



OSHA Mandated Training Requirements CFR 1910 – General Industry

Access to employee exposure and medical records 1910.20 (g)(1)(i-iii), (g)(2)

- inform of existence, location, availability of records
- inform of person responsible for maintaining records and providing access
- inform of employee right to access distribute informational materials

Employee emergency plans and fire prevention plans 1910.38 (a)(5)(i-iii), (a)(4)(i-ii)

- designate and train sufficient number of persons to assist in safe evacuations
- review plans (emergency and fire) and hazards with all affected employees (portion of the plan which employee must know to protect oneself in the event of an emergency)
- train initially, when responsibilities/actions change or when plan(s) change

also see Appendix to Subpart E

Powered platforms 1910.66 (i)(1)(i-v)

- platforms shall only be operated by persons proficient in operation, safe use and inspection
- training must cover:
 - * recognition and prevention of hazards associated with individual work tasks and the use of particular working platforms
 - * emergency action plan
 - * work procedures (written; using manufacturer's operating manual)
 - * fall arrest systems
 - * operation and inspection of platforms
- employees must be certified in training and inspection

also see appendix A, C and D

Vehicle mounted elevating and rotating work platforms 1910.67 (c)(2)(ii)

- only trained employees shall operate aerial lifts

Manlifts 1910.68 (e)(a)

- all manlifts shall be inspected by a competent designated person at 30 day intervals

also see ANSI standard A90.1-1969

Ventilation: open surface tanks 1910.94 (d)(9)(i), (d)(10)(v-vi)

- all employees working in and around open-surface tank operations must be instructed as to the hazards of their respective jobs, ppe and first aid procedures
- in emergencies, at least one trained standby employee, with suitable respirator, shall be present in the nearest uncontaminated area, be able to communicate with employee in tank, and be able to haul the individual out of tank with a lifeline if necessary
- employees must be trained on appropriate respiratory protection if maintenance work requires use of respirator

also see ANSI Z9.1-1969 Safety Code for Ventilation and Operation of Open-Surface Tanks

Occupational exposure to noise 1910.95 (k)(1-3), (l)(2)

- annual training program instituted for employees exposed to 85 dB to include:
 - * effects of noise on hearing
 - * purpose of hearing protection; advantages, disadvantages, attenuation of various types
 - * instructions on selection, fitting, use, care
 - * purpose of audiometric testing, test results
- provide affected employees with informational materials pertaining to standard

Ionizing radiation 1910.96 (f)(3)(viii), (l)(2)

- inform employees of sound and meaning of radiation evacuation warning system (actual demonstration)
- inform employees of hazards associated with and presence of radioactive materials in work areas
- inform employees how to protect themselves
- inform employees of their right access to radiation exposure reports

also see ANSI N2.3-1967 Immediate Evacuation Signal for Use in Industrial Installations Where Radiation Exposure May Occur

Flammable and combustible liquids 1910.106 (b)(5)(vi)

tank storage:

- detailed, printed instructions of flood emergency procedures must be posted
- affected employees must be informed of location and operations of valves or other equipment needed to fulfill emergency flood procedures

Storage and handling of liquefied petroleum gases 1910.110(b)(16)

- personnel performing installation, removal, operation and maintenance work shall be properly trained in such function.

also see NFPA 58-69 Standard for the Handling of Liquefied Petroleum Gases

Storage and handling of anhydrous ammonia 1910.111 (b)(13)(ii)

tank car unloading points and operation:

- unloading operations must be performed by reliable persons properly instructed and given authority to monitor compliance with all applicable procedures

also see ANSI K61.1-1966 Storage and Handling of Anhydrous Ammonia

Process safety management of highly hazardous chemicals 1910.119 (g), (h), (j)(3)

initial training:

- overview of the process and operating procedures, to include:
 - * specific safety and health hazards
 - * emergency operations
 - * shutdown procedures
 - * safe work practices

refresher training:

- provided every 3 years or as necessary

contractors:

- pertains to those contractors performing maintenance, repair, turnaround, major renovation or specific work on or adjacent to a covered process

employer responsibilities:

- * inform contract employees of known potential hazards
- * explain applicable portions of emergency action plan
- * develop and implement safe work practices to control entrance, presence and exit of contract employees in covered process areas
- * periodically evaluate contractor performance
- * maintain contract employee injury/illness log

contract employer responsibilities:

