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## **Division 2, General occupational safety and health rules**

### **2/E 437-002-0042 Emergency action plan**

An emergency action plan describes how employees will respond to emergencies such as fires, toxic chemical releases, severe weather, and floods.

If your workplace has more than 10 employees and must comply with any of the following rules, it must have a written emergency action plan:

- Process safety management of highly hazardous chemicals – 1910.119
- Hazardous waste operations and emergency response – 1910.120
- Portable fire extinguishers – 437-002-0187
- Fixed extinguishing systems, general – 1910.160
- Fire detection systems – 1910.164
- Grain handling facilities – 1910.272
- Ethylene oxide – 1910.1047
- Methylenedianiline – 1910.1050
- 1-3 Butadiene – 1910.1051
- Methylenedianiline – 1926.60

Training required by emergency action plans:

- Designate and train a sufficient number of employees to assist in a safe and orderly evacuation in an emergency.
- Review with new employees those parts of your emergency action plan that they must know during an emergency. Also, review the plan with employees whenever their responsibilities under the plan change or the plan itself changes.
- If your workplace has 10 or fewer employees, the emergency action plan does not have to be in writing and you can verbally describe the plan to employees.

### **2/E 437-002-0043 Fire prevention plan**

If your workplace has more than 10 employees and must comply with any of the following rules, it must have a written fire prevention plan:

- Portable fire extinguishers – 437-002-0187
- Ethylene oxide – 1910.1047
- Methylenedianiline – 1910.1050
- 1-3 Butadiene – 1910.1051
- Methylenedianiline – 1926.60

Review with employees – before their initial assignments – the parts of the fire prevention plan they must know in emergencies and inform them about fire hazards they might be exposed to. The plan must be in the workplace and available for employees to review.

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If your workplace has 10 or fewer employees, the fire prevention plan does not have to be in writing and you can describe the plan to them verbally.

## **2/F 1910.66 Powered platforms for exterior building maintenance**

Powered platforms must be operated only by employees who are trained in:

- Recognizing and preventing hazards associated with their work tasks
- Recognizing and preventing powered-platform hazards
- Emergency action plan procedures
- Work procedures for operating and inspecting working platforms
- Personal fall-arrest system inspection, care, and use

Emergency planning. Each working platform must have a written emergency action plan that explains emergency procedures, escape routes, and alarms. Review the plan with employees before they first use the platform and whenever the plan is changed.

Competent person. A designated competent person must train employees to operate and inspect powered platforms.

Certification. Certify that employees have been trained to operate and inspect powered platforms, documenting their names, trainer signatures, and training dates.

## **2/G 1910.95 Occupational noise exposure**

You must have an annual training program for employees exposed to noise at or above an eight-hour time-weighted average of 85 decibels. The program must be updated to reflect changes in personal protective equipment and work processes.

Those exposed to noise at or above the 85-decibel limit must be fitted with hearing protectors and trained how to use and care for them.

## **2/H 1910.103 Hydrogen**

This rule applies to liquefied hydrogen systems on consumer premises. Maintain legible written operating instructions at installations that require employees to operate the equipment.

Hydrogen process equipment operators must keep legible operating instructions at their work locations. A qualified person must be present when a mobile hydrogen supply unit is being unloaded.

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## **2/H 1910.109 Explosives and blasting agents**

Transporting explosives. Motor vehicles that transport explosives must be equipped with fully charged fire extinguishers and drivers must be trained to use them. Every vehicle transporting Class A or Class B explosives must be attended by a person who knows the class of explosive material and its dangers. The attendant must be trained to protect the public from those dangers.

Bulk delivery and mixing vehicles. The operator must be trained in the safe operation of the vehicle and its mixing and conveying equipment. The operator must be familiar with the commodities being delivered and the general procedure for handling emergencies.

## **2/H 1910.110 Storage and handling of liquefied petroleum gasses**

Employees whose work involves installing, removing, operating, and maintaining LP gas must be properly trained. When standard watch service is provided at LP gas installations, attending personnel must be appropriately trained.

## **2/H 1910.119 Process safety management of highly hazardous chemicals**

Employees who do chemical-process work must be trained in the hazards, emergency operations, and safe work practices applicable to their jobs. Certify that employees understand the training; include each employee's name and training date.

Employees must have refresher training at least every three years to ensure that they understand current operating procedures.

Contract employers must ensure that their employees are trained in performing their jobs safely in fire, explosion, and toxic-release situations, and in the contracting company's emergency action plan. Ensure that employees understand the training. Document their names, training dates, and how you determined that they understood the training.

