web site is at http://www.osha.gov/SLTC/index.html. A sampling of the Web site is shown below. An alphabetical site index at the top of the Web page assists users in locating a particular occupational safety and health topic. One only needs to click on the letter of the alphabet or scroll through the page to view the available topics.



Additionally, OSHA publishes many **Fact Sheets** and **Publications** on various occupational safety and health subjects. A sample Fact Sheet listing in alphabetical order is shown below. All of the available Fact Sheets may be downloaded from http://www.osha.gov/OshDoc/toc_fact.html. OSHA publications can be downloaded from http://www.osha.gov/pls/publications/pubindex.list. Publications may also be ordered by calling 202-693-1888.

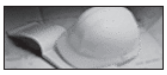


Written plans previously available from BSA Health and Safety included generic written plans for the Confined-Space Entry Program and an Asbestos Written Plan. Because these safety and health issues can be difficult to understand and be in compliance with, you should review the related available material on OSHA's Web site at www.osha.gov for assistance in developing these and other programs and plans.

To help you, shown below are the Web pages associated with the two issues named above.

Permit-Required Confined Spaces

(http://www.osha.gov/SLTC/confinedspaces/index.html)



Safety and Health Topics

Confined Spaces

Many workplaces contain spaces that are considered "confined" because their configurations hinder the activities of any employees who must enter, work in, and exit them. For example, employees who work in process vessels generally must squeeze in and out through narrow openings and perform their tasks while cramped or contorted. OSHA uses the term "confined space" to describe such spaces. In addition, there are many instances where employees who work in confined spaces face increased risk of exposure to serious hazards. In some cases, confinement itself poses entrapment hazards. In other cases, confined space work keeps employees closer to hazards, such as asphyxiating atmospheres or the moving parts of machinery. OSHA uses the term "permit-required confined space" (permit space) to describe those spaces that both meet the definition of "confined space" and pose health or safety hazards.

In Focus

- Hurricane Recovery
- eTools

The following questions link to information relevant to confined spaces in the workplace. Information related to the construction industry is covered by a separate topic page.

What OSHA standards apply?
Standards

What are the hazards and possible solutions associated with confined spaces?

Safety and Health Topics

Confined Spaces
- OSHA Standards
- Hazards and Possible Solutions
- Additional Information
- Credits

Content Reviewed 02/23/2004

Occupational Exposure to Asbestos

(http://www.osha.gov/SLTC/constructionasbestos/)

Safety and Health Topics

Construction - Asbestos

An estimated 1.3 million employees in construction and general industry face significant asbestos exposure on the job. Heaviest exposures occur in the construction industry, particularly during the removal of asbestos during renovation or demolition.

In Focus

- Hot Topics
- Alliances

Asbestos is well recognized as a health hazard and is highly regulated. OSHA and EPA asbestos rules are intertwined.

The following commonly asked questions link to safety and health information about asbestos. Asbestos information related to other industries is covered by a separate topic page.

- **Where can I find information about asbestos and its health effects?**
- **Where can I find resources to help me evaluate asbestos exposure?**
- **Where can I find information to help me control asbestos exposure?**
- **Where can I find compliance information, including regulations and standards?**
- **Where can I find information about training courses related to asbestos?**
- **What additional reference information about asbestos is available?**

Related Safety and Health Topics Pages

- Asbestos (General Information)
- Synthetic Mineral Fibers

Recognition

Safety and Health Topics

- Recognition
- Evaluation
- Control
- Compliance
- Training
- Other
- Credits

Accessibility Assistance

Contact the OSHA Directorate of Science, Technology and Medicine at 202-693-2300 for assistance accessing PDF materials.

Occupational Noise Exposure and Hearing Conservation Program Plan

(29 CFR 1910.95)

Introduction

This plan outlines the procedures and personal protective equipment necessary to protect our employees' hearing. The plan will also enable our council office/camp to comply, where applicable, with OSHA standard 29 CFR 1910.95, Occupational Noise Exposure.

The following information provides a generic overview of a particular topic related to OSHA standards. It does not alter or determine compliance responsibilities in OSHA standards or the Occupational Safety and Health Act of 1970. Because interpretations and enforcement policy may change over time, you should consult current OSHA administrative interpretations and decisions by the Occupational Safety and Health Review Commission and the courts for additional guidance on OSHA compliance requirements. OSHA's Web page can be accessed at www.osha.gov.

The following is an example of the Occupational Noise Exposure and Hearing Conservation Plan that the council office/camp may choose to use. Modify all or any part of the example plan to fit your council office/camp noise procedures.

Example

Noise and Hearing Conservation Plan

Date _____

Council Office/Camp Name _____

Address _____

City, State, Zip _____

Phone _____ Fax _____

Noise Monitoring

- Noise monitoring will be conducted initially in those areas of our council office/camp where we believe that any employee's noise exposure may be at or above an 8-hour time-weighted average (TWA) of 85 decibels (dBA).
- Monitoring shall be repeated whenever a change in production, process, equipment, or controls increases noise exposure to the extent that additional employees may be exposed at or above the action level.
- _____ will be responsible to ensure that noise monitoring is conducted, where necessary. He/she or another qualified individual will conduct the surveys.
- A properly calibrated sound-level meter and/or noise dosimeter shall be used to measure noise levels.
- All noise survey results will be posted at _____ (example: employee bulletin board). _____ will be the council office/camp contact for employees to seek information regarding the noise survey results.

Audiometric Testing

- Each employee who will be exposed to noise levels that are at or above 85 dBA for an 8-hour TWA will be given a baseline audiometric test. This baseline test will be provided to the employee within 6 months of employment (or 12 months if the audiogram is conducted by a mobile test van service).
- Each affected employee who is exposed to noise levels at or above 85 dBA for an 8-hour TWA will be given an audiometric test annually.
- Audiometric tests will be conducted by a licensed audiologist, a physician, or a technician certified by the Council of Accreditation in Occupational Hearing Conservation (CAOHC). Our council office/camp will use _____ (name of person/company) to conduct the audiometric testing.
- Audiometric testing will be provided to the affected employee at no cost.
- The results of any audiometric tests will be reported to each affected employee.
- An employee who experiences a standard threshold shift (STS) (where there is an average shift from baseline levels of 10 dBA or more at 2,000, 3,000, and 4,000 hertz in either ear):

    1. Shall be notified of the results in writing;
    2. Shall be counseled in the fitting and use of hearing protection; and
    3. Shall be referred to a specialist if necessary.

Hearing Protection

- Hearing protection (e.g., earplugs [disposables], inserts, or muffs) will be provided at no cost to employees who are exposed to a TWA of 85 dBA or more. Hearing protection is also mandatory for those employees who are exposed to 85 dBA or more and have not had a baseline audiogram and for all employees who have experienced a STS.

- Regardless of the level of noise, all employees who work at _____ (camp name) on the rifle range or shotgun range, and with handicraft merit badges such as Woodwork or Metalwork, are required to wear hearing protection (e.g., earplugs, inserts, or muffs).
- All hearing protection will be kept in a clean and sanitary condition. Reusable ear inserts and muffs shall be cleaned at least daily and between users. All disposable noise plugs will be thrown away daily or whenever visible dirt can be seen on the plug.
- Hearing protection can be obtained at the following location(s):

  Rifle/shotgun shed

  Health lodge

  _____

  _____
- Employees will be trained annually in the proper use of hearing protection.
- Where hearing protection is required, it is the responsibility of _____ (name) to ensure that employees properly wear hearing protection.

Training

- _____ (name) will be responsible for training employees, covered under this plan, annually. He/she or another qualified individual will conduct the training.
- _____ person/company's name) will conduct noise and hearing conservation training for _____(council name/camp).
- The scope of the training will include

  1. The effects of noise on hearing;
  2. Hearing protection devices and their proper selection, fitting, use, and care; and
  3. Purposes and procedures of audiometric testing.

Access to Information and Training Materials

- _____ (council name/camp) will make available to affected employees copies of the noise standard and will post a copy at the _____ (example: bulletin board).
- _____ (name) will provide all informational materials to affected employees.