- * train each contract employee in safe work practices
- * instruct each contact employee in known potential hazards and applicable portions of emergency action plan
- * maintain documentation of employee understanding of training
- * assures all contract employees follow safety rules and safe work practices of facility
- * advise employer of unique hazards presented by contractor's work

training for process maintenance activities:

- each employee involved in maintaining the on-going integrity of process equipment shall be trained in an overview of that process, its hazards and applicable job tasks to assure employees operate in a safe manner

also see Appendix C and D

Hazardous waste operations and emergency response 1910.120 (b)(iv), (q)(6), (q)(7), (q)(8)

contractors and sub-contractors:

an employer who retains contractor or sub-contractor services for work in hazardous waste operations shall inform those contractors, sub-contractors or their representatives of the site emergency response procedures and any potential fire, explosion, health, safety, or other hazards of the hazardous waste operation that have been identified by the employer's information program

On-site:

all employees working on site exposed to hazardous substances, health hazards or safety hazards and their supervisors and management responsible for the site shall receive training meeting the requirements outlined below before they are permitted to engage in hazardous waste operations that could expose them to hazardous substances, safety or health hazards

elements to be covered:

- names of personnel and alternates responsible for site safety and health
- safety, health and other hazards present on the site
- use of ppe
- work practices by which the employee can minimize risk from hazards
- safe use of engineering controls and equipment on the site
- medical surveillance requirements including recognition of symptoms and signs which might indicate over exposure to hazards
- contents of site-specific safety and health plan

initial training:

- general site workers engaged in hazardous substance removal or other activities which expose or potentially expose workers to hazardous substances and health hazards shall receive a minimum of 40 hours of instruction off-site and a minimum of three days actual field experience under the direct supervision of a trained, experienced supervisor
- workers on site only occasionally for a specific, limited task and who are unlikely to be exposed over permissible exposure limits and published exposure limits shall receive a minimum of 24 hours of instruction off-site and a minimum of one day actual field experience under the direct supervision of a trained, experienced supervisor
- workers regularly on site in monitored and characterized areas where exposures are under permissible exposure limits and published exposure limits where respirators are not necessary and the characterization indicates that there are no health hazards or the possibility of an emergency developing shall receive at a minimum of 24 hours of instruction off-site and a minimum of one day actual field experience under the direct supervision of a trained, experienced supervisor workers with 24 hours of training and who become general site workers or who are required to wear respirators, shall have the additional 16 hours and two days of training necessary to total 40 hours/3 days (see first paragraph of this section)

management and supervisor training:

on-site management and supervisors directly responsible for or who supervise employees engaged in hazardous waste operations shall receive 40 hours initial and three days supervised field experience and at least 8 hours additional specialized training at the time of job assignment on the following (but not limited to) topics:

- employer's safety and health program
- ppe program
- spill containment program
- health hazards monitoring procedures and techniques

qualifications for trainers:

trainers shall be qualified to instruct employees about the subject matter that is being presented, such trainers shall have satisfactorily completed a training program for teaching the subject they are expected to teach, or shall have the academic credentials and instructional experience necessary for teaching the subjects

instructors shall demonstrate competent instructional skills and knowledge of the applicable subject matter

training certification:

employees and supervisors that have received and successfully completed the training and field experience described above, shall be certified by their instructor or the head instructor and trained supervisor as having completed the necessary off-site and field training

a written certificate shall be given to each person so certified, any person not certified shall be prohibited from engaging in hazardous waste operations

refresher training:

employees, management and supervision covered by this section shall receive 8 hours of refresher training annually to include critique of incidents that have occurred in the past year which could be used as training examples, and other relevant topics

equivalent training:

employers who can show by documentation or certification that an employee's prior work experience and/or training has resulted in training equivalent to the above mentioned training, shall not be required to provide initial training requirements to such employees and shall provide a copy of the certification or documentation to the employee upon request; however, certified employees or employees with equivalent training new to a site shall receive appropriate, site specific training prior to site entry and have appropriate supervised field experience at the new site

Emergency Response:

training shall be based on the duties and functions to be performed by each responder of an emergency response organization, prior to taking part in actual emergency operations

first responder awareness level (level 1)

(individuals likely to witness or discover a hazardous release)

- * understanding of what hazardous substances are, risks associated with such hazardous materials
- * an understanding of the potential outcomes associated with an emergency created by hazardous substances
- * ability to recognize presence of hazardous substances in an emergency
- * ability to i.d. the hazardous substance, if possible
- * their role in the emergency response plan
- * ability to make appropriate notification, and recognize the need for additional resources

first responder operations level (level 2)