Employees who maintain process equipment must be trained in the equipment's hazards and operating procedures. Maintenance and contract workers whose job tasks are affected by a process change must receive information and training about the changed process.

## **2/H 1910.120 Hazardous waste operations and emergency response**

After hazardous substances at a site have been identified, the risks associated with the substances must be established and employees must be informed of the risks.

Employees must be trained before they are permitted to work with hazardous waste. They cannot participate in or supervise field activities until they have been trained at the level required by their jobs and responsibilities. Training must cover the following:

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- Names of employees and alternates responsible for worksite safety and health
- Hazards on the site
- Use of personal protective equipment
- Safe work practices
- Engineering controls and equipment used on site
- Medical surveillance requirements
- Site safety and health plan requirements

## **2/H 437-002-0118 Oregon rules for reinforced plastics manufacturing**

Train workers to handle materials safely. Training must include instruction in the following:

- Storage and handling
- Cleanup and disposal of spill
- First aid for spills
- Potential health and safety hazard
- Personal hygiene
- Personal protective measures and labeling

Eye protection. An eyewash fountain must be available no more than 25 feet or 15 seconds from any work area where methylethyl ketone peroxide is being mixed or transferred.

The 15-second criterion applies if other workers are close enough under normal working conditions to offer assistance and if you have a formal training program that includes first-aid procedures for eye injuries.

Identification labels. Hazardous-material identification labels must be on all containers of discarded hazardous chemicals. Labels are not required on small containers used and discarded in one work shift. Descriptions explaining the labeling system must be prominently posted in the workplace. Workers must be trained so that they understand what the labels mean.

## **2/I 437-002-0134 Personal protective equipment**

This rule applies to personal protective equipment and other protective equipment for the eyes, face, head, extremities, and torso, including protective clothing, respiratory devices, and protective shields and barriers.

Employees who use PPE must be trained on the following:

- When PPE is necessary
- What PPE is necessary
- How to properly put on, remove, adjust, and wear PPE
- The limitations of the PPE
- The proper care, maintenance, useful life, and disposal of the PPE

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Each employee must understand the training and demonstrate the ability to use the PPE properly.

Employees must be retrained when they cannot demonstrate required skills and when there are changes in the workplace or the PPE that make previous training obsolete.

## **2/I 1910.134 Respiratory protection**

Train employees to use respirators properly. Training must focus on:

- Why a respirator is necessary
- The importance of proper fit
- A respirator's capabilities and limitations
- How to use a respirator in emergencies
- How to care for a respirator

New employees who have had respirator training within 12 months of their hire date are exempt from training for their first year on the job if they can demonstrate they know how to use and maintain their respirators.

Retraining is required at least annually, sooner if worksite hazards change or if employees switch to another type of respirator. Employees who do not understand how to use or properly care for their respirators also must be retrained.

Any employee not required to wear a respirator who asks to wear one must read 1910.134, Appendix D, Information for Employees Using Respirators When Not Required Under the Standard.

## **2/J 1910.145 Accident prevention signs and tags**

All employees must be instructed that danger signs indicate immediate danger and that caution signs indicate possible hazards against which proper precaution should be taken.

## **2/J 437-002-0146 Confined spaces**

Employees involved in permit space work must have the understanding, knowledge, and skills about permit spaces necessary to perform their duties.

Training is required for new employees and for all other employees:

- Before an employee is assigned permit-space duties
- Before there is a change in an employee's assigned duties
- When there is a new permit space hazard for which an employee has not been trained
- When there are changes to the written permit-space program
- When a review of an entry permit identifies problems with an entr

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- When there is a deviation from established procedures or an employee's knowledge of the procedures is inadequate

Record each employee's training, including the employee's name, the trainer's signature, the training date, and the employee's responsibilities. Employees must be able to inspect their training records.

Awareness training for employees who work near permit spaces

Provide all employees whose work operations are or may be in an area where permit spaces are present with a basic overview of:

- The permit space program.
- The entry-permit system.
- The alternate entry procedures, if used.

Awareness training is not required for employees whose exposure is negligible, such as office workers who walk in a parking lot that has a sewer manhole or workers entering a building with a baghouse near it, as long as those employees have no other exposures to permit spaces. Similarly, when all permit spaces cannot be accessed or opened by employees, awareness training is not required.