Recordkeeping

- _____ (name) will be responsible for maintaining noise-level monitoring results for two years from the date(s) of each survey.
- _____ (name) will be responsible for retaining each employee's audiometric results for the duration of the employee's employment.
- Upon request, affected employees may contact _____ (name) to obtain copies of noise surveys and/or audiogram tests results.

References and Guidance

A copy of the Occupational Noise Exposure standard may be found on OSHA's Web page at www.osha.gov. Click on Standards, then on Part 1910, and then find 1910.95.

OSHA's Technical Manual may also provide useful information to help councils comply with the Occupational Noise Exposure standard. The following Web link is provided: http://www.osha.gov/dts/osta/otm/noise/index.html.

Further guidance is found on OSHA's safety and health topics Web site at http://www.osha.gov/SLTC/noisehearingconservation/index.html.

Safety and Health Topics

Noise and Hearing Conservation

alliance
An OSHA Cooperative Program

Every year, approximately 30 million people in the United States are occupationally exposed to hazardous noise. Fortunately, the incidence of noise-induced hearing loss can be reduced or eliminated through the successful application of engineering controls and hearing conservation programs.

In Focus

- Alliances
- eTools

This page is maintained as a product of the Alliance between OSHA and the National Hearing Conservation Association (NHCA).

The following questions link to information relevant to noise and hearing conservation in the workplace. Information related to the construction industry is covered by a separate topic page.

What standards apply?
OSHA | Other Federal | National Consensus

Where do noise hazards occur and what are their health effects?

How do you measure noise exposures?

How can noise be controlled?

Where can I find information on hearing conservation programs?

Safety and Health Topics

Noise and Hearing Conservation
- Standards
- Health Effects
- Measuring Exposure
- Controls
- Hearing Conservation Programs
- Additional Information
- Credits

Content Reviewed 04/04/2005

Permit-Required Confined Space (PRCS) Entry Program

(29 CFR 1910.146)

Introduction

The hazards encountered and associated with entering and working in confined spaces are capable of causing bodily injury, illness, and death to the worker. Accidents occur among workers because of failure to recognize that a confined space is a potential hazard. You should therefore suppose that the most unfavorable situation exists in every case and that the danger of explosion, poisoning, and asphyxiation will be present at the onset of entry.

Before initiating forced ventilation, consider information such as restricted areas within the confined space, voids, the nature of the contaminants present, the size of the space, the type of work to be performed, and the number of people involved. The ventilation air should not create an additional hazard due to recirculation of contaminants, improper arrangement of the inlet duct, or substitution of anything other than fresh (normal) air (approximately 20.9 percent oxygen, 78.1 percent nitrogen, and 1 percent argon with small amounts of various other gases). The terms *air* and *oxygen* are sometimes considered synonymous. However, this is a dangerous assumption, since the use of oxygen in place of fresh (normal) air for ventilation will expand the limits of flammability and increase the hazards of fire and explosion.

Hazardous conditions found in confined spaces include Hazardous Atmospheres (flammable, toxic, irritating, and asphyxiating), and General Safety Hazards (mechanical, communications, entry and exit, and physical).

Information on confined spaces can be found on OSHA's Web page at www.osha.gov. The following information provides a generic overview of a particular topic related to OSHA standards. It does not alter or determine compliance responsibilities in OSHA standards or the Occupational Safety and Health Act of 1970. Because interpretations and enforcement policy may change over time, you should consult current OSHA administrative interpretations and decisions by the Occupational Safety and Health Review Commission and the courts for additional guidance on OSHA compliance requirements.

Confined space *means* a space that: 1) Is large enough and so configured that an employee can bodily enter and perform work; 2) Has limited or restricted means for entry or exit (for example, tanks, vessels, silos, storage bins, hoppers, vaults, and pits are spaces that may have limited means of entry); and 3) Is not designed for continuous employee occupancy.

Permit-required confined space (permit space) *means* a confined space that has one or more of the following characteristics: 1) Contains or has a potential to contain a hazardous atmosphere; 2) Contains a material that has the potential for engulfing an entrant; 3) Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or by a floor which slopes downward and tapers to a smaller cross section; or 4) Contains any other recognized serious safety or health hazard.

The following is an example *minimal* plan for a workplace that has employees making a sewer-type entry. All or any part of this example plan can be modified to fit an actual confined-space entry at your council office or camp.

Example
Permit-Required Confined Space (PRCS) Entry Plan

Date _____

Council Office/Camp Name _____

Address _____

City, State, Zip _____

Phone _____ Fax _____

Policy

_____ *(council name/camp)* management shall not permit an employee to enter and no employee shall enter a confined space (or PRCS) unless such entry is made in compliance with OSHA regulations and the procedure outlined, similar to the example plan below.

In addition, all confined spaces (and PRCSs) must afford the employee safe entry and exit from all accessible parts of the confined space (or PRCS) when he/she is wearing personal protective equipment or other equipment that may be prescribed by regulations or policies for entry.

_____ *(responsible person)* shall ensure that effective measures are taken to prevent the inadvertent or accidental entry of any employee into a confined space (or PRCS).

_____ *(council name/camp and responsible person)* shall post required warning signs, including but not limited to "DANGER—PERMIT-REQUIRED CONFINED SPACE. DO NOT ENTER," or by any other equally effective means, shall inform exposed employees of the existence and location of and the danger posed by the permit spaces.

If _____ *council office/camp)* decides that its employees *will not* enter permit spaces, *(council name/camp)* shall take effective measures to prevent its employees from entering the permit space(s).

If _____ *(council name/camp)* decides that its employees *will* enter permit spaces, *(council name/camp)* shall have a written permit space program to be written and implemented that complies with 1910.146.

Plan

Confined-space workplace: _____ *(example: Sewer entry)*

Potential hazards: _____ *(council office/camp)* employees could be exposed to the following:

Yes	No	
_____	_____	Engulfment.
_____	_____	Presence of toxic gases. Equal to or more than 10 ppm hydrogen sulfide (H_2S) measured as an 8-hour time-weighted average. If the presence of other toxic contaminants is suspected, specific monitoring programs will be developed.
_____	_____	Presence of explosive/flammable gases. Equal to or greater than 10% of the lower flammable limit (LFL).
_____	_____	Oxygen deficiency. A concentration of oxygen in the atmosphere equal to or less than 19.5% by volume.

A. Entry Without Permit/Attendant

Certification. Confined spaces may be entered without the need for a written permit or attendant provided that the space can be maintained in a safe condition for entry by mechanical ventilation alone, as provided in 1910.146(c)(5).

All spaces shall be considered permit-required confined spaces until the pre-entry procedures demonstrate otherwise. Any employee required or permitted to pre-check or enter an enclosed/confined space shall have successfully completed, as a minimum, the training as required by the following sections of these procedures.

A written copy of operating and rescue procedures as required by these procedures shall be at the work site for the duration of the job. The Confined Space Pre-Entry Checklist (see the self-checklist below) must be completed by the LEAD WORKER before entry into a confined space. This list verifies completion of items listed below. This checklist shall be kept at the job site for the duration of the job. If circumstances dictate an interruption in the work, the permit space must be reevaluated and a new checklist must be completed.

Control of atmospheric and engulfment hazards.

Pumps and Lines. All pumps and lines that may reasonably cause contaminants to flow into the space shall be disconnected, blinded and locked out, or effectively isolated by other means to prevent development of dangerous air contamination or engulfment. Not all laterals to sewers or storm drains require blocking. However, where experience or knowledge of industrial use indicates there is a reasonable potential for contamination of air or engulfment into an occupied sewer, then all affected laterals shall be blocked. If blocking and/or isolation requires entry into the space, the provisions for entry into a permit-required confined space must be implemented.

Surveillance. The surrounding area shall be surveyed to avoid hazards such as drifting vapors from the tanks, piping, or sewers.

Testing. The atmosphere within the space will be tested to determine whether dangerous air contamination and/or oxygen deficiency exists. Detector tubes, alarm-only gas monitors, and explosion meters are examples of monitoring equipment that may be used to test permit space atmospheres.

Testing shall be performed by the LEAD WORKER who has successfully completed the Gas Detector training for the monitor that worker will use. The minimum parameters to be monitored are oxygen deficiency, LFL, and hydrogen sulfide concentration.