(individuals who respond to releases as part of the initial response, respond in a defensive manner only -- contain the release from a safe distance, keep it from spreading, prevent exposures)

- * knowledgeable of basic hazard and risk assessment techniques
- * select and use proper ppe
- * understanding of basic hazardous materials terms
- * knowable of basic control, containment, confinement techniques
- * implement basic decon procedures
- * understand relevant operating and termination procedures

hazardous materials technician (level 3)

(individuals who respond to releases for the purpose of stopping the release, receive 24 hours of training equal to level 2, are certified on the following competencies):

- * knowledge to implement emergency response plan
- * knowledge of classification, identification and verification of known and unknown materials by field survey of instruments or equipment
- * function within an incident command system
- * knowledgeable of selection criteria for specialized ppe
- * understand hazard and risk assessment techniques
- * perform advanced control, containment and/or confinement operations with available resources and ppe
- * understand and implement decon procedures
- * understand and implement termination procedures
- * understand basic chemical and toxicological terminology and behavior

hazardous materials specialist (level 4)

(individuals who respond with and provide support to level 3 responders, duties parallel level 3 responders with advanced, specific additional knowledge, act as site liaison, receive 24 hours of training equal to level 3, and are certified on the following competencies):

- * knowledge to implement emergency response plan
- * knowledge of classification, identification and verification of known and unknown materials by field survey of instruments or equipment
- * knowledge of state emergency response plan
- * knowledgeable of selection criteria for specialized ppe
- * understand in-depth hazard and risk techniques
- * perform specialized control, containment, and/or confinement operations with available resources and ppe
- * determine and implement decon procedures
- * knowledge sufficient to develop and implement site safety control program
- * understand chemical, radiological and toxicological terminology and behavior

on scene incident commander (level 5)

(individuals who will assume control of incident scene beyond first responder awareness level, receive 24 hours of training equal to first responder operations level, certified on the following competencies):

- * ability to implement incident command system
- * ability to implement emergency response plan
- * knowledgeable of hazards and risks associated with employees working in chemical protective clothing
- * ability to implement local emergency response plan
- * knowledgeable of state emergency response plan of Federal Regional Response Team
- * understand importance of decon procedures

- trainers
 - * satisfactorily completed training course for teaching hazmat response subjects or have training/academic credentials and instructional experience necessary to demonstrate competent instructional skills and good command of subject matter
- refresher training
 - * annual refresher training for all levels sufficient to maintain competencies
 - * method of certifying competencies must be kept

also see Appendices

General requirements for ppe 1910.132 (f)

each employee shall receiving training, with written certification, sufficient to demonstrate knowledge and proper use of ppe:

- when ppe is necessary
- what ppe is necessary
- how to properly don, doff, adjust, wear ppe
- limitations
- proper care, maintenance, useful life and disposal of ppe

retraining will be required when deficiencies are found in knowledge, or:

- changes in workplace render previous training invalid
- changes in types of ppe

also see Appendix B or ANSI Z87.1-1968 Eye and Face Protection, ANSI Z89.1-1969 Safety Requirements for Industrial Head Protection, ANSI Z41.1-1967 Men's Safety Toe Footwear

Respiratory protection 1910.134 (a)(3), (b)(3)

- employees shall use provided respiratory protection in accordance with instructions and training
- the user shall be instructed and trained in the proper use of respirators and their limitations

ANSI Z88.2-1969 Standard Practice for Respiratory Protection

Specifications for accident prevention signs and tags 1910.145 (c)(1)(ii), (c)(2)(ii)

- all employees shall be instructed danger signs indicate immediate danger, special precautions are necessary
- all employees shall be instructed caution signs indicate a possible hazard against which proper precaution should be taken

also see ANSI Z35.1-1968 Specifications for Accident Prevention Signs and ANSI Z35.2-1968 Specifications for Accident Prevention Tags

Permit-required confined spaces 1910.146 (g), (h), (i), (j)

all affected employees shall receive training sufficient to acquire understanding, knowledge and skills necessary for safe performance of assigned duties, training certification shall be:

- prior to assignment of duties
- prior to a change in assigned duties
- whenever there is a change in permit space operations
- retraining when deficiencies in knowledge are observed

authorized entrant duties:

- knowledge of hazards of entry, to include information on the mode, signs or symptoms and consequences of exposure
- proper use of equipment
- communicate with attendant as necessary, alert attendant whenever:
 - * entrant recognizes any warning sign or symptom of exposure to dangerous situation
 - * entrant detects a prohibited condition
- exits from the confined space as quickly as possible whenever:
 - * an order to evacuate is given by the attendant or entry supervisor
 - * the entrant recognizes any warning sign or symptom of exposure to a dangerous situation
 - * the entrant detects a prohibited condition
 - * an evacuation alarm is activated

attendant duties:

- knows the hazards which may be faced during entry, including information on the mode, sign and symptoms and consequences of exposures
- aware of behavioral effects of hazard exposure in authorized entrants
- continuously maintains an accurate count of authorized entrants in the permit space and ensures that the means used to identify authorized entrants accurately identifies who is in the permit space
- remains outside the permit space during entry operations until relieved by another attendant
- communicates with authorized entrants as necessary to monitor entrant status and to alert entrant of the need to evacuate the space
- monitors activities inside and outside the space to determine if it is safe for entrants to remain in the space and orders the authorized entrants to evacuate the permit space immediately under any of the following conditions:
 - * if the attendant detects a prohibited condition
 - * if the attendant detects the behavioral effects of hazard exposure in an authorized entrant
 - * if the attendant detects a situation outside the space that could endanger the authorized entrants
 - * if the attendant cannot effectively and safely perform all the duties required
- summons rescue and other emergency services as soon as the attendant determines that authorized entrants may need assistance to escape from permit space hazards
- takes the following actions when unauthorized persons approach or enter a permit space while entry is underway:
 - * warn the unauthorized persons that they must stay away from the permit space
 - * advise the unauthorized persons that they must exit immediately if they have entered the permit space
 - * inform the authorized entrants and the entry supervisor if unauthorized persons have entered the permit space
- performs non-entry rescue as specified by the employer's rescue procedure
- performs no duties that might interfere with the attendant's primary duty to monitor and protect the authorized entrants

entry supervisor duties:

- knows the hazards that may be faced during entry, including information on the mode, signs or symptoms and consequences of the exposure
- verifies by checking that the appropriate entries have been made on the permit, that all tests specified by the permit have been conducted and that all procedures and equipment specified by the permit are in place before endorsing the permit and allowing entry to begin
- terminates the entry and cancels the permit
- verified that rescue services are available and that the means for summoning them are operable
- removes unauthorized individuals who enter or who attempt to enter the permit space during entry operations
- determines, whenever responsibility for a permit space entry operations is transferred and at intervals dictated by the hazards and operations performed within the space, that entry operations remain consistent with terms of the entry permit and that acceptable entry conditions are maintained

also see Appendices A, B, and C and Coors Policy

Control of hazardous energy (lockout/tagout) 1910.147(a)(7)
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- employer must provide training to ensure the purpose and function of the energy control program are understood by employees, the knowledge and skills required for safe application, usage and removal of energy controls are acquired and maintained by each employee, training must include:
 - * recognition of applicable hazardous entry sources type and magnitude of energy available in the workplace, methods and means necessary for energy isolation and control
 - * affected employees shall be instructed and trained in use of energy control procedures
 - * all other employees working in or around area where energy control procedures are utilized shall be instructed about the procedures and about the prohibition relating to attempts to restart or re-energize machines or equipment which are locked out or tagged out
- when tagout systems are used, employees must be trained in the following limitations of tags:
 - * tags are warning devices and do not provide physical restrains
 - * tags are not to be removed without authorization of the authorized person responsible for the tag
 - * tags are never to be ignored, bypassed or otherwise defeated
 - * tags must be legible and understandable by anyone coming into contact with tag
 - * tags and means of attachments must be of such construction to withstand environmental conditions encountered
 - * tags may evoke a false sense of security, their meaning must be understood as a part of the overall program
 - * tags must be securely attached to energy isolation devices and cannot be inadvertently or accidentally detached during use
- employee retraining is necessary when:
 - * change in job assignment, machines, equipment or processes which present a new hazard or whenever the procedure changes
 - * periodic inspection reveals, or there is reason to believe, inadequacies in employee's knowledge prevent proper adherence to procedures
 - * introduction of new or revised methods and procedures
- employer shall certify employee training has been accomplished and is kept up-to-date (name and date of training must be included on certification)

also see Coors Policy

Medical services and first aid 1910.151 (b)

in the absence of an infirmary, clinic or hospital in or near proximity to workplace, person or persons shall be adequately trained to render first aid

also see Medic First Aid training manual

Portable fire extinguishers 1910.157(g)(1-4)