Provide this training:

- For all new affected employees.
- For all employees whose duties change and place them in areas with permit spaces.
- When employees do not understand the required training.
- When there is a change in the permit program.
- When there are new or previously unidentified permit spaces.

## **2/J 1910.147 The control of hazardous energy (lockout/tagout)**

If you have employees who service equipment that could start or move unexpectedly, you must document energy-control procedures, periodic inspections, and employee training to ensure that employees are protected.

Establish energy-control procedures, training, and periodic inspections to ensure that workers can safely service machinery and equipment. Authorized employees must have training in using and removing energy controls. All others who work in areas where energy-control procedures are in effect must also know the procedures. When tagout systems are used, workers must understand the limitations of tags.

Document that workers are trained and that their training is current. Include each worker's name and training dates.

Each lock or tag must be removed from its energy-isolating device by the employee who applied it. There is one exception: When the authorized employee who applied the lock or tag is not

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available to remove it, you can authorize another person to remove it, provided that procedures and training for removal are part of your energy-control program.

## **2/K 437-002-0161 Medical services and first aid**

If a clinic, hospital, or physician is not reasonably accessible to the worksite, a person trained in first aid must be available on site.

## **2/L 437-002-0187 Portable fire extinguishers**

Provide training upon initial assignment and at least annually for employees who are designated to use fire extinguishers.

Training must familiarize the employees with the general principles of fire extinguisher use, fire hazards, and the use of appropriate equipment.

Training may also include controlled fires (check with local authorities) to train employees in the proper use of extinguishers.

## **2/L 1910.158 Standpipe and hose systems**

Only trained personnel can inspect standpipe and hose systems.

## **2/L 1910.160 Fixed extinguishing systems, general**

Designate and annually train employees to inspect and maintain fixed extinguishing systems.

## **2/L 1910.164 Fire-detection systems**

Be sure that trained personnel service, maintain, and test fire-detection systems.

## **2/L 1910.165 Employee alarm systems**

Maintenance. Only trained people must service, maintain, and test employee alarms.

Reporting emergencies. Employees must understand how to report emergencies at your workplace. If telephones are used to report emergencies, post the phone numbers for reporting emergencies near the telephones or on employee bulletin boards.

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## **2/L 437-002-0182 Oregon rules for firefighters**

Fire departments must have a written policy that describes the organizational structure, functions, and frequency of training provided to firefighters. Employees who participate in exempted firefighting activities must be properly trained, protected, clothed, and equipped. All firefighters must attend regularly scheduled safety and health training.

Develop and maintain employees' skills throughout the firefighting ranks and train them before they begin their assigned duties. Before firefighters participate in structural firefighting activities or live fire training, they must meet the entry-level firefighter training as prescribed by the Department of Public Safety Standards and Training (DPSST), or have equivalent training.

Live fire training must be conducted under the direction of a fire-department training officer and must follow the General Requirements for Live Fire Training established by the state fire marshal.

Hazardous-materials response. Fire departments that respond to hazardous-material incidents must develop written plans that include training policies and response procedures.

Respiratory-protection training. Train firefighters before they use self-contained breathing apparatus (SCBA) to enter uncontrolled contaminated or oxygen-deficient atmospheres; they must annually demonstrate their proficiency.

Confined space rescue. Train responders to recognize inherent confined space hazards before assigning or attempting any related duties in confined space rescues.

## **2/N 1910.177 Servicing multi-piece and single-piece rim wheels**

You must have a training program for employees who service rim wheels. The program must describe work hazards and safety procedures. Evaluate employees' ability to service rim wheels and give additional training to those who are not proficient.

## **2/N 1910.178 Powered industrial trucks**

Employers must train powered industrial truck operators with programs tailored to the employees' existing operating skills, the types of industrial trucks the employees run, and hazards the employees are likely to encounter.

Refresher training is required if an operator is involved in an accident or near-miss incident, operates the truck in an unsafe manner, or is assigned to operate another type of truck.

Operator performance evaluations are required at least once every three years.

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## **2/N 437-002-0221 Handling materials, additional Oregon rules**

Regularly assigned, trained operators must operate hoisting machines, except those equipped with automotive controls

## **2/N 437-002-0223 Oregon rules for commercial and industrial vehicles**

Only trained, authorized operators can operate commercial or industrial vehicles. You must have specific procedures to train those who operate industrial vehicles for non-highway use.

## **2/N 437-002-0228 Oregon general requirements for cranes**

Employees who operate cranes or derricks must be properly trained, have sufficient practical experience, and follow written operating procedures. Keep written records of operators' training and operating experience.