A written record of the pre-entry test results shall be made and kept at the work site for the duration of the job. The supervisor will certify in writing, based upon the results of the pre-entry testing, that all hazards have been eliminated.

Affected employees shall be able to review the testing results. The most hazardous conditions shall govern when work is being performed in two adjoining, connecting spaces.

Entry Procedures. If no non-atmospheric hazards are present and if the pre-entry tests show no dangerous air contamination and/or oxygen deficiency within the space and there is no reason to believe that any is likely to develop, entry into and work within may proceed.

The atmosphere in the immediate vicinity of the workers within the space shall be continuously tested. The workers will immediately leave the permit space when any of the gas monitor alarm set points are reached as defined.

Workers will not return to the area until a SUPERVISOR who has completed the gas detector training has used a direct-reading gas detector to evaluate the situation and has determined that it is safe to enter.

Rescue. Arrangements for rescue services are not required where there is no attendant. See the rescue portion of section B, below, for instructions regarding rescue planning where an entry permit is required.

B. Entry Permit Required

Permits: Confined Space Entry Permit (see example permit below). All spaces shall be considered permit-required confined spaces until the pre-entry procedures demonstrate otherwise. Any employee required or permitted to pre-check or enter a permit-required confined space shall have successfully completed, as a minimum, the training as required by the following sections of these procedures.

A written copy of operating and rescue procedures as required by these procedures shall be at the work site for the duration of the job. The Confined Space Entry Permit must be completed before approval can be given to enter a permit-required confined space. This permit verifies completion of items listed below. This permit shall be kept at the job site for the duration of the job. If circumstances cause an interruption in the work or a change in the alarm

conditions for which entry was approved, a new Confined Space Entry Permit must be completed.

Control of atmospheric and engulfment hazards.

Surveillance. The surrounding area shall be surveyed to avoid hazards such as drifting vapors from tanks, piping, or sewers.

Testing. The confined space atmosphere shall be tested to determine whether dangerous air contamination and/or oxygen deficiency exists. A direct-reading gas monitor shall be used.

Testing shall be performed by the SUPERVISOR who has successfully completed the gas detector training for the monitor the supervisor will use. The minimum parameters to be monitored are oxygen deficiency, LFL, and hydrogen sulfide concentration.

A written record of the pre-entry test results shall be made and kept at the work site for the duration of the job. Affected employees shall be able to review the testing results. The most hazardous conditions shall govern when work is being performed in two adjoining, connected spaces.

Space Ventilation. Mechanical ventilation systems, where applicable, shall be set at 100 percent outside air. Where possible, open additional manholes to increase air circulation. Use portable blowers to augment natural circulation if needed. After a suitable ventilating period, repeat the testing. Entry may not begin until testing has demonstrated that the hazardous atmosphere has been eliminated.

Entry Procedures. The following procedures shall be observed under any of the following conditions: 1) Testing demonstrates the existence of dangerous or deficient conditions and additional ventilation cannot reduce concentrations to safe levels; 2) The atmosphere tests as safe but unsafe conditions can reasonably be expected to develop; 3) It is not feasible to provide for ready exit from spaces equipped with automatic fire suppression systems and it is not practical or safe to deactivate such systems; or 4) An emergency exists and it is not feasible to wait for pre-entry procedures to take effect.

All personnel must be trained. Any person entering the space shall wear a self-contained breathing apparatus (SCBA). At least one worker shall stand by the outside of the space ready to give assistance in case of emergency. The standby worker shall have a self-contained breathing apparatus available for immediate use.

At least one additional worker shall be within sight or call of the standby worker. Continuous powered communications shall be maintained between the worker within the confined space and standby personnel.

If at any time there is any questionable action or nonmovement by the worker inside, a verbal check will be made. If there is no response, the worker will be moved immediately. *Exception:* If the worker is disabled due to falling or impact, he/she shall not be removed from the confined space unless there is immediate danger to his/her life. Local fire department rescue personnel shall be notified immediately.

The standby worker may only enter the confined space in case of an emergency (wearing the self-contained breathing apparatus) and only after being relieved by another worker. All workers entering the space shall use a safety belt or harness with attached lifeline, with the free end of the line secured outside the entry opening. The standby worker shall attempt to remove a disabled worker via his/her lifeline before entering the space.

When practical, these spaces shall be entered through side openings—those within 3½ feet (1.07 m) of the bottom. When entry must be through a top opening, the safety belt shall be of the harness type that suspends a person upright, and a hoisting device or similar apparatus shall be available for lifting workers out of the space.

In any situation where their use may endanger the worker, the use of a hoisting device or safety belt and attached lifeline may be discontinued.

When dangerous air contamination is attributable to flammable and/or explosive substances, lighting and electrical equipment shall be Class 1, Division 1 rated per National Electrical Code and no ignition sources shall be introduced into the area.

Continuous gas monitoring shall be performed during all confined space operations. If alarm conditions change adversely, entry personnel shall exit the confined space and a new confined space permit shall be issued.

Rescue. Call the fire department services for rescue. Where immediate hazards to injured personnel are present, workers at the site shall implement emergency procedures to fit the situation.

The following self-checklist can assist your council office/camp in developing a PRCS program including a written permit.

Confined Space Self-Checklist

Yes	No	
_____	_____	Are confined spaces thoroughly emptied of any corrosive or hazardous substances, such as acids or caustics, before entry?
_____	_____	Are all lines to a confined space containing inert, toxic, flammable, or corrosive materials valved off and blanked or disconnected and separated before entry?
_____	_____	Are all impellers, agitators, or other moving parts and equipment inside confined spaces locked-out if they present a hazard?
_____	_____	Is either natural or mechanical ventilation provided prior to confined space entry?
_____	_____	Are appropriate atmospheric tests performed to check for oxygen deficiency, toxic substances, and explosive concentrations in the confined space before entry?
_____	_____	Is adequate illumination provided for the work to be performed in the confined space?
_____	_____	Is the atmosphere inside the confined space frequently tested or continuously monitored during conduct of work? Is there an assigned safety standby employee outside of the confined space. when required, whose sole responsibility is to watch the work in progress, sound an alarm if necessary, and render assistance?
_____	_____	Is the standby employee appropriately trained and equipped to handle an emergency?
_____	_____	Is the standby employee or are other employees prohibited from entering the confined space without lifelines and respiratory equipment if there is any question as to the cause of an emergency?
_____	_____	Is approved respiratory equipment required if the atmosphere inside the confined space cannot be made acceptable?
_____	_____	Is all portable electrical equipment used inside confined spaces either grounded and insulated, or equipped with ground fault protection?
_____	_____	Before gas welding or burning is started in a confined space, are hoses checked for leaks, compressed gas bottles forbidden inside of the confined space, torches lighted only outside the confined area, and the confined area tested for an explosive atmosphere each time before a lighted torch is to be taken into the confined space?
_____	_____	If employees will be using oxygen-consuming equipment—such as salamanders, torches, and furnaces, in a confined space—is sufficient air provided to assure combustion without reducing the oxygen concentration of the atmosphere below 19.5 percent by volume?
_____	_____	Whenever combustion-type equipment is used in a confined space, are provisions made to ensure the exhaust gases are vented outside of the enclosure?
_____	_____	Is each confined space checked for decaying vegetation or animal matter that may produce methane?
_____	_____	Is the confined space checked for possible industrial waste that could have toxic properties?
_____	_____	If the confined space is below the ground and near areas where motor vehicles will be operating, is it possible for vehicle exhaust or carbon monoxide to enter the space?

Sample Confined Space Entry Permit

Date and Time Issued: _____ Date and Time Expires: _____

Job site/Space I.D.: _____ Job Supervisor: _____

Equipment to be worked on: _____ Work to be performed: _____

Standby Personnel: _____ _____ _____

1. Atmospheric checks: Time _____

   Oxygen _____ %

   Explosive _____ % L.F.L.