- where portable extinguishers are provided in the workplace, the employer shall provide an educational program to familiarize employees with general principles of fire extinguisher use and the hazards involved in incipient stage fire fighting; training shall be provided initially and at least annually thereafter
- employees designated to use fire extinguishers in an emergency shall receive training in the appropriate use of equipment, training shall be provided initially and at least annually thereafter

Fixed extinguishing systems, general 1910.160 (b)(10)

employer shall train employees designated to inspect, maintain, operate or repair fixed extinguishing systems and annually review their training to maintain competencies

Fire detection systems 1910.164 (c)(4)

employer shall assure the servicing, maintenance and testing of fire detection systems, including cleaning and necessary sensitivity adjustments are performed by a trained person knowledgeable in the operations and functions of the system

Employee alarm systems 1910.165 (b)(4)

employer shall explain to each employee:

- the preferred means of reporting emergencies
- employer shall post emergency telephone numbers near telephones, notice boards, or other conspicuous locations when telephones are used as a means of reporting emergencies
- employee alarm systems have priority over all non-emergency messages

Servicing multi-piece and single piece rim wheels 1910.177 (c)(1-3)

all employees involved in the servicing of rim wheels shall be instructed in the hazards involved in servicing and proper safety procedures to be followed.

- no employee services any rim wheel unless the employee has been trained and instructed in correct procedures of servicing the type of wheel being serviced and proper safe operating procedures
- minimum information for training program shall include applicable data contained in rim manual charts and contents of this standard
- any employee unable to read or understand rim manual charts shall be instructed in a manner in which the employee is able to understand
- each employee must demonstrate and maintain the ability to service rim wheels safely, including performance in the following:
 - * demounting (deflating) of tires
 - * inspection and identification of rim wheel components
 - * mounting tires (including inflation with a restraining device or other safeguard)
 - * use of restraining device or barrier
 - * handling rim wheels
 - * inflation of the tire when a single piece rim wheel is mounted on a vehicle
 - * understanding of the necessity of standing outside the trajectory both during inflation of the tire and during inspection of the rim wheel following inflation
 - * installation and removal of rim wheels
- employees shall be evaluated on their ability to perform above tasks safely and additional training shall be provided as necessary to assure each employee maintains proficiency

also see OSHA publications, "Demounting and Mounting Procedures for Truck/Bus Tires" and "Multi-piece Rim Matching Charts" available from OSHA Publications Office, 202-523-9667

Powered industrial trucks 1910.178(l)

only trained and authorized operators shall be permitted to operate a powered industrial truck, methods shall be devised to train operators in the safe operation of powered industrial trucks

also see NFPA No. 505-1969 Powered Industrial Trucks, and ANSI B56, 1-1969 Powered Industrial Trucks

Overhead and gantry cranes 1910.179(b)(8)

only designated personnel shall be permitted to operate a crane

also see ANSI B30.2.0-1967 Safety Codes for Overhead and Gantry Cranes

Crawler locomotive and truck cranes 1819, 180(b)(3) and (i)(5)(ii)

- only designated personnel shall be permitted to operate a crane or crawler
- operating and maintenance personnel shall be made familiar with the use and care of the fire extinguishers provided in cap or vicinity of crane or crawler

also see ANSI B30.5-1968 Safety Code for Crawler, Locomotive and Truck Cranes

Derricks 1910.181(j)(ii)

operations and maintenance personnel shall be made familiar with the use and care of the fire extinguishers kept in immediate vicinity of the derrick

also see ANSI B30.6-1969 Safety Code for Derricks

Slings 1910.184(d) and (e)(3)(i-iii)

inspections:

- each day prior to use, the sling and all fastenings and attachments shall be inspected for damage or defects by a competent person designated by the employer
- additional inspections shall be performed during sling use, where service conditions warrant, damaged or defective slings shall be immediately removed from service

alloy steel chain sling inspections (in additional to above requirements):

- thorough periodic inspection of alloy steel chain slings in use shall be made on a regular basis (not less than one inspection per year) to be determined on the basis of frequency of use, severity of service conditions, nature of lifts being made, experience gained on service life of slings used in similar conditions
- employer shall make and maintain a record of the most recent month in which each alloy steel chain sling was thoroughly inspected
- thorough inspection of alloy steel chain slings shall be performed by a competent person designated by the employer, and shall include a through inspection for wear, defective welds, deformation and increase in length (defective slings shall be immediately removed from service)