## **2/N 1910.179 Overhead and gantry cranes**

Using fire extinguishers. Operators and maintenance people must know how to use on-board fire extinguishers.

Maintaining crane hooks. Repairing crane hooks by welding or reshaping is not recommended; however, if repairs are attempted, they must be done under the supervision of a competent person and the hook must be tested before further use.

Moving the load. When two or more cranes are used to lift a load, a qualified person must supervise the operation and instruct all personnel involved in proper positioning, rigging, and moving the load.

## **2/O 1910.217 Mechanical power presses**

Only trained employees can inspect and maintain power presses. Provide enough supervision to ensure that operators follow correct operating procedures; train them before they begin work and at least once a year thereafter. Employees who use presses in the presence-sensing device initiation (PSDI) mode must have training that covers the following:

- The manufacturer's recommended test procedures for checking the presence-sensing device
- Required safety distances
- Operation, function, and performance of the PSDI mode
- Requirements for hand tools used in the PSDI mode
- Consequences of overriding the safeguard functions of the PSDI system

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Certify that employees are trained; document each employee's name, the trainer's signature, and training date; keep the records for the duration of their employment.

## **2/O 1910.218 Forging machines**

Maintain forge shop equipment so that it will operate safely and ensure that employees are trained to inspect and repair the equipment.

## **2/O 437-002-0256 Stationary compactors, self-contained compactors and balers**

You must:

- Train and supervise equipment operators. Training must include information from the operation manual, when available, and these rules.
- Document the names of the trainers, trainees, and the training dates.
- Instruct all employees how to identify and report exposure to hazards.

Ensure that only trained employees authorized by management, or service technicians, are allowed to maintain and repair the equipment. Qualified employees must demonstrate a proficiency in maintaining and repairing the equipment.

## **2/Q 1910.252 Welding, cutting, and brazing – general requirements**

Ensure that cutters or welders and their supervisors understand their work process and are trained to operate their equipment safely.

Fire watchers must have fire-extinguishing equipment readily available, be trained to use it, and be familiar with the means for sounding a fire alarm.

## **2/Q 1910.253 Oxygen-fuel gas welding and cutting**

Employees in charge of the oxygen or fuel-gas supply equipment, including generators, and oxygen or fuel-gas distribution piping systems must be instructed and competent before being left in charge.

Rules and instructions covering the operation and maintenance of oxygen or fuel-gas supply equipment, including generators and oxygen or fuel-gas distribution piping systems must be available to employees.

When regulators or parts of regulators, including gauges, need repair, properly instructed mechanics must perform the work.

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## **2/Q 1910.254 Arc welding and cutting**

Employees who operate arc-welding equipment must be properly instructed and qualified.

Employees assigned to operate or maintain arc-welding equipment must be acquainted with the requirements of 1910.252(d) and with 1910.252(a), (b) and (c); if they do gas-shielded arc welding, they must also know Recommended Safe Practices for Gas-Shielded Arc Welding, A6.1-1966, American Welding Society.

## **2/R 1910.264 Laundry machinery and operations**

Employees must be instructed in the hazards of their work and in safe work practices.

## **2/R 1910.268 Telecommunications**

Employees must be trained in safe telecommunications work practices before they begin work. Training can be on the job, in the classroom, or combined. Training must cover emergency procedures, first aid, and how to recognize harmful substances, animals, insects, and plants.

Certify that employees have been trained; document their names, the trainer's signature, and training dates. Documentation must be prepared at the end of training and maintained for the duration of each employee's employment.

Storage batteries. Those who work with storage batteries must be instructed in emergency procedures such as dealing with acid spills.

Derricks. Manufacturers' specifications, load ratings, and instructions for operating derricks must be strictly observed. Post rated-load capacities and instructions for derrick operation on a permanent weather-resistant plate on the derrick where the operator can see them. Make sure that operators are trained as required by 437-002-0228(2), Division 2/N, Crane Operator Training Requirements. A competent person must inspect derricks at least once a year.

High-voltage work. Employees using high voltage to locate trouble or to test cables must be instructed in precautions for their own safety and for the safety of co-workers.

Manhole work, first aid. A person trained in first aid must be immediately available to assist a worker who encounters a hazard in a manhole.