   Toxic _____ PPM

   Tester's signature: _____

2. Source isolation (No entry):	**N/A**	**Yes**	**No**
Pumps or lines blinded	❒	❒	❒
Pumps or lines disconnected or blocked	❒	❒	❒

3. Ventilation modification:	**N/A**	**Yes**	**No**
Mechanical	❒	❒	❒
Natural ventilation only	❒	❒	❒

4. Atmospheric checks after isolation and ventilation:

   Oxygen _____ %> 19.5%

   Explosive _____ L.F.L. < 10%

   Toxic _____ PPM <10 PPM H_2S

   Time _____

   Tester's signature: _____

5. Communication procedures: _____

   _____

6. Rescue procedures: _____

   _____

   _____

   _____

7. Entry, standby, and backup persons:		Yes	No
Successfully completed required training?		❒	❒
Is it current?		❒	❒

8. Equipment:	N/A	Yes	No
Direct reading gas monitor tested	❒	❒	❒
Safety harnesses and lifelines for entry and standby persons	❒	❒	❒
Hoisting equipment	❒	❒	❒
Powered communications	❒	❒	❒
SCBAs for entry and standby persons	❒	❒	❒
Protective clothing	❒	❒	❒
All electric equipment listed Class I, Division I, Group D, and non-sparking tools	❒	❒	❒

9. Periodic atmospheric tests:

Oxygen _____ % Time _____		Oxygen _____ % Time _____	
Oxygen _____ % Time _____		Oxygen _____ % Time _____	
Explosive _____ % Time _____		Explosive _____ % Time _____	
Explosive _____ % Time _____		Explosive _____ % Time _____	
Toxic _____ % Time _____		Toxic _____ % Time _____	
Toxic _____ % Time _____		Toxic _____ % Time _____	

We have reviewed the work authorized by this permit and the information contained herein. Written instructions and safety procedures have been received and are understood. Entry cannot be approved if any squares are marked in the "No" column. This permit is not valid unless all appropriate items are completed.

Permit prepared by: (Supervisor) _____

Approved by: (Unit Supervisor) _____

Reviewed by (Confined Space Operations Personnel):

_____ _____

(printed name) (signature)

This permit to be kept at job site. Return job site copy to Safety Office following job completion.

Copies: White Original (Safety Office) Yellow (Unit Supervisor) Hard (Job site)

Sample Entry Permit

Permit valid for 8 hours only. All copies of permit will remain at job site until job is completed.

Date: _____ Site location and description: _____

_____

Purpose of entry: _____

Supervisor(s) in charge of crews	Type of Crew	Phone No.
_____	_____	_____

Communication procedures _____

Rescue procedures (phone numbers at bottom) _____

_____

Notes: (1) Below, bold denotes minimum requirements to be completed and reviewed prior to entry.
(2) On items that do not apply, enter N/A in the blank.

Requirements Completed	**Date**	**Time**
Lock out/De-energize/Try out	_____	_____
Line(s) Broken/Capped/Blanked	_____	_____
Purge—Flush and Vent	_____	_____
Ventilation	_____	_____
Secure Area (Post and Flag)	_____	_____
Breathing Apparatus	_____	_____
Resuscitator—Inhalator	_____	_____
Standby Safety Personnel	_____	_____
Full Body Harness w/"D" ring	_____	_____
Emergency Escape Retrieval Equipment	_____	_____
Lifelines	_____	_____
Fire Extinguishers	_____	_____
Lighting (Explosive-proof)	_____	_____
Protective Clothing	_____	_____
Respirator(s) (Air-purifying)	_____	_____
Burning and Welding Permit	_____	_____

Continuous Monitoring Test	Permissible Entry Level		Record Every Two Hours							
Percent of oxygen	**19.5% to 23.5%**		____	____	____	____	____	____	____	____
Lower flammable limit	**Under 10%**		____	____	____	____	____	____	____	____
Carbon monoxide	**35 ppm***		____	____	____	____	____	____	____	____
Aromatic Hydrocarbon	1 ppm*	5 ppm†	____	____	____	____	____	____	____	____
Hydrogen Cyanide (Skin)		4 ppm†	____	____	____	____	____	____	____	____
Hydrogen Sulfide	10 ppm*	15 ppm†	____	____	____	____	____	____	____	____
Sulfur Dioxide	2 ppm*	5 ppm†	____	____	____	____	____	____	____	____
Ammonia		35 ppm†	____	____	____	____	____	____	____	____

_____

* Eight-hour, time-weighted average: Employee can work in the area eight hours (longer with appropriate respiratory protection).

† Short-term exposure limit: Employee can work in the area up to 15 minutes.

Remarks _____

_____

Gas Tester Name and Check No.	Instrument(s) Used	Model and/or Type	Serial and/or Unit No.
_____	_____	_____	_____
_____	_____	_____	_____

A safety standby person is required for all confined-space work.

Safety Standby Person(s)	Check No.	Confined Space Entrant(s)	Check No.	Confined Space Entrant(s)	Check No.
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

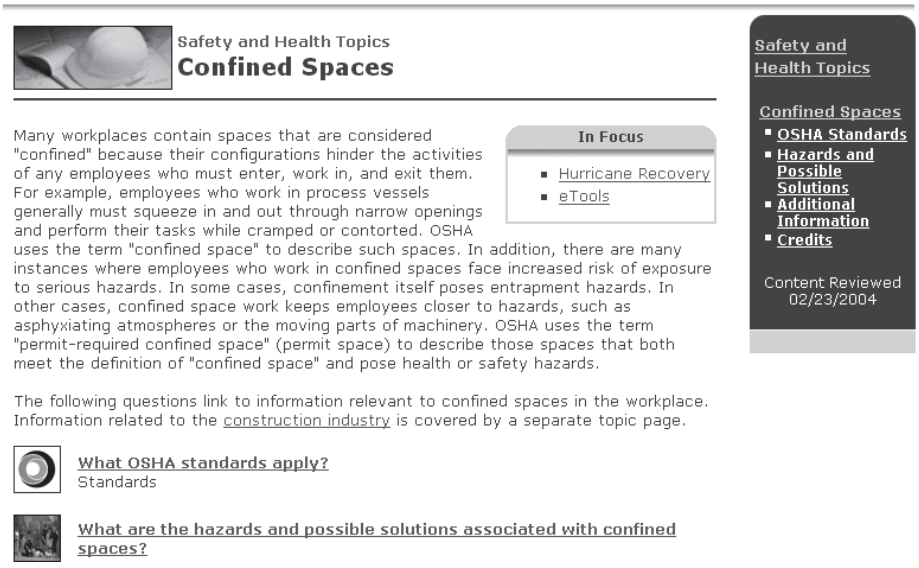
Supervisor authorizing—all conditions satisfied _____
signature

Department _____ Phone _____

Ambulance 2800 Fire 2900 Safety 4901 Gas Coordinator 4529/5387

References

Further information on **29 CFR 1910.146, *Permit-Required Confined Spaces,*** is available through OSHA's public page at www.osha.gov. Further information on complying with safety standards for confined spaces can be found on OSHA's safety and health topics page at http://www.osha.gov/SLTC/confinedspaces/index.html.



Safety and Health Topics
Confined Spaces

Many workplaces contain spaces that are considered "confined" because their configurations hinder the activities of any employees who must enter, work in, and exit them. For example, employees who work in process vessels generally must squeeze in and out through narrow openings and perform their tasks while cramped or contorted. OSHA uses the term "confined space" to describe such spaces. In addition, there are many instances where employees who work in confined spaces face increased risk of exposure to serious hazards. In some cases, confinement itself poses entrapment hazards. In other cases, confined space work keeps employees closer to hazards, such as asphyxiating atmospheres or the moving parts of machinery. OSHA uses the term "permit-required confined space" (permit space) to describe those spaces that both meet the definition of "confined space" and pose health or safety hazards.

In Focus
- Hurricane Recovery
- eTools

The following questions link to information relevant to confined spaces in the workplace. Information related to the construction industry is covered by a separate topic page.

What OSHA standards apply?
Standards

What are the hazards and possible solutions associated with confined spaces?

Safety and Health Topics

Confined Spaces
- OSHA Standards
- Hazards and Possible Solutions
- Additional Information
- Credits

Content Reviewed 02/23/2004

Personal Protective Equipment Plan

(29 CFR 1910.132–138)

Introduction

The purpose of this plan is to identify required Personal Protective Equipment (PPE) by work area, and to familiarize employees on the proper selection, fitting, use, maintenance, and care of PPE in order to reduce the risk of work-related injuries sustained due to improper use or care of the equipment.