Woodworking machinery requirements 1910.213(s)(5)

sharpening or tensioning of saw blades or cutters shall be done only by persons of demonstrated skill in this kind of work

also see AMCI 01.1-1954 (R1961) Safety Code for Woodworking Machinery and ANSI 01.1-1954 (R1961) Safety Code for Woodworking Machinery

Mechanical power presses 1910.217(e)(3), (f)(2) and (h)(13)(i-ii)

training of maintenance personnel

- employer shall ensure the original and continuing competence of personnel caring for, inspecting and maintaining power presses

training of power press operators

- employer shall train and instruct the operator in the safe method of work before starting work on any operation covered by this section
- employer shall ensure by adequate supervision that correct operating procedures are being
- employer shall ensure operator competence by providing training initially, and at least annual thereafter, which shall include instruction relative to the following:
 - * manufacturer's recommended test procedure for checking operation of the presence sensing device, to include the use of the test rod
 - * safety distance required
 - * operation, function and performance of the PSDI mode
 - * requirement for hand tools that may be used in the PSDI mode
 - * severe consequences that can result if the operator attempts to circumvent or bypass any of the safe-guard or operation functions of the PSDI system

- employer shall certify the employees have been trained by preparing a certification record, to be maintained for duration of employment

also see Appendix A, B, C, D, and ANSI B11.1-1971 Safety Standard for Construction, Care and use of Mechanical Power Presses

Forging machines 1910.218(a)(2)(iii)

employees must be trained on proper inspection and maintenance of forging machinery equipment

also see ANSI B24.1-1971 Safety Standard for Forging

General requirements for welding, cutting and brazing (a)(1)

basic precautions for fire protection and prevention responsibilities of welder, cutters, their supervisors, contractors and management should see **NFPA 51B-1962 Standard for Fire Prevention in the Use of Cutting and Welding Processes.**

Oxygen-fuel gas welding and cutting 1910.253(a)(4)

- workers in charge of oxygen or fuel-gas supply equipment and oxygen or fuel-gas distribution piping systems shall be instructed and judged to be competent by their employers for this important work before being left in charge
- rules and instruction covering the operation and maintenance of oxygen or fuel-gas supply equipment shall be readily available

also see ANSI Z49.1-1967 Safety in Welding and Cutting and NFPA 51-1969 Welding and Cutting Oxygen Fuel Gas System

Arc welding and cutting 1910.254(a)(3), (d)(6) and (d)(9)(i)

- workers designated to operate arc welding equipment shall have been properly instructed and qualified to operate such equipment
- printed rules and instructions covering operation of equipment supply by the manufacturers shall be strictly followed
- the operator should report and equipment defect or safety hazard to his supervisor and the use of the equipment shall be discontinued until its safety has been assured, repairs shall be made only by qualified personnel

also see ANSI Z49.1-1967 Safety in Welding and Cutting and NFPA 51-1969 Welding and Cutting Oxygen Fuel Gas System

Resistance welding 1910.255(e)

periodic inspection shall be made by qualified maintenance personnel and a certification record maintained

also see ANSI Z49.1-1967 Safety in Welding and Cutting and NFPA 51-1969 Welding and Cutting Oxygen Fuel Gas System

Telecommunications 1910.268(c)(1-3), (h)(1), (j)(1)(i), (j)(4)(i)(D,F), (o)(1)(ii), (o)(3)(

training:

- employers shall provide training prior to beginning work regarding precautions and safe work practices
- if employer can demonstrate the employee is already trained in precautions and safe work practices prior to employment, training need not be provided
- where training is required, it shall consist of on-the-job training or classroom type training or a combination of both
- employees shall certify that employees have been trained, certification shall be maintained for duration of employment
- training shall include:
 - * recognition and avoidance of dangers relating to encounters with harmful substances and animal, insect or plant life
 - * procedures to be followed in emergency situations
 - * first aid training, including instruction in CPR

ladders:

- no employee nor any material or equipment may be supported or permitted to be supported on any portion of a ladder unless it is first determined, by inspections and checks conducted by a competent person, that such ladder is adequately strong, in good condition, and properly secured in place

derrick trucks and similar equipment:

- only persons trained in the operation of the derrick shall be permitted to operate the derrick
- the derrick and associated equipment must be inspected by a competent person at intervals set by the manufacturer, but in no case less than one time per year -- records shall be maintained including dates of inspection and repairs made

guarding manholes and street openings:

- while work is being performed in the manhole, a person with basic first aid training shall be immediately available to render assistance

joint power and telecommunications manholes:

- while work is being performed in a manhole occupied jointly by an electric utility and a telecommunications utility, an employee with basic first aid training shall be available in the immediate vicinity to render assistance as may be required

Grain handling facilities 1910.272(e)(1-2), (h)(1-2)

training:

- current and new employees shall be trained initially and at least annually thereafter, and when changes in job assignment will expose them to new hazards, training shall include:
 - * general safety precautions associated with the facility, including recognition and preventative measures for the hazards related to dust accumulations and common ignition sources
 - * specific procedures and safety practices applicable to their job tasks, to include but not limited to procedures in; cleaning procedures of grinding equipment and choked legs, housekeeping, hot work, preventative maintenance and lockout/tag out
 - * employees assigned to special tasks, such as bin entry and handling of flammable or toxic substances, shall be provided training to perform such tasks safely

contractors:

employer shall inform contractors performing work at the grain handling facility of:

- known potential fire and explosion hazards related to the contractor's work and work area
- applicable safety rules of the facility
- applicable provisions of the emergency action plan

also see Appendix A, B and C

Electrical training 1910.332

scope:

- training requirements apply to employees who face a risk of electrical shock that is not reduced to a safe level by electrical installation

content:

- *employees* shall be trained in and familiar with safety related work practices required by Subpart S - Electrical, which pertain to their respective jobs
- *non-qualified employees* covered by this section, but are not qualified persons shall also be trained in and familiar with any electrically related safety practices not specifically addressed by Subpart S
- *qualified employees* (those permitted to work on or near exposed energized parts) shall, at a minimum, be trained and familiar with the following:
 - * skills and techniques necessary to distinguish exposed live parts from other parts of electrical equipment
 - * skills and techniques necessary to determine the nominal voltage of exposed live parts
 - * clearance distances specified (1910.333c) and corresponding voltages to which the qualified person will be exposed

type of training:

- classroom or on-the-job

also see Appendix A -- reference documents

Asbestos 1910.1001(j)(7)

employee information and training:

- employer shall institute a training program for all employees exposed to airborne concentration of asbestos at or above the PEL and/or excursion limit and ensure their participation in the program
- training shall be provided prior to or at the time of initial assignment and at least annually thereafter
- training shall be conducted in a manner in which it is understood, employer shall ensure that each employee is informed of the following:
 - * health effects associated with asbestos exposure
 - * relationship between smoking and exposure to asbestos producing lung cancer
 - * quantity, location, manner of use, release and storage of asbestos and the specific nature of operations which could result in exposure to asbestos
 - * engineering controls and work practices associated with the employee's job assignment
 - * specific procedures implemented to protect employees from exposure to asbestos, such as appropriate work practices, emergency and clean up procedures, and ppe to be used
 - * the purpose, proper use and limitations of respiratory protection and protective clothing

- * the purpose and a description of the medical surveillance program
- * the contents of this standard, including appendices
- * names, addresses and phone numbers of public health organizations which provide information, materials and/or conduct programs concern smoking cessation.
- * requirements for posting signs and affixing labels and the meaning of the required legends for such signs and labels

employees performing housekeeping operations in a facility containing ACM or PACM shall be trained (at least annually) in asbestos awareness which shall contain the following:

- health effects of asbestos
- location of ACM and PACM in the building/facility
- recognition of ACM and PACM damage and deterioration
- requirements in this standard relating to housekeeping
- proper response to fiber release episodes

access to information and training materials:

- copy of the standard and its appendices shall be readily available without cost to all affected employees
- provide upon request, all materials relating to the employee information and training program
- inform all employees concerning the availability of self-help smoking cessation program materials

also see NIH publication 89-1647, appendices, B, D, E, F, I

Lead 1910.1025(l)

training program:

- employees who may potentially be exposed to lead must be informed of contents of appendices A and B
- employer shall institute a training program for all and assure the participation of all employees who are subject to exposure to lead at or above the action level or for whom the possibility of skin or eye irritation exists
- employer shall provide training prior to the time of initial job assignment, and at least annually
- each affected employee shall be informed of the following:
 - * content of standard and appendices
 - * specific nature of the operations which could result in exposure to lead above the action level
 - * purpose and description of the medical surveillance program and the medical removal protection program including information concerning the adverse health effects associated with excessive exposure to lead (including reproductive effects)
 - * engineering controls and work practices associated with the employee's job assignment
 - * contents of any compliance plan in effect
 - * instructions to employees that chelating agents should not routinely be used to remove lead from the body and should not be used at all except under direction of licensed physician

access to information and training materials (shall be readily available to all affected employees):