## **2/R 1910.269 Electric power generation, transmission, and distribution**

Employees must be trained in all safety-related work practices affecting electric power generation, transmission, and distribution work, including pole-top and manhole rescue. All training must be in the classroom or on the job. Employees must be able to do the following:

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- Distinguish exposed live parts of electric equipment
- Determine the nominal voltage of exposed live parts
- Determine minimum approach distances for the voltages to which they are exposed
- Demonstrate safe techniques for working on or near exposed energized equipment

An employee must have additional training (or retraining) whenever the following occurs:

- The employee is not complying with safety practices
- Changes in technology, equipment, or procedures require new work practices
- The employee is assigned to do work other than his or her normal job tasks

Certification. Certify that each employee has been trained; documentation must be on file for the duration of the employee's employment.

Cardiopulmonary resuscitation (CPR) and first-aid training. When anyone works on exposed lines or equipment energized at 50 volts or more, a person trained in first aid and CPR also must be on site. If two or more employees are doing fieldwork, at least two people trained in first aid must be available. If employees were trained in first aid and CPR within three months of their hiring date, only one person must be available on site.

At fixed work locations such as generating stations, each employee exposed to electric-shock hazards must be reachable within four minutes by a person trained in first aid and CPR.

Energy-control program. Employees who service or maintain machines must be trained to recognize hazardous energy sources, isolate them, and control the energy. Employees who use tagout systems must be trained to use them appropriately.

Enclosed spaces. Employees who enter enclosed spaces or who serve as attendants must be trained in enclosed space hazards and entry and rescue procedures.

Two-worker rule. No fewer than two journeymen, or workers with equivalent training and experience, are required for work on energized high-voltage equipment. A qualified apprentice may work in place of one of the journeymen for training. There are exceptions to this requirement; for more information, see 437-002-0317(1)(b), Additional Oregon Rules for Electric Power Generation, Transmission and Distribution.

## **2/R 1910.272 Grain-handling facilities**

Train employees annually and whenever changes in their job assignments expose them to new hazards. They must be trained in the following:

- General safety precautions, including measures to prevent dust accumulation
- Specific job-related safety practices such as cleaning grinding equipment, clearing choked legs, and lockout/tagout procedures

Special tasks. Employees assigned special tasks such as bin entry and handling flammable or toxic substances must be trained to perform the tasks safely.

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Observers. Employees acting as observers must be trained in rescue procedures, including procedures for obtaining assistance.

## **2/R 437-002-0303 Tree and shrub services (training and work planning)**

Instruct employees in the proper use of all equipment provided for them and require that safe working practices be observed. A job safety briefing with all crew members is required and all work procedures and assignments must be worked out carefully before any tree job begins.

## **2/R 437-002-0304 Tree and shrub services (first aid requirements)**

First-aid care and supplies must be provided as required by 437-002-0161, Medical Services and First Aid.

Employees must be able to render cardiopulmonary resuscitation (CPR), and be trained in tree-top rescue.

## **2/R 437-002-0307 Tree and shrub services (personal protective equipment)**

When operating chain saws or other noisy equipment, employees must wear hearing protection that complies with 1910.95, Occupational Noise Exposure.

Provide hearing protection at no cost to employees and allow them to choose from a variety of suitable devices.

Train the employees in the proper use and care of the hearing protection.

## **2/R 437-002-0312 Pulp, paper, and paperboard mills**

Employees cannot operate pulp and paper equipment until they have received training and are familiar with safe operating procedures. They must also be trained in proper lifting or moving techniques.

Employees entering hazardous-substance areas must be trained to deal with breaks, ruptures, or spills.

Employees assigned to work alone in remote areas must report to a designated person or have someone check to make sure they are safe; employees and check-up personnel must be trained in the reporting procedures.

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Industrial kiln guns and ammunition. Develop written instructions for storing and operating industrial kiln guns and ammunition, including safety procedures. All those working with this equipment must be instructed in the procedures.

Recovery furnace area. All those working in recovery furnace areas must be instructed in emergency procedures.

Handling chlorine dioxide. Provide written instructions and safety procedures for operating and maintaining the generator. Those working on the equipment must be trained in these procedures.

Handling sodium chlorate. Employees handling sodium chlorate must be trained in handling precautions and safe work habits.

## **2/S 1910.332 Electrical (training)**

Employees exposed to electric-shock hazards must be trained in the safety requirements relevant to their jobs. Both qualified and unqualified people must be trained. Unqualified people are those who may be exposed to electric-shock hazards during their jobs but who are not permitted to work on or near exposed energized equipment.

## **2/T 1910.410 Commercial diving operations, qualifications of dive team**

Each member of the dive team must have the training to perform assigned tasks safely.