The following information provides a generic overview of a particular topic related to OSHA standards. It does not alter or determine compliance responsibilities in OSHA standards or the Occupational Safety and Health Act of 1970. Because interpretations and enforcement policy may change over time, you should consult current OSHA administrative interpretations and decisions by the Occupational Safety and Health Review Commission and the courts for additional guidance on OSHA compliance requirements. OSHA's Web page can be accessed at www.osha.gov.

Scope

This plan covers all employees who could reasonably be exposed to areas or situations where the use of PPE is required. The following is an example Personal Protective Equipment Plan that the council office/camp may choose to use. All or any part of the example plan can be modified to fit your council office/camp PPE procedures.

Example
Personal Protective Equipment Plan

Date _____

Council Office/Camp Name _____

Address _____

City, State, Zip _____

Phone _____ Fax _____

Workplace Hazard Assessment

This plan requires_____ (council name/camp) to identify, in writing, the potential for exposure to hazards that are present or likely to be present at _____ (council name/camp). The type of Personal Protective Equipment (PPE) required as well as job classifications where occupational exposure to the required PPE occurs must also be identified.

_____ (name) will be responsible for the identification of hazards present or likely to be present. The identification will be done through _____ (visual means, monitoring devices, atmospheric testing, etc., depending on the nature of the hazard).

	Work Area	Nature of Exposure	PPE Requirements
Example:	Wood Shop	Flying wood debris	Safety glasses
	_____	_____	_____
	_____	_____	_____
	_____	_____	_____

_____ (council name/camp) will update this plan annually and/or when working conditions or processes change.

General Requirements

_____ (name) will be responsible for the selection, and ensuring employee use, of the types of PPE that will protect the affected employees from the hazards identified in the hazard assessment above.

(Note: The selection of PPE should be made by someone knowledgeable about various PPEs.)

Defective or damaged PPE shall not be used.

_____ (name) will be responsible for verifying that the required workplace hazard assessment has been performed through a written certification that identifies the workplace evaluated, the person certifying that the evaluation has been performed, and the date(s) of the hazard assessment; and also identifies the document as a certification of hazard assessment.

Training

_____ (council name/camp) shall provide training to each employee who is required to use PPE. Each such employee shall be trained to know at least the following:

1. When PPE is necessary;

2. What PPE is necessary;

3. How to properly don, doff, adjust, and wear PPE;

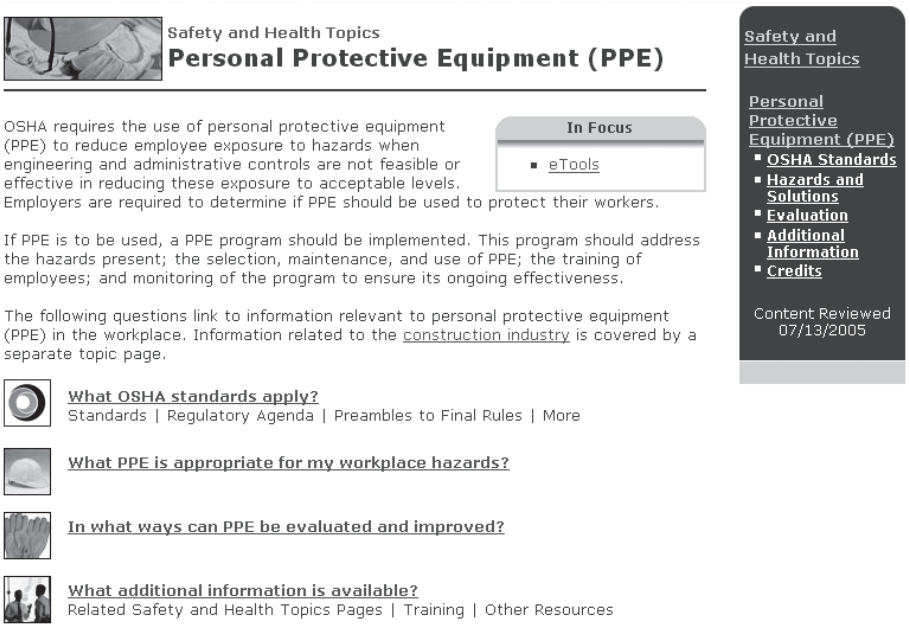
4. The limitations of the PPE; and

5. The proper care, maintenance, useful life, and disposal of PPE.

_____ (name) will ensure that each affected employee demonstrates an understanding of the training, and the ability to use PPE properly, before being allowed to perform work requiring the use of PPE.

References

For further information, please consult OSHA's Web page at www.osha.gov. OSHA provides compliance assistance through links from its public Web page. The direct link to the safety and health topics page on personal protective equipment is http://www.osha.gov/SLTC/personalprotectiveequipment/index.html.



Safety and Health Topics

Personal Protective Equipment (PPE)

OSHA requires the use of personal protective equipment (PPE) to reduce employee exposure to hazards when engineering and administrative controls are not feasible or effective in reducing these exposure to acceptable levels. Employers are required to determine if PPE should be used to protect their workers.

In Focus

- eTools

If PPE is to be used, a PPE program should be implemented. This program should address the hazards present; the selection, maintenance, and use of PPE; the training of employees; and monitoring of the program to ensure its ongoing effectiveness.

The following questions link to information relevant to personal protective equipment (PPE) in the workplace. Information related to the construction industry is covered by a separate topic page.

What OSHA standards apply?
Standards | Regulatory Agenda | Preambles to Final Rules | More

What PPE is appropriate for my workplace hazards?

In what ways can PPE be evaluated and improved?

What additional information is available?
Related Safety and Health Topics Pages | Training | Other Resources

Safety and Health Topics

Personal Protective Equipment (PPE)
- OSHA Standards
- Hazards and Solutions
- Evaluation
- Additional Information
- Credits

Content Reviewed 07/13/2005

Additional Guidance

The following information will provide compliance assistance for employers and employees in implementing requirements for a hazard assessment and the selection of personal protective equipment.

I. Controlling hazards. PPE devices alone should not be relied upon to provide protection against hazards, but should be used in conjunction with guards, engineering controls, and sound manufacturing, occupational, or workplace safety practices.

II. Assessment and selection. Always consider certain general guidelines for assessing the foot, head, eye and face, and hand hazard situations that exist in an occupational or educational operation or process, and match the protective devices to the particular hazard. It should be the responsibility of the council officer or camp ranger to exercise common sense and appropriate expertise to accomplish these tasks.

III. Assessment guidelines. To assess the need for PPE, take the following steps:

A. Survey. Conduct a walk-through survey of the areas in question to identify sources of hazards to workers and co-workers. Consider the basic hazard categories:

1. Impact
2. Penetration
3. Compression (rollover)
4. Chemical
5. Heat
6. Harmful dust
7. Light (optical) radiation

B. Sources. During the walk-through survey, the safety officer should watch for the following potential hazards. Also review injury/accident data to help identify problem areas.

1. Sources of motion; i.e., machinery or processes where any movement of tools, machine elements, or particles could exist, or movement of personnel that could result in collision with stationary objects
2. Sources of high temperatures that could result in burns, eye injury, or ignition of protective equipment, etc.
3. Types of chemical exposures
4. Sources of harmful dust
5. Sources of light radiation; i.e., welding, brazing, cutting, furnaces, heat treating, high-intensity lights, etc.
6. Sources of falling objects or potential for dropping objects
7. Sources of sharp objects that might pierce the feet or cut the hands
8. Sources of rolling or pinching objects that could crush the feet
9. Layout of workplace and location of co-workers
10. Any electrical hazards

C. Organize data. Following the walk-through survey, organize the data and information for use in assessing hazards. The objective is to prepare for an analysis of the hazards in the environment to enable proper selection of protective equipment.

D. Analyze data. Having gathered and organized data on a workplace, now make an estimate of the potential for injuries. Review each of the basic hazards (paragraph 3.a.) and determine the type, level of risk, and seriousness of potential injury from each of the hazards found in the area. Consider the possibility of exposure to several hazards simultaneously.