- copy of standard and appendices
- materials relating to the employee information and training program
- materials relating to the OSHA act, regulations issued pursuant to that Act

also see Appendices A, B, and C

Benzene 1910.1028(j)(3)

- employer shall provide information and training at the time of initial assignment for employees working in an area where benzene is present and annually thereafter for employees exposed to benzene above the action level
- training shall be accordance with HazCom standard with specific information on benzene, to include:
 - * explanation of contents, and copy of, benzene standard, including appendices A and B,
 - * description of medical surveillance program and explain information contained in appendix C

also see Appendices A, B, and C

Bloodborne pathogens 1910.1030(g)(2)

employers shall ensure all employees with occupational exposure participated in a training program, provided at no cost during work hours, training shall be provided as follows:

- training shall be provided at the time of initial assignment to tasks where occupational exposure may take place, and annually thereafter
- additional training will be provided when changes in assignment, procedures, etc. constitute a change in exposure
- material appropriate in content and vocabulary to educational level, literacy and language of employees shall be used
- training shall contain, at a minimum:
 - * accessible copy of the standard
 - * general explanation of the epidemiology and symptoms of bloodborne disease
 - * explanation of the modes of transmission of bloodborne pathogens
 - * explanation of the appropriate methods for recognizing task and other activities which may involve exposure to blood and other potentially infectious materials
 - * explanation of the use and limitations of methods that will prevent or reduce exposure including appropriate engineering controls, work practices, and ppe
 - * information on the types, proper use, location, removal, handling, decontamination and disposal of ppe
 - * explanation of the basis for selection of ppe
 - * information on the hepatitis B vaccine, including information on its efficacy, safety, method of administration, the benefits of being vaccinated and free vaccination program
 - * information on the appropriate actions to be taken and persons to contact in an emergency
 - * explanation of the procedure to follow if an exposure incident occurs, including the method of reporting the incident and the medical follow-up that will be made available
 - * information on the post-exposure evaluation and follow-up that the employers required to provide for the employee following an exposure
 - * an explanation of the signs and labels and/or color coding required by this standard
 - * opportunity for interactive questions and answers with the person conducting the training session
- the person conducting the training shall be knowledgeable in the subject matter

also see Appendix A

Hazard communication 1910.1200(h)

- provide employees with effective information and training on hazardous chemicals in their work area at the time of initial assignment and whenever a new physical or health hazard not previously trained about is introduced into their work area
- information and training may be designed to cover categories of hazards or specific chemicals
- chemical specific information must always be available through labels and MSDSs
- employees shall be informed of:
 - * the requirements of this section
 - * any operations in their work area where hazardous chemical are present
 - * location and availability of written hazcom program, including the required lists of hazardous chemical and MSDSs

- employee training shall include at least:
 - * methods and observations that may be used to detect the presence or release of a hazardous chemical in the work area
 - * physical and health hazards of chemicals in the work area
 - * measures employees can take to protect themselves from these hazards including specific procedures the employer has implemented to protect employees from exposure to hazardous chemicals, such as appropriate work practices, emergency procedures and ppe
 - * details of the hazcom program, including explanation of the labeling system and MSDSs, how employees obtain and use the appropriate hazard information

also see Appendices A, B, C, and E

Occupational exposure to hazardous chemicals in laboratories 1910.1450(f)
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- employees shall be provided with training and information sufficient to apprise them of hazards within their work areasuch information shall be provided at the time of initial assignment, prior to assignments involving new exposures (frequency of refresher training shall be determined by the employer)
- employees shall be informed of:
 - * contents of standard and appendices
 - * location and availability of chemical hygiene plan
 - * permissible exposure limits for OSHA regulated substances or recommended exposure limits for other hazardous chemicals where there is no applicable OSHA standard
 - * signs and symptoms associated with exposure to hazardous chemicals
 - * location and availability of known reference material on hazards, safe handling, storage, disposal of hazardous chemicals found in the laboratory
- employees shall be trained on:
 - * methods and observations that may be used to detect the presence or release of a hazardous chemicals in the work area
 - * physical and health hazards of chemical in the work area
 - * measures employees can take to protect themselves from these hazards including specific procedures the employer has implemented to protect employees from exposure to hazardous chemicals, such as appropriate work practices, emergency procedures and ppe
 - * details of the chemical hygiene plan

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