Training must also cover the following:

- Appropriate tools and equipment
- Diving techniques
- Diving operations
- Emergency procedures
- Cardiopulmonary resuscitation and first aid

Divers exposed to hyperbaric conditions must be trained in diving-related physics and physiology. Dive-team members must be assigned tasks suited to their experience and training.

Workers in training must perform tasks under the supervision of an experienced dive-team member. The person in charge must have the experience and training necessary to conduct an assigned diving operation safely.

## **2/Z 1910.1001 Asbestos**

Annually train employees exposed to airborne concentrations of asbestos at or above the permissible exposure limit and excursion limit.

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All asbestos training must cover the following:

- Methods of recognizing asbestos
- Health effects associated with asbestos exposure
- The relationship among smoking, asbestos, and lung cancer
- Operations that could result in exposure to asbestos
- Proper use of respirators
- Appropriate work practices for asbestos jobs
- Medical surveillance program requirements
- Public health organizations that help employees quit smoking
- Requirements for posting signs

Access to training materials. Make written training documents and a copy of 1910.1001 available to employees.

Training records. Keep training records for one year beyond each employee's last employment date.

## **2/Z 1910.1003 13 carcinogens**

The requirements in this rule apply to the following hazardous substances:

- 4-Nitrobiphenyl
- alpha-Naphthylamine
- methyl chloromethyl ether
- 3,3'-Dichlorobenzidine (and its salts)
- bis-Chloromethyl ether
- beta-Naphthylamine
- Benzidine
- 4-Aminodiphenyl
- Ethyleneimine
- beta-Propiolactone
- 2-Acetylaminofluorene
- 4-Dimethylaminoazo-benzene
- N-Nitrosodimethylamine

Each employee, before being authorized to enter a regulated area, must receive training that covers:

- The nature of the carcinogenic hazards
- The nature of the operation that could result in exposure
- The medical surveillance program
- Decontamination practices
  - Emergency procedures and the employees' roles in the procedures
  - Information to aid employees in recognizing and evaluating conditions that may result in the release of a carcinogen

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- First-aid procedures
- A review of this rule at the employee's first training and annually thereafter

## **2/Z 1910.1017 Vinyl chloride**

Employees working with vinyl chloride (or polyvinyl chloride) before conversion to fabricated products must be trained in its hazards and safe work practices. Training must cover:

- Health hazards of chronic vinyl chloride exposure
- Operations that could expose employees to vinyl chloride in excess of the permissible exposure limits
- The purpose for, proper use of, and limitations of personal protective equipment
- Vinyl chloride fire hazards
- Monitoring and medical-surveillance programs
- Emergency procedures
- Conditions that may result in the release of vinyl chloride
- A review of 1910.1017 at the employee's first training and annually thereafter

## **2/Z 1910.1018 Inorganic arsenic**

Employees who are exposed to inorganic arsenic above the action level or who develop skin or eye irritations must have annual training.

Employees who use respirators must have quarterly training that covers:

- Operations that could result in exposure to inorganic arsenic
- The proper use of respirators
- Medical surveillance
- Engineering controls and work practices
- The requirements of 1910.1018

Any employee who has difficulty breathing while wearing a respirator must be examined by a physician trained in pulmonary medicine to determine whether the employee can wear a respirator while performing a required task.

Access to training materials. Make 1910.1018 available for employees to review.

## **2/Z 1910.1025 Lead**

All employees exposed to lead at or above the action level or to lead compounds that may cause skin or eye irritation must participate in an annual lead-hazards training program covering the following:

- The requirements of 1910.1025 and its appendices
- Operations that could result in exposure to lead above the action level

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- The purpose, proper selection, fitting, and use of respirators
- The medical-surveillance program and the medical-removal protection program
- Engineering controls and work practices
- Any compliance plan in effect
- Prohibitions against removing lead with chelating agents without the direction of a licensed physician
- Employees' right of access to records

## **2/Z 1910.1026 Chromium (VI)**

Employees who may be exposed to Chromium (VI) must be able to demonstrate knowledge of:

- The requirements of 1910.1026
- The purpose of the medical surveillance program required by 1910.1026

A copy of 1910.1026 must be available at no cost to all affected employees.

## **2/Z 1910.1027 Cadmium**

Employees whose work involves potential exposure to cadmium must have annual training that covers:

- Health hazards associated with cadmium
- Operations that could result in exposure to cadmium
- How employees can protect themselves from cadmium exposure
- The proper use of respirators and protective clothing
- The purpose of the medical surveillance program

You must also comply with the training requirements of 1910.1200, Hazard communication.