IV. Selection guidelines. After completing the procedures in paragraph 3, the general procedure for selecting protective equipment is to

A. Become familiar with the potential hazards and the type of protective equipment that is available, and what it can do; i.e., splash protection, impact protection, etc.

B. Compare the hazards associated with the environment (i.e., impact velocities, masses, projectile shape, radiation intensities) with the capabilities of the available protective equipment.

C. Select the protective equipment that ensures a level of protection greater than the minimum required to protect employees from the hazards; and

D. Fit the user with the protective device and give instructions on care and use of the PPE. It is essential that end users be made aware of all warning labels for and limitations of their PPE.

V. Fitting the device. Give careful consideration to comfort and fit. PPE that fits poorly will not afford the necessary protection. The user is more likely to continue wearing the device if it fits the wearer comfortably. Protective devices are generally available in a variety of sizes. Care should be taken to select the right size.

VI. Devices with adjustable features. Adjustments should be made on an individual basis for a comfortable fit that will keep the protective device in the proper position. Take particular care in fitting devices for eye protection against dust and chemical splash to ensure that the devices are sealed to the face. In addition, proper fitting of helmets is important to ensure that a helmet will not fall off during work operations. In some cases a chin strap may be necessary to keep the helmet on an employee's head. (Chin straps should break at a reasonably low force, however, to prevent a strangulation hazard.) Where manufacturer's instructions are available, they should be followed carefully.

VII. Reassessment of hazards. It is the responsibility of the safety officer to reassess the workplace hazard situation as necessary, by identifying and evaluating new equipment and processes, reviewing accident records, and reevaluating the suitability of previously selected PPE.

VIII. Selection chart guidelines for eye and face protection. Some occupations for which eye protection should be routinely considered are (this is not a complete list): carpenters, electricians, machinists, mechanics and repairers, millwrights, plumbers and pipe fitters, sheet metal workers and tinsmiths, assemblers, sanders, grinding machine operators, lathe and milling machine operators, sawyers, welders, laborers, chemical process operators and handlers, and timber cutting and logging workers. The following chart provides general guidance for the proper selection of eye and face protection against hazards associated with the listed hazard "source" operations.

Eye and Face Protection Selection Chart

Source	Assessment of Hazard	Protection
Impact		
Chipping, grinding, machining, masonry work, woodworking, sawing, drilling, chiseling, powered fastening, riveting, and sanding	Flying fragments, objects, large chips, particles, sand, dirt, etc.	Spectacles with side protection, goggles, face shields. See notes (1), (3), (5), (6), (10). For severe exposure, use face shield.
Heat		
Furnace operations, pouring, casting, hot dipping, and welding	Hot sparks	Face shields, goggles, spectacles with side protection. For severe exposure use face shield. See notes (1), (2), (3).
	Splash from molten metals	Face shields worn over goggles. See notes (1), (2), (3).
	High temperature exposure	Screen face shields, reflective face shields. See notes (1), (2), (3).
Chemicals		
Acid and chemicals handling, degreasing, plating	Splash	Goggles, eyecup and cover types. For severe exposure, use face shield. See notes (3), (11).
	Irritating mists	Special-purpose goggles.
Dust		
Woodworking, buffing, general dusty conditions	Nuisance dust	Goggles, eyecup and cover types. See note (8).
Light and/or Radiation		
Welding: Electric arc	Optical radiation	Welding helmets or welding shields. Typical shades: 10–14. See notes (9), (12).
Welding: Gas	Optical radiation	Welding goggles or welding face shield. Typical shades: gas welding 4–8, cutting 3–6, brazing 3–4. See note (9).
Cutting, torch brazing, torch soldering	Optical radiation	Spectacles or welding face shield. Typical shades, 1.5–3. See notes (3), (9).
Glare		
	Poor vision	Spectacles with shaded or special-purpose lenses, as suitable. See notes (9), (10).

Notes to Eye and Face Protection Selection Chart

(1) Take care to recognize the possibility of multiple and simultaneous exposure to a variety of hazards. Provide adequate protection against the highest level of each of the hazards. Protective devices do not provide unlimited protection.

(2) Operations involving heat may also involve light radiation. As required by the standard, protection from both hazards must be provided.

(3) Face shields should only be worn over primary eye protection (spectacles or goggles).

(4) As required by the standard, filter lenses must meet the requirements for shade designations in 1910.133(a)(5). Tinted and shaded lenses are not filter lenses unless they are marked or identified as such.

(5) As required by the standard, persons whose vision requires the use of prescription (Rx) lenses must wear either protective devices fitted with prescription (Rx) lenses or protective devices designed to be worn over regular prescription (Rx) eyewear.

(6) Wearers of contact lenses must wear appropriate eye and face protection in a hazardous environment. It should be recognized that dusty and/or chemical environments may pose an additional hazard to contact lens wearers.

(7) Exercise caution in the use of metal-frame protective devices in electrical hazard areas.

(8) Atmospheric conditions and the restricted ventilation of the protector can cause lenses to fog. Frequent cleansing may be necessary.

(9) Welding helmets or face shields should be used only over primary eye protection (spectacles or goggles).

(10) Non-side shield spectacles are available for frontal protection only, but are not acceptable eye protection for the sources and operations listed for "impact."

(11) Eye and face protection should be designed and used so that it provides adequate ventilation and protects the wearer from splash entry.

(12) Protection from light radiation is directly related to filter lens density. See note (4). Select the darkest shade that allows task performance.

IX. Selection guidelines for head protection. All head protection (helmets) is designed to provide protection from impact and penetration hazards caused by falling objects. Head protection is also available to protect against electric shock and burn. When selecting head protection, knowledge of potential electrical hazards is important. Class A helmets, in addition to impact and penetration resistance, provide electrical protection from low-voltage conductors (they are proof-tested to 2,200 volts). Class B helmets, in addition to impact and penetration resistance, provide electrical protection from high-voltage conductors (they are proof-tested to 20,000 volts). Class C helmets provide impact and penetration resistance, but they are usually made of aluminum, which conducts electricity, and should not be used around electrical hazards.

Where falling objects present hazards, helmets must be worn. Some examples include: working below other workers who are using tools and materials that could fall; working around or under conveyor belts that carry parts or materials; working below machinery or processes that might cause materials or objects to fall; and working on exposed energized conductors. Some examples of occupations for which head protection should be routinely considered are carpenters, electricians, linemen, mechanics and repairers, plumbers and pipe fitters, assemblers, packers, wrappers, sawyers, welders, laborers, freight handlers, timber cutting and logging, stock handlers, and warehouse laborers.

X. Selection guidelines for foot protection. Safety shoes and boots that meet the ANSI Z41-1991 Standard provide both impact and compression protection. Where necessary, safety shoes can be obtained that provide puncture protection. In some work situations, metatarsal protection should be provided, and in other special situations electrical conductive or insulating safety shoes would be appropriate.

Safety shoes or boots with impact protection are required for carrying or handling materials such as packages, objects, parts, or heavy tools, which could be dropped; and for other activities where objects might fall onto the feet. Safety shoes or boots with compression protection are required for work activities involving skid trucks (manual material handling carts) around bulk rolls (such as paper rolls) and around heavy pipes, all of which could potentially roll over an employee's feet. Safety shoes or boots with puncture protection are required where employees could step on sharp objects such as nails, wire, tacks, screws, large staples, scrap metal, etc., causing a foot injury.

Some occupations for which foot protection should be routinely considered are (this is not a complete list): shipping and receiving clerks, stock clerks, carpenters, electricians, machinists, mechanics and repairers, plumbers and pipe fitters, structural metal workers, assemblers, drywall installers and lathers, packers, wrappers, craters, punch and stamping press operators, sawyers, welders, laborers, freight handlers, gardeners and grounds-keepers, timber cutting and logging workers, stock handlers, and warehouse laborers.

XI. Selection guidelines for hand protection. Gloves are often relied upon to prevent cuts, abrasions, burns, and skin contact with chemicals that are capable of causing local or systemic effects following dermal exposure. OSHA is unaware of any gloves that provide protection against all potential hand hazards, and commonly available glove materials provide only limited protection against many chemicals. Therefore, it is important to select the most appropriate glove for a particular application and to determine how long it can be worn, and whether it can be reused.

It is also important to know the performance characteristics of gloves relative to the specific hazard anticipated; e.g., chemical hazards, cut hazards, flame hazards, etc. These performance characteristics should be assessed by using standard test procedures. The employer should review selected information from the manufacturer that the gloves meet the appropriate test standard(s) for the hazard(s) anticipated. Other factors to be considered for glove selection in general include

- As long as the performance characteristics are acceptable, in certain circumstances it may be more cost effective to regularly change cheaper gloves than to reuse more expensive types; and,
- The work activities of the employee should be studied to determine the degree of dexterity required; the duration, frequency, and degree of exposure of the hazard; and the physical stresses that will be applied.

With respect to selecting gloves for protection against chemical hazards:

- The toxic properties of the chemical(s) must be determined; in particular, the ability of the chemical to cause local effects on the skin and/or to pass through the skin and cause systemic effects;
- Generally, any "chemical resistant" glove can be used for dry powders;
- For mixtures and formulated products (unless specific test data are available), a glove should be selected on the basis of the chemical component with the shortest breakthrough time, since it is possible for solvents to carry active ingredients through polymeric materials; and,
- Employees must be able to remove the gloves in such a manner as to prevent skin contamination.

XII. Cleaning and maintenance. It is important that all PPE be kept clean and properly maintained. Cleaning is particularly important for eye and face protection where dirty or fogged lenses could impair vision.

For the purposes of compliance with 1910.132 (a) and (b), PPE should be inspected, cleaned, and maintained at regular intervals so that the PPE provides the requisite protection. It is also important to ensure that contaminated PPE which cannot be decontaminated is disposed of in a manner that protects employees from exposure to hazards.

Powered Industrial Trucks—Forklifts

(29 CFR 1910.178)

Introduction

It is the policy of _____ (council office/ camp) to provide for the safe operation and use of forklifts.

Our objective is to achieve this goal via employee training, inspection procedures, and safe operation rules for all forklift operators. Forklift operators must be properly trained *and* certified prior to operating forklifts.

The use of a forklift may assist us in our camp operation. Properly trained employees and well-maintained forklifts will help us to operate this equipment in the safest and most productive manner possible.

Management, forklift operators, and other employees share the responsibility to help ensure that forklift accidents are prevented. By working together we can prevent accidents that often lead to serious injury or death to operators and pedestrians.

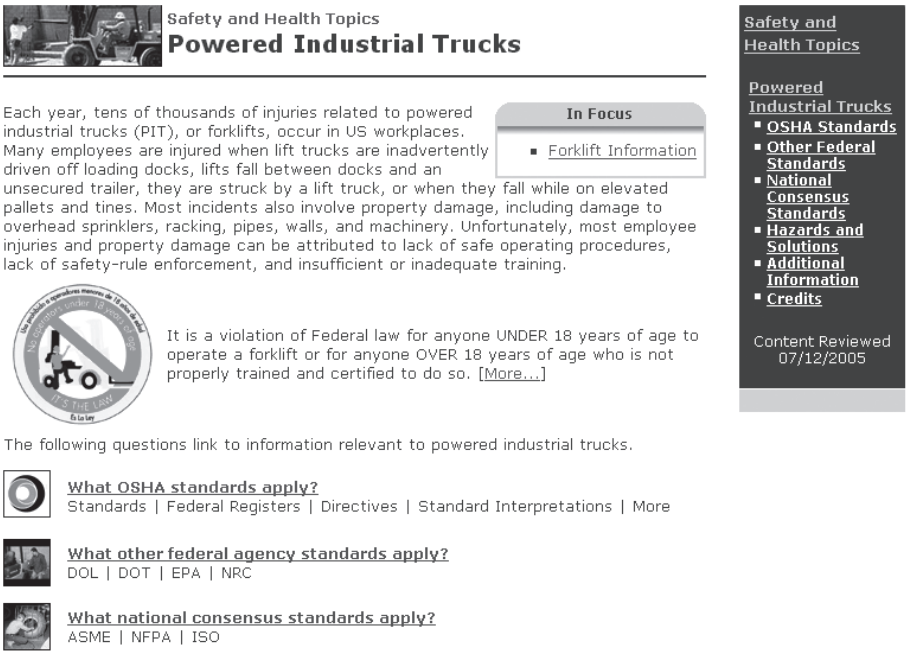
It is a violation of Federal law for anyone UNDER 18 years of age to operate a forklift or for anyone OVER 18 years of age who is not properly trained and certified to do so. The sticker shown above can be downloaded from http://www.youthrules.dol.gov/posters.htm#Sticker and placed on forklifts.

The following information provides a generic overview of a particular topic related to OSHA standards. It does not alter or determine compliance responsibilities in OSHA standards or the Occupational Safety and Health Act of 1970. Because interpretations and enforcement policy may change over time, you should consult current OSHA administrative interpretations and decisions by the Occupational Safety and Health Review Commission and the courts for additional guidance on OSHA compliance requirements.

References

A copy of the Powered Industrial Trucks, 29 CFR 1910.178, standard may be found on OSHA's Web page at www.osha.gov. Click on Standards, then on Part 1910, and then find 1910.178.

The direct link to OSHA's Safety and Health Topics Web page on Powered Industrial Trucks can be found at http://www.osha.gov/SLTC/poweredindustrialtrucks/index.html.



Safety and Health Topics
Powered Industrial Trucks

Each year, tens of thousands of injuries related to powered industrial trucks (PIT), or forklifts, occur in US workplaces. Many employees are injured when lift trucks are inadvertently driven off loading docks, lifts fall between docks and an unsecured trailer, they are struck by a lift truck, or when they fall while on elevated pallets and tines. Most incidents also involve property damage, including damage to overhead sprinklers, racking, pipes, walls, and machinery. Unfortunately, most employee injuries and property damage can be attributed to lack of safe operating procedures, lack of safety-rule enforcement, and insufficient or inadequate training.

In Focus
- Forklift Information

It is a violation of Federal law for anyone UNDER 18 years of age to operate a forklift or for anyone OVER 18 years of age who is not properly trained and certified to do so. [More...]

The following questions link to information relevant to powered industrial trucks.

What OSHA standards apply?
Standards | Federal Registers | Directives | Standard Interpretations | More

What other federal agency standards apply?
DOL | DOT | EPA | NRC

What national consensus standards apply?
ASME | NFPA | ISO

Safety and Health Topics

Powered Industrial Trucks
- OSHA Standards
- Other Federal Standards
- National Consensus Standards
- Hazards and Solutions
- Additional Information
- Credits

Content Reviewed 07/12/2005

Additional Guidance

Sample Daily Checklist for Powered Industrial Trucks

The following checklist is intended to assist in providing training on OSHA's powered industrial truck operator standards. The daily checks or inspections are not a substitute for any of the provisions of the Occupational Safety and Health Act of 1970 or for any standards issued by the U.S. Department of Labor's Occupational Safety and Health Administration (OSHA).

The OSHA standard for powered industrial truck training [29 CFR 1910.178(l)] requires that an employer provide training to truck operators on a variety of topics. Among these topics are vehicle inspection and maintenance that the operator will be required to perform. The following checklist is provided as part of OSHA's ongoing effort to assist employers and employees in ensuring that a safe and healthful workplace is provided. The list serves as a guide only and may not be totally inclusive. Each type of powered industrial truck is unique, and checklists pertinent to each type of vehicle should be modified accordingly. It is recommended that the manufacturer's instructions on vehicle maintenance and owner's and operator's responsibilities also be consulted. The OSHA standards for powered industrial trucks must be reviewed to ensure compliance.

The two general types of powered industrial trucks are: electric (battery) powered and internal combustion engine (gas/LPG/diesel) powered. Each of these general types has a variety of different configurations and attachments. Your workplace may have various trucks being operated. **ALL OPERATORS MUST BE TRAINED TO OPERATE ALL TYPES OF INDUSTRIAL TRUCKS THEY WILL BE OPERATING.**

Daily, preshift inspection of powered industrial trucks is required by OSHA standards.

Daily checklists for each type of industrial truck are available from the truck manufacturer. You may choose to use a checklist for each type of industrial truck in your workplace or compile one that can be used for any type of truck.