Certify that employees have been trained. Document their names, the trainer's signature, and the training dates. Keep the records for one year.

## **2/Z 1910.1028 Benzene**

Train employees before they work in areas where benzene is present. If exposures are above the action level, employees must be trained at least annually.

Training must be in accordance with the hazard communication training required by 1910.1200(h). You must also explain to employees your medical surveillance program and your training requirements for benzene.

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Except for licensed physicians, those who administer pulmonary function testing must complete a training course in spirometry sponsored by an appropriate governmental, academic, or professional institution.

## **2/Z 1910.1029 Coke oven emissions**

You must have annual training for employees exposed to coke oven emissions that covers:

- The information contained in the substance information sheet for coke oven emissions, 1910.1029, Appendix A
- The purpose, proper use, and limitations of respirators
- A review of 1910.1029

## **2/Z 1910.1030 Bloodborne pathogens**

Employees exposed to bloodborne pathogens must have annual training that includes:

- The requirements of 1910.1030
- The epidemiology, symptoms, and transmission modes of bloodborne pathogens
- The exposure-control plan and how to obtain a copy of the plan
- Tasks that may involve exposure to blood and other infectious materials
- Methods that prevent or reduce exposure to bloodborne pathogens
- Hepatitis B vaccine, including vaccination benefits
- Appropriate actions to take and whom to contact for emergencies involving blood or other potentially infectious materials
- Procedures to follow if an exposure occurs
- Information on post-exposure evaluation and follow up after an exposure
- Information regarding warning signs and labels

The person conducting the training must be familiar with the requirements of 1910.1030 and how they apply to employees' tasks.

Additional training for employees in HIV/HBV laboratories and production facilities

Employees in HIV or HBV research laboratories or production facilities must have the following initial training in addition to the above requirements:

- Proficiency in standard microbiological techniques and in practices specific to the facility
- Prior experience in handling human pathogens or tissue cultures

Train employees who have no experience handling human pathogens. An employee's initial activities cannot include handling infectious agents; assign these activities only after workers have learned appropriate handling techniques and can accomplish them proficiently.

Training records. Keep training records for three years. Records must include:

- The dates of training sessions

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- A summary of training material
- Names and qualifications of people conducting training
- Names and job titles of all people attending training

Biosafety manual. Prepare a biosafety manual for workers and have them review it annually.

## **2/Z 1910.1043 Cotton dust**

Annually train all employees exposed to cotton dust. Training must cover:

- Acute and long-term health hazards associated with cotton dust exposure
- Jobs and processes that could result in exposure to cotton dust at or above the permissible exposure limit
- Measures necessary to protect employees from exposure in excess of the permissible exposure limit
- The proper use of respirators
- Medical surveillance
- The requirements of 1910.1043

Provide training materials to Oregon OSHA upon request.

Pulmonary function testing. With the exception of licensed physicians, those who administer pulmonary function testing must complete a training course in spirometry sponsored by an appropriate academic or professional institution.

## **2/Z 1910.1044 1,2-dibromo-3-chloropropane**

You must provide training for all employees who may be exposed to 1,2-dibromo-3-chloropropane that covers:

- The information in the Substance Safety Data Sheet for 1,2-dibromo-3-chloropropane (see 1910.1044, Appendix A)
- The quantity, location, and operations that could result in exposure to 1,2-dibromo-3-chloropropane
- The proper use of respirators
- A description of the medical surveillance program

Access to training materials. A copy of the program must be available to all affected employees.

Each year, inform employees about the information in the Substance Safety Data Sheet and in safe practices for using 1,2-dibromo-3-chloropropane.

## **2/Z 1910.1045 Acrylonitrile**

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Provide training for employees exposed to acrylonitrile above the action level, employees whose exposures are maintained below the action level by engineering and work practice controls, and employees subject to potential skin or eye contact with liquid acrylonitrile.

Employees must be informed about the following:

- Operations involving exposure to acrylonitrile
- The purpose of the medical surveillance program
- Emergency and first-aid procedures
- Proper use of respirators and protective clothing
- Conditions that could cause the release of acrylonitrile

Employees must review this information at their initial training and annually thereafter.

### **2/Z 1910.1047 Ethylene oxide**

Provide annual training to employees exposed to ethylene oxide at or above the action level that covers:

- Methods to detect the presence or release of ethylene oxide in the work area
- Information on ethylene oxide hazards
- Methods employees can use to protect themselves from ethylene oxide hazards
- The hazard communication program

### **2/Z 1910.1050 Methylenedianiline**

Provide employees with information and training on methylenedianiline in accordance with Oregon OSHA's hazard communication training requirements in 1910.1200(h) at the time of initial assignment and at least annually thereafter.

Make available to affected employees, without cost, all training program materials, including a copy of 1910.1050.

Keep training records for one year after an employee's termination date.

### **2/Z 1910.1051 1,3, Butadiene**

Provide employees exposed to 1,3, butadiene with information and training in accordance with Oregon OSHA's hazard-communication rules in 1910.1200(h).

Employees who may be exposed to 1,3, butadiene at or above the action level must be trained before an initial job assignment and at least annually thereafter.

Training must cover:

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- The health hazards associated with 1,3, butadiene
- A description of the medical surveillance program
- The quantity, location, use, release, and storage of 1,3, butadiene
- Operations that could result in exposure to 1,3, butadiene
- Emergency procedures and personal protective equipment
- Measures employees can take to protect themselves from exposure to 1,3, butadiene

Have a copy of 1910.1051 for employees to review.

## **2/Z 1910.1052 Methylene chloride**

Provide all employees exposed to methylene chloride with information and training in accordance with the requirements of Oregon OSHA's hazard-communication rules in 1910.1200(h). Inform employees whose exposure to airborne concentrations of methylene chloride exceeds the action level about the quantities, locations, use, and storage requirements for methylene chloride.

Employees exposed to methylene chloride above the action level must be retrained as necessary so they continue to understand safe-use practices. Whenever tasks or procedures increase an employee's exposure above the action level, you must update the training to ensure that each affected employee remains proficient.

## **2/Z 1910.1096 Ionizing radiation**

All individuals working in or frequenting any portion of a radiation area must be informed of the following:

- Radioactive materials or radiation in the area
- Safety problems associated with exposure and ways to minimize exposure
- Applicable provisions of 1910.1096 for the protection of employees from exposure
- Reports of radiation exposures

Signal-generating systems. Those who work in areas covered by the system's signal must be familiar with the sound.

## **2/Z 1910.1200 Hazard communication**

Employers must provide employees with information and training on hazardous chemicals in their work area at the time of their initial assignment and whenever a new chemical hazard they have not previously been trained about is introduced. Chemical-specific information must always be available through labels and safety data sheets.

Employees must be informed of:

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- The requirements in the hazard communication standard.
- Any operations in their work area where hazardous chemicals are present.
- The location and availability of the written hazard communication program, including the required list of hazardous chemicals, and safety data sheets.

Employee training must include:

- The methods used to detect the presence or release of a hazardous chemical in the work area.
- The physical, health, simple asphyxiation, combustible dust, and pyrophoric gas hazards of the chemicals in the work area.
- The measures employees can take to protect themselves from these hazards.
- The details of the hazard communication program, including an explanation of the labels on shipped containers, the workplace labeling system, and safety data sheets.

## **2/Z 1910.1450 Occupational exposure to hazardous chemicals in laboratories**

Train employees about the chemical hazards in their work areas before their initial assignments and before assignments involving new chemical exposures.

Training must cover:

- Methods to detect the presence or release of a hazardous chemical
- Chemical hazards in the work area
- Methods of protection from chemical hazards
- Details of the written chemical hygiene plan

If the composition of a chemical substance produced exclusively for laboratory use is known, determine if it is hazardous. If the chemical is hazardous, provide employees with the information and training listed above.

## **2/Z 437-002-0364 MOCA (4,4'-methylene bis (2-chloroaniline))**

Employees must be trained in the following before entering a MOCA-regulated area:

- MOCA's carcinogenic hazards
- Operations involving MOCA
- The purpose of the medical-surveillance program
- Decontamination practices
- Emergency procedures and first aid
- Conditions that could cause the release of MOCA

Employees must review these requirements at the first training session and annually thereafter.

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## **2/Z 437-002-0373 Thiram**

Employees exposed to thiram must receive training in safe use and handling that covers:

- Health hazards of thiram exposure
- Operations that could result in exposure to thiram
- The purpose for, proper use of, and limitations of personal protective equipment
- Thiram's toxic and skin-irritation effects
- The necessity of effective personal hygiene
- A review of 437-002-0373 at the employee's first training and annually thereafter