Refer to the owner's manual, specifications, and manufacturer's recommendations to modify the checklist for trucks operated in your workplace. Below is a sample checklist for an internal combustion truck. A checklist for an electric industrial truck can be found at http://www.osha.gov/dcsp/ote/trng-materials/pit/daily_pit_checklist.html. These lists can be modified to suit your workplace needs.

Operator's Daily Checklist

Internal Combustion Engine Industrial Truck (Gas/LPG/Diesel Truck)

Record of Fuel Added

Date		**Operator**		**Fuel**	
Truck#		**Model#**		**Engine Oil**	
Department		**Serial#**		**Radiator Coolant**	
Shift		**Hour Meter**		**Hydraulic Oil**	

Safety and Operational Checks (Prior to Each Shift)

Have a **qualified** mechanic correct all problems.

Engine Off Checks	**OK**	**Maintenance**
No leaks—fuel, hydraulic oil, engine oil, or radiator coolant		
Tires—condition and pressure		
Forks, top clip retaining pin and heel—check condition		
Load backrest—securely attached		
Hydraulic hoses, mast chains, cables and stops—check visually		
Overhead guard—attached		
Finger guards—attached		
Propane tank (LP gas truck)—rust, corrosion, damage		
Safety warnings—attached (refer to parts manual for location)		
Battery—check water/electrolyte level and charge		
All engine belts—check visually		
Hydraulic fluid level—check level		
Engine oil level—dipstick		
Transmission fluid level—dipstick		
Engine air cleaner—squeeze rubber dirt trap or check the restriction alarm (if equipped)		

Fuel sedimentor (diesel)		
Radiator coolant—check level		
Operator's manual—in container		
Nameplate—attached and information matches model, serial number, and attachments		
Seat belt—functioning smoothly		
Hood latch—adjusted and securely fastened		
Brake fluid—check level		
Engine On Checks—	**OK**	**Maintenance**
No unusual noises (if there are, they must be investigated immediately and it must be determined that the vehicle is safe prior to it being used.)		
Accelerator or direction control pedal—functioning smoothly		
Service brake—functioning smoothly		
Parking brake—functioning smoothly		
Steering operation—functioning smoothly		
Drive control—forward/reverse—functioning smoothly		
Tilt control—forward and back—functioning smoothly		
Hoist and lowering control—functioning smoothly		
Attachment control—operation		
Horn and lights—functioning		
Cab (if equipped)—heater, defroster, wipers—functioning		
Gauges: ammeter, engine oil pressure, hour meter, fuel level, temperature, instrument monitors—functioning		

Training

Developing a Training Program for

Powered Industrial Truck Operators

This information is intended to be used for training purposes only. It is not a substitute for any provisions of the Occupational Safety and Health Act of 1970, or for any standards issued by OSHA.

How do I develop a powered industrial operator training program?

Before you begin developing your operator training program, you should become familiar with the OSHA standard for powered industrial trucks and any operator's manual pertinent to the equipment you have in your workplace.

I. **Identify your operators.** First, determine the employees who will be required to operate powered industrial trucks in your workplace. If an employee has other duties, but sometimes operates a powered industrial truck, training must be provided.

II. **Identify the types of powered industrial trucks you have in your workplace and those employees who will be required to operate the vehicles.** There are many different types of powered industrial trucks. Typically, these types of vehicles are known as forklifts or lift trucks. Some types of trucks are not capable of being ridden by the operator. These are also covered by the OSHA standard and training is required. Some trucks are fitted with attachments purchased from the manufacturer. The use of these attachments may affect the manner in which the truck is handled; therefore, training on the use of the attachment would also be required. If your employees will be expected to operate several different types of powered industrial trucks, then training is required on the unique handling characteristics of the vehicles.

III. **Determine the methods of training.** Once you have identified your truck operators and types of trucks you have in your workplace, you should determine the methods of training you will use. Training must consist of a combination of formal instruction and practical training. Using both methods is the only way to ensure that the trainee receives and comprehends the instruction and uses the information to safely operate a powered industrial truck. Note that the formal training need not take place in a classroom. Discussions can consist of the trainer talking to the trainee and explaining the training material, either in the workplace or in another location. The training must, however, include an explanatory element as well as a practical element. Formal instruction may include lectures, conferences, classroom discussions, demonstrations, and written or oral tests. To enhance the training and make it more understandable to the employee, employers and other trainers may use movies, slides, computers, videotapes, and other visual presentations.

Using visual aids has several advantages, including

- The employees being trained remain more attentive, thereby increasing the training's effectiveness;
- The trainer can use visual presentations to ensure that the necessary information is covered during the training;
- Graphical presentations make better use of the training time by decreasing the need for the instructor to carry on long discussions about the instructional material; and,
- Trainees have greater retention of information learned from graphical presentations.

While some employees can learn instructional material while seated in a classroom, other employees may learn best by observing an operation (demonstration) and/or by personally performing an operation (practical exercise). In most cases, a combination of different training methods provides the best training in the least amount of time. Once you have selected the method of training, then the content of the training program must be considered to include all pertinent training items.

IV. **Set training program content.** Because each type (make and model) of powered industrial truck has different operating characteristics, limitations, and other unique features, a good employee training program for operators should be based upon the type of vehicles that the employee will be trained and authorized to operate. The training should also emphasize the workplace's features that will affect how

the vehicle must be operated. Finally, the training should include the general safety rules applicable to operating any powered industrial truck.

The following is an outline of a generic powered industrial truck operator training program.

A. Characteristics of the powered industrial truck(s) the employee will be allowed to operate:

1. Differences from the automobile;
2. Controls and instrumentation: location, what they do, and how they work;
3. Engine or motor operation;
4. Steering and maneuvering;
5. Visibility;
6. Fork and/or attachment adaptation, operation, and limitations of use;
7. Vehicle capacity;
8. Vehicle stability;
9. Vehicle inspection and maintenance the operator will be required to perform;
10. Refueling or charging and recharging batteries;
11. Operating limitations; and
12. Any other operating instruction, warning, or precaution listed in the operator's manual for the type of vehicle the employee is being trained to operate.

B. The operating environment:

1. Floor surfaces and/or ground conditions where the vehicle will be operated;
2. Composition of probable loads and load stability;
3. Load manipulation, stacking, unstacking;
4. Pedestrian traffic;
5. Narrow aisle and restricted place operation;
6. Operating in classified hazardous locations;
7. Operating the truck on ramps and other sloped surfaces that would affect the vehicle's stability;
8. Other unique or potentially hazardous environmental conditions that exist or may exist in the workplace; and
9. Operating the vehicle in closed environments and other areas where insufficient ventilation and/or poor vehicle maintenance could cause a buildup of carbon monoxide or diesel exhaust.

C. The requirements of the OSHA standard.

V. Perform employee evaluation. After the training program has been completed, and before allowing the employee to operate the truck in the workplace, the employer must evaluate the trainee's knowledge and skills and determine that the employee is competent to operate the truck safely. This evaluation will determine the adequacy of training and the ability of the employee to perform truck operations safely in the workplace. The OSHA standard also requires that an evaluation of the operator's performance be conducted at least once every three years and after refresher training.

The employer should complete a certification of training record containing the name of the operator, the date of the training, the date of the evaluation, and the identity of the person(s) performing the training or evaluation.

VI. Provide refresher training. During the course of truck operation, the supervisor may observe the employee performing an unsafe act, such as riding with the load too high or traveling at an unsafe speed. The person making the correction should point out the incorrect manner of operation of the truck or other unsafe act being conducted, tell the employee how to do the operation correctly, and then ensure the employee does the operation correctly.

When there have been multiple on-the-spot corrections, the employer may decide to conduct a more structured retraining program, to include the following information:

A. Common unsafe situations encountered in the workplace;

B. Unsafe operating methods observed or known to be used; and

C. The need for constant attentiveness to the vehicle, the workplace conditions, and the manner in which the vehicle is operated.

The above subject areas need to be taught so that the trainee receives all the information needed for safe vehicle operation. Specific details of the above subject areas may be found in the vehicle manufacturers' literature, the national consensus standards [e.g., the ASME B56 series of standards (current revisions)], and the OSHA standards relating to powered industrial truck operator training.